

# **Evaluation of the Infrastructure Development Fund**

**Final Report**

**Volume 2 – Case Studies**

***April 2018***

**Study conducted by ADE**



ADE has been contracted to prepare this report by the Ministry of Foreign Affairs.

The views expressed are those of ADE, the consultant, and do not represent the official views of the Netherlands' Ministry of Foreign Affairs.





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This chapter contains 15 case studies that are the IDF operations selected for in-depth study:

1. BENGAZ
2. DIGICEL (UNIGESTION HOLDING S.A.)
3. DUTCH BANGLABANK LTD.
4. EOLO DE NICARAGUA S.A.
5. ESSEL CLEAN SOLU HYDROPOWER LTD.
6. GROWN ENERGY, MOZAMBIQUE
7. GUARANTCO LTD., MAURITIUS
8. KENMARE - MOMA
9. KIVU WATT, RWANDA
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11. OMERA PETROLEUM LTD, BANGLADESH
12. PAN AFRICAN HOUSING LTD.
13. ROBI AXIATA LTD., BANGLADESH
14. SONGAS
15. ZANZIBAR – SUGAR

The structure of the case studies includes the following information:

1. Project fiche
2. Scoring
3. Lessons learnt and key findings
4. Findings at indicator level to feed into the EQ analysis

For the projects visited during the field phase, a mission report is provided in Annexes.



# Bengaz

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

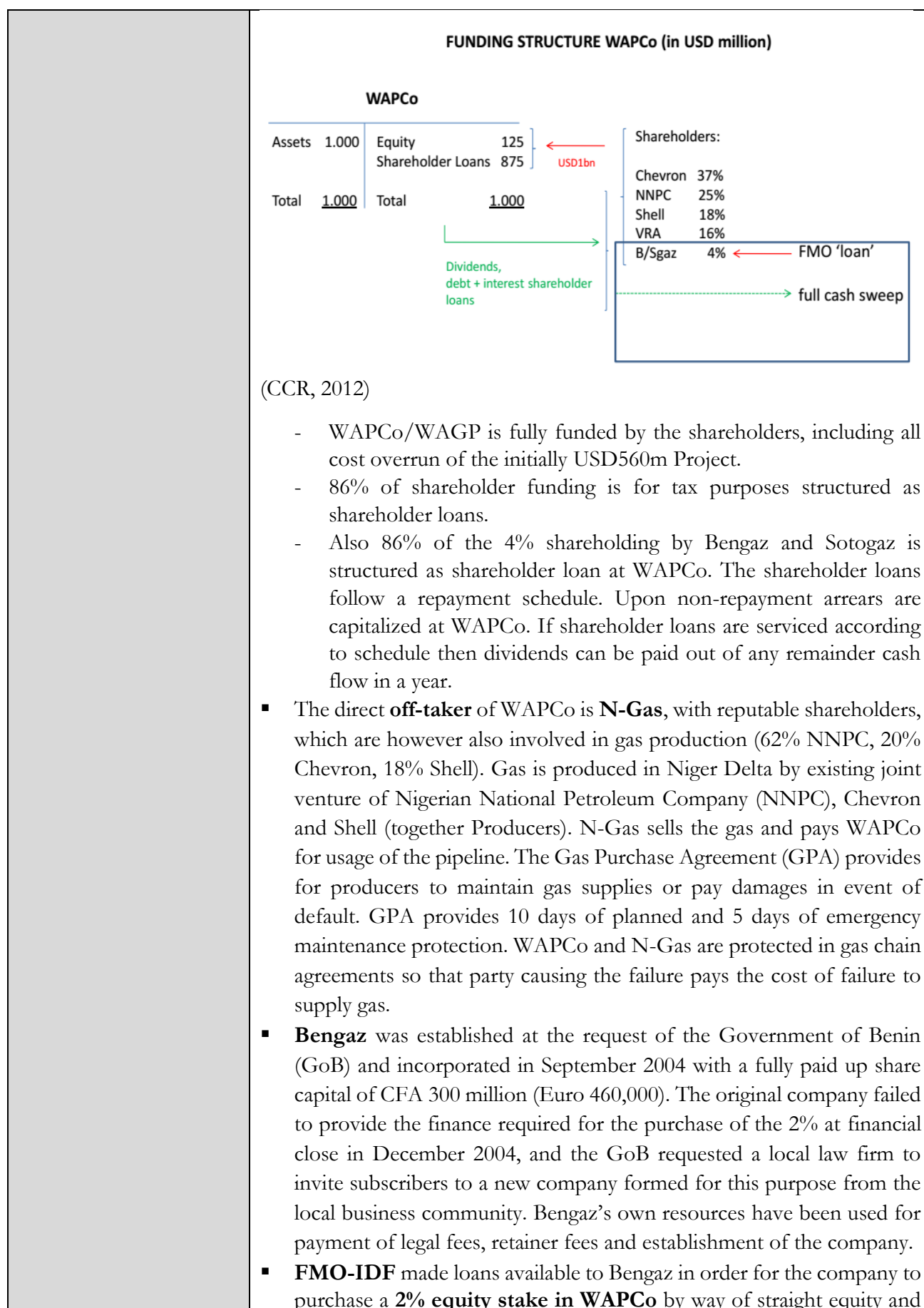
Remarks:

- Project under process of debt restructuring (SO since 2013) → the situation may change any time (e.g. regarding the bank account issue, EQ 6)
- Limited information on current Bengaz financial situation and ability to repay IDF
- Limited information on the outcomes of the project in Benin
- No field mission was possible for this project

## 1. Project fiche

Project title	Bengaz
Project description	<ul style="list-style-type: none"> <li> <p>The West African Gas Pipeline (WAGP) project (<b>Project</b>) aimed at the construction, ownership and operation of a 620 km gas pipeline with initial capacity of 135 million standard cubic feet per day (MMScf/d) expandable to 475 MMScf/d, transporting natural gas from Nigeria, where the gas is sourced across Benin and Togo to Ghana by the Special Purpose Company (SPC) 'WAPCo'. Its purpose is to provide cheap and clean source of energy for power generation and industrial uses in the recipient countries.</p>  <p><a href="http://www.wagpco.com/index.php?lang=en">http://www.wagpco.com/index.php?lang=en</a></p> </li> <li> <p>The <b>agreement</b> to build the pipeline was signed in 2000, with a plan to bring the pipeline on stream in 2005. Construction did not start until 2005, pushing back the start date until end 2007. Due to further delays, pipeline was inaugurated in November 2008 and available for uncompressed gas supply ("free flow"). Uncompressed gas became available in limited quantities during 2009. The projected was fully on stream in July 2010.</p> </li> <li> <p><b>Project cost:</b> initially USD 560m, with USD 495mo related to the pipeline itself. Of this amount USD 460m was covered by 4 contractors under fixed price lumpsum contracts. The main contractors all have experience in the region and are world class in their respective fields: Wilbros (USD 150m) for onshore activities, Horizon (USD 150m) for offshore activities, concrete weight coating by Bredero Shaw (USD 35mo) and the pipe itself by Corinth Pipe Works (USD 105m). Due to cost overruns of USD52.4m in 2006, USD 135m in 2007 and USD 255m in 2009, the total cost rose to USD 1bn.</p> </li> <li> <p>WAPCo is being managed by ChevronTexaco and Shell. The <b>ownership</b> of WAGP is as follows:</p> </li> </ul>





	<p>shareholder loans. <b>Approved IDF exposure for debt service was USD14.5m; final exposure (after cost overruns): USD31.2m.</b> The concept was that with the revenue from its operations, WAPCo would service the shareholder loans to Bengaz, enabling the company with that same revenue (dividends and interest on shareholder loans) to service the FMO-IDF loan.</p> <ul style="list-style-type: none"> <li>▪ According to the information available it appears that the <b>2% equity stake for Bengaz</b> (and Sotogaz) was fixed by WAPCo. Given the regional dimension of the initiative, WAPCo shareholders were willing to have Benin and Togo being part of it. This could explain why WAPCo is not willing to have FMO replacing Bengaz and Sotogaz as shareholder. <b>No indication on the rationale of this specific percentage.</b></li> <li>▪ <b>Incomes at Bengaz</b> consist of shareholder loan repayments, interest on shareholder loans and dividend, all from WAPCo. Bengaz sole activity is the shareholding of WAPG shares. With the operationalisation of the pipeline, Bengaz would be in charge of gas distribution in Benin.</li> <li>▪ <b>The project was transferred to special operations in 2013.</b> The project faced several delays, and once completed operations have not provided the intended results, as the pipeline is transporting much less gas than envisaged (for several reasons, including political, with Nigeria no longer willing to export gas). Due to the lack of cash flow and the impossibility of developing new businesses, Bengaz ran into trouble servicing the FMO-IDF loans. <b>FMO is currently in a process of debt restructuring with Bengaz</b> (delayed due to governance issues detailed under the EQs) and in discussion with WAPCo to have the minority shareholders (Bengaz and Sotogaz) reimbursed out of the envisaged moratorium of WAPCo on shareholders loan repayments for the next 3-5 years. Expected recovery is low since WAPCO performs poorly: as of January 2014, the WAGP was shipping approximately 70 MMscf/d (about half of the foundation volumes) and earning USD 9mln per month. At this volume the annual debt service to Bengaz would be about USD 1.3 mln whereas, given the exposure and the interest rate, obligations alone are USD 2.4 mln. Financial projections done for WAPCo in 2014 indicated that at foundation gas volume of 134 MMscf/d debt repayment would occur in 2031.</li> <li>▪ In addition IDF provided a <b>USD 3m of convertible grant</b> for an independent power plant in 2006. A MOU with Globeleq for further development was signed but expired without the full realisation of the IPP. According to the 2011 CCR, a NDA was concluded by Bengaz with ContourGlobal as potential new part (replacing Globeleq under expired MOU). The grant has been converted and is now part of the debt to be restructured.</li> </ul> <p><i>CCR 2006-2016; Financial proposal (2005); IMR advice (2005; 2010); meeting notes</i></p>
Sector	Energy

Stage	Ongoing (construction of the underlying infrastructure completed)		
Operation Dates	Finvob: 28/10/2004 Financial proposal (Credit Committee): 23/06/2005 Financial proposal (Board): 28/06/2005 Term Facility Agreement: 11/08/2005 Loan effective date: 27/10/2006 Change request #1: 17/01/2007 Change request #2: 13/11/2007 Change request #3: 26/02/2009 Last disbursement: 15/10/2010 Transfer to Special Operations: 2013 Maturity/final repayment date: 15/04/2019 (CCR 2016) – ongoing discussion on debt restructuring		
Contract	0015626		
Country/Region	Benin		
Country category	LDC		
Project total cost (€)	USD 560m (anticipated); over USD 1 billion (at completion)		
IDF contribution (€)	Original committed amount: USD17.7m (CCR 2016); USD 14.5m according to the FP Disbursed amount: USD 31m		
Co-financing (€)	No		
Loan Terms			
Senior/Subordinated	Senior Loan		
Convertible	No		
Amount	<b>Original loan amount: 14.596.844 USD</b> There have been three requests for capital increase as a result of overrun costs: <ul style="list-style-type: none"><li>• increase loan amount with USD 1.2m: 17/01/2007</li><li>• increase loan amount with USD 2.9m: 13/11/2007</li><li>• increase loan amount with USD 6.5m: 26/02/2009</li></ul>		
Loan Agreement Date	11/08/2005	Facility No	0000015052
Currency	USD		
Tenor	14 years (including a cash sweep mechanism, i.e. all cash coming from the project will be used for debt service first during outstanding) Has been revised to 15 years with Change Request #1		
Grace period	2 years from financial close (June 30 <sup>th</sup> 2005) Has been revised to 3 years with Change Request #1 Has been revised to 4 years with Change Request #2 Extension of grace period up to October 2010		

Interest rate	Has been revised with Change Request #1: 6% instead of 10.12% due to a change in interpretation of the financing from equity to a loan (offer the ODA component of 25% retroactively)																																																																													
Security	<ul style="list-style-type: none"><li>▪ Pledge on escrow account through which all monies due to Bengaz from the Project (including dividends and interest on shareholder loans) will be channelled, in order to secure principal and interest instalments due under the FMO-IDF Loan Agreement</li><li>▪ Pledge of Bengaz’ shares</li><li>▪ Mortgage over fixed assets, if any</li><li>▪ Right of assignment of license / concession</li><li>▪ Step-in rights</li><li>▪ A legal opinion to be obtained by the Lenders from Allen &amp; Overy (includes local counsel)</li><li>▪ Limited dividend pay-out: shareholders will be allowed to 12% (base case) - 15% return on their investment in line with WAPCo shareholders but capped at 10% of cash available after regular debt service; some working capital will be allowed in line with annually submitted business plan and budget; the remainder of cash follows the prepayment mechanism as described above.</li></ul>																																																																													
Fees	<p>Prepayment Fee: 2.0% of the amount so prepaid.</p> <p>Front end fee: 1.0% of the Facility amount payable to IDF and payable from proceeds of first draw down.</p> <p>Commitment fee: 0.5% p.a. payable monthly in arrears to the LDC Fund on the undrawn amount of the facility and payable from proceeds of first draw down.</p>																																																																													
Disbursements	<p>According to the (incomplete) ‘disbursement and repayments Excel file’, 1<sup>st</sup> disbursement date: 9/11/2006</p> <p>According to 2016 CCR, last disbursement date: 15/10/2010</p>																																																																													
Monitoring	Full monitoring regime																																																																													
Key covenants	Usual conditions precedent for this kind of transaction																																																																													
Collateral	<p>FMO-IDF has a charge over the shares of Bengaz and Sotogaz in WAPCo and a pledge on the shares of Bengaz and Sotogaz themselves. FMO-IDF also has a step-in right and the right of assignment of the license in Benin and Togo.</p> <p>Client review March 2010:</p> <table><tr><th>Facility</th><th>Collateral Type</th><th>Units</th><th>Unit Value</th><th>Current Value</th><th>Collateral Description</th><th></th></tr><tr><td>0000015052</td><td>124-PLEDGE ON SHARES/NOTES/BONDS</td><td>785.975,00</td><td>1,00</td><td>785.975,00</td><td>Certificate of registration of a mortgage/ charge,</td><td>dd. 11/8/2005</td></tr><tr><td></td><td>124-PLEDGE ON SHARES/NOTES/BONDS</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Charge Over Shares i.r.o. West African Gas Pipeline</td><td>dated 11/08/2005</td></tr><tr><td></td><td>125-PLEDGE ON DEPOSITS / ESCROW ACCOUNTS</td><td>1,00</td><td>851.849,00</td><td>851.849,00</td><td></td><td></td></tr><tr><td></td><td>125-PLEDGE ON DEPOSITS / ESCROW ACCOUNTS</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Second Ranking Charge Over Cash</td><td>dated 11/08/2005</td></tr><tr><td></td><td>150-AGREEMENT</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Term Facility Agreement</td><td>dd 11/08/05</td></tr><tr><td></td><td>156-AGREEMENT OTHER</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Security Agreement</td><td>dd 11/08/05</td></tr><tr><td></td><td>156-AGREEMENT OTHER</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Supplemental Agreement</td><td>dd 11/08/06</td></tr><tr><td></td><td>156-AGREEMENT OTHER</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Supplemental Agreement</td><td>dd 22/01/07</td></tr><tr><td></td><td>156-AGREEMENT OTHER</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Supplemental Agreement</td><td>dd 26/11/07</td></tr><tr><td></td><td>160-OTHER</td><td>0,00</td><td>0,00</td><td>0,00</td><td>Negative Pledge clause 18.1, Security, TFA 11/08/05</td><td>and Pari Passu Ranking</td></tr></table>	Facility	Collateral Type	Units	Unit Value	Current Value	Collateral Description		0000015052	124-PLEDGE ON SHARES/NOTES/BONDS	785.975,00	1,00	785.975,00	Certificate of registration of a mortgage/ charge,	dd. 11/8/2005		124-PLEDGE ON SHARES/NOTES/BONDS	0,00	0,00	0,00	Charge Over Shares i.r.o. West African Gas Pipeline	dated 11/08/2005		125-PLEDGE ON DEPOSITS / ESCROW ACCOUNTS	1,00	851.849,00	851.849,00				125-PLEDGE ON DEPOSITS / ESCROW ACCOUNTS	0,00	0,00	0,00	Second Ranking Charge Over Cash	dated 11/08/2005		150-AGREEMENT	0,00	0,00	0,00	Term Facility Agreement	dd 11/08/05		156-AGREEMENT OTHER	0,00	0,00	0,00	Security Agreement	dd 11/08/05		156-AGREEMENT OTHER	0,00	0,00	0,00	Supplemental Agreement	dd 11/08/06		156-AGREEMENT OTHER	0,00	0,00	0,00	Supplemental Agreement	dd 22/01/07		156-AGREEMENT OTHER	0,00	0,00	0,00	Supplemental Agreement	dd 26/11/07		160-OTHER	0,00	0,00	0,00	Negative Pledge clause 18.1, Security, TFA 11/08/05	and Pari Passu Ranking
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Conversion features			
Grants			
Amount	2.867.997,39€		
Convertible	Yes		
Purpose	Financing of the development stage of a 35MW to 100MW independent power plant (IPP) that will use the natural gas of the West African Gas Pipeline through Bengaz.		
Grant agreement date	May 2006 (grant proposal)	Facility no	IP Facility 0000117711
Key terms	The cost of a 75MW IPP is estimated to USD80m; development expenses equal to about 5% of project's cost		
Disbursement	According to 2016 CCR: Contracting date: 11/08/2006 Last disbursement date: 30/07/2009		
Conversion terms	The grant will be repayable in case of a feasible project through a shareholder's loan with Bengaz within approximately 5 years including a return of 15% to 20%		
Other	Extension of the validity of the convertible grant with one year (March 2009)		
Financial Risk and Performance			
	Financial proposal/approval	Client Review - Most recent	
Client Risk Rating	B2-satisfactory	<ul style="list-style-type: none"><li>- Standalone CRR: F19 (FMO rating) or CCC- (S&amp;P rating) → poor standing and subject to very high credit risk.</li><li>- Final CRR : F21 (FMO rating) or C (S&amp;P rating) → Default</li></ul> Source: 2016 CCR	
Loan - Impairment provision	%	100% (2016 CCR)	
Financial performance	<p>The project is performing below expectations with:</p> <ul style="list-style-type: none"><li>- Total cost almost doubled and 3 years delay in the implementation of the underlying infrastructure</li><li>- No information on Bengaz balance sheet. Profitability and balance sheet indicators of WAPCo give an insight:<ul style="list-style-type: none"><li>o Net loss of \$33.24m by end of March 2016 (year to date)</li><li>o RoE: -54.14%</li><li>o RoA: -0.29%</li></ul></li><li>- Last repayment from Bengaz to FMO-IDF reported: 2012.</li><li>- Transferred to special operations since 2013. Debt restructuring in</li></ul>		

	<p>discussion.</p> <p>Governance issues at both Bengaz (e.g. dispute between majority and minority stakeholders, money stolen by majority shareholder) and WAPCo (e.g. unwillingness to share information) has worsened the financial performance as regard to FMO. This issue include the fact that the latest payments made by WAPCo to Bengaz were not done on the account reserved for the reimbursement of FMO loan. FMO has therefore not get access to the money despite requests to both Bengaz and WAPCo.</p>
<b>Client Review -key findings</b>	<p>Delayed, over budget project implementation (delay and cost overrun). Project should have reached completion in July 2010, but no information on the results coming from it and the return to FMO.</p>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p>The Project WAPCo aimed to contribute to, inter alia, <i>“improving the competitiveness of the energy sectors in Ghana, Benin, and Togo by promoting the use of cheaper and environmentally cleaner gas from Nigeria in lieu of solid and liquid fuels for power generation and other industrial, commercial uses, and diversifying energy supply sources”</i>.</p> <p>By participating in the financing, IDF was directly rewarding/stimulating successful private sector involvement in the outset public sector investment. Expected beneficiaries of resulting economic growth were (local) companies active in Benin and neighbouring countries. Gains of the investment through taxes, dividend, etc. of otherwise ‘flared’ gas are considerable. Anticipation of a very strong flow of leads coming from FMO participation in the near future through the marketing of the gas to other power stations, aluminium smelter, gas bottling facilities, etc.</p> <p>The construction of the pipeline was completed in ???. Given very low revenues from transport of gas, Bengaz has not been in position to further develop related activities (gas distribution in the country). The IPP project for which FMO provided an IDF convertible grant for the development stage did not materialise. There is also a limited diversification of the suppliers (the main one being N-Gas).</p>
<b>Assumptions in FP</b>	<ul style="list-style-type: none"> <li>- Regulatory risk (low): the States which WAGP will serve signed a treaty (WAGP Treaty) early 2003 to foster a stable and harmonized legal environment and entered into the International Project Agreement (IPA) with WAPCo to establish and implement a harmonized legal and fiscal regime. IPA provides protection for change in law risk to WAPCo.</li> <li>- Construction Phase Risks (low): date certain fixed price lump sum contracts for majority of project cost (USD 460m) with 4 leading firms in their respective fields of profession.</li> <li>- Construction Funding Risk (low): all existing shareholders of WAPCo paid the full project cost into an escrow account with Standard Chartered in London as per December 2004 in the form of equity and shareholder loans.</li> <li>- Corporate Governance Risk (low): WAPCo follows international practice on governance issues. Bengaz has a managing director, with a good business reputation, who is also a shareholder. Bengaz, however, will merely be a gas marketing and contracting firm and it is not anticipated to employ many people.</li> </ul>

	<ul style="list-style-type: none"><li>- Debt Service Risk (low): dividends and servicing of shareholder loans from WAPCo will flow into an escrow account with Standard Chartered where a strict cash flow cascade will be followed in repayment of the IDF loan. Hence, not Bengaz to decide to service the loan.</li><li>- Management Risk (low): ChevronTexaco and Shell run WAPCo.</li><li>- Gas Supply Risk (low) - Note this was a major mistake as subsequent failure of NNPC to supply planned volumes shows.</li><li>- Quality of Gas Supplied (low)</li><li>- Production Disruption Risk (high)</li><li>- Labour strikes (high)</li><li>- Failure to Producer Facilities (high)</li><li>- Offtake Risk (low to high)</li><li>- Forex risk (low): tariff is in USD and indexed.</li><li>- Country risk (high): not for the purposes of IDF.</li></ul>		
Main project activities and achievements	<p>The Project comprised the following elements: (1) a new pipeline system, the West African Gas Pipeline (WAGP), which would transport natural gas from Nigeria to Ghana, Togo and Benin; (2) spurs to provide gas to power generating units in Ghana, Benin, and Togo; (3) conversion of existing power generating units to gas; and (4) as needed, additional compression investments.</p> <p>The main achievement has been the construction of the pipeline, however three years delayed (July 2010).</p> <p>As regards to Bengaz itself, the term facility agreement refers to payments to be made by Bengaz to shareholders. Payments to FMO have been limited due to limited payments received from WAPCo. No business development as expected, due to limited exploitation of the pipeline.</p>		
Main project issues	<p>In summary, key issues and risks of the project are of political and financial nature: FMO's debt service is based on full cash sweep of all income Bengaz gets from WAPCo, which is however rather uncertain and unpredictable due to mainly the Nigeria (politically driven) gas supply problems and impact on the operations of damages to the pipeline. Loans have not been paid in a long time, due to the impossibility of reaching an agreement with the Company for a restructuring and the pending legal process against WAPCo which has pushed Bengaz to use any proceeds they received from WAPCo to pay for their legal costs.</p>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m		The 2012 CCR mentions a direct tax from the pipeline of USD 200m for each of the 2 countries (Benin and Togo). Bengaz income statement of 2011 a loss and no tax

			paid by the company.
<b>GHG Saving (tCo2)</b>	T CO <sub>2</sub>		
<b>Installed Capacity (MW)</b>	MW	The WAGP was designed to transport up to 475 MMscf/d. (million standard cubic feet per day). Bengaz was in the process of securing a license for a 35MW to 100MW independent power plant (IPP) in Benin (2008 CCR)	Gas shipments are below foundation volumes notably because supply from Nigeria is lower than expected. As of January 2014, the WAGP was shipping approx. 70 MMscf/d.
<b>Production Capacity</b>	GWh		
<b>People served – distribution</b>	#		
<b>People served – transport</b>	#		
<b>People served – power</b>	#		
<b>People served – telecom</b>	#		
<b>People served – IT/internet</b>	#		
<b>People served – industrial/agri</b>	#		
<b>People served – farmers reached</b>	#		
<b>Forestry under management</b>	ha		
<b>Agriculture</b>	ha		
<b>Green investments</b>	€m		
<b>Inclusive investments</b>	€m		



## 2. Scoring

	Desk Review
<b>EQ 2 - Relevance</b>	
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	n/a No indication that FMO-A was considered for Bengaz
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	1
JC 2.3 Additionality of IDF Loans and Equity Investments	2 (additional in the sense that IDF was the lender of last resort; however, Bengaz (and Sotogaz) contribution was not essential for the construction of the pipeline as such. The contribution allowed Benin to benefit from the pipeline. Nevertheless, although the GoB initiated Bengaz, it is not perceived as supportive in resolving the current situation.
<b>EQ 1 - Effectiveness</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	1
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer-term employment opportunities, improved business environment and demonstration effects).	1
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	1
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	2 (the situation deteriorated from 2009/2010; before, no major issue)
<b>EQ 4 – ESG Risk Management</b>	
JC4.2 IDF-financed projects contributed to green and inclusive development	1
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3 (ok for the one conducted by FMO in 2004; then conducted by WB: not done on yearly/quality issues mentioned)
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	n/a

<b>EQ 6 – Efficiency</b>	
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	1
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	2
<b>EQ 3 – Revolvability</b>	
JC 3.5 Individual Project Sustainability	1
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	n/a
JC 5.2 Effects for Dutch companies and economy	n/a
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	n/a
<b>Scoring Justification</b>	
EQ 2 - Relevance	1.5- No catalytic effect (no commercial funding mobilised by FMO's investment); highly additional since no other bank was prepared to finance the participation of Bengaz in WAPCo
EQ 1 - Effectiveness	1 - Outputs reached (pipeline constructed) but with serious delays and overrun. Outcomes not yet achieved due to delays in the implementation (to be investigated) and failure to reach projected gas volumes through pipeline. E&S reports based on WB missions. A 2009 foreseen field mission not realised.
EQ 4 – ESG Risk Management	2 - E&S information on impacts based on WB missions/reports (although no evidence yet for Benin). Not on yearly bases/quality issues mentioned
EQ 6 – Efficiency	1.5 - Major issues not identified upfront (reliability of gas supply from Nigeria cost overruns to be covered by shareholders, governance issues, etc.)
EQ 3 – Revolvability	1 – losses – WAPCo has failed as has Bengaz
EQ 5 – Policy	n/a

<b>Comments</b>	Overall the project has not been successful: significant shortcomings both at the construction of the underlying infrastructure (delays, cost overruns) and during its operationalisation (limited supply of gas, governance issues, etc.)
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### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

## 3. Lessons learnt and key findings

- Underestimation of several risks, including political risks in Nigeria although the success of the project relied on the supply of gas by the country. In this context, funding an equity investment was not a good idea. IDF should have asked for guarantees to the GoB, since Bengaz aimed at having Benin taking part in the regional facility.
- Information on the special vehicle company, Bengaz, was insufficient for an understanding of where control lay and its financial condition. Moreover, it had a capital of only €0.5m to which IDF initially lent €14.6m and in total €31.2m. It is evident that all the risk was taken by IDF.
- The rationale of the 2% is not clear. With the 2% participation, Bengaz has no influence on WAPCo. From Bengaz perspective, the percentage was not an issue since the overall contribution was paid by IDF. From IDF perspective, not sure why the exposure was almost doubled in order to keep the 2% participation of Bengaz in WAPCo (at all costs) without any guarantee from the GoB (IDF exposure (USD 31m) is huge compared to the size of Bengaz (EUR 460k equity).
- FMO is now in the process of recovering the money, but not clear where the money would come from since WAPCo has limited/minimal revenues. These limited revenues also raise the point of the capacity of WAPCo to finance the maintenance of the USD 1bn pipeline.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <ul style="list-style-type: none"> <li>i) temporary/short term during the implementation period</li> <li>ii) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</li> </ul>	
<p><b>I-1.2.1</b> - FMO provided a loan to Bengaz in order for them to purchase a 2% equity stake in WAPCo by way of equity and shareholder loans. The project consisted in construction, ownership and operation of a 620 km gas pipeline designed to transport natural gas from Nigeria, across Benin and Togo, to Ghana (cf. project description above). Bengaz was not directly involved in the building of the pipeline and had limited, if any, influence over project implementation. It was only a 2% shareholder in WAPCo.</p> <p>The project cost amounts to USD 1bn. The initial budgeted cost was USD 560m, but 3 cost overruns have been registered during the implementation of the project. For this project FMO has disbursed USD 31.2m of senior loan (from IDF). The initial commitment was USD 17.7m. In addition, FMO has disbursed a USD 2.8m of IDF convertible grant for the development stage of an IPP in Benin.</p> <p><b>I-1.2.3</b></p> <p>The construction of the pipeline faced important challenges, going from difficulties at the level of construction management to pipe damage, leakage, incorrect moisturing level of the gas, political unwillingness to supply gas from Nigeria, etc. At the implementation level this has resulted to delays and cost overruns. In the end, the construction of the pipeline was delayed by three years and doubled almost in cost:</p> <ul style="list-style-type: none"> <li>- The construction started in August 2005 (as envisaged in the Financial proposal) and commissioning was envisaged beginning of 2007 (the finalisation of the work was anticipated in December 2006 in the FP). The completion date has been revised several times up to July 2010.</li> <li>- Original project cost was assessed at USD 560 mio (funded by USD 441 mio from shareholder funds); the project faced costs overrun of USD 52.4 mio (Nov 2006), USD 135 mio (Nov 2007) and USD 255 mio (Feb 2009). This resulted in a total cost of USD 1 bln.</li> <li>- Total amount disbursed on Bengaz: USD 31 mio (last disbursement in October 2010).</li> </ul> <p>The 3 cost overruns arisen notably from:</p>	

- November 2006: Onshore construction delays in Wilbros construction activities. Implication was the repricing of the loan at 6% instead of 10.12% (taking the ODA 25% discount into account as 10.12% was not reachable due to the loan increase from the cost overrun) and the extension of loan repayment date
- November 2007: Capital increase as a result of a number of uncertain factors including pipeline risk mitigation, insurance coverage of offshore repairs and settlement with Wilbros (for onshore construction). Implication is the extension of repayment from 10/2007 to 10/2009
- February 2009: Construction costs due to change of contractors. The previous onshore contractor, WILBROS sold the entity to ASCOT, a Nigerian construction company, which WAPCo had to terminate and manage by itself because ASCOT did not honour the terms of the contract. This has led to increased management and other support costs for WAPCo, and funding for the transition from construction to full operations of WAGP. Implication is the extension of grace period from 10/2009 to 10/2010. Due to the change of contractors, the completion of contracts had been signed on a reimbursable basis, not lump sum as initially. A lump sum strategy was not possible due to time constraints and difficulty I assessing the work carried out by the previous contractor.

The reporting on delays started in 2007. The CCR of August 2006 mentions that 'as per the latest status report of 26<sup>th</sup> June 2006, no delays are reported'. The IC of August 2007 indicates that the project had shown delays and cost overruns in which FMO financed its share. In the same document it appears that FMO was not supposed to fund any further overrun: '(...) If further costs overruns occur, they are expected to be financed by the large sponsors, not by FMO (...)'. However, in November 2007 FMO decided to follow the 2007 cost overrun to prevent becoming strongly subordinated and have its returns fall due the implicit dilution. The shareholders arranged a general meeting where experts were called in to justify the 2009 cost overruns and ensure that there are no more calls on extra funding. FMO found itself in a position with little room to manoeuvre, due to the way the shareholders agreement is structured: if FMO did not participate in the new round of funding, its position would become subordinated as the USD 255mln cost overrun becomes repayable first, once cash flow will start flowing in 2010, priced at 15% p.a. Another consequence of non-payment was the dilution of the shareholding from 2% to 1.49%, and further to 1.19% as shareholders that decide not to participate in new funding were penalized through a reduction in their share position by 20%. The reduced shareholding lowers cash flow entitlements, meaning FMO's loan would be repaid in 2028. By increasing the funding the FMO debt would start to be service October 2010.

The IMR (2010) mentions another delay (but no cost overrun) which moved the commercial operation date to July 2010. Chevron took over management of the construction contracts and reached project completion but at considerable delay (CCR 2012).

Concerning the additional Facility for the IPP, the facility was ended in 2008. About EUR 2.8 mio was spent and a MOU with Globeleq for further development was signed but expired without the full realisation of the IPP. The management of Bengaz concluded a non disclosure agreement with ContourGlobal as potential new part replacing Globeleq under expired MOU(CCR 2011).

*Sources: IMR (2005; 2007; 2009; 2010), CCR (2006; 2011; 2010), meeting notes*

JC1.3	IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).												
<p><b>I-1.3.1</b> - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets</p> <p><b>I-1.3.2</b> - Assessment of likely sustainability of indirect jobs created after project completion</p> <p><b>I-1.3.3</b> - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks</p> <p><b>I-1.3.4</b> - Evolution of selected country level indicators on ease of ‘Doing Business’</p> <p><b>I-1.3.5</b> - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)</p>													
<p>The constraints on the gas supply continue to be the politically driven by Nigeria (politicians believe gas should serve the domestic market). Therefore, the gas supply from N-Gas is uncertain and remains unpredictable, which jeopardizes the whole project. In response to that, WAPCo undertook various projects aiming at increasing the volume of natural gas transported to consuming countries. WAPCo declared in 2012 that the pipeline was an “open access” system, to allow multiple shippers to use the pipeline to transport gas to any of the three gas importing countries. Any suitably qualified entity could then apply to become a shipper with a view to entering into gas transportation contracts with WAPCo. From then, WAPCo started a number of activities in response to developments in the energy sectors in the countries in which it operates. In Benin, the CCR (2013) reports that Bengaz has entered a joint venture with Gasol plc, named Cogas, which is developing a liquefied natural gas (LNG) import terminal in Benin. The intention was to put the LNG on the WAPCo pipeline, to be transported to off takers in Benin and neighbourhood countries. This means additional supply of gas on the pipeline, next to N-Gas in Nigeria (and therefore, more revenue generated in WAPCo and thus flows to Bengaz). No specific information on the related activities. So far, Bengaz has a staff of 3 people. It was expected to increase up to 50 with the operationalisation of the pipeline. The pipeline is therefore apparently still not used at its maximal capacity.</p>													
<p>Benin has limited electrical generation capacity and is a net importer of electricity (in 2012, only 18% was produced in Benin, the rest was exported notably from Ghana and Nigeria). Generation capacity in 2014 consisted of 60MW. The 2014 CCR indicates that Benin was developing 2 additional thermal power plants which would be able to operate on natural gas (demand estimated to 31MMscf/d, with total potential gas demand in Benin, including industrial off-takers, estimated at 45-50 MMscf/d).</p> <p>The ranking of Benin regarding Doing Business indicators<sup>1</sup> has negatively evolved since 2012 (from 175 to 151). However, the situation has worsened as regard to getting electricity (from 140 to 174).</p>													
<table><tr><td>Doing business Benin</td><td>2012 rank</td><td>2017 rank</td><td>2018 rank</td></tr><tr><td>Getting electricity</td><td>140</td><td>174</td><td>174</td></tr><tr><td>Overall</td><td>175</td><td>155</td><td>151</td></tr></table>		Doing business Benin	2012 rank	2017 rank	2018 rank	Getting electricity	140	174	174	Overall	175	155	151
Doing business Benin	2012 rank	2017 rank	2018 rank										
Getting electricity	140	174	174										
Overall	175	155	151										
<p>The WB however reports a diminution in the price of electricity over the period, from USD 0.228 per kWh in 2012 to 20.7 in 2018. Given the limited contribution of Bengaz in the overall supply of electricity in Benin (no indication of gas distribution in Benin through Bengaz) we can assume that this reduction is not related to IDF contribution in Bengaz. We can also assume</p>													

<sup>1</sup> <http://www.doingbusiness.org/data/exploreeconomies/nicaragua#getting-electricity>

that overall contribution of the project in the development of the private sector in Benin, if any, is marginal.

*Sources: World Bank (February 2018), CCR (2013, 2015, 2016)*

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
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**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long-term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

Through its participation in the funding of WAPCo, IDF expected to contribute to the realisation of a project which would safeguard access to gas supply in countries with no gas related industry. Beneficiaries of resulting economic growth are (local) companies active in Benin (and Togo). Significant gains expected to come from the marketing of the gas to other power stations, aluminum smelter, gas bottling facilities. A few opportunities have emerged in Benin, including the IPP of 35MW to 75MW in Benin, for which an IDF convertible grant was provided for the development stage (the IPP did not materialised; no specific information on the reasons) and Cogas (cf. JC 1.3).

According to the WB, Benin, Togo and Ghana could save nearly USD 500 mio in energy costs over a 20-year period as WAGP-supplied gas is substituted for more expensive fuels in power generation. The creation of 10.000 to 20.000 primary sector jobs was expected.

The delays in the realisation of the gas pipeline has resulted in a renegotiation of gas prices. WAPCo reached agreement on higher tariffs in the 4 countries involved in December 2011 that would compensate for cost overrun during construction. The initial tariff was agreed in 2004 for a 25 year period, to yield 15% return p.a. Due to the cost increases the prospective yield would have been some 7-8% otherwise. No indication whether this price increase had been repercutated in a way or another to electricity prices in Benin. The CCR (2013) indicates that gas-fired IPPs of 100MW save imports of oil and heavy fuel oil (HFO) by some USD 700m per country over a 20 year period, which is lowered with the tariff increase.

*Sources: CRR August 2006; 2013*



<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
<p><b>I-1.5.1</b> - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects</p> <p><b>I-1.5.2</b> - Evidence of availability and application of consistent M&amp;E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets</p> <p><b>I-1.5.3</b> - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management</p>	
<p>There is no intervention logic, with development impacts identified and indicators with targets to reach by the project. The reports received (mainly FMO Client Credit Reviews and IMR, no annual report of WAPCo or Bengaz) provide information related to the financial status of the project and the issues encountered in its implementation and operationalisation, which subsequently impact the capacity of Bengaz to service its FMO loan. Receipt of audit reports from Bengaz has been difficult for FMO: the CCR (2013) mentions for instance that despite several requests, FMO had not received yet updated data from Bengaz nor a reconfirmation of the data reported the previous year (Bengaz was unable to pay for the accountant who would audit the 2012 financial statements).</p> <p>Regarding WAPCo, documents review indicate that contacts improved considerably during 2009 with almost full information sharing but got worse in 2009 / 2010 with the replacement of the Shell-Managing Director by another person who is not willing to cooperate in any way with entities outside the shareholders' group. FMO met the Managing Director and his team in October 2010 and was refused any up-to-date information from WAGP. A waiver was given in June 2011 for providing information in accordance with the credit agreement. Contacts with WAPCO are difficult since they are generally not willing to cooperate with entities outside the shareholders' group.</p> <p><i>Sources: CCR (2012-2014)</i></p>	

## EQ 2 – Additionality and catalytic effects

<b>Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?</b>	
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
<p><b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects</p> <p><b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio</p> <p><b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio</p>	
No indication that FMO-A was considered for Bengaz.	
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>
<p><b>I-2.2.1</b> - Ratio of mobilisation at project level of IDF funding to commercial funding sources.</p> <p><b>I-2.2.2</b> - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)</p>	



There has been no commercial nor development funding mobilised by FMO-IDF's investment. DEG has decided not to participate, because the transaction (at that time only Sotogaz) was considered too small. AfDB has not participated for policy reasons (financing equity). IDF was a lender of last resort for Benin and Togo.

IDF (LDC) financed 100% of the participation of Bengaz (and Sotogaz) in WAPCo while the other 96% of WAPCo was already secured. Moreover, as mentioned in the 2010 Evaluation of the project, other shareholders would have bought the (4%) shares if Bengaz and Sotogaz had not participated. However, according to available information it appears that:

- WAPCo wanted to have Bengaz and Sotogaz as shareholders given the regional dimension of the initiative.
- IDF intervened because it was mean to have a gas infrastructure developed in the country.

The added value of FMO-IDF has been identified as safeguarding access to gas supply in countries with no gas related industry at that moment (EDIS score 63).

No catalytic effect identified of IDF regarding Bengaz shareholders (cf. JC 6.1).

*Sources : IMR 2005, FP 2005*

### **JC 2-3    *Additionality of IDF Loans and Equity Investments***

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO-IDF additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)

**I-2.3.5** - Bengaz was established at the request of the Government of Benin and incorporated in September 2004. The original company failed to provide the finance required for the purchase of the 2% at financial close in December 2004. The Government then requested a local law firm to invite subscribers to a new company formed for this purpose from the local business community. Bengaz' own resources have been used for payment of legal fees, retainer fees and establishment of the company whereas FMO-IDF facility financed the 2% equity stakes. The Facility comprises a long term loan with tenor of 14 years but includes a cash sweep mechanism (returns on capital invested are capped at 12% initially and 15% when sales increase or 10% of cash after debt service, whichever is lower; all additional cash to be used for prepayment of FMO-IDF's facility).

The project was included in the Nepad infrastructure programme and, as such, considered as a project promoting regional integration and thus contributing to the creation of larger energy markets in Africa. IDF aims at promoting infrastructure development in LDC countries (including Benin and Togo) by making available high-risk financing and/or grants. IDF contribution have provided access to Benin (and Togo) access to pipeline (and therefore to a cheaper energy source). The WAPCo transaction therefore fit with IDF criteria. The funding was additional in the sens that no other commercial or development bank was prepared to finance the participation of Bengaz in WAPCo. The Client review 2010 scores financial additionality as 60 points, which is the maximum in the scorecard. However, as previously

mentioned (JC 2.2), Bengaz (and Sotogaz) contributions were not as such necessary for the project to be implemented since other stakeholders could bring the capital.

*Sources: Financial Proposal (2005), CRR (2006)*

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

#### JC 3.5 Individual Project Sustainability

##### I.3.5.1 - Review performance and sustainability of 15 projects selected for desk review.

The project faced several delays, and once completed operations have not provide the intended results, as the pipeline is transporting much less gas than envisaged. The last, due to Nigeria's resilience to provide the gas that was promised. Due to this lack of cash flow, and the impossibility of developing new business, Bengaz ran into trouble servicing the FMO-IDF loans. The project was transferred to SO in 2013.

The table below presents the initial repayment plan, as envisaged in the 2005 financial proposal (with the initial committed amount of USD 14.5m). The 1<sup>st</sup> repayment was due in 2007.

amount	14.542.110	USD	interest	8,75%			
tenor	14		front-end fee	1,00%			
installments	24		libor	3,50%			
grace loan	2		prepayment fee	2,00%			
construction period grace interest	2		commitment fee [accrued]	0,50%			
	OUTSTANDING	REPAYMENT	ACCRUED INTEREST	INTEREST	MARGIN	TOTAL	
0,5	14.542.110	0	636.217	0	0	0	2005
1	15.178.327	0	0	664.052	0	0	0
1,5	15.842.379	0	0	693.104	0	0	0
2	16.535.483	0	0	723.427	0	0	0
2,5	17.258.911	1	1.078.682	0	802.270	481.362	1.880.952
3	16.180.229	1	359.561	0	723.616	434.169	1.083.176
3,5	15.820.668	1	359.561	0	707.885	424.731	1.067.446
4	15.461.107	1	359.561	0	692.154	415.293	1.051.715
4,5	15.101.547	1	359.561	0	676.423	405.854	1.035.984
5	14.741.986	1	539.341	0	668.558	401.135	1.207.899
5,5	14.202.645	1	539.341	0	644.962	386.977	1.184.303
6	13.663.304	1	539.341	0	621.366	372.819	1.160.707
6,5	13.123.963	1	539.341	0	597.770	358.662	1.137.111
7	12.584.622	1	539.341	0	574.173	344.504	1.113.514
7,5	12.045.281	1	719.121	0	558.443	335.066	1.277.564
8	11.326.160	1	719.121	0	526.981	316.189	1.246.102
8,5	10.607.039	1	719.121	0	495.520	297.312	1.214.641
9	9.887.918	1	719.121	0	464.058	278.435	1.183.179
9,5	9.168.796	1	1.078.682	0	448.327	268.996	1.527.009
10	8.090.114	1	898.902	0	393.269	235.962	1.292.171
10,5	7.191.213	1	1.078.682	0	361.808	217.085	1.440.490
11	6.112.531	1	898.902	0	306.750	184.050	1.205.652
11,5	5.213.629	1	1.078.682	0	275.289	165.173	1.353.971
12	4.134.947	1	898.902	0	220.231	132.139	1.119.132
12,5	3.236.046	1	1.078.682	0	188.769	113.262	1.267.451
13	2.157.364	1	898.902	0	133.712	80.227	1.032.613
13,5	1.258.462	1	898.902	0	94.385	56.631	993.286
14	359.561	1	359.561	0	31.462	18.877	391.022
	17.258.911		17.258.911		11.208.179		28.467.090

(Financial proposal, 2005)

The project started full operations in July 2010. The revised first 'scheduled' debt service from Bengaz to FMO-IDF was planned October 2010 which due to delay of the commissioning of the pipeline did not happen.

- FMO-IDF received first payments under its full cash sweep arrangements with Bengaz in July 2011 (FCFA61.5m, equivalent to EUR 94k). Next payments were expected in June 2012, on a more regular basis and higher amounts (USD 800k per quarter from WAPCo to Bengaz).
- The CCR 2014 mentions that only small payments have been made to WAPCo shareholders in 2011 and early 2012, and likewise FMO-IDF has only received some small amounts under FMO-IDF's cash sweep arrangement.
- In August 2012 the pipeline was severely damaged apparently by a ship's anchor and only as per 30 June 2013 has the repair work been done. No revenues have been generated by WAPCo (and hence no income to Bengaz and no loan servicing) from August 2012 to June 2013. The only reason that Bengaz has not been forced into bankruptcy during that period seems to be that shareholders have provided the necessary working capital.
- As of January 2014, the WAGP was shipping approximately 70 MMscf/d (about half of the foundation volumes) and earning USD 9mln per month. At this volume the annual debt service to Bengaz would be about USD 1.3 mln whereas, given the exposure and the interest rate, obligations alone are USD 2.4 mln. Financial projections done for WAPCo in 2014 indicated that at foundation gas volume of 134 MMscf/d debt repayment would occur in 2031.
- End of 2015, average daily gas receipt and delivery for the year was at its lowest. N-Gas reported a reduction in supply due to sabotage on a pipeline (the TransForcados crude pipeline). The drop had a direct impact on WAPCo's revenue, which did not meet the expected results.
- Total outstanding due to WAGP was around US\$ 102.58 million by the end of 2015. The precarious funding situation of the company led the Board of Directors, at the meeting held on 15 October 2015, to ask the Management to model a "dooms day" budget scenario in the unlikely event that the company is forced to shut down any part of its operations.
- WAPCo started 2016 with an expectation of a significant increase in gas flow volumes. It was also expected for the year that new shippers would be signed on to increase the company's revenue stream. Few developments have occurred in this area so far.

As indicated in latest CCRs (2014-2016), the main risk factor which severely impeded the sustainability of the project is of political nature. Indeed, more gas is (and will be) used domestically in Nigeria (unwillingness of Nigeria to supply outside its borders), limiting the operations and revenue of WAPCo since the supply from N-Gas is impacted. Mitigating factors include Ghana envisaging to transport its own gas (the country has developed its gas facilities) through the pipe, which might be more stable in terms of volumes and would generate good revenues for WAPCo. The more IPPs will use gas from WAGP the more cash will flow to Bengaz to repay the loans. In 2012 Bengaz has entered into a joint venture with Gasol plc, named Cogas, which aimed at developing an LNG import terminal in Benin (FMO Energy Dept. was also looking to provide possible financing). However, WAPCo didn't seem eager diversify the gas supply from just N-Gas, since they seem to be concerned to drive N-Gas out completely (2013 CCR).

The table below highlights key profitability, income statement and balance for WAPCo by mid-2016 (latest available to the evaluators). WAPCo posted a net loss of US\$ 33.24 million by the end of Quarter 1 (Q1) of 2016. March 2016 is reported as being the lowest revenue generated so far, while current and legacy invoices continued to remain unpaid. At these revenue levels, WAPCo will not be able to service the interest payments on the shareholder loans and will also not be in a position to repay the principal which falls due by end 2026. Cash flow availability to sustain continuous operations is currently at risk as N-Gas is the only source of WAPCo's cash inflow. In addition to cash flow availability risk, the worsening revenue numbers deteriorate most

of the financial indicators. Debt to equity ratio stands at 96:4, ROE is negative at -54.14%, while ROA YTD is -0.29%.

	Actuals		Budget	
<b>Profitability</b>	<b>YTD 2016</b>	<b>March</b>	<b>YTD 2016</b>	<b>March</b>
Gross Profit Margin	-11.46%	-42.37%	54%	52%
Operating Profit Margin	-28.03%	-66.12%	2%	-2%
Monthly Revenue Growth	-17.38%	-17.38%	-	-6%
<b>Management Effectiveness</b>	<b>YTD 2016</b>	<b>March</b>	<b>YTD 2016</b>	<b>March</b>
Return on Assets :	-0.29%		0.02%	-
Return on Equity:	-54.14%		-22%	-

	Actuals		Budget	
<b>Income Statement</b>	<b>YTD 2016</b>	<b>March</b>	<b>YTD 2016</b>	<b>March</b>
	<b>Million US\$</b>	<b>Million US\$</b>	<b>Million US\$</b>	<b>Million US\$</b>
Revenue	13.53	3.52	13.59	6.57
Other Income	0.97	0.35	0.11	0.06
Operating Cost	(5.77)	(2.03)	(4.26)	(2.14)
EBITDA	7.76	1.50	14.31	4.49
Depreciation and Amortisation	(12.53)	(4.17)	(9.10)	(4.55)
EBIT	(3.79)	(2.33)	0.34	(0.06)
Finance Cost	(29.44)	(10.61)	(19.54)	(9.44)
EBIT to Interest Expense(times)	(0.13)	(0.22)	0.02	(0.01)

	<b>Actuals</b>	<b>Budget</b>
<b>Balance Sheet</b>	<b>YTD</b>	<b>YTD</b>
	<b>Million US\$</b>	<b>Million US\$</b>
Total Cash	65	67
Total Debt *	1,172	1,172
Total Equity	55	59
Debt to EBITDA (times)	151	82
Total Debt/Equity(%)	0.96	0.95
Current Ratio (times)	2.26	

(CCR 2016)

By December 2017 N-Gas had not lifted the force majeure, alleging that the security threats that cause the damage to the lines were still there. The force majeure allows N-Gas to supply limited volume of gas without paying any compensation despite the contract (cf. description section).

Through their participation in N-Gas, NNPC, Chevron and Shell perceive revenues from the provision of the gas to Ghana off-taker whereas Bengaz (and Sotogaz) are the only companies depending exclusively on WAPCo payments to shareholders.

To ensure its survival, WAPCo has proposed strategies to its shareholders, including to put a moratorium on repayment of shareholders loans until 2020/2022. FMO-IDF envisaged to request during the board meeting of December 2017 that minority shareholders (Bengaz/Sotogaz) get reimbursed in advance, since they are less advantaged compared to major shareholders also involved in N-Gas.

The overall outstanding amount has been provisioned (0% in 2012, 50% in 2013, 75% in 2014 and 100% in 2015). The risk of not receiving any payment back was increase with the bank account issue previously described. No figures on the payments received so far by FMO-IDF from Bengaz.

Sources: CCR (2011-2016), IMR 2009

## EQ 4 – ESG Risk Management

## What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)

### JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

In 2008 (CCR, June 2008), the project was categorised B+ in relation to E&S risks, due to the associated environmental risks. The main risks were biodiversity, erosion, emissions to air, water and soil, contractor management, waste management, occupational health & safety, community relations, compensation. The classification evolved to category A in 2010, following WB supervision missions (since FMO-IDF is not in lead position with respect to E&S). WB mission visited all WAGP facilities and did not discern any significant adverse impacts. Recent CCRs (2012-2016) indicate no changes in E&S ratings. E&S Category is still A, i.e. potential significant adverse impacts (2016 CCR). This later CCR states that there are no E&S requirements for Bengaz since the company has no other activity than holding the shares of WAPCo.

Sources: CCR (2008; 2011; 2012), meeting notes

### JC4.2 IDF-financed projects contributed to green and inclusive development

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

The ecological development impact of the project was considered medium, with positive aspects in terms of using waste gas and negative aspects since it is dependant on fossil resource extraction (IMR 2005).

From the environmental point of view, it was expected that once operation starts, most of the flared gas in Nigeria would be used for gas supply by WAPCo to Ghana via Benin and Togo, thus leading to a reduction of the release GHGs in Nigeria, and clean energy production in Ghana, Togo and Benin. No figures provided in terms of GHG reduction.

Regarding the social dimension, community compensations and resettlements have been properly sorted by WAPCo (inspected by WB).

No indication of Bengaz contribution to improved access to electricity in Benin or to any social activities (which is not surprising given the financial situation of the company since the operationalisation of the pipeline).

<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
<p><b>I-4.3.1</b> - Use of Free prior and informed consent principles</p> <p><b>I-4.3.2</b> - FMO verification that higher risk projects comply with national legislation and international norms</p> <p><b>I-4.3.3</b> - Evidence of ESG risk assessment</p> <p><b>I-4.3.4</b> - Evidence of ESIA and ESAP preparation and implementation</p> <p><b>I-4.3.5</b> - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)</p>	<p>FMO-IDF is not in a lead position with respect to E&amp;S. As mentioned in the IMR (2005), FMO-IDF will fully refer to the IDA – WAPCo Project Agreement: “FMO will have to be noticed if they have any breach there, with similar consequences, and FMO will receive all reports as submitted to IDA. FMO will be able to carry out on-site monitoring verification. For environmental and social aspects, this FMO financing can only rely on the World Bank involvement here. No other conditions can be set by FMO. Having studied the available World Bank information and documentation, it is concluded that this project is fully acceptable to FMO. Follow-up monitoring will provide opportunities for verification”.</p> <p>FMO-IDF has received copies of all information and documentation (including any reports, assessments and plans) which were required to be delivered by WAPCo to the International Development Association (WB). According to those documents, WAPCo has been rather compliant with the implementation of environmental and social management plans, and the WB missions did not discern significant adverse impacts.</p> <p>There are indications of FMO monitoring carefully the environmental and social aspects of the project between 2006 and 2010:</p> <ul style="list-style-type: none"> <li>- The CCR (August 2006) indicated that the construction progress in Lagos continued to be hindered by spurious community relations which were being handled by on-site community relations representatives.</li> <li>- The IMR (November 2007) highlighted that with regard to the Environmental and Social aspects, the performance and reporting by the project had not been up to standard. The reasons were considered to be partly due to the attitude of WAPCo management and contractors. A major risk remaining was the social risks in the form of community relations. The document mentions that a visit by FMO would be planned. The document also refers to the limited awareness about the importance of receiving good reporting within Bengaz (and Sotogaz) and the necessity to sensitize them. The overall situation was considered by FMO as being worrisome given the impact of the project.</li> <li>- The IMR (2010) stresses that the lack of yearly update for such a project is unacceptable (notably because the visit announced the year before did not take place). Nevertheless, FMO was in the opinion that the project generally appeared to be in line with the FMO sustainability requirements and the WB safeguard Policies. All the issues identified in the missions conducted by the WB (technical and E&amp;S supervision mission in December 2008; Inspection Panel in August 2008) appeared to be covered in the WB inspection panel plan and the “regular” action plan based on the recommendation notably by ESAP and WB supervision missions.</li> </ul> <p><i>Sources: CCR (2006; 2010), IMR (2007; 2010), meeting notes</i></p>



<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<b>I-4.4.1</b> - Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management	
<b>I-4.4.2</b> - Evidence of feedback and application of lessons learned in subsequent projects	
No evidence for Bengaz (shell company)	

## EQ 5 – Policy

<b>To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?</b>	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendement to the subsidy decision on the involvement of Dutch companies).	
No Dutch company involved in Bengaz.	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals	
<b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active	
<b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries	
<b>I-5.2.4</b> - Jobs created in projects financed by IDF	
N/A	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes	
<b>I-5.3.2</b> - Number and volume of projects co-financed	
No linkages with other Ministry programmes.	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<p><b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process</p> <p><b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs</p> <p><b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring)</p> <p><b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF</p> <p><b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations</p>	
<p><b>I-6.1.3</b></p> <p>Work on this Project commenced after receiving proof in writing of both Bengaz' and Sotogaz' share purchase options into WAPCo in May 2005, notwithstanding the fact that all project info was available to FMO since June 2004. The evaluation period therefore has been rather short but nevertheless very effective since the Project reached financial close December 2004 and led to access to final executed project documents. All independently produced studies have been evaluated and a legal opinion has been obtained from Allen &amp; Overy on the project agreements. The independent studies evaluated included the gas market promotion strategies (by Nexant) and the economic and financial assessment (by IPA Energy Consulting). IDF's investment criteria (for providing loans to corporates) were not fully met: no track record of Bengaz (but that is part of the project) and leverage was too high (solvency &lt; 30%). The project was however considered acceptable for various reasons (high capitalization, risk transferred to WAPCo thanks to the structure, etc.).</p> <p>In line with its E&amp;S procedures FMO conducted a due diligence in 2004, resulting in an approval of the investment proposal in combination with a dedicated action plan. The project's E&amp;S performance is monitored extensively on a regular basis against WB safeguard policies through an independent consultant (Newfields), and through a dedicated WB expert team: the environmental and social advisory panel (ESAP). In 2008, for reasons of efficiency and capacity it was decided that FMO would follow the conclusions of the WB ESAP (a group of independent environmental and social experts working on behalf of the WB).</p>	
<p><b>I-6.1.5</b></p> <p>Bengaz' shareholders represent a broad range of local industries and investors. A competent management structure was established (through the appointment of the manager of an investment company as Chairman of Bengaz; and the founder of a well-known local travel and transport services company as Managing Director). Available information, notably from recent CCRs (2012-2016), indicates BenGaz corporate governance is poor:</p> <ul style="list-style-type: none"> <li>- While working in the restructuring of the loan with the company, the chairman of the Board of Bengaz and majority shareholder has been sued and withdraw from the company by the minority shareholders under the allegations that he had never made his capital contribution. During the process, the minority shareholders requested the court to appoint a charter accountant to go over the company's accounts and transactions, in order to assess how the chairman (M. Monnou) spent the money received by WAPCo during the past years, as it seems that they've never received any part of those funds. There are now proofs that M. Monnou has stolen the money (decision court in favour of minority shareholders→ M. Monnou will be prosecuted).</li> </ul>	



- This new development has interrupted the restructuring and has elevated questions regarding the possibility of coming to an arrangement with the new shareholders. While initially they communicated that their intention was to solve things amicably with FMO, after FMO's requested that they instruct WAPCo to transfer any dividend in the proceeds account, it became evident that they were no different from the predecessor as they ignored FMO requests and they were planning to distribute the WAPCo dividends with no consideration to the current contracts in place.

Corporate Governance for WAPCo is arranged well. With the explicit agreement of the governments (Nigeria, Benin, Togo and Ghana), the WAGP Project is being developed on commercial terms. WAPCo has been established as an arms-length commercial enterprise; none of the public shareholders are in a majority position. For the duration of the license ChevronTexaco and Shell will hold most managerial positions within WAPCo (quality of management rated as good).

Experiences with both clients are positive although both are remotely involved in the project. Contacts with WAPCo improved considerably during 2009 with almost full information sharing but got worse in 2009 / 2010 with the replacement of the Shell-MD by another person who is not willing to cooperate in any way with entities outside the shareholders 'group, as reported in CCRs from 2012 and on. FMO met the MD and his team in October 2010 and was refused any up-to-date information from WAGP. For the enforcement of the shares WAPCo decided to issue a Notice of Refusal to FMO request, alleging that the purported transfer of shares from Bengaz to FMO did not comply with the provisions of the Shareholder Agreement. The 2013 CCR mentions regular contacts between the FMO Special operations and Bengaz via e-mails and phone.

#### **Overview of Bengaz shareholders:**

Bengaz' shareholders represent a broad range of local industries and investors. The core investor is Coryve Investment, a local company controlled by the founder of a reputable law firm called Cabinet Monnou. A competent management structure was established through the appointment of the Gérant of Coryve Investment, as Chairman of Bengaz; and the founder and chief executive of Carl Dork, a well-known local travel and transport services company, as Managing Director. The Société Béninoise d'Électricité et d'Eaux, and the CNSS (Caisse Nationale de Sécurité Sociale) are also shareholders.

*Sources: CCR (2006; 2010 -2016), Financial proposal (2005), IMR 2005, meeting notes*

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
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**I-6.2.1 - Appropriateness of available FMO expertise**

**I-6.2.2 - Trend in of full-time ratio equivalent staff to volume of operations**

No specific indication on the expertise of FMO staff in charge of the project. Nevertheless, the documents available on the project (from the CIP to the latest CCR) can be considered of good quality. Internally, FMO has been flexible in approving the additional funds to finance the overruns, keeping ahead the importance for Bengaz to maintain 2% of the total project (to avoid dilution of shares) – FMO was almost forced to finance the cost overrun due to the set-up of the financing. This risk had not been anticipated upfront. Furthermore, the political risk associated to the supply of gas by Nigeria was not well understood at the time of the due diligence. Indeed, from the at the conception of the proposal gas supply risk was considered to

be low whereas it turns out to be the key reason for failure. The debt service risk also was perceived to be low, with payments from WAPCo to flow into an escrow account.

**JC 6.3** *Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?*

**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

Explanatory factors of the observed delays in the implementation include the following (detailed along the fiche, especially under the description, EQ 1 and EQ 3 sections):

- One of the top firms involved in the construction of the pipeline, Wilbros (~ 1/3 of total project cost), sold the entity that had contracted with WAPCo to a Nigerian company. The successor of Wilbros (ASCOT) did not honor the contract and tried to increase the contract price, delayed work, etc. Finally Chevron decided to terminate the original Wilbros contract and started to execute construction management itself.
- Other delaying factors includes pipe damage, leakage and incorrect moisturing level of the gas.

In the end the Project is delayed by three years.

Explanatory factors of the current situation include:

- The limited supply of gas through the pipeline, due to the political unwillingness from Nigeria to export gas, combined with the observed limited willingness of WAPCo to diversify from N-Gas in order to increase the volume of supplied gas through the pipeline. The limited supply is the key reason for failure.
- Governance issues both in Bengaz and WAPCo, increasing the risk for FMO-IDF to not get paid.
- Internally, FMO has been flexible in approving the additional funds to finance the overruns, keeping ahead the importance for Bengaz to maintain 2% of the total project (to avoid dilution of shares) – FMO-IDF was almost forced to finance the cost overrun due to the set-up of the financing. This risk had not been anticipated upfront.
- Other issues not properly addressed, although raised by FMO during monitoring meetings, such as the penalties to be paid by shareholders in case of delays in project completion and the procedure in case of conflict between parties involved in the project. This later was not adequately addressed given the problems with EPC contractors and insurance companies delaying and increasing the project costs.

## Sources of data

Document title	Date
Questions and Answers	1/04/2004
FMO Rapid risk screen for direct investment pre-finvo	28/10/2004
FINVOB ter bepsreking	28/10/2004
Financing proposal	23/06/2005
Investment and mission review	23/06/2005
Term Facility Agreement	11/08/2005
LDC fund convertible grant proposal	1/05/2006
Independent monitoring report	1/06/2006
Final Eligibility Report	7/07/2006
Review Status check	1/08/2006
Notes to financial statements for the year ended 31st december 2006	31/12/2006
Draft for review: feasibility study	10/01/2007
Investment and mission review - Change request	17/01/2007
Draft Report	1/02/2007
Change request	17/04/2007
Share certificate	26/07/2007
Investment and mission review	28/08/2007
Notification of approval of construction budget amendment	25/09/2007
Change request	1/11/2007
Investment and mission review	13/11/2007
Client credit review direct investment	14/07/2008
Investment and mission review	25/02/2009
Investment and mission review	26/02/2009
Small change request	6/03/2009
Pre-contracting memo	3/04/2009
Client credit review direct investment	10/03/2010
Investment and mission review	18/03/2010
FMO evaluation form 2010	19/08/2010
Investment and mission review	26/03/2012
Client credit review direct investment	24/01/2011
Client credit review direct investment	March 2012
Non-Delegated Client credit review corporate	3/07/2013
Client credit review	2/07/2014
Client credit review	3/07/2015
Client credit review	3/07/2016
FMO extrait	
To IMR	
Share certificate	



## **Digicel (Unigestion holding s.a.)**

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

Remarks:

- Old project (2005-2007) → IO not at FMO anymore. Interview with IDF manager at the time of the implementation of the project (not the IO).
- IDF loans reimbursed less than 2 years after disbursements → almost no progress reports
- Limited information on outcomes/impacts
- No field mission for this project

## 1. Project fiche

Project title	UNIGESTION HOLDING S.A.
Project description	<p>Unigestion Holding S.A. (UH or Digicel Haiti) was a project company of Digicel Limited. Unigestion purpose was to roll out a GSM cellular network to be delivered by Ericsson. Initial targets: to serve 300.000 subscribers and cover all major cities and roads in between with a superior coverage compared to other providers. The construction was foreseen in two phases: the 1<sup>st</sup> phase expected to be delivered in March 2006 (173 sites, 150.000 subscribers) and the 2<sup>nd</sup> phase in 2007 (38 sites, 150.000 subscribers). Since its launch in May '06, Digicel Haiti experienced rapid growth considerably in excess of the business plan, with the 12-month subscriber target of 300k achieved in two months, a subscriber base at the end of August '06 in excess of 500k and a market share of approximately 40%.</p> <p>Digicel International Finance Ltd (“DIFL”) was the dominant shareholder with a participation of 71% in Unigestion and an option to buy-out the minority shareholder, the local GB Groupe S.A. (29%), bringing in local expertise and relations. In 2007, DIFL used their option to buy-out the local minority shareholders and UH became a company fully owned by DIFL. DIFL is ultimately owned by Digicel Ltd (“DL”), a Bermuda-based entity with telecom interests in more than 10 Caribbean islands, and majority-owned (87%) by Mr O’Brien. Digicel had a strong track record with the startup of mobile phone operations in the Caribbean. As per March 2005, the Group was the leading Caribbean phone operator with an annual turnover of USD 477,5mln, an Ebitda of USD 96,8mln, equity of USD 60mln and solvency of 10%.</p> <p>The penetration rate of mobile phone in Haiti was very low in 2005(&lt; 5%) when Digicel entered the market, which was a result of the low purchasing power of citizens, and the high prices/low quality of the existing suppliers. Unigestion was foreseen to compete with three existing mobile phone companies, who all received weak perceptions on price/quality ratio. Market research reports expected Unigestion to built up market share rapidly, which appeared realistic considering the strong competitive position (superior network, high quality/service, strong brand and competitive pricing).</p> <p>Over the period there were two major and distinct European Financing Partner (EFP) – funded operations which provided infrastructure for cellular telecommunications in the Caribbean region:</p> <ul style="list-style-type: none"> <li>- One called “Digicel operation” (07-LC-FMO-0904-DIGICEL as the EFP- reference number), where the</li> </ul>

	<p>Promoting Partner (PP) was FMO and the promoter was DIFL- St Lucia. This project, presented by FMO (USD 35m loan), was approved by the EFP in November 2004 and disbursed in January 2005.</p> <p>- The second operation was “Unigestion operation” in Haiti (<b>13-HT-PRO-0405-UNIGESTION</b>), with PROPARCO as PP for a USD 22m loan and UH as the promoter. It was approved by the EFP in December 2005, disbursed in June 2006 and was early reimbursed in December 2007. It was part of the USD 64m syndicated loan of the original investment (original investment of USD 128m, 50% equity – 50% loan). FMO also participated this funding with a 7 yr USD 12m from IDF (senior secured loan).</p> <p>These operations were followed by a syndicated facility of USD 70m, arranged by Citibank, to which FMO participated with a 6.6 yr USD 15m FMO-A loan. Other financiers in this transaction were Proparco, EDC, Nova Scotia and IFC. The purpose was to finance the expansion of UH, which experienced a rapid growth in excess of the business plan.</p>
<b>Sector</b>	Infrastructure - Operation of satellite-based telecommunication networks
<b>Stage</b>	IDF loan was requested for the launch of a new mobile phone company in Haiti. Successful launch and successful company. IDF loan fully reimbursed (early reimbursement: 7 year loan disbursed in June 2006 and reimbursed in December 2007).
<b>Operation Dates</b>	Finpre/Clearance in Principle (CIP): 21/09/2005, Financial proposal /Approval: 17/11/2005 Project executed as planned. Moreover, due to the unpredicted fast growth of the subscriber base, all investments were implemented well in advance in respect of the schedule and further expansions were anticipated.
<b>Contract</b>	FMO Client numbers 00015761
<b>Country/Region</b>	Haiti / Latin America And The Caribbean
<b>Country category</b>	LIC
<b>Project total cost (€)</b>	<p>Initial Investment: USD 128m (50% Equity &amp; 50% Debt, including USD 12m IDF senior secured loan). The project costs was initially USD 100m. Digicel then changed its business plan to provide for a more aggressive rollout of the GSM network. This resulted in an increase in the investment plan from USD 100m to USD 128m. The debt portion therefore increased to USD 64m (from USD 50m).</p> <p>Additional Funding: USD 140m (50% Equity &amp; 50% Debt, including USD 15m FMO-A senior secured loan)</p> <p>TOTAL Cost: USD 268m</p>
<b>IDF contribution (€)</b>	USD 12m 7Yr Senior Secured Loan (beginning of 2006) from IDF.

Co-financing (€)	Initial Investment and financing plan (FP, October 2005) by year				
	Investment plan in USD		03/2006	03/2007	Total
	Investment fee		2,000	1,000	
			65,744	4,536	70,280
	Investment costs		5,088	5,866	10,954
	Financing cash-flow shortage		7,496		
	Financing cash-flow surplus			9,572	
	Total		80,328	20,974	101,302
	Financing plan in USD				
	Financing		44,000	6,000	50,000
	On loan		24,000	0	24,000
			9,500	2,500	12,000
	From banks		10,500	3,500	14,000
	Financing cash-flow			8,974	
	End of year (positive)		(7,672)		(7,672)
	Total		80,328	20,974	101,302
	<p>The USD 12m of FMO was part of a debt package of in total USD 64m arranged by Citibank N.A. Other financiers in this transaction were Proparco, the French development bank and the EFP fund (a fund where all European development agencies work together including the EIB), EDC, the Canadian development bank and the IFC.</p> <p>Other institutions providing senior debt were: IFC (15m USD), Export development Canada (7.5m USD), Bank of Nova Scotia (5m USD), Citibank (2.5m USD) and Sofides (Haiti) (0.5m USD).</p> <p>Subsequently there has been another syndicated loan of USD 70M, also arranged by Citibank, in which FMO has been involved through a USD 15m secured FMO-A from IDF; other institutions for the syndicated loan: Citibank, IFC, EDC, Nova Scotia and Proparco.</p>				
	Loan Terms				
Senior/Subordinated	Senior				
Convertible	No				
Amount	USD 12 m				
Loan Agreement Date	17/11/2005	Facility No	15219		
Currency	USD				
Tenor	7 years				
Grace period	24 months for the initial agreement				
Interest rate	Margins 400-500 bps. With respect to the MOL financing FMO receives the following margin:				
	Total Debt to EBITDA ratio		Marge (%)		
	≥ 3.0		5.0%		
	3.0 ≥ 2.0		4.5%		



	<table><tr><td>&lt; 2.0</td><td>4.0%</td></tr></table> Floating interest Because of MOL requirements the LIBOR rate was capped at 3.25%.	< 2.0	4.0%																							
< 2.0	4.0%																									
Security	The security package consists out of the following securities: <ul style="list-style-type: none"><li>• A perfected, first priority security interest in the project accounts;</li><li>• A perfected, first priority security interest in the project agreements;</li><li>• Collateral Agent being named loss payee and additional insured for all required insurance;</li><li>• A perfected first priority lien over all assets including the license;</li><li>• A perfected first priority security interest in all equity interests;</li><li>• Securities will be shared on a pari passu basis as will be agreed upon in a Security Sharing Agreement.</li></ul>																									
Fees	Appraisal fee USD 25.000 Front-end fee 1% Commitment fee 0,5%																									
Disbursements	Dates and amounts (from CCR 2007) First disbursement: 01/06/2006; Last disbursement: 01/11/2006. Reimbursement of the USD 27m in December 2007 (from Disbursement and repayments breakdown file):																									
Monitoring	Within 7 working days of each month local management provides a wide range of information to the Group CEO/CFO who then reports to the Board. Reporting takes place every quarter to all banks.																									
Key covenants	<p>The collateral consists of a complete project finance security package, including pledge on assets and shares, parent Digicel Ltd financial completion guarantee of USD 13m and financial covenants.</p> <p>Financial covenants:</p> <ul style="list-style-type: none"><li>• until positive EBITDA: minimum revenue and minimum subscriber number</li><li>• positive EBITDA but negative free cash flow: minimum EBITDA, min EBITDA to interest expense and maximum Debt/EBITDA</li><li>• positive free cash flow, minimum EBITDA to interest expense and maximum Debt/EBITDA and minimum cash available for debt service to debt service</li></ul> <p>Digicel Haiti easily complied with the covenants per 31-03-2007, but for the amount of capital expenditure:</p> <table><tr><td></td><td colspan="2">30-09-2006</td><td colspan="2">31-03-2007</td></tr><tr><td></td><td>Covenant</td><td>Actual</td><td>Covenant</td><td></td></tr><tr><td>Number of subscribers</td><td>420.000</td><td>611.631</td><td>665.000</td><td></td></tr><tr><td>Revenue</td><td>USD 12,5m</td><td>USD 21,2m</td><td>USD 28,0m</td><td></td></tr><tr><td>EBITDA</td><td>n.a</td><td>n.a</td><td>USD 3,45m</td><td></td></tr></table>		30-09-2006		31-03-2007			Covenant	Actual	Covenant		Number of subscribers	420.000	611.631	665.000		Revenue	USD 12,5m	USD 21,2m	USD 28,0m		EBITDA	n.a	n.a	USD 3,45m	
	30-09-2006		31-03-2007																							
	Covenant	Actual	Covenant																							
Number of subscribers	420.000	611.631	665.000																							
Revenue	USD 12,5m	USD 21,2m	USD 28,0m																							
EBITDA	n.a	n.a	USD 3,45m																							

	Capex	n.a	n.a	USD 138m	USD 148m
	For the FY ending March 2007, a capital expenditure limit was set on USD 138m, Digicel Haiti exceeded this amount with approximately USD 10m, but this non-compliance was not considered as alarming, as the excess was not enormous and the capex was used to enable the tremendous growth in subscribers and revenues.				
Financial Risk and Performance					
	Financial proposal/approval		Client Review - Most recent		
Client Risk Rating	“Good”		C1 (54) Financial Sustainability Factor is B2(57), being medium risk		
Loan - Impairment provision	%		%		
Equity - Fair value adjustment	%		%		
Financial performance		30-09-2006		31-03-2007	
		Covenant	Actual	Covenant	Actual
	Number of subscribers	420.000	611.631	665.000	1.395.140
	Revenue	USD 12,5m	USD 21,2m	USD 28,0m	USD 47,6m
	EBITDA	n.a	n.a	USD 3,45m	USD 10,0m
	Capex	n.a	n.a	USD 138m	USD 148m
Client Review -key findings	Since the launch in May 2006, the business has performed very well; Digicel Haiti exceeded its subscriber targets by far (expected was a subscriber base of 1.2m subscribers per March '09, subscribers per March '07 were already higher with an amount of almost 1.4m subscribers). Further, Digicel Haiti became EBITDA positive, and net profitable, in March 2007, earlier than the forecasted second year of operations, but just ten months after launching the business. This was due notably to its high subscriber growth, excessively higher than budgeted. The loan was fully repaid by December 2007 (instead of April 2013 as per the LA).  By 2012 Digicel represented 80% of the mobile telephony market in Haiti (about 5m of subscribers), after the acquisition of Voila, one of its competitor. Other competitors on the market includes Netcom and Haitel (under financial difficulties in 2012). <sup>2</sup>				
Results chain: expectations and achievements					
Logical framework	Inputs: Senior secured term loan of USD 27 million (USD 12 million initially of a total debt package of USD 64 million arranged by Citibank, and an additional USD 15 million of a total debt package of USD 70 million in the upsizing per October '06,				

<sup>2</sup> <http://www.hpnhaiti.com/site/index.php/societe/5877-haiti-telecommunication-digicel-prend-80-du-marche-de-la-telephonie-cellulaire-en-haiti>

	due to rapid growth, considerably in excess of the business plan). Output: a GSM cellular network covering all major cities and roads in between, with a superior coverage compared to other providers. Outcomes: prices drop, increased penetration and improved service. Furthermore, positive impact on re-sellers of pre-paid cards, independent distribution shops, construction companies (cell sites) and the government through VAT and company tax.  Impact: the creation of a mobile telecommunication infrastructure capable to overcome the geographical fragmentation and cultural/political diversity characterising the Caribbean islands.		
Major risks	<p>The finance proposal mentioned the following risks:</p> <ul style="list-style-type: none"><li>• Country and market risks. Haiti is a very difficult country to operate. The local co-sponsor GB Group does provide some comfort. Although some weak regulations are in place the unstable environment might have serious impact on the ability to operate. The current operators have hardly developed the market and are considered to be weak with bad quality systems, weak marketing and bad reputations. Digicel has proven in other established markets with weak competitors that they are able to take market share very quickly using their strong branding, good distribution, good quality and meeting their promises to the market. Sensitivity analysis shows that there is room for setbacks.</li><li>• Change of ownership and/or loss of key management. This is mitigated by the share retention clause in the loan documentation. The company has proven to be able to keep important managers on board with attractive salary package and share option scheme;</li><li>• Currency risk: Mitigated by the expected incoming calls out of the USA resulting in USD revenues. Furthermore the risk is mitigated by the completion guarantee of DIFL.</li></ul>		
Main project issues	No significant issue. The project performed well above what was planned.		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
People served telecom –	#	150,000 subscribers by March 2006 150,000 early 2007	300.000 (after two months) 500.000 (end of August 06’) 1.200.000 (March 2007)

			2.000.000 (March 2008)
<b>Inclusive investments</b>	€m	12	12

## 2. Scoring

	Desk Review
<b>EQ 2 – Relevance</b>	
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3
JC 2-3 Additionality of IDF Loans and Equity Investments	3
<b>EQ 1 - Effectiveness</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	4
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	4
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	4
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	N/A
<b>EQ 4 – ESG Risk Management</b>	
JC4.2 IDF-financed projects contributed to green and inclusive development	3
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	
<b>EQ 6 – Efficiency</b>	
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness.	4

JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	4
<b>EQ 3 – Revolvability</b>	
JC 3.5 Individual Project Sustainability	4
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	
JC 5.2 Effects for Dutch companies and economy	
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	
<b>Scoring Justification</b>	
EQ 2 - Relevance	<p>3</p> <p>The facility carries a high risk profile due to two main reasons: (1) <u>Country risk</u> is very high (-10). A political unrest and/or economic crisis could harm performance and interests of mobile operators; (2) The regulator was closely linked with the government and could possibly give preferential treatment to state-owned Teleco. There was a lot of uncertainty around the efficiency of the regulatory bodies. Additionality was high given limited resources available in country, and there was strong catalytic effect by encouraging the mobilisation of long-term local resources as well as attracting other local financial institutions that were invited to participate to the syndicated senior loans and to share the financial risks.</p>
EQ 1 - Effectiveness	<p>4</p> <p>A highly satisfactory project on delivering infrastructure outputs and short term job creation. Subscription expectations were frequently exceeded. Prices for telecommunications dropped significantly and were then accessible to a larger population. The strong coverage of Digicel mobile network enabled a wider access and competitors were forced to upgrade their networks to provide better overall quality service. However, the project cost went from USD 128m to 268m due to underestimated growth rate of subscriptions.</p> <p>Loans were repaid in 2007</p>

EQ 4 – ESG Risk Management	3 (Social and Environmental Category classified as a B) Social and environmental management in line with international standards, but only a marginal contribution of FMO (IDF) to the ESG management implemented by the company. Due diligence not conducted by FMO.
EQ 6 – Efficiency	4 Highly satisfactory project, since no shortcomings have been identified both related to procedures and timeliness issues, and in terms of staff resources from FMO (at least no issues in terms of skills).
EQ 3 – Revolvability	4 High sustainability, Digicel is a highly successful company. Indeed, it has high operational efficiency since Digicel Haiti was expected to start generating positive cash flows in the second year of operation, but outperformed its expectations and already generated positive cash flows, only ten months after starting operations. IDF was reimbursed in 2007.
EQ 5 – Policy	n/a
Comments	A highly successful project

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learnt and key findings

- The project performed well above what was planned. Beyond the strong market opportunity in Haiti, the good performance of the project can be attributed to the strong experience of Digicel in setting-up successful telecom service providers in Caribbean countries.

#### 4. Findings at indicator level to feed into the EQ analysis

Please provide the main findings emerging from the project review across the set of EQs so as to feed into the EQ analysis. The expert responsible for drafting an EQ will compile into the EQ analysis template all the relevant information emerging from the project review for his/her EQ.

- Please indicate N/A when the indicator is not relevant for the project.
- Please indicate the information source (documents, interviews, etc.) for each data provided: for document (author, title, year, pages where the information can be found); for interviews (meeting note number); for web page (hyperlink and consultation date).

#### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
i) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument); ii) portfolio performance (including reasons for portfolio impairments); iii) co-funding/complementarity with FMO-A portfolio; iv) investment leverage/funding mobilization.	
Portfolio analysis	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure) <b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice). <b>I-1.2.3</b> - Implementation progress – time and cost compared with programme <b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets <b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets: iii) temporary/short term during the implementation period iv) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks	
<b>I-1.2.1</b> Through IDF (USD 12m+15m), FMO has participated to the expansion of Unigestion Holding S.A. (trade name Digicel Haiti), a new project company of the Digicel Caribbean Group (83%) and the local GB Group (17%). Haiti had a base of around 281,000 subscribers in 2004. The country's mobile penetration rate was only 3.5%, which is a significant lag not only compared to its neighbours but also compared to countries such as Côte d'Ivoire, Senegal and Cameroon, which at the end of 2004 had reached levels respectively estimated at 11%, 10% and 9%. This lag was due not only to the political crisis afflicting Haiti but also by a combination of other factors such as the late introduction of the mobile service in the country (1999), the technological standards used (TDMA, CDMA, AMPS), which offer a service quality and an economic model that are less competitive than those of GSM, and last but not least, the poor management of the two existing main operators, for whom	



Haiti has not always been considered as a strategic country. Faced to this situation the government decided (in August 2004) to award three new mobile telecommunication licenses based on the GSM standard: two to existing operators (Haitel and Comcel) and a third one to a new operator. Unigestion Holding sa was selected in May 2005 as the new operator. The 15-year license was obtained for the sum of USD 30 million, payable on advantageous terms over a thirteen-year period.

### **I-1.2.3 and I-1.2.4**

The project costs was initially USD 100m. Digicel then changed its business plan to provide for a more aggressive rollout of the GSM network. This resulted in an increase in the investment plan from USD 100m to USD 128m. The debt portion therefore increased to USD 64 million (from USD 50 million).

The construction was foreseen in two phases: the 1<sup>st</sup> phase expected to be delivered in March 2006 (173 sites, 150.000 subscribers) and the 2<sup>nd</sup> phase in 2007 (38 sites, 150.000 subscribers). Since its launch in May '06, Digicel Haiti experienced rapid growth considerably in excess of the business plan, with the 12-month subscriber target of 300k achieved in two months, a subscriber base at the end of August '06 in excess of 500k and a market share of approximately 40%. To face this rapid growth, the project cost was increased by USD 140M (additional funding 50% Equity & 50% Debt, including USD 15m IDF senior secured loan). The total cost of the project amounted to USD 268M.

The strategy of combining network quality, innovative service offering, extensive distribution channels and strong brand, Unigestion has been able to:

- Develop mobile penetration: for example, in Haiti the penetration was below 5% before Digicel's launch, and was above 20% (end-2007) less than 18 months after the Unigestion SA entered the market,
- Take a leading position vs competition: Digicel is No 1 in Haiti (over 50%)

The objectives of Unigestion in Haiti have then been achieved: the Digicel mobile phone network roll-out was executed and gave results well above the expectations.

**I 1.2.5** For the Unigestion operation, Digicel-Haiti had created some 214 new jobs in its first year of its life and totalling 828 staff in March 2008.

*Sources: Kwartaal bericht expansion Unigestion Digicel; 090112 EFP Evaluation*

<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b>
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**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

The main social effects expected from the financing were the impact on customers and consumers as prices would drop, penetration would increase further and service would improve more (quality of services, new services, etc.). Furthermore it would have a positive impact on resellers of pre-paid cards, independent distribution shops, construction companies (cell sites) and the government through VAT and company tax. The import of the equipment would have a negative impact on the trade balance of Haiti but the net USD income out of international services would partly offset this negative effect. Indirect services like independent telecom shops and resellers of pre-paid cards would benefit of the intensified competition in the mobile sector

By 2008, Digicel was a Caribbean leading company with approximately 4,000 employees, of which around 900 staffs in Jamaica and more than 800 in Haiti<sup>3</sup>. Indirect jobs created by Digicel operations, chiefly in SMEs providing services to Digicel customers has been estimated (by Digicel Group) at some 12,000 jobs for the region (no specific estimations for Haiti regarding indirect jobs). According to a study conducted by Bearingpoint, from 2006 to 2008 in Haiti, Digicel has occasioned 60 thousands street vendors<sup>4</sup>.

Employment of Digicel group by country													
Year / staff	Group	Jamaica	East caribbean	Dutch caribbean	North caribbean	T & T	Suriname	Guyana	El salvador	<b>Haiti</b>	French west indies	Honduras Panama	Total
<b>2002</b>	0	361	0	0	0	0	0	0	0	<b>0</b>	0	0	361
<b>2003</b>	0	422	3	0	0	0	0	0	0	<b>0</b>	0	0	425
<b>2004</b>	58	587	203	40	18	5	0	0	0	<b>0</b>	0	0	911
<b>2005</b>	81	721	166	42	24	13	0	0	0	<b>0</b>	0	0	1047
<b>2006</b>	100	755	257	93	87	330	0	0	0	<b>214</b>	95	0	1931
<b>2007</b>	157	908	323	150	121	494	32	164	260	<b>763</b>	100	0	3472
<b>2008</b>	174	875	374	152	125	411	122	156	482	<b>828</b>	131	144	3974

East Caribbean *Anguilla, Antigua & Barbuda, Barbados, Dominica, St. Kitts & Nevis, St. Lucia, St. Martin, St. Vincent, Grenada*

Dutch Caribbean *Aruba, Bonaire, Curaçao*

North Caribbean *Bermuda, Cayman, Turks & Caicos*

French West Indies *Martinique, Guadeloupe, French Guiana*

GROUP *HR, CEO, Finance, Business Dev, Commercial, Technology, Rollout & Regulatory*

The overall ranking of Haiti has worsen from 174 to 181 (over 190) from 2013 to 2017, which indicate that it is less easy to do business in the country in 2017 compared 2013. No indicator directly related to telecoms. However, as previously mentioned, the mobile penetration rate increased from about 5% in 2004 to above 20% in 2007, with Unigestion leading the market (over 50%).

Doing business Haiti	2013 rank	2017 rank
Overall	174	181

*Source: World Bank, 2017*

<sup>3</sup> Currently the Digicel Group has operations in 29 Caribbean and Central American countries and territories; and 4 in the Pacific. <https://www.digicelgroup.com/en.html>

<sup>4</sup> <http://www.maghaiti.net/digicel-fete-ses-9-ans-en-haiti-le-parcours-dun-geant-de-la-telecom/>

*Sources: finvob digicel Haiti; Kwartaal bericht expansion Unigestion Digicel; Kwartaalbericht; 090112 EFP Evaluation; World Bank, 2017*

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
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**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

See I-1.2.1 and JC 1.3

In addition, when the project was launched, the fixed line penetration was limited to larger cities (e.g. Port-au-Prince); the strong coverage of Digicel mobile network enabled a wider access to the telecommunications. Prices for telecommunications have dramatically dropped (no figures for Haiti, but in Jamaica the price has dropped by 40% when Digicel entered in the Caribbean market). This cost reduction has also occurred in countries where the GSM technology allowed Digicel to offer free incoming calls, free activation fees and the billing per second. In parallel to this drop in telecommunication prices, Haiti has registered a significant increase in its GDP per capita, from 465 USD in 2005 to 616 USD in 2007 (32%) but it remains the poorest Caribbean nation. We cannot confirm the contribution of Digicel in this increase of the GDP, however the literature highlights that there are potential links between access to technologies (including telecoms) and poverty as telecoms increase access to development opportunities.

*Source: 090112 EFP Evaluation; Kwartaalbericht; World Bank (February 2018)*

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
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**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

Both IDF loans (USD 12m + 15m), disbursed in June 2006, were prepaid in December 2007 due to much higher revenues than planned as a result of much faster subscriber growth. IDF perspective since the IDF loans ( (according to the disbursement Excel file received from FMO) was fully reimbursed by December 2007. Over this period there has been an Investment & mission review (documents dated October and November 2005), a scorecard in October 2006, a Client credit review in August 2007 and an evaluation in December 2008. This evaluation was

about the operations financed under the European Financing Partners Agreement (Digicel Saint Lucia and Unigestion in Haiti). Information is provided on the number of subscribers, the evolution of the mobile penetration rate and the (direct and indirect) jobs related to the project. No reference to previous IDF projects.

## EQ 2 – Additionality and catalytic effects

Please find at the end of this document the types of additionality

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

IDF and FMO-A have both funded Unigestion. IDF contributed to the initial investment plan (USD 12m over the USD 64m requested) whereas FMO-A participated in a subsequent financial plan to fund the high growth in the number of subscribers (USD 140m, of which 50% of debt including USD 15m from FMO-A). The original finance was funded through IDF due to weak regulatory framework, country risk and Digicel being a start up. Since Digicel has not encountered any problem with the regulator and has exceeded its business plan, FMO felt comfortable to fund the second with FMO-A. the margin of both loans were the same, the difference being in the tenor and grace period (both longer for IDF).

The characteristics of the loans, from Financial proposals, are summarised in the following table:

Total Debt to EBITDA ratio	Margin (%)	
	IDF	FMO-A
≥ 3.0	5.0%	5.0%
3.0 ≥ 2.0	4.5%	4.5%
< 2.0	4.0%	4.0%
	IDF	FMO-A
Tenor	7 years	6 years 5 months
Grace period	24 months	17 months

The internal rating of the country for FMO-A was D, since Haiti was not a focus country and is a difficult one. The score card of October 2005 (related to IDF loan) indicate a country score of 31 (no further indications to compare D and 31).

Sources: *finvob digicel Haiti, Finance proposal Digicel (October 2005), Finance Proposal Unigestion S.A. (October 2006)*

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.

**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

The original project funding was the following:

<b>Financing plan in USD</b>	<b>03/2006</b>	<b>03/2007</b>
Equity	44,000	6,000
Ericsson loan	24,000	0
FMO	9,500	2,500
Other banks	10,500	3,500
Operating cash-flow		8,974
Cash end of year (positive)	(7,672)	
<b>Total</b>	<b>80,328</b>	<b>20,975</b>

Initial Investment: USD128M (50% Equity & 50% Debt, including USD 12M IDF senior secured loan). Additional Funding: USD 140M (50% Equity & 50% Debt, including USD 15m IDF senior secured loan). Total cost: USD 268M; total debt: USD134M, with USD 27M of IDF secured loan. IDF provided about 20% of the debt. Other senior lenders were IFC (15m USD), Export development Canada (7.5m USD), Bank of Nova Scotia (5m USD), Citibank (2.5m USD) and Sofides (Haiti) (0.5m USD).

Although not being the lead arranger of the syndication, IDF had a catalytic role. The financial added value of IDF was indeed mostly based on the catalytic effect by attracting other local financial institutions that were invited to participate to the syndicated senior loans and to share the financial risks. However, the lead arranger was Citibank

*Sources: 070305 Nulmeting Digicel Haiti voor MOL fonds; Financieringsvoorstel digicel Haiti oktober 2005; 090112 EFP Evaluation; Finvob digicel Haiti*

### **JC 2-3** ***Additionality of IDF Loans and Equity Investments***

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed investment, start-up, technical assistance...)

Regarding additionality, FMO through the IDF (MOL fund) played an important role as financier of this project. Although the Group had good access to the international capital market and international operating banks it was not easy to find financial institutions to leverage their investment in Haiti. Furthermore, the 7-year duration was rather difficult to obtain at the time for “risky countries” such as Haiti.

FMO’s role in this project is important as our participation was followed by Proparco. Furthermore we also play a role in Digicel maintaining its good environmental and social standards. Covenants in this respect have been agreed upon and are included in the loan documentation. As long term funds for Haiti are only available from agencies such as FMO, Proparco, IFC and EDC our involvement as financier was necessary to get the funding in place.

Source: 070305 Nulmeting Digicel Haiti voor MOL-fonds; Financieringsvoorstel digicel Haiti oktober 2005; Kwartaalbericht

Additionality and catalytic scores were the following:

Additionality	3	EDC and FMO are asked to provide financial support
Catalytic role	2	Vital role for development banks

A score of 3 indicates an “essential” role, and 2 a “substantial” one.

Source: finvob digicel Haiti

## EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

### JC 3.5 Individual Project Sustainability

**I.3.5.1** - Review performance and sustainability of 15 projects selected for desk review.

The project has performed well, with no delays in the implementation. The performance was higher than foreseen in the business model, resulting in a need of additional funds to face the high growth of the number of subscribers. Cf. JC 1.2

The project was sustainable. By 2008, Digicel (which includes Unigestion) was a highly successful company, with sound key indicators and financial ratios. Over the period 2002-2008 the compound annual growth rate was 60%, of EBITDA was 51% (up to 505m USD) and of subscriber base was 69% up to 6.5m clients. According to the EFP evaluation, Digicel has been spending around 350m USD per year in equipment during the period 2005-2008, equivalent to 30% of its annual sales. This rate of investments with the growing positive EBITDA demonstrated a strong potential for growth. In March 2012, Digicel has absorbed the company Comcel for USD 97M and became a monopoly in the country, with a market share of 80%.

The table below provides an overview of the annual financial results per March 31, 2007, compared to the Bank Plan of the Upsizing:

	Bank Plan per 31-03-2007	Actual Results	Variance
Subscribers	750,000	1,395,000	645,000
ARPU (*)	13.08	12.44	(0.64)
SAC(*)	63.94	56.0	7.94
	USD in 000		USD in 000
Revenue	74,700	106,863	32,163
SAC	44,400	78,148	(33,748)
EBITDA	(37,200)	(44,678)	(7,478)
EBITDA Margin%	n.a	(42%)	n.a
Net profit	(78,540)	(46,615)	31,925
Capex	137,300	149,269	11,969
Equity	34,533	61,000	26,467
Solvency	16,9%	19,5%	2.6%
Closing cash	25,100	11,139	(13,961)



*Source: Review Digicel Haiti 2007/7 (\* ARPU: Average Return Per Unit (monthly); SAC: Subscriber Acquisition Cost (monthly per subscriber)*

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

### **JC4.2** *IDF-financed projects contributed to green and inclusive development*

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, ‘emission avoidance’ or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of ‘*doubling impact and halving footprint by 2020*’

Telecommunication projects are classified as a B project according to World Bank definitions. Digicel has implemented an environmental management system throughout the Group, which also applied in Haiti. Main environmental issue of a mobile network is the selection of cell sites where transceiver equipment is installed. Sites are bought from private landowner and Digicel has a Community Liaison Policy concerning the obligation to discuss the cell-site locations extensively with the local community. The company purchases power from the national grid and has fuel oil based stand-by generators in place. An environmental compliance certification is prepared every year and covers the main issues of the impact on the environment and of health & safety and social management. Wasted TRU's are disposed under the service contract by Ericsson. The existing procedures keep under control and minimise the risk for the environment and for human beings. We can therefore say that the environmental impact of the activities of the Group is relatively limited.

*Source: 070305 Nulmeting Digicel Haiti voor MOL fonds; 090112 EFP Evaluation*

The Social Category is classified as a B. The Group has implemented a human resources policy and procedure manual including health & safety procedures. A working week is 40 hours. The workforce is not member of a union. Salaries are positioned at the mean of the market and bonuses can go up to 50% of a basic salary. Digicel provides life, pension and health insurances, subsidies on lunches and concessions on phones. There is management development system in place to develop local people to grow into management positions. In the case of cell sites Digicel Haiti has a policy in place to prevent any resettlement.

A part the usual sponsorship that telecom provider use for reinforcing their brand, Digicel Haiti has created a Foundation with the objective of rebuilding 20 primary schools and making available for free thousands of vaccinations against most common parasites and diseases. These initiatives offered the access to education, made by fully trained teachers, to more than 7000 children.

*Source: Financieringsvoorstel digicel Haiti oktober 2005; 090112 EFP Evaluation*

### **JC4.3** *FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices*

**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3 - Evidence of ESG risk assessment****I-4.3.4 - Evidence of ESIA and ESAP preparation and implementation****I-4.3.5 - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)**

Mobile systems have limited environmental impact, apart from the visual impact of base station towers (telecommunication projects are classified as a B project according to World Bank definitions). Digicel, since the beginning of its activities, has implemented an environmental management system. Main environmental issue of a mobile network is the selection of cell sites where transceiver equipment is installed. Sites are bought from private landowner and Digicel has a Community Liaison Policy concerning the obligation to discuss the cell-site locations extensively with the local community. Digicel obtained all necessary licences and permits for the cell sites from the National Environmental Planning Agency. Regarding social dimension, Digicel Haiti has created a Foundation with the objective of rebuilding 20 primary schools and making available for free thousands of vaccinations against most common parasites and diseases. According to the 2008 Evaluation, these initiatives have offered access to education (by fully trained teacher) to more than 7000 children.

An environmental compliance certification is prepared every year and covers the main issues of the impact on the environment and of health & safety and social management.

FMO's contribution on E&S was therefore marginal and consisted in requiring the company to report on these aspects on the basis of the IFC guidelines that it follows and ILO standards. No evidence of any other (potential) contribution.

*Sources: Kwartaalbericht, Financieringsvoorstel digicel Haiti oktober 2005; Operations evaluation, December 2008*

<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
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**I-4.4.1**

Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management

**I-4.4.2**

Evidence of feedback and application of lessons learned in subsequent projects

No information available

**EQ 5 – Policy**

<b>To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?</b>	
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<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
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A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).

The portfolio analysis (file provided by FMO) indicates that there are no Dutch companies involved in this project.



<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
No Dutch companies involved (see JC 5.1)	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
None.	

## EQ 6 – Efficiency

<b>Has FMO efficiently and appropriately managed the Fund?</b>	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations.	
<p>The process from the CIP to the approval of the FP was relatively short: Finpre/Clearance in Principle (CIP): 21/09/2005, Financial proposal /Approval: 17/11/2005 (for the first loan), a period of just under two months.</p> <p>The financial proposal addressed the key issues related to the investment by IDF. The FP also contains documentary evidence of project compliance with FMO and IDF investment criteria. IDF involvement in the project is justified on several aspects (positive environmental/social contribution, improvement of infrastructures, high additionality, etc.). The investment has been approved in November 2005 by the IC with the following conditions:</p> <ul style="list-style-type: none"> <li>- Strong preference for a fixed interest rate of all debt facilities, to be discussed with the client and Citibank.</li> <li>- Restriction of pricing grid. If financial covenants other than debt/ebitda covenant are breached, a discount on the 5% spread is not applicable.</li> <li>- Definitive level of financial covenants to be agreed upon by IMR.</li> <li>- Preferably a financial completion guarantee of DIFL (instead of DL).</li> <li>- Re-assess calculation of the collateral value and enforceability in the Scorecard, based on the legal Due Diligence.</li> <li>- Consider to provide a local currency loan instead of a USD loan, to mitigate currency risk (reward structure to be agreed upon by IMR).</li> </ul>	

The investment officer was complimented by the IC for the good quality of the proposal. To prepare the proposal FMO has received annual reports of the DIFL and DL, an extensive business presentation of the project company and a financial model prepared by the company. To verify the market assumptions FMO has received a market study supporting the analysis for most of the markets where Digicel is active. To further substantiate the assumptions there have also been discussions with key Board members.

A corporate governance risk analysis has also been conducted (rated good). Major risks identified included the strong dependency on one major shareholder (mitigated by the share control clause in the term sheet) and the fact that it was difficult to find good people to work in Haiti. The loss of key managers could then be a risk. However the hired management team was well qualified and had attractive remuneration schemes.

**JC 6.2** *FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support*

**I-6.2.1** - Appropriateness of available FMO expertise

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

FMO expertise was appropriate for the project:

- The project fitted in FMO's strategy to leverage on FMO's knowledge of the telecommunication market and experience with Digicel Group. FMO played an important role as financier, especially by leveraging its expertise in debt financing. The Group had good access to the international capital market and international operating banks. It wouldn't have been possibly or at least unlikely, to find a financial institution willing to leverage their investment in Haiti.
- According to the EFP evaluation, both FMO and PROPARCO were very effective in appraising and introducing the project to EFP. Their follow-up of the clients was particularly useful to help the other Promoting Partners in understanding this unusual case of a company growing faster than any reasonable forecast.

**JC 6.3** *Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?*

**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

**Sources of data**

Document title	Date
Nulmeting Digicel Voor MOL Fonds	2005
FINVOB Digicel	1/09/2005
Finance proposal	1/10/2005
Investment & mission review (IMR)	18/10/2005
CCR Scorecard	31/10/2005
IMR Questions and Answers	7/11/2005
Frontpage Finance proposal	8/11/2005
Investment & mission review (IMR)	9/11/2005
Investment & mission review (IMR)	11/11/2005
Notitie Aangepast Business Plan IMR	2/03/2006
Tranche A Credit Agreement	1/05/2006
E&S Compliance Certificate	8/06/2006
Finance proposal	15/06/2006
FINVOB	19/09/2006
Client Credit Review - Frontpage	3/10/2006
Client Credit Review - Scorecard	3/10/2006
Amended and Restated Tranche A Credit Agreement	15/11/2006
Review status check	31/03/2007
Penalty Interest Invoice	20/09/2007
Prepayment notification	30/11/2007
EFP Evaluation	1/12/2008
Kwartaal bericht expansion	N/A
Kwartaal bericht expansion	N/A



# **Dutch Banglabank Ltd.**

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

## 1. Project fiche

Project title	Dutch Banglabank Ltd.		
Project description	DBBL was established in 1995 and operational since June 1996 with FMO as co-sponsor with a 30% stake. At the time of the approval of the IDF investment in November 2007, FMO had sold most of its shares and only 1% of the equity remained. It has developed into a medium-sized bank, financing SMEs and high growth manufacturing industries as well as retail clients. In 2007 DBBL had 39 branches and 684 employees. DBBL has set up a foundation (DBBF) where 2.5 % of the profit is transferred for social purposes. In 2004 DBBL increased its contribution to DBBF to 5% of its profit. Apart from the IDF subordinated loan FMO has provided different facilities, such as an export loan and housing loans, under the MASSIF and FMO-A facilities. Most of the equity has been sold and by 2014 FMO owned only 1% of DBBL. The IDF subordinated loan of US\$ 10 million was intended to finance infrastructure related projects. DBBL intended to focus on <u>enabling financing of effluent water treatment plans</u> in various parts of Bangladesh where textiles play a very important role as well as <u>schools and hospitals</u> .		
Sector	Financial institutions/banking		
Stage	Expansion		
Operation Dates	Finpre: Clearance in Principle (CIP): 23-4-2-2007 Financial proposal /Approval: 06-11-2007 Effective date: 26-6-2008 Expiration Date: 14-12-2018		
Contract	FMO Client number: C00015053		
Country/Region	Bangladesh, Asia		
Country category	LDC		
Project total cost (€)	n.a.		
IDF contribution (€)	US\$ 10 million		
Co-financing (€)	Increase of the existing housing loan (NO. 2) with the equivalent of US\$ 5 million in LCY Taka not Massif (lack of eligibility) Existing loans: 1. Export Loan US\$ 2.5 million FMO-A 2. Housing Loan Takas 270,9 million Massif 3. Housing Loan US\$ 5 million FMO-A		
Loan Terms			
Senior/Subordinated	Subordinated loan		
Convertible	No		
Amount	US\$ 10 million equivalent in Taka		
Loan Agreement Date	26-6-2008	Facility No	108615
Currency	Taka		
Tenor	12 years		
Grace period	5 years		
Interest rate	Fixed 5% from LOI replace with T-Bill of 91 days (7.62%-7 Oct 2007) plus result linked return Margin for the loan will depend on the number of sub-loans disbursed to LDC-eligible clients in the infrastructure sector. From smaller than 4 to larger than 10 sub-loans 4.5% margin to only 1% margin.		
Security	4 most important and essential covenants (see below)		
Fees			
Disbursements	US\$ 5 million 26-8-2008		

	US\$ 1.6 million 31-12-2009 Remainder of loan US\$ 3.434 million was cancelled		
Monitoring			
Key covenants	<p>1. CAR &gt;10%. Bangladesh Bank requires a CAR-minimum of 9%. Dividends will only be allowed after reaching a minimum of 10% CAR. As an added measure, Tier 1 should be at least 60% of the Total of Tier 1 and Tier 2 capital (See Annex 6-form of compliance in FP)</p> <p>2. Open loan exposure minus cash collateral &lt;25%</p> <p>3. 3 months maturity gap local currency &lt;75%</p> <p>4. Single borrower limit to be increased to &lt;35%</p> <p>The Bank could invest in the following infrastructure-related sub-sectors: telecommunications; provision of water and distribution; fixed infrastructure-ports, airport; mobile infrastructure-ships, trucks, wharfs; environmental infrastructure-water purification, waste management; and social-health care, hospitals and schools.</p>		
Conversion features	n.a.		
Equity Terms			
Direct			
Indirect – Fund			
IDF Investment (\$, €m, local currency)			
Total Project/fund			
IDF Stake (%)			
Investment date		Facility No	
Disbursements	Dates and amounts		
Direct investment – exit strategy			
Direct investment - put option terms			
Fund life			
Grants			
Amount			
Convertible	Yes/No		
Purpose			
Grant agreement date		Facility no	
Key terms			
Disbursement	Dates and amounts		
Conversion terms			
Data limitations and constraints			
	Limited data was available in respect of E&S, although FMO provided (2 November 2017) a report from FI Konsult dated July 2017 and a Client		

	ESG Report of April 2016.	
	No data were made available on the use of funds of the IDF subordinated loan and it seems that FMO had not requested information respectively. Mention was made of loans to the textile sector in respect of affluent treatment plants in 2016.	
	Very little data are available on developmental issues. The scorecards do give an indication but the CCRs report very little key results in respect of key development issues. No specific targets seem to be set in this respect.	
	Reporting on the FMO-A facilities seems adequate, but reporting on the IDF loan seems lacking.	
Financial Risk and Performance		
	Financial proposal/approval	Client Review - Most recent
Client Risk Rating	Country risk: D Environmental Cat. B+ Environmental Risk: 44 Social risk factor: 50	F13 in 2014 F12 in 2015
Loan - Impairment provision	%	%
Equity - Fair value adjustment	%	%
Financial performance	Dutch Bangla Bank Ltd (DBBL) has shown a stable development in recent years, both in capitalization, profitability and in growth of loans and deposits. The asset quality has been under pressure like all Bangladeshi banks, but have been kept relatively well under control, in terms of relatively low and stable asset quality ratios. Asset quality has been in line with or even better than its peers in Bangladesh. NPLs steadily increased since 2012 to 4.5% per June 2015 and still show an upward trend especially in nominal terms. Restructured loans have been reduced to a low level of less than 0.5% from a considerable level in 2013. Write offs are at a low level of around 1% annually. The loan loss reserve coverage is strong and stable at 80%, and the open loan exposure ratio is at an acceptable level of 15%. Like other Bangladeshi banks, DBBLs loan portfolio has a substantial concentration in several large clients. The Single Economic Group Exposure ratio is high at 23%, remaining within the covenant of 25% of Tier 1 capital. The concentration also is measured in the aggregate large exposure ratio, its exposure to its 10 largest borrowers. This ratio is high at 220% of capital, though being reduced from 262%. But also the top 20-30 largest borrowers show similar high exposures, adding to the high concentration of risks in the portfolio. Investments in government securities and balances at the central bank are relatively low, and serve almost completely to meet the Cash reserve requirement (6.5%) and the Statutory Liquidity Ratio of 13% of deposits. The government assets ratio, the excess over these statutory levels, is only 4%. See further table below with historical data up to 2016.	



	DBBL Operating Highlights									
		2016	2015	2014	2013	2012	2011	2010	2009	2008
		Taka bn	Taka bn	Taka bn	Taka bn	Taka bn	Taka bn	Taka bn	Taka bn	Taka bn
	Total assets	276.84	244.06	215.99	185.54	155.90	123.27	101.18	81.79	61.62
	Loans	173.40	152.27	124.40	106.42	91.65	79.66	67.66	48.41	41.70
	Equity	17.66	16.75	14.52	12.64	10.85	8.94	7.00	4.35	3.16
	Provisions	2.29	0.17	0.81	1.04	0.39	0.23	0.46	0.43	0.07
	Net income	1.76	3.02	2.21	2.00	2.31	2.15	2.00	1.13	0.82
	Ratios									
	Capital adequacy	13.1%	13.7%	13.8%	13.7%	12.0%	11.2%	9.6%	11.6%	10.9%
NPLs	5.2%	3.7%	4.4%	3.9%	3.0%	2.7%	2.4%	2.5%	3.3%	
ROA Equity	10.2%	19.3%	16.2%	17.0%	23.4%	27.0%	35.3%	30.3%	29.9%	
ROA Assets	0.7%	1.3%	1.1%	1.2%	1.7%	1.9%	2.2%	1.6%	1.5%	
No of branches	165	155	145	136	126	111	96	79	64	
No of Employees	6,127	5,201	5,556	4,666	5,268	4,015	2,794	1,785	1,229	
Source: DBBL 2016 and 2012 Annual Reports										
Client Review -key findings	Financial system: Although regulation by Bangladesh Bank (Central Bank) is accentuated frequently, the Bangladesh financial system at the start of the IDF loan was not on international level. However, in the period before 2007, a sale of a stake in a major nationalized bank was taken over by 2 foreign companies, which paved the way for more foreign participation and development of the financial markets with international expertise. Monitoring and reporting has also improved substantially has been adequate, and the financial reporting by the client has been positive.									
	Local conditions: A caretaker government was installed in 2006/2007, which was seriously fighting corruption. Stock markets were reacting positively at the time. The Bangladesh economy has been developing less strong in more recent years, also influenced by political and social turbulence related to elections. Country risk remains high.									
	Local currency issues: FMO accepts currency risk in case of depreciation of the Bangladesh Taka. The Taka has a general tendency of depreciation over time in relation to the Euro and USD. Mitigating factor is the benchmark rate of 182 days. FMO has negotiated a favourable FX-rate at the time of disbursement with Standard Chartered Bank.									
	Corporate Governance: Sponsor shareholder Mr. Ahmed has a lot of influence. Mitigation: Mr. Ahmed has resigned as chairman of the board. 2 independent board members remained. The resignation of Mr. Ahmed has enabled the bank to demonstrate higher professional and ethical standards with more independence, which is a positive signal.									
	Operational results: Interest margins are decreasing with competition. At the time of approval NPL's were in the 2-3 % range with good reserves in place. FMO monitors the NPL's so that they remain in this range and not increase further. In general Bangladeshi banks have been affected by the increasing NPLs (and restructured loans) more recently. However, DBBL has been able to contain its asset quality at a relatively good level (4.5% in June 2015).									
	Environmental performance: Bangladesh signed the UN Conference on Environment and Development 1992. Local guidelines are based on the Environment Protection Act 1995. Several government institutions are busy with monitoring and supervision of emissions of gasses, waste-disposal, deforestation, establishment of industries near residential areas. DBBL checks the clients for compliance with these guidelines.									
	The production activities of the clients of the export loan have an									

	<p>environmental impact (chemical waste in the bicycle and garment sector). DBBL is aware of this and environmental issues are part of the credit analyses and loan documentation. Some improvement on reporting and action plans was required. DBBL has been categorized as B+ like other Bangladeshi banks, due to involvement in garment industry and ship breaking clients. DBBL's exposure to textiles and RMG sector has slightly decreased from 36% to 33%, and other high risk sectors include construction (3%), power and gas (1%) engineering and metal industries including ship breaking (6%) and agriculture (1%).</p> <p>Social Risk: Within DBBL the manual for social policy is in place. Primary and secondary labour conditions are in line with the Bangladeshi banking sector. The conditions for private banks are much better than the government owned banks. The good reputation of the bank put them in the position to hire young, bright new staff. The social risks in the portfolio are well managed based on external social audits.</p>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p><u>Inputs:</u> Since the establishment of DBBL in 1996, FMO participated as equity partner in the bank and intensified its financial support through different credit lines. The IDF financing in 2007 was a continuation of this financial support, though now targeting the infrastructure sector.</p> <p><u>Outputs:</u> As is common for a financial institution, it provides loans and guarantees to its customers, and delivers a broad range of other financial services to facilitate private sector companies.</p> <p><u>Outcomes:</u> Through providing this broad range of financial products to its customers, growth potential is created in a variety of industries, in the case of DBBL in particular to the textile sector. Private sector development is a key outcome of this process.</p> <p><u>Impacts:</u> Eventually it is expected that through a better financial system with trustworthy commercial banks such as DBBL, the corporate sector thrives, thereby creating many new jobs, and eventually improving people's lives.</p>
<b>Assumptions</b>	<p>As was mentioned above, Dutch-Bangla Bank Ltd (DBBL) has shown a stable development in recent years, both in capitalization, profitability and in growth of loans and deposits. The asset quality has been under pressure like all Bangladeshi banks, but have been kept relatively well under control, in terms of relatively low and stable asset quality ratios. In respect of <u>financial risks</u> DBBL aims to implement a number of policies to safeguard against potential risks. It is retaining profit, strengthening Tier 2 capital and improving the overall risk management system in order to improve the CAR. Furthermore, DBBL aims to mitigate the risk of falling net interest margin by focusing on retail account openings and by improving asset quality, which in turn is done by diversifying the loan portfolio and intensified monitoring. In the light of increased competition, DBBL is also improving customer services (with a focus on technology) and strengthening brand image. <u>Country/political risk</u> has been identified as a key risk, as the Bangladesh economy has been developing less strong in more recent years, also influenced by political and social turbulence related to elections (cycles of 4 years). This type of risk is not easy to mitigate, although a good functioning financial institution should be well placed to</p>

	<p>weather political storms. In DBBL's case the institution is anchored in the Bangladeshi society with a range of good quality clients and a steady pool of deposits from a clientele that exercises trust in the bank. For keeping up a good reputation, <u>asset quality</u> is essential for a financial institution. Unfortunately, Bangladeshi banks have been affected by increasing NPLs (and restructured loans) over recent years. However, DBBL has been able to contain its asset quality at a relatively good level. As was mentioned earlier, DBBL, like other Bangladeshi banks has a relatively high concentration of the loan portfolio in several large clients, as expressed in aggregate large exposure ratio at over 200%. This is an area where special attention is needed, to reduce risk. In respect of <u>environmental &amp; social risks</u> DBBL has been categorized as B+ like other Bangladeshi banks, due to involvement in garment industry and ship breaking clients. A mitigant is that FMO together with the client hired FI Konsult to assist in the improvement and implementation of their current ESMS (see report of FI Konsult stored on the FMO memory stick).</p>
<b>Main project activities and achievements</b>	<p>DBBL focuses on the midsize market including SME's with trade related products, working capital financing and term loans. In DBBL, banking products and services based on latest technology and multiple delivery channels are aimed at faster and better customer services at the doorsteps of customers at affordable cost. The overall market share is low (1-2% in an overbanked environment), but the reputation DBBL as a social driven bank is very good. Their market share with ATMs (1,940 end 2011) is very high and an initiative 2012 with mobile banking in rural areas (resulting in winning various awards) further improved reputation. DBBL end 2011 had 111 branches and 4,015 employees (2794 employees mentioned in the CCR). Over the years the capital adequacy ratio (CAR) developed in a positive way and the bank remained profitable since the disbursement of the IDF loan in 2007, showing the following net profit figures: 2007 USD 4.8 million; 2008 USD 8.5 million; 2009 USD 16 million; 2010 USD 28 million; 2011 USD 26 million; 2012 USD 29 million; 2013 USD 25.8 million; 2014 USD 28 million.</p> <p>However, in June 2013 DBBL requested a waiver for breach of the Open Loan Exposure (OLE) Ratio. As per March 2013 DBBL's OLE Ratio stands at 26.45% thereby exceeding FMO's limit of 25%. The bank sent FMO a waiver request explaining the cause which is twofold: (a) tightened loan classification and provisioning policies set by Central Bank of Bangladesh (BB): in September 2012, BB introduced more stringent rules on loan classification and provisioning. Upon implementation in Q4 of 2012, the entire banking sector witnessed an increase in NPLs from 6.1% in 2011 up to 10.0% in 2012. DBBL's NPLs also witnessed an increase from 2.7% per FY 2011 to 3.0% per FY 2012, however still below industry average; (b) lower growth of total capital/retained earnings: with the increase in NPLs and the tightened provisioning rules, the increased amount of provisioning has put extra pressure on the bank's capital. Furthermore, in the first quarter of 2013 DBBL has paid out dividend for 2012 resulting in lowered retained earnings. With the increase in NPLs and the slowed growth of total capital, DBBL exceeded the OLE Ratio per March 2013. Due to a favourable outlook DBBL brought the OLE Ratio down during the last quarter of 2013. This was possible through a decreased</p>

	NPL level and as the dividend payment made in Q1 of 2013 was a one-off event, no such capital reduction took place throughout the rest of the financial year. DBBL foresees to increase its retained earnings due to an expected increase in revenues and constraints of operational costs. DBBL has developed into a fully-fledged bank with a good market reputation and excellent collaboration with the Central Bank. The documentation provided does not present information on the actual use of the IDF funds and the success of the water treatment plants for the textile sector that should have been financed. See further the text under Assumptions above.		
Main project issues	<ul style="list-style-type: none"><li>- Country/political risk</li><li>- Maintaining asset quality</li><li>- Monitor concentration of loan portfolio</li><li>- Keep track of environmental &amp; social performance</li><li>- Monitor utilisation of IDF funds in areas of priority (water treatment plants of textile industry), hospitals and school.</li></ul>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	The documentation does not list corporate income tax payments	Reporting documentation does not give respective data
GHG Saving (tCo2)	T CO <sub>2</sub>		
Installed Capacity (MW)	MW		
Production Capacity	GWh		
People served – distribution	#	ATM machines installed 233 in 2008	DBBL largest provider of ATMs with 2454 ATMs in 2014
People served – transport	#		
People served – power	#		
People served – telecom	#		
People served – IT/internet	#		
People served – industrial/agri	#		
People served – farmers reached	#		
Forestry under management	ha		
Agriculture	ha		
Green investments	€m		
Inclusive investments	€m		

## 2. Scoring

	Desk Review	Field Visit
<b>EQ 2 – Relevance</b>		
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	3	
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3	
JC 2-3 Additionality of IDF Loans and Equity Investments	4	
<b>EQ 1 - Effectiveness</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	2	
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	2	
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	2	
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	2	
<b>EQ 4 – ESG Risk Management</b>		
JC4.2 IDF-financed projects contributed to green and inclusive development	3	
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3	
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	3	
<b>EQ 6 – Efficiency</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	2	
<b>EQ 3 – Revolvability</b>		

JC 3.5 Individual Project Sustainability	4	
<b>EQ 5 – Policy</b>		
JC 5.1 Involvement of Dutch companies in IDF projects	n.a.	
JC 5.2 Effects for Dutch companies and economy	n.a.	
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	n.a.	
<b>Scoring Justification</b>		
EQ 2 - Relevance	3.3	
EQ 1 - Effectiveness	2	
EQ 4 – ESG Risk Management	3	
EQ 6 – Efficiency	2	
EQ 3 – Revolvability	4	
EQ 5 – Policy		
<b>Comments</b>	Overall rating 2.86	In view of the lack of knowledge in respect of the use of IDF funds, which funds were supposed to be used to finance water treatment plants in the highly polluting textile industry, a rating of Partly Satisfactory is justified.

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons Learnt and key findings

Issue	Lesson
Information undertakings do not cover information on sub-loans/on-lending but talk about E&S.	It is essential that when loan agreements with a financial institutions define a specific purpose of the loan, there should also be a clause in the agreement that the institution reports on the use of funds based on the purpose of the loan. In the case of DBBL there should have been reporting on the use of funds to facilitate clients in the textile industry to buy affluent water treatment plants.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
v) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument); vi) portfolio performance (including reasons for portfolio impairments); vii) co-funding/complementarity with FMO-A portfolio; viii) investment leverage/funding mobilization.	
N.A.	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure) <b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice). <b>I-1.2.3</b> - Implementation progress – time and cost compared with programme <b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets <b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets: v) temporary/short term during the implementation period vi) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks	
<p>The loan of USD 10 mln in local currency was made available in 2008 (USD 5 million) and 2009 and USD 1.6 million). The latter was the last disbursement and no explanation is provided in the documentation why USD 3.4 million was not disbursed. The IDF facility was dedicated to finance water treatment plant for the textile industry and financing schools and hospitals. No evidence has been provided the the IDF funds were used as intended. Monitoring is very much based on scorecard data, without attending to issues as use of funds and demand for financing for infrastructure investments.</p> <p>The Bank has developed positively over time utilising FMO's different credit lines, including financing from MASSIF. It would have been important if a more thorough reporting would have taken place IDF loan.</p> <p>Jobs have been created in the Bank, but there have been no target set for job creating in the financial proposal. In the approval year of the IDF loan, 2007 total number of employees amounted to 684 staff. In 2013, total jobs created amounted to 4666 positions. The job creation effect of the IDF funds must have been modest with only USD 6.6 million disbursed.</p> <p>Rating: 2 (Partly Satisfactory)</p>	
<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b>
<b>I-1.3.1</b> - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets	

- I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion
- I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks
- I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'
- I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

The project documentation does not report on indirect jobs. Due to the underutilization of the IDF facility, the effect of establishment of new enterprises must have been minimal. There is no evidence available to make a positive judgement in this respect. The wider effect of FMO's involvement with DBBL from the start in 1996 must have been substantial. Through assisting DBBL management and dealing actively with the Central Bank, FMO must have contributed positively towards better regulation of the financial sector. However, it is not clear in what way the IDF loan disbursed in 2008 and 2009 have contributed to this indirect effect. Bangladesh ranks no. 176 on the World Bank List of "Doing Business 2017" which position shows that there is a lot to be done, including in the financial sector. One of the bottlenecks is, as reported in some of the CCRs, that the Government continues giving out banking licences to new market players and as a result the well established bank suffer from the fierce competition of the newcomers.

No evidence has been provided in the documentation that IDF clients benefit from the IDF support. It would be important during the mission to Bangladesh to visit a number of DBBL clients who have benefitted from the IDF facility.

Rating: 2 (Partly Satisfactory)

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
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**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

There was no target set for job creation in respect of the IDF financing, although the financial assistance by FMO since 1996, through the equity participation (30%, now 1%), two housing loans and a trade finance facility, must have assumed a growth pattern at least in line with, or above market averages. With only 1-2% of the market, and with the growing competition, DBBL remained a modest player. At the time of the IDF financing in 2007 the Bank had created in total 684 jobs and in 2014, the staff total amounted to 4666. No specific job creation can be associated with the IDF financing.

During the field mission, information should be gathered on DBBL clients that have been financed with IDF funds and their investments in infrastructure were successful. FMO should request the Bank to report on the use of funds of the IDF facility. Such reporting should reveal why there was underutilisation of the IDF facility.



In the absence of solid data on the results of IDF financed projects/companies, the judgement on this indicator cannot be positive.

Rating: 2 (Partly Satisfactory)

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
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**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

The focus of the reporting by FMO on DBBL concentrated on the Bank more in general and did not single out the IDF facility. The reporting on the joint facilities in the CCRs seemed adequate although the reporting, including the scorecards, over the years concentrated more on financial indicators than on social indicators. Explanation in the CCR on the social and development indicators was scarce, reason why it is difficult to make a judgement on the results of the IDF financing. M&E systems as applied by FMO do not do enough justice to the nature of the funding, i.e. subordination, local currency and longer tenor.

Rating: 2 (Partly Successful)

## EQ 2 – Additionality and catalytic effects

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
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**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

The risk rating for all the facilities at the time of approval of the IDF facility was B2 Moderate, while the EDIS rating for the IDF facility was also rated B2 (moderate). In 2015 the assigned risk rating for the IDF facility was F13, while the FMO-A loans were rated F12. Bangladesh is an LDC country and was the reason why IDF funding was chosen, with the aim to boost infrastructure financing in priority areas. Also the terms of the loan, i.e. subordination and the fact that it involved local currency financing, explains why this was an IDF loan. It is unfortunate that with the aim of financing water treatment plants in the textile sector, the environmental reports did not observe the performance of the water treatment plants, which would help prevent further pollution of the river system in Bangladesh. In this respect, the fact that the use of funds of the IDF loan was not monitored, might have been the reason of the lack of interest by FMO's E&S staff.

Rating: 3 (Satisfactory)

<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>
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**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.  
**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

For a financial project which does not have a finance plan for a specific investment plan, the catalytic effect is difficult to measure. An alternative would be to identify the total FMO financing as a percentage of total assets/liabilities. In 2008, total assets of the Bank reached a level of EUR 632.7 million, while at the time, the total of the FMO facilities was EUR 26.9 million, or 4.3%. The nature of the funding must have been important for DBBL, i.e. the housing loans, the trade finance facility and the IDF infrastructure financing. With most of the equity sold in 2008, FMO could propose the IDF, as conflicts of interest had drastically diminished. Because of the characteristics of the IDF financing the catalytic effect was positive at entry.

Rating: 3 (Satisfactory)

### **JC 2-3** *Additionality of IDF Loans and Equity Investments*

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)

The terms of the IDF loan, being subordinated, in LCY and with a longer tenor (12 years) than the commercial market would provide, made the facility highly additional. The FMO-A loan was in foreign currency and required a first mortgage on the assets, and also the tenors (9 years) would not have been matched by commercial banks. The margin for the IDF loan depends on the number of sub-loans disbursed to LDC-eligible clients in the infrastructure sector. From smaller than 4 to larger than 10 sub-loans 4.5% margin to only 1% margin. It would be important that the client would provide periodic reports. In view of the conditionality of the IDF loan, which would not be matched by FMO-A financing and commercial bank resources, the rating on additionality is positive.

Rating: 4 (Highly Satisfactory)

## **EQ 3 – Revolvability**

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

### **JC 3.1** *Evolution and drivers of portfolio performance pre and post 2012*

<b>I-3.1.1</b> - Portfolio performance and trends, in particular 2002-2011 and 2012-2016 <b>I-3.1.2</b> - Portfolio repayments/realisations and recycling in new projects <b>I-3.1.3</b> - Performance of projects with FMO-A and/or other government funds <b>I-3.1.4</b> - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses	
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<b>I-3.2.2</b> - Balance sheet strength, profitability and cash flow/liquidity <b>I-3.2.2</b> - Utility of Carnegie revolvability model in managing IDF operations	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting <b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,	
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.	
<p>DBBL has been profitable during the time the IDF financing was available and used. The profitability allowed the Bank to repay the IDF funds as scheduled. At the moment of a total amount of USD 6.6 million used and in total USD 2,640,000 is expected to be fully repaid in 2018. The risks of the IDF investment was moderate, as FMO through their shareholdership knew the client very well. However, the risk of doing business in an LDC such as Bangladesh should not be under estimated, reason why the IDF financing was fully justified.</p> <p>The financial performance of DBBL has been positive and since 2007, the year of approval of the IDF facility, the Bank was profitable, showing the following net profit figures: 2007 USD 4.8 million; 2008 USD 8.5 million; 2009 USD 16 million; 2010 USD 28 million; 2011 USD 26 million; 2012 USD 29 million; 2013 USD 25.8 million; 2014 USD 28 million.</p> <p>DBBL has a strong funding structure and good liquidity levels. Its Statutory Liquidity ratio (highly liquid assets/average demand/time liabilities) increased to 20.6% (13% minimum required by CB). DBBL has been very successful in attracting deposit funding (like several of its peers), mostly stable funding in form of savings deposits (35%) and term deposits (40%). Deposit funding forms over 80% of its funding, and the loan/deposits ratio is stable at below 75%. As shown in the Liquidity statement table, both liquidity and stable funding are strong. The maturity profile (NSF) is strong, thanks to fixed character of most of its deposit funding, and the short-term character of the loan portfolio (75% &lt; 1 year residual tenor). The FX mismatch position of DBBL has been very limited, with hardly any FX borrowings and assets almost fully in local currency. Following the FMO/DEG subordinated loans denominated in USD, a mismatch may appear. Total FX position as reported by DBBL (as registered under BIS market risk) was less than 4% per FY 2013. DBBL has a well-established RM organization, including the relevant risk committees and policies.</p> <p>IDF risk management guidelines follow those of FMO-A facilities. FMO already had provided funding to DBBL and was a shareholder for many year. It, therefore, had established a good monitoring system to keep track of the utilisation of the credit guidelines. The IDF facility</p>	

immediately benefited from the established relationship and monitoring and evaluation systems. As mentioned above, there should have been better reporting on the use of IDF funds so that the IDF fund management would have an adequate view of whether the funds were allocated to the agreed sub-sectors (waste water treatment plants in the textile industry, schools and hospitals). The IDF funds were used by DBBL, being a solid financial institutions, which had enhanced its financial control systems, with the help of FMO, which helped secure sustainability of the financial institution.

Taking into account that the IDF loan is provided to a well established bank, in which FMO had invested as an equity party and had provided three FMO-A facilities, the revolvability of this IDF loan is excellent on Revolvability. In addition, the the loan has been repaid to a great extent.

In view of the performance of Dutch Banglabank Ltd. and its responsible and knowledgeable management as evidenced in the documentation received, the Bank is highly sustainable.

Rating 4 (Highly Satisfactory)

## EQ 4 – ESG Risk Management

### What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)

#### JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

The project was assigned an E&S risk category B+. Corporate Sustainability Priorities remained positive with a score on average 60 over the period 2007-2014. FMO's E&S experts helped the Bank building its environmental mitigation systems and thereby assisting their clients in their environmental endeavors.

However, there was little attention in the monitoring documentation in respect of the use of IDF funds by DBBL in waste water treatment plants of the textile industry. As the textile industry is a high polluting industry, in particular in respect of its untreated waste water, the IDF funds could help DBBL's clients improve their environmental performance.

In view of all that FMO has established in the Bank in respect of compliance of E&S rules and regulations the social and environmental effects have to be judged positively.

Rating: 3 (Satisfactory)

#### JC4.2 IDF-financed projects contributed to green and inclusive development

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

There was no adverse environmental effects identified. The social benefits in the Bank have remained acceptable over time and there is no negative reporting on this indicator in the CCRs. "Doubling impact and halving footprint" was not an issue with this client dating back to the mid-nineties.

Rating: 3 (Satisfactory)

<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
<p><b>I-4.3.1</b> - Use of Free prior and informed consent principles</p> <p><b>I-4.3.2</b> - FMO verification that higher risk projects comply with national legislation and international norms</p> <p><b>I-4.3.3</b> - Evidence of ESG risk assessment</p> <p><b>I-4.3.4</b> - Evidence of ESIA and ESAP preparation and implementation</p> <p><b>I-4.3.5</b> - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)</p> <p>In the financial sector it is crucial that adequate environmental conditionality is incorporated in the legal documentation of the financial institution. In the case of DBBL, FMO was instrumental in introducing the necessary environmental policies and guidelines that also would help the Bank's clients. In that context the conditionality of the use of IDF funds in the textile sector to buy waste water treatment plants, as a vital anti-pollution measure, was very promising. During the field mission this should be discussed with the environmental staff in the Bank. E&amp;S risk rating over the period 2007-2014 is 60 on average. In the more recently received information on DBBL an E&amp;S report prepared in 2016 was provided. (see the memory stick data received on 2 November 2017 from Dave Smith)</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<p><b>I-4.4.1</b></p> <p>Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management</p> <p><b>I-4.4.2</b></p> <p>Evidence of feedback and application of lessons learned in subsequent projects</p> <p>This is a category B+ investment.</p> <p>Rating: 3 (Satisfactory)</p>	

## EQ 5 – Policy

<b>To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?</b>	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
<p>A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).</p> <p>n.a.</p>	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<p><b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals</p> <p><b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active</p>	

<b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries	
<b>I-5.2.4</b> - Jobs created in projects financed by IDF	
n.a.	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes	
<b>I-5.3.2</b> - Number and volume of projects co-financed	
n.a.	



## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<p><b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process</p> <p><b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs</p> <p><b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring)</p> <p><b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF</p> <p><b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations</p> <p>IDF eligibility needs to be verified during the field mission. For the moment allocating IDF funds to the project seems justified, as the intended use of funds were for infrastructure purposes whereby the IDF funds would be used in financing the purchase of water treatment plants for the highly polluting textile industry.</p> <p>FMO has clearly defined policies and internal procedures, although the changes of monitoring and evaluation system over time made it more difficult to identify a consistency in the presented ratings in the scorecards, presented in the CCRs. Due to the absence of local presence and the need to monitor from a distance, there is a danger that monitoring has not the intensity that it should have. In respect of DBBL, taken into account that FMO was a shareholder and had provided a number of facilities contacts with management seemed to have been good and FMO was also able to organise training in important areas, in particular E&amp;S, which enhanced its relationship with the client.</p> <p>Corporate governance was adequately adhered to, which is a reflection of the good shareholder composition and good functioning Board and Board committees, including the audit committee.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<p><b>I-6.2.1</b> - Appropriateness of available FMO expertise</p> <p><b>I-6.2.2</b> - Trend in of full-time ratio equivalent staff to volume of operations</p> <p>As FMO was a shareholder in the Bank for many years, relationships had developed positively with enhanced the quality of the investment. The use of FMO staff for training purposes and the FMO's presence in the Board helped the Bank. Taking into account the erratic growth in staff with a doubling of personnel in 2012, without steep growth of balance sheet total and market share, there seems to have been a lack of efficiency. These fluctuations in number of staff and balance sheet total should be further explained.</p> <p>Rating: 2 (Partly Satisfactory)</p>	
<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<p><b>I-6.3.1</b> - Identification of explanatory factors (incl. external factors) in effective implementation</p> <p><b>I-6.3.2</b> - Identification of explanatory factors (incl. external factors) in effective observed delays</p> <p>The fact that FMO is willing to invest along side IDF with FMO-A funds is positive. As long as the conditionality of both loans satisfy requirements of the two sources of finance. The structure of the Fund management secures adequate handling of IDF funds. At times there could be a better description for the justification of IDF funding for a project.</p>	

Rating: 3 (Satisfactory)
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## Sources of data

Document title	Date
Financial Proposal	18/10/2007
Investment & Mission Review (IMR) - Minutes of the Investment Committee meeting	1/11/2007
Annex 1 IC Conditions	1/11/2007
Annex 2 IC Conditions	1/11/2007
Client Credit Review	6/11/2007
FP Change request	12/12/2007
Disbursement Request	13/12/2007
FP Change request	24/06/2008
Subordinated Term Facility Agreement	26/06/2008
Memo - Fulfillment of IC conditions pre-contracting	30/06/2008
FP Change request	1/07/2008
Investment & Mission Review (IMR) - Change request	3/07/2008
Client Credit Review	1/09/2008
Investment & Mission Review (IMR)	2/09/2008
FP Change request	26/09/2008
Investment & Mission Review (IMR) - Waiver	7/10/2008
FP Change request	25/11/2008
Investment & Mission Review (IMR)- Advice on Waiver	15/12/2008
FP Change request	1/04/2009
Investment & Mission Review (IMR) - Change request	8/06/2009
Client Credit Review	9/11/2009
FP Change request	12/11/2009
Investment & Mission Review (IMR) - Change & disbursement request	14/12/2009
Disbursement request	18/12/2009
Client Credit Review	2/06/2010
FP Change request	23/08/2010
IMR - Advice on change request	23/11/2010
Client Credit Review	1/06/2011
Client Credit Review	14/05/2012
DBBL 2012 Annual Report	4/04/2013
Client Credit Review	25/06/2013
Post-contracting change request - Waiver to FMO contracted financing	25/06/2013
Client Credit Review	10/07/2014
Pre-contracting change request	10/07/2014
Client Credit Review	20/10/2014
Client Credit Review	3/11/2015
DBBL 2012 Annual Report	16/03/2017

## ANNEX 1

### Field Visit Notes – Dutch Bangla Bank limited (DBBL) 16-17 January 2018

#### DBBL – 16 January

Abdul Kashem Md Shirin – MD & CEO  
Md Sayedul Hassan - Deputy MD  
Pronab Kumar Roy - Head of Risk Management Division  
Muhammed Didarul Islam – Deputy Head of Risk Management Division  
Mohammed Mesbahul Alam – Company Secretary  
Eng Mahbub Jan Chowdury – Senior VP E&S  
Shahadat Ahmed – Senior Asst VP Credit Risk Management Division  
Ahmed Shikatura – Senior Executive Officer  
Md Habib-A-Khoda – Executive Officer  
PPT Presentation on 16 January

#### Company Visits 17 January

##### 1. GM Dyeing and Printing Mills

Md Zahirul Islam – Partner  
Abdul Mannan – Partner  
Rokibul Hasan ACA – Manager & son of MZI

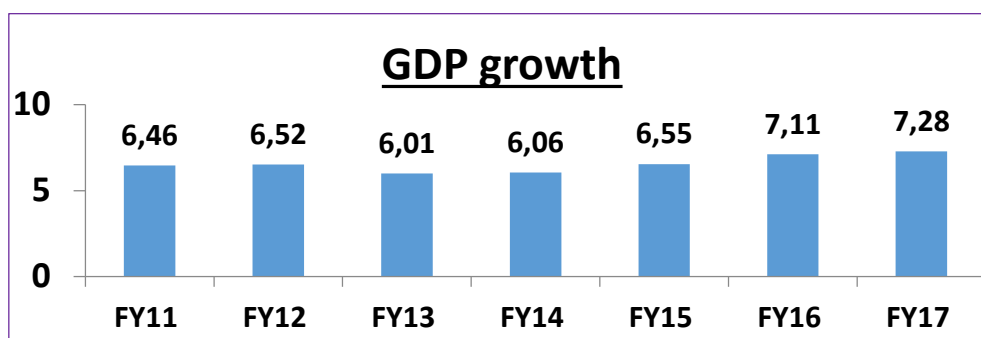
##### 2. Fakir Fashion Ltd

Farik K Nahid – MD (son of chairman and grandson of founder)  
Quazi Mohiuddin – CEO  
Mohammad Zakir Hossain – CFO  
Md Habib Ahmed – GM (Accounts and Finance)  
HR Manager

1. General discussion on FMO-DBBL Financial Relationship
  - i. Focusing on Equity Investment as a shareholder
  - ii. Credit Lines as a Financer/Lender
  - iii. Subordinated Term Loan provided/lender
  - iv. Others-General discussion: DBBL and Industry
2. Environmental & Social Risk Management in DBBL as suggested by FMO
  - i. Policy Issues
  - ii. Capacity Development
  - iii. Others (our Domestic policy/regulation regarding Green banking/Environmental Issues etc.)

- The Government of Bangladesh made a special resolution/law relaxing the existing limit (10%) for holding of shares of Dutch-Bangla Bank Limited to maximum 25% by a person/institution either separately or aggregately with all related parties. This allowed FMO to take its large 30% initial stake.
- Now, FMO is a familiar name to the corporate business bodies, regulatory authority (central bank), Government Agencies, credit rating agency and other stakeholders of Bangladesh.

- Currently, as of 31 December 2017, FMO's shareholding to DBBL is 0.94% (Number of shares 1,877,020)



- FMO's role in DBBL overall development
  - Financial:
    - Generate earning (profitability) by utilizing the funds;
    - Improving capital position
  - Non-financial development:
    - Building corporate governance
    - Environmental & Social Risk Management;
    - Capacity development through training, seminars [We intend to have much more involvement from FMO in this regard as a development financial institution of Dutch Govt.]

FMO is considered as contributing in a positive way to high operating standards that improves its risk rating.
- FMO officers visit DBBL every 2 or 3 months. Future cooperation could include green finance.
- The IDF Subordinated Loan was on-lent to a mixture of textile and non-textile companies<sup>5</sup>:
  1. Anmona Fashions Limited
  2. Fabcon Textile Mills Limited
  3. Anwar Dyeing & Printing Mills
  4. Rubel Dyeing & Printing Mills Limited
  5. Keya Knit Composite
  6. G. M. Dyeing & Printing Mills – visited by ADE
  7. Alauding Textile Mills
  8. Fakir Fashion – visited by ADE
  9. WWR Bio Fertilizer
  10. Dhanmondi Hospitals (Pvt) Limited
  11. ACME Specialized Pharmaceuticals Limited

This list is very limited and gives no information as to amounts, terms, purpose etc. It illustrates the lack of reporting demanded by FMO-IDF on the utilisation of the credit line.

- **Credit Lines from FMO**

<sup>5</sup> DBBL email 24 January 2018

## Credit Lines & Soft Term Credit Facilities

### Credit Lines from FMO

SL No	Year	Loan Amount	Currency	Tenure	Rate of interest	Purpose
1	2000	5.00 million	EURO	5 Years	Bank rate + 2%	Financing for small-scale enterprise (SSEs) in the manufacturing, agriculture and productive services industries
2	2003	3.00 million	USD	5 Years	LIBOR + 2.75%	Financing for procurement of capital machinery to the export oriented industrial units

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## Subordinated Debt Facilities

### Subordinated Debt

SL No	Year	Loan Amount	Currency	Tenure	Rate of interest	Lender
Subordinated – 1	2006	5.00 Million	EURO	9 Years	Yield of 182 days T-bill + 3.90%.	FMO
Subordinated - 2	2007	5.00 Million	EURO	9 Years	Yield of 182 days T-bill + 3.90%.	FMO
Subordinated – 3	2008	5.00 Million	EURO	10 Years	7%	FMO
	2009	1.60 Million	EURO	10 Years	7%	FMO
Subordinated Debt 4 & 5	2013-2014	25 M+ 25 M = 50 M	USD	6 Years	6M LIBOR+5%	25 M by FMO and 25 M by DEG where FMO acts as agent

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- Subordinated 3 is IDF credit line and is the net disbursed amount €6.6m. No explanation given for failure to drawdown full €10m.
- After 2006/2007 Bank of Bangladesh recognised subordinated loans as Tier 2 capital. FMO Subordinated facilities counted as Tier 2 capital and were substantial contributors to DBBL's total capital ratio that has had to increase from a minimum of 9% in 2006 to 11.25% (actual TCR for DBBL at 30 9 2017 was 14.6%).

## DBBL Capital position with FMO's Sub-debts

### Subordinated Debt

Particular	Basel-I			
	2006	2007	2008	2009
Total Capital [Tier1+Tier2]	2,663.8	3,399.5	4,587.5	5,899.8
Tier1	1,660.2	2,089.5	2,911.2	4,048.9
Tier2	1,003.5	1,310.0	1,676.3	1,850.9
FMO's contribution to Tier 2 Capital	442.9	626.9	873.4	872.5
% of FMO contribution to Total Capital	16.63%	18.44%	19.04%	14.79%

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## DBBL Capital position with FMO's Sub-debts

### Subordinated Debt

Particular	Basel-II					Basel-III		
	2010	2011	2012	2013	2014	2015	2016	Q3 _2017
Total Capital [Tier1+Tier2]	9,125.9	10,534.9	12,284.0	15,403.4	18,077.9	21,137.6	21,249.4	25,859.3
Tier1	6,051.2	7,523.0	9,395.5	10,693.5	12,276.8	14,729.8	14,937.6	16,337.3
Tier2	3,074.7	3,011.8	2,888.5	4,709.8	5,801.2	6,407.8	6,311.8	9,522.0
FMO's contribution to Tier 2 Capital	1,353.0	1,198.2	1,043.4	2,694.5	3,683.0	4,401.9	3,700.1	1,653.3
% of FMO contribution to Total Capital	14.83%	11.37%	8.49%	17.49%	20.37%	20.82%	17.41%	6.39%

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- CSR activities include support for high school students and sports sponsorship
- DBBL will send a list of Effluent Treatment Plant (ETP) and other infrastructure projects financed with IDF line. Sub-loans typically 3 to 5 year terms with 1 year grace periods and 3% margins.
- E&S reviews are carried out for development lending projects carried out by the Sustainable Financing Unit which has 3 officers.
- When DBBL needs a credit line FMO is the first to be contacted. Only contact other DFIs if FMO cannot provide funding.
- IFC and Asian Dev Bank have provided trade finance credit lines.
- FMO

### GM Dyeing and Printing Mills

- GMDPM was started by 2005 by the 2 partners who both had spent their careers in textile companies where they were in charge of textile printing. The loans for the company were provided by DBBL which remains the principal bank. It is located in the Rupgonj suburb of Dhaka about 20km from the city centre.
- The factory is dark and gloomy and employs 138 people who earn between \$100 and \$1,000 per month. At present, GMDPM supplies mainly printed fabric to local clothing companies the designs for which it creates in its design office. The raw material is grey fabric. It does a small amount of export work where foreign companies specify the design.
- It is planning a major investment programme in new automated equipment that will enable it to focus on foreign customers that have higher quality standards. This could cost at least €10m.
- Turnover in the year to June 2016 was €4.1m equivalent with a net profit of €0.16m.
- The effluent treatment plant (ETP), funded with the IDF loan, was installed in 2009 has a capacity of 40m<sup>3</sup> per hour. Treated water is recycled. There are regular inspections of the factory by the Dept of Environmental Affairs to ensure that there is no pollution.
- The ETP was in operation. There was a large pond outside which had foam on the surface. We were told that fish live in it.
- GMDPM has a close relationship with DBBL.
- This is an entrepreneurial small company run by 2 partners.
- Below are photos taken at the factory, the bottom two show the ETP facility.



### Fakir Fashion

- This is a large family owned textile group that was started by the late Alhaj Yusuf Ali Fakir, the father of the chairman whose son is the managing director. The current company was established in 2009 and evolved from Sunshine Fashion industries. All five directors are from the Fakir family. It is an integrated textile company that is involved in:
  - Spinning and knitting
  - Dyeing and finishing
  - Printing
  - Embroidery
  - Cutting, and
  - Stitching
- It has around 9,000 employees and a turnover of \$84m in 2017. In 2016 it made a profit of \$4.5m. All operations are carried out on one large site in the Rupganj garment district, not far from GMDPM. It even has a helipad on the roof of its main building that enables customers to reach the factory easily from the centre of Dhaka and avoid the traffic. Turnover is forecast to reach around \$100m in 2018 and employees increase to 10,000. It plans to move into jeans and denim products in a new unit on the site that will employ about 1,000 people.
- Production capacities are:
  - Knitting 18 tpd
  - Dyeing-finishing 27 tpd
  - Sewing 132,000 garments per day, mainly T shirts and polo shirts.
- It exports 10%% of its production to large retail chains primarily in Europe and N. America. FF's largest customer is H&M, about 40% of sales. Other customers include the Zara Group, Mango, Gap and Guess. It has quality certifications from all its key customers covering the way that its garments are produced and employee standards.
- The company provides a number of benefits to its employees including:
  - A fleet of 60 buses that bring them to and from work
  - Medical facilities
  - Child care
  - Subsidised supermarket for bulk foods
  - On-site mosque (85% of population is Moslem)
- CSR activities include student bursaries
- DBBL provides by far the largest amount of banking facilities. It has been involved with FF since the 1990s. The founders of FF and DBBL were friends in the town in Dhaka where they both grew up.
- Inter alia, DBBL helped finance the \$2.5m effluent treatment plant (ETP) that was finished in October 2017.
- Fakir believes company strengths are:
  - Reputation with customers, e.g. H&M Gold Partner
  - Textile industry quality certifications both in Bangladesh and internationally
  - Design studio in London that works with studio at factory
  - Commitment to sustainability (people environment and profitability)
  - Technology including automation

### **ETP project financed with IDF subordinated loan**

The ETP project has a capacity of 12,000m<sup>3</sup> per day and is being implemented in three phases. It was phase 1 with a capacity of 4,000m<sup>3</sup> per day that was recently opened. Most of the actual facility that has been built control systems, holding tanks, pipes etc have been built to accommodate all three phases. It is only the actual processing pools that are being built in phases. Construction of phase 2 has just started and will probably be ready in early 2019. The ETP construction was

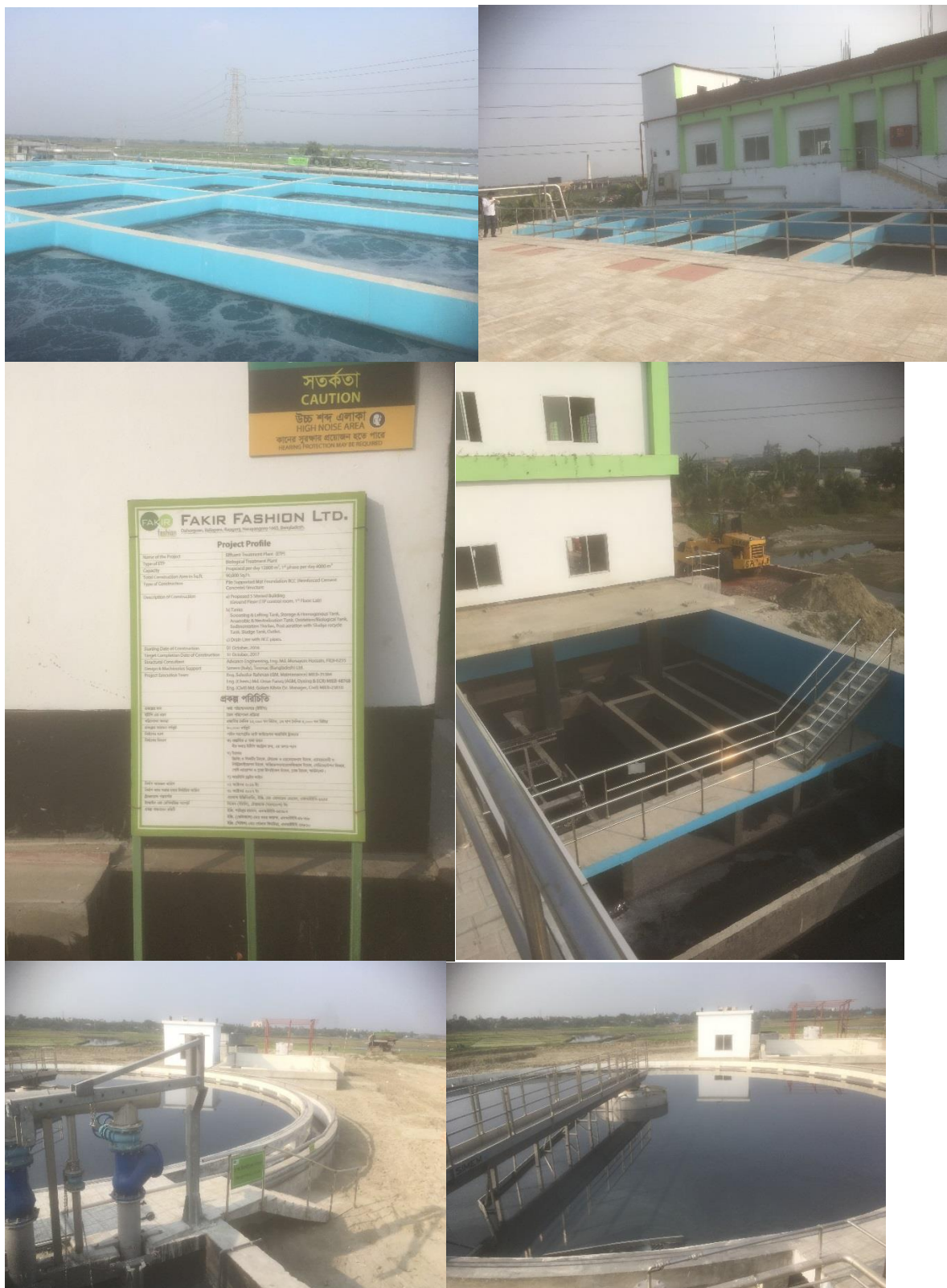
undertaken by the Italian company SIMEM that worked with a local building firm. FF is happy with the quality of the ETP.

Target is 0% discharge of unclean/polluted water. It is located several hundred metres from the dyeing unit from which contaminated water is pumped to the ETP.

The facility appeared to have been built to a high standard and was working. Phase 2 earthworks had begun. The control room had backup systems and equipment to avoid shutdowns. W

Below are photos taken at the facility.





## ANNEX 2

Development Impact and Role of FMO Dutch Banglabank Ltd.																	
	EDIS Economic Development Impact Score	Corporate Sustainability Priorities	FMO's Role		Balance sheet total in million USD	% growth	Employees	% growth	Nr branches	SME Centres	ATMs						
2007	68	66	2 (Good)				684		39								
2008	63	66	2 (Good)				800	17,0%	49		233						
2009	75	55	60		1.157,5		1755	119,4%	71								
2010	75	55	60		1.406,6				79	10	700	By providing such services DBBL is enabling the customers to maximize their business potentials and to fulfill their personal aspiration					
2011	62	65	35		1.506,0	7,1%	2794	59,2%	111		1940						
2012				none	1.954,0	29,7%	5268	88,5%									
2013	62	66	40		2.397,0	22,7%	4666	-11,4%	96		1100						
2014				none	2.545,0	6,2%	none		136		2454						

# **Eolo de Nicaragua S.A.**

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

## 5. Project fiche


Project title	Eolo de Nicaragua S.A.
Project description	<p>The Eolonica S.A. wind farm is a 44MW wind farm on the shore of lake Nicaragua, adjacent to the wind farms Amayo I and II; about 120km south of Managua. The project includes 22 2MW G90 Wind Turbine Generators, 200m transmission line, and a 60 MW substation connecting the project to the regional grid. The farm is connected to the Nicaraguan National grid via a 230-kV transmission line at its own substation.</p> <p>Construction started in March 2012. Commercial operations started in December 2012 (initially planned for November), and official inauguration was in May 2013. Project completion achieved in March 2014. Construction consisted in:</p> <ul style="list-style-type: none"> <li>- 6km of access to roads</li> <li>- One 60 MW set up substation (34.5kV-230kV)</li> <li>- 22 tower foundations</li> <li>- Mounting and commissioning of 22 WTG</li> <li>- 7,8km of collector system</li> </ul> <p>An agreement with ENATREL (the national company of electric transmission) was reached upon the finalization of the construction of the Eolo substation. According to this agreement, Eolo was due to sell the substation to ENATREL one year after the construction. In the meantime, the maintenance of the station was the responsibility of Eolo. The cost of the station is approximately USD 3.5 million. However, as of December 2017, ENATREL has not fulfilled this agreement. It was mentioned during the field mission that this could be due to the long process for the government to get a loan for the transaction.</p> <p>Since December 2016 the owner is CMI (<i>Corporación multi inversiones</i>), one of the top 3 largest renewable energy manufacturers in Central America and Panama. It is a family-owned Guatemalan conglomerate that acquired Eolo (and other GME assets). It operates in 14 countries, on 3 different continents. Previously, the shareholder was Globeleq Mesoamerica Energy Wind Ltd (GME Wind), incorporated in Bermuda and owned by Globeleq Generation Ltd (70%) and Mesoamerica Power (30%). GME is the company who developed nearby Amayo I and II wind park projects (in 2010, FMO invested in Amayo II). Following the change in ownership between GME and CMI, Eolo management team has not changed and key contact people are the same. The initial shareholder was Arctas, who sold Eolo to GME before contracting. The project cost is USD112.5m. The financing plan is the following:</p> <ol style="list-style-type: none"> <li>1) Equity: USD 21m (Globeleq)</li> <li>2) Subordinated debt: USD 12m (IDF)</li> <li>3) Senior debt: <ul style="list-style-type: none"> <li>▪ FMO-A: USD28m</li> </ul> </li> </ol>

- Proparco: USD26.5m
- DEG: USD25m

Two 20 year take-or-pay power purchase agreements (PPAs) have been signed with the privately-owned utility companies Disnorte and Dissur (initially majority owned by the Spanish Gas Natural Fenosa, active in gas distribution and transportation, and electricity generation and distribution; lately acquired by the Spanish construction companies TSK and Melfosur). The energy involved in each contract will be generated up to 21,562,5 kW for each contract (tot. 43,125 kW). These companies have the full responsibility for energy dispatch and distribution in Nicaragua (only). Disnorte and Dissur provide a 2-month payment guarantee letter of credit. The tariff is in USD and starts at 11cents/kWh with an annual increase of 3% up to a maximum of 14 cents/kWh in year 16.





	 
<b>Sector</b>	Energy (utilities)
<b>Stage</b>	Development phase of the project (construction is completed).
<b>Operation Dates</b>	<p>CIP: 15 June 2011</p> <p>Decision on CIP: 1 July 2011</p> <p>Financial proposal: 22 September 2011</p> <p>Decision on FP (approval with additional conditions): 29 September 2011</p> <p>Loan effective date: 2 May 2012</p> <p>First repayment date: 15 September 2013</p> <p>Maturity/ Final repay date: 15 March 2027</p>
<b>Contract</b>	C10001124

Country/Region	Nicaragua/Central America		
Country category	Lower MIC		
Project total cost (€)	USD112.5m		
IDF contribution (€)	USD12m (10.6%)		
Co-financing (€)	FMO-A (25%), Proparco (23.5%), DEG (22%); same tenors as IDF loan, first ranking and pari passu for all senior loans.		
Loan Terms			
Senior/Subordinated	Subordinated		
Convertible	No		
Amount	USD12m		
Loan Agreement Date	20 April 2012	Facility No	0000123517
Currency	USD		
Tenor	15 years		
Grace period	2 years		
Interest rate	12.5% per annum (fixed rate loan) Penalty interest: 2% (fixed rate loan)		
Security	Unsecured		
Fees	Appraisal fee: USD10k Commitment fee rate: 0.75 (quarterly, on unused amount) Front-end fee: USD210k (bi-annually)		
Disbursements	2 May 2012: USD7M 14 September 2012: USD1.23m 10 December 2012: USD1.76m 19 April 2013: USD1.74m 28 June 2013: USD120k		
Monitoring	Annual Client Credit Reviews		
Key covenants	Subordinated debt service coverage ratio (DSCR) > 1.15 Senior DSCR > 1.20 Debt to net worth < 2.33		
Conversion features	n.a.		
Financial Risk and Performance			
	Financial proposal/approval	Client Review - Most recent	
Client Risk Rating	5: moderate (CIP: project finance, June 2011)	F12 (CCR, May 2017)	
Loan - Impairment provision	%	%	
Equity - Fair value adjustment	%	%	
Financial performance	The project is performing above expectations with: <ul style="list-style-type: none"><li>- Turnover exceeding expectations (USD 22.3m in 2016, 7% above expectations; USD 25.8m in 2015, 30% above expectations)</li><li>- Subordinated DSCR = 1.45 (Q1 2016)</li><li>- Senior DSCR = 1.75 (Q1 2016)</li><li>- Debt to net worth = 1.86 (Q1 2016)</li><li>- Net profit: USD 8.3m in 2015, USD 4.4m in 2016</li></ul>		

	<ul style="list-style-type: none"><li>- Profit margin 2016: 21% (vs 14% budgeted)</li></ul> <p>Historical performance:</p> <table><tr><th></th><th>2013</th><th>2014</th><th>2015</th><th>2016</th><th>2017E</th><th>2018B</th></tr><tr><td>Energy Revenues (\$k)</td><td>18,828</td><td>24,355</td><td>25,806</td><td>21,799</td><td>20,208</td><td>24,418</td></tr><tr><td>OPEX</td><td>4,296</td><td>4,890</td><td>4,699</td><td>4,512</td><td>4,698</td><td>4,918</td></tr><tr><td>EBITDA (\$k)</td><td>14,532</td><td>19,465</td><td>21,107</td><td>17,287</td><td>15,510</td><td>19,500</td></tr></table> <table><tr><th></th><th>2013</th><th>2014</th><th>2015</th><th>2016</th><th>2017E</th><th>2018B</th></tr><tr><td>Generation - MWh</td><td>179,191</td><td>225,623</td><td>232,130</td><td>190,295</td><td>168,774</td><td>200,865</td></tr><tr><td>Availability</td><td>93.8%</td><td>97.7%</td><td>97.2%</td><td>97.3%</td><td>97.2%</td><td>96.9%</td></tr><tr><td>Plant Factor (%)</td><td>46.6%</td><td>58.6%</td><td>60.2%</td><td>49.3%</td><td>43.8%</td><td>52.2%</td></tr><tr><td>Wind Speed (m/s)</td><td>7.9</td><td>8.8</td><td>9.3</td><td>8.0</td><td>7.0</td><td>8.4</td></tr><tr><td>LTA</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table> <p>The contractor (Gamesa) is committed to ensure that the availability average measure in the turbines will not be lower than 97% starting from April 2013 (the second anniversary of the term of the commissioning).</p>		2013	2014	2015	2016	2017E	2018B	Energy Revenues (\$k)	18,828	24,355	25,806	21,799	20,208	24,418	OPEX	4,296	4,890	4,699	4,512	4,698	4,918	EBITDA (\$k)	14,532	19,465	21,107	17,287	15,510	19,500		2013	2014	2015	2016	2017E	2018B	Generation - MWh	179,191	225,623	232,130	190,295	168,774	200,865	Availability	93.8%	97.7%	97.2%	97.3%	97.2%	96.9%	Plant Factor (%)	46.6%	58.6%	60.2%	49.3%	43.8%	52.2%	Wind Speed (m/s)	7.9	8.8	9.3	8.0	7.0	8.4	LTA	0	0	0	0	0	0
	2013	2014	2015	2016	2017E	2018B																																																																	
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LTA	0	0	0	0	0	0																																																																	
Client Review -key findings	<ul style="list-style-type: none"><li>- The client performing well, exceeding the initial projections.</li><li>- All the covenants were comfortably met (no arrears) and the debt was serviced as planned.</li><li>- The client went beyond the E&amp;S requirements and displayed a high level of commitment to adhere to international best practices.</li><li>- Country risk is perceived as high. It includes the risk of energy curtailments, with the subsequent revenues lost. The country risk was mitigated by the close contact FMO and its clients in Nicaragua had with the relevant entities, the fact that wind energy was a relatively cheap source of electricity in Nicaragua, and the relatively good performance of the off-takers. However, in 2015-2017 the lost revenues due to energy curtailments amounted to about USD 1,6million.</li></ul>																																																																						
Results chain: expectations and achievements																																																																							
Logical framework	<p>Nicaragua has excellent wind resources and related energy potential, but at the time of the CIP preparation, only 62MW were installed.</p> <p>With the provision of financial resources (USD12m IDF subordinated debt, and the remaining of the USD112m project cost provided through senior debt from FMO-A, Proparco and DEG), the expected output was building a wind farm, which should lead to the generation of 44MW of renewable energy. The expected impacts were a diversification of the energy matrix by reducing fossil fuel dependence of Nicaragua.</p> <p>Rationale for IDF:</p> <ul style="list-style-type: none"><li>- Nicaragua was one of least stable countries in the region (elections scheduled end 2011, etc.). For Amayo 2, FMO funded USD3m as mezzanine loan through AEF for the same reason; Eolo S.A. required higher amount of mezzanine, at an earlier, development stage.</li><li>- Given the development phase of the project, no commercial nor DFI funding available for this tenor at such early stage.</li></ul>																																																																						



	<ul style="list-style-type: none"><li>- FMO's mezzanine provides bankability and creditability, which facilitate entrance of LT senior debt.</li></ul>																																												
Assumptions	<p>Overall, no reasons for concerns. The major key risks (and mitigation measures) mentioned in project documents can be summarised as follows:</p> <ul style="list-style-type: none"><li>- Country risk remains key risk which is well monitored by frequent client contact. Client keeps well informed with relevant government entities;</li><li>- Financial risks:<ul style="list-style-type: none"><li>o Market risk, partly mitigated by the close contact FMO and its clients have in the Nicaraguan entities, and the relatively cheap source of electricity wind in Nicaragua;</li><li>o Resource risk, mitigated by a 6 months DSRA, and the comfortable DSCR levels;</li></ul></li><li>- Environmental and social risks:<ul style="list-style-type: none"><li>o Typical operational health and safety risks during construction, managed by Eolo decision to implement corrective actions</li><li>o Decision to acquire OHSAS 18000 certification</li></ul></li></ul>																																												
Main project activities and achievements	<ul style="list-style-type: none"><li>- Activities implemented: construction of the wind farm started in March 2012; operations started in December 2012 (1-month delay, however the commercial operations date was planned for Q4-2012); official inauguration in May 2013 and project completion achieved in March 2014.</li><li>- Outputs achieved: as planned, a 44MW capacity wind farm</li><li>- Outcomes achieved:</li></ul> <table><tr><td></td><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017E</td><td>2018B</td></tr><tr><td>Generation - MWh</td><td>179,191</td><td>225,623</td><td>232,130</td><td>190,295</td><td>168,774</td><td>200,865</td></tr><tr><td>Availability</td><td>93.8%</td><td>97.7%</td><td>97.2%</td><td>97.3%</td><td>97.2%</td><td>96.9%</td></tr><tr><td>Plant Factor (%)</td><td>46.6%</td><td>58.6%</td><td>60.2%</td><td>49.3%</td><td>43.8%</td><td>52.2%</td></tr><tr><td>Wind Speed (m/s)</td><td>7.9</td><td>8.8</td><td>9.3</td><td>8.0</td><td>7.0</td><td>8.4</td></tr><tr><td>LTA</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table> <p>In 2016 Eolo produced 3.29% of country's energy. Off take price was at USD 114.9/MWh until November 2016. On December 1<sup>st</sup>, a 3% increase was applied, resulting in a price of USD 117.6/MWh. For 2015, the average price in Nicaragua was: USD 107.41/MWh for wind, comparing to USD 108.71/MWh for geothermal and USD 105.77/MWh for hydro.</p> <ul style="list-style-type: none"><li>- Impact achieved: 120 520 tCO2eq of annually avoided GHG emission, similar at time of baseline study. Equivalent people served via power generation: 386 892.</li></ul>				2013	2014	2015	2016	2017E	2018B	Generation - MWh	179,191	225,623	232,130	190,295	168,774	200,865	Availability	93.8%	97.7%	97.2%	97.3%	97.2%	96.9%	Plant Factor (%)	46.6%	58.6%	60.2%	49.3%	43.8%	52.2%	Wind Speed (m/s)	7.9	8.8	9.3	8.0	7.0	8.4	LTA	0	0	0	0	0	0
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LTA	0	0	0	0	0	0																																							
Main project issues	No major issues reported																																												
Quantitative Indicators																																													
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent																																										
Corporate Income Tax	€m	0.5	1.22 (in 2016)																																										

<b>GHG Saving (tCo2)</b>	T CO <sub>2</sub>	120 520	105580 (by March 2017)
<b>Installed Capacity (MW)</b>	MW	44	44
<b>Production Capacity</b>	GWh	162 per year	232.13 in 2015
<b>People served – distribution</b>	#		
<b>People served – transport</b>	#		
<b>People served – power</b>	#		498725 (2016)
<b>Green investments</b>	€m	USD12m (100%)	USD12m (100%)
<b>Inclusive investments</b>	€m	USD12m (100%)	USD12m (100%)

## 6. Scoring

	Desk Review	Field Visit
<b>EQ 2 - Relevance</b>		
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	4	4
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	1	2 (only development financing, no commercial funds catalysed)
JC 2-3 Additionality of IDF Loans and Equity Investments	4	4
<b>EQ 1 - Effectiveness</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	3	4
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	2	3 (improved access to electricity at country level – about 4% from Eolo, which contribute to improving business environment, but no direct link with Eolo identified)
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	3	3 (improved access to electricity at country level – about 4% from Eolo; but sold at a higher price than average cost; social projects reaching the most vulnerable)
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	4	4

<b>EQ 4 – ESG Risk Management</b>		
JC4.2 IDF-financed projects contributed to green and inclusive development	4	4
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	2	4 (additional documents collected from the field)
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management		4
<b>EQ 6 – Efficiency</b>		
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	4	4
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	4	4
<b>EQ 3 – Revolvability</b>		
JC 3.5 Individual Project Sustainability	4	3 (country risk identified)
<b>EQ 5 – Policy</b>		
JC 5.1 Involvement of Dutch companies in IDF projects		
JC 5.2 Effects for Dutch companies and economy		
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry		
<b>Scoring Justification</b>		
EQ 2 - Relevance	Satisfactory: no catalytic effect, but high additionality. In addition, more risky.	3- Satisfactory: no catalytic effect on commercial loans, but high additionality and higher risk
EQ 1 - Effectiveness	Satisfactory on delivering infrastructure outputs and short term job creation. Indications of limited long-term job creation (to be further investigated). Indication of an improvement of the business environment (FMO role to be	3,5 - Satisfactory on delivering outcomes and PSD; highly satisfactory on delivering infrastructure outputs and short-term job creation; availability of reporting.

	clarified) and availability of reporting (although not on progress achievement in terms of development impacts; but IDF funding was highly additional).	
EQ 4 – ESG Risk Management	Satisfactory, since although conducted by the client, the monitoring indicates positive results regarding E&S. To be clarified whether monitoring is actually being done by FMO.	4- Highly satisfactory, since although conducted by the client, the monitoring indicates positive results regarding E&S.
EQ 6 – Efficiency	Highly satisfactory. No major issue identified in terms of procedures and client's governance. Skilled staff.	4 – Highly satisfactory
EQ 3 – Revolvability	Highly satisfactory regarding project sustainability. Key risk is the country risk	3- Satisfactory regarding project sustainability as such, but country risk to be managed
EQ 5 – Policy	N/A	N/A
<b>Comments</b>		Successful project with only minor shortcomings

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learned

The good performance of the project can be attributed to the strong experience of GME in implementing generating technologies in general, and Wind Park projects in Nicaragua in particular. FMO has also expertise in energy projects.

#### 4. Findings at indicator level to feed into the EQ analysis

##### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <p>vii) temporary/short term during the implementation period</p> <p>viii) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</p>	
<p><b>I-1.2.1:</b></p> <p>The project consists in a 44MW wind farm on the shore of Lake Nicaragua. The project includes 22 2MW G90 Wind Turbine Generators from Gamesa, as well as 200m transmission lines and a 60 MW substation connecting the project to the regional grid.</p> <p>The project cost amounts to USD 112.5 Mln, of which USD 91.5 Mln financed by subordinated and senior debt. For this project FMO has committed to a USD 12 Mln subordinated loan (from IDF) and USD 28 Mln in senior debt. Proparco and DEG committed to USD 26.5 Mln and USD 25 Mln of senior debt respectively.</p> <p>Nicaragua is now covering almost half its energy demand through renewable sources—up from 25 percent just a few years ago. As of June 2015, renewables made up 53% of all electricity production in Nicaragua (wind, geothermal, hydro and solar). The Eolo Wind Farm has produced 3.29 percent of the country's annual energy demand in 2016.</p> <p><i>Sources: Change request 120427 small change request Eolonica; World Bank Group, Public-Private Partnerships briefs #96918, "Nicaragua: Eolo wind Farm", May 2015; ARCTAS website; Nicaragua clean targets (<a href="http://www.econwatch.com">www.econwatch.com</a>); 170425 CCR Eolo de Nicaragua</i></p>	
<b>I-1.2.3</b>	

The project was completed on time (operations started in December 2012, i.e. 1-month delay, however the commercial operations date was planned for Q4-2012) and is performing well, without any significant problem so far. The table below details the implementation progress.

Implementation progress	Planned (finance proposal 22/09/2011)	Effective (CCR 2016 & 2017)
Contract date		20-04-2012
Loan effective date		02-05-2012
First disbursement	15-12-2011	
Last disbursement	15-12-2013	28-06-2013
First repayment date	15-12-2013	15-09-2013
Maturity / Final repay date	15-12-2026	15-03-2027

#### I-1.2.4

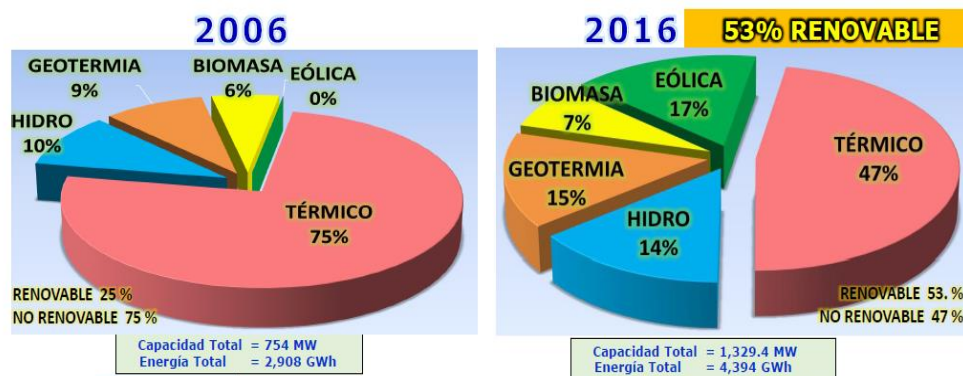
Energy Sector	Explanation	Actual 2011	Actual Up to 2012	Actual Up to 2013	Actual Up to 2014	Actual Up to 2015
Total installed capacity (MW.)	<i>Installed through project</i>	0	0	44	44	44
Total energy produced (GWh.)	<i>State the average of the annually energy produced.</i>	0	0	178	178	178

Source: 2011 IDF QI datasheet projects

According to the CCR (June 2013), the development impact of the project is as targeted, as Eolo has become operational. Quantitative indicators are the following (for June 2013): 4,416 man hours, or 28 people FTE. Since the Project is operational, it generates 44MW, giving access to energy to ~126.000 people. The 2016 Sustainability report indicates USD 0.306m as income tax paid in 2016 and USD 0.0185m of real estate and other municipal taxes.

Overall in 2016 the project produced 190.3GWh (above the target) and the income tax paid for the year 2016 amounted USD 1,2m. Electricity generated at Eolo is directly injected to the national interconnected system (SIN). Thus, there is no direct benefits to the local communities around the project area. However, the project contributes to satisfy the national electricity demand and the reliability of the system. Below is shown some figures on the changes in the energetic matrix of the country:

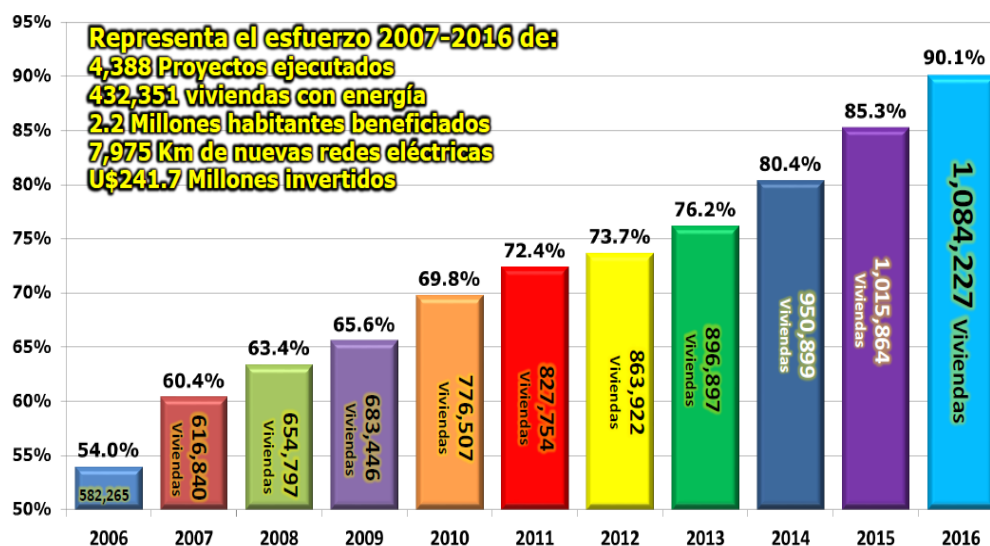
- From 2006 till 2016, 663.8 MW electricity generation capacity has been installed in the National Interconnected System (291 MW thermic, 77 MW geothermic, 186.2 MW wind, 1.3 solar energy, 62.5 biomass and 45.2 MW hydroelectric)



- 90% of the population (rural and urban) have access to energy compared to 50% in 2006
- Around the project area in Rivas, energy coverage has increased from 76 % in 2006 to 92% in 2016

### EVOLUCIÓN DEL ÍNDICE DE COBERTURA ELÉCTRICA NACIONAL

El porcentaje de cobertura eléctrica nacional a Diciembre 2016 es del **90.1%**, representando un incremento del **36.1%** respecto a la cobertura desde el año 2006. **432,351** nuevas viviendas con energía de calidad.



Sources: Programa Nacional de Electrificación Sostenible y Energía Renovable (PNESER); 170425 Client Credit Review ; 130625 Client Credit Review

#### I 1.2.5

2. Employment Effects	Explanation	Actual 2011	Actual Up to 2012	Actual Up to 2013	Actual Up to 2014	Actual Up to 2015
2.a. Total short-term direct employment	State total number of direct jobs created during construction phase (peak employment).	0	475	0	0	0
2.b. Total long-term direct employment	State total number of direct jobs created over the operation phase.			28	28	

Source: 2011 IDF QI datasheet projects; 130625 Client Credit Review



By end 2016, 22 people were working in Eolo (permanent jobs), of which 15 were local people. Eolo currently provides direct employment to 26 persons, incl.6 women (December 2017).

**JC1.3** *IDF financed projects contribute to the development of the private sector (by means of increased longer-term employment opportunities, improved business environment and demonstration effects).*

**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

#### **I-1.3.1**

2. Employment Effects	Explanation	Actual 2011	Actual Up to 2012	Actual Up to 2013	Actual Up to 2014
2.c. Total short- and long- term <b>indirect</b> employment	State total number of estimated indirect jobs created during the construction- and operation phase.	0	0	0	0

*Source: 2011 IDF QI Datasheet Projects*

By 2016, Eolo was working with 20 suppliers for their operation and construction, of which 7 were local. These suppliers are legal entities, which implies an effect of Eolo on the employment of several people related to these legal entities.

#### **I-1.3.4**

The ranking of Nicaragua regarding Doing Business indicators<sup>6</sup> has positively evolves since 2013 as regard to getting electricity (from 129 to 100).

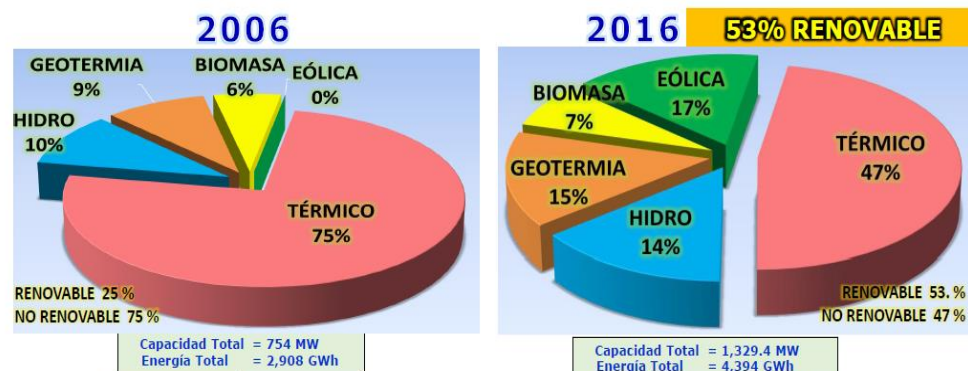
Doing business Nicaragua	2013 rank	2017 rank	2018 rank
Getting electricity	129	99	100
<b>Overall</b>	<b>119</b>	<b>127</b>	<b>131</b>

The improvement comes notably from the reduction of the number of days to obtain a permanent electricity connection (70 in 2013 to 55 in the DB 2018 rank). The reliability of supply is rated as 4 in DB 2018 rank (a middle ranking in the scale 0 worst to 8 best), which is close to the Latin America and Caribbean (LAC) average of 4.2. A few years ago, Nicaragua was almost totally dependent on imported fuel oil to generate power. The country also lacked thermal plants to turn that fuel oil into electricity. The result was rolling, 12-hour blackouts that damaged the economy and the daily life. This situation has improved (the country is now eligible for the

<sup>6</sup> <http://www.doingbusiness.org/data/exploreeconomies/nicaragua#getting-electricity>



calculation of the system average interruption duration and frequency indexes, which was not the case in 2013 because the outages were considered to be too frequent or long-lasting to be considered for the electricity supply to be considered as reliable). The country energy matrix now consists of 53% of renewable (incl. 17% wind and 15% geothermal) and 47% of non-renewable.



The cost of electricity expressed as a percentage of the economy's income per capita is lower in Nicaragua compared to the LAC region (856.5 versus 927.4). This indicator has been divided by almost 2 for Nicaragua since 2013 (from 1526 to 856.5).

Since the electricity generated at Eolo is directly injected to the national interconnected system, there is no direct benefits to the local communities around the project area. However, as previously mentioned, the project contributes to satisfy the national electricity demand and the reliability of the system. The combination of a better supply and a lower price have probably benefited to the private sector in the country but there are no figures to display.

Sources: World Bank, October 2017; Programa Nacional de Electrificación Sostenible y Energía Renovable (PNESER)

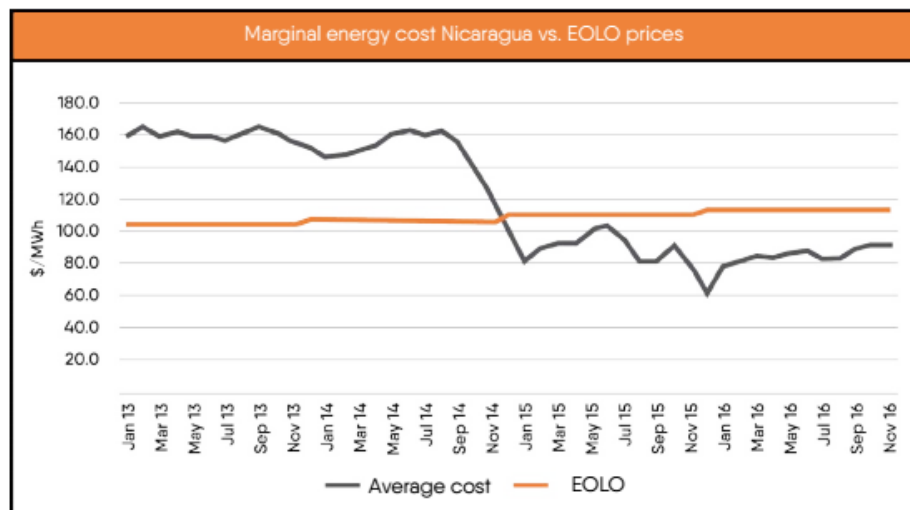
<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
<p><b>I-1.4.1</b> - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long-term job creation])</p> <p><b>I-1.4.2</b> - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)</p> <p><b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.4</b> - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p><b>I-1.4.5</b> - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p>	
<p>Nicaragua produces no oil but is a land for renewable energies (the country has fierce winds, tropical sun and rumbling volcanoes). In 2005, the government set out to harness all that natural energy. The country put in place a set of policies that would allow renewable energy projects to be developed in Nicaragua (including e.g. tax breaks).</p> <p>Eolo is in line with the Human Development National Plan (Plan Nacional de Desarrollo Humano) and the GoN sector policies and strategies on energy infrastructure. The fundamental</p>	

purpose of the energy policy, implemented since 2007, is the expansion of the renewable energy generation and the change of the generation matrix. Eolo is a founding member of the Chamber of Commerce of Generators, which is part of the Superior Council of Private Companies, and has played an active role in the review of by-laws, new laws and crafting of renewable energy incentives.

The petroleum bill on an annual basis was a significant amount of country's GDP, so by changing the energy matrix the country is now generating more power from its own resources, reducing its vulnerability on the fluctuations of the market. As by 2016, renewables made up 53% of Nicaragua's electricity (a figure that government officials predict could rise to 80 percent within a few years) and 90% of the country had reliable access to the grid (see JC 1.3).

As mentioned under JC 1.3, Eolo works directly with 20 suppliers (legal entities), including local entities. All of them are asked for an updated taxpayer ID and their status regarding tax withholding. Eolo and its suppliers pay taxes to the government, but we are not in position to link Eolo activities with public sector investment levels.

There is no evidence of Eolo's energy reaching directly poorest people and vulnerable groups since the production is directly injected to the national interconnected system. However, overall Eolo has contributed to the improvement of access to energy (90% of the population have now access to reliable energy, which include the most vulnerable). Regarding the impact of Eolo on the access to energy for vulnerable people, it appears that from 2015 the price offered by Eolo was above the national average because of the reduction in oil prices, as shown in the graph below:



*Source: Sustainability report (2016)*

There is neither no evidence of a proactive approach to target outcomes contributing to poverty reduction. However, through the social activities implemented by Eolo (social investments in education, health, infrastructures and environment), the company reaches the most vulnerable of the community around the wind farm plan (Eolo works with 1 local government, 8 communities and 7 local organisations in Rivas region; 1773 direct beneficiaries, USD 62350 in 2016).

Finally, the subordinated IDF funding was highly additional, as no long term commercial nor DFI funding was available for this tenor at such early stage. According to the Financial Proposal,

subordinated loan with 15-year tenure or non-recourse finance was not available from commercial parties nor DFIs. Shorter tenure for such transaction would not be accepted by senior lenders because of the impact on available cash flows for debt service. Without IDF the project could therefore not have been launched.

To sum up, Eolo contributes to the improvement of access to electricity in Nicaragua (about 4% at the country level). This access and reduced price benefit the entire population. It is therefore difficult to isolate the IDF contribution to poverty reduction in line with access to electricity. However, without IDF it would have been difficult to realise the project, and Eolo specific social activities in the Rivas region target the most vulnerable.

*Sources: CIP 110615 Eolonica S.A; 110630 IMR Advice and IC Decision on CIP Eolonica Nicaragua; Sustainability reports (2015 and 2016); CMI PPT presentations*

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
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**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

The reporting framework worked effectively and provided information for the management of the results. However, the information provided was not consistent over the period, and there is no evidence of lessons learned:

- From the documents received, we can observe that there was a comprehensive reporting of progress and results, with notably 2 to 3 Client credit reviews per year between October 2011 and May 2017 (with only 1 CCR in 2016). The project also produces an Annual Monitoring Report (“Sustainability Report”) which gives information on social, economic and environmental indicators (same indicators since 2015);
- The following indicators were considered in the 2011 CCR (3/10/2011) and the CIP, but not in the following CCRs, which indicates that there was no application of a consistent M&E system to follow-up progress towards targets and development objectives: number of employees in the company; contribution to government revenues; client’s installed generation capacity; total installed capacity in the country; number of electricity connections in this project; equivalent of connections served by the project; number of beneficiaries from the respective infrastructure service.
- Reference is made to Amayo wind farm project (I and II), nearby to Eolo, and developed by ARCTAS, also in charge of Eolo. FMO invested in Amayo II in 2010 and has a good relation and experience with ARCTAS. No mention of specific lessons learnt from that project for Eolo.

## **EQ 2 – Additionality and catalytic effects**

Please find at the end of this document the types of additionality

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

FMO-A provided a senior loan while IDF provided a subordinated loan (complementarity between IDF and FMO-A, with IDF taking more risk). This subordinated IDF funding was highly additional, as no long term commercial nor DFI funding (including FMO-A) was available for this tenor at such early stage.

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.

**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

The initial financing plan (Financial proposal) is the following:

<b>Financing</b>	<b>USD mln</b>
Sponsor's Equity	22,5
Subordinated Debt ("SOD")	12
<b>Total Equity &amp; SOD</b>	<b>34,5 / 30%</b>
<b>Senior Debt ("SD")</b>	<b>80,5 / 70%</b>
FMO's A-loan	27
Proparco and DEG Loan	54
<b>Total Funding</b>	<b>115</b>

The IDF subordinated debt represented 15% of the senior loans and the project was funded 30% by equity and subordinated debt and 70% by senior loans. No commercial funds involved (no catalytic role of IDF regarding commercial institutions).

The final financing plan is presented here below:

- Equity: USD 21m (Globeleq)
- Subordinated debt: USD 12m (IDF)
- Senior debt (USD 79.5m):
  - FMO-A: USD28m
  - Proparco: USD26.5m
  - DEG: USD25m

The proportions are the same (IDF 15% of senior debt, 30% of equity). The DFIs contribution to total funding is almost equivalent, with FMO-A providing a little more than Proparco and DEG (USD 28m vs. respectively 26.5m and 25m).

In both cases there are no commercial funds catalysed, only DFIs funding. IDF played a significant role in the financing of the project through its catalytic role regarding DFIs since IDF was the only fund available providing a tenure acceptable for the senior lenders as regard to the

transaction.

### JC 2-3 *Additionality of IDF Loans and Equity Investments*

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed imvestment, start-up, technical assistance...)

Tenures are the same for FMO-A and IDF loans. Overall FMO committed amounts amounted to USD 28m from FMO-A (senior loans) + USD 12m from IDF (subordinated loan). The LGD is logically higher from IDF than FMO-A (47,5% vs 32,5%). The score of IDF subordinated loan on additionality was high (60). This strong additionality is related to the non-availability of other long term mezzanine funding at such early stage, allowing sponsor to optimize the size of the project.

Contract Description	EOLO DE NICA- CL USD 12 MLN MEZZ	EOLO DE NICA- CL USD 28 MLN SENIOR
Product	COMMERCIAL LOANS	COMMERCIAL LOANS
Cooperation		
Mezzanine	Y	N
Subordinated	Y	N
Convertible	N	N
Revolving / Redeemable	N	N
PD	1.6 %	1.6 %
LGD	47.5 %	32.5 %
Economic Capital	19.1%	13.1%
Fund	IDF	FMO NV
Currency Loans/Equity	USD	USD
Current Exchange Rate	USD-EUR: 1.069400	USD-EUR: 1.069400
Original Committed Amount	12,000,000.00 (USD)	28,000,000.00 (USD)
Highest Outstanding Amount / disbursed Amount	11,861,835.00 (USD)	27,677,614.00 (USD)
FMO Total Share Available	0.00 (USD)	0.00 (USD)
FMO Total Share Withheld	0.00 (USD)	0.00 (USD)
Outstanding Exposure (EQ)		
Total Current Principal Balance	9,880,999.66 (USD)	23,055,667.23 (USD)
Total Current Principal Balance (EUR)	9,239,760.30	21,559,441.96
Fair value (EUR)		
FMO Share (%)	100.00%	100.00%
Contract Date	20-04-2012	20-04-2012
Last Disbursement Date	28-06-2013	28-06-2013

## EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolving fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

**JC 3.5 Individual Project Sustainability**

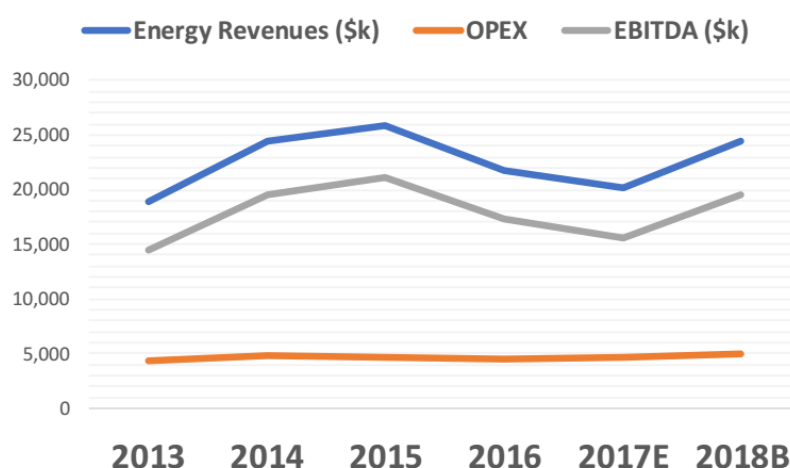
**I.3.5.1 - Review performance and sustainability of 15 projects selected for desk review.**

Overall, the project is performing above expectations. The project turnover is exceeding expectations. In 2015 the turnover was at USD 25.8m in 2015, which is 30% above projections and 6% increased since 2014. The reason for this is the excellent wind resource and the project's exceptional over-compliance in power generation. The EBITDA and Net Profit Margins are also at very high levels. Total Operating Costs were also lower than projected in 2015 (USD 4.7m vs 4.85m budgeted) and this is mainly due to cost savings on personnel costs, vehicle fuel purchases, and major savings in the plant comprehensive insurance policy.

	2013	2014	2015	2016	2017E	2018B
Energy Revenues (\$k)	18,828	24,355	25,806	21,799	20,208	24,418
OPEX	4,296	4,890	4,699	4,512	4,698	4,918
EBITDA (\$k)	14,532	19,465	21,107	17,287	15,510	19,500

	2013	2014	2015	2016	2017E	2018B
Generation - MWh	179,191	225,623	232,130	190,295	168,774	200,865
Availability	93.8%	97.7%	97.2%	97.3%	97.2%	96.9%
Plant Factor (%)	46.6%	58.6%	60.2%	49.3%	43.8%	52.2%
Wind Speed (m/s)	7.9	8.8	9.3	8.0	7.0	8.4
LTA	0	0	0	0	0	0



Source: CMI PPT presentation

The relatively lower performance in 2016 is to put in perspective with the maintenance of the generators. GAMESA is the company in charge of maintenance of the plant and has a 10 years contract (currently contract is at its end of the fifth year). GAMESA must ensure that the availability average measured in the turbines will not be lower than 97%. CMI is considering rescinding the contract after a cost-benefit analysis that demonstrates that CMI can implement a



maintenance unit by their own. GAMESA provides short term maintenance while CMI will focus in a long-term maintenance.

Regarding the country risk, Eolo has experience since 2014 energy curtailments instructed by CNDC (Centro Nacional de Despacho de Carga, the unit in charge of managing the electricity market in Nicaragua) during the low energy consumption hours in the country. This curtailment incremented significantly during 2015, leading to foregone revenues close to USD 1m. CNDC states that the curtailment are caused due to the lack of regulation capacity in the national grid and the excess of energy offer during the low consumption hours. Eolo has already submitted a formal claim to CNDC to eliminated these curtailments. These curtailments should also be put in perspective with the prices offered by Eolo compared to oil prices (cf. JC 1.4).

Energy and foregone revenues (2015-2017):

Year	Hrs.	Revenues Lost	Energy
2015	528.20	\$ 1,099,619.2	9,908.4 MWH
2016	71.07	\$ 169,799.88	1,480.2 MWH
2017	95.44	\$ 235,697.66	2,003.9 MWH

*Source: CMI PPT presentation*

There was also an agreement with ENATREL (the national company of electric transmission). Eolo would sell the substation to ENATREL one year after the construction. In the meantime, the maintenance is the responsibility of EOLO. The maintenance cost is approximately USD 40,000 annually. This cost is relatively low but there is a risk of failures in the transformer. By December 2017 the transaction was not concretised yet, which is due (according to interviewees) to the long process for the government to get the funds (about USD 3.5m).

The working capital decreased significantly during the first quarter of 2016, due to the increase in the receivables from Disnorte and Dissur, without any reason for concern. The payment and billing procedures are being carried out smoothly. Distribution companies continue to pay within 35 days, as established in PPAs.

*Source: 20160617 Client Credit Review; CMI PPT presentation*

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

**JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio**

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

Environmental & Social risk category B+, as risks are estimated to be moderate and not unprecedented or potentially irreversible.

Besides General EHS Guidelines, EHS Guidelines for Wind Energy are applicable.

Source: 110615 cip Eolonica S.A

**JC4.2** *IDF-financed projects contributed to green and inclusive development*

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

The Financial proposal indicates that the E&S development impact of the project is positive on climate change reduction through renewable energy generation (44MW). The estimated baseline avoidance was 110,054 tCO<sub>2</sub>eq. GHG avoidance reported in CCR of June 2016 and February 2017 is 105,580 tCO<sub>2</sub>eq., which is slightly below the estimation.

Eolo is also funding a reforestation project implemented together with 5 small-producer families in the micro-basin of El Limon river. The reforestation plan includes the creation of hedges and planting campaigns involving the area's schools and giving talks on the protection of the environment to these school's students and faculty. The actions were coordinated with the Ministry of the Environment and Natural Resources of Nicaragua. All the trees planted (about 6,500 by 2016) are native species that favor the conservation of local species habitats.

The environmental and social risks and impacts are limited during the operational phase of a wind park. They relate mostly to management of hazardous materials (oil and lubricants), noise, shadow flicker and birds and bats. The bird and bat monitoring indicated that Eolo had no significant impact on populations and that no protected species had been affected. Regarding noise and shadow flicker, the 2016 sustainability report mentions 0 noise or shadow flicker grievances.

Eolo has dedicated staff and budget for managing E&S. In 2016 alone, Eolo spent close to USD125,000 on E&S risk management activities (more than 2015) and about USD 60,000 on CSR activities. The corporate social responsibility program is a measure to mitigate the social risk of the project. The CSRP is implemented working with communities, strengthening their capacity to develop a clean environment and improving their quality of life. Approximately 2,000 indirect beneficiaries from the communities around the project area. Activities are developed with local communities and meet the needs expressed by the community.

Eolo main social investment projects include:

- Infrastructure: street lamps, solar panels, water access
  - 733 people benefitted with safety improvements by the installation of street lamps; project coordinated with the Rivas City Hall.
  - 733 people benefitted with the donation of an induction pump for the drinking water system in Santa María and Genízaro; project supported by Eolo since 2014.
  - 47 people benefitted with the donation of solar panels for 10 families that had no electric power
- Education: qualification and training:
  - 14 women trained to strengthen their families' food security by creating bio-intensive organic orchards.
  - 21 people trained in handicrafts, cost control, and sale of handmade product.





(Handmade products)

- 15 young people trained in cell-phone repair.
- Education: support to schools:
  - 90 preschoolers benefitted with a donation of desks.
  - 600 students benefitted with school beautification: inter-classroom, intergrade, and inter-school contest to beautify classrooms and common areas.





- School orchards: students of the Raúl Barrios and Joaquín Chamorro schools were trained on growing orchards for their schools.
- Donation of school supplies

Overall positive contribution to green and inclusive development.

<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
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**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3** - Evidence of ESG risk assessment

**I-4.3.4** - Evidence of ESIA and ESAP preparation and implementation

**I-4.3.5** - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)

Compliance with national legislation and international norms is verified through the Annual Monitoring Report which requires information like: environmental incidents, environmental and social budget, grievances, inspections carried out by local institutions, reporting, environmental monitoring required by local law, water analysis, plans and procedures, ESAP progress. IDF investment in Eolo had been approved by FMO management with conditions including the submission of the final ESAP as part of a pre-contracting memo (the financial proposal had been submitted before the full E&S due diligence).

The June 2016 CCR indicates that the client is going beyond E&S requirements and displays a high level of commitment to adhere to international best practices. The project has a functional integrated management system that became ISO 14001 and OHSAS 18001 certified in 2014. Trainings, drills, monitoring and reporting are performed regularly. Eolo follows a robust bird and bat fatality monitoring protocol agreed with Western EcoSystems Technology, Inc. (WEST, Inc.), an international environmental and statistical consulting firm.

Regarding the Environmental and Social Governance management, Eolo has an environmental policy, a CSR Policy (these policies are under review and in process to adjust to new owners Governance), and an Environmental and Social Management Plan (PGA). FMO monitors the ESG risk management through the annual monitoring report (ESAP progress).

<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
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**I-4.4.1**

Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management

**I-4.4.2**

Evidence of feedback and application of lessons learned in subsequent projects

The E&S reporting of 2015 was on time and of good quality, covering E&S key aspects (the reporting is carried out by the client, no external consultant involved). The 2017 CCR includes the detailed client ESG report. The client performance is considered as being good. The report also indicates that corrective actions had been taken following incidents:

“11/07/2013 Construction is completed and ESAP underway. Bird/bat monitoring is ongoing with few registered collisions classified as Least Concern by IUCN. There were 2 incidents involving 3 fatalities from the contractor's side. Investigation showed human error and poor vehicle maintenance. Corrective actions were taken. OHSAS 18001 certification is planned for May 2014”

Eolo engagement strategies focus on creating long term relations and getting involved in community ongoing development initiatives to secure sustainability of the relations and social



investment. Social Investment Plans are developed in participatory processes with the community. Reforestation strategies also involve local communities.

*Source: 120411 - Environmental and Social Monitoring Agreement; Client credit review (2016; 2017); field interviews*

## EQ 5 – Policy

**To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?**

<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendement to the subsidy decision on the involvement of Dutch companies).	
No Dutch company involved in the project.	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
N/A.	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
No linkages.	

## EQ 6 – Efficiency

**Has FMO efficiently and appropriately managed the Fund?**

<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	

The financial proposal addressed the key issues related to the investment by IDF. However, the environmental and social due diligence process, including a field visit and review by an independent lenders advisor had not been performed yet at the time of the FP, only a preliminary analysis of the environmental impact report had been performed by the E&S specialist. No red flag came from this analysis, but a full E&S due diligence was still requested and planned. The results of this E&S due diligence would form the basis for the senior loan finance proposal (FMO-A) and for its approval process. The FP also contains documentary evidence of project compliance with FMO and IDF investment criteria. IDF involvement in the project is justified on several aspects (positive environmental/social contribution, improvement of infrastructures, high additionality, etc.). The investment has been approved by FMO management with conditions including the submission of the final ESAP as part of a pre-contracting memo for review by the IMR and approval by the IC.

A corporate governance risk analysis has also been conducted (rated Good). The management was experimented and responsible for developing Amayo I and II (at that time, the only windfarms in Nicaragua). The client complies with FMO's CG standards. Late December 2016, following an SPA, CMI a family-owned Guatemalan conglomerate acquired Eolo (and other GME assets). The Eolo management team has not changed and key contact people are the same.

Quote from an interviewee:

"FMO's team is accessible and really open to communicate. Experiences with other DFIs are not that satisfactory. In FMO's relationship, we perceive the team has short response times, and understand the diverse situations that happen in this region, such as government related challenges, contractor's performance, etc. We think that FMO's intervention in the project is correct, managing the project, and trusting that Owner is responsible taking the best decisions."

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
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**I-6.2.1** - Appropriateness of available FMO expertise

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

FMO has used staff with relevant expertise for Eolo investment. According to interviewees, the attention and support from senior executive and the analysts assigned to the loan administration has been satisfactory. ("We have found they are open and cooperative to discuss the project's diverse issues: cash distributions, waivers, self-operation project, model modifications").

<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
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**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

Expertise of the owner: the project was owned by Globeleq Mesoamerica Energy Wind Ltd (GME Wind). Globeleq is a power industry who became leader by operating or acquiring interest in multiple power facilities across the world. The company is experienced in implementing an array of generating technologies in different geographic locations. GME is the company who developed nearby Amayo I and II wind park projects in Nicaragua. Since December 2016 the owner is CMI (*Corporación multi inversiones*), one of the top 3 largest renewable energy manufacturers in Central America and Panama. It is a family-owned Guatemalan conglomerate who acquired Eolo (and other GME assets). It operates in 14 countries, on 3 different

continents. While energy production was the core business of GME, infrastructure (which is involved with power generation plants), is only one of the 7 divisions of CMI.

## Sources of data

Document title	Date
Eleonica CIP	15/06/2011
IC Decision on CIP	1/07/2011
Finance proposal	22/09/2011
Credit Transaction (Support) Services Agreements	29/09/2011
Investment and mission review	29/09/2011
Client Credit Review	3/10/2011
Eolonica Side Agreements	31/12/2011
Investment and mission review	10/04/2012
Eolonica Distribution certificate	20/04/2012
Eolonica Direct Terms Agreements	20-23/04/2012
Change request post contracting	27/04/2012
Payment milestone schedule	27/04/2012
Direct Agreements (Versión de firma)	10/05/2012
Eolonica Claims Cooperation Agreement	10/08/2012
Client Credit Review	3/07/2013
Client Credit Review	10/07/2013
Evaluation of Effectiveness of AEF supported Projects	24/12/2013
Client Scorecard	15/05/2014
Client Credit Review	3/06/2014
Client Credit Review	26/11/2014
Client Credit Review	3/05/2015

Client Credit Review (Credit Analyst Advice)	4/05/2015
Eolo Financial Statements	27/05/2015
Client Credit Review	13/07/2015
Transfer request	4/09/2015
Memo to lenders	1/10/2015
Client ESG Report	6/06/2016
Eolo Financial Statements	6/06/2016
Client impact	8/06/2016
Client Scorecard	9/06/2016
Client Credit Review	17/06/2016
Eolonica Installation contract	22/09/2016
Common terms agreement - Schedule 7 (E&S Monitoring)	14/02/2017
Sustainability report 2016	9/04/2017
Client Credit Review	5/09/2017
Client Credit Review	03/30/2017
EOLO shareholder structure	N/A
Eolo E&S 2017	N/A
Eolo 2018 Lenders Visit V2	N/A

## Annex 1

### List of participants in the field mission:

Carolina Baltodano	Coordinator of the Social and Environmental Department – CMI Costa Rica
Alejandro Jimenez	Financial Manager – CMI Costa Rica
Oliver Narvaez	Operations Manager - Nicaragua
Kenya Navas	Community and Environment Coordinator - Nicaragua
Rafael Bermudez	General Manager – Eolo Nicaragua
Leonel López	Occupational Health and Safety Coordinator - Nicaragua
Maribel Pizzi	Social consultant -Eolo
Jaqueline Gazo	School Pedro Joaquín Chamorro - Director
Ritha Sukadi	
Ileana Holt	Local Consultant

### Notes from the meetings:

- The EOLO project is in line with the Human Development National Plan (Plan Nacional de Desarrollo Humano) and the GoN sector policies and strategies on energy infrastructure. The fundamental purpose of the energy policy, implemented since 2007, is the expansion of the renewable energy generation and the change of the generation matrix.
- Electricity generated at EOLO is directly injected to the national interconnected system (SIN). Thus, there is no direct benefits to the local communities around the project area. However, the project contributes to satisfy the national electricity demand and the reliability of the system. Below is shown some figures on the changes in the energetic matrix of the country:
  - From 2006 till 2016, 663.8 MW electricity generation capacity has been installed in the National Interconnected System (291 MW thermic, 77 MW geothermic, 186.2 MW wind, 1.3 solar energy, 62.5 biomass and 45.2 MW hydroelectric)
- 90% of the population (rural and urban) have access to energy compared to 50% in 2006
- Around the project area in Rivas, energy coverage has increased from 76 % in 2006 to 92% in 2016
- Environmental and Social Management:
  - EOLO provides direct employment to 26 persons: 6 women + 20 men
  - The project does not have a significant negative impact on the surrounding environment. The project was classified according to the national environmental assessment system (Sistema Nacional de Evaluación Ambiental -Decree 76-2006) as a moderate socio-environmental impact project, subject to the preparation of an Environmental and Social Management Plan (ESMP) to be approved by the Ministry of Environment and National Resources (MARENA). A socio-environmental assessment was performed complying with the national legislation.
  - The project also complies with IFC environmental and social standards



- In line with the ESMP, EOLO conduct monitoring on the collision and mortality of birds and bats, socio-environmental training activities, monitoring on air quality and effluents from the plant, implementation of a biodiversity management plan, reforestation and a corporate social responsibility program.
  - The corporate social responsibility program (CSR) is a measure to mitigate the social risk of the project
  - The CSR is implemented working with communities, strengthening their capacity to develop a clean environment and improving their quality of life
  - Approximately 2000 indirect beneficiaries from the communities around the project area
  - Activities are developed with local communities and meet the needs expressed by the community.
  - Some of the activities developed in the communities near the project are:
    - Installation of street illumination in some sectors of the rural areas around the project
    - Supporting the Pedro Joaquín Chamorro school where 225 students are served:
      - Social and pedagogical support
      - EOLO provides cleaning supplies for the school two times a year
      - Ecological practicing and competitions
      - Training and support on recycling activities
      - Training of housewives on elaboration of handicrafts that can be sold at the local market
      - School gardens
      - Teaching in basic English
      - Developing and financing of cultural activities
      - Construction of parks
      - Scholar packages that include: books, backpacks, shoes
      - School library
      - Perforated well: EOLO supported the technical studies, coordination with the Municipality, installation of storage tanks and water pump
    - Purchase and installation of solar panels for Las Brisas, a rural community in Rivas
    - Purchase and installation of an incinerator and refrigerator for the local community health centre
    - The sustainability of EOLO's investments is guaranteed through: involving the community in decision making and taking the people's need into account
    - Coordination with key stakeholders is always considered when planning activities or support to the communities
    - Training and educating of the local community
    - Currently the total investment in social issues is USD 226,338.52.
- Regarding participation in law and policy making, EOLO has participated in the revision and preparation of the new National Environmental Assessment System (Decree 15-2017: Actualización del sistema de evaluación ambiental de permisos y autorizaciones para el uso sostenible de los recursos naturales. EOLO has also participated in the revision and

amendment of Decree 33-95 (rename Decree 21-2017) that regulates municipal and industrial *wastewater discharges*.

Others:

- An agreement with ENATREL was reached upon the finalization of the construction of the Substation (SS), EOLO would sell the station to ENATREL one year after the construction. In the meantime, the maintenance of the SS is the responsibility of EOLO. The cost of the SS is approximately USD 3.5 million.
- The SS maintenance cost is approximately USD 40,000 annually. This cost is relatively low but there is a risk of failures in the transformer
- Energy produced by EOLO is connected to the national interconnected system and sold to DISNORTE – DISSUR the electrical distribution company which delivers for national consumption only.
- EOLO has a 20 years concession period.
- GAMESA is the company in charge of maintenance of the EOLO plant and has a 10 years contract (currently contract is at its end of the fifth year). GAMESA must ensure that the availability average measured in the turbines will not be lower than 97%. CMI is considering rescinding the contract after a cost-benefit analysis that demonstrates that CMI can implement a maintenance unit by their own. GAMESA provides short term maintenance while CMI will focus in a long-term maintenance.

# Essel Clean Solu Hydropower Ltd.

The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

Remarks:

- Young project (1<sup>st</sup> disbursement in 2016) → limited information on achievement so far, on-going implementation.
- Almost no progress reports
- No field mission for this project

## 1. Project fiche

Project title	Essel Clean Solu Hydropower Ltd.
Project description	<p>The project consists in the construction of a 82MW run-of-river hydropower plant in the Solu River in the Solukhumbu district of the Eastern Development Region of Nepal. The project includes a 4.2km transmission line to connect the project to the grid. It was awarded to the Company out of a competitive bidding process. Project costs total ~USD 190 mln, financed by 25% equity, 6.6% sub-senior debt and 68.4% senior debt. The Project sponsors are (i) Clean Developers ('CD', 23%), a Nepalese Infrastructure company, (ii) Essel Infraprojects ('EIL', 49%), an Indian conglomerate active in the infrastructure sector and 5 Nepalese companies, including FMO client Clean Energy Development Bank ('CEDB', 2%). Construction is being done under a turnkey fixed price EPC-contract with Patel Engineering, a large financially strong construction company from India, with a strong pedigree in hydro power projects. Operation and maintenance will be provided by Energy Infratech, a firm specialized in detailed engineering, project monitoring and O&amp;M services for the energy sector. 100% off-take will be sold to the Nepal Electricity Authority ('NEA', "Offtaker"), the 100% state-owned monopoly electricity provider, under a 30yrs PPA. The Project will add about 11% to Nepal installed capacity and provide clean electricity to a staggering 3.1mln people in Nepal (about 11% of the population), one of the poorest-55 countries. Given the pressing energy shortages and country's extremely low per capita electricity consumption the project will have a significant developmental impact. FMO has strong additionality as mandated lead arranger (MLA) and mobilizes USD 65mln from DFIs and USD 30mln from Nepalese banks</p> <p>The client's name is no longer "Essel Clean Solu Hydropower" but "Solu Hydropower Private Limited".</p>
Sector	Electricity production from hydropower for external (Renewable Energy)
Stage	The construction period is estimated at 42 months from 30 April 2016, meaning that construction completion is expected to occur by 31 October 2019. The construction has been delayed by the devastating earthquakes early 2015.
Operation Dates	<p>December 2014: FMO agreement</p> <p>In 2014, FMO contracted to provide USD 67.5 debt (senior FMO-A: USD 35 mln + USD 20 mln syndicated to BIO + USD 5 mln syndicated to Triodos + subordinated debt from IDF: USD 12.5 mln), maturing on 10 July 2031.</p> <p>Contracting effective end 2015.</p> <p>The Project was initially expected to achieve Financial Close within 9 months of contracting (i.e. by the end of September 2015). However, a severe earthquake and the delay in obtaining approval from the Nepal Rastra Bank caused a delay in achieving FC. The Required Commercial Operation Date under the PPA has been extended to 16 December</p>

	<p>2019 to accommodate the delay. NRB approval was finally obtained in January 2016 and the project has achieved Financial Close on 29 July 2016.</p> <p>Full Notice to Proceed under the EPC was given on 31 July 2016. Site mobilization already commenced in Q2.</p>																																																															
Country/Region	Nepal																																																															
Country category	Low income // country rating F18																																																															
Project total cost (€)	<p>USD 190 mln (about USD 2.5mln per MW), detailed as follows:</p> <table><tr><th>Uses (USD mln):</th><th>Total costs revised by 30 June 2016</th><th>Amount YTD Spent</th><th>Budget remaining</th></tr><tr><td>Preliminary expenditure</td><td>3.5</td><td>3.5</td><td>0</td></tr><tr><td>Land</td><td>2.5</td><td>2.3</td><td>0.2</td></tr><tr><td>Access road</td><td>4.3</td><td>3.9</td><td>0.3</td></tr><tr><td>EPC components</td><td>123.0</td><td>5.4</td><td>117.6</td></tr><tr><td>Contingencies</td><td>9.2</td><td>0</td><td>9.2</td></tr><tr><td>Engineering, management and supervision</td><td>8.4</td><td>4.3</td><td>4.1</td></tr><tr><td>Interest During Construction (IDC)</td><td>24.2</td><td>0</td><td>24.2</td></tr><tr><td>Commitment Fees</td><td>3.4</td><td>1.6</td><td>1.8</td></tr><tr><td>Fees &amp; Transaction costs</td><td>2.5</td><td>2.2</td><td>0.3</td></tr><tr><td>Debt Service Reserve Account (DSRA)</td><td>9.6</td><td>0</td><td>9.6</td></tr><tr><td>Total uses</td><td>190.6</td><td>23.2</td><td>167.3</td></tr></table>	Uses (USD mln):	Total costs revised by 30 June 2016	Amount YTD Spent	Budget remaining	Preliminary expenditure	3.5	3.5	0	Land	2.5	2.3	0.2	Access road	4.3	3.9	0.3	EPC components	123.0	5.4	117.6	Contingencies	9.2	0	9.2	Engineering, management and supervision	8.4	4.3	4.1	Interest During Construction (IDC)	24.2	0	24.2	Commitment Fees	3.4	1.6	1.8	Fees & Transaction costs	2.5	2.2	0.3	Debt Service Reserve Account (DSRA)	9.6	0	9.6	Total uses	190.6	23.2	167.3															
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		NPR tranche									
		Prime Commercial Bank Ltd	19%81%								
		Nepal SBI Bank Ltd	0%100%								
		HIDCL	25%75%								
		Prabhu Bank Limited	0%100%								
		Siddhartha Bank Limited	0%100%								
Loan											
Senior/Subordinated	Subordinated debt										
Convertible	No										
Amount	USD 10 m with a USD 2.5 m increase in the loan amount of USD 10 m approved in CIP dated 16/05/2014										
Loan Agreement Date	30/12/2014	Facility 126857									
Currency	USD										
Tenor	16.5 years										
Grace period	50 months										
Interest rate	LIBOR+7% (700bps), fixed										
Security	Yes: pledge on shares (subordinated lender shares in); pledge on license/concession (security with senior); mortgage on land (lenders)										
Fees	Front end fee: 1.3% (125 bps) Appraisal fee: 10.000 Monitoring fee: 10.000 Commitment fee: 1% (100 bps) Prepayment fee: 200 bps with stepdown										
Disbursements	<p>First disbursement under the subordinated loan took place in August 2016 (source: CCR February 2017)</p> <p>According to the file received from FMO, disbursement details are as follow:</p> <table><tr><td>Effective date</td><td>Transaction value (€)</td></tr><tr><td>12 August 2016</td><td>9375000</td></tr><tr><td>21 March 2017</td><td>1111111</td></tr><tr><td>11 August 2017</td><td>1500000</td></tr></table>			Effective date	Transaction value (€)	12 August 2016	9375000	21 March 2017	1111111	11 August 2017	1500000
Effective date	Transaction value (€)										
12 August 2016	9375000										
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Monitoring	The project is being monitored by WSP / Parson Brinckerhoff as LTA (quarterly site visits). On request of the lenders the LTA subcontracted a social specialist for additional support on the requirement for FPIC (free and prior informed consent).										

	An E&S report is expected annually.	
Key covenants	Main covenant: DSCR 1.15x Negative covenants: Cross default, negative pledge, change of control, asset disposal, dividend restrictions ESG Covenants: Env. Law compliance; IFS performance standards; E&S management system; E&S action plan	
Financial Risk and Performance		
	Financial proposal/approval	Client Review - Most recent
Client Risk Rating	F17	F17
Loan - Impairment provision	(LGD) 75%	75%
Equity - Fair value adjustment	%	%
Financial performance		
Client Review -key findings		
Results chain: expectations and achievements		
Logical framework	The project is expected to generate reliable, clean and relative low-cost power to Nepal and facilitate replacing the expensive and environmental unfriendly emergency power. Activities implemented to reach this objective consist in developing a 82MW hydropower plant using hydro potential of the River Solu. The HPP is expected to contribute in reducing imports of energy by Nepal and increase country’s capacity to face demand (currently installed capacity is about 700MW whereas peak demand can reach 1100 MW) and limit massive load shedding (up to 18hours a day in the dry season). The overall impact would be to facilitate sustainable economic growth through generation of reliable low-cost power in the country.	
Assumptions	<ul style="list-style-type: none"><li>- Mitigation of sponsor and sponsor equity risks; mitigation of construction and completion risk; mitigation of FX risk; mitigation of political risk; mitigation of E&amp;S risk.</li></ul> <p>In particular:</p> <p><u>Sponsor risk:</u> EIL acts as the key counterpart in the transaction. Financial support from EIL is uncertain as the company has ambitious expansion plan in constructing several projects including a thermal power (1320 MW) and solar projects (40MW). Liquidity might not be available to provide additional equity, and the financial performance/profitability is weak with USD 7.1 mln revenues and USD 916k net profit in 2011. EIL is embedded in the Essel Group, a conglomerate and one of India’s biggest business houses. This embedding provides partly comfort on the EIL ability to successfully develop the project. However, EIL has no track record in hydro projects.</p> <p><u>Off-taker/country risk:</u> high. The off-taker, NEA, is 100% state owned</p>	

	by GoN. It is financially weak (figures in the CIP indicated a Net loss ratio -34). The financial position of NEA has been weakened over the years as consumer tariff did not adjust while cost of supply increased because of high overhead costs and imported energy (cost/sale 49% in 2003 vs 74% in 2011). NEA owns 75% of the installed hydropower capacity. NEA is fully dependent on state support. The project does not benefit from a GoN guarantee.		
Main project activities and achievements	Construction of power plant, started.		
Main project issues	Revision of the power plant set up (for example, reduction of the number of turbines from 3 to 2; but they have a higher potential and bring thus advantages); Waste management		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
GHG Saving (tCo2)	T CO <sub>2</sub>	405.713 (of which 340.592 by FMO)	
Installed Capacity (MW)	MW	82	
Production Capacity	GWh	445	
People served – power	#	3.000.000 (of which 522.568 by FMO)	
Green investments	€m	12.5	12.5
Inclusive investments	€m	12.5	12.5



## 2. Scoring

	Desk Review
<b>EQ 2 - Relevance</b>	
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	3
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3
JC 2.3 Additionality of IDF Loans and Equity Investments	3
<b>EQ 1 - Effectiveness</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	n/a (construction ongoing)
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	n/a
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	n/a
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	2 (CCR available, but no evidence of a M&E framework for the results of the project)
<b>EQ 4 – ESG Risk Management</b>	
JC4.2 IDF-financed projects contributed to green and inclusive development	3
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	4
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	2
<b>EQ 6 – Efficiency</b>	
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	3 (FMO organisational structure etc. worked properly but 1 <sup>st</sup> CIP submitted at a too early stage: approved with several conditions; delays due to external factors)
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	3 no indication of lack of (skilled) resources from FMO. Early stage of the implementation.

<b>EQ 3 – Revolvability</b>	
JC 3.5 Individual Project Sustainability	3 - still in construction phase (likelihood for sustainability but not confirmed yet). Also risk of Offtaker
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	n/a
JC 5.2 Effects for Dutch companies and economy	n/a
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	n/a
<b>Scoring Justification</b>	
EQ 2 - Relevance	3 - The required long term financing, i.e. subordinated debt, is not available in Nepal to ensure returns acceptable to investors. Nepalese commercial banks and DFIs catalysed.
EQ 1 - Effectiveness	(still TBD)
EQ 4 – ESG Risk Management	3 (ESG grade: A). The project is 100% green finance and will generate electricity with negligible greenhouse gas emissions, qualifying as a renewable energy project under the FMO Sustainable Energy Strategy and scoring excellent greenhouse gas impact. Moreover, the project generates employment and improved services such as drinking water supply and health clinics. However, identified ESG risks to be mitigated.
EQ 6 – Efficiency	3 – The process from the identification to the start of the implementation was long but the delay is mainly due to external factors. No significant issue regarding cost-effective support from FLO staff (implementation at early stage).
EQ 3 – Revolvability	3 (likelihood for sustainability but not confirmed yet)
EQ 5 – Policy	n/a
<b>Comments</b>	The project is being implemented with no significant issue. Mitigation measures are being

	taken to overcome identified risks. Delays due to external factors (earthquake)
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#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learned

The project is being implemented with no significant issue. Off-taker risk to be carefully followed: the off-taker, NEA, is financially weak and fully dependent on state support. However, the project does not benefit from a GoN guarantee. Mitigant so far: Sponsor Support Agreement requires EIL to fund not only any forecast funding shortfall, but also any accounts shortfall (including Debt Service Reserve Account shortfall) until a GoN guarantee is in place.

#### 4. Findings at indicator level to feed into the EQ analysis

##### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <ul style="list-style-type: none"> <li>ix) temporary/short term during the implementation period</li> <li>x) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</li> </ul>	
Construction of the project commenced on 30 July 2016 and is scheduled to be completed by December 2019.	
<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b>
<p><b>I-1.3.1</b> - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets</p> <p><b>I-1.3.2</b> - Assessment of likely sustainability of indirect jobs created after project completion</p> <p><b>I-1.3.3</b> - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks</p> <p><b>I-1.3.4</b> - Evolution of selected country level indicators on ease of 'Doing Business'</p> <p><b>I-1.3.5</b> - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)</p>	
By October 2017, 963 staff were employed on site, out of which 24 are female. No evidence so far of a contribution to the development of the private sector. Effects on private sector development to be assessed after the start of the operations.	

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
	<p><b>I-1.4.1</b> - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])</p> <p><b>I-1.4.2</b> - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)</p> <p><b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.4</b> - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p><b>I-1.4.5</b> - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p>
	<p>At CIP time (2014), expected results have been identified with the Energy Impact Scoring Tool (see figure left). In particular, the project is expected to reach 3.103.628 people (compared to a baseline of 220.486). GHG avoidance per year is estimated at 352 while GHG emission per year should be 0. An attribution factor 75% has been used.</p> <div data-bbox="199 913 646 1256"> </div> <p>There is no description on the assumption or the approach to calculating the impact expected.</p> <p>The project started its construction works only recently, and no information is available on the likelihood of achievements of the results of the project.</p>
<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
	<p><b>I-1.5.1</b> - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects</p> <p><b>I-1.5.2</b> - Evidence of availability and application of consistent M&amp;E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets</p> <p><b>I-1.5.3</b> - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management</p>
	<p>Documents reviewed were internal FMO documents related to approval and changes; no reports from the project directly. No evidence of M&amp;E system.</p> <p>Reference is made at FP of previous lessons that are used in this case. However, seems not very “interactive”, rather compliance.</p>

## EQ 2 – Additionality and catalytic effects

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

FMO-A provided a senior loan while IDF provided a subordinated loan that is more risky:

	USD Sr. Loan	NPR Loan	USD Sub. Loan
Amount (USDxmio)	100	30 (USD eq.)	12.5
Tenor (dtd)	16.5yrs	(15-16.5)yrs	16.5
Interest	L+ 5.00%	[9]1% all in floating	L+7% fixed
DSRA	6m (part of capex)	[6]m	6m (funded from operational CF)
Front End Fee	125bps	1.25%	125bps
Arranging Fee (FMO)	50bps	-	n.a.
Comm. Fees	75 bps	-	75 bps
Prepayment Fee	2%: <4yrs after X*; 1%: 4-6yrs after X; 0%: >6yrs after X. *: Scheduled technical completion	2%: <4yrs after X*; 1%: 4-6yrs after X 0%: >6yrs after X	3%: <4yrs after X*; 2%: 4-6yrs after X 0%: >6yrs after X

FMO-A loan terms are in the senior loan column whereas IDF (subordinated loan) is in the last column. Both loans have the same tenor but, since subordinated loans are more risky, the interest is higher on IDF than FMO-A (L+7% vs L+5%).

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.

**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

The project has catalysed Nepalese commercial banks (USD 30 m equivalent) and DFIs for a total of USD 65.5 million debt (senior FMO-A: USD 30mln + USD 20 mln syndicated to BIO + USD 5 mln syndicated to Triodos + subordinated debt from IDF). IDF provided 100% of the subordinated funding (and 6,6% of the overall funding). The subordinated funding enabled to catalyse the USD130mln of senior debt, of which USD 30mln came from FMO-A (23% of the senior debt, about 16% of the overall funding). Nepalese banks are the main providers of the senior debt, followed by FMO-A and DEG. IDF played a significant role in the financing of the project through its catalytic role.

Financing source:	USD mln:	%:
<i>Equity and subdebt:</i>		
Equity	47.7	25.0%
FMO-IDF sub-ordinated debt	12.5	6.6%
<i>Senior debt:</i>		
FMO-A	30.0	15.7%
FMO – BIO syndicated	20.0	10.5%
FMO – Triodos syndicated	5.0	2.6%
DEG	25.0	13.1%
OFID	20.0	10.5%
Five local Nepalese banks <sup>2</sup>	30.4	16.0%
<b>Total financing</b>	<b>190.6</b>	<b>100%</b>

The total financing requested for the project amounted USD 190.6 m, which is about USD 13m above the project cost modelled in the due diligence report dated February 2016. Potential cost overruns, would be covered by the sponsor, fully backed by EIL (including debt payments in case of delays). The currency risk during construction is expected to be mitigated via a natural hedge. Regarding the debt, the USD loan would be USD 112.5m (senior + subordinated). Equity and the remainder debt would be provided in NPR. USD 110m out of the total project cost would be payable in USD and the remainder in NPR. USD revenues in the PPA base case (55% of PPA revenues during initial 10 years) match the senior loan USD debt service payments.

#### JC 2-3 *Additionality of IDF Loans and Equity Investments*

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed investment, start-up, technical assistance...)



Details are as follows:

Contract Number	0000126683	0000126857	0000138436	0000138454	0000138467
Contract Description	ESSEL A-LOAN SYN CL FIXED USD 41M	ESSEL CLEAN- CL LCY USD 12.5MLN	ESSEL A-LOAN SYN FLOATING USD 9M	ESSEL B-LOAN SYN CL FIXED USD 4M	ESSEL B-LOAN SYN FLOATING USD 1M
Product	COMMERCIAL LOANS	COMMERCIAL LOANS	COMMERCIAL LOANS	COMMERCIAL LOANS	COMMERCIAL LOANS
Mezzanine	N	Y	N	N	N
Subordinated	N	Y	N	N	N
Convertible	N	N	N	N	N
Revolving / Redeemable	N	N	N	N	N
PD	17.4%	17.4%	17.4%	0%	0%
LGD	30%	75%	30%	0%	0%
Economic Capital	14.2%	44.9%	14.2%	0%	0%
Fund	FMO NV	IDF	FMO NV	FMO NV	FMO NV
Currency Loans/Equity	USD	USD	USD	USD	USD
Current Exchange Rate	USD-EUR: 1.080300	USD-EUR: 1.080300	USD-EUR: 1.080300	USD-EUR: 1.080300	USD-EUR: 1.080300
Original Committed Amount	41,000,000.00 (USD)	12,500,000.00 (USD)	9,000,000.00 (USD)	4,000,000.00 (USD)	1,000,000.00 (USD)
Highest Outstanding Amount / disbursed Amount	0.00 (USD)	9,375,000.00 (USD)	0.00 (USD)	0.00 (USD)	0.00 (USD)
FMO Total Share Available	24,600,000.00 (USD)	3,125,000.00 (USD)	5,400,000.00 (USD)	0.00 (USD)	0.00 (USD)
FMO Total Share Withheld	0.00 (USD)	0.00 (USD)	0.00 (USD)	0.00 (USD)	0.00 (USD)
Outstanding Exposure (EQ)					
Total Current Principal Balance	(USD)	9,375,000.00 (USD)	(USD)	(USD)	(USD)
Total Current Principal Balance (EUR)		8,678,144.96			
Fair value (EUR)					
FMO Share (%)	0.00%	100.00%	0.00%	0.00%	0.00%
Contract Date	30-12-2014	30-12-2014	30-12-2014	30-12-2014	30-12-2014
Last Disbursement Date	10-12-2019	10-12-2019	10-12-2019	10-12-2019	10-12-2019
Commitment Fee	0.75 ON UNUSED AMOUNT (Active)	0.75 ON UNUSED AMOUNT (Active)	0.75 ON UNUSED AMOUNT (Active)	0.75 ON UNUSED AMOUNT (Active)	0.75 ON UNUSED AMOUNT (Active)

Tenures are the same for FMO-A and IDF loans. Overall FMO committed amounts amounted to USD 55mln from FMO-A (senior loans) + USD 12.5mln from IDF (subordinated loan). The LGD is logically higher from IDF than FMO-A (75% vs 30%). The interest rate is 100% fixed for IDF, vs 82% and 18% floating for FMO-A.

The key transaction characteristics in the FP were the following:

	USD Sr. Loan	NPR Loan	USD Sub. Loan
Amount (USDxmio)	100	30 (USD eq.t)	12.5
Tenor (dtd)	16.5yrs	[15-16.5]yrs	16.5
Interest	L+ 5.00%	[9]% all in floating	L+7% fixed
DSRA	6m (part of capex)	[6]m	6m (funded from operational CF)
Front End Fee	125bps	1.25%	125bps
Arranging Fee (FMO)	50bps	-	n.a.
Comm. Fees	75 bps	-	75 bps
Prepayment Fee	2%: <4yrs after X*; 1%: 4-6yrs after X; 0%: >6yrs after X. *: Scheduled technical completion	2%: <4yrs after X*; 1%: 4-6yrs after X 0%: >6yrs after X	3%: <4yrs after X*; 2%: 4-6yrs after X 0%: >6yrs after X

It can be seen that IDF takes a higher financial risk compared to FMO-A. The Fixed and Floating amounts are as follows:

	Fixed	Floating
USD tranche		
IDF	100%	0%
FMO	82%	18%
DEG	80%	20%
OFID	100%	0%



	NPR tranche			
	Prime Commercial Bank Ltd	19%	81%	
	Nepal SBI Bank Ltd	0%	100%	
	HIDCL	25%	75%	
	Prabhu Bank Limited	0%	100%	
	Siddhartha Bank Limited	0%	100%	

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

#### JC 3.5 Individual Project Sustainability

**I.3.5.1** - Review performance and sustainability of 15 projects selected for desk review.

The project was awarded out of a competitive bidding process, which facilitates transparency and strong GoN support. Moreover, the sponsor group consists of Nepalese and Indian companies with strong experience in developing infrastructure projects in India and Nepal. They provide a mix of strong financial support, experience in hydro contracting and an experienced project management team (Board of Directors).

The likelihood of sustainability looks good; the financial partners are reliable and experienced and so is the management. The challenges will be in the inclusion of the local communities.

### EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

#### JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

#### JC4.2 IDF-financed projects contributed to green and inclusive development

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

At approval stage, the project has been classified as being at high risk in terms of biodiversity and social impact. The proposed mitigation measures include among others appropriate

monitoring and broad stakeholder engagement (preparation of a Livelihood Development Program in parallel).	
<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
<p><b>I-4.3.1</b> - Use of Free prior and informed consent principles</p> <p><b>I-4.3.2</b> - FMO verification that higher risk projects comply with national legislation and international norms</p> <p><b>I-4.3.3</b> - Evidence of ESG risk assessment</p> <p><b>I-4.3.4</b> - Evidence of ESIA and ESAP preparation and implementation</p> <p><b>I-4.3.5</b> - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)</p>	
<p>Project is rated as A</p> <p>FMO is leading E&amp;S. FMO is thus monitoring the E&amp;S activities from the project and reports on the mitigation issues (and related change requests):</p> <ul style="list-style-type: none"> <li>- An environmental and social risk analysis has been conducted at the CIP stage. It identified some potential risks and challenges, which were to be carefully monitored during project implementation (such as mitigation measures on land use, mitigation of environmental impact, management of security, etc.).</li> <li>- FMO has reported 3 times on E&amp;S in 2016;</li> <li>- Several due diligence trips have been undertaken between 2012 and 2014, improving the proposed mitigation of E&amp;S risks. A final due diligence report has been produced by FMO in 2016, providing a general update for E&amp;S, EPC contract and O&amp;M sections.</li> </ul> <p>Impact assessments include IFC performance standards. A specific point of attention of E&amp;S aspects has been the communication with the communities, and the development of a community development plan and communication protocol.</p> <p>One of the requirements related to E&amp;S included the need to identify a suitable company to collect and dispose project's wastes. It became indeed apparent that waste management would be a difficult issue to solve for the client. The project's remote location and the low availability of certified vendors make finding a secure and reliable solution for hazardous waste nearly inaccessible. Options are being reviewed.</p>	
<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<p><b>I-4.4.1</b></p> <p>Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management</p> <p><b>I-4.4.2</b></p> <p>Evidence of feedback and application of lessons learned in subsequent projects</p>	
No evidence found.	

## EQ 5 – Policy

To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
No Dutch companies involved in this project.	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
No Dutch companies involved	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
None.	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
The process took longer than it should normally do, due to external factors: <ul style="list-style-type: none"> <li>- CIP: 10 April 2012</li> <li>- IC Decision on CIP: 19 April 2012 (approval under several conditions). Considerations regarding e.g. exposure (50M\$ from FMO-A and IDF) was conceived to be high given the risk profile of the client and country; social issues to be evaluated carefully ("because of reputational risk to FMO and irreversible impacts of the project, these could be a deal breaker. Project should be executed in line with IFC performance standards"). IMR was of the opinion that the CIP was submitted in a very early stage of the process, given the need to obtain CIP approval in an earlier stage as FMO acted as mandated lead arranger.</li> </ul>	

- New CIP on 8 May 2014 due to expiration of the previous one approval. The required changes notably on the PPA took longer than expected due to the political situation in Nepal. Main changes in the meantime included PPA improvements (55% USD revenues for 10 years vs 100% local currency before; liquidity support covering 6 months of revenues (vs 3 months before); etc); no immediate GoN Support for the obligations of NEA under the PPA expected; O&M outsourced (vs in-house before); project cost decreases (from USD 210m to USD 186m) due to competitive outcome EPC tendering (old price was estimation by engineer); less complex FMO-A loan (only USD loan vs TCX NPR loan and guarantee before) and subordinated loan in USD instead of NPR.
- IC decision on 16 May 2014 (approval under conditions including adequate mitigation of off-taker risk).
- FP submitted on 21 August 2014 (signed version not received)
- Several Due diligence have been conducted between 2012 and 2014
- Construction started in 2016 (delays due to earthquake)

The financial proposal addressed the key issues related to the investment by IDF. The FP also contains documentary evidence of project compliance with FMO and IDF investment criteria (compliant except for tenor: 16.5 years against 15 years, needed for the bankability). IDF involvement in the project is justified on several aspects (positive environmental/social contribution, improvement of infrastructures, high additionality, etc.).

A corporate governance risk analysis has also been conducted (rated satisfactory). The management of the project is an experiment, primarily from Clean Developers.

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
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**I-6.2.1** - Appropriateness of available FMO expertise

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

No specific indication of lack of expertise from FMO staff for the different activities implemented so far (including due diligence).

<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
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**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

Mitigant measures to overcome the sponsor risk (limited hydro power experience) include the following mitigants: Indian and Nepalese Sponsors with good infrastructure experience and understanding of doing business in Nepal; Turnkey fixed price EPC with an experienced hydro contractor, (c) O&M outsourced to an experienced party; Strong Project management team with Nepalese hydro experience, (e) Experienced owners engineer, and Nepalese shareholders with a robust network and understanding of doing business in Nepal. So far, the project has not experienced significant issues in the implementation. The delay in the start of the project was due to the 2015 earthquake.

## Sources of data

Folder	File name	Document title	Date
CIP	120411 CIP ECS lower solu signed	CIP Project Finance	10/04/2012
CIP	120419 IMR advice	IC Decision on CIP	19/04/2012
Product Approval Document	Product approval document guarantee	Product approval document financing and capital markets	30/05/2012
Product Approval Document	Product approval document LCY BIO	Product approval document financing and capital markets	30/05/2012
Agreement & Amendment	120913 Consultancy agreement FMO signed	Independent technical and environmental and social services agreement	13/09/2012
CIP	140508 CIP Essel lower solu signed	CIP	8/05/2014
CIP	140516 Analyst advice and IC decision		16/05/2014
Financing proposal	140821 Final FP Lower Solu	FP	21/08/2014
Financing proposal	140821 Final FP Lower Solu inc annexes	FP	21/08/2014
IRC	140828 Analyst advice and IC advice	IC advice and MB decision	28/08/2014
IRC	140828 MB approval FP	IC advice and MB decision	28/08/2014
Agreement & Amendment	140910 FMO letter to energy ministry Neupana law draft	Tripartite agreement for Generation license	10/09/2014
Approval request	141201 IMR approval request	IMR approval request for change request pre-contracting	1/12/2014
Approval request	141215 Essel lower solu small change personal guarantee	FO approval request	15/12/2014
Approval request	141217 Essel lower solu small change NPR uncovered	FO approval request	15/12/2014
Agreement & Amendment	141217 Equity subordinated loan document clean dev	Clean dev - Essel-clean solu hydropower	17/12/2014
Study and Evaluation Report	141219 lower solu	BNY	19/12/2014
	141230 Lower solu executed dated bio participation notice	BIO participation notice	30/12/2014
	141230 Lower solu executed dated NPR guarantee	Financial demand guarantee	30/12/2014
	141230 lower solu executed dated pcbl fee letter	for senior and subordinated debt financing packages	30/12/2014
	141230 lower solu executed dated Triodos participation	participation agreement	30/12/2014
FINVOB	140415 E+S rapid risk scree	npre finvob	14/04/2015

Folder	File name	Document title	Date
Client credit review	150928 SCR lower solu fee payment date extension	1031 client credit review	28/09/2015
Client credit review	151109 SCR extension fee payment date	1031 client credit review	9/11/2015
Due diligence	LTA Lower Solu Hydropower Final Due Diligence Report 2153176A-PWR-RPT-017B Rev4	Lower Solu Hydroelectric Power Project, Nepal Final Due Diligence Report by Lenders' Technical Advisor Rev. 4	28/02/2016
Approval request	160407 Approval request post-contracting lower	FO approval request post contracting	14/04/2016
Approval request	160614 Approval request post-contracting		14/06/2016
Approval request	160617 Essel clean solu change request waiver CPs		17/06/2016
Approval request	160711 SCR lower solu CPs		11/07/2016
Agreement & Amendment	160713 Lower solu CTA fees waiver letter		13/07/2016
	160713 lower solu offshore account	offshore accounts charge	13/07/2016
Approval request	160718 Lower solu change request		18/07/2016
Client credit review	160728 1025 Client ESG report solu	1025 client ESG report	28/07/2016
Client credit review	160728 1025 Client ESG report SOLU draft		28/07/2016
Client credit review	160801 Client credit reviews		1/08/2016
Client credit review	160803 1025 Client ESG report updated		3/08/2016
Client credit review	161221 lower solu ES large change request		21/12/2016
Client credit review	170210 Approval request Solu hydropower land acquisition		10/02/2017

# Grown Energy, Mozambique

The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

- Remarks:

- The current situation (some years after FMO exit) is not entirely clear – no follow up or monitoring of this convertible grant appears to have been carried out by FMO (see also ‘Project Outcomes’ below).
- After initial telephone contact by the evaluation team it was not possible to make follow-up contacts with the project sponsor, Rademan van Rensburg, to further discuss Grown Energy project history and current activities in Zambezia (see also ‘Project Outcomes’ below).
- Final disbursement figures for FMO financing are not confirmed.
- No logical framework.
- Attempts to arrange a meeting with the sponsor Rademan van Rensburg during the Mozambique field visit were unsuccessful.

The information is all sourced from the limited documentation made available to the evaluation team as of the end of August 2017.



## 1. Project fiche

Project title	Grown Energy
<b>Project description</b>	Grown Energy (Pty) Ltd is a South African sponsored bio-fuel development company planning to build a 50Mlitre p.a. bio-ethanol plant and feed stock plantation in the Zambezi valley in Mozambique. Field stock which was intended to be used to produce the bio-ethanol was sweet sorghum and sugar cane. The plant was expected to produce 210,000 T/year of bagasse (which is a direct waste product of the bio-ethanol production process) which would be used as an energy source for a 5MW power plant which would be the primary steam and electricity source of the project. To this end Grown Energy obtained access to 20,000 ha of land adjacent to the Zambezi river near to the border with southern Malawi. It was intended to utilise irrigation waters from the river for crop production. It was proposed to build two 167,000 litres/day bio-ethanol plants in two phases, the bio-ethanol to be produced through a continuous or semi-batch fermentation process. Two 5MW co-generation plants would be built adjacent to the bio-ethanol plants using the bagasse by product of the milling and refining process as feed stock for the co-generation plant. Approximately 20% of the bagasse plus effluent from the plant would be used to produce compost (by a microbial composting process). Rademan van Rensburg and Fieldstone Africa had funded the original project concept and worked on initial development (land sourcing, agricultural scoping, plant conceptualisation, financial modelling and structuring) but additional funds were necessary for full feasibility studies (including soil analysis and ESIA).
<b>Sector</b>	Bio fuel
<b>Stage</b>	Start-up
<b>Operation Dates</b>	Finpre/Clearance in Principle (CIP), Financial proposal /Approval See below
<b>Contract</b>	FMO Client numbers 00015517
<b>Country/Region</b>	Mozambique, Africa
<b>Country category</b>	LIC
<b>Project total cost (€)</b>	24/07/2006 – USD 99M (of which USD 57M construction costs) to be funded USD39M equity and USD60M debt (i.e. 40/60 split equity/debt). However, the 2007 feasibility study more than doubled the estimated costs to USD213M (arguing that the viable plant capacity should be 100Ml/year of ethanol ie double the original proposal) with associated inflation of costs of construction materials.
<b>IDF contribution (€)</b>	See below
<b>Co-financing (€)</b>	July 2006: Sponsors – Actis 30%, Venfin 20%, GE 16%, FMO 9%. Subsequently changed – see below
<b>Loan Terms</b>	
<b>Senior/Subordinated</b>	
<b>Convertible</b>	
<b>Amount</b>	



Loan Agreement Date		Facility No	
Currency			
Tenor			
Grace period			
Interest rate			
Security			
Fees			
Disbursements	Dates and amounts		
Monitoring			
Key covenants			
Conversion features			
Equity Terms			
Direct			
Indirect – Fund			
IDF Investment (\$, €m, local currency)			
Total Project/fund			
IDF Stake (%)			
Investment date		Facility No	
Disbursements	Dates and amounts		
Direct investment – exit strategy			
Direct investment - put option terms			
Fund life			
Grants			
Amount	2006 USD 525,000 (disbursed USD 105850) In approving this initial grant the LDC Infrastructure Fund Grant Committee described the project as ‘... a rare exception as far as it concerns the dedication of its initiators and high potential in a supportive national policy environment’ 2007 USD 201,000 2007 USD 30,000 2007 USD 14,000 (€10,000) [disbursed USD 53,850?] 2008 USD 1.32M (disbursed USD 319,123 – Facility cancelled 2010) 2008 USD 100,000 Facility cancelled 2010)		
Convertible	Yes – USD201,000 was a convertible grant (on a 1:1 equity holding basis) to cover 43% of USD471457 estimated costs of investigating of 4 potential project sites. This grant agreement expired 31/08/2007 but was not fully utilised such that a request for disbursement of the final USD30000 was approved 27/09/2007.		
Purpose	For feasibility, ESIA studies and project development		
Grant agreement date	2006 USD 105,850 2007 USD 201,000 2008 USD 53,850	Facility no	0000100996 0000102913 0000112568

	2008 USD 1266150 2010 USD 100,000		0000112568 0000118816
Key terms	Convertible into equity upon financial completion		
Disbursement	Dates and amounts - Total disbursement (2008) USD 306,850		
Conversion terms	FMO grants to be converted to equity 1:1, if FMO decides to convert and continues to invest in the project. If not the grant would be repaid once new investors come in (same for development funding by Tata). The grant amount will be considered a first disbursement once FMO's grant is converted into equity.		
Financial Risk and Performance			
	Financial proposal/approval		Client Review - Most recent
Client Risk Rating	FSF 2006 C2 moderate	RF/IF C2: moderate	SDIF 37 Documentation received details only a single assessment of client risk rating (2006)
Loan - Impairment provision	N/A %		N/A %
Equity - Fair value adjustment	N/A %		N/A %
Financial performance			
Client Review -key findings			
Results chain: expectations and achievements			
Logical framework	No logical frameworks have been encountered in any documents made available to the evaluator. Reference was made to expected development impacts as follows: July 2006: Financial proposal for FMO convertible grant USD 525,000. <i>The implementation of the Project will have a strong positive financial-economic impact on the country and positively contribute toward the Millennium Development Goals. The agricultural aspect of the project will lead to increased employment (sustainable employment opportunities, about 1,800 FTE's in an area where 85% of the community lives below the poverty line, and it will have an impact on suppliers of (agricultural) goods and services). The project, being a first of its kind in Mozambique, will – when successful – pave the way for more projects to come and thus has a positive impact on (potential) new entrants.</i> <i>Currently there is no policy of ethanol blending in Mozambique. The Mozambican government intends to introduce such a policy once ethanol is available in the country. When this happen, there will be a significant impact on customers/final consumers, making available a product that was previously not available in the country. The production of ethanol in Mozambique is expected to have a large and positive effect on the country's balance of payments, as import of petroleum can be reduced. It should also reduce or stabilize the pump price of petrol to the Mozambican consumer and in general to ensure a higher availability of fuel in the Mozambican market. Finally, reduced spending of foreign currency due to reduction of imports will also be beneficial.</i>		

	<p>The 2008 Financial proposal for FMO convertible grant USD 3.2M replicated the 1<sup>st</sup> paragraph above substituting the 2<sup>nd</sup> paragraph as follows:</p> <p><i>There is also a significant impact on customers/final consumers, making available a product that was previously not available in the country. The production of ethanol in Mozambique will also have a large and positive effect on the country's balance of payment as import of petroleum can be reduced. It should also reduce or stabilize the pump price of petrol to the Mozambican consumer and in general ensure a higher availability of fuel in the Mozambican market. Lastly, there will be reduced spending of foreign currency because of reduction of imports as well.</i></p> <p>This assertion is contested by the 2008 evaluation which noted: '....ethanol production will neither lead to reduced imports of fuel, not have a stabilising effect on fuel prices in Mozambique'</p> <p>Social and environmental impacts are covered in detail under JC4.4 below.</p>
<b>Assumptions</b>	<p><b>Risks, assumptions and mitigation measures as identified in July 2006</b></p> <p><u>Completion/technical risk:</u> <i>High. Use of proven technology and involvement of experienced EPC contractors and a fixed price, turn-key contract with clearly defined performance standards and requirements will mitigate technical and price risk in constructing the plant. The Project's budget includes a contingency of USD 5.2 min and GEZ will obtain construction all-risk insurance. Because of the fact that the project currently is in a very early stage, feasibility studies will have to be finalised and no agreements are in place yet.</i></p> <p><u>Supply risk:</u> <i>Medium. Market reports and reports from RvR say that sweet sorghum is the most suitable feedstock. An independent view from agricultural consultants/specialists will have to confirm this. In terms of logistics, 6,500 hectares of land are being used in a rotational matter (22,000 hectares in total available) is very considerable. Losses due to disease will be minimised by selecting resistant hybrids, providing optimum growing conditions, rotating with other crops and removing infested debris. Alternative feedback (molasses) is available in the area.</i></p> <p><u>Off-take risk:</u> <i>Medium. The sponsors are negotiating with two potential off-takers and the intention is to have (long term) off-take agreements in place by the time construction of the Plant starts, so that a minimum off-take amount is guaranteed. In addition, because of governmental commitments worldwide, a floor in the demand of bio-fuels – irrespective of price movements – is almost certain. Because of this, the structure as planned would imply low risk; at this stage however, because of the uncertainties still involved, the risk is rated as medium.</i></p> <p><u>Commodity price risk:</u> <i>Medium. Decrease in ethanol process could reduce profitability of the Project. Decrease in oil prices to a level below USD 42 p/barrel will reduce competitiveness of ethanol and therefore reduce demand. According to industry experts, the oil price will remain at the current high levels, due to the increase in demand of liquid fuels and limited availability of crude oils. Also mitigated by environmental requirements of governments, which guarantee a minimum level of demand. Commodity price risk is also mitigated by GEZ owning full chain of production, reducing costs of production, allowing GEZ to compete even in worse market circumstances.</i></p> <p><u>Business risk – Overcapacity:</u> <i>Medium. There is a lot of interest worldwide for the ethanol market and many development and expansion initiatives are under</i></p>

	<p>way. Although the project is one of the more advanced initiatives, production capacity will grow strongly in the years to come. Although demand will also continue to grow, it is difficult to assess with precision if future demand is enough to take-off all available supply. This is mitigated by the Project's low cost production, which will allow the Project to offer ethanol at very competitive pricing.</p> <p><u>Business risk – Substitution: Medium.</u> Alternative methods for the production of ethanol are being studied. Currently there is no alternative cost-efficient technology in place, however, there is a risk that during the Project's lifetime alternative technologies are developed that may be commercially viable. It is unclear what the effect is that this would have on the Project's profitability.</p> <p><u>Management /operating risk: High.</u> The sponsors are considering appointing Booker Tate as manager of the Project. Booker Tate has a strong track record in managing sugar/power plants around the world, and the appointment of Booker Tate would minimise management and operating risk of the Project. The alternative where managers with relevant experience would be identified by the different partners involved would take considerably more time and bring more uncertainty. Therefore, at this stage of the project and without having contracted a reputable manager yet, the risk is considered to be high.</p> <p><u>Regulatory risk: Low.</u> There is no relevant regulatory policy in place yet in Mozambique. The GoM however is supportive of the Project. The Sponsors are currently in discussion with the Minister of Energy, who will before construction starts, confirm in writing that the Project will be provided with all necessary permits, licenses and approval required.</p> <p>Clearly, being a grant funding for the development stage of a project, no securities/covenants are in place that can potentially act as risk mitigants. Overall the risk is rated as high in this stage of the project, but considered to be fully in line with the aims and criteria of the LDC-fund.</p> <p>These risks were repeated almost word for word in the April 2008 Financial Proposals for FMO financing of USD 3.2M convertible grant.</p> <p><u>Key Assumptions as identified in July 2006</u></p> <p>The financial model used for analysis was developed by Fieldstone – the model is relatively high level. A more detailed and advanced model should be built in the next (development) stage, once the different consultants have done their reviews.</p> <ul style="list-style-type: none"> <li>• The input assumptions relating to revenues are based on guarantees inputs as received in offered provided by the constructors and technology providers Cost assumptions have been obtained from potential suppliers, and where not available, industry norms have been applied.</li> <li>• Assumed sweet sorghum production is 4,500 litre per ha, which is conservative considering that trials have shown that a yield of 7,500 per ha is achievable.</li> <li>• Annual ethanol output levels are based on guaranteed nameplate capacity of 50MLPY. The sponsors are considering an expansion of the Plant in 2011 that will double the Plant's capacity. For conservative reasons this expansions is not included in the projections of this project.</li> <li>• Production is based on 333 operational days per year to account for 22 days of scheduled and 10 days of forced stoppages.</li> <li>• Price assumptions used for revenue projections are based on real prices of various market sources. Prices for the local market are set at USD 0.50 and for the export market at USD 0.52. These processes are to be stipulated in the off-take agreement(s) at a later stage.</li> </ul>
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- *Annual fixed costs are set at USD 4 Mln in the base year and mainly consist of salaries (management contract) & wages (70%).*
- *Variable costs are set at USD 5.4 Mln in the base year, including a contingency of USD 0.3 Mln, and mainly consist of feedstock production costs (74% of variable/43% of total costs). Production prices for sweet sorghum are determined on the basis of soil samples and current fertilizer and seed costs.*
- *Distribution costs are assumed to be 0.05 USD per litre of ethanol.]Working capital requirements are based on 60 days receivable/inventory and 45 days payable.*
- *Cost of financing is assumed to be 9.0% per annum for debt with no carrying costs for equity. Debt is amortized in 14 equally six-monthly repayments (7 years) following commercial operation. The model assumes that interest is 'capitalized', i.e. interest payable is added to the debt amount and not deducted as expense in the income statement. Annual repayment instalments however are based on the total amount payable (debt amount & interest) over the whole period, leading to stable repayment amounts over the years.*

- *Inflation assumption is set at 4%.*

Some of the 2006 assumptions remained unchanged in the 2008 Financial Proposals for FMO financing of USD 3.2 M convertible grant (below).

- *The input assumptions relating to ethanol production are based on inputs as received in offers provided by the constructors and technology providers. Cost assumptions have been obtained from potential suppliers, and where not available, industry norms have been applied.*
- *The assumed annual sweet sorghum production is 13,000 litres per ha, which is based on 2 cycles per annum and continuous use of land resources for the project duration of 25 years.*
- *Annual ethanol output levels are based on guaranteed nameplate capacity of 100m litres per year from 2011 onwards, operating at full capacity from the completion of plant construction.*
- *Production is based on 333 operational days per year, to account for 22 days of scheduled and 10 days of forced stoppages.*
- *Assuming export of total production, station gate ethanol process is set at USD 0.45 per litre as of the end of 2007. Station gate process represent the price of ethanol as it leaves the plant and changes owner, new of distribution and marketing expenses.*
- *Marketing and distribution costs are assumed to be USD 0.15 per litre, which includes the marketing fees payable to TCL. Added to the station gate price mentioned above, the all-inclusive ethanol market price of USD 0.60 per litre is deemed conservative compared to current ethanol prices seen in the European market (USD 1.0 per litre, floor price considered by experts is EUR 0.51 per litre).*
- *Factory costs are USD 8.8 M per year after construction completion, and mainly consist of direct production and maintenance costs, salaries and insurance costs.*
- *Agricultural costs are USD 14.8M per year after construction completion and consist of feedstock production costs, including agricultural management costs of USD 2.2M. Production prices for sweet sorghum are determined on the basis of soil samples and current fertilizer and seed costs.*

	<ul style="list-style-type: none"> <li>• Based on an Environmental and Social due diligence, relocation expenses are estimated at 350 households to be relocated for USD 1,500 each. Fieldstone's model assumed 250 households.</li> <li>• Working capital requirements are based on 45 days receivable/inventory and 45 days payable which is conservative compared to the Fieldstone assumption of 30 and 45 days, respectively. This results in a cash buffer of approximately USD 2.5M.</li> <li>• Cost of financing is assumed to be 9.25% per annum for debt with no carrying costs for equity. Debt is amortized in 22 semi-annual instalments (11 years) following commercial operation. The model assumes that interest is capitalized during construction, i.e. interest payable is added to the debt amount. Financing fees are conservatively estimated, taking into account a 2.5% up-front fee, a 0.5% commitment fee and 1.0% advisory fee payable to arranger Fieldstone.</li> <li>• Inflation assumption is set at 10.0%, which is conservative compared to the 4.0% assumed by Fieldstone as inflation has a positive leveraging impact on the Project's IRR.</li> <li>• At the end of the project lifetime the residual value of the plant is estimated to be half of the initial investment, mainly reflecting the value of irrigated and cultivated farmland and to some extent the value of the Plant. Fieldstone did not include a residual value in its model. TCL included a higher residual value in their model.</li> <li>• For fiscal assumptions, fixed assets are depreciated at an accelerated level, resulting in a tax exemption period until 2019. These assumptions are to be confirmed by a fiscal advisor; however, they are following the tax laws of Mozambique.</li> </ul>
<b>Main project activities and achievements</b>	<p>Given that this project never entered the implementation phase all activities, outputs and impacts expected – none have actually been achieved.</p> <p><b>July 2006 – Expected activities</b></p> <p>The ethanol will be produced by a biochemical process (fermentation) from sugar juice extracted from sweet sorghum and sugar cane as feedstock. GEZ will own the full chain of production and also be responsible for the cultivation and supply of both sweet sorghum and sugar cane. For this process the Government of Mozambique (GoM) has provisionally allocated approximately 26,000 ha of land available to GEZ, of which GEZ will obtain the 'rights of use' for a period of 50 years, pending approval of the Council of Ministers. Feedstock can be delivered on a 'direct cost only' basis, maximising the competitiveness of the ethanol produced. A combination of primarily sweet sorghum supplemented by sugar cane has been selected due to proven superior yields of sweet sorghum. The project will produce additional crops such as soya and other (dry) legumes for consumption and as an additional income source for the Project. The Project's proximity to roads, rail and the Zambezi River will lower infrastructure requirements and transportation costs. The Plant will produce 203,000 tons per year of bagasse (a direct waste product of the bio-ethanol production process), which will be used as an energy source to fire a 25MW Energy Generation Plant (EGP). This plant will be the primary steam and electricity source of the Project. The total capital investment required for the Project is estimate at USD 213.4M, of which 40% will be financed by equity and 60% by debt. Total construction cost for the plant is estimated at USD 99M, which will have to be confirmed by preliminary engineering planned for the development phase. The construction period is</p>

	<p><i>estimated to last 29 months starting December 2008. TCL will be the (main) off-taker with rights to purchase 100% of production. In this capacity TCL will also be fully responsible for logistics (transportation to the port and storage). The necessary policy and regulations for this Project are not provided with all necessary permits, licenses and approvals that would be required once the relevant policies and regulations are being implemented.</i></p> <p><b>By April 2008</b>, only a few changes had been made to project activities.</p> <p><i>Grown Energy (Pty) Ltd (GE) is a South African biofuels development company that was formed in 2005 by Fieldstone Africa (Pty) Ltd, a financial advisory company, and Rademan van Rensburg (RvR), a self-employed experienced agricultural specialist. GE plans to develop a 50 million rer bio-ethanol plant (Plant) and a feedstock plantation in the Zambezi Valley near Luabo in Mozambique, on the banks of the Zambezi river (Project). Grown Energy Zambezi SARL (GEZ) will be established to own and operate this Plant. The ethanol will be produced by a biochemical process (fermentation) from sugar juice with sweet sorghum as feedstock. GEZ will own the full chain of production and also be responsible for the cultivation and supply of sweet sorghum. For this purpose the GoM will make 22,000 ha of land available to GEZ (leasing). As such, feedstock can be delivered on a 'direct cost only' basis, maximising the competitiveness of the ethanol produced. Alternatively molasses (a 'by-product' of the sugar industry) can be used feedstock, without any changes being required to the Plant. The Project's proximity to good roads, rail and the Zambezi river would allow molasses to be delivered from outside the area at low cost. The Plant will produce 210,000 tons per year of bagasse (a direct waste product of the bio-ethanol production process), which will be used as an energy source to fire a 5MW Energy Generation Plant (EGP). This plant will be the primary steam and electricity source of the project. The total capital investment required for the Plant is estimated at USD 99 min, of which 38% will be financed by equity and 62% by debt. Construction of the Plant will be tendered. Total construction cost for the plant is estimated at USD 57 min, including a contingency of 10% (USD 5.2 min). The construction period is estimated to last 12-18 months starting end of GE is currently talking to one other potential off-taker, Mooch, a British oil trading company. The Project will be designed, constructed and operated in accordance with applicable law and regulations. The necessary policy and regulations for this Project are not in place yet, however, the Ministry of Energy has committed to provide an official letter stating that GEZ will be provided with all necessary permits, licenses and approvals that would be required once the relevant policies and regulations are being implemented.</i></p> <p>The economics of electricity generation for the national grid appears to be queried by the 2008 evaluation which notes that generation of electricity using bagasse costs ~USD0.06-0.08/kWh which is 3 to 4 times the sales cost of electricity in Mozambique where cheap and clean energy is generated by Cahorra Bassa distributed at USD0.02-0.025/kWh.</p>
<b>Main project issues</b>	<p>Grown Energy aimed to establish a 50M litre p.a. bio-ethanol plant in central Mozambique based on sugar cane and sweet sorghum.</p> <p>2006: provision of grant (USD 525,000) for fatal flaw analysis. Grant value approved but only USD 105,850 was actually disbursed.</p> <p>2007: convertible grant (USD 201,000) for completion of feasibility</p>

	<p>phase (grant to be converted to equity if project progresses to development phase). [€229,671 disbursed as convertible grant as per 31/12/2017]</p> <p>2008: [€85,543 disbursed in 2008]</p> <p>2009: FMO decision to exit development phase (June 2009) due to ongoing delays with approval of land rights, process delays, weak project management and uncertainty in relation to main sponsor's commitment (i.e. Tata) [at this stage it was hope that the main sponsor would continue to support the project so as to reach financial close at which point FMO grant funding would be converted to equity]</p> <p>2010: Convertible grant facility cancelled (with possibility of conversion of grants into equity and consideration of additional FMO funding in the future).</p> <p>[2016: according to press reports Tata sells 95% stake in Grown Energy Zambezi Lda (16/02/2016) for USD 5.5M (to Rademan Van Rensburg)]</p>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	No information made available	
GHG Saving (tCo2)	T CO <sub>2</sub>	No information made available	
Installed Capacity (MW)	MW	25MW EGP (as primary steam and electricity source for project)	
Production Capacity	GWh	No information made available	
People served – distribution	#	No population figures – excess electricity would be sold into the local grid (rural electrification). However, there is virtually no rural distribution network in this part of Mozambique and to achieve significant impact in rural electrification a major investment in a distribution network would be necessary. Also, given that this area has one of the highest poverty rates in Mozambique, the ability of local people to pay for connection charges and electricity tariffs is doubtful	



<b>People served – transport</b>	#	N/A	
<b>People served – power</b>	#	No information made available	
<b>People served – telecom</b>	#	-	
<b>People served – IT/internet</b>	#	-	
<b>People served – industrial/agri</b>	#	100-300 households (directly affected in proposed farming area)	
<b>People served – farmers reached</b>	#	N/A	
<b>Forestry under management</b>	ha	-	
<b>Agriculture</b>	ha	~36,000 ha concession (proposed ~26,000 ha under cultivation)	
<b>Green investments</b>	€m	Assumed all FMO investments came under this category	
<b>Inclusive investments</b>	€m	No information made available	

## 2. Scoring

It should be noted that these are tentative ratings based on incomplete information on the project.

	Desk Review
<b>EQ 2 - Relevance</b>	
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	N/A As this is a grant, no comparative ratings of risk of IDF and FMO-A portfolio have been examined in project documentation made available
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3 Initial co-financing included Actis 30%, Venfin 20%, GE 16% and FMO/IDF 9%. After the withdrawal of Actis and Venfin, FMO commitment was reportedly fundamental to the Tata (TDL) buy in to the project and thus may be considered as catalytic.
JC 2-3 Additionality of IDF Loans and Equity Investments	3 The project would not have been developed at all without FMO involvement (albeit that the project did not in fact go ahead) – thus FMO involvement may be considered an additional. The 2008 evaluation concluded that IDF grants were, considering the greenfield character of the project and the junior company status of GE as initiator, likely to be additional in the first phase and definitely in the second stage.
<b>EQ 1 – Effectiveness – Note - no information available on current project status</b>	
JC 1.1 Trends in the nature and component balance of IDF portfolio	N/A
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	1 No infrastructure outputs have been produced – whilst IDF support continued through an extended development phase, IDF pulled out in 2010 citing delays in land acquisition, weak management and continuing uncertainty over the continuing participation of the main sponsor (Tata).
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	1 Had the project gone ahead considerable employment might have been generated (estimated at 2000 during development phase, an additional 2000 in the next phase plus 3000 in out grower schemes) all in an area of high poverty and high unemployment not including short term employment generated during plant and power station construction. Actually only about 30 persons were employed for a short period on bush clearance. Thus the project has not contributed to private sector development.
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more	1 Expected outcomes were not delivered as the project did not go ahead. However, the 2008 evaluation concluded that outcomes would have been less than expected.

widely)	
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	1 There is no evidence of consistent M&E systems, monitoring or reporting and overall it cannot be said that IDF M&E and reporting frameworks consistently provided accurate and timely information for management of results. However, there is no evidence of feedback and application of lessons learned in other FMO projects.
<b>EQ 4 – ESG Risk Management Note - no information available on current project status</b>	
JC 4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio	N/A
JC4.2 IDF-financed projects contributed to green and inclusive development	1 There is no estimation of GHG emissions that might have been avoided by this project, on the contrary, the 2008 Scoping Report notes that mitigation engineering would be necessary to avoid atmospheric emissions of particulate matter and CO2 from the proposed plants and a loss of stored carbon resulting from land clearance.
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3 There is no doubt that E&S studies are fully compliant with national legislation and international practices. ESG risk assessments included consideration of: occupational H&S, pollution prevention and abatement, land acquisition and resettlement, bio-diversity, conservation and NRM, cultural heritage, community H&S and security (including community engagement) and other potential impacts resulting from land clearance.
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	2 There is no evidence of ESG lessons learned being applied to subsequent portfolio management.
<b>EQ 6 – Efficiency</b>	
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	1 Over-reliance upon the sponsor's capacity and technical capability combined with an under-estimation of risks (long term sustainability and shorter term logistical and bureaucratic issues that thwarted project implementation)
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	1 . Given the technical and logistical problems which beset the project and resulted in the project not going ahead there are doubts about the FMO resources and specialised knowledge for such an agricultural (and power generation) project in remote up-country Mozambique.
JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective	1 This project was not successful – the acknowledged weakness of FMO sector capacity and early enthusiasm (and pressure

utilisation?	to make deals) combined with limited sponsor managerial capacity and logistical issues in the proposed business plan (sugar cane/sweet sorghum>ethanol>power generation) to impede progress. Longer term sustainability would anyway have been doubtful.
<b>EQ 3 – Revolvability</b>	
JC 3.1 Evolution and drivers of portfolio performance pre and post 2012	N/A
JC 3.2 Financial Performance	N/A
JC 3.3 Focus of risk management systems and policies on long-term sustainability	N/A
JC 3.4 Revolvability	N/A
JC 3.5 Individual Project Sustainability	1 Given that the project did not go ahead expected sustainability is dependent upon project assumptions. In 2006 bio-enhanced production was perceived as a sustainable response to increased demand propelled by government and international strategies, fuel security concerns and environmental pressures. However, ethanol prices peaked in 2006 at USD 4; current prices are ~USD 1.55. However, the 2008 evaluation cast doubt on expected sustainability noting that electricity generation costs of Bagasse were 3-4 times the sales cost of electricity in Mozambique whilst ethanol production would not lead to reduced imports of fuel nor have a stabilising effect on fuel process in Mozambique.
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	N/A
JC 5.2 Effects for Dutch companies and economy	There is no reference to involvement of Dutch companies.
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	N/A GC noted (April 2008) <i>‘the high possibility of future financing by FMO-A’</i> but no references to linkages to other infrastructure programmes has been examined (apart from passing reference to possible AfDB involvement in out grower schemes)
<b>Scoring Justification</b>	
EQ 2 - Relevance	3 The project would not have got off the drawing board without FMO involvement (not that it got far from the drawing board anyway) and in this respect the FMO role (ie IDF grants) may be considered additional. After withdrawal of the initial co-financiers FMO’s continuing commitment was a key point in the TDL buy-in and thus the FMO role can be considered catalytic. The IDF core principle of

	additionality and catalysing resources from third parties has been respected albeit that this project pre-dates the 2010-2016 period
EQ 1 - Effectiveness	1 Expected outcomes were not delivered as the project did not go ahead. Although impediments to progress arose from the (in)actions of the sponsor GE (rather than due to FMO) there are indications that expected outcomes may have been over-optimistic. Thus, in this case, DF-funded activities were not (and probably would not have been) effective in expected results contributing to the results chain of the Fund
EQ 4 – ESG Risk Management	2 Had the project gone ahead then E&S (and developmental) effects would have been significant (in terms of employment generation) although mitigation measures would have been necessary to avoid some environmental issues. E&S studies (for this category A project) were fully compliant with national legislation and international norms.
EQ 6 – Efficiency	1 FMO's limited sector capacity and possible over-reliance upon the sponsor's technical capacity without recourse to independent advice is noted.
EQ 3 – Revolvability	1 As the project did not go ahead comments on revolvability are speculative and depend upon project assumptions (predictably optimistic) and expected outcomes. Claimed developmental aspects were significant (although subject to doubts) and to some extent were used as a 'trade off' against the considerable identified risks (which were under-rated in contemporary analysis). Overall there is doubt that, even if it had gone ahead, this project would have contributed to Fund revolvability
EQ 5 – Policy	N/A
<b>Comments</b>	To summarise, FMO involvement in this project was essential in progressing preparation as far as was actually achieved but that FMO enthusiasm overwhelmed the considerable project risks and doubts about longer term sustainability

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learned & Key Findings

- FMO had limited experience of agricultural projects (as acknowledged by in the minutes of the GC meeting 28/04/2008) and thus relied largely on the experience (and enthusiasm) of project partners not only as ‘comfort’ but also as a substitute for FMO’s lack of experience in this field and as the only source of technical due diligence i.e. there is no evidence of independent due diligence (other than as regards ESG – see below. There is a sense of this project being a predominantly ‘one man show’ (i.e. Rademan van Rensburg) whose enthusiasm and advocacy for the project was clearly demonstrated as was FMO’s reliance upon him.
- FMO’s due diligence was inadequate in particular regarding technical aspects of the project. No FMO-hired independent technical specialist was sent to visit the proposed project site and assess the reasonableness of the key assumptions on which the feasibility study was based. For a very risky green field project in a remote area of Mozambique reliance at face value on a fundamentally flawed project proposal should not have happened.
- Risks were identified but underestimated together with over-optimistic assumptions. Examples include: lengthy and time-consuming bureaucracy in obtaining permits, approvals and licenses (the lack of national regulatory framework being a contributory factor); logistical problems in launching a green-field project in remote up-country Zambezia; sensitivity to commodity price fluctuations (and USD/€ exchange rate risks); logical and evidential deficits (e.g. estimated costs of electricity generation three times the Mozambican tariff; ethanol produced by this project being unlikely to lead to reduced fuel imports or national fuel price stabilisation; ethanol production costs lower in RSA with greater accessibility to markets).
- FMO proved to be a reliable and patient partner whose role in promoting and sustaining project development was overwhelmingly positive (including reportedly being a factor in the entry of Tata as a new sponsor after the withdrawal of some of the original sponsors)<sup>7</sup>.
- FMO had completely lost touch with the sponsor RvR and had no way of contacting him. ADE on its own was able to find him and have one short telephone conversation after which RvR did not respond further.
- FMO insisted upon the highest standards of ESG (to IFC standards) which in some cases were more demanding than required by national regulation. However, no reference was made to this project potentially contributing to FMO’s target of ‘doubling impact, halving footprint’.
- Post disbursement monitoring of the project by FMO was poor. This was a convertible loan that could have been converted into equity. Consequently monitoring should have been of the same standard as for a loan or equity investment. There was no formalized M&E framework and no logical framework was produced. There is no evidence of feedback of lessons learned and there was no follow up after cancellation of FMO facilities and withdrawal of FMO (see ‘Project Outcomes’).
- It is not possible to form an opinion on the adequacy of FMO project management (other than noting doubts about FMO sector experience noted above) or organizational structure for management of IDF.
- There was no involvement of Dutch firms

<sup>7</sup> Source: IOB Evaluation Investing in infrastructure Evaluation of the LDC Infrastructure Fund 2008: 4 Additionality and catalytic impact ‘The participation of Tata Chemicals can be directly attributed to FMO’s insistence; 6 Conclusions ‘FMO’s continuous commitment throughout the project’s life, including the transfer from the first to the second project site, has had a catalytic impact shown by FMO’s insistence to get a large commercial player (Tata Chemicals) on board’

**Project outcomes**

The project never entered the implementation phase.

In 2009 FMO decided to exit due to continuing delays with approval of land rights, process delays, weak project management and uncertainty about the continuing commitment of the main sponsor (Tata) – at this stage it was hoped that the main sponsor would continue to support the project so as to reach financial closure at which point FMO grant funding would be converted to equity. In 2010 the grant facility was cancelled (with possibility of conversion of grants into equity and consideration of future FMO funding).

No subsequent information was available in FMO documentation but investigation by the evaluation team confirmed that Tata sold their 95% stake in Grown Energy Zambezia Lda in February 2016 to Rademan van Rensburg (USD5.5M). Further investigation of Mozambique sources revealed that Rademan van Rensburg has established a Mozambican firm, EcoFarms Lda, for production and processing of sugar cane at Chemba in Zambezia (which involves some 5km of irrigation channel from the Zambezi River) which may become operational in 2018. Partners are not known except for FCID (Catholic Fund for Innovation and Development) – participation USD 1.4M. It is not clear whether the land used by EcoFarms at Chemba is that identified by feasibility studies for Grown Energy (financed by FMO convertible grant) after the first proposed location at Mopeia was found to be unsuitable and, if so whether or not the FMO funded studies (convertible grant) are informing development of this land.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
<p>ix) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument);</p> <p>x) portfolio performance (including reasons for portfolio impairments);</p> <p>xi) co-funding/complementarity with FMO-A portfolio;</p> <p>xii) investment leverage/funding mobilization.</p> <p>2006: Application for convertible grant USD 0.525M (~34% of initial development costs)</p> <p>2006: Project sponsors: Actis (30%), Verifin (20%), GE (16%) &amp; FMO (9%) – these project sponsors (Actis and Verifin) left the project after fatal flaw analysis declared the selected land was unsuitable (but another location might be feasible). Tata subsequently entered.</p> <p>2006: Guarantee: USD 5M (€3.89M)</p> <p>2007: Convertible Grant USD 201000 (for feasibility studies for new land sites) [€229671 disbursed by 31/12/2007]</p> <p>2008: €85543 disbursed in 2008.</p> <p>Grant €10000 (partial coverage of last stages of feasibility study)</p> <p>Grant proposed for USD3m convertible grant plus €10000 grant approved</p> <p>2009: FMO decision to exit development phase</p> <p>2010: Convertible grant facility cancelled by FMO</p> <p>2016: Although not confirmed, it appears from press reports that Tata sold its stake in GEZ (to RvR)</p> <p>From the project documentation scrutinised it is not possible to comment upon trends in the nature and component balance of the IDF portfolio as a whole</p>	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <p>xi) temporary/short term during the implementation period</p> <p>xii) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</p> <p>No infrastructure outputs have been produced. Whilst IDF support continued through an extended development phase, by 2010 IDF decided to pull out citing delays in land acquisition, weak project management and continuing uncertainty regarding continuing participation of the main sponsor (Tata). By late 2008 30 persons were reported to be directly employed of which 27 were manual labour clearing the bush (for establishment of a campsite, minor nurseries, mini-irrigation (sprinkler system and limited cropping of sweet sorghum).</p>	



The project intended to ‘*combat poverty through involvement of local business community and local employment*’ in accordance with the Mozambique PRSP and Visão 2025. The proposed project was also compliant with various sector strategies ie Energy Policy (Min.Energia), policy and strategies for Industry (Min Industria e Comercio) and Green Revolution Strategy Paper (MinAg). The agricultural component of the project was expected to lead to increased sustainable employment opportunities (about 800 FTEs in an area where 85% of the population live below the poverty line plus potential outgrowers. There were also expected to be positive impacts on suppliers of agricultural goods and services).

The 2008 evaluation suggested potential employment generation was higher than noted. According to the 2007 investment plan ~2000 jobs would be created during the development phase, 2000 additional jobs in the next phase (1<sup>st</sup> ethanol production phase) plus 3000 jobs in outgrower schemes (not including temporary employment during construction of the ethanol plant). It was also reported that AfDB was committed to finance capacity building of outgrowers by means of a) cane supply arrangements; b) management; c) workshop and equipment; d) skills transfer and wider capacity building

**Conclusion:** No infrastructure outputs have been produced – whilst IDF support continued through an extended development phase, IDF pulled out in 2010 citing delays in land acquisition, weak management and continuing uncertainty over the continuing participation of the main sponsor (Tata).

<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b>
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**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of ‘Doing Business’

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

- No reference to estimated indirect employment creation has been encountered in documents scrutinised apart from reference to out-grower schemes (see above).
- At the time of FMO involvement there was no national regulatory framework in place for bio-fuel production (although MinAg was expected to finalise a proposal for a strategy and framework in 2008) However the Minister of Energy had provided a comfort letter confirming that GEZ would be issued all necessary permits, licenses and appraisals. There was no FMO (or project) support to formulation of national regulatory frameworks. The national Biofuel Strategy was approved in March 2009.
- Whilst rankings have an improving trend Mozambique is rated by the WB ‘Doing Business’ Index at 137/190 countries.  
2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006  
137 133 127 139 146 139 126 135 141 134 140 110
- GEZ would not have proceeded through the formulation stage without FMO support.

**Conclusions:** Had the project gone ahead considerable employment might have been generated (estimated at 2000 during development phase, an additional 2000 in the next phase plus 3000 in out grower schemes) all in an area of high poverty and high unemployment not including short term employment generated during plant and power station construction. Actually only about 30 persons were employed for a short period on bush clearance. Thus the project has not contributed to private sector development.

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
	<p><b>I-1.4.1</b> - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])</p> <p><b>I-1.4.2</b> - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)</p> <p><b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.4</b> - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p><b>I-1.4.5</b> - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p>
	<ul style="list-style-type: none"> <li>• Development impacts were identified as including: strong positive financial and ME impact on the country at large; reduction or stabilisation of pump prices of fuel to the Mozambican consumer and higher availability of fuel in the Mozambican market; increased sustainable employment; impact on suppliers of agricultural goods and services. However, these have not materialised (as the project did not go ahead) - there has been no (direct or indirect) employment generation (except for consultants) other than ground clearance (30 posts).</li> <li>• The project was expected to have a significant impact upon customers/final consumers by making available a produce previously not available in Mozambique. This production was expected to have an important effect upon the country's balance of payments as importation of fuel could be reduced (reduced spending of hard currency) whilst stabilising pump prices and contributing to a higher availability of fuel in Mozambique.</li> </ul> <p>The April 2008 Financial Proposal notes:</p> <p><i>In Africa, several countries are considering mandating bio-fuels. The Government of Mozambique has plans to introduce a mandatory blend of ethanol and petrol for transportation.</i></p> <p><i>However, the GoM has not yet done so, as ethanol production has not yet begun in the country. The Minister of Energy has stated that a mandatory blend of 2.5% would be introduced once ethanol would be available, increasing to 25% subject to availability. This is in line with Petromac's intention to introduce a 10% blend of fuel grade ethanol in all their petrol. As there is no crude oil refining capacity in Mozambique, Petromac is importing refined fuels at prices that are higher than the current ethanol prices.</i></p> <p>However, the 2008 evaluation suggests that national use of ethanol would be extremely modest due to a lack of blending facilities, composition of the vehicle fleet and PETROMOC focus on diesel rather than ethanol. The first decade of ethanol production would not lead to reduced fuel imports not have a stabilising effect on national fuel prices. Also, export opportunities to RSA would be limited as production costs in Mozambique are higher than those in RSA (thus suggesting export to Europe might benefit from import preferences for ACP countries)</p> <ul style="list-style-type: none"> <li>• There is reference only to potential employment creation in the local agricultural sector in central Mozambique which has poverty level of ~85%.</li> <li>• Explicit reference is made to the project potentially contributing to poverty reduction by employment creation.</li> <li>• Given that this project would have been the first bio-fuel project for LDC (in line with the FMOs 2006 commitment to include renewable energy activities in the LDC portfolio) and would have been amongst the first such projects in Mozambique, there would have been a relatively high level of attribution to FMO support.</li> </ul>

**Conclusion:** Expected outcomes were not delivered as the project did not go ahead. However, the 2008 evaluation concluded that outcomes would have been less than expected.

**JC1.5** *IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio*

**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

- In 2006 the FMO role was seen to be substantial as, without FMO funding the project may not develop. FMO wished to design the project to meet satisfactory environmental, social and corporate criteria and thus close monitoring and reporting was deemed to be necessary. The 'Fatal Flaws Analysis' (January 2007) concluded that although the selected location was 'not ideal' the project concept was viable. This was considered by GC in February 2007 and a convertible grant of USD 201000 was approved. The conditions of this grant included a requirement to deliver the feasibility study to FMO within 2 months after the final joint disbursement (as did a further grant offer for USD 30000 in October 2007 and USD 10000 in January 2008) although there is no reference to monitoring of progress. Reporting of project progress in IDF Rural Reports consists of short paragraph (in 2006, 2009 and 2010 reports) giving a situation report.
- There is no evidence of consistent M&E systems – no log frame or monitoring system as such appear to have been produced in project documentation scrutinised. There are, however, references to production figures in various descriptive texts (e.g. area of land under crops, yields etc). The 2008 evaluation presented an evaluation matrix:

Objective-means	Indicators/variables	Sources of information
<b>Input</b> Business implementation plan National energy / fuels policy Financial contributions (grants, equity, loans)	Investment plan completed Plans on alternative fuels / ethanol Financing plan completed	Existence business plan Policy documents Ministry for Energy Financing Plan Annual reports
<b>Activity</b> Completed feasibility study with all components Construction ethanol plant Electricity	Studies completed Licences issued EPC contract completed; transfer of plant Electricity generation plant established	Studies Licenses Contract, Progress reports
<b>Output</b> Sorghum and sugarcane in production Ethanol Electricity	Cultivation of sweet sorghum and sugarcane Quantity of ethanol being produced KWh of electricity generated	Verification Progress reports

<b>Outcome</b> Bio-ethanol being sold to traders and used as fuel (for example blending) Electricity being used by plant and distributed to communities Employment  Increased outlet to local suppliers of agricultural inputs	Statistics of sales (domestic, exports) Percentage of fossil fuel blended with ethanol KWh Electricity distributed to communities Frequency of outages Employment in plant Employment in agricultural production Number of new jobs created Quantities and financial volume of locally traded inputs sold to Grown Energy	(Project not completed)
<b>Impact</b> Positive effect on trade balance Reduction or stabilisation of fuel prices Poverty reduction Reduced CO2 emission	Reduced imports of fossil fuel Fuel prices over time Exports earnings of ethanol Economic activity and productivity in Zambezi region	(Project not completed)

• There is no evidence of feedback and application of lessons learned in other FMO projects.

Conclusion: The FMO role in project development was substantial and the project would not have got off the drawing board (it might be argued that it never did) without IDF. There is no evidence of consistent M&E systems, monitoring or reporting and overall it cannot be said that IDF M&E and reporting frameworks consistently provided accurate and timely information for management of results. However, there is no evidence of feedback and application of lessons learned in other FMO projects.

## EQ 2 – Additionality and catalytic effects

Please find at the end of this document the types of additionality

<b>Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?</b>	
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
<b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects	
<b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio	
<b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio	
No comparative ratings or profiles of the IDF/LDC portfolio and FMO-A portfolio have been examined in project documentation made available for this project.	
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>
<b>I-2.2.1</b> - Ratio of mobilisation at project level of IDF funding to commercial funding sources.	

**I-2.2.2 - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)**

By June 2008 USD 306,850 had been provided by LDC in convertible grants (i.e. USD 201,000 – 2007 and USD 105,850 disbursed under a convertible grant facility of USD 525,000 – 2006). Reference is made to subsequent FMO funding in the portfolio spreadsheets (USD 53,850 and USD 1,266,150 – 2008); USD 100,000 – 2009) but it is not possible (from supplied documentation) to track all disbursements against approved funding – see summary of approved funding – JC 1.1)

Conclusion: Initial proposed co-financing included Actis 30%, Venfin 20%, GE 16% and FMO/IDF 9%. After the withdrawal of Actis and Venfin, FMO commitment was reportedly fundamental in the Tata (TDL) buy in to the project and thus may be considered as catalytic.

**JC 2-3 | Additionality of IDF Loans and Equity Investments**

**I-2.3.1 - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.**

**I-2.3.2 - At project level, project viability endorsement and contribution from IDF participation.**

**I-2.3.3 - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects**

**I-2.3.4 - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.**

**I-2.3.5 - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)**

- No comparison of terms in comparison to other funding sources in documentation made available.
- FMOs role has been significant having provided funding for the feasibility stage (and initially proposed to invest development capital). FMO additionality was considerable and the project would not have been developed at all without FMO involvement. FMO considered the project to be ‘*excellent for the LDC Fund to be involved in*’ with FMO playing a strong catalytic role in attracting a new sponsor (i.e. Tata) (although the transaction was considered to be high risk).

The April 2008 Financial Proposal concluded:

*‘This transaction is an excellent project for the LDC Fund to be involved in. The LDC Fund has committed to expand activities in the renewable energy sector, and this is the first Project financed by the LDC Fund in the biofuel sector. Development impact is substantial. FMO plays a strong catalytic role and has the possibility to play a significant role in the environmental and social elements of the Project. Transaction is high risk, mostly due to the early stage of the Project, but FMO partner in this Project is strong and experienced.’*

The 2008 evaluation concluded that FMO grants were, considering the greenfield character and junior company status of the initiator, more likely additional in the 1<sup>st</sup> phase and definitely in the 2<sup>nd</sup> stage. FMO commitment was considered by the evaluation to be fundamental to get Tata Chemicals to buy in to the project and thus a catalytic effect.

- The July 2006 Financial Proposal included a compliance test for FMO investment Criteria.

General

1. *Financially strong sponsor (with a substantial participation): yes, in general partners are reputable companies such as ACTIS, VENFIN and Fieldstone; RvR is a private individual, experienced in agriculture. Possible entry of Booker Tate would be positive as well;*
2. *Technical completion well defined ; n.a. at this stage;*
3. *Sufficient financial support from sponsor (recourse) until financial completion n.a at this stage*

4. *Security: FMO invests seed capital; no security other than intellectual property rights at this stage;*  
 5. *Cash flow projections against constant and forecasted prices (inflationary considerations): in the base case scenario a price increase has been taken into account with respect to all costs (and revenues).*

Ratios for energy projects

Ratio	FMO min standard	Project (base case minimum)
DSCR	1.15	1.22
Total Debt/EBITDA	<4.25	Not relevant; equity only at this stage (projections for next stage show 3.44)
Solvency	>33%	Not relevant; equity only at this stage (projects for next stage show > 40%)

Energy

- *PPA (off take contract for bio-ethanol in this case) with longer tenor than financing: may not be achieved, though long term off take agreements with several potential off-takers are being discussed. LDC Fund has flexibility re. this criterium;*
- *Tariff: n.a.*

Conclusion

*Project meets all relevant LDC Fund and project finance criteria; LDC Fund has flexibility re. off take contracts (to be further assessed in the next phase of the Project).*

The 2006 Financial Proposal also noted ‘We deem additionality as essential; without substantial funding from FMO the project may not materialise. In a later stage FMO’s continued interest is also desirable contributing to the viability of the overall financing plan. Being one of the providers of development capital in this early stage our role is definitely catalytic and essential’. Both the 2006 and 2007 financing proposals were positive ‘...combining a grant in the early stage with most likely an equity contribution and potentially a (subordinate) loan in a later stage leads to substantial catalytic effect’. Fieldstone also noted additionality aspects of FMO’s contribution ie

*The role of FMO in promoting and sustaining the development of the GEZ project has been essential and overwhelmingly positive. There are a variety of development agencies and it is possible that some of these could have provided the type of early stage feasibility capital which FMO has provided to the project. However, it is doubtful that this could have been sourced as efficiently from other agencies or that the additional value added in terms of project support could have been delivered from the other agencies. Additionally, the appetite from FMO to support the project from feasibility study through to start-up was critical. [...]. Given the greenfield nature of the project, the underlying agriculture and commodity risk, it is doubtful that the other equity providers would have been willing to provide further funding. We may have been able to source equity in smaller shareholdings but this would have diluted decision making ability (a major problem in the first [Mopeia] project) and resulted in unnecessary delays”.*

Conclusion: The project would not have been developed at all without FMO involvement (albeit that the project did not in fact go ahead) – thus FMO involvement may be considered an additional. The 2008 evaluation concluded that IDF grants were, considering the greenfield character of the project and the junior company status of GE as initiator, likely to be additional in the first phase and definitely in the second stage.



### EQ 3 – Revolvability

<b>Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?</b>	
<b>JC 3.1</b>	<b><i>Evolution and drivers of portfolio performance pre and post 2012</i></b>
<b>I-3.1.1</b> - Portfolio performance and trends, in particular 2002-2011 and 2012-2016 <b>I-3.1.2</b> - Portfolio repayments/realisations and recycling in new projects <b>I-3.1.3</b> - Performance of projects with FMO-A and/or other government funds <b>I-3.1.4</b> - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses	
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<b>I-3.2.2</b> - Balance sheet strength, profitability and cash flow/liquidity <b>I-3.2.2</b> - Utility of Carnegie revolvability model in managing IDF operations	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting <b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,	
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond  Not applicable to individual project performance.	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.  Given that the project has not gone ahead this response relies on project assumptions. As regards sustainability, demand for bio-ethanol was perceived as a sustainable response to increasing demand for such fuel propelled by government strategies, fuel security concerns and environmental pressures. The proposed mixed crop base cultivated on a national basis was expected to be a sustainable source of supply leading to sustainable employment opportunities. Ethanol prices worldwide peaked in 2006 at USD4; current prices are around USD1.55. <u>Conclusion:</u> Sustainability was doubtful – ethanol prices have declined and electricity tariffs in Mozambique would have rendered the cost of power generation unviable.	

## EQ 4 – ESG Risk Management

### What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)

#### JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

Given the nature of this project (production of bio-fuel at what was originally proposed as a green-field site) environmental and social issues have a major fundamental relevance to this project. A project strong point was identified as ‘...the renewable and environmentally friendly nature of the project’. FMO has recognised these issues and has taken a clear stance in ensuring adequate investigation and mitigation of related impacts. During the period of FMO involvement some substantial reports were produced:

July 2006: ESIA Proposal

Dec 2006: Environmental Pre-feasibility Report

(August 2007: Proposal for EIA (i.e. scoping report)

April 2008: Draft Scoping Report (E&S)

Changing perceptions of E&S impacts may be tracked chronologically.

July 2006 Financial Proposal

Multiple references to E&S issues:

- *Environment impact: Being a renewable energy project, the basics are obviously sound, replacing a fossil fuel by a bio-fuel. Nevertheless, we expect the project – being a greenfield operation – to be labelled category A. An environmental impact assessment will have to be conducted and FMO will be involved in setting up the terms of reference. FMO’s IMR department is involved and will remain involved during the initial and subsequent stage of the project.*
- *Social impact: Category B, possibly A (in case resettlements are needed – though the area is very scarcely populated). The usual social policies and labour standards will have to be in place. FMO, being involved in the early stage, will have a significant role and will contribute to designing these policies and standards.*

FMO states that, ‘together with the other providers of development capital, we will be able to design the project such that it meets all environmental, social and corporate governance criteria....’

Development costs were expected to cover costs of, inter alia environmental and social costs (FMO to be involved in setting up ToR for preliminary ESIA).

In further discussion of E&S impacts FMO appears to have concluded that despite being classed as a category A projects, environmental issues will not be a problem – ‘...the bases are obviously sound.....’ i.e.

#### **Environmental impact**

FMO’s IMR department (A.Kool/K.Verstralen) is involved and will remain involved during the initial and subsequent stage of the project. So far, no specific due diligence has been conducted on environmental aspects other than desk research based on the info memo.

*Being a renewable energy project, the basics are obviously sound, replacing a fossil fuel by a bio-fuel. Nevertheless, we expect the project – being a greenfield operation – to be labelled category A. An environmental impact assessment will have to be conducted and FMO will be involved in setting up the terms of reference. Aspects that we may come across are farming method and the use of pesticides, in the construction of the ethanol plant and the power plant there will be aspects such as safety, (waste)water treatment, clean air, etc. There are no clean air or clean water standards in place in Mozambique; the project will comply with EU standards. Once operational, all the usual management systems for environmental monitoring will have to be in place. Information so far indicates that the identified 20,000 ha is undeveloped with ‘no large areas of stained soil, stressed vegetation, pits of ponds*



*and nothing of obvious environmental concern. Also, no evidence of previous land filling, dumping, hazardous materials or debris is present. Finally, GEZ will make use of biological farming practices and will minimize environmental disturbance.*

### **Social impact**

*Being a greenfield operation, probably category A. However, if the results of the social preliminary assessment does identify that there are no (major) resettlements foreseen or any identification of any other major social issues (e.g. influx of a large number of people) the project might be categorized as a WB category B project.*

*The identified 20,000 ha are currently undeveloped and the area is very scarcely populated. Ownership of the land is with the government and GEZ will lease the land.*

*The consulting firm referred to (above) will also assess the social impact the project may have on the local communities which might be affected by the implementation of the project. The usual social policies and labour standards will have to be in place. FMO, being involved in the early stage, will contribute to designing these policies and standards.*

### **Feb 2007 Grant proposal**

#### ***Environmental and Social***

*No environmental assessment has been done yet, but has been incorporated into the budget (covered by DEG). Many of FMO's environmental and social concerns regarding the original Mopeia site will remain in this second stage of feasibility studies and with respect to the four new potential locations.*

*As the project is a greenfield operation – the project is labelled category A. Aspects to consider will be farming method & the use of pesticides, in the construction of the ethanol plant and the power plant there will be aspects such as safety, (waste) water treatment, clean air, etc. As clean air or clean water standards are not in place in Mozambique; the project will comply with EU standards. Once operational all the usual management systems for environmental monitoring will have to be in place. GE will make use of biological farming practise and will minimize environmental disturbance.*

*The project has been rated category A. However, if the results of the preliminary social assessment indicate that there are no (major) resettlements foreseen or no other major social issues (e.g. influx of a large number of people) are identified, the project might be categorized as a WB category B project.*

*The usual social policies and labour standards will need to be in place. FMO, being involved in this early stage, will contribute to designing these policies and standards.*

### **April 2008 Financial Proposal**

*By this time the environmental and social risks have been raised to 'high' (the pre-scoping environmental report having identified several issues underestimated in previous considerations i.e. land clearance, water abstraction (from the Zambezi river), waste water treatment, use of pesticides and resettlement). However there is continued confidence that mitigation measures will be effective i.e. 'commitment from the main sponsor, TCL (TCL has reputation for high standards of social responsibility) combined with early stage involvement of FMO provides further support of implementing necessary measures.'*

*The proposal goes on to reiterate much of the wording of the 2006 Financial Proposal.*

#### ***Environmental and social impact***

*Being a renewable energy project, the basics are obviously sound, replacing a fossil fuel with a bio fuel. Nevertheless, we expect the Project – being a greenfield operation – to be labelled category A. An environmental and social impact assessment will be conducted and FMO will be involved in setting up the terms of reference.*

*The Africa department's environmental and social specialists, respectively A. Kool and K. Verstralen are both involved and will remain involved during the initial and subsequent stages of the Project. Eventually an environmental and social manager should be appointed by GEZ.*

*For the time being CES (Coastal Environmental Services), an independent environmental and social expert consultancy from South Africa has been appointed by GEZ. A final scoping report is being produced and will be presented to the shareholders. Alwin Kool has visited the site together with the project manager from CES to fine tune and discuss the outcome of the scoping exercise, including the terms of reference (ToR) for the Environmental and Social Impact Assessment. This ToR will soon be tendered.*

*Aspects that will come across as potential environmental and social impacts are: resettlement, chosen farming methods, labour conditions, the use of pesticides and land clearing issues. In the construction and operation of the ethanol and the power plant there will need to be considerations for issues such as safety and setting up sound management systems to control (waste) water treatment, clean air, etc.*

*There is presently no clean air or clean water standards in place in Mozambique. The Project will comply with EU and IFC standards with regards to emissions and discharges. Once operational, all the usual management systems for environmental monitoring will need to be in place. This will be certified through an ISO 14000 based system. Information so far indicated that the identified 26,000 ha are at large undeveloped with 'no large areas of stained soil, stressed vegetation, pits or ponds'. Also, no evidence of previous land filling, dumping, hazardous materials or debris is present. GEZ will make use of biological farming practices and will minimize environmental disturbance.*

*The 26,000 ha are scarcely populated but several subsistence agricultural systems have been identified. The consulting firm CES, referred to earlier, will also address and assess the social impact on the local communities caused by the implementation of the Project. The current ownership of the land is (and stays) with the government and GEZ will lease the land. Compensation for resettlement, including economical should be clearly looked into and will form an essential part of the ESIA process. Consultation so far has not resulted in complaints and showed that there is great interest in this project. The usual social policies and labour standards will have to be in place. FMO, being involved in the early stage will contribute to designing these policies and standards.*

*Despite the recent controversy surrounding biofuel development over concerns with respect to food security issues, this Project will actually enhance food production as food crops will be cultivated on arable land that is currently not being used. Rotational land will be cultivated to produce food, most likely beans, rice and corn, which are intended to be self-financing and will be sold to the local market.*

*TCL, as main sponsor, has confirmed their cooperation and commitment on environmental and social matters. The organization has a track record for its high level of social responsibility dating back over a century, when model homes were built for steel employees and the company provided free education for their children. TCL has set up the Tata Chemicals Society for Rural Development (TCSRSD) in 1980 to promote its social objectives for the communities in and around Mithapur and Babrala, where its facilities are located which works to protect and nurture rural populations in and TCL's facilities and helps people achieve self-sufficiency in natural resource management, livelihood support and the building of health and education infrastructure.*

*The potential significant role of FMO in environmental and social elements of the project is restated.*

#### Grant Proposal June 2008

Restatement of environmental and social issues as set out above.

Conclusion: Although this project was categorised A it was not possible from documents scrutinised to identify trends in the nature and balance of ESG risk in the IDF portfolio as a whole

#### ***IDF-financed projects contributed to green and inclusive development***

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

- The Draft ESIA Scoping Report (April 2008) flags atmospheric emissions (particulate matter and large quantities of carbon dioxide) as potentially representing a range of negative effects on ecosystems and human health. Engineered mitigation measures are recommended.
- The Scoping Report makes reference also to loss of stored carbon as a result of land clearing and to GHG omissions under 'other project-related impacts'.

#### ***Issue 4: Loss of stored carbon as a result of land clearing***

*Soils and plant biomass are the two largest biologically active stores of terrestrial carbon. Converting natural habitats to cropland releases CO<sub>2</sub> due to burning or microbial decomposition of organic carbon stored in plant biomass and soils.*

#### **Issue 5: Greenhouse gas emissions**

*Agriculture can cause the further release of soil carbon in response to disturbance by tillage. Other sources of greenhouse gas (GHG) emissions include the use of fossil fuels in the growing, harvesting, transporting and processing of biofuels. The ELA will need to determine the overall emission of GHGs and compare this with emissions from fossil fuel extraction, transport and processing. According to the Roundtable on Sustainable Biofuels (RSG), it is necessary to determine the emissions from 'root to tank' i.e. through the life cycle of biofuels. There is only passing reference to 'potential mitigation to carbon emissions' in the April 2008 Financial Proposal.*

- There is considerable analysis of potential social effects in the various ESIA and other documentation. However, as the project has not gone ahead so there are no actual effects to report or compare. No reference has been made to contribution towards the FMO targets (doubling impact and halving footprint by 2020) – this project predated such targets.

**Conclusion:** There is no estimation of GHG emissions that might have been avoided by this project, on the contrary, the 2008 Scoping Report notes that mitigation engineering would be necessary to avoid atmospheric emissions of particulate matter and CO<sub>2</sub> from the proposed plants and a loss of stored carbon resulting from land clearance.

#### **JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices**

**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3** - Evidence of ESG risk assessment

**I-4.3.4** - Evidence of ESIA and ESAP preparation and implementation

**I-4.3.5** - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)

- There is no explicit reference to 'Free prior and informal consent principles' but there is reference to compliance with IFC performance standards and requirements e.g. Draft Scoping Report, April 2008.

*Performance Standard 1 established the importance of i) integrated assessment to identify the social and environmental impacts, risks and opportunities of projects; ii) effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and iii) the client's management of social and environmental performance through the life of the project.*

- Environmental studies (proposed and actioned) are fully compliant with national legislation as developed by MICOA (Ministerio para a Coordenação de Acção Ambiental' and other legal institutions (e.g. INDER, INPF, INIA, DTA) and with requirements of IFC (PSI-8).
- ESG risk assessments have been carried out and the following issues were identified at scoping stage.
  - Labour working conditions (occupational H&S)
  - Pollution prevention and abatement (general pollution, production of liquid effluents, atmospheric emissions, release of odours, noise and light pollution, management of general and hazardous wastes, storage of hazardous materials, production of leachate.)
  - Land acquisition and involuntary resettlement (loss of dwellings and physical infrastructure, loss of livelihoods, loss of agricultural land by local subsistence farmers).

	<ul style="list-style-type: none"> <li>- Biodiversity, conservation and sustainable natural resource management (increased pressure on remaining natural resources, physical change to the land form, impact on soils in the development area, water abstraction for the agricultural process, impacts on vegetation and plant communities, impacts on fauna, alien invasive species).</li> <li>- Cultural heritage (loss of graves and sacred sites)</li> <li>- Community H&amp;S and security (pedestrian safety, impacts of increased traffic on health, health risks from consumption of ethanol, community exposure to disease)</li> <li>- Other project-related impacts (attraction of vermin, traffic safety and animals, flooding loss of stored carbon as a result of land clearing, greenhouse gas emissions)</li> <li>- Various ES studies have been undertaken and it is clear that FMO has taken a major role in ensuring compliance with all national and international norms regarding E&amp;S issues.</li> </ul> <p><u>Conclusion:</u> There is no doubt that E&amp;S studies are fully compliant with national legislation and international practices. ESG risk assessments included consideration of: occupational H&amp;S, pollution prevention and abatement, land acquisition and resettlement, bio-diversity, conservation and NRM, cultural heritage, community H&amp;S and security (including community engagement) and other potential impacts resulting from land clearance.</p>
<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<b>I-4.4.1</b>	Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management
<b>I-4.4.2</b>	Evidence of feedback and application of lessons learned in subsequent projects
	<ul style="list-style-type: none"> <li>• There is clear evidence of FMO involvement in identification and mitigation of potential ESG impacts although there are no outcomes given that the project has not gone ahead.</li> <li>• There is no evidence of feedback and lessons learned from this project being applied to other projects.</li> </ul>

## EQ 5 – Policy

<b>To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?</b>	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
	A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).
	N/A
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b>	Evidence of IDF projects contribution to Dutch companies goals
<b>I-5.2.2</b>	Number of companies – Small and medium sized enterprises (SME) in particular - internationally active
<b>I-5.2.3</b>	Level of exports to and investments in IDF eligible countries
<b>I-5.2.4</b>	Jobs created in projects financed by IDF
	There is no reference to involvement of Dutch companies in documentation scrutinised.

<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes	
<b>I-5.3.2</b> - Number and volume of projects co-financed	
The GC minuted of 29/04/2008 refer to <i>'the high possibility of future financing by FMO-A'</i> (recommending involvement of a credit analyst for consultation on facility structure) but no reference to linkages to other infrastructure programmes has been examined (other than compliance with the objectives of the Mozambique PRSP).	

## EQ 6 – Efficiency

<b>Has FMO efficiently and appropriately managed the Fund?</b>	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process	
<b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs	
<b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring)	
<b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF	
<b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
There are various references to FMO LDC Fund strategies in documents scrutinised but little reference to FMO policies as such e.g. <u>Financing proposal July 2006</u> <i>Strategy FMO – 'the project fits excellent in the LDC Fund Strategy to act as a catalyst'.</i> Also (Annex 3: Compliance with FMO investment criteria)	
<b>Criteria for Project Financing – see JC2.3 above</b>	
However, the different interests/goals of FMO in development of this project compared to other stakeholders was noted in February 2007 when three sponsors withdrew after the original location was found to be unsuitable (i.e. REG, TsB Sugar and Ven Fin).	
<ul style="list-style-type: none"> <li>• The only reference to comparison to procedures of other DFIs is reference to compliance with IFC performance standards and requirements (i.e. IFC PS1.8) in connection with E&amp;S issues.</li> <li>• The continuing FMO involvement in this project allowed the survival of the project after the departure of most of the original sponsors (see above) while a new main sponsor was identified i.e. Tata.</li> <li>• From the documents scrutinised it is not possible to form a clear opinion of the adequacy of the FMO organisational structure for management of IDF. However there is reference to GEZ being the first bio-energy project for LDC and in various project documentation there are multiple references to the experience of project partners.</li> </ul>	
(e.g. 2008 Financial Proposal:	
<i>'Intention to use proven technology and involve experienced EPC contractors'</i>	
<i>'Although bio fuel is a new activity for TCL the company has extensive experience in O&amp;M in other industries'</i>	
<i>'RvR, a self-employed experienced agricultural specialist'....'extensive experience in the SA agricultural sector'</i>	
<i>'Agriculture is a leading provider of agricultural technical management....with significant experience in developemnt of large agricultural sector'</i>	



And so on. There is an impression of FMO reliance upon project partner's experience not only as 'comfort' but as a substitute for FMO's lack of experience in this field and as the only source of technical due diligence i.e. there is no evidence of independent due diligence on behalf of FMO).

- Corporate governance was considered in both Financial Proposals (2006 and 2008) the changes reflecting the changes in project sponsors after rejection of the first proposed location.

#### 2006

*The Board constitution is subject to the final shareholder structure. At this moment the intention for GEZ is to have a Board of Directors consisting of 7 people representing each of the respective shareholders. Of these (mainly non-executive) Directors, 2 will be assigned by GE and the remaining 5 by Petromac and 4 investors (Actis, Venfin, FMO and Finnfund or Norfund). Clive Ferreira (as Chairman) and Rademan van Rensburg will represent GE. Clive is experienced in advising and financing energy projects in Africa and Rademan has extensive experience in the development of agricultural projects in the region. Rademan will be the only executive in the Board. Casimiro Francesco (CEO of Petromac) will be representing Petromac. Day-to-day management will be in the hands of the management team. There is no separate supervisory board.*

#### 2008

*The board constitution is subject to the final shareholder structure and will be discussed in greater detail prior to signing of shareholders' agreement. The Tata Group follows strict corporate governance rules and one of the requirements is to have as many non-executive directors as possible and bring in professionalism at the Board level. At this moment the intention for GEZ is to have a Board of Directors consisting of 7 people and will be constituted as follows: TCL – 4 Directors, of which one will be Chairman of the Board; RvR = Fieldstone – 1 Director; FMO – 1 Director – independent or otherwise; and Fieldstone Fund – 1 Director (in the event that Fieldstone Fund becomes a shareholder).*

The 2008 evaluation concluded that the two grants fit within the LDC criteria for grants (max €5M and no more than 50% of transaction size); also that the proposed USD3.2M convertible grant matched the criteria set.

**Conclusion:** It is not possible to form an opinion on the adequacy of FMO's organisational structure, policies and procedures and whether they enhanced timeliness and cost effectiveness (other than noting an over-reliance upon the sponsor's capacity and technical capability combined with an under-estimation of risks (long term sustainability and shorter term logistical and bureaucratic issues that thwarted project implementation))

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
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**I-6.2.1** - Appropriateness of available FMO expertise

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

No project information on ratios of FMO staff to value of operations. Given the technical and logistical problems which beset the project and resulted in the project not going ahead there are serious doubts about the FMO resources and specialised knowledge for such an agricultural (and power generation) project in remote up-country Mozambique.

<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
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**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

The project has not gone ahead and the convertible grant facility has been cancelled (2010). However, the problems were not due to FMO; the contribution of FMO has supported the

project through the development phase (including supporting the project after most original sponsors withdrew following rejection of the proposed location) until a new main sponsor was identified. However delays in land allocation and uncertainty about the continuing commitment of the 'new' main sponsor (TDL) led to FMO's decision to withdraw.

However, efforts continue to develop the project and should financial closure ever be reached, IDF grant contribution will be converted into equity (and IDF may even consider additional funding). TDL sold out its stake in the project in 2016 (to RvR).

Conclusion: This project was not successful – the acknowledged weakness of FMO sector capacity and early enthusiasm (and pressure to make deals) combined with limited sponsor managerial capacity and logistical issues in the proposed business plan (sugar cane/sweet sorghum>ethanol>power generation) to impede progress. Longer term sustainability would anyway have been doubtful.

## Sources of Data

Document title	Date
FINVOB info sheet	20/07/2006
GC minutes	24/07/2006
Proposal: ESIA	July 2006
FINVOB info sheet	05/09/2006
Environmental Pre-feasibility Report	December 2006
Appendix: Budget	February 2007
Grant proposal (USD 201000 convertible grant for feasibility study for new land sites)	13/02/2007
Offer of grant (USD 201000)	28/02/2007
Proposal for EIA	August 2007
Offer for grant (USD 30000)	05/10/2007
FINVO Capacity development sheet for approval (€10000 – for completion of feasibility studies)	18/12/2007
Offer for grant (€10000)	12/01/2008
Questions (for proposal): Agri, management, technical, off take, financial, local community, other	Undated
Draft budget	March 2008
Financial proposal (for €100000 LDC grant; USD 3.2 M convertible grant to be subject of more detailed proposal and appraisal for equity and/or debt funding is requested)	April 2008
Draft Scoping Report (Environmental and Social Issues)	April 2008
GC minutes – approval for USD 3.2M convertible grant for development phase and €10000 grant (to cover part of legal fees)	29/04/2008
Grant proposal - €xxx (to cover possible travel expenses associated with final stages of development)	09/06/2008



# **Guarantco Ltd., Mauritius**

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

## 1. Project fiche

# - Project title	GUARANTCO LTD.
Project description	<p>Guarantco (Gco) is an initiative of the Private Infrastructure Development Group (“PIDG”), established in 2003 in the UK to provide credit enhancement of local currency lending and to build capacity in local capital markets for the infrastructure development in low and lower middle-income countries. PIDG was a multi-donor initiative to promote mechanisms to address the different funding “gaps” which impede attracting capital to the provision of infrastructure service in poor income countries. The PIDG is comprised of Austria, Ireland, The Netherlands, Sweden, Switzerland, the UK and the World Bank. Guarantco was moved to Mauritius on 25 August 2005 to be incorporated under the laws of that country. GCO seeks to increase its capital base from USD73m to USD100m, in order to raise a max USD 400m senior leverage facility with KfW/Barclays. Current shareholders of GCO are the following bilateral institution of PIDG members: DFID (USD25m) of the UK, Sida (USD15m) of Sweden, Seco (USD8m) of Switzerland and FMO (USD25m). In 2008, total Assets amount to USD66m cash, of which USD7m pledged for guarantees, funded by USD63m capital and USD3m reserves. FMO is also shareholder in the Emerging Africa Infrastructure Fund (EAIF) and GCO provides guarantees to many of the EAIF-financed infrastructure projects. GCO and EAIF are both managed by Frontier Markets Fund Manager Ltd. (FMFML). FMO was a shareholder of FMFML (18.4%) but sold these shares in 2013. In accordance with its statutes, GCO’s fund management was re-tendered in 2015. Cardano Development B.V. (“Cardano”) won the bid and took over the fund management from FMFML in May 2016. FMO as shareholder in GCO approved the change of fund manager. Cardano is well-known to FMO being also the fund manager of a.o. TCX and Frontclear. Transition of fund management to Cardano is positively perceived given (i) FMO’s strong relation with Cardano/TCX, (ii) its experience with LCY financing in emerging markets, (iii) its lower management fees (vs. FMFML), and (iv) anticipated synergies re LCY financing activities of both ends. GCO has 15 employees in London and Nairobi and a one-tier Board consisting of 7 members (3 non-executive). Joost Zuidberg (former FMO) is CEO of Cardano Development and Chairman of the GCO Management Board. GCO has adequate systems in place (partially co-developed with FMO assistance) for collecting E&amp;S related data. In addition, AECOM (consultant) provides trainings for staff and facilitates effective reporting and further E&amp;S policy implementation.</p>
Sector	Financial services sector providing guarantees
Stage	Start-up after a trial period of 3 years.

Operation Dates	Clearance in Principle (CIP): 8-11-2005 Finpre: Financial proposal approval (FP): 7-4-2006 Loan effective date: 27-10-2006 Expiration (maturity/final repayment) date: 31-12-2040		
Contract	C00015620		
Country/Region	World		
Country category	LDC		
Project total cost (€)	US\$ 400 million plus US\$ 100 million		
IDF contribution (€)	US\$ 25 million plus US\$ 9 million		
Co-financing (€)	DFID US\$ 25 million Sida US\$ 15 million Seco US\$ 8 million plus US\$ 9 million		
Loan Terms			
Senior/Subordinated			
Convertible			
Amount			
Loan Agreement Date		Facility No	
Currency			
Tenor			
Grace period			
Interest rate			
Security			
Fees			
Disbursements	Dates and amounts		
Monitoring			
Key covenants			
Conversion features			
Equity Terms			
Direct	US\$ 34 million		
Indirect – Fund			
IDF Investment (\$, €m, local currency)	US\$ 34 million		
Total Project/fund	US\$ 500 million		
IDF Stake (%)	34% of equity		
Investment date		Facility No	
Disbursements	Dates and amounts: US\$ 15 million 27 December 2006 US\$ 8 million 18 December 2007 US\$ 2 million 18 August 2008 US\$ 9 million 1 October 2010		
Direct investment – exit strategy	In 2040		
Direct investment - put option terms	Guarantees		
Fund life	End 2040		
Grants			
Amount			

Convertible	Yes/No		
Purpose			
Grant agreement date		Facility no	
Key terms			
Disbursement	Dates and amounts		
Conversion terms			
Financial Risk and Performance			
	Financial proposal/approval	Client Review - Most recent	
Client Risk Rating	E&S risk: Category A project No CRR in documentation	F8 in 2017	
Loan - Impairment provision	0%		
Equity - Fair value adjustment	0%	Arithmetic impairment 8% and US\$ 2,5 million proposed in 2014	
Financial performance	Profitability has been weak in recent years, largely driven by (i) low interest rates and returns on investments, (ii) provisions on called guarantees and (iii) high fixed costs. GCO’s main sources of revenue are (i) guarantee fees and (ii) returns on investments from deposits and securities held through asset managers Fidelity and Pimco. GCO follows a conservative investment strategy as it is not permitted to run high risks on its investments. All holdings must be at least investment grade with average rating of at least ‘A-’. Half of investments can be liquidated within three business days. Revenues increased over 2016 with guarantee fees amounting to USD 8.2m (2015: USD 6.7m) and investment income of USD 6.4m (2015: USD 6.6m). On the costs side, most expenses are related to fund management and administrative expenses amounting to USD 12.0m (2015: USD 9.9m). The increase was solely due to a one-off Termination fee of USD 3m to FMFML. New Cardano management introduced a simplified management fee arrangement which is capped at USD 10m per annum. Administrative expenses dropped by almost USD 1m mainly resulting from the cancellation of the old counter-guarantee facility. GCO remains loss making mainly relating to a one-off USD 3m Termination Fee (due to change of fund management mid 2016) and furthermore relating to continuing low interest rates, low returns on investments and relatively high provisions. Shareholders are all public development entities that do not seek a return on investment (i.e. dividends) nor an exit any time soon. The Australian Department of Foreign Affairs & Trade joined GCO shareholding through an AUD 4m investment in 2016. In addition, DFID injected another GBP 13m of capital and made available a GBP 40m callable capital facility bringing total share capital to USD 302.2m (USD 255.1 when subtracting accumulated		

	<p>losses). When subtracting the one-off Termination Fee, net loss was a 'modest' USD 860k indicating that GCO is reaching operational break-even. Guarantee portfolio increased to USD 456.4m (USD 327.4m in '15). Portfolio quality is stable. No new defaults or called guarantees were reported in '16. External ratings are unchanged, Moody's A1 stable; Fitch' AA-(Jul'16).</p> <p>Main E&amp;S risks relate to the nature of the guaranteed projects yet varying greatly per sector and geography. The client has in place a good system for gathering information on the E&amp;S performance of the borrowers and giving feedback. GCO follows DFI E&amp;S risk management principles and reports (voluntarily) on this. In Nov'16 GCO cancelled the outstanding USD 100m counter-guarantee facility it had in place with Barclays, KfW and FMO. Subsequently, in December 2016 IMS AF-LAC closed a new USD 30m counter-guarantee facility with GCO on enhanced and simplified terms. KfW is anticipated to join this new counter-guarantee facility on similar terms for a similar amount –yet it needed more time to process internal approvals.</p>
<b>Client Review -key findings</b>	<p>GCO was established to provide local currency guarantees to companies and infrastructure projects in emerging markets. These guarantees essentially function (i) as credit enhancements in order to facilitate investments, (ii) stimulate local capital markets development and investments by a.o. local FIs and IFIs, and (iii) reduce project risk by eliminating the FX risk. GCO has high external ratings by Fitch (AA-, stable) and Moody's (A1, stable) mainly associated to its government shareholders and its strong capital adequacy and liquidity position. GCO's guarantee portfolio is covered by a first loss buffer of USD 302.2m of net-equity (of which USD 34m from FMO-IDF on behalf of DGIS). In addition, it has a GBP 40m callable capital facility from DFID in place. Lastly, a USD 30m counter-guarantee facility from FMO provided further loss-absorption coverage. GCO shareholders and Board have capped the maximum leverage at 3 meaning that GCO cannot grow its guarantee portfolio in excess of 3x its equity (including the call facility). The counter-guarantee facility can only be called upon by GCO if leverage exceeds 5x the equity. By 2017 no amounts were ever claimed under the old counter-guarantee facility which availability expired in March 2016 and was fully cancelled in November 2016.</p>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p><u>Inputs</u> in a guarantee fund as run by GCO, are the capital contributions by the shareholders which present the buffer to grant the guarantees to projects according to the priorities set by the Fund's shareholders. <u>Outputs</u> are the guarantees provided to guarantee local currency loans to infrastructure projects. The <u>outcomes</u> are the realisation of key infrastructure projects in low and middle-income countries, where there is an enormous infrastructure "gap" and where FX and LCY financing for these type of projects is scarce. The <u>intermediate and global impact</u> than can be observed with successful</p>

	<p>projects is an enhancement of the infrastructure industry and economic development in the country and sometime even beyond national borders, in the region. These ultimate impacts is what drives the shareholders of OGC and the members of the Private Infrastructure Development Group (PSIDG).</p>
<b>Assumptions</b>	<p>The CCR of 2008 highlighted the risk of a continued commitment of shareholders to support GCO, giving it a fair chance to become successful. Mitigation is found in the wider infrastructure mandate secured by GCO's shareholders and the members of PIDG.</p> <p>In addition there is a danger of complex decision making and inefficiencies in a small organization. To solve this, the Board and Credit Committee are identical.</p> <p>Another risk is insufficient appetite from prospective clients due to (high) price perception of local currency solutions. Mitigated by education, assistance and endurance. Other risks are associated with the fact that guarantee products are complex, deal mortality must be high and GCO's team is rather small. This is mitigated by emphasis on market aspects and proper marketing. Environmental and social risks and mitigants: scores on environmental risk [A: 99] and social risk [A: 91]. FMO's E&amp;S experts are used by GCO for E&amp;S management and monitoring of Guarantco's portfolio.</p> <p>Financial-economic development impact was assigned a moderate rating FSF (C2: 42). EDIS is rather low at 36, as most items score neutral, and only the impact on competitors and society (tax contributions) score positive. It is apparent that the Private Equity scorecard does not fully reflect the potential impact.</p> <p>Environmental &amp; Social development impact: FMO's E&amp;S expert conducts E&amp;S studies and monitoring for GCo to ensure compliance in these areas. The active support to E&amp;S is rated excellent (3). When assessing added value and FMO's role, FMO's role is substantial as an equity investor and fronting bank on a cash collateral basis. FMO's AAA rating grants credibility and FMO will market and use GCO as a vehicle to provide local currency solutions (reciprocity). Additionally and Catalytic role were both rated Substantial (2).</p>
<b>Main project activities and achievements</b>	<p>GCO received a Fitch international AA- rating (F4 FMO rating), which deviates significantly from the current FMO F18 rating. Key drivers of the Fitch rating are i) public ownership ii) strong capital position iii) small, specialized financial guarantor iv) weak profitability expected to improve v) high but manageable currency risk. The rating is expected to result in higher deal flow as GCO becomes an acceptable party for more financial institutions. This additional deal flow will be needed to reach break-even. GCO managed to sign 5 transactions in 2013, resulting in a portfolio of committed guarantees of USD 194 min as of Q1 2014 (compared to USD</p>

130 min at FYE 2012). The impact of this portfolio increase on profitability is below expectations. FMO's IDF equity stake diluted from 23.3% to 16.6% due to a USD 59 million fresh equity injection by DFID in GCO in 2013. Further dilution took place as an additional USD 100 min equity injection from PIDG took place in 2014. Fair value/ cost slowly declining (89% at 2012 review, 88% 2013 review): impairment (10%) remained unchanged during June 2014. While equity value is slowly declining due to the continuing losses, counter guarantors are not at risk since equity is higher than the portfolio, an additional USD 100 min equity contribution was expected at the time and portfolio is 120% cash collateralized. The availability period has ended in 2015 and no large changes in asset quality were foreseen.

Based on the current counter-guarantee GCOs max. portfolio size is limited to USD 250 min. Capacity for growth is expected to be created by i) additional equity ii) additional leverage from insurance companies iii) increase of counter guarantee limits. It is expected that FMO will be invited to increase its exposure in 2015. If the Fitch rating is accepted by the market additional leverage from the insurance companies may be sufficient to facilitate growth and FMOs support may not be needed in 2-3 years, allowing for cancellation of the guarantee facility.

Below, a financial accounts summary is presented which shows that GCO over the period 2011-2016 is loss making. Only in 2010 GCO reached a break-even situation and it is projected that 2017 will see a first profit.

In USD 'min	Audited 2015	Management 2016	Projections 2017
Revenue income	6.7	8.2	12.3
Operating result	-2.9	-3.8	-0.6
Provisions	6.4	2.1	0.4
Net Profit	-7.3	-3.9	2.2
Total Assets	260	273	324
Equity	238	255	292
Retained earnings	-38	-42	-43
Solvency	91%	93%	90%
Committed Guarantees	224	437	640
Effectuated net guarantees	143	259	NA
Leverage Ratio	1.6	1.4	2.2

(in USD min)	Audite 2010	Audite 2011	Audite 2012	Audite 2013	Audite 2014
Turnover	3.8	2.6	4.2	3.8	4.6
Operating Result	-0.2	-1.9	-1.2	-3.7	-3.2
Provisions	0	14.6	4.5	4.0	10.6
Net Profit	0.1	-15.9	-1.4	-8.7	-11.6
Balance Sheet Total	104	122	140	194	276
Equity	102	95	130	181	244
Solvency(%)	98%	78%	93%	93%	87%
Committed Guarantees	103	130	130	194	246
Effectuated net guarantees	93	105	130	146	140
Equity to amount at risk	1.1	0.9	1.0	1.2	1.7
Effective counter-guarantee utilization	0%	0%	0%	0%	0%

Main project issues	<u>Balance Sheet:</u> GCO has a USD 273m balance sheet of which USD 255m is equity. Assets comprise almost entirely of current assets, mainly available for sale of financial assets relating to securities/investments held by PIMCO and Fidelity. Half of those investments can be liquidated within three business days. Liabilities of USD 18.3m mainly relate to provisions on payable guarantees.		
	Portfolio: GCO increased its guarantee portfolio over 2016 to a total of 31 transactions (vs. 27 in 2015) bringing the grand total of committed guarantees to USD 437m of which USD 197m is active exposure and USD 259m committed. (The difference between ‘committed’ and ‘active’ refer to guarantees that have been executed but the underlying credit facilities have yet to be disbursed.) Nine projects are USD guarantees (USD 167.3m, all performing except one), the remainder are all LCY guarantees. No guarantees have been called in 2016. At present, four projects remain listed as non-performing of which 3 are fully provisioned for in total USD 10.1m. The four impaired projects are closely monitored and GCO continues to actively work on these projects to recover its paid claims. Another four projects are watchlisted as they are in breach of financial covenants but continue to service their existing debt obligations –hence no guarantee claims have been made till date.		
	<u>Capital:</u> capital adequacy is very high with solvency of 93%. Paid-in share capital is USD 302.2 million as at YE 2016, effective equity is USD 255.1 million due to the accumulated losses of USD 42.1 million. Over 2016 CGO’s main shareholder DFID injected GBP 13m of fresh capital. In addition, the Australian Department of Foreign Affairs & Trade joined the shareholding through a AUD 4 million investment. Last but not least, DFID made available a callable capital facility of GBP 40m in September 2016. Under the current leverage limit arrangements this effectively means that GCO could grow its guarantee portfolio to up to USD 900m. GCO is not expected to pay out any dividends to its shareholders the coming years.		
	<u>Profitability:</u> GCO’s primary objectives are to encourage private-sector involvement in the domestic financing of infrastructure projects and as such profitability is not a key performance metric (for the shareholders and rating agencies). Profitability has been weak in recent years (see comments above). GCO follows a conservative investment strategy as it is not permitted to run high risks on its investments. All holdings must be at least investment grade with average rating of at least ‘A-’.		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m		EUR 79,374 in 2015



<b>GHG Saving (tCo2)</b>	T CO <sub>2</sub>		
<b>Installed Capacity (MW)</b>	MW		
<b>Production Capacity</b>	GWh		
<b>People served – distribution</b>	#		
<b>People served – transport</b>	#		
<b>People served – power</b>	#		
<b>People served – telecom</b>	#		
<b>People served – IT/internet</b>	#		
<b>People served – industrial/agri</b>	#		
<b>People served – farmers reached</b>	#		
<b>Forestry under management</b>	ha		
<b>Agriculture</b>	ha		
<b>Green investments</b>	€m		
<b>Inclusive investments</b>	€m		

## 2. Scoring

	Desk Review
<b>EQ 2 – Relevance</b>	
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	3
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3
JC 2-3 Additionality of IDF Loans and Equity Investments	3
<b>EQ 1 - Effectiveness</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	3
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	3
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	3
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	3
<b>EQ 4 – ESG Risk Management</b>	
JC4.2 IDF-financed projects contributed to green and inclusive development	3
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	3
<b>EQ 6 – Efficiency</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	3
<b>EQ 3 – Revolvability</b>	

JC 3.5 Individual Project Sustainability	3
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	N.A.
JC 5.2 Effects for Dutch companies and economy	N.A.
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	N.A.
<b>Scoring Justification</b>	
EQ 2 - Relevance	3
EQ 1 - Effectiveness	3
EQ 4 – ESG Risk Management	3
EQ 6 – Efficiency	3
EQ 3 – Revolvability	3
EQ 5 – Policy	
<b>Comments</b>	Overall rating 3 (Satisfactory)

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learnt and key findings

Issue	Lesson
Projects that are pushed by DGIS to be finance through IDF funding as they fit Government policy very well, can be in conflict with the objectives of the Fund. In the case of Guarantco the investment was in line with the policy of DGIS to stimulate infrastructure investment through the PIDG initiative. The investment in Guarantco, however, violated the revolvability principle of the Fund as it was clear from the beginning that exit could only place in 2040.	Funds, such as the Infrastructure Development Fund should not finance projects that are Government-pushed, as there is a risk that key objectives of the Fund, in the case of are violated. In the case of Guarantco it was the revolvability objective that could not be met.
Managing the investment in Guarantco remained to a great extend the responsibility of DGIS, through their participation in PIDG. It reduced the position of FMO to manage their investment in the same fashion as they handled the other equity investments.	Managing an IDF equity investment in a financial services company such as Guarantco, should be the full responsibility of FMO, rather than a de facto shared responsibility with DGIS, as is the case until 2017. Giving the new equity investment department in FMO the responsibility for managing this investment, will help putting FMO back in the driver seat.
Risk in the portfolio of guaranteed projects remains an important challenge for financial services companies such as Guarantco for which they need the necessary skill mix.	When guaranteeing the financing in projects which belong to a global-oriented portfolio, the monitoring of the risk should not be underestimated. It is often required to interact with management locally for which Guarantco in the beginning was not equipped. It seems that adequate recruitment takes place to hire adequate numbers of staff with the right skill mix.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
xiii) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument); xiv) portfolio performance (including reasons for portfolio impairments); xv) co-funding/complementarity with FMO-A portfolio; xvi) investment leverage/funding mobilization.	
N.A.	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure) <b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice). <b>I-1.2.3</b> - Implementation progress – time and cost compared with programme <b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets <b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets: xiii) temporary/short term during the implementation period xiv) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks	
<p>In the CCR of 2016 it was reported that GCO is optimistic about its growth opportunities for the coming years. It has a solid pipeline of almost USD 190 million GCO board approved, yet to be closed guarantees and an additional USD 82 million of other pipeline projects. Further optimism about growth prospects stems from GCO's positive track-record and strong external ratings for a few years now which enhanced its publicity, brand and familiarity in the markets it operates in. Also, demonstrated shareholders' commitment to provide support as well as the continued involvement of DFIs (i.e. KfW and FMO) benefit the projected expansion of the guarantee portfolio. Lastly, the anticipated USD 60m of callable equity (from DFID) and restructuring of the counter-guarantee facility allow GCO to leverage more, take larger stakes and thereby broaden the pipeline of potential new guarantees.</p> <p>Management projections until 2019 (renewed counter-guarantee facility would expire ultimately 2022) were obtained. GCO expects to grow its guarantee portfolio by 20-25% year-on-year (or about 8-10 deals of avg. USD 20 million each) ultimately growing it to about USD 1bln by 2019 (or equity:guarantee leverage of 1:3). It targets a portfolio balanced between highly innovative, sometimes riskier transactions, and equally developmental but less risky transactions. Sectoral exposure limits remain at max 25% each whereas GCO expects its main exposures to remain in the energy, transport and infrastructure sectors. Key operational challenges for the coming years are to close enough projects to realize the targeted growth, but also to resolve the outstanding non-performing projects in order to release provisions. On the income side, break-even is anticipated to be realized by end- 2017</p>	

mainly as a result from scaling up activities thereby increasing guarantee fees and by enhanced returns on the investment portfolio. Profitability will thereafter develop positively as most costs remain fixed whereas both guarantee and investment income will increase as the portfolio and balance sheet grows

The markets in which GCO operates largely overlap with FMO's and can be characterized as typical developing countries. Currently GCO has activities in 15 countries in Africa and Asia. By country, most guarantees are in Nigeria (\$139 million, 30%), India (\$88 million, 19%), Ghana (\$59 million, 13%) and Pakistan (\$57million, 12%). By sector, largest exposures are to gas transportation & distribution (\$109 million, 24%), urban infrastructure (\$98 million, 22%), transport (\$55 million, 12%), energy (\$43 million, 9%), and telecom (\$42 million, 9%). Shareholders, Board and management actively govern a well-diversified portfolio in terms of currency, geography, sector and client risk rating. By 2016 GCO had created 16 jobs. There is no information about the numbers of direct jobs that are created in the companies to which GCO provides guarantees.

Rating : 3 (Satisfactory)

<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b>
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**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

GCO does not collect information on indirect job creation in the companies to which it provides guarantees. It is, however, known that the infrastructure sector in which GCO involves itself (gas transportation & distribution; urban infrastructure; transport; energy; and telecoms) through expansion activities creates many direct and indirect jobs. Infrastructure is a sector in which, after construction, many staff are involved in operating the plant and equipment and maintaining the same. The countries in which GCO provides most (64%) of the guarantees are the following: Nigeria (30%); India (19%); Ghana (13%); and Pakistan (12%). On the ease of "Doing Business 2017" list of the World Bank, the following positions can be observed: Nigeria (nr. 169); India (nr. 130); Ghana (nr. 108); and Pakistan (nr. 144). The four countries just mentioned are all improving on "ease of doing business".

Rating: 3 (Satisfactory)

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
<p><b>I-1.4.1</b> - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])</p> <p><b>I-1.4.2</b> - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)</p> <p><b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.4</b> - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p><b>I-1.4.5</b> - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p> <p>The projects that received assistance from GCO through guarantees are in the targeted sector (infrastructure) and in the targeted countries (Low and middle income countries). The projects contribute highly to job creation and development in the different countries, although no specific measuring of jobs created takes place.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
<p><b>I-1.5.1</b> - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects</p> <p><b>I-1.5.2</b> - Evidence of availability and application of consistent M&amp;E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets</p> <p><b>I-1.5.3</b> - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management</p> <p>The reporting on GCO is somewhat complicated because the CRRs deal with three different equity investments, i.e. in EAIF, in MFMFL and in GCO. What has been presented in the CRRs and in the Investment and Monitoring Reports seems to give a good view on how GCO is doing financially, and how the pipeline of projects and realised guarantee deals develop, although information on a project-by-project basis seems lacking. The score card presentations are not always complete, which might be caused by the changes in monitoring and evaluation systems that took place over the years. The reporting on E&amp;S issues could have been more extensive, although a report of September 2015 shows positive results.</p> <p>Rating: 3 (Satisfactory)</p>	

## EQ 2 – Additionality and catalytic effects

Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?	
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
<p><b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects</p> <p><b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio</p> <p><b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio</p>	
<p>The investment as a shareholder in GCO was done at the request of DGIS. At the time, a DGIS membership of PIGD, in which development cooperation among some Western governments in respect of infrastructure in Africa, was the main target. It must be assumed that no commercial source was interested to participate in GCO, in particular in view the risk involved to provide guarantees to the infrastructure sector, in countries with a high risk profile and the strong equity base that was a prerequisite for the Guarantco initiative. There was no FMO-A investment alongside the participation with IDF funds, although FMO-A funds were used for the EAIF and FMFML equity investments.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>
<p><b>I-2.2.1</b> - Ratio of mobilisation at project level of IDF funding to commercial funding sources.</p> <p><b>I-2.2.2</b> - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)</p>	
<p>The main reason for investing in GCO was the request by DGIS to FMO to realise the investment. FMO invests in GCO alongside the bilateral development institutions from Sweden, UK, and Switzerland. FMO was chosen because of its comparative advantages to contribute its experience to this initiative, which can be seen as a tribute to the institution. The catalytic effect of FMO was therefore a non-issue in this project. Nonetheless a positive rating is justified.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC 2-3</b>	<b><i>Additionality of IDF Loans and Equity Investments</i></b>
<p><b>I-2.3.1</b> - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.</p> <p><b>I-2.3.2</b> - At project level, project viability endorsement and contribution from IDF participation.</p> <p><b>I-2.3.3</b> - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects</p> <p><b>I-2.3.4</b> - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.</p> <p><b>I-2.3.5</b> - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)</p>	
<p>The shareholders agreed to a set of conditions before taking the initiative to establish GCO. A shareholders agreement and subscription agreements were signed. All shareholders participate on equal footing, although the DFID position in the Group remains the dominant one. FMO</p>	



provides FMO-A loans to EAIF for investments by the Fund. Equity exit of FMO from GCO will be difficult before the end date of 2040.

Rating: 3 (Satisfactory)

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

<b>JC 3.1</b>	<b><i>Evolution and drivers of portfolio performance pre and post 2012</i></b>
<p><b>I-3.1.1</b> - Portfolio performance and trends, in particular 2002-2011 and 2012-2016</p> <p><b>I-3.1.2</b> - Portfolio repayments/realisations and recycling in new projects</p> <p><b>I-3.1.3</b> - Performance of projects with FMO-A and/or other government funds</p> <p><b>I-3.1.4</b> - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses</p>	
<p>The nature of this investment is to help out DGIS what wanted FMO to allocate IDF funds to the GCO initiative, to complement the PIDF and EAIF activities. As exit from GCO is not realistic, in view of the nature of GCO, such an investment is against the principle of revolvability and should be seen as an exception.</p> <p>Rating: 2 (Partly Satisfactory)</p>	
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<p><b>I-3.2.2</b> - Balance sheet strength, profitability and cash flow/liquidity</p> <p><b>I-3.2.2</b> - Utility of Carnegie revolvability model in managing IDF operations</p>	
<p>The balance sheet is very strong, but the profitability has so far been negative. Losses are modest though in relation to the balance sheet total, and in 2016 profit was close to breakeven. Modest profit for the future are expected.</p> <p>Rating: 4 (Highly Satisfactory)</p>	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<p><b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting</p> <p><b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,</p>	
<p>IDF's risk management guidelines and equity valuation policy and reporting follow the guidelines for FMO-A investments. The question can be asked whether the development side is adequately covered in the internal reporting. The CCRs provided by FMO present sometime incomplete scorecards and do not address developmental and E&amp;S matters in sufficient detail. The strong equity position of GCO and the strong management team provides confidence of long-term sustainability.</p> <p>Rating: 3 (Satisfactory)</p>	

<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond	
N.A.	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.	
<p>Taking into account the high equity position of GCO, as well as the commitments of the shareholders of GCO to the mission of the company, project sustainability can be positively assessed. The fact that the profitability figures are not positive yet and that some provisions had to be made, does not effect the positive rating.</p> <p>Rating: 3 (Satisfactory)</p>	

## EQ 4 – ESG Risk Management

<b>What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)</b>	
<b>JC4.1</b>	<b><i>Trends in the nature and component balance of ESG risk in the IDF portfolio</i></b>
<p>A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).</p> <p>The investment in SCO is rated category A, and involves potential significant adverse impacts in respect of E&amp;S. The E&amp;S risks are high, but the way in which GCO has handled and is handling E&amp;S risk gives confidence the there risks are adequately mitigated. The reporting on E&amp;S seems to have been adequate, although the documentation received give scant evidence respectively. E&amp;S requirements have never been formalized with FMO. Reports show positive E&amp;S performance</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC4.2</b>	<b><i>IDF-financed projects contributed to green and inclusive development</i></b>
<p><b>I-4.2.1</b> Comparison of intended/actual Greenhouses gases (GHG) footprint, ‘emission avoidance’ or other environmental effects</p> <p><b>I-4.2.2</b> Comparison of intended/actual social effects including social inclusion</p> <p><b>I-4.2.3</b> Progress in moving towards FMO Impact Model targets of ‘doubling impact and halving footprint by 2020’</p> <p>GCO, with the necessary help from FMO, adequately handles the high E&amp;S risks in projects that are guaranteed by GCO. Detailed reports on E&amp;S should give further evidence that the Fund Managers takes all the necessary steps to maintain E&amp;S monitoring at the highest level.</p> <p>Rating: 3 (Satisfactory)</p>	

<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
<p><b>I-4.3.1</b> - Use of Free prior and informed consent principles</p> <p><b>I-4.3.2</b> - FMO verification that higher risk projects comply with national legislation and international norms</p> <p><b>I-4.3.3</b> - Evidence of ESG risk assessment</p> <p><b>I-4.3.4</b> - Evidence of ESIA and ESAP preparation and implementation</p> <p><b>I-4.3.5</b> - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)</p> <p>The CCR of 2017 mentions that the E&amp;S reporting quality is good. GCO provides an overview of the E&amp;S reports, findings and follow-up measures for six clients (out of 16) which have reported on E&amp;S in 2014 (the 2015 report is expected in Sept 2016). Not all borrowers are contractually required to submit an E&amp;S report while the report of the borrowers whose contracts was signed recently, was not due yet at the time of the preparation of the client's report. E&amp;S requirements have never been formalized with FMO. Despite this, GCO submits an E&amp;S report annually which is prepared by the consultant AECOM (Former URS). FMO formalize E&amp;S reporting in the restructured facility.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<p><b>I-4.4.1</b></p> <p>Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management</p> <p><b>I-4.4.2</b></p> <p>Evidence of feedback and application of lessons learned in subsequent projects</p> <p>No adverse environmental or social events were reported in 2014. However, more information is expected to come along with the upcoming Annual Monitoring Report. In 2013, a set of trainings for GCO were planned by the consultant URS (in 2017 AECOM), in order to ensure effective reporting and policy implementation aligned with the IFC Performance Standards 2012 and E&amp;S management guidelines. After contacting FMFML, information was obtained that the set of trainings were under development. The training is essential to allow integration of E&amp;S into project development, realisation and monitoring.</p> <p>Rating: 3 (Satisfactory)</p>	

## EQ 5 – Policy

To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
N.A.	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
N.A.	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
N.A.	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
<p>FMO has clearly defined policies and internal procedures, also in respect of equity participations, although the changes of monitoring and evaluation system over time made it more difficult to identify a consistency in the presented ratings in the scorecards, as presented in the CCRs. Due to the absence of local presence and the need to monitor from a distance, there is a danger that monitoring has not the intensity that it should have. In the case of GCO the quality of the Fund Manager is crucial and allows professional interaction with FMO investment officer.</p> <p>Corporate governance is adequately adhered to, which is a reflection of the good cooperation PIDG, AEIF and the GCO shareholders. FMO seems to handle this investment in a professional manner with due attention to its partners in the project.</p>	

Rating: 3 (Satisfactory)	
<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<b>I-6.2.1</b> - Appropriateness of available FMO expertis <b>I-6.2.2</b> - Trend in of full-time ratio equivalent staff to volume of operations	
<p>The reporting on the project as presented in the CCRs seems adequate and there is evidence in the project documentation that FMO is very experienced in with equity funds focussing on the infrastructure sector. DGIS selected FMO to help out with the GCO investment because its skill respectively.</p> <p>Rating: 4 (Highly Satisfactory)</p>	
<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<b>I-6.3.1</b> - Identification of explanatory factors (incl. external factors) in effective implementation <b>I-6.3.2</b> - Identification of explanatory factors (incl. external factors) in effective observed delays	
<p>Good interaction with the donors, members of PIDG, and the shareholders of GCO helps with the success of the fund. However, directives from the donor group interested in infrastructure development in Africa, cannot always be cost-effective for GCO, which might have a negative effect on financial returns. On balance, the judgement must be positive as GCO is highly capitalised.</p> <p>Rating: 3 (Satisfactory)</p>	

## Sources of data

Document title	Date
IMR - Advice	24/11/2005
IMR - Reaction to IMR Advice	29/11/2005
IMR - Disbursement	20/12/2006
IMR - Guarantco Review	18/06/2008
Guarantaco Subscription request	3/07/2008
Amendment to Subscription request	3/07/2008
Project evaluation form	5/08/2008
Declaration Letter of Effectiveness	14/08/2008
FINPRE for Approval	19/08/2008
Scorecard	19/08/2008
Six-monthly report PIDG Programme Manager	October 2008
Guarantaco Project Review	6/10/2008
Memorandum	23/10/2008
FP Change request	15/12/2008
Client Credit Review	15/12/2008
Investment & Mission Review (IMR) - Change request	17/12/2008
IMR - Response to change request	20/02/2009
Client Credit Review	8/07/2009
FP Change request	19/02/2010
Subscription agreement #1	20/04/2010
Written resolution	30/04/2010
Financial Statements	24/06/2010
Valuation Worksheet	30/06/2010
Client Credit Review	7/07/2010
Client Credit Review	10/07/2010
Memo to IMR / IRC	22/07/2010
IMR - Advice on CCR	23/07/2010
Amendment #1 to the subscription agreement dated 20/04/2010	August 2010
Subscription agreement #2	September 2010
Subscription request	17/09/2010
Scorecard	6/11/2010
Deed of agreement	18/11/2010
Waiver request post contracting	30/12/2010
Client Credit Review	24/05/2012
IMR Advice on Group Credit Review	21/06/2012
IMR - Minutes of IRC meeting	25/06/2012
Client Credit Review	3/06/2013
IMR Advice on Group Credit Review	20/06/2013
Client Credit Review	12/05/2014
Client Credit Review - Analyst Advice	19/06/2014
Client Credit Review	29/06/2015
Client Credit Review - Analyst Advice	28/07/2015

Client Credit Review	30/06/2016
Amendment #2 to the deed of agreement	20/01/2017
Subscription agreement #7	20/01/2017
Client Credit Review	15/03/2017
Amendment #1 to the deed of agreement	N/A

## Annex 1

### Meeting in London on 19 December 2017 with Lasitha Perrera, the CEO of Guarantco with Fredrik Korfker

- Mr. Perrera explained that PIDG is about to change drastically, in the sense that the various companies, such as Guarantco, EAIF, and their other regional-oriented infrastructure investment funds will be merged in PIDG and operate under one umbrella, with one CEO and a single Executive Board. This change is instigated by the major players in PIDG being the associated Governments of which DFID of the UK and DGIS of the Netherlands have been dominant. He felt that if this reorganisation of PIDG would not have been adopted, the Dutch would have probably have stepped out of the PIDG initiative.
- Mr Perrera made clear that not all EAIF's projects are guaranteed by Guarantco and that their clientele is more globally oriented.
- FMO is a shareholder of EAIF and investing in EAIF projects. There were occasions where FMO has called the GCO guarantee. How does FMO deal with conflict of interest and the moral hazard involved? Can you share relevant information in this respect? Response: FMO realises that securing a guarantee from a company of which they are a shareholder can be consider a moral hazard and constitute a conflict of interest situation. However, the FMO staff taking decisions in respect of the GCO equity investment were not involved in the approval of guarantees. Therefore, the responsible FMO staff had a minimalistic approach in acting as a shareholder. The move of the investment in Guarantco to Private Equity within FMO secures the Chinese wall between equity and loans and is an indication that FMO Management was aware of the conflict of interest situation. It was advised to also speak to DGIS staff responsible for the investments in and through PIDG/EAIF. Comment: See above remark on conflict of interest.
- Relationship of FMO with the fund managers FMFML/Cardano and possible conflicts of interest as CEO Cardano was former FMO staff.
- He very happy with the performance of Cardano the new Fund Manager, and their delivery of FM services is also much cheaper than the former Fund Manager FMFML.
- Mr. Perrera confirmed the training obtained by FMO E&S staff and promised some more recent E&S material.
- Further comments based on discussion with Lasitha:
- PIDG is developing as a kind of MDB with high level of equity financing with substantial callable capital. It is important that the rating agencies rate the PIDG associate companies close to triple A;
- Further study Guaranto's website for additional information;
- FMO helped in setting up system whereby there would be more focus on the private sector and less on DFIs
- There is a lot of stress in Guarantco's portfolio but there is not a negative outlook. Guaranto's seems to hold an adequate grip on the performance of its guaranteed projects;
- Only one project is in work-out
- The Guarantco team is gaining in strength, in London (Africa/Asia) as well as in Nairobi. Staff: 18 in London and 6 in London. Total staff by end of 2018 about 30;



- They do less acquisition these days as the clients seem to be able to find Guarantco. There is more name recognition in the market for the Guarantco's guarantees;
- Guarantco prepares monthly real-time reports; upgrades of the reporting system are made-non-payments are flagged-up quickly.
- Also clients provide information on their businesses to Guarantco, as if they were a client/lender and not the guarantor.
- 50% of the portfolio is under stress where potential issues can easily occur; smaller things are monitored through a watch list;
- Guarantco helps developing local capital markets like in Nigeria whereby they try to focus on becoming the centre of excellence in respect of local currency financing;
- Last 24 months focus on Pakistan, Bangladesh and Kenya;
- Four rating Agencies rate Guarantco on a regular basis (Fitch, Moodies, Pacra and Bloomfield West Africa)
- At the moment Guarantco operates on a break-even basis and Lasitha is positive in respect of Guarantco's future profitability.
- Information received:
  - o Third quarterly report 2017



## Kenmare - moma

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

### **Data and Other limitations**

Key documents setting out the compliance with IDF criteria were not available. This is important given that Kenmare is a mining project in a remote area that required the construction of infrastructure, most importantly an electricity power line. The benefits of such infrastructure for local communities is assessed in this report. Also, there was limited information on the due diligence of E&S.

## 1. Project fiche

Project title	Kenmare Resources plc
<b>Project description</b>	Development of the Moma titanium minerals mining project <sup>8</sup> located on the remote north east coast of Mozambique. The mining concession was acquired by Kenmare in 1987 and contains large deposits (over 100 years) of (i) ilmenite and rutile (two forms of titanium dioxide that are used primarily in pigments and also to make titanium metal), and (ii) zircon (a by-product that is used mainly in the ceramics industry to increase the opacity of tiles and sanitary ware). The Moma mine started operations in 2007 and uses dredge mining, a low-cost method of extracting minerals that is well suited to the deposits in which we operate. Kenmare is listed on the London and Dublin exchanges. Moma mine is its only project, although the actual reserves are in several locations along the coast. The mine is currently accounts for about 10% of the global production of ilmenite. Currently the mine employs over 1,300 people, down from a peak of 1,565 in 2014.
<b>Sector</b>	Mining
<b>Stages</b>	Start-up, expansion, and restructuring
<b>Operation Dates</b>	Finpre/Clearance in Principle (CIP), Financial proposal /Approval
<b>FMO Customer no:</b>	015430
<b>Country/Region</b>	Mozambique, Africa
<b>Country category</b>	LIC
<b>Project total cost (€)</b>	The total project financing needs to financial completion - in the base case expected 31 December 2008 - including historical investments, EPC contract, financing costs and building various reserve accounts was \$396,5m. <ul style="list-style-type: none"> <li>• Maximum senior debt is \$200m,</li> <li>• maximum subordinated debt €55m</li> </ul>
<b>IDF contribution (€)</b>	
<b>Co-financing (€)</b>	The Kenmare project was a large project finance transaction involving a variety of financiers, both commercial and developmental, as can be seen below.

<sup>8</sup> Moelis - Case Study Kenmare Resources' 2015 Restructuring and 2016 Recapitalisation October 2016

	<b>Original 2004 Financial Plan</b>		\$m	\$m	
	Existing equity		48		
	New equity		79		
	<b>Total equity</b>			127	32%
	Subordinated				
	EIB €40m		48		12%
	IDF €15m		18		5%
	<b>Total subordinated</b>			66	17%
	Senior				
	AfDB		40		
	ECIC/ABSA		80		
	EIB*		15		
	FMO-A		15		
	KfW (insured)		50		
	<b>Total senior</b>			200	50%
	Other			4	1%
	<b>Total</b>			<b>397</b>	<b>100%</b>
	Source 2004 FP FMO-A and IDF				
<b>Loan Terms</b>					
<b>Facility No</b>	15358	101948	141579		
<b>Senior/Subordinated</b>	Subordinated	Subordinated	Super senior – standby, rescue facility		
<b>Convertible</b>	Part converted to equity	No	No		
<b>Amount</b>	€15m	\$1.5m	\$4.4m		
<b>Loan Agreement Date</b>	02/12/2003	28/07/2005	08/01/2015		
<b>Currency</b>	Euro	USD	USD		
<b>Tenor</b>	15 years	14 years	2 years		
<b>Grace period</b>	Up to 5 years	?			
<b>Interest rate</b>	Fixed 10%		Libor + 10%		
<b>Security</b>	None	None	Yes – above senior loan		
<b>Disbursements</b>	€15m	\$1.5m			
<b>Monitoring</b>	Annual CCRs and close monitoring during implementation and up to 2016 due to financial problems and near insolvency				
<b>Key covenants</b>	n/a				
<b>Conversion features</b>	\$10m converted into equity				
<b>Equity Terms</b>					
<b>Direct</b>	Direct				
<b>Indirect – Fund</b>	n/a				
<b>IDF Investment (\$, €, local currency)</b>	Conversion of \$10 m equivalent of 2004 €15m IDF subordinated loan into 34.9m Kenmare shares at a price of GBP16p = Stg 5.6m. This was to bolster Kenmare’s equity base to enable new loans to be raised to fund cost overruns <sup>9</sup> .				
<b>Total Project/fund</b>	n/a				
<b>IDF Stake (%)</b>	6.5% at time of conversion				
<b>Investment date</b>	24 November 2004				
<b>Disbursements</b>	Conversion				
<b>Direct investment – exit</b>	Shares will be sold on London Stock Exchange at an appropriate time				

<sup>9</sup> In particular the \$10m of subordinated FMO loan converted was replaced by a similar \$10m subordinated loan from Emerging Africa Infrastructure Fund, in which FMO is an investor.

strategy										
Direct investment - put option terms	None									
Fund life	n/a									
Grants										
Amount	\$302,400									
Convertible	No									
Purpose	Support Kenmare Development Association <sup>10</sup> (KMAD) to improve clinics, health care provision and HIV/AIDS awareness in communities around the mine									
Grant agreement date	16 February 2009		Facility no		CD – MD-010-2					
Key terms	Total project \$0.62m, of which \$0.32m from KMAD. 3 year program to February 2012									
Disbursement	2009 to 2012									
Conversion terms	n/a									
Financial Risk and Performance										
	Financial proposal/approval					Client Review - Most recent				
Client Risk Rating	C1 (47) – May 2004									
Loan - Impairment provision	25%					0% following restructuring in 2016 which involved write-offs and debt/equity swaps.				
Equity - Fair value adjustment	50%					0% following restructuring in 2016 which involved write-down and debt/equity swaps.				
Financial and operating performance	Kenmare Operating Highlights									
		2010	2011	2012	2013	2014	2015	2016	H1 17	
	Shipments	'000MT	713	730	681	678	800	800	1,024	547
	Cash cost	\$ per MT			197	200	190	166	136	131
	Average price	\$ per MT	128	229	345	238	218	178	138	187
	Revenues	\$m	92	168	235	162	174	143	142	102
	Net Income	\$m	-16	24	50	-44	-101	-61	-15	9
	Sources: annual and half year reports									
Client Review -key findings	Project had major delays and cost overruns. In 2016 and H1 2017 there has been tentative evidence that the project is now financially viable and finally achieving it operating and developmental goals.									
Results chain: expectations and achievements										
Logical framework	As is often the case in the mining sector, the Moma mine is an enclave project in a remote coastal location in northern Mozambique. Mineral ore is extracted at the mine, processed and delivered on barges from its jetty to waiting ships a short distance offshore. The sales revenues do not go through Mozambique and are instead paid offshore to Kenmare. The principal benefits to Mozambique are: <ul style="list-style-type: none"><li>• The creation of around 300 jobs during construction at the mine.</li><li>• The creation of up to permanent 1,500 jobs when the mine reaches full production.</li><li>• Improvements to local infrastructure<sup>11</sup> in villages and communities around the mine, including the provision for the first time of grid electricity (transmission line capacity 22MW, of which 4MW not required by mine while the project average 18MW, paved roads and community buildings (health and education).</li></ul>									

<sup>10</sup> According to the February 2009 FINPRO CD, KMAD was established by Kenmare in 2004 as an independent development organisation to undertake community activities within a 10km radius of the mine.

<sup>11</sup> Reference made in appraisal reports to possible use of Kenmare airstrip and port facilities by local communities but in a poor rural area this was unrealistic.

	<ul style="list-style-type: none"><li>• Support for KMAD a local development organisation set up to improve, health, education and social services as well as local economic development.</li><li>• Small but significant opportunities for local supply of goods and services.</li></ul> <p>The logframe below summarises the developmental logic of the project:</p> <table><tr><th>Logframe</th></tr><tr><td><b>Inputs</b> Construction of mine in Nampula province, including mineral processing factory, jetty, camp and airstrip Relocation of 140+ households and community buildings Construction of 170 km 110KV electricity line and mobile telephone tower Establishment of Kenmare Development Association (KMAD)</td></tr><tr><td><b>Outputs</b> Production and export of ilmenite, zircon and rutile Electrification of villages (Mozambique electricity utility – EDM) 140 new houses for relocated families Jobs both directly and with suppliers and sub-contractors KMAD community projects – water, education, economic and health Access to telecommunications in surrounding villages/communities</td></tr><tr><td><b>Outcomes</b> Exports of minerals Direct and indirect jobs in and around mine Taxes – payroll, royalties, corporate Villages connected to the grid Establishment of local SMEs New/improved health and education facilities</td></tr><tr><td><b>Impact</b> Poverty reduction in villages/district surrounding mine and Nampula province Improved health, education and access to water in neighbouring villages Diversification of Mozambique economy Enhanced human capital in mine area</td></tr></table>	Logframe	<b>Inputs</b> Construction of mine in Nampula province, including mineral processing factory, jetty, camp and airstrip Relocation of 140+ households and community buildings Construction of 170 km 110KV electricity line and mobile telephone tower Establishment of Kenmare Development Association (KMAD)	<b>Outputs</b> Production and export of ilmenite, zircon and rutile Electrification of villages (Mozambique electricity utility – EDM) 140 new houses for relocated families Jobs both directly and with suppliers and sub-contractors KMAD community projects – water, education, economic and health Access to telecommunications in surrounding villages/communities	<b>Outcomes</b> Exports of minerals Direct and indirect jobs in and around mine Taxes – payroll, royalties, corporate Villages connected to the grid Establishment of local SMEs New/improved health and education facilities	<b>Impact</b> Poverty reduction in villages/district surrounding mine and Nampula province Improved health, education and access to water in neighbouring villages Diversification of Mozambique economy Enhanced human capital in mine area
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<b>Impact</b> Poverty reduction in villages/district surrounding mine and Nampula province Improved health, education and access to water in neighbouring villages Diversification of Mozambique economy Enhanced human capital in mine area						
Assumptions	<p>The main risks in the project were:</p> <ul style="list-style-type: none"><li>• Construction risk for a greenfield project in a remote location</li><li>• Operating risk related to the efficiency of the mine and the contractor and processing plants</li><li>• Market risks linked primarily to the price of ilmenite and demand.</li></ul>					
Main project issues	<ul style="list-style-type: none"><li>• High cost overruns</li><li>• Late start of operations</li><li>• Collapse in ilmenite price to a low in 2016 of 20% of 2004 price, modest recovery since</li><li>• Near insolvency and search for new equity investors</li></ul>					

	<ul style="list-style-type: none"><li>Restructuring in 2016 with \$275m of new equity, partial write-off of loans and debt/equity swap</li></ul>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	S30m over life of project, including royalties and fees <sup>12</sup>	Tax and royalty payments delayed/deferred due to late start up, high operating costs and low mineral prices
GHG Saving (tCo2)	T CO <sub>2</sub>	n/a	
Installed Capacity (MW)	MW	n/a	
Production Capacity	GWh	n/a	
People served – distribution	#	n/a	
People served – transport	#	n/a	
People served – power	#	n/a	
People served – telecom	#	n/a	
People served – IT/internet	#	n/a	
People served – industrial/agri	#	n/a	
People served – farmers reached	#	n/a	
Forestry under management	ha	n/a	
Agriculture	ha	n/a	
Green investments	€m	n/a	
Inclusive investments	€m	n/a	

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<sup>12</sup> 2004 FP



## 2. Scoring

	Desk Review	Field Visit
<b>EQ 2 - Relevance</b>		
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	3	3
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3	3
JC 2.3 Additionality of IDF Loans and Equity Investments	3	3
<b>EQ 1 - Effectiveness</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	2 Although the mine is now working well, there were delays and major cost overruns in project implementation	2 Although the mine is now working well, there were delays and major cost overruns in project implementation
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	2 Kenmare is an enclave projects that apart from local benefits (jobs and supplies) has had a marginal effect on the private sector in Mozambique.	2 Kenmare is an enclave projects that apart from local benefits (jobs and supplies) has had a marginal effect on the private sector in Mozambique.
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	3 The mine has delivered the planned outcomes, although there were delays and financial problems.	3 The mine has delivered the planned outcomes, although there were delays and financial problems.
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	3 Focus of M&E has been financial with much less attention on developmental issues	3 Focus of M&E has been financial with much less attention on developmental issues
<b>EQ 4 – ESG Risk Management</b>		
JC4.2 IDF-financed projects contributed to green and inclusive development	3 Good performance on environmental issues and community development	4 Strong performance on environmental issues and community development
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with	2 Lack of documentation	3 Lack of documentation but Kenmare view FMO positively

best international practices		
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	n/a no lessons evident but Kenmare is a good example of high E&S standards	3 no lessons evident
<b>EQ 6 – Efficiency</b>		
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	2 Issue of eligibility of mining for IDF unresolved	2 Issue of eligibility of mining for IDF unresolved
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	3 Initial due diligence did not identify key project risks. Post investment support very good.	3 Initial due diligence did not identify key project risks. Post investment support very good.
<b>EQ 3 – Revolvability</b>		
JC 3.5 Individual Project Sustainability	3 Restructuring and more favourable market conditions have strengthened Kenmare.	2 Restructuring and more favourable market conditions have strengthened Kenmare. Nevertheless major challenges remain on mine operations and market in China.
<b>EQ 5 – Policy</b>		
JC 5.1 Involvement of Dutch companies in IDF projects	n/a	n/a
JC 5.2 Effects for Dutch companies and economy	n/a	n/a
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	n/a	n/a
<b>Scoring Justification</b>		
EQ 2 - Relevance	3 IDF fulfilled its mandate by providing subordinated/mezzanine financing that helped to mobilise senior loans, including FMO-A.	3 IDF fulfilled its mandate by providing subordinated/mezzanine financing that helped to mobilise senior loans, including FMO-A.
EQ 1 - Effectiveness	2.5 After delays and cost overruns project is working well, although significant challenges	2.5 After delays and cost overruns project is working well, although significant challenges

	remain	remain
EQ 4 – ESG Risk Management	2.5 Lack of due diligence documentation	3.5 Field visit showed strong commitment to E&S both at mine and in local communities
EQ 6 – Efficiency	2 Eligibility of mining project with ancillary infrastructure benefits for surrounding communities unclear	2 Eligibility of mining project with ancillary infrastructure benefits for surrounding communities unclear
EQ 3 – Revolvability	3 Kenmare now performing well after restructuring, higher titanium prices and lower operating costs	2 Field visit revealed major challenges still remain
EQ 5 – Policy	n/a	n/a
<b>Comments</b>	Demonstrates FMO commitment to supporting a project through difficult times. IDF was complementary to FMO-A	Demonstrates FMO commitment to supporting a project through difficult times. IDF was complementary to FMO-A

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learnt and key findings

- Unclear from documents whether mining is an eligible project for IDF as infrastructure development (airstrip, roads, electricity, telecoms, water, schools and clinic) is secondary and limited to area around mine in northern Mozambique.
- Greenfield project with major cost overruns and delays in implementation that burdened the Company with high debt levels.
- Limited economic benefits to Mozambique as a whole. At local/provincial level project has been very important in a very poor, remote part of Mozambique. Around the mine there have been substantial job creation (although jobs have been cut in recent years) and clear economic and social benefits.
- Strong commitment to minimise environmental effects of mining.

- Co-investment with FMO-A. FMO and IDF showed strong support for Kenmare during many years of poor financial performance and near insolvency which is greatly appreciated by Kenmare. Restructuring in mid-2016 has given Kenmare the chance to secure its long-term future. However operating and titanium market challenges still remain.
- IDF subordinated loan while modest relative to total financial plan was important in mobilising senior loans.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

**How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?**

**JC1.2** *IDF-financed projects have delivered expected infrastructure outputs on time and within budget*

**I-1.2.1** - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)

**I-1.2.2** - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).

**I-1.2.3** - Implementation progress – time and cost compared with programme

**I-1.2.4** - Infrastructure operation – outputs/production compared with targets

**I-1.2.5** - Direct job creation (local labour and/or local subcontractors) and comparison with targets:

As well as the investment in the mine itself, the project in a remote area in northern Mozambique required additional infrastructure:

- Construction of a 170km transmission 28MW line to connect mine in Tipuito with the grid and enable Electricidade de Moçambique (EDM) to electrify towns and villages as far away as Moma (70km). The mine
- Airstrip because of the lack of good roads, the nearest city, Nampula, being 4 hours away.
- Jetty for shipping out of ilmenite, rutile and zircon finished products on barges to waiting ships
- Mobile telecoms connections

Project finished more than 2 years later than planned and significantly over budget as shown below:

2004 Mine expected cost: \$348m	Mine actual cost: \$1.1bn
<ul style="list-style-type: none"> <li>• \$79m initial equity raised</li> <li>• €55m Sub</li> <li>• \$200m senior</li> </ul>	<ul style="list-style-type: none"> <li>• \$140m market cap. at Dec-14</li> <li>• \$20m Holdco</li> <li>• \$95m Senior</li> <li>• \$247m Sub</li> </ul>

Source Moelis - Case Study Kenmare Resources' 2015 Restructuring and 2016 Recapitalisation, October 2016

- The project ran significantly over budget and behind schedule; follow-on equity issuances of \$435m between 2010 and 2013 to finance an expansion
- A major restructuring was undertaken in 2016 which resulted in \$275m of new equity. This included major investment by SGRF<sup>13</sup> that invested \$100m for a 30% stake provided. Also, there were debt write-offs and debt/equity swaps that saw Kenmare's debt fall by about 70%. As a result Kenmare now has a much stronger balance sheet
- Kenmare first began production on a limited but lower than planned basis at Moma in 2007 and only started accounting for revenues in its income statement in the second half of 2009<sup>14</sup>.

<sup>13</sup> The State General Reserve Fund of Oman (SGRF)

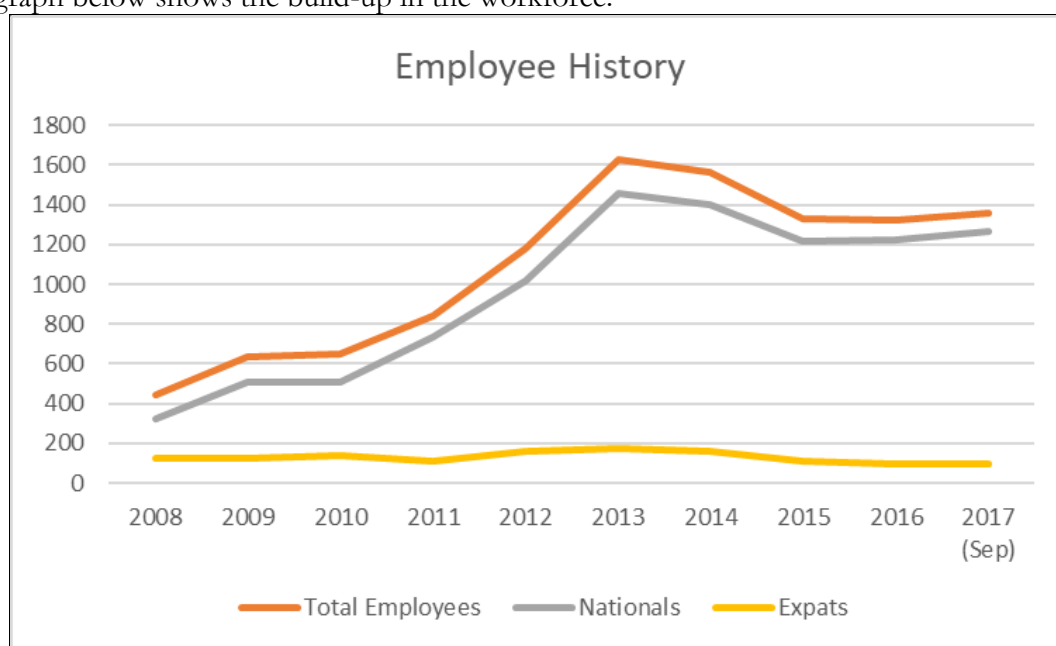
<sup>14</sup> Kenmare Resources 2010 annual report

Jobs created greatly exceed the targets set out in the 2004 FP of some 410 as the table below shows.

Mine employee statistics at year end<sup>15</sup>

	2016	2015	2014
Number of Employees	1,323	1,344	1,565
% Mozambican	93%	91%	90%
% Expatriates	7%	9%	10%

The graph below shows the build-up in the workforce.



Although the mine is now working well, the delays and major cost overruns in project implementation require that a 2 partially unsatisfactory rating is merited.

**JC1.3** *IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).*

**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'.

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

The mine is an enclave project. Apart from local jobs (both direct and with sub-contractors and suppliers) and a limited amount of local goods and services in neighbouring villages the effects on the Mozambique economy in general and the private sector in particular have been very limited. There may be a demonstration effect given the relatively small number of large foreign controlled projects in Mozambique. This was it should be noted expected at the outset of the project.

<sup>15</sup> Kenmare 2016 annual report

A 2, partially unsatisfactory rating, is merited.

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
<p><b>I-1.4.1</b> - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])</p> <p><b>I-1.4.2</b> - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels) <b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.4</b> - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p><b>I-1.4.5</b> - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p>	

According to the 2016 Kenmare annual report, ‘The Group’s world-class resource is estimated to contain approximately 200 million tonnes of ilmenite (equivalent to around 140 years production from the current plant) and associated co-products rutile and zircon’.

Mine employee statistics at year end<sup>16</sup>

	<b>2016</b>	<b>2015</b>	<b>2014</b>
Number of Employees	1,323	1,344	1,565
% Mozambican	93%	91%	90%
% Expatriates	7%	9%	10%

There will be a continuing reduction in expatriate employees through a localization strategy involving developing Mozambican staff at all levels: management, supervisory and apprentice levels. It is expected that in 2 or 3 years the Mozambican deputy mine manager will take charge

There is also a substantial number of indirect workers, mainly sub-contractors at the mine. International Facilities Services (IFS) a South African Group, has been contracted to run the camp and all the catering. It is the largest sub-contractor. In total there are about 615 people working for sub-contractors. With a current payroll of 1,342, the total number of people working at the mine is almost 2,000.

Attached at Annex 1 is a note of the visit to the mine in November 2017 and local villages/communities withing a radius of 10km.. It is clear that the mine has brought major economic and social benefits to villages and their inhabitants. Specifica

An agreement with EDM signed in 2008 led to 6,247 households and organisations being connected in Moma (3,205), Larde (749) and six other communities.

The jetty is of a specialised design for the loading of ore barges. It cannot easily be used by fishing boats or general cargo vessels. Third parties are permitted to land on the airstrip, which was frequently used for emergency relief during floods in 2015, but only on an as needed basis when road access is not possible.

The table below shows payments to the Mozambique Government over the last four years. Payroll taxes fell from a high in 2014 as Kenmare cut employees. Royalties account for nearly 90% of non-payroll taxes. No corporate tax has been paid apart from small amounts of withholding taxes (\$0.5m in 2016). Kenmare benefits from a tax holiday on profits it makes. This may be more of an issue in the future, assuming that Kenmare produces profits.

<b>Payments to Mozambique Government</b>				
	2013	2014	2015	2016
	\$m	\$m	\$m	\$m
Payroll taxes	9.50	10.56	8.55	7.41
Royalties and other taxes	4.39	6.07	4.90	4.62
<b>Total</b>	<b>13.89</b>	<b>16.63</b>	<b>13.45</b>	<b>12.03</b>

Source Kenmare Resources 2016 Annual Report

Overall benefits to Mozambique Government can be considered as modest in the context of the size of the project. However, at the regional level, in Nampula province, the project has been a major boost particularly along the coast north of Moma.

<sup>16</sup> Kenmare 2016 annual report



KMAD was established by Kenmare to undertake community activities in the locality of the the mine and show that it was a responsible corporate citizen. corporate social responsibility. This has led to improvement of livelihoods and wellbeing for the community within a 10 km radius of the mine.

The impact on the balance of payments has been positive, although much of the dollar revenues are used to pay debt service costs and foreign supplies. Dollars have flowed into the country to pay for local salaries, supplies, transport, power and other expenses

Although the newly constructed or rehabilitated roads are open to the local population, in practice these roads are of a rudimentary quality and do not greatly reduce the remoteness of the mine and surrounding villages. More important, perhaps, has been the electrification of Moma, and areas around the mine and in the Larde District. While these were undertaken by EDM, this was only possible because of the 170km line installed by Kenmare to bring electricity to the mine. Another important benefit to local communities that the mine made possible is the availability of connections to the mobile telephone network for the first time. Due to the specialised nature of the jetty for exporting minerals it cannot be used for other purposes such as landing fish. The airstrip while predominantly used by the mine is available for emergency relief flights and may in the future be used to bring tourists going to a nearby island that is being considered.

The mine had significant benefit in the the villages, towns and communities around the mine. This an isolated/remote area on the northern coast of Madagascar with subsistence agriculture and fishing being the main livelihoods. As noted under 4 E&S the mine delivered major community benefits, as well as over 1,000 well paid jobs for local people.

In summary, the project delivered the planned outcomes. Accordingly a 3 rating.

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
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**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

Throughout the period since the project was approved in 2004 there have been regular reports prepared by FMO staff. The focus of monitoring and CCRs of Kenmare has though been primarily financial. This is not surprising given the operational and financial difficulties that the project has had since it was approved in 2004. Despite this, supervision of the E&S commitments and plans that Kenmare entered into has been good. It is evident from the documents provided that FMO has been closely monitoring Kenmare. Moreover, the field visit revealed a strong and positive relationship with Kenmare that is appreciated by the client. FMO/IDF's willingness to work with Kenmare through many years of financial and operating difficulties, culminating in the July 2016 restructuring demonstrates strong monitoring performance by FMO.

Developmental issues, especially the benefits of communities around the mine were only addressed in the 2009 internal evaluation and the 2008 case study undertaken as part of the IOB review of IDF. It should also be noted that mining has not been a core sector for FMO with relatively few been undertaken. The proposed new FMO Strategy 2025 does not envisage further mining projects. Kenmare is the only mining project in the IDF portfolio.

Overall a 3, satisfactory, rating for M&E is appropriate.

## EQ 2 – Additionality and catalytic effects

Please find at the end of this document the types of additionality

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

In the financial plan FMO-A provided a senior loan while IDF provided a subordinated loan. The project is a good example of the complementary way that FMO-A and IDF can finance a project with IDF taking considerably more risk.

A satisfactory 3 rating is appropriate.

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.

**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

The financial plan below shows the original project funding in 2004.

<b>Original 2004 Financial Plan</b>	<b>\$m</b>	<b>\$m</b>	
Existing equity	48		
New equity	79		
<b>Total equity</b>		127	32%
Subordinated			
EIB €40m	48		12%
IDF €15m	18		5%
<b>Total subordinated</b>		66	17%
Senior			
AfDB	40		
ECIC/ABSA	80		
EIB*	15		
FMO-A	15		
KfW (insured)	50		
<b>Total senior</b>		200	50%
Other		4	1%
<b>Total</b>		<b>397</b>	<b>100%</b>
Source 2004 FP -FMO-A and IDF			

It can be seen that IDF provided about 30% of the subordinated funding which was led by EIB. The subordinated funding was important in catalysing the senior loan funding enabling a relatively modest equity base for a start-up (32%) raise 50% of senior funding, of which 7.5% came from FMO-A. EIB, however, was by the far the most important outside funding source

(a total of €63m) accounting for 16% of the plan, followed by KfW insured funding (€50m, 13%). Nevertheless IDF funding was important for the financial plan and mobilising commercial loans.

Subsequently in 2007 and 2014 IDF provided further \$2.5m of funding to enable Kenmare to continue operations following cost overruns and delays. It also provided a grant of €0.3m in 2009 to support KMAD.

Overall IDF played an important and satisfactory role in the financing of Kenmare, 3 rating.

### JC 2-3 *Additionality of IDF Loans and Equity Investments*

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)

The table below shows the total funding provided by both IDF and FMO-A since the project was approved in 2004<sup>17</sup>.

Total Funding by IDF and FMO-A						
Year	Facility #	Instrument	Fund	Amount \$	Tenor years	
2004	15358	Subordinated	IDF	8,977,693	15	41.4%
2004		Equity	IDF	10,000,000	n/a	
2007	101948	Subordinated	IDF	1,500,000	12	
2015	141579	Super senior	IDF	960,986	2	
		Total IDF		21,438,679		
						58.6%
2004	15356	Senior	FMO-A	19,500,000	12	
2008	104949	Subordinated	FMO-A	10,000,000	11	
2015	140144	Super senior	FMO-A	786,261	2	
		Total FMO-A		30,286,261		
	Totals			51,724,940		
Source: Special Operations - Exposure Split						

Project delays and cost overruns led to the need for additional funding in 2007 and 2008.

In the 20004 FP (that combined IDF and FMO-A loans) stated that the role of FMO was to:

- Provide scarce long-term debt and that FMO participation was the final piece in the financing plan;
- Catalytic in bringing in other lenders and equity investors;
- Monitor the implementation of the environmental action plan;
- Play an active role in the monitoring of (deployment) of social programs.

<sup>17</sup> It should be noted that the IDF equity funding occurred as a result of a conversion of \$10m equivalent of the €15m subordinated loan to strengthen the equity base while at the same time a matching \$10m loan was provided by the Emerging Africa Infrastructure Fund (EAIF) in which FMO is a shareholder.

While the involvement of IDF in the subordinated debt component was important it should not be overstated given the relatively small amount vi-a-vis EIB's much larger contribution. However, IDF's willingness in April 2006 to convert £6m of the subordinated loan into equity to bolster the equity of Kenmare and thereby raise equivalent loan funding from EAIF demonstrates a strong IDF role.

Overall it is evident that the IDF additionality and role was satisfactory, 3 rating.

#### IDF Eligibility

Although mining is not an infrastructure work in itself, the use of the LDC fund was justified by referring to three eligible sectors involved in the mining project: energy distribution (the LDC loan was specifically destined to a 170 km electricity transmission line), immobile infrastructure (road, airstrip and jetty construction) and social infrastructure (through the KMAD). Although all these aspects cannot be denied, from the start on an investment in mining was a rather indirect way to achieve those development objectives. ( A comment in the 2009 internal evaluation of IDF states '...at that time there was a lot of pressure to invest through the LDC fund. Therefore this project was most likely seen as relevant enough to invest in.')

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

#### **JC 3.5**     *Individual Project Sustainability*

##### **I.3.5.1** - Review performance and sustainability of 15 projects selected for desk review.

From the outset in 2004 there were significant delays and cost overruns. By January 2009 total costs for project had risen to \$597m up from planned \$390m, due primarily to:

- poor performance of the engineering, procurement, and construction" (EPC) contractor (and sub-contractors) and poor project and operational management of MOMA. The result was that the technical completion was delayed from originally March 2007 to December 2010
- the decision at the outset to buy second hand mining equipment that was unsuitable and had to be replaced with new equipment.
- operating costs that were not covered by revenues<sup>18</sup>.

As a result there were significant delays in technical and financial completion, and especially the ramp up of production<sup>19</sup>.

Set out below a summary of operating performance up until H1 2017.

<sup>18</sup> CCR 10.3.2009

<sup>19</sup> IMR 20 March 2009

Kenmare Operating Highlights									
		2010	2011	2012	2013	2014	2015	2016	H1 17
Shipments	'000MT	713	730	681	678	800	800	1,024	547
Cash cost	\$ per MT			197	200	190	166	136	131
Average price	\$ per MT	128	229	345	238	218	178	138	187
Revenues	\$m	92	168	235	162	174	143	142	102
Net Income	\$m	-16	24	50	-44	-101	-61	-15	9

Sources: annual and half year reports

As well as the delays and major cost overruns in bringing the mine into operation, there was also a major decline (a peak to trough drop of around 80%) in the price of ilmenite (the principal product) as shown by the graph below. Very few projects could survive such a fall. Kenmare has, however, been able to drastically cut its operating costs so that at even low prices it is viable.

#### Restructuring

On 28 July 2016, the Group completed a capital restructuring to reduce debt to US\$100 million (from US\$392.4 million using agreed exchange rates) and to provide an additional US\$75 million of cash for working capital and to meet fees and expenses. This was achieved by:

- the raising of \$275m new equity from new and existing shareholders,
- the conversion of US\$44.2 million from debt to equity in the Company and
- US\$69 million in debt write-offs agreed by Lenders, including IDF and FMO-A.

As a result of the restructuring, Kenmare reduced its loans from \$342m in 2015 to \$100m in 2016. Debt servicing payments will therefore be much lower and the balance sheet much stronger

For IDF and FMO-A the restructuring produced a more than satisfactory financial outcome as the table below shows:

Total Loans and Equity by IDF and FMO-A			
	Disbursed a \$m	Total Recovery b \$m*	Return b/a
<b>IDF</b>	21.4	42.3	1.97
<b>FMO-A</b>	30.3	36.0	1.19
<b>Total</b>	<b>51.7</b>	<b>78.3</b>	<b>1.51</b>
* Recoveries include the current values of shares in Kenmare Resources received as part of the restructuring in July 2016 that included, inter alia, debt/equity swaps.			
Source: Special Operations - Exposure Split, Kenmare and IDF annual reports			

It is noteworthy that the restructuring appears to have been more favourable for IDF than FMO-A as reflected in the ratio of total recovery to amounts returned. While IDF did not receive all the interest due on the subordinated loans it did not lose principal/equity. The IDF investment has made a positive contribution to IDF's revolvability even with reduced interest payments.

#### Sustainability/Outlook for Kenmare

As can be seen from the operating summary, Kenmare has reduced its cash operating costs per ton by 35% since 2013. There has also been a modest increase in ilmenite prices. As a result operating cashflows are now much stronger.

Combined with the decline in debt service obligations and a stronger balance sheet, Kenmare can now look to a more secure future. This is a major turnaround from recent years when

Kenmare has been on the brink of insolvency and dependent on short term funding from lenders including IDF and FMO-A while it brought in new equity.

There are, nevertheless, two major risks that will need to be addressed/managed in the coming years:

- i) a relatively new challenge has emerged in that the current mining site is less productive due to lower grade ores, higher extraction/processing costs and a reversal in the production cost per tonne. A range of options are currently being considered to maintain existing production capacity:
  - Upgrade of the poorly performing B concentrator that involves a 20% increase in output that would provide a short to medium term fix at a modest cost of around \$16m.
  - At the pre-feasibility stage, a new dredge and wet plant at Pilivili Lease, 20km away which could provide a longer-term boost in production but at a cost of \$115m capex and \$23m annual operating cost. However, financing such a project may be a challenge only 17 months after restructuring in mid-2016.
  - Even more ambitious would be to go even further away in Congolone about 60km to the north on the coast. This un-costed project would be even more expensive and risky.
- ii) Dependence on ilmenite prices not declining again. In particular, there is considerable uncertainty over the demand for one grade of ilmenite IP2 sold to China:
  - IP2 is a sulphate ilmenite lower quality product (<55% TiO<sub>2</sub>) sold to customers in China – demand is volatile and not strong at present. High stock levels at the factory such that large amounts are stored outside and covered with plastic sheets.
  - IP1, 3 and 4 are chloride ilmenites with a higher TiO<sub>2</sub> content (>55%) where demand is better from other non-Chinese customers.
  - Kenmare expects to be fully sold out of zircon, rutile and Ilmenite IP3 in 2017, but holding inventories of IP2 sulphate ilmenite. This was evident from the high stockpiles of IP2 that are being stored outside of the factory, the warehouse currently being full.

In short, Kenmare has a brighter outlook than it did prior to the July 2016 restructuring. Nevertheless, the stock market remains cautious with shares down about 30% in January 2017, although they are up about 65% since their low 18 months ago. In summary, a 2, partially satisfactory rating is appropriate.

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

**JC4.2** *IDF-financed projects contributed to green and inclusive development*

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'



The project was classified as category A - high risk (Projects/clients with potential significant adverse social or environmental impacts which are diverse, irreversible or unprecedented.). Despite this classification, the mining process is relatively low impact environmentally and does not involve the use of hazardous or toxic chemicals. Instead to extract the ilmenite, rutile and zircon minerals in the dredged mud involves a series of primarily mechanical and thermal (rather than chemical) processes. As well as environmental issues arising in the mining and production process, the other major environmental/social challenges/issues are:

- Land and village resettlements as the mine moves onto occupied land in its concession area, and
- The restoration of land so that it is returned to the state it was prior to mining.

The mine is subject to environmental/social audits by the Mozambican authorities. To meet international (especially IFC) standards and national standards, Kenmare uses independent experts, in particular Coastal and Environmental Services<sup>20</sup> (C&E) from South Africa who also carried out the EIA as part of the project feasibility (see JC4.3). On the C&E website, in the section referring to the work it undertakes for its clients, it is stated: ‘Kenmare Resources: On-going environmental and social management services including review of operational mining EMP, compliance audits against IFC Performance Standards, IFC EHS General Guidelines and EHS Guidelines and the issue of Environmental Completion Certificate.’<sup>21</sup>

There was one major environmental accident in 2010 when a settling pond at the Moma Mine breached its southern retaining wall, which resulted in the release of water, sand and clay that flowed through part of the nearby village of Topuito<sup>22</sup>. The liquid/slurry that was released did not contain hazardous chemicals so that there was no lasting environmental damage. There was an unconfirmed report that a 4 year old girl was killed. 30 houses suffered extensive damage that Kenmare repaired. Another 358 houses suffered minor flood damage.

As a condition for the original IDF and FMO-A investments in 2004 there was a commitment to by Kenmare to an improve its E&S performance. For social issues, a key initiative was the establishment of the Kenmare Moma Development Association (KMAD) which continues to play an important role in Kenmare’s community activities. KMAD has an annual budget of \$1.5m. Its goals are:

1. **Livelihoods and economic development** - This includes capacity development and financial support to income generating initiatives, agriculture/food security and livestock support and economic infrastructures.
2. **Health development** - This includes support of the health sector – capacity development of medical staff, equipment, materials and infrastructure improvements, community health and HIV awareness, water and sanitation.
3. **Education development** - This includes support to the education sector including support for capacity development of teachers, educational materials and equipment, school infrastructures and furniture, vocational training, community environmental awareness and sports.

<sup>20</sup> <http://www.cesnet.co.za/> established in 1990

<sup>21</sup> <http://www.cesnet.co.za/assets/pdf/Project%20Profiles%20June%202017/CES%20Expertise%20in%20Mining%20and%20Extractive%20Industries%20WEB.pdf>

<sup>22</sup> <http://www.kenmareresources.com/media/press-releases/archive/2010-10-13.aspx>

Annual reports include sections on Kenmare's E&S performance. According to the 2016 annual report, for example, it is stated that 'Kenmare is committed to operating in an environmentally responsible manner and to minimising the impact of mining and processing operations on the local environment. The Mine is subject to the environmental laws and standards in force in Mozambique, together with international standards and guidelines of the International Finance Corporation ("IFC") World Bank, African Development Bank and FMO, as well as its own policies. The Mine applies the IFC Performance Standards (2006), as set out in the Environmental Management Plan ("EMP") and is moving to compliance with the IFC Performance Standards 2012.

Where standards differ, Kenmare has committed to meeting the most stringent standard applicable. EIA Services, Lda, on behalf of the Ministry of Land, Environment and Rural Development ("MITADER"), conducted an annual environmental audit at the Mine in 2016, measuring compliance with the Mozambican Government Decree 25/2011 of 15 June 2011 which requires companies to be audited annually by MITADER. No significant findings were registered.

Kenmare subscribes to the NOSA<sup>23</sup> Occupational Health, Safety and Environmental Management System. Kenmare's second NOSA grading audit was conducted in November 2016 and Kenmare was awarded an improved rating of 5 stars (the second highest rating possible), reflecting improvements in systems management in this area of the business.'

For restoration of mined-out dredge paths, Kenmare continues to follow the programme approved by MITADER in the Management Plan and Rehabilitation Strategy, so that mined area can be handed over to local communities. In 2016, a total area of 153 hectares was rehabilitated with top-soil, with the natural seed content contributing to the development of mixed trees and grassland rehabilitation. Planting of indigenous trees has supplemented the development of these areas. A further 33 hectares were planted with casuarina trees, a future commercial forestry crop. The rehabilitation plan for 2016 focussed on developing a patchwork of alternative land uses post mining, including development of agricultural land, forestry, savannah and woodlands, with the tactics of rehabilitation developed according to topography, adjacent ecotypes, availability of topsoil and tailings characteristics. With the arrival of new mobile equipment fleet in the latter part of 2016, the focus in 2017 will be on increasing rates of land restoration, and reducing the open area required for mining activities.'

Also the Kenmare 2016 AR states that: 'KMAD and the Mine have delivered significant improvements to local infrastructure, with all local villages now:

- electrified,
- improved access to water and
- mobile phone coverage throughout the community.

KMAD and the Mine have created direct and indirect employment opportunities, training initiatives have been implemented and numerous development activities started by KMAD have now matured. 2016 was the first year delivering on the KMAD 2016-2018 Strategic Plan.

As regards E&S monitoring by FMO only a limited number of documents were available. The 2007 E&S annual review. Nevertheless, the 2014 CCR, for example, notes in the section on E&S Risk Analysis<sup>24</sup>:

<sup>23</sup> NOSA set up by the South Africa government in 1951 provides occupational health, safety and environmental risk management services and solutions and is the exclusive provider of both the NOSA Five Star Grading System and SAMTRAC.

<sup>24</sup> CCR 3 March 2014



- No mayor environmental or social shortcomings were reported in the last year. The client has shown a constant commitment towards improving the environmental and social performance.
- The community developments undertaken by Kenmare have been perceived positively by the local community, who is benefiting from the health, education and new business opportunities. The local community has also benefitted from significant land compensation, a process which is now fully completed, and other infrastructure improvements such as the water distribution system in the nearby village of Miticoma.
- According to company information, the 2012 GHG emission was 112,244 tonnes CO2 equivalent. This value dates from 2012 when the Phase II Expansion took place. The main reasons for the increased emissions are two: Use of vehicles for completion of Phase II expansion and the use of generators for compensating the black outs of the normally hydropower-based electricity needed for processing.
- Kenmare is keeping up the pace with completing the 2009 voluntary ESAP action points in order to meet the IFC 2006 performance standards. Recently, as initiated by FMO, a new ESAP has been agreed to reach compliance with 2012 IFC PS by 2014.
- The company has followed up with past recommendations improving the health and security standards, collaborating with the Government and KMAD for the resettlement and increasing the community's life quality. However, a challenge remains the maintenance of the health and education services after the financial support is over and a better communication with NGOs and Media and other investors.

The field visit to the mine (see Annex 1) found that:

- There is a land rehabilitation strategy aimed primarily at returning mined areas to a state fit for a return to agriculture as soon as possible. As noted since the mining cycle for ilmenite and zircon does not involve the use of chemicals, the waste materials do not contain pollutants and rehabilitation is relatively easy.
- The Rehabilitation Management Plan determines which areas are suitable for agriculture and how much will be preserved for native vegetation and/or casuarinas. Local communities are involved in running nurseries that Kenmare has helped set up that sell suitable plants to Kenmare for planting on rehabilitated land. One of the important matters in rehabilitating land is to ensure that appropriate top soil is used so that native vegetation and casuarinas will grow well. A Kenmare nursery was visited as well as a plot of rehabilitated land that had been replanted with casuarinas. It was evident that land rehabilitation is taken seriously. However, it was noted that attempts to encourage local farmers to diversify beyond subsistence cassava have had limited success.
- When the mine was built there was a resettlement programme that required Kenmare to build 146 Houses, a school and a mosque. It was completed in March 2007. The ADE visit to Mtitikoma (about 5 km from the mine) found that new houses have been built to a good standard.

Th field visit to community projects (see Annex 1) found that:

KMAD supports projects in 10 villages surrounding the mine. Since the mine was established, the surrounding population increased from 7,000 to a peak of 24,000 as people were attracted by the possibility of well paid jobs. In recent years, the retrenchments have resulted in a probable decline of the local population.

The key local challenges have been, and remain:

- Health: Malaria, HIV/AIDS & poor access to basic health care services

- Education: Only primary schools & high adult illiteracy rates
- Food security: Diet based on cassava and fish
- Social: Gender equality; limited access to clean water & transport

KMAD's development focus has been on three pillars:

- Economic development: income generating activities and food security/agriculture
- Socio-cultural development: healthcare, education, clean water and sports and culture
- Rural infrastructure development: schools and health facilities

At the project level KMAD has supported:

- Income generating projects in eggs and poultry, fruits and vegetables, sewing, carpentry, salt production, and farming and fishing
- Education initiatives in savings and credit, adult literacy, health training and business skills
- Health and Sanitation projects in water, mosquito spraying, vaccinations and bed nets

The 2012-2014 Capacity Development Programme jointly funded by FMO and KMAD supported:

- Bi-weekly visits from Mobile Clinic Team consisting of Doctor and Dentist.
- Training of community health volunteers
- Capacity building for the new health post

KMAD has an annual budget of \$1.5m. There is a 3-year community development plan and annual action plans of development activities agreed and signed with the community. The 2016 KMAD annual report lists 37 income generating projects that it supported in 10 villages and the district capital Larde. Typically, micro/small loans must be repaid over a medium-term schedule. The following projects were visited.

- In Topuito 2 businesses supported with micro loans were visited:
  - bakery owned by a business woman with 7 employees that is doing well
  - and poultry project producing 400 eggs from 490 hens with 7 employees. A substantial proportion of the eggs go to the Kenmare canteen. Due to high input costs for maize, the business is marginally competitive against eggs coming from Nampula 4 hours' drive away. The owner of the business in the centre of the village complained that water is only available about 0.5km away.
- In Tipane a micro clothing business employing women was visited. It enabled about 5 women to earn modest amounts from the production of sample bags for the mine.

There were also visits to the following social infrastructure projects:

- A clinic built in 2013 by KMAD employs 3 nurses and 2 technicians, but no doctors was visited. According to the KMAD annual report, in 2016 it handled 13,803 patients (7,763 a year. It has:
  - pre-natal and maternity units (498 births in 2016)
  - pharmacy (under construction)
  - general ward
- In social infrastructure projects KMAD signs MoUs with GoM whereby it builds the facilities and GoM commits to fund the staff and operating costs.
- Schools around the mine only go up to primary/elementary level. For secondary education children must go Larde up to 15 km away or Moma (75km).
- Technical School – opening in January 2018. This project comprises 3 blocks of classrooms/workshops as well as a block for administration and teachers. It also has a water tower. It was built to meet GoM specifications. It will focus on electrical, civil and

mechanical engineering skills. Carpentry will be added later. The buildings appeared to be to a good standard.

- The Tipane water supply project, which was visited, involved a new bore hole, a large elevated storage tank with a capacity of 10,000 litres and piping to 5 distribution points around the village.
- In addition the electrification of the villages was clearly evident.

In summary, Kenmare is strongly committed to conducting its operations with national and international E&S standards. It has also played a strong community role in the neighbouring villages. An excellent 4 rating is therefore merited..

**JC4.3** *FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices*

**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3** - Evidence of ESG risk assessment

**I-4.3.4** - Evidence of ESIA and ESAP preparation and implementation

**I-4.3.5** - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)

As part of the documents submitted by Kenmare for funding in 2003/2004 there was a 5 volume environmental impact assessment (EIA) prepared in 2000. Volume 3, the actual EIA comprises 189 pages and was prepared by a South African firm Coastal and Environmental Services<sup>25</sup> (C&E) which according to its website has extensive experience, inter alia, in the mining sector. Moreover, the C&E website refers to:

‘Kenmare Resources (Dublin): Heavy Minerals Mine, in Moma, Mozambique. Detailed feasibility phase ESIA to international standards and numerous addendum EIAs.

Kenmare Resources: On-going environmental and social management services including review of operational mining EMP, compliance audits against IFC Performance Standards, IFC EHS General Guidelines and EHS Guidelines and the issue of Environmental Completion Certificate.

<sup>26</sup>.

The project was designated as E&S Category: A which would be expected for a mining project of this kind. The actual E&S risk assessment shown as Annex 20 to the 2004 FP was not attached to the FP. However, CCRs refer to a condition for IDF/FMO-A being implementation of an Environment Management Plan (EMP).

The Kenmare annual reports contain sections on its compliance with E&S standards. The 2006 report, for example, notes on page 26 that: “The Mine is subject to the environmental laws and standards in force in Mozambique, together with international standards and guidelines of the IFC, Bank, African Development Bank and FMO, as well as its own policies. The Mine applies the IFC Performance Standards (2006), as set out in the Environmental Management Plan (“EMP”) and is targeting compliance with the IFC Performance Standards 2012. The Mine consistently seeks to apply best practice in all of its activities. The above standards relate to emissions, effluent treatment, noise, radiation, water quality, rehabilitation, and management of social impacts, amongst others..

<sup>25</sup> <http://www.cesnet.co.za/> established in 1990

<sup>26</sup> <http://www.cesnet.co.za/assets/pdf/Project%20Profiles%20June%202017/CES%20Expertise%20in%20Mining%20and%20Extractive%20Industries%20WEB.pdf>

EIA Services, Lda, on behalf of the Ministry of Land, Environment and Rural Development (“MITADER”), conducted an annual environmental audit at the Mine in 2016, measuring compliance with the Mozambican Government Decree 25/2011 of 15 June 2011 which requires companies to be audited annually by MITADER. No significant findings were registered.’

The absence of the original ESIA and annual reviews of E&S at Kenmare make it difficult to rate FMO’s due diligence. However, Kenmare management at the mine commented on the importance of environmental compliance to FMO. Accordingly a satisfactory 3 rating.

<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
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**I-4.4.1**

Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management.

**I-4.4.2**

Evidence of feedback and application of lessons learned in subsequent projects

There is no evidence that E&S lessons from Kenmare are being applied in other IDF projects. This is not surprising since Kenmare is a mining project. Nevertheless the good social practices and commitment to high E&S standards make Kenmare a good example. Overall satisfactory 3 rating..

## EQ 5 – Policy

**To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?**

<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
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**I-5.2.1** - Evidence of IDF projects contribution to Dutch companies goals

**I-5.2.2** - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active

**I-5.2.3** - Level of exports to and investments in IDF eligible countries

**I-5.2.4** - Jobs created in projects financed by IDF

No involvement of Dutch companies in the project. Kenmare Resources is an Ireland headquartered mining company listed on the London and Dublin Stock Exchanges.

<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
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**I-5.3.1** - Evidence of synergies between IDF and other infrastructure programmes

**I-5.3.2** - Number and volume of projects co-financed

No links with other MFA programmes

## EQ 6 – Efficiency

**Has FMO efficiently and appropriately managed the Fund?**

<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<p><b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process</p> <p><b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs</p> <p><b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring).</p> <p><b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF</p> <p><b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations</p> <p>The 2004/2005 FP versions addressed the key issues related to the investments by both FMO-A and IDF. No documents were available showing the approval of the IDF investment by FMO management, nor of compliance with IDF investment criteria. In particular no documentary evidence on the appropriateness of IDF investing in a mine was available. The FP refers to the investments in infrastructure (electricity, roads, the airstrip and the jetty). Of these only electricity has played an important role in improving the quality of life in the communities around the mine. Whether this incidental, and modest, benefit to local infrastructure is sufficient justification for IDF involvement is debateable, especially given the large amount of the IDF investment.</p> <p>Kenmare is a company listed on the London and Dublin stock exchanges. It therefore has to follow CG standards applicable to listed companies which is referred to in the 2004 FP. CG is not specifically addressed in monitoring reports. It appears that FMO may have therefore relied on these listing requirements and the auditors of Kenmare to ensure that appropriate CG standards were maintained. One area where FMO and other funding institutions may have been weak is over the pay of executive directors. It appears that salaries for top management remained high during the many years when Kenmare was fighting for survival. In the 2006 AR, however, there were reductions in the possible bonus payments to senior management.</p> <p>In short, based on the documents available to ADE, the involvement of IDF in this project was not well justified. A 2, partly unsatisfactory, rating is required.</p>	
<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<p><b>I-6.2.1</b> - Appropriateness of available FMO expertise</p> <p><b>I-6.2.2</b> - Trend in ratio of full-time equivalent staff to volume of operations</p> <p>FMO has used experienced and competent staff throughout the period that IDF has been associated with Kenmare. In particular, FMO worked tirelessly to find solutions for the financial and operating problems that overshadowed the project from the outset until the restructuring in July 2016. During the field visit and telephone discussions with Kenmare senior management the special role of FMO was acknowledged, both on resolving the financial problems and also its contribution to ensuring that Kenmare implemented international E&amp;S standards.</p> <p>It is though clear that the initial due diligence did not fully identify the major project risks.</p> <p>On balance, a 3 satisfactory rating</p>	
<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<p><b>I-6.3.1</b> - Identification of explanatory factors (incl. external factors) in effective implementation</p> <p><b>I-6.3.2</b> - Identification of explanatory factors (incl. external factors) in effective observed delays</p>	

Better, in-depth technical due diligence in addition to financial and commercial DD would have identified high inherent risks in project. FMO experience in mining limited compared with infrastructure and financial sectors.

## Sources of Data

Document title	Date
Financial Proposals	18 May 2004
Financial Proposals	11 December 2004
Financial Proposals	13 January 2005
Financial Proposal Capacity Development Agreement with Kenmare Moma Associacao de Desenvolvimento (KMAD)	16 February 2009
Amendment to 4 <sup>th</sup> CTA Deed of Amendment	21 September 2007
Waiver agreement	24 May 2007
IMR Request	8 July 2014
Credit Approval Request post contracting	19 April 2016
Request to Credit Committee for restructuring approval	21 June 2016
Kenmare Resources Annual reports	2010,2012, 2015, 2016 and half year 2017
CCRs, including CCR	11 August 2008 and 3 March 2014
E&S Annual Review	11 August 2008
Kenmare EIA	2000
Addendum: increase subordinated debt with €1.15m (\$1.5m) Mio, IDF eligibility approval memo	8 May 2005
approval to convert \$10m equivalent IDF loan into equity	April 2006
FMO Kenmare internal evaluation	2009
IOB IDF Evaluation – Kenmare case study	2009
Kenmare presentation to Andrew Danino	06-09 November 2017
Kenmare Moma Development Association	2016 Annual Report
Moelis, Case Study Kenmare Resources' 2015 Restructuring and 2016 Recapitalisation	October 2016
<a href="http://www.cesnet.co.za/">http://www.cesnet.co.za/</a>	



## ANNEX 1

### Notes on Mozambique Field Visit to Kenmare Moma Mine, Nampula (Regional Capital) and Maputo – 6 to 11 November 2017

#### 1. Meetings held:

##### a) **Kenmare Moma Mine**

Gareth Clifton	Country Manager
Higino Jamisse	Deputy Mine manager
Rama Coetze	Mine superintendent
Dario + Ian Ellis	Electrical plant
Johan Jacobs	Health and safety
Samira Izidine	E&S
Regina Macuacua	KMAD, CSR and community relations
Caetano Amurane	HR and labour relations
Eusebia	Jetty

##### b) **Local Communities and Government of Mozambique**

- Natuko Tibani, mayor of Nathaka village (and also district councillor)
- Olavo Alberto Diniasse -permanent secretary (number 2) Ladre District Council
- Ministry of Mineral Resources and Energy – Nampula Regional Office and Maputo, Elias Davai (Nampula), Director and Deputy Director (Candido Acacio Rangeiro) Maputo

#### 2. Kenmare Mine



Concessions





Dredging pond



Jetty



Processing

3. <u>Mine Visit Schedule</u>	
Monday 6	
15:00	Arrival at Site
16:00	Site Induction (Library)
Tuesday 7	
07:30 – 09:00	Wet Concentrator Plant (WCP) A & B
09:00 – 10:00	Mineral Separation Plant, Laboratory and warehouse
10:00 – 11:00	Electricity sub-station & Agrekko
11:00 – 12:00	Jetty
12:00 – 12:30	Lunch (Library)
12:30 – 15:30	Presentations <sup>27</sup> : <ul style="list-style-type: none"> <li>- Current Operations &amp; Business Outlook (GC)</li> <li>- New reserves (GC)</li> <li>- Environment (SI)</li> <li>- IFC2012 performance standards Implementation (SI)</li> <li>- Labour relations (CA)</li> <li>- Local procurement, tax, etc.(GC)</li> </ul>
15:30 – 16:30	Visit Training Centre

<sup>27</sup> Kenmare Presentation to Andrew Danino, 06-09 November 2017

Wednesday 8	
08:00 – 09:30	Presentation – KMAD & CSR (RM)
09:30 – 10:30	Visit Nathaka (Regulo)
10:30 – 12:30	Visits <ul style="list-style-type: none"> <li>- Clinic</li> <li>- Mtitikoma (resettlement)</li> <li>- KMAD projects</li> <li>- Tebane school</li> <li>- Sewing project</li> </ul>
12:30	Lunch (Library)
13:00	Visit Topuito Technical school
13:45	Meet District Government Officials (Larde)
Thursday 9	
08:00	Departure

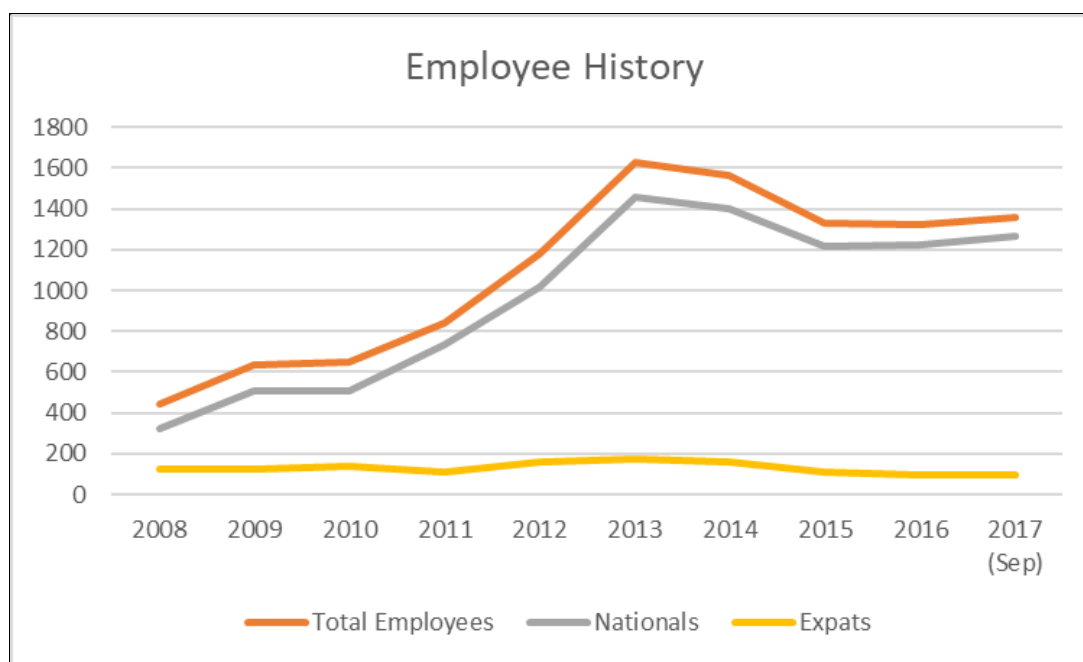
#### 4. Overall Impressions

- It is evident that the mine is being managed in an environmentally friendly way.
- Relations with the Government (local, regional and national) are good and Kenmare devotes considerable attention to ensuring that issues that arise are dealt with in a sensitive way. Kenmare is committed to high standards of CSR.
- For the surrounding villages and communities, the mine has brought many economic and social benefits (jobs, schools, clinics, water, electricity and sub-contractor/supplier opportunities). It is difficult to identify any significant downsides. It should be remembered that the mine is a very remote and economically deprived part of Mozambique. In short for most villages Kenmare has brought jobs and services that GoM has not been able to provide.
- A challenge for Kenmare is to manage expectations on what it can do with its limited \$1.5m annual KMAD budget. A case in point is the informal request for a bridge over the Meluli river at Larde will need to be handled diplomatically as it would likely cost.
- Operationally the mine is facing the challenge of diminishing ore concentrations. At some point it will be necessary to move dredging (and perhaps some processing) to other reserves that Kenmare has. This will be expensive.
- The market for the lowest grade ilmenite, IP2, that goes to China is volatile. At present there are large unstocks of unsold IP2 at the mine.
- While the 2016 restructuring and capital injection strengthened the balance sheet, the medium to long-term future of Kenmare, which has only one asset, the Moma mine, is not assured. Other mining companies with a portfolio of assets are less vulnerable.

#### 5. Key Findings from Mine Meetings:

- iii) General - At the national level, Kenmare is the Fourth largest private sector investment project; invested >US\$1bn to date. In 2016 it paid US\$12m in 2016 for income taxes, withholding taxes & royalties to Mozambique Government

- iv) The operations outlook has improved significantly since early 2016 which was the low point for the business. It is now planned to produce c. 1Mt pa ilmenite over next 2 years. Zircon projects continue to deliver additional volumes and higher quality products resulting in greater revenues. However, a relatively new challenge has emerged in that the current mining site is less productive due to lower grade ores, higher extraction/processing costs and a reversal in the production cost per tonne. A range of options are currently being considered to maintain existing production capacity:
- Upgrade of the poorly performing B concentrator that involves a 20% increase in output that would provide a short to medium term fix at a modest cost of around \$16m.
  - At the pre-feasibility stage, a new dredge and wet plant at Pilivilil Lease, 20km away which could provide a longer-term boost in production but at a cost of \$115m capex and \$23m annual operating cost. However, financing such a project may be a challenge only 17 months after restructuring in mid-2016.
  - Even more ambitious would be to go even further away in Congolone about 60km to the north on the coast. This un-costed project would be even more expensive and risky.
- v) At the marketing level, the picture has improved with a Strong offtake of ilmenite and zircon in H1 2017 from core customers with a particularly strong performance in zircon. However, there is considerable uncertainty over the demand of one grade of ilmenite sold to China:
- IP2 is a sulphate ilmenite lower quality product (<55% TiO<sub>2</sub>) sold to customers in China – demand is volatile and not strong at present. High stock levels at the factory such that large amounts are stored outside and covered with plastic sheets.
  - IP1, 3 and 4 are chloride ilmenites with a higher TiO<sub>2</sub> content (>55%) where demand is better from other non-Chinese customers.
  - Kenmare expects to be fully sold out of zircon, rutile and Ilmenite IP3 in 2017, but holding inventories of IP2 sulphate ilmenite. This was evident from the high stockpiles of IP2 that are being stored outside of the factory, the warehouse currently being full.
- vi) Employment – The chart below shows the trend in direct employment at the mine which can be seen to have peaked in 2013. Due to Kenmare's financial difficulties a retrenchment programme was implemented to reduce operating costs. After discussions with trade unions, the number of local job losses was reduced in return for concessions in pay and benefits.



Source S51

There will be a continuing reduction in expatriate employees through a localization strategy involving developing Mozambican staff at all levels: management, supervisory and apprentice levels.

There is also a substantial number of indirect workers, mainly sub-contractors at the mine. International Facilities Services (IFS) a South African Group, has been contracted to run the camp and all the catering. It is the largest sub-contractor. In total there are about 615 people working for sub-contractors. With a current payroll of 1,342, the total number of people working at the mine is almost 2,000.

vii) Environmental and Social

- Compliance with Health, Safety & Environment plans. There were no significant environmental incidents. IFC (2012) compliance largely completed – principally management of environmental and social risk, labour standards, and resource efficiency and pollution prevention. It is evident from briefings given to ADE and notices around the mine that HSE is taken seriously.
- External audits are carried out by the Ministry of Land, Environment and Rural Development (MITADER), the most recent audit: having been carried out in October 2017. Minor findings related with waste segregation and hydrocarbon management. An E&S audit by the South African firm NOSA is planned for December 2017.
- There is community involvement in environmental monitoring through the Environmental Community Committee established in 2015 that has 14 community members from the 7 surrounding villages
- There is a land rehabilitation strategy largely aimed at returning mined areas to a state fit for a return to agriculture as soon as possible. It should be noted that the mining cycle for ilmenite and zircon does not involve the use of chemicals. Instead only physical processes involving separation and drying are used. Consequently, the waste materials do not contain pollutants and rehabilitation is relatively easy.

- The Rehabilitation Management Plan determines which areas are suitable for agriculture and how much will be preserved for native vegetation and/or casuarinas. Local communities are involved in running nurseries that Kenmare has helped set up that sell suitable plants to Kenmare for planting on rehabilitated land. One of the important matters in rehabilitating land is to ensure that appropriate top soil is used so that native vegetation and casuarinas will grow well. A Kenmare nursery was visited as well as a plot of rehabilitated land that had been replanted with casuarinas. It was evident that land rehabilitation is taken seriously. However, it was noted that attempts to encourage local farmers to diversify beyond subsistence cassava have had limited success.
- When the mine was built there was a resettlement programme that required Kenmare to build 146 Houses, a school and a mosque. It was completed in March 2007. The ADE visit to Mtikoma (about 5 km from the mine) found that new houses have been built to a good standard.

### Resettlement Houses

Old



New



### viii) Common Infrastructure

The most important common infrastructure is the 170km power line from Nampula to Topuito that was paid for by Kenmare. Only about half of the capacity is required by the mine, the other half being available in the surrounding areas. An agreement with EDM signed in 2008 led to 6,247 households and organisations being connected in Moma (3,205), Larde (749) and six other communities, including three near the mine. In the villages of Tipane and Topuito it was evident that many houses had electricity. A reasonable number of them also had satellite television dishes. There were also a number of shops and businesses indicating economic activity.

The jetty is of a specialised design for the loading of ore barges. It cannot easily be used by fishing boats or general cargo vessels. Third parties are permitted to land on the airstrip, which was frequently used for emergency relief during floods in 2015, but only on an as needed basis when road access is not possible.

### 6. Community and Social Meetings and Projects

KMAD supports projects in 10 villages surrounding the mine. Although the mine is referred to as Moma this was the district in which it was located prior to the creation of a new district Larde in which it is now located. Moma itself is 75km to the south. The mine has seen the surrounding population increase from 7,000 to a peak of 24,000 as people were attracted by

jobs. The retrenchments have resulted in a probable decline of the local population in recent years.

The key local challenges have been, and remain:

- Health: Malaria, HIV/AIDS & poor access to basic health care services
- Education: Only primary schools & high adult illiteracy rates
- Food security: Diet based on cassava and fish
- Social: Gender equality; limited access to clean water & transport

KMAD's development focus has been on three pillars:

- Economic development: income generating activities and food security/agriculture
- Socio-cultural development: healthcare, education, clean water and sports and culture
- Rural infrastructure development: schools and health facilities

At the project level KMAD has supported:

- Income generating projects in eggs and poultry, fruits and vegetables, sewing, carpentry, salt production, and farming and fishing
- Education initiatives in savings and credit, adult literacy, health training and business skills
- Health and Sanitation projects in water, mosquito spraying, vaccinations and bed nets

The 2012-2014 Capacity Development Programme jointly funded by FMO and KMAD supported:

- Bi-weekly visits from Mobile Clinic Team consisting of Doctor and Dentist.
- Training of community health volunteers
- Capacity building for the new health post

KMAD has an annual budget of \$1.5m. There is a 3-year community development plan and annual action plans of development activities agreed and signed with the community. Set out below are KMAD projects:

- 32 income generating projects. Typically, micro/small loans to projects are provided by Kenmare and must be repaid over a medium-term schedule.
- In Topuito 2 businesses supported with micro loans were visited:
  - bakery owned by a business woman with 7 employees that is doing well
  - and poultry project producing 400 eggs from 490 hens with 7 employees. A substantial proportion of the eggs go to the Kenmare canteen. Due to high input costs for maize, the business is marginally competitive against eggs coming from Nampula 4 hours' drive away. The owner of the business in the centre of the village complained that water is only available about 0.5km away.
- In Tipane a micro clothing business employing women was visited. It enabled about 5 women to earn modest amounts.
- A clinic built in 2013 by KMAD employs 3 nurses and 2 technicians, but no doctors was visited. It handles about 1,300 patients a year. It has:
  - pre-natal and maternity units (45 births per month)
  - pharmacy (under construction)
  - general ward
- In social infrastructure projects KMAD signs MoUs with GoM whereby it builds the facilities and GoM commits to fund the staff and operating costs.



- Schools around the mine only go up to primary/elementary level. For secondary education children must go Larde up to 15 km away or Moma (75km).
- Technical School – opening in January 2018. This project comprises 3 blocks of classrooms/workshops as well as a block for administration and teachers. It also has a water tower. It was built to meet GoM specifications. It will focus on electrical, civil and mechanical engineering skills. Carpentry will be added later. The buildings appeared to be to a good standard.
- The Tipane water supply project, which was visited, involved a new bore hole, a large elevated storage tank with a capacity of 10,000 litres and piping to 5 distribution points around the village.

#### 7. Government Meetings

a) Natuko Tibani, mayor of Nathaka village (and also district councillor) –

This village of 3,600 people not far from the mine has had 2 KMAD projects:

- a water bore hole
- 3 classrooms for the school

Unlike Tipane and Topuito, there is no electricity in the village however and access is by way of a very sandy unmade road. It appeared to be a lot less busy and developed than the other 2 villages visited. The mayor would like further support from Kenmare.

b) Olavo Alberto Diniasse -permanent secretary (number 2) Ladre District Council

She has been in Larde for 2 years having been previously been in the Manica province. She was positive and complementary about the relationship between Kenmare, local communities and GoM. A conflict over the land acquisition (Mont Felipe) by Kenmare was amicably resolved. Kenmare keeps GoM informed and works well to resolve issues. Relocation of displaced people when the mine was built were handled well. Larde appreciates Kenmare support for 35 nursing students. A key issue at present for the Larde District is the desired funding (partial but substantial) by Kenmare of a bridge across Meluli river at Larde. This would reduce time to drive to Nampula from about 4 hours to 3 hours.

c) Ministry of Mineral Resources and Energy – Nampula Regional Office and Maputo National Office - Elias Davai (Nampula), Director and Deputy Director (Candido Acacio Rangeiro) Maputo

Mining is a priority sector for GoM. Kenmare is a very important company for Mozambique. GoM has a very good relationship with Kenmare dating back to the 1980s when Kenmare entered the country to extract graphite. Graphite was not viable due to high diesel prices. As a result, Kenmare switched to ilmenite,  $TiO_2$  ore. The mine has brought jobs to the communities around the mine as well as financial benefits (royalties, taxes etc) to the country. No negative issues were raised. There are other ilmenite reserves in Mozambique that could be exploited.





# Kivu Watt, Rwanda

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

Remarks:

- No progress reports for the construction period including the project completion report
- Not all documentation regarding IC decisions appears to have been received

## 1. Project fiche

Project title	KivuWatt
Project description	<p>Lake Kivu is one of Africa's great lakes on the border of Rwanda and the Democratic Republic of Congo. Lake Kivu is one of three known lakes with a risk of limnic eruption (uncontrolled release of gas). It contains high levels of methane gas and CO<sub>2</sub>, dissolved at great depth which poses a risk as gas clouds can emerge from the lake. At the same time Rwanda desperately needs more electricity. In 2010 only about 6% of the nation's then 10 million inhabitants were connected to the grid. As methane gas is a good source for power generation, extracting the gas and using it for power generation provided a business opportunity while at the same time reducing the risk of uncontrolled gas release. Contour Global ('CG'), a US based power company spotted this opportunity and created KivuWatt Ltd. KivuWatt includes an integrated methane gas extraction and production facility and an associated power plant. KivuWatt signed Gas Concession Agreement ('GCA') with the government of Rwanda and a 25 year Power Purchase Agreement ('PPA') for 100 MW with Rwanda Electricity Corporation ('RECO'). Both the GCA and PPA are guaranteed by the Rwandan government. The project consists of two parts: off shore and on shore. The off-shore component contains the gas extraction and production facility located 13 km from the shore where a platform is moored with installations to lift, separate and process the gas dissolved in the lake. CG's in-house technicians started developing the techniques for this in 2005 with the assistance of Antares Offshore Ltd, an experienced technical consultant in the offshore oil and gas and renewable industry. The methods used stem from well-known oil and gas extraction processes, but have never been used for extracting gas from a lake before. The extraction will be conducted in compliance with prescriptions that were produced jointly by the governments of Rwanda and DRC and were established by a panel of international experts. The extracted gas will be transported to the on-shore component where a MWM gas-fired power plant will generate 25 MW of electricity. The plant has been operating commercially since 31/12/2015 with peak power 26 MW, with 192 GWH being delivered in 2016. Target availability is 90%. At this time there was a single transmission line from Kivu serving the Rwandan grid.</p>
Sector	Energy
Stage	Start-up
Operation Dates	<ul style="list-style-type: none"> <li>28/05/2010 – CIP – Project Finance Proposed FMO-A Loan USD 25 M equity USD 10 M</li> <li>03/06/2010 Investment &amp; Mission Review IC Decision – approval for due diligence</li> <li>08/06/2010 – Investment &amp; Mission Review Revised IC decision – maximum USD 25M (USD 10 M equity (EAF), USD 15M Senior secured debt)</li> <li>12/05/2011 Financial Proposal FMO USD 15.5 M BIO USD 10 M</li> <li>15/08/2012 Loan agreement date IDF USD 13.42 M; USD 6.58 M</li> </ul> <p>Syndicated loans (BIO has 3 focus countries – DRC, Rwanda, Burundi)</p>

Contract	FMO Client numbers 00015517					
Country/Region	Rwanda, Africa					
Country category	LIC					
Project total cost (€)	Project costs have escalated over the years May 2010 USD 127.1 M May 2011 USD 141.6 M June 2013 USD 160.0 M Nov 2013 USD 164.1 M Jan 2014 USD 179.1 M Sept 2014 USD 193.8 M April 2015 USD 194.3 M Nov 2015 USD 198.9 M					
IDF contribution (€)	IDF-A USD 13.42 M CL 0000123954 24/08/2011 IDF-B USD 6.58 M CL 0000124603 24/08/2011 67%/33% debt/equity					
Co-financing (€)	BIO-A USD 6.71 M CL 0000119554 24/08/2011 AEF-A USD 7.55M CL 0000123946 24/08/2011 BIO-B USD 3.29 M CL 0000124594 24/08/2011 AEF-B USD 3.7 M CL 0000124603 24/08/2011 67%/33% debt/equity					
Loan Terms						
Senior/Subordinated						
Convertible						
Amount	ADF-A – USD 13.42 M; IDF-B USD 6.58 M					
Loan Agreement Date	15/08/2012		Facility No		A. 0000123594 B. 0000124603	
Currency	USD					
Tenor	15 years					
Grace period	2 years					
Interest rate	Cost of funds	Indexed rate Loan	Base	Margin	Total	
		BBUSD 6 month rate	1.33239	1.22	2.55239	
	Interest	Fixed rate loan	1.75076	5.5	7.25076	
	Penalty interest	Fixed rate loan	0.00	2.0	2.0000	
Security	Fully secured					
Fees						
Disbursements	0000123954 29/11/2011 USD 6.2 M 02/04/2012 USD 6.1 M 15/08/2012 USD 1.2 M 0000124603 15/08/2012 USD 2.9 M 06/12/2013 USD 2.3 M 16/01/2015 USD 1.4 M					
Monitoring						
Key covenants	No information					
Conversion features	N/A					
Equity Terms						
Direct						

Indirect – Fund			
IDF Investment (\$, €m, local currency)			
Total Project/fund			
IDF Stake (%)			
Investment date		Facility No	
Disbursements	Dates and amounts		
Direct investment – exit strategy			
Direct investment - put option terms			
Fund life			
Grants			
Amount			
Convertible	Yes/No		
Purpose			
Grant agreement date		Facility no	
Key terms			
Disbursement	Dates and amounts		
Conversion terms			
Financial Risk and Performance			
	Financial proposal/approval		Client Review - Most recent
Client Risk Rating	28/09/2012 Final CRR F14/48: Standalone CRR F14 16/10/2013 Final CRR F15/48: Standalone CRR F15 03/11/2014 Final CRR F16/48: Standalone CRR F16 15/04/2015 Final CRR F16 : 26/10/2015 Final CRR F20 : Standalone CRR F17 03/03/2016 Final CRR F20 : Standalone CRR F17 04/07/2017 Final CRR F14 : Standalone CRR F14		
Loan - Impairment provision	Jan 2015 - 25% Aug 2015 – 50% Analyst advice 23/03/2017 observes ‘Aug 2015 IRC decided to deviate from the provisioning policy (50% decided, 75% according to policy). The new 2015 IRC decided to maintain 50% provisioning ‘as per policy’ but it is effectively a deviation from the provisioning policy’		-
Equity - Fair value adjustment	N/A (secured loans)		%
Financial performance	See below		
Client Review -key findings	The evolution of CRR findings reflects the ups and downs of project implementation: 28/09/2012 E&S OK, power plant and transmission line ready. Barge installation delays. Commercial operation expected Q1/2 2013.		

	<p>16/10/2013 As above except commercial operation now expected Q1 2014. Project cost over-run of USD 21.9 M (i.e. total estimated cost USD 164.1 M) (cost over-run to be funded by equity).</p> <p>03/11/2014 Concern over delayed completion and that both quality and quantity of gas extracted from lake are unclear (key for future cash flows).</p> <p>15/04/2015 – 26/10/2015 Project nearing completion but has faced severe delays and cost over-runs. Sponsor has shown strong commitment injecting more equity than required under financing agreement. Proposed temporary use of DSRA to project completion whilst requiring sponsor to increase his share. Risk profile of client unchanged.</p> <p>23/03/2016 Project operational and performing above expectations. Financial completion should follow Technical Completion.</p> <p>(Analyst advice) – sponsor starting to free equity for investment in Phase II and exploring possibilities for financing Phase II with option for prepayment of existing lenders. Lenders pressing for restructuring.</p> <p>03/03/2017 Transfer memo FO – exposure €27M, no arrears, provisioning 50%</p>
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### Results chain: expectations and achievements

#### Logical framework

- No log frame as such has been examined. However the Evaluability Report has presented a simplified Theory of Change for KivuWatt.

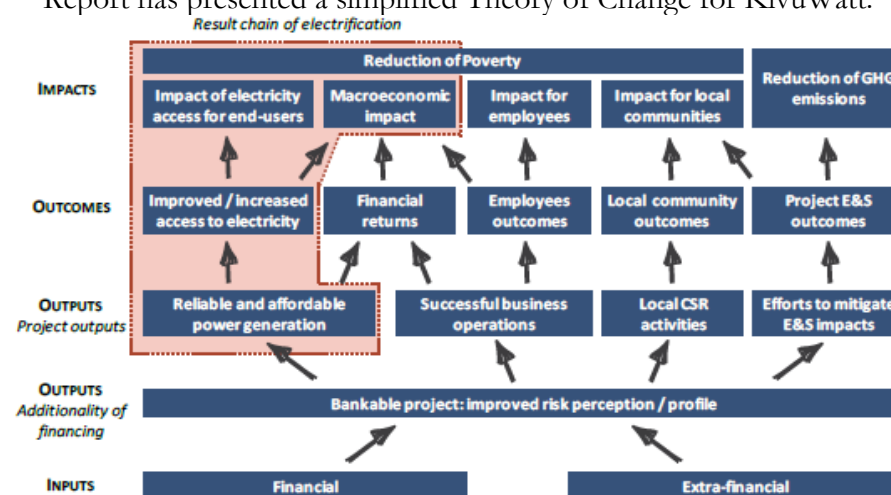


Figure 1 - Simplified Theory of Change of KivuWatt

The social and environmental impact goals of FMO's investment in African electricity generation projects are reduction of poverty and of GHG emissions. The goal of reducing GHG emissions is clearly defined in the context of power generation. Evaluation of avoided GHG emission requires a detailed knowledge of the country electricity mix and the calculation of project emissions, relying on international standards.

Poverty can be defined in two ways, with different roles of electricity in poverty reduction:

- In the traditional sense of low income and consumption of goods: poverty reduction is linked to improving the income level, partly through the use of electricity for productive activity.
- In wider definitions of poverty related to welfare and sustainable livelihoods (or to Millennium Development Goals or SDGs): poverty reduction is linked to other benefits of electricity such as access to infrastructure and services (education, health care...) and to information and communication.

	<p>Moreover expanded electricity generation capacity can have impacts both at macro and micro level. At macro level, it can stimulate the economy and indirectly reduce poverty. At micro level, while electrification can directly improve poverty levels in both poverty definitions, their magnitude depends on the accessibility reliability, quality and affordability for the poor.</p> <p>The isolation of project's results from other projects in the region that have the same objectives is a difficulty. In the case of power plants connected to the grid, there are multiple attribution gaps from inputs to impacts. Some particularly challenging causal links are listed below.</p> <ul style="list-style-type: none"><li>- Link between increased generation capacity and availability/reliability of supply</li><li>- Link between availability of supply and actual consumption (including access and use for the poor)</li><li>- Link between electricity consumption and poverty impacts</li><li>- Link between electricity consumption and economic growth at macro-level.</li></ul>						
<b>Assumptions</b>	<p>A full listing of risks (and mitigants) is annexed to the Investment Proposal (12/05/2011) – summarised below</p> <table><tr><th>Category of risk</th><th>Risk</th><th>Mitigants</th></tr><tr><td>Gas resource risk</td><td><p>1) Gas quantity: will enough gas be extracted through the risers and the separators?</p><p>2) gas quality: will the equipment on the barge be sufficient to handle the volume of gas and to extract CO2 to produce gas within the range required by the turbines</p></td><td><ul style="list-style-type: none"><li>- Gas availability risk is considered to be low. Various studies have indicated that the methane gas resources in the Lake can support up to 300-500 MW of installed capacity for a period of approx. 40 yrs., with current extraction technology.</li><li>- The power plant can run on methane content as low as 65% without a drop in power output (base case 85%). Wartsila has agreed to guarantee the performance and the cold start of the engines at 65% methane concentration.</li><li>- The USD 25 mln completion support is based on having funds available to improve gas quantity and the gas quality on the GEF.</li><li>- Gas availability risk is assumed by GoR via definition force majeure event under the CA: If the concession area ceases to produce or the quantities of gas produced ceases to be economically viable or it</li></ul></td></tr></table>	Category of risk	Risk	Mitigants	Gas resource risk	<p>1) Gas quantity: will enough gas be extracted through the risers and the separators?</p> <p>2) gas quality: will the equipment on the barge be sufficient to handle the volume of gas and to extract CO2 to produce gas within the range required by the turbines</p>	<ul style="list-style-type: none"><li>- Gas availability risk is considered to be low. Various studies have indicated that the methane gas resources in the Lake can support up to 300-500 MW of installed capacity for a period of approx. 40 yrs., with current extraction technology.</li><li>- The power plant can run on methane content as low as 65% without a drop in power output (base case 85%). Wartsila has agreed to guarantee the performance and the cold start of the engines at 65% methane concentration.</li><li>- The USD 25 mln completion support is based on having funds available to improve gas quantity and the gas quality on the GEF.</li><li>- Gas availability risk is assumed by GoR via definition force majeure event under the CA: If the concession area ceases to produce or the quantities of gas produced ceases to be economically viable or it</li></ul>
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			become technically unfeasible to extract gas therefrom, KivuWatt can terminate the CA and PPA and subsequently GoR needs to repay the all outstanding debt.
	Sponsor risk	Financial strength, sponsor track record, long term commitment.	<ul style="list-style-type: none"> <li>- Funding all equity required for the project is a CP.</li> <li>- This is a high profile project for CG. The CG financial projections and the access of CG to funding, give sufficient comfort that CG has the financial means to support the KivuWatt project if required.</li> </ul>
	Operational risk	1) Poor operational performance, increased downtime, reduced availability leads to reduced capacity payments 2) Maintenance costs higher than projected.	<ul style="list-style-type: none"> <li>- Once up and running the GEF requires manageable maintenance.</li> <li>- KP1 runs since the (very late) start-up without major problems, although not at design capacity.</li> <li>- Comfortable DSCR's. The business case can absorb a 20% increase in OPEX without affecting any of the financial covenants.</li> <li>- The power plant will be maintained under a long term maintenance contract with Wartsila.</li> </ul>
	Offtake risk	Financial strength of off taker/GoR	<ul style="list-style-type: none"> <li>- The GoR has been able to turn the utility around in the last 5 years. Although fuel is partly subsidised, EWSA is considered to be a well-run utility that recoups its costs (both net profit and cash flow positive). EWSA has approx. USD 250M in committed donor support for network upgrade and expansion.</li> <li>- Capacity charge is 95% of total tariff, guaranteeing stable cash flows</li> <li>- GoR guarantees all (financial) obligations of EWSA.</li> <li>- Although not in place yet, KivuWatt will seek for a 3</li> </ul>

			months payment security from EWSA (still to be negotiated).
	Currency risk	Currency mismatch between EWSA receipts for electricity sales and PPA payments	<ul style="list-style-type: none"> <li>- Currency risk is assumed by the off taker. All payments under the PPA are paid in Rwandan Francs at the then prevailing RWF – USD exchange rate (including a quarterly true up mechanism).</li> <li>- Except for the Power EPC contract all costs are denominated in USD. Sponsor to seek currency hedging for Power EPC contract.</li> </ul>
	Interest rate risk		Under the finance documents, KivuWatt will have to hedge at least 75% of its interest rate exposure.
	Regulatory/legal risk	1) risk that the claim of Dane Associates can impact KivuWatt's concessions 2) potential disputes between Rwanda and the DRC 3) Changes to Management Prescriptions	<ul style="list-style-type: none"> <li>- The Dane issue is a contractual issue between Dane and the GoR. KivuWatt has obtained a letter from GoR in which GoR confirms that the Dane concession has been terminated correctly. The Lender will seek additional comfort in the GoR Direct Agreement.</li> <li>- Any dispute between the DRC and Rwanda on lake management issues should be dealt with by the Bilateral Lake Monitoring Agency. Lenders are protected by Political Risk event definition under the PPA/GCA.</li> <li>- Re. Changes the MP's, the project is protected by the Change of Law provisions on the PPA and CGA.</li> </ul>
	Country risk		<ul style="list-style-type: none"> <li>- Rwanda is a small landlocked country with a small economy that still relies heavily on exports of agricultural products.</li> <li>- Rwanda has been politically stable since the 1994 events. GDP growth has been around 5% year on year and is</li> </ul>



			forecast to grow at the same pace in the next 5 years. -Although Kagame’s (stable) administration is expected to remain in place for another 7 years, Rwanda could be vulnerable to political instability in the long term. - Rwanda maintains good relationships with the international donor community and is praised by the World Bank and IMF for its efforts to improve the overall business environments and its public finance management. - Sovereign risk of Rwanda is high (B-)
Main project activities and achievements	See reference to Theory of Change above.		
Main project issues	As the project is now in full operation implementation issues have been largely resolved. For summary of issues during the course of implementation see above.		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	N/A	
GHG Saving (tCo2)	T CO <sub>2</sub>	Target 115 KTCO <sub>2</sub> /year (including correction of KTCO <sub>2</sub> /year for the non-biogenetic part of CO <sub>2</sub> in the lake	
Installed Capacity (MW)	MW	26 MW (it is estimated that an installed capacity of 150-200MW is possible without depletion of reserves – both DRC and Rwanda sides of border)	
Production Capacity	GWh	220 GWh	
People served – distribution	#	Although it was expected that 72% of households would be connected to the grid by 2017 the actual figure is 35%. The difference is due to the high cost of grid extension in remote areas compared to low demand and equally low ability to pay in these areas. (Electricity is	

		expensive in Rwanda in comparison with neighbouring countries).	
<b>People served – transport</b>	#	N/A	
<b>People served – power</b>	#	KivuWatt represents about 12% of national power generation and 39% of additional capacity installed since Base Line (BL, 2015). Given that the current population is estimated at 12 millionM, KivuWatt is estimated to be serving approximately 550000 persons.	
<b>People served – telecom</b>	#	N/A	
<b>People served – IT/internet</b>	#	N/A	
<b>People served – industrial/agri</b>	#	N/A	
<b>People served – farmers reached</b>	#	N/A	
<b>Forestry under management</b>	ha	N/A	
<b>Agriculture</b>	ha	N/A	
<b>Green investments</b>	€m	This project is not classed as ‘Green’ investment (it is suggested to be ‘potentially green’)	
<b>Inclusive investments</b>	€m	This project is not classed as ‘Inclusive’ investment	



## 2. Scoring

	Desk Review
<b>EQ 2 - Relevance</b>	
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	<p>3</p> <p>Without articulating exactly what levels of comparative risk might be acceptable to IDF and/or FMO-A there was specific articulation of the relatively lower risk appetite of FMO-A in that the originally proposed FMO-A financing was rejected by I C and replaced by IDF financing.</p>
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	<p>3</p> <p>Apart from a requirement for AEF financing criteria that '<i>AEF position will catalyse debt financing</i>' there is no discussion of IDF catalysation of other financing. However, there is a suspicion that the IDF/AEF position has been a factor in enabling other participation (e.g. AfDB and EAIF).</p>
JC 2.3 Additionality of IDF Loans and Equity Investments	<p>3</p> <p>There is little doubt that IDF/FMO participation was additional in arriving at a bankable project (albeit that the Evaluability Report concluded that ex-post evaluation of additionality was '<i>not feasible</i>' - given the extensive consideration of the issue leading up to this conclusion it is suggested that perhaps it is quantification of degree of additionality that is not feasible rather than a judgement as to whether or not additionality resulted from IDF financing). If such additionality resulted from IDF then logically IDF funding would result in greater additionality than FMO-A financing proportionally to the greater levels of risk assumed by IDF.</p>
<b>EQ 1 - Effectiveness</b>	
JC 1.1 Trends in the nature and component balance of IDF portfolio	<p>N/A</p> <p>From the project documentation scrutinised it is not possible to comment upon trends in the nature and component balance of the IDF portfolio as a whole</p>
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	<p>2</p> <p>The project was 3 years late in coming on line and costs escalated from USD 127.1 M (May 2010) to USD 198.9 M (Nov 2015). That being said electricity is being generated at expected outputs and gas quality and quantity exceed expectations.</p>
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	<p>3</p> <p>No estimates of indirect job creation have been examined in documentation made available and on this basis it is not possible to opine as to what extent the project may contribute to PSD. However, such development is strongly indicated by the Mid-Line Evaluation Report which contrasts the greater</p>

	turnover, profits (and to a lesser degree) profitability of connected self-employed compared with those not connected.
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	3 The project has delivered expected power generation (albeit with delays and cost escalation) although there have been some constraints in transmission and distribution compared with expected results. Thus, in terms of the proposed results chain: Output: reliable and affordable power generation – achieved (but not confirmed regarding affordability) Outcome: improved/increased access to electricity – partially achieved Impacts: macro-economic growth and poverty reduction - the Evaluability Report notes that the causality link between electrification and economic growth <i>‘is difficult to assess robustly and different methodological trends may lead to different conclusions’</i> .
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	3 Although there appears to have been effective monitoring of progress and results there is also consistent references to E&S monitoring reports being overdue such there are times that reporting may not have been entirely timely. Whilst there is clear evidence of feedback as a result of monitoring during implementation being applied to the ongoing project there is no evidence of wider dissemination of lessons learned to the wider IDF portfolio.
<b>EQ 4 – ESG Risk Management</b>	
JC 4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio	
JC4.2 IDF-financed projects contributed to green and inclusive development	3 In terms of reduction of GHG emissions targets are 115KT/year which is considered to be ‘public goods’ which are distributed to stakeholders as ‘additional benefits’ whilst Kivuwatt is clearly within the FMO impact model targets <i>‘doubling impact and halving footprint by 2020’</i> . In a wider context the E&S impact goals of FMO’s investment in African electricity generation projects are reduction of poverty and GHG emissions and there is no doubt that this project has contributed to green and inclusive development..
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	4 There is full compliance with Rwandan policy and legal requirements and international agreements and standards and guidance as developed by IFCs and in specific compliance with the requirements of the Expert Committee on production and use of methane from Lake Kivu. Thus FMO due diligence has covered identification and management of E&S

	risks in accordance with international practices
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	3 See commentary under JC 1.5 above.
<b>EQ 6 – Efficiency</b>	
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	3 The project was fully compliant with FMO policies, procedures and investment criteria which were clear. Although no information has been examined which permits judgement on the adequacy of staff levels for management of this project it is understood that there was particular FMO interest and support of this project concept. There is no evidence that project delays were in any way due to FMO (procedures, policies, organisational structure or staffing). On the contrary all delays (and cost over-runs) were due to technical problems encountered during implementation. IDF, AEF (and BIO) support was clearly complementary as may be seen from comparison of fund criteria.
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	3 There is no project information on ratios of FMO staff to value of operations. However, there is evidence of good quality and tenacious commitment of FMO personnel to the concept and detail of this innovative project.
JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?	3 Given the serious delays and cost over-runs during project implementation the capacity and capability of the sponsor was a critical factor in eventual completion. FMO supported overcoming of such problems by continuing support through all the ups and downs
<b>EQ 3 – Revolvability</b>	
JC 3.1 Evolution and drivers of portfolio performance pre and post 2012	N/A
JC 3.2 Financial Performance	
JC 3.3 Focus of risk management systems and policies on long-term sustainability	
JC 3.4 Revolvability	N/A
JC 3.5 Individual Project Sustainability	3 Sustainability has been assessed at two levels. Extraction and use of methane from Lake Kivu is taken to be a mitigant in reducing build-up of such dissolved gas and thus reducing the risk of a limiric eruption. On a commercial level it has been estimated that the current levels of extraction could be multiplied 4-5 times without significant depletion of resource.

<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	N/A There has been little or no involvement of Dutch companies identified in project documentation made available to the evaluation.
JC 5.2 Effects for Dutch companies and economy	
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	N/A FMO has provided 2 loans under IDF, 2 under AEF and 2 under BIO. Other (non-ministry lenders include AfDB and EAIF/PIDG) whilst MCGA has provided political risk insurance to CG (which has provided more than the agreed levels of equity).
<b>Scoring Justification</b>	
EQ 2 - Relevance	3FMO financial support was highly relevant to this (equally highly relevant) project in that IDF finance was additional, FMO-A having a lower risk tolerance, and catalytic as a factor in other IFC participation
EQ 1 - Effectiveness	3 FMO financial support was effective for a project delayed by some 3 years and a cost over-run of >50%. Outputs have eventually been fully achieved and outcomes partially (and likely to increase)
EQ 4 – ESG Risk Management	3.5 ESG risk management has been very good in tackling a most unusual environmental situation in line with international best practices
EQ 6 – Efficiency	3 FMO displayed particular interest and support of the project concept through significant ‘ups and downs’. Although there were considerable implementation delays there is no evidence that FMO procedures, policies, organisational structure or staffing contributed to such delays
EQ 3 – Revolvability	3 Project sustainability now appears assured environmentally and financially although there is no indication of this project contribution to overall IDF revolvability
EQ 5 – Policy	N/A
<b>Comments</b>	This is an impressive and exciting project involving innovation and application of previously proven techniques in a different context. The ‘do nothing’ scenario was not a realistic option as left untouched, methane levels would continue to build up thus increasing the likelihood of a ‘limnic eruption’ with consequent loss of life. Productive use of the methane is the optimal approach environmentally (as opposed to, say, flaring off) with significant potential social, economic, environmental and development impacts

**Rating Scale for evaluation scores:**

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learned and key findings

- Conceptually this is an impressive project involving innovation and application of previously proven techniques in a different context. The ‘do nothing’ scenario was not a realistic option as left untouched, methane levels would continue to build up thus increasing the likelihood of a ‘limnic eruption’ with consequent loss of life. Productive use of the methane is the optimal approach environmentally (as opposed to, say, flaring off) with significant potential social, economic, environmental and development impacts.
- There was no involvement of Dutch firms.
- It is not possible to form an opinion on the adequacy of FMO project management or organisational structure for management of the IDF as a whole. However, FMO did demonstrate informed understanding of the inherent technical and environmental issues and the novel challenges.
- No log frame was produced although a simplified ‘Theory of Change’ was produced for the Evaluability Report (evaluation is on-going, BL and mid-line reports having been produced to date). The generic social and environmental goals of FMO investment in African power generation are reduction of poverty and (reducing GHG emissions but, because an M&E framework (and BL data collection) was not undertaken at the outset of the project, the evaluation is having difficulties in quantification and identification of some indicators especially higher-level impacts (e.g. indirect employment generation, economic growth). Thus, it was decided that the evaluation would focus on ‘access to electricity’ rather than other expected outcomes (such as financial returns/viability and outcomes [e.g. employment, E&S, local benefits]. In other words, evaluation *‘is feasible but with a reduced scope and subject to specific conditions’*. Instead of ‘retro-fitting’ an evaluation, more effective analysis of outcomes/impacts (and lesson learning) would result from an ‘up front’ design of an M&E system (with BL data collection).
- Given that an evaluation is being undertaken there is an assumption that there will be feedback and application of lessons learned (although there is no reference to such feedback in the evaluation reports scrutinised).
- FMO insisted upon the highest standards of ESG (IFC norms for a Category A project) but the inherent environmental issues dictated even more demanding and specific guidelines (i.e. Mandatory Guidelines and Management Prescriptions for Lake Kivu Gas Extraction as prepared by the Expert Committee). Also, the project is clearly within the provisions of FMO’s targets ‘doubling impact, halving footprint) targeting GHG savings of 115ktCO<sub>2</sub>/year.
- Power projects tend to concentrate upon generation. Transmission lines and distribution networks are not considered to the same degree. The costs of connection and electricity tariffs are often beyond the reach of the poorer segments of society and distribution networks (especially rural networks) in Africa are rarely an economically viable investment (using conventional methods of EIRR assessment). Considering the poverty reduction is one of the generic goals of FMO investment in African power generation it seems that this goal is only being approached through ‘employment creation’.



- Sponsor strength is a key pre-requisite for project success. In the case of KivuWatt CG sourced financing for cost over-runs. Similarly, competent partners/stakeholders are necessary – in this case the national electricity utility EWSA (long term offtake agreements) and the government (guarantees). It is not possible to avoid comparison and contrast of the different levels of sector investment enablement in Rwanda and Tanzania.
- FMO has proven to be a reliable partner through considerable ‘ups and downs’ during implementation. Such solidity is over and above FMO additionality – there is little doubt that financing closure would not have taken place without continuing support of FMO (and other lenders)
- The risks for KivuWatt were considerable and were comprehensively investigated, with the exception of distribution/transmission weaknesses and construction set-backs. Mitigation measures were effective. That being said project preparation was subject to seemingly inevitable over-optimistic/unrealistic assumptions (estimated costs and time period).
- There is recurrent reference to late reporting of E&S monitoring, and, there is an absence of progress reports but, from documentation scrutinised, on the whole there appears to have been satisfactory.

### **Project Outcome**

Lake Kivu, one of Africa’s great lakes on the border of Rwanda and the Democratic Republic of Congo is one of three known lakes with a risk of limnic eruption (uncontrolled release of gas<sup>1</sup>). It contains high levels of methane gas and CO<sub>2</sub>, dissolved at great depth which poses a risk as gas clouds can emerge from the lake. As methane gas is a good source for power generation, extracting the gas and using it for power generation provided a business opportunity while at the same time reducing the risk of uncontrolled gas release. Contour Global (‘CG’), a US based power company spotted this opportunity and created KivuWatt Ltd. KivuWatt includes an integrated methane gas extraction and production facility and an associated power plant. The project consists of two parts: off shore and on shore. The off-shore component contains the gas extraction and production facility located 13 km from the shore where a platform is moored with installations to lift, separate and process the gas dissolved in the lake. CG’s in-house technicians started developing the techniques for this in 2005 with the assistance of Antares Offshore Ltd, an experienced technical consultant in the offshore oil and gas and renewable industry. The methods used stem from well-known oil and gas extraction processes, but had never been used for extracting gas from a lake before. The extraction will be conducted in compliance with prescriptions that were produced jointly by the governments of Rwanda and DRC and were established by a panel of international experts. The extracted gas is transported to the on-shore component where a MWM gas-fired power plant will generate 25 MW of electricity. Project costs escalated from USD127M (2010) to USD199M (2015). Completion and commercial operation originally planned for Q1/2 2013 was delayed by approximately 3 years becoming operational 31/12/2015. The plant has been operating commercially since 31/12/2015 with peak power 26 MW with 192 GWH being delivered in 2016. Reliability issues and load shedding from the single transmission line to Karonga should be resolved by construction of a new line to Kigali (not part of this project).

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
<p>xvii) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument);</p> <p>xviii) portfolio performance (including reasons for portfolio impairments);</p> <p>xix) co-funding/complementarity with FMO-A portfolio;</p> <p>xx) investment leverage/funding mobilization.</p> <ul style="list-style-type: none"> <li>• See ‘Operations Dates’ above for evolution of main project timelines – appears that not all documentation has been made available regarding IC Decisions (?)</li> <li>• Provisioning was imposed on IDF transactions Jan 2015 – 25% Aug 2015 – 50% This provisioning was in response to the difficulties in implementation which culminated in the cancellation of the Civicon contract. Costs and delays were escalating (see ‘Total Project Cost’ above)</li> <li>• The original proposal was for FMO-A funding but this was declined in place of IDF, AEF and BIO financing. It is understood that consideration is being given to expansion of generation capacity (7.5MW) with FMO-A investment.</li> <li>• See above (‘IDF contribution’, ‘Co-Financing’ and ‘Disbursements’ regarding investment leverage and funding mobilisation.</li> </ul> <p><u>Conclusion:</u> From the project documentation scrutinised it is not possible to comment upon trends in the nature and component balance of the IDF portfolio as a whole</p>	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <p>xv) temporary/short term during the implementation period</p> <p>xvi) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</p> <ul style="list-style-type: none"> <li>• Provision of financing for provision of new infrastructure (i.e. development, construction and extraction of an integrated methane gas extraction and production facility and associated 26 MW power plant). IDF-A USD 13.42 M CL 0000123954 24/08/2011 IDF-B USD 6.58 M CL 0000124603 24/08/2011</li> </ul>	

BIO-A USD 6.71 M CL 000019554 24/08/2011

AEF-A USD 7.55 M CL 0000123946 24/08/2011

BIO-B USD 3.29 M CL 0000124594 24/08/2011

AEF-B USD 3.7 M CL 0000124603 24/08/2011

Other lenders include AfDB (loan – USD 25 M) and EAIF/PIDG (loan – USD 2.5 M). MCGA (multi-lateral Investment Guarantee Agency) has provided Political Risk Insurance to Contour Global which has provided equity (USD 50.5 M) plus pre-completion guarantee (USD 25 M).

- No grants have been provided (initial development costs were covered by Contour Global)
- Financing plan as per Financial Proposal May 2011

#### Investment and financing plan

Sources	US\$ m	%	Uses	US\$ m	%
Equity/ shareh. loans	50.51	35.6%	EPC	85.03	60.0%
Debt	91.25	64.6%	Mobilization Costs	8.46	6.0%
			Development Costs	16.13	11.4%
			Financing Costs	16.01	11.3%
			Other	7.24	5.1%
			Contingency (Dev. fee if not used)	8.80	6.2%
Total	141.66	100%	Total	141.66	100%

In addition, sponsor completion support is included as described in 7.3 and 7.4.

- Project costs have escalated over the years
  - May 2010 USD 127.1 M
  - May 2011 USD 141.6 M
  - June 2013 USD 160.0 M
  - Nov 2013 USD 164.1 M
  - Jan 2014 USD 179.1 M
  - Sept 2014 USD 193.8 M
  - April 2015 USD 194.3 M
  - Nov 2015 USD 198.9 M
- The project was delayed by some 3 years (see JC. 6.3 for detailed explanation of delays)
- Since 31/12/2015 the plant has achieved full production (26 MW) with total energy delivered in 2016 192 GWh (compared with target of 222 GWh), reliability issues and load shedding from the single transmission line to Karonga are the reason for lower delivery. This issue should be resolved by a new line to Kigali (2017)
- During the construction phase KivuWatt was reported to have a total of 535 (direct and contractors' employees), out of which 360 were locally recruited staff. More than 50 people are employed during the operation phase. The project is compliant with E&S IFC Standards. KivuWatt is a major project for the Kibuye area, with a potential high impact on local economy (employment, indirect business sectors boost, etc). The number of Project Affected People (PAP) is limited: 43 persons who owned plots of land were resettled by the government before the start of the project. Moreover, KivuWatt is carrying out socio-economic projects among which a library for Gusara primary school, latrines for a refugee camp and cows for PAPs.
- The Impact Evaluation has encountered difficulties in quantification/identification of employment e.g. Evaluability Report
 

*Beyond electrification, local economy stakeholders also benefit from KivuWatt economic impact: project direct and indirect employees, local communities, local businesses, etc. However, evaluation of KivuWatt's impact on these stakeholders is partly vain since construction phase is already well under way. Thus, the study shall be restricted to an evaluation at outcome level, indicators can provide information on project employment (share of local employees, jobs qualification, training programmes, health protection, et), CSR activity outcomes and other outcomes for local economy (employment in local businesses).*

*For most of the pillars of theory of change the choice of Option 1 (for the evaluation methodology) is driven by the impossibility to implement a baseline survey for stakeholders who have benefited from the project during the construction phase (employees and local communities). Moreover, the attribution of KivuWatt's outcomes (e.g. working conditions of employees) to final impacts on poverty reduction (e.g. living conditions of employees) is highly debatable. Thus, a study based on secondary data (from KivuWatt's monitoring documents) and completed by qualitative field surveys should be satisfactory for an evaluation at the outcome level.*

- The Evaluation Base Line Report continues this theme noting that 'Employees Outcomes' and 'Local Employment' will be captured in end line measurements through interviews and Household Living Conditions Surveys whilst the Mid-line Evaluation Report investigates economic performance of self-employed and access to electricity there appears (at this time) to be no estimates of potential secondary employment generation as a result of increased power generation.

**Conclusion:** The project was 3 years late in coming on line and costs escalated from USD 127.1 M (May 2010) to USD 198.9 M (Nov 2015). That being said electricity is being generated at expected outputs and gas quality and quantity exceed expectations.

**JC1.3** ***IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).***

**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

- See JC. 1.2 above regarding expected job creation. At this time there appears to be no estimates of indirect job creation as such, nor assessment of likely sustainability of such indirect jobs. That being said the Mid-line Evaluation Report has compared grid connected areas and 'outside grid connected areas' as follows:

	Outside grid connected areas	Grid connected areas	
No of informal business	1266	1656	
Share connected to grid	-	59%	
Economic performance of self employed			
		Connected	Not connected
Turnover (1000 RW)	84	363	87
Profit (1000 RW/month)	54	266	53
Profitability (% of turnover)	64	73	61

- The project has not overtly supported formulation of regulatory or legislative frameworks although the ground-breaking nature of this project may lead to altered sector regulatory and/or legal frameworks.
- Rwanda is currently 56<sup>th</sup>/190 in the 'Ease of Doing Business' rankings with huge improvements in ranking over the course of the past decade.  
2017; 2016; 2015; 2014. 2013; 2012; 2011; 2010; 2009; 2008; 2007; 2006;  
56 62 46 32 52 45 58 67 139 150 158 139
- There is little doubt that the support of IDF has benefited Contour Global in the delivery of this project despite serious impediments. In general, IFI support is an additionality issues i.e.

such support should make a contribution that is beyond what is available or that is otherwise absent from the market and should not crowd out the private sector’.

**Conclusion:** No estimates of indirect job creation have been examined in documentation made available and on this basis it is not possible to opine as to what extent the project may contribute to PSD. However, such development is strongly indicated by the Mid-Line Evaluation Report which contrasts the greater turnover, profits (and to a lesser degree) profitability of connected self-employed compared with those not connected.

**JC1.4** *IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)*

**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

- See above regarding direct and indirect employment generation (JC 1.2 and JC 1.3).
- The proposed result chain for electrification has the following linkage (Evaluability Report)
 

Output	Reliable and affordable power generation
Outcome	Improved/increased access to electricity
Impacts	Impact of electricity access for end user
	Macro-economic impact
	Reduction of poverty

Beyond electrification, local economy stakeholders are also expected to benefit from KivuWatt economic impact (project direct and indirect employees, local communities and businesses, etc).

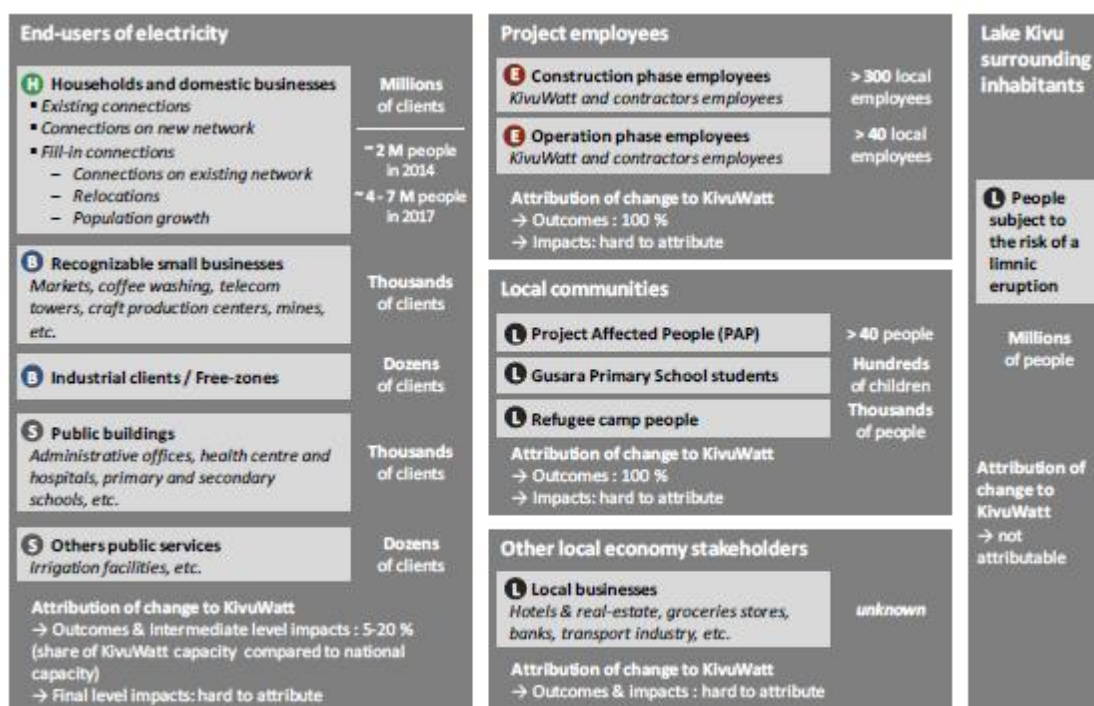
In the EDPRS 2013-2018 (Economic Development and Poverty Reduction Strategy) GoR recognises the improvement of access and generation of electricity as a pre-requisite for economic growth and poverty reduction. However there is little literature on evaluation of socio-economic impacts of grid-connected power plants. The Evaluability Report noted that at macro level: *Electricity consumption and economic growth can be linked in two ways: many studies focus on causality from economic growth to electricity demand and consumption (conservation hypothesis), while fewer studies analyse causality between electrification and induced economic growth (growth hypothesis). A 1% increase in electricity consumption is expected to lead to a 0.17% increase in GDP. Other causality hypotheses between electrification and economic growth include no causality (neutrality hypothesis) and bio directional causality (feedback hypothesis). Overall, this causal link is very difficult to assess robustly and different methodological choices may lead to different conclusions.*

*Moreover, economic growth at the macro level is not a guarantee of poverty reduction, unless economic growth is achieved in a ‘pro-poor’ way.*
- The FMO theory of change adapted to the KivuWatt project (as per the Evaluability Report) is set out in ‘Logical Framework’ above. Commentary on this TOC (Evaluability Report 4.1 Feasibility, scope and targets of KivuWatt impact evaluability) noted that the higher in the results chain the more debatable is the causality between levels of evaluation such that certain indicators have been judged as not measurable (i.e. no satisfactory data) or not relevant (i.e. impact negligible of other impacts). ‘Economic growth’ was judged to be ‘not measurable’.



It is suggested that such an impact is both ‘not measurable’ nor is isolation and attribution of IDF realistic.

- In terms of proactive targeting of outcomes different stakeholders are expected to benefit in different ways and to different extents (e.g. end users of electricity, direct or indirect employees, local communities, other stakeholders benefiting from KivuWatt economic impact – see diagram below).



**Conclusion:** The project has delivered expected power generation (albeit with delays and cost escalation) although there have been some constraints in transmission and distribution compared with expected results. Thus, in terms of the proposed results chain:

Output: reliable and affordable power generation – achieved (but not confirmed regarding affordability)

Outcome: improved/increased access to electricity – partially achieved

Impacts: macro-economic growth and poverty reduction - the Evaluability Report notes that the causality link between electrification and economic growth ‘is difficult to assess robustly and different methodological trends may lead to different conclusions’.

**JC1.5** *IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio*

**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

- As may be seen from the chronological list of documentation made available to the evaluation (listed immediately preceding EQ1) there appears to have been effective monitoring of progress and results. However, with the exception of the September 2015 Construction

Report to Lenders, no progress reports have been scrutinised by the evaluator. Also, there is consistent reference to E&S Monitoring Reports being overdue such that there are hints that reporting may not always have been timely.

- The Impact Evaluation (Evaluability Report) has devoted considerable attention to indicators and methodologies whereby effectiveness of project attainment of results may be assessed (there is no reference to effectiveness of the wider IDF portfolio). A series of 'Indicator Sheets' are attached to the report, i.e.

<b>Project Outputs</b>		
Reliable and affordable power generation	Added capacity and availability Reliability of supply	- Actual available capacity of plant - Actual share of total national electricity production capacity
	Energy produced	- Actual energy produced by the plant - Actual share of total electricity produced in the country
	Cost of power generation	Cost of electricity produced by the project
Successful business operations	Project revenues/profits	Turnover/EBITDA/Net profits
	(In)/direct job creation	- No of FT equivalent direct and indirect jobs per type of job per type of employment contract, per category of employee, per phase of project development - Share of local employees in the total nr of employees
	Local content	- No of local hiring (FT equivalent employees) induced by project - % of local hiring induced by project - Local content spending of Rwandan enterprises - Share of local content expenditures in total of CSR investments
Local CSP Structures	Donations	Monetary value of donations realised in local CSR activities framework
	Direct Support	- Amount of financial resources devoted to CSR programmes - Type of CSR actions financed

			- Amount of material means of CSR programmes
Efforts to mitigate E&S impacts	E&S Action Plan		- Amount of E&S action plan investments per year per action - Type of E&S action financed
	Project GHG emissions		- Direct CO2 equivalent emissions limited - Direct CO2 equivalent emissions per unit of energy produced.
<b>Project Outcomes</b>			
Improved/Increased access to electricity	Electricity reliability		- No of power outages per month/year - Duration of power outages per month/year - Duration of power outages per month/year - Average time of available electricity per day
	Electricity access (end-users reached)		- No of new end users getting access to electricity - Share of end users getting access to electricity
	Electricity consumption		Actual electricity consumption per day/year
Financial Returns	Financial returns for owners/lenders		- IRR/ROE for owners - IRR for lenders
Employees Outcomes	Salaries and working conditions		- Monthly salary level of project direct employees - Types of working conditions and in-kind benefits - No of direct employees that have received in-kind benefits
	Training		- Total no of training days per year per employee - No trained employees per year
Local community outcomes	CSR activities outcomes		No of beneficiaries of CSR activities
	Job/activity creation		- No of new businesses created thanks to CSR activities



		<ul style="list-style-type: none"> <li>- % of beneficiaries creating new business</li> <li>- Jobs (FT equivalent) created because of creation of new economic activity</li> </ul>
E&S Impacts	Avoided GMG Omissions	<ul style="list-style-type: none"> <li>- CO2 equivalent avoided emissions by the project per year</li> <li>- CO2 equivalent avoided emissions by the project by unit of energy produced</li> </ul>
<b>Project Impacts</b>		
Impact of electricity for end users	Energy spending	<ul style="list-style-type: none"> <li>- Total energy spending per month/year and per energy source</li> <li>- Share of energy spending in total expenditures</li> </ul>
	Energy users	<ul style="list-style-type: none"> <li>- Ownership of electrical equipment</li> <li>- Energy uses for main needs</li> </ul>
	Jobs/activity creation (specific)	<ul style="list-style-type: none"> <li>- No of new businesses created thanks to purchase of new equipment/service</li> <li>- % of users creating new business</li> <li>- FT and PT jobs created because of creation of new economic activity</li> <li>- Turnover of new business created thanks to the project (and/or benefits)</li> </ul>
	Access to services	Distance to closest service from the HH
Macro-economic impact	Employment	Employment level per sector of activity

- The Evaluability Report also discusses proposed evaluation methodologies at length, based upon development of a ‘Theory of Change’ followed by deciding which impacts should be evaluated – it was calculated that electricity access would be the main focus (rather than other outcomes such as financial returns, employees’ outcomes, local country outcomes and project E&S outcomes, although indicators have been developed for all outcomes). Ex-post evaluations of FMO additionality was judged not to be feasible due to ‘*unavailability of tangible elements*’. It was concluded that impact evaluation of KivuWatt ‘*is feasible but with a restricted scope and subject to specific conditions*’ and two options were proposed i.e.
- Option 1: evaluating mainly the outputs and outcomes of the project based on secondary data and qualitative interviews of the various stakeholders
- Option 2: completing the first option with a field surveys gathering primary data to evaluate some outcomes and impacts of electricity access at the end-users level.

- There is no specific reference to feedback and application of lessons learned in subsequent projects, but this is clearly implied by the decision to undertake an impact evaluation. There is clear evidence of feedback as a result of monitoring during implementation/construction being applied to ongoing FMO management of implementation of this project.

Conclusion: Although there appears to have been effective monitoring of progress and results there is also consistent references to E&S monitoring reports being overdue such there are times that reporting may not have been entirely timely. Whilst there is clear evidence of feedback as a result of monitoring during implementation being applied to the ongoing project there is no evidence of wider dissemination of lessons learned to the wider IDF portfolio.

## EQ 2 – Additionality and catalytic effects

Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?																							
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>																						
<p><b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects</p> <p><b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio</p> <p><b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio</p>																							
<p>No comparative ratings or profiles of the IDF and FMO-A portfolio have been examined in documentation made available for this project. However, it is noted that the the original proposals for FMO financing was for FMO-A support (Loan USD 25M; Equity USD 10M). This was approved subject to due diligence (IC Decision 03/06/2010) but a revised IC Decision/specified involvement of IDF, AEF and BIO- (08/06/2010)</p> <p><i>‘The IC saw this proposal as a potentially interesting project where FMO could take a lead position. On the other hand the IC clearly struggled with the risk profile of this proposal including the technical risk, political risk and project finance risks. The transaction at this stage was seen almost as a venture capital transaction and the IC was uncomfortable to finance with FMO-A resources based on the presesnt information. The use of AEF for the equity part was seen as fitting for the current risk profile of the deal. ‘</i></p> <p><u>Conclusion:</u> Without articulating exactly what levels of comparative risk might be acceptable to IDF and/or FMO-A there was specific articulation of the relatively lower risk appetite of FMO-A in that the originally proposed FMO-A financing was rejected by I C and replaced by IDF financing.</p>																							
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>																						
<p><b>I-2.2.1</b> - Ratio of mobilisation at project level of IDF funding to commercial funding sources.</p> <p><b>I-2.2.2</b> - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)</p>																							
<table> <tr> <td>Project Lenders:</td><td>Senior Loans</td></tr> <tr> <td>FMO (AEF &amp; IDF)</td><td>USD 31.25 M (IDF USD 20 M: AEF USD 11.25 M)</td></tr> <tr> <td>BIO</td><td>USD 10 M</td></tr> <tr> <td>AfDB</td><td>USD 25 M</td></tr> <tr> <td>EAIF/PIDG</td><td>USD 25 M</td></tr> <tr> <td></td><td>-----</td></tr> <tr> <td>Total debt (64.6%)</td><td>USD 91.25</td></tr> <tr> <td>Sponsor Contour Global</td><td></td></tr> <tr> <td>Equity (35.6%)</td><td>USD 50.51 M (initial)</td></tr> <tr> <td></td><td>USD 25 M (pre-completion guarantee)</td></tr> <tr> <td></td><td>(Buy-down guarantee USD 30M)</td></tr> </table> <p><u>Conclusion:</u> Apart from a requirement for AEF financing criteria that ‘AEF position will catalyse debt financing’ there is no discussion of IDF catalysation of other financing. However, there is a suspicion that the IDF/AEF position has been a factor in enabling other participation (e.g. AfDB and EAIF).</p>		Project Lenders:	Senior Loans	FMO (AEF & IDF)	USD 31.25 M (IDF USD 20 M: AEF USD 11.25 M)	BIO	USD 10 M	AfDB	USD 25 M	EAIF/PIDG	USD 25 M		-----	Total debt (64.6%)	USD 91.25	Sponsor Contour Global		Equity (35.6%)	USD 50.51 M (initial)		USD 25 M (pre-completion guarantee)		(Buy-down guarantee USD 30M)
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JC 2-3	<b><i>Additionality of IDF Loans and Equity Investments</i></b>
	<p><b>I-2.3.1</b> - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.</p> <p><b>I-2.3.2</b> - At project level, project viability endorsement and contribution from IDF participation.</p> <p><b>I-2.3.3</b> - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects</p> <p><b>I-2.3.4</b> - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.</p> <p><b>I-2.3.5</b> - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed imvestment, start-up, technical assistance...)</p>
	<ul style="list-style-type: none"> <li>• Terms and conditions for loans supplied by IDF, AEF and BIO are almost identical (PD – 4.7%; LGD – 22.5%; Economic capital – 10.1%; Contract date 24/08/2011; USD). No information on terms of other lenders (AfDB and EAIF) have been scrutinised.</li> <li>• There is little doubt as to the additionality of FMO participation in arriving at a bankable project (i.e. better risk perception/profile) – no financing closure would have taken place without FMO (and other lenders).</li> <li>• Whilst the Evaluability Report concludes that ex-post evaluation of FMO financing, additionality has been judged to be ‘not feasible’ there is considerable preceding consideration of additionality. Extracts are presented below:  <i>Additionality is defined by the DCED as the ‘net positive difference that is expected to result from a donor-business partnership’.</i>  <i>Methodologies to assess additionality ex-ante have seen their credibility challenged for their use of criteria that are often criticised as limited or vague. Multilateral development banks have placed the additionality measurement issue at a higher level: support should make a contribution that is beyond what is available, or that is otherwise absent from the market and should not crowd out the private sector. Five core principles provide guidance to the investor: additionality; crowding-in; commercial sustainability; reinforcing markets; promoting high standards. The most commonly referred to sub-category of input additionality is financial additionality, which focuses on the fact that donor funds do not substitute other available funding from the partner company itself or other parties. The support to private sector should not crowd out the market players and thus distort the market.</i>  <i>Most methodologies to assess additionality find their limits in the difficulty to determine baselines or counterfactual against which additionality can be measured. They are often a ‘fail or pass’ type of ex-ante evaluation since there is no measurement per se of the additionality.</i>  <i>Additionality is therefore considered through the financial angle, but other perspectives are adopted by donors when evaluating additionality; knowledge or design additionality; time additionality, policy additionality, demonstration additionality; development additionality.</i>  <i>One major barrier to ex-post assessment of additionality is to assess the market level in countries where the local capital market is not mature or non-existent and demonstrate whether the use of concessional finance is justified by the existence of a market failure and so as long as the failure exists.</i>  <i>In the case of KivuWatt project, FMO’s loan terms are expected to be more favourable than what private financiers could provide. Thus, project benefits are expected to be higher (and therefore financially viable) with FMO’s investment than if the market provided the loan with a full risk premium. FMO’s ability to adjust its expectations on rates to more standard and less risky projects standards introduces de facto concessionality in the financing. A similar concept would be found with the exchange rate risk assessment and financing. A higher level of assessment concerns the distribution of ‘additional benefits’ among stakeholders. These benefits can be considered as public goods (GHG reduction, lower cost services, deployment of innovative technology, etc). They are not monetized by investors, which makes the financial benefits lower than the</i> </li> </ul>

*economic benefits. However, they should be documented so as to justify the concessionality characteristic of funding.*

- No comparison of IDF additionality scores relative to FMO-A have been examined (although it is presumed that as IDF projects have a higher perceived risk profile than is acceptable for FMO-A projects, if a project is eventually successful, the additionality of IDF finance could potentially be higher than for FMO-A)
- It is understood that this project will be subject to a normal equity exit (although other options were considered as promissory increased during the construction stage and FMO management was transferred to SO).
- IDF criteria for investment have been covered under JC 6.1 below.

Conclusion: There is little doubt that IDF/FMO participation was additional in arriving at a bankable project (albeit that the Evaluability Report concluded that ex-post evaluation of additionality was 'not feasible' - given the extensive consideration of the issue leading up to this conclusion it is suggested that perhaps it is quantification of degree of additionality that is not feasible rather than a judgement as to whether or not additionality resulted from IDF financing). If such additionality resulted from IDF then logically IDF funding would result in greater additionality than FMO-A financing proportionally to the greater levels of risk assumed by IDF.

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

#### **JC 3.1**      ***Evolution and drivers of portfolio performance pre and post 2012***

**I-3.1.1** - Portfolio performance and trends, in particular 2002-2011 and 2012-2016

**I-3.1.2** - Portfolio repayments/realisations and recycling in new projects

**I-3.1.3** - Performance of projects with FMO-A and/or other government funds

**I-3.1.4** - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses

No reference has been made to overall portfolio performance in project documents scrutinised. This project falls in both pre and post-2012 periods.

#### **JC 3.2**      ***Financial Performance***

**I-3.2.2** - Balance sheet strength, profitability and cash flow/liquidity

**I-3.2.2** - Utility of Carnegie revolvability model in managing IDF operations

- No reference has been made to the Carnegie Revolvability Model in documents scrutinised for this project.
- Multiple reviews were made of balance sheet strength etc for both Contour Global and KivuWatt (in addition to client credit reviews).  
27/09/2012 Balance Sheet: Contour Global Ltd  
27/09/2012 Balance Sheet: KivuWatt Ltd  
28/09/2012 Client Credit Review: KivuWatt  
Final CRR F14/48: Standalone CRR F14  
16/10/2013 Client Credit Review: KivuWatt  
Final CRR F15/48: Standalone CRR F15  
10/01/2014 Balance Sheet: KivuWatt  
09/09/2014 Balance Sheet: Contour Global

03/11/2014 Client Credit review: KivuWatt Final CRR F16/48:Standalone CRR F16 15/04/2015 Client Credit Review: KivuWatt Final CRR F16 26/10/2015 Client Credit Review Final CRR F20: Standalone CRR F17 29/10/2015 Balance Sheet: KivuWatt 03/05/2016 Client Credit Review: KivuWatt Final CRR F20: Standalone CRR F17 <u>Conclusion:</u> Financial performance now appears to be satisfactory	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting <b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,	
<ul style="list-style-type: none"> <li>• See JC 3.2 above for trends in client risk rating.</li> <li>• See JC 6.1 below regarding compliance with IDF (and AEF) guidelines for FMO investment including exposure limits etc.</li> </ul> <u>Conclusion:</u> The focus of FMO risk analysis was not only on financial risks but also on the very unusual and considerable environmental issues and every effort has been made to ensure environmental sustainability- All in all an impressive performance.	
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond Not applicable to individual project performance.	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.	
Performance of construction of KivuWatt is covered under JC 6.3 below. From October 2015 to mid December 2015 the plant was operated for testing and commissioning. Contractualization has been finalised in the second half of December 2015. The plant is running in commercial operation since 31 December 2015. The yearly target for electricity production is 220 GWh. Peak power delivered is 26 MW. Since the beginning of commercial operation, the grid operator calls for the peak power and the plant produces 26 MW in a flat mode. Total energy delivered by the plant in 2016 is 192 GWh. If the plant does not reach its 220 GWh target it can be due to the lower demand from the grid operator. So far, the plant used to be connected to one distribution line only, supplying the district of Karonga but also the rest of the Rwandan grid. The line is relatively unstable with a lot of dispatches to Burundi. The plant is operated on a 24h basis, base load. The target for availability of the full plant is 90%. The maintenance program is built on plans for maintenance on equipments that could affect the production of the plant (engines, compressors). There is an automated system to monitor the safety and maintenance of these critical equipments. In early March 2017 a high voltage line (220 kV) was connectd to the plant in addition to the former line, in order to secure distribution to Kigali. This line may stabilize the grid and increase power demand to the plant from the grid operator. In the future, KivuWatt will serve both lines.	

The Rwandan grid has a current peak demand of 140 MW but it will increase in the next 1 or 2 years. Phase 2 of KivuWatt is still under discussion and feasibility study with 3 additional barges 25 MW each.

Subject to proven performance of Phase 1 there is possibility of replicating the technology up to 100 MW. KivuWatt has a Gas Concession Agreement (CGA) with the Government of Rwanda and a 25 year Power Purchase Agreement (PPA) for 100 MW with the Rwandan Electricity Corporation. Both the CGA and PPA are guaranteed by the Government of Rwanda

Sustainability of operations is thus reasonably assured. Other considerations of sustainability as considered in the Impact Evaluation include:

- Environmental sustainability
- Commercial sustainability (IFI principles of providing finance to private sector in market-based nonconcessional and sustainable terms, when reasonable market terms exist)
- Sustainable livelihoods
- Sustainable impacts (considered not to be visible at the monitoring time scale i.e. they will take time to develop after completion of implementation)
- Continued use of traditional energy sources (as a sustainability issue for environment and electricity demand/usage)
- Availability and reliability of power supply as an issue attracting substantial consumption for productive usages.

In conclusion, cost and time over-runs obviously have an effect on any project but in the wider scheme of things these issues appear to have little impact on the overall project sustainability from FMO's point of view. In terms of availability of methane the lake reserves are confirmed as sufficient for at least a quadrupling of power generation (ie up to 100MW) and thus presumably reducing risks of a limnic eruption. Extraction and processing techniques have been proven whilst quality and quantity of the gas have exceeded expectations. Other sustainability considerations considered positive by the impact evaluation (BL and mid-line) included environmental, commercial, livelihood and impacts plus continued use of traditional energy sources and availability/reliability of power supply (attracting consumption for productive usages). Cost over-runs of USD65M have been fully absorbed by the Sponsors. The CCR rating (04/07/2017) shows improvement on grounds that the plant is operating close to full capacity with a successful first year of commercial operation (monthly average revenues USD2.8M). The project team is working towards Technical and Financial Completion – both targeted for the end of this year. The project was with SO until 2016 when it was transferred back to EN following rescheduling of the debt profile. Also, the Deal Team is confirmed to be comfortable with an ongoing corporate restructuring of the Sponsor and a postponement of Long-stop Dates.

Conclusion: Sustainability has been assessed at two levels. Extraction and use of methane from Lake Kivu is taken to be a mitigant in reducing build-up of such dissolved gas and thus reducing the risk of a limnic eruption. On a commercial level it has been estimated that the current levels of extraction could be multiplied 4-5 times without significant depletion of resource.

## EQ 4 – ESG Risk Management

Most references below are taken from the KivuWatt Power Plant ESIA (SKM) October 2009 which is an impressive body of work.

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

**JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio**

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).



KivuWatt is classed as a category A project due to the potential for catastrophic release of toxic gas and category A requirements have been followed in preparation of ESIA and ESMP. Risks have been covered below. A brief description of the project is given below:

The KivuWatt project involves the development of a Power Plant and a Marine Landing Site (which is effectively a port) onshore and four offshore Gas Extraction facilities (GEF). The gas extraction facility itself is located on a portion of Lake Kivu on the Rwandan side of the border which has been made available by the Government of Rwanda (GoR) as per the terms of the Concession Agreement with Contour Global KivuWatt Ltd. KivuWatt Phase 1 generates 26 MW using methane gas extracted from the deep waters of Lake Kivu.

Gas extraction will be conducted in compliance with the 'Lake Kivu Gas Extraction: Basic Principles, Mandatory Requirements and Guidelines for the concessionary Design and Operation of Gas Extraction Plants' – 'The Mandatory Guidelines'. These guidelines were produced jointly by the Government of Rwanda and the Democratic Republic of Congo and were established by a panel of international experts.

Whilst the Mandatory Guidelines are a legally binding requirement of the Concession Agreements, revisions to the document have been prepared since 2008 culminating in 'Management Prescriptions for the Development of Lake Kivu Gas Resources' (17<sup>th</sup> June 2009). The project meets those elements pertaining to lake stability and the environment in both documents.

All of the power output will be sold to Electrogaz the state owned company which was expected to heavily strengthen their transmissions/distribution system to accommodate the new generation capacity.

Rwanda suffers from a serious energy deficit which is constraining economic development. As of 2008 only 6% of the population had access to electricity. By the year 2020, Electrogaz intends to extend coverage to 36 or 40 percent of the country's households and the KivuWatt project will play an important part in meeting that target.

The KivuWatt project presents an opportunity for generation of low cost electricity that compared favourably with generation from other sources.

The 'do nothing' scenario is not an option in this case due to the need to reduce gas levels in Lake Kivu in order to avoid the hazardous consequences of a future gas eruption with the possibility of a large number of fatalities as happened at Lake Nyos in Cameroon (although it cannot be predicted when such a liminic eruption might take place). The conclusion of the Expert Committee (2006) was:

*'The irrefutable conclusion by the Expert Committee is that from the point of view of risks, the environment and economics, the only viable action is to produce the methane gas in Lake Kivu and use it for power production. To do nothing is clearly unacceptable because of the risk and to vent the lake instead of producing gas is worse from all points of view.'*

The project contributes to lake stability and contributes to averting a humanitarian disaster by reducing levels of gas in the lake.

**Conclusion:** Although this project was categorised A it was not possible from documents scrutinised to identify trends in the nature and balance of ESG risk in the IDF portfolio as a whole

#### **JC4.2** *IDF-financed projects contributed to green and inclusive development*

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

- Targets for GHG saving are 115kt CO<sub>2</sub>/year (including correction of 21 kt CO<sub>2</sub>/year for the non-biogenic part of CO<sub>2</sub> in the lake). (GHG emissions for electricity generation are



mainly considered to be biogenic even if a proportion derives from other sources e.g. volcanic activity). However it is proposed that the impact of GHG emissions will only be assessed in the End Line Evaluation Report. The 'Evaluability Assessment' considers GHG reduction as 'public goods' which are distributed to stakeholders as 'additional benefits' which are not monetarised by investors but goes on to define GHG reduction as one of two final E&S impact goals of FMO investment in African electricity generation projects, i.e.

*'The social and environmental impact goals of FMO's investment in African electricity generation projects are the reduction of poverty and of GHG emissions: these goals define the final impacts sought and the final link of the causal chain in the theory of change. The goal of reducing GHG emissions is often clearly defined in the context of power generation projects. The evaluation of avoided GHG emission requires a detailed knowledge of the country electricity mix and the calculation of project emissions, relying on international standards.'*

- Comparison of intended/actual social effects is discussed under JC 4.4. below.
- KivuWatt is clearly within the provisions of the FMO Impact Model Targets, 'doubling impact and halving footprint by 2020' – reference to this target is noted in the Baseline Report:  
*'As part of its ambition to become the leading impact investor in 2020 by doubling its impact and halving its footprint FMO provided funding to Contour Global (USA), the project developer and owner of KivuWatt. This project will add 26 MW to the current electrical generation capacity connected to the Rwandan grid (115 MW in 2014). KivuWatt should have a major impact on electricity access at the Rwandan national level, both for strengthening the power sector in terms of capacity and quality of electricity supply and for connecting new end-users.'*

**Conclusion:** In terms of reduction of GHG emissions targets are 115KT/year which is considered to be 'public goods' which are distributed to stakeholders as 'additional benefits' whilst KivuWatt is clearly within the FMO impact model targets 'doubling impact and halving footprint by 2020'. In a wider context the E&S impact goals of FMO's investment in African electricity generation projects are reduction of poverty and GHG emissions and there is no doubt that this project has contributed to green and inclusive development..

<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
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**I-4.3.1 - Use of Free prior and informed consent principles**

**I-4.3.2 - FMO verification that higher risk projects comply with national legislation and international norms**

**I-4.3.3 - Evidence of ESG risk assessment**

**I-4.3.4 - Evidence of ESIA and ESAP preparation and implementation**

**I-4.3.5 - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)**

- There is no specific reference to 'free prior and informed consent principles' but a framework for a social development is set out in detail including a 'Public Consultation and Disclosure Programme'. Although these measures are reported to have been carried out, no reports of the process have been scrutinised. Source: ESIA 6.1 Framework for a Social Management Plan:

*'In line with international best practise, Contour Global KivuWatt Ltd will develop a Social Management Plan (SMP). The SMP will recommend feasible and cost effective measures to prevent or reduce significant negative social impacts to acceptable levels, a mechanism for monitoring the success of these mitigation measures and a Public Consultation and Disclosure Programme (PCDP). The process explained in the following text is considered necessary for the development of a Social Management Plan (SMP).*

*In order to successfully attend to the various tasks and responsibilities contained in a SMP, including the Public Consultation and Disclosure Programme, a Community Relations/Liaison Officer will need to be employed by Contour Global KivuWatt Ltd. The Community Liaison Officer will need the support and the assistance of a Community Liaison Working Group (CLWG) which will be formed (in cooperation with*

*Government and with popular support) in order that various stakeholders within the affected area are represented and have an organised forum to communicate with Contour Global KivuWatt Ltd. The CLWG will ensure that the needs and perspectives of all local stakeholders are taken into account. This group is also a key component for any social investment initiatives and will assist the Community Liaison Officer with such activities such as Development Needs Assessments, decision making, implementation of actions and their evaluation. The group will also play an important role in facilitating the Public Consultation and Disclosure Process and will also act in collaboration with the Resettlement Working Group (RWG) which will be formed for the purposes of developing and implementing the Resettlement Action Plan.*

*As already outlined, a Public Consultation and Disclosure Programme (PCDP) will be developed in line with the IFC's Good Practice Manual. The PCDP will build on the public consultation and participation process already initiated during the ESI. Contour Global KivuWatt Ltd recognises that disclosure of information throughout the project (composed of construction, operation and decommissioning phases) will help to ensure accountability and transparency. The act of public consultation will help to identify potential points of disagreements between stakeholders, ethnic/gender/religious/political based tensions, raised expectations by the project and emerging social problems that require attention and with which Contour Global KivuWatt Ltd may be able to assist. In the formation of the PCDP, local, regional and national stakeholders will need to be identified with a view to establishing who will require participation in pertinent areas of information disclosure or consultation. The Community Liaison Officer with assistance of the CLWG; will execute the PCDP. Development of the PCDP will commence once the Community Liaison Officer is in post and the CLWG has been formed.*

- There is full compliance with Rwandan policy and legal requirements and international environmental agreements and standards and guidance as developed by international organisation (e.g. WB, IFC, OPIC). Compliance with the legal requirements of Rwandan regulation (Organic Law on Environmental Protection, Conservation and Management [2005] supported by statutory instruments and subsidiary legislation) and Regional and International Agreements. UN Convention in Climate Change (1992); Basel Convention on control of transboundary movement of hazardous wastes and disposal (2004); Convention on Biological Diversity (1996) is mandatory. Compliance with international best practice and OPIC requirements has been ensured in all cases. Environmental conditions are included in agreements (i.e. Concession and Power Purchase Agreements).

There was comprehensive identification of risks (although the main use of this word was in discussing the possibility of eruption of methane from Lake Kivu. There was a systematic identification of impacts (positive and negative), mitigation measures and residual impacts under following headings: Geo-hazards, Impacts (ultimate stability event, 'do nothing' scenario, construction phase, operations phase, decommissioning); Mitigation (construction and operations phases, decommissioning, residual and cumulative impacts); Human environment, fisheries, environmental quality (air quality for power plant, noise, soil quality, water environment, waste). An Environmental Mitigation and Mentoring Plan has been implemented throughout construction and into the current operations phase.

- Three Client CSG Reports have been scrutinised  
26/09/2012 E&S Risk Category A  
CG Risk Category 3

It was reported that the E&S Monitoring Report was overdue.

The E&S Action Overview noted 'no client progress' under the following issues: Fire-fighting plan, noise emission report, standard operating procedures, traffic safety plan, air emission report, ambient and quality monitoring plan (and BL study), HIV/AIDS framework, occupational H&S plan, community development plan, fisheries inventory plan. Action was noted under the following issues: Contractor shop drawings report (3 months after Financial Closing). Emergency preparedness and Response Plan (date change waiver submitted), Resettlement Action Plan (prior to 1<sup>st</sup> disbursement), Lake monitoring and E&S safety plans; Environmental management and monitoring plan (prior to 1<sup>st</sup> disbursement). E&S

management system report (prior to 1<sup>st</sup> disbursement). Update ESIA: Maritime landing site extension and prepare centre actions and activities (3 months prior to scheduled Phase I Technical Completion; no extension to marine landing site. CG Action and ESG Pricing categories were deemed not applicable.

15/04/2015 E&S Risk Category A

CG Risk Category A

It was again reported that the E&S Monitoring Report was overdue.

Client progress was noted against all issues listed above.

CG Action and ESG Pricing were again deemed 'not applicable'.

INR Advice/Considerations noted 'Good' client performance; 'Low' NGO/Media attention and '20/11/2013 ESAP implementation, monitoring and reporting on track. No reason for concern'

29/10/2015 As above, but no reference to 'IMR Advice/Considerations'.

Conclusion: There is full compliance with Rwandan policy and legal requirements and international agreements and standards and guidance as developed by IFCs and in specific compliance with the requirements of the Expert Committee on production and use of methane from Lake Kivu. Thus FMO due diligence has covered identification and management of E&S risks in accordance with international practices

<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
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#### **I-4.4.1**

Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management

#### **I-4.4.2**

Evidence of feedback and application of lessons learned in subsequent projects

- Apart from monitoring of progress of E&S mitigation measures during the implementation and operation (see JC 4.3 above) there is strong evidence of measures being taken to assess effectiveness of ESG risk management as a component of the ongoing Impact Assessment of KivuWatt e.g. the BL Report includes under the heading 'Qualitative Evaluation' local communities and environmental outcomes including access to electricity and local employment in Karonga district.
- Whilst there is an assumption that there will be feedback and application of lessons learned resulting from such an evaluation being carried out there is no reference to such feedback in any of the three evaluation documents scrutinised (i.e. Evaluability, BL and Mid Line Reports). It is thus concluded that the primary function of the evaluation is to examine the effectiveness of FMO project management as regards attainment of development and ESG objectives.

Conclusion: Although there appears to have been effective monitoring of progress and results there is also consistent references to E&S monitoring reports being overdue such there are times that reporting may not have been entirely timely. Whilst there is clear evidence of feedback as a result of monitoring during implementation being applied to the ongoing project there is no evidence of wider dissemination of lessons learned to the wider IDF portfolio.

## **EQ 5 – Policy**

**To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?**

<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
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A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendement to the subsidy decision on the involvement of Dutch companies).

N/A

**JC 5.2**   *Effects for Dutch companies and economy*

**I-5.2.1** - Evidence of IDF projects contribution to Dutch companies goals

**I-5.2.2** - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active

**I-5.2.3** - Level of exports to and investments in IDF eligible countries

**I-5.2.4** - Jobs created in projects financed by IDF

There is no reference to involvement of Dutch companies in documentation scrutinised.

<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes	
<b>I-5.3.2</b> - Number and volume of projects co-financed	
<ul style="list-style-type: none"> <li>FMO has provided 2 loans (USD 13.4 M and USD 6.6 M) under IDF, two loans (USD 7.6 M and USD 3.7 M) under AEF and two loans (USD 6.7 M and USD 3.3 M) under the FMO-BIO Framework. FMO financing was thus considered to be additional as limited senior debt was available. Other lenders include AfDB (loan – USD 25 M) and EAIF/PIDG (loan – USD 25 M). MCGA (Multi-Lateral Investment Guarantee Agency) has provided Political Risk Insurance to Contour Global which has provided equity (USD 50.5 M) plus pre-completion guarantee (USD 25 M)</li> <li>No reference has been made to other co-financed projects.</li> </ul>	

## EQ 6 – Efficiency

<b>Has FMO efficiently and appropriately managed the Fund?</b>	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process	
<b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs	
<b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring)	
<b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF	
<b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
<ul style="list-style-type: none"> <li>The original FP analysed compliance with FMO and AEF investment criteria i.e. <u>FMO Investment Criteria</u>  <i>Catalysation</i> – Contour Global is an equity provider and developer providing equity but looking to DFIs to provide debt.  <i>Additionality</i> – FMO is arranger, provides funds and arranges funds from others only DFIs are willing to lend  <i>CG</i> – compliant with FMO Corporate Governance principles  <i>Exclusion List</i> – Energy is not on this list  <i>Focus Countries</i> – Rwanda is LDC  <i>Private Sector</i> – 100% equity to be held by private sector  <i>Active partners</i> – EAIF as co-arranger, AfDB, BIO and EFP are participants. All financiers have aligned interests.  <i>Continuity and return</i> – CG required to maintain 51% shareholding while senior loan outstanding  <i>Substantial risk sponsor</i> – CG spent USD 10 M on technical development (which FMO considers substantial amount of risk)  <i>Quality and Morality of management</i> – assessed ok  <i>Poverty Reduction</i> – at project outset Rwanda had electrification rate (outside of Kigali) of ~6%. Increased power supply could permit ending lease of expensive emergency diesel-engined generators whilst continuous availability of electricity is expected to spur economic development and thus reduce poverty.  <i>Criteria for project finance</i> – financially strong partner, well defined technical and financial completion, sufficient forward commitments by sponsor until financial completion, all possible security held by lenders, cash-flow projects available.</li> </ul>	

*Criteria for energy* – FPA longer than tenure of loan, tariff consists of capacity fee and energy fee/OSM charge

*Specific rates* – Energy – historic DSCR for default >1,15, equity/balance sheet total for default >33%

*Criteria for government funds* – on lending side no involvement of government funds

*Criteria for financing* – max tenor 12 years, FMO total commitment 14.6% of total investment (limit 25%), equity exit – pre-determined exit strategy not required for power projects with long term off take agreements (in combination with reasonable equity IRR), equity partner – not essential as sponsor deemed to be financially strong, equity return – IRR ~19%, country limit for Rwanda (rating 7) is 8% of FMO equity (i.e. €106 M), industry limit – 50% of country limit, single client limit - €65 M, group limit on CG – no other transactions.

#### AEF Fund Criteria

1. Is the country on the AEF country list (if yes, which group - >75% or 25% group)?	Yes, Rwanda is LDC and in 75% group.
2. Does the project or specific investment contribute to establishment of new and/or improvement energy access according to AEF criteria?	Yes. Projects will result in 25 MW of additional generation capacity in Rwanda for domestic consumption. The project will strengthen Rwanda's energy infrastructure, which essential for its economic development.
3. Output investment/project (in connected people).	Exact figure to be verified during DD. Estimation ~220,000
4. Is the type of investment mentioned in Poverty Reduction Strategy Paper (PRSP) for the country?	Yes. Methane gas to power development is mentioned in PRSP. Utilising gas trapped in lake is key for economic development.
5. Is proposed funding in line with FMO's finance policies?	Yes, fits FMO's policies regarding sector/products. Criteria in line with AEF.
6. Is ownership debtor private or public?	Fully private.
7. Sufficient financial and economic sustainability and profitability?	Yes. Significant power shortages which will be alleviated due to this investment.
8. Good corporate governance?	Project company will have to comply with FMOs requirements or corporate governance.
9. Postive contribution environmental/social; poverty alleviation?	Utilising methane gas trapped in Lake Kivu will provide low cost energy lead to reduction in high costs and heavily polluting emergency power solutions (diesel/HFO). Project will comply with IFCs PS.
10. AEF Fund project.	USD 10 M Ordinary Equity
11. Catalytic role/additionality AEF Fund?	Additionality: Limited availability of equity financing for power projects in SSA. Catalytic role: AEF position will catalyze debt financing.
12. Return > 10% (equity) in EUR?	Yes, IRR around 19%.
13. Pricing (subordinated) loan ODA?	ODA compliant (equity).
14. Risk and return in line with market?	Yes.
15. Currency	USD.

16. Maximum transaction amount	USD 10 M.
17. Within limits accumulation of different products FMO?	Within (AEF) limits. AEF finances 8% of cash required and become 20% shareholder.
18. ODA-Notification: When foreseen?	Notification for AEF takes place yearly in retrospect through DGIS.
19. Transaction won out of tendering situation? Specific conditions related to tendering?	No. Licenses were obtained through direct negotiations with the Government of Rwanda. Process was transparent and signed off by the World Bank Group (MIGA) according to sponsor.
<p><b>Conclusion:</b> The project was fully compliant with FMO policies, procedures and investment criteria which were clear. Although no information has been examined which permits judgement on the adequacy of staff levels for management of this project it is understood that there was particular FMO interest and support of this project concept. There is no evidence that project delays were in any way due to FMO (procedures, policies, organisational structure or staffing). On the contrary all delays (and cost over-runs) were due to technical problems encountered during implementation. IDF, AEF (and BIO) support was clearly complementary as may be seen from comparison of fund criteria.</p>	
<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<p><b>I-6.2.1</b> - Appropriateness of available FMO expertise</p> <p><b>I-6.2.2</b> - Trend in of full-time ratio equivalent staff to volume of operations</p>	
<p>There is no project information on ratios of FMO staff to value of operations. However, there is evidence of good quality and tenacious commitment of FMO personnel to the concept and detail of this innovative project.</p>	
<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<p><b>I-6.3.1</b> - Identification of explanatory factors (incl. external factors) in effective implementation</p> <p><b>I-6.3.2</b> - Identification of explanatory factors (incl. external factors) in effective observed delays</p>	
<p>FMO has mentioned progress of implementation and identified explanatory factors for delays which total approximately 3 years (and cost over-run of ~USD 65 M) the project becoming operational on 31/12/2015. Subsequently operation have been successful with the plant operating at full capacity. There were a number of delays during construction:</p> <ul style="list-style-type: none"> <li>• The barge was launched in Aug 2011 with Civicon undertaking outfitting and installation works. This contract was terminated due to poor performance and quality and a new contract signed with Koch (KE&amp;C)Portugal. Installation and commissioning was completed in Oct 2014.</li> <li>• The Wartsila Power Plant contract was completed with initial substantial completion Sept 2012. Wartsila personnel de-mobilised Oct 2012 (due to delays in barge installation – see above) and re-mobilised June 2015 to resume commissioning:</li> <li>• Other delays included: <ul style="list-style-type: none"> <li>- The breakage of mooring rope in November 2014 and subsequent redesign of mooring, pushed the COD till end of May 2015</li> <li>- Due to mishaps earlier in marine installations, KivuWatt engaged expert salvage company Titan Salvage to assess the remaining marine works and based on their recommendation, towing procedure was amended by adding power units to barge to improve its</li> </ul> </li> </ul>	



maneuverability and give power redundancy for towing operation. This activity delayed the COD by another 2 months till end of July 2015.

- Riser installation has been slower than expected due to weight difference from design values and loss of working hours due to weather delays, adding another month to COD.
- At lowering of separator pontoon on 28<sup>th</sup> July 2015, the control of lowering was lost and pontoon stanchions suffered some damages. A salvage team was mobilized to assess damages and prepare salvage operation were fully completed by early October. COD delayed a few days due to some technical hitches during lowering operation till mid-October.
- A further delay of a week was caused by late arrival of suppliers commissioning engineers, as all of them had prior commitments, which KivuWatt had to supercede.
- The shortfall in tax refund payments also contributed to delayed payments, which had their effect on supply of services and materials. Contour Global committed additional funds to support project upto COD, thus mitigating the delay effect of the default of tax refund payments.

Conclusion: Given the serious delays and cost over-runs during project implementation the capacity and capability of the sponsor was a critical factor in eventual completion. FMO supported overcoming of such problems by continuing support through all the ups and downs



## Sources of Data

The information below is all sourced from documentation made available to the evaluation team as of mid-September 2017 (as listed below).

Document title	Date
Rwanda: Country Risk Report Q4 2015	
KivuWatt Holdings – Final Structure	
KivuWatt Power Plant ESIA (skm)	28/10/2009
CIP– Project Finance	28/05/2010
Investment & Mission Review: IMR Advice on CIP	02/06/2010
Investment & Mission Review: IC Decision on CIP	03/06/2010
Advisory Services Agreement	04/06/2010
Investment & Mission Review: Revised IC Decision	08/06/2010
Investment Proposal: KivuWatt Ltd, FMO-A	12/05/2011
Share Pledge Agreement	30/08/2011
Client ESG Report	26/09/2012
Access to Energy (modification of 09/04/2010)	26/09/2012
Balance Sheet – Contour Global LP	27/09/2012
Balance Sheet – KivuWatt Ltd	27/09/2012
Client Credit Review	28/09/2012
Non-delegated Client Credit Review Project	28/09/2012
Amendment and Restatement Agreement relating to an offshore accounts agreement dated 24/08/2011 as amended and restated on 12/12/2011 and an off shore bank account security agreement dated 24/08/2011	22/10/2012
Investment & Mission Review	26/11/2012
Investment & Mission Review	25/02/2013
Minutes – IRC Meeting	25/08/2013
Deed of Indemnity	11/09/2013
Client Credit Review	16/10/2013
Executive Version: Waiver Letter nr. 4 in relation to termination of the Barge EPC Contracts, entry into replacement agreements with Koch Engineering and approval of a Capacity Remedial Plan	20/11/2013
Investment & Mission Review	09/12/2013
Balance Sheet: KivuWatt Ltd.	10/01/2014
Uses in USD M based on case with completion of construction in March 2014	---/03/2014
Memo – Update KivuWatt construction	08/04/2014
Investment & Mission Review	29/07/2014
Balance Sheet: Contour Global LP	09/09/2014
IMR Approval Request & IRC Memo for Change Request	11/09/2014
Evaluability Assessment of KivuWatt Project (Methodological guidelines on feasibility to measure KivuWatt's various impacts)	---/09/2014
Client Credit Review Report	03/11/2014
Investment & Mission Review	25/11/2014
Memo – transfer to SO for further restructure	12/12/2014
Email – Kivu memo on transfer	15/12/2014

Document title	Date
IMR Comment Box – decision IMR on disbursement memo 06/01/2015	06/01/2015
Front Office/SO Approval Request	12/02/2015
Minutes IRC Meetings	24/02/2015
IRC Memo	17/03/2015
Minutes IRC Meeting	24/03/2015
Transfer SO Project	14/04/2015
Client Credit Review	14/04/2015
Energy (Direct investment)	15/04/2015
Client ESG Report	15/04/2015
Client Credit Review	15/04/2015
Email – Kivu transfer decision	06/05/2015
Email – meeting with Contour Global (01/07/2013)	06/07/2015
Credit/IRC Memo	10/08/2015
Impact Evaluation of KivuWatt – Base Line Report (BL study launched Dec 2014 to undertake field data collection before commissioning of KivuWatt power plant then scheduled for May 2015 [subsequently delayed]. The study was carried out in a short [3 months] time frame)	---/08/2015
Credit Approval Request (for Change Request)	17/08/2015
KivuWatt Ltd	20/08/2015
Construction Report to Lenders: Sept 2015	---/09/2015
Client Credit Review	26/10/2015
<a href="http://www.businesswire.com">www.businesswire.com</a> (Fitch assigns first time B+ IDR to Contour Global LP)	28/10/2015
Client ESG Report	29/10/2015
Balance Sheet; KivuWatt Ltd	29/10/2015
Credit/IRC Memo	03/11/2015
Agenda IRC Meeting	25/11/2015
Client Credit Review Request	03/03/2016
Analyst Advice – Client Credit Review	23/03/2016
Credit Decision: Request for Approval (LCR)	06/07/2016
Transfer FO Project (provisioning 50%)	17/08/2016
Agenda IRC Meeting	30/08/2016
CCR: Credit Approval Request Post-Contract (04/07/2017)	04/07/2017
KivuWatt Impact Evaluation: Midline Report (comprising monitoring sample of villages regarding grid connection status, outcomes on communities surrounding the KivuWatt power plant, gather information to monitor additionality of KivuWatt on supply to the grid, check validity of BL survey with EUCV4)	---/04/2017

# Mtwara Energy Project

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

- Remarks:
  - Financial proposals for FMO financial support transaction (grant/warrant and equity)
  - Supporting technical documentation (feasibility/scoping studies, ESIA/ESMP, design dossiers, specifications, technical descriptions etc)
  - Project agreements

## 1. Project fiche

Project title	Mtwara Energy Project (MEP)
Project description	<p>In 2003 Artumas (a Canadian junior oil and gas company) and GoT agreed to develop an integrated 'gas to power' project in Southern Tanzania which involved two separate activities i) exploration and development of a natural gas field and marketing of gas (G Project) and ii) gas-to-power-to-end-consumer project (E Project) including infrastructure (27km pipeline), power plant and off grid transmission and distribution (T&amp;D). The project, Artumas Tanzania Jersey Ltd (AJTL) was to replace inefficient diesel generators and upgrade and link three isolated diesel powered grids which historically had major difficulties in distribution of reliable power to this isolated region of Southern Tanzania bordering Mozambique, thus potentially relieving major constraints to regional social and economic development.</p> <p>Expected outcomes included provision of stable, reliable and affordable power in Mtwara province, reduction in generating costs by substitution of high cost oil imports with low cost domestic gas and private sector development thus leading to reduced national dependency on imported oil, reduced foreign exchange requirements and resultant greater ME stability of Tanzania. A claimed reduction in power outages and greater grid stability by diversification away from hydro-power towards natural gas and coal-fired power generation cannot be confirmed in the case of substitution of diesel generators by gas-fired generation.</p> <p>Development impact was optimistically claimed to be high reaching beyond gas exploitation, transport and use in power generation to increased GDP growth and poverty reduction. These impacts were expected to be accomplished by increased household connection to the grid (rural electrification). [ie lighting, TV, education, health, efficiency improvement/time savings in use of electrical appliances]. Such expected impacts may have been unrealistic given the high cost of connection, unaffordability of tariffs by the poor and little acquisition/use of household appliances in rural Africa. The distribution component did not, in any case, go ahead, such that even more modest development aspirations were denied.</p>
Sector	Infrastructure
Stage	Start-up, expansion, restructuring
Operation Dates	USD 1.7M (Grant/warrant) 14/09/2006 USD 12.8M, USD 13.9M, USD 1.7M (Equity)
Contract	FMO Client number 00015520
Country/Region	Africa
Country category	LIC
Project total cost (€)	Total estimated project cost escalated from USD 36.7M (2004) to USD 123 M by the end of 2006 and USD152M by the end of 2007
IDF contribution (€)	USD 28.1 M
Co-financing (€)	Various proposals for co-financing did not go ahead i.e. EAIF, ORET, FMO-A
Loan Terms	
Senior/Subordinated	

Convertible			
Amount			
Loan Agreement Date		Facility No	
Currency			
Tenor			
Grace period			
Interest rate			
Security			
Fees			
Disbursements	Dates and amounts		
Monitoring			
Key covenants			
Conversion features			
Equity Terms			
Direct	LDC		
Indirect – Fund	-		
IDF Investment (\$, €m, local currency)	USD 14.5 M 2006 (includes USD 1.7M grant/warrant 2004), USD 15.3M 2007		
Total Project/fund	2007 Total estimated project cost escalated from USD 36.7M (2004) to USD 152 M (end 2007).		
IDF Stake (%)	19.65% 2007 reduced to 7.46% 2012 – 100% impaired. Recovery of USD 1.38 M for purchase of 7.46% shareholding in ATJL.		
Investment date	2004, 2006, 2007	Facility No	0000100824
Disbursements	Dates and amounts USD 12.8M 2006; USD 15,3M 2007		
Direct investment – exit strategy	<p>Recovery of USD 1.38M for purchase of 7.46% of ATJL shares</p> <p>Basically FMO invested USD28M which resulted finally in a shareholding of 7.46% of ATJL (the percentage was much higher but was diluted due to subsequent capital calls). By 2010 Artumas was technically bankrupt and only avoided liquidation of all assets by Wentworth taking over. The operation continued to be loss making and the book valuation of the total outfit which had invested ~USD153M (with amortizations &gt;USD105M) was estimated at USD48M. Thus FMO accepted an offer from the majority shareholder to sell out their 7.46% for USD1.38M.</p> <p>(USD 28.1 M (i.e. 14.5 + 15.3 = 29.8 – 1.7 = 28.1)</p> <p>This sum was calculated upon sale of power plant to Tanseco for USD13.5M less USD1.175 (contractual 5% holdback) plus value of Mnazi Bay block (independent valuation) USD8.1M from which a deduction of USD1.898189M is made for costs incurred since 2011 giving a total valuation of USD18526811 or which 7.48% is USD 1.38M.</p> <p>USD 13.5 – 1.175 = USD12.325 + USD8.1 – 1.898189 = USD18526811 of which 7.48% = USD1.38M.</p> <p>Net FMO loss USD28M – USD1.38M = USD26.72M</p> <p>At the time of FMO exit the gas well represented a ‘stranded asset’. It is reported that a Chinese funded pipeline from Mtwara to Dar es Salaam has since been constructed thus ‘releasing’ gas field assets which reportedly now have a valuation considerably higher than the independent valuation of USD 8 M.</p>		
Direct investment -	FMO negotiated a put option on AGI 6-8 years after the investment had		

put option terms	taken place (ie after the start of commercial operations), the exercise price to be based upon independent valuation at that time. However, FMO-A guidelines for exit after development phase (and assumed positive cash flow) suggest that exit would be much quicker than the negotiated put option.					
Fund life	-					
Grants						
Amount	USD 1.7M					
Convertible	Yes - Warrant					
Purpose	To give FMO 20% stake in ATJL upon conversion of warrant into equity					
Grant agreement date	2004	Facility no		0000100824		
Key terms	-					
Disbursement	2004					
Conversion terms	USD 1.7M warrant included in LDC equity investment of USD 14.5M (2006)					
Financial Risk and Performance						
	Financial proposal/approval				Client Review - Most recent	
Client Risk Rating		FSF	RF/IF		2010 – 7 Poor	
	2006	C1	C2			
	2007	C1	C2:			
	2008	C1: moderate	C2: moderate			
	2009	7: Poor				
	2010	7: Poor	7: Poor			
Loan - Impairment provision	06/2008 - 25% 11/2008 – 25% 12/2008 – 50% 02/2009 – 100%				2012 - 100%	
Equity - Fair value adjustment		10/06 /2008	30/04 /2008	30/06 /2009	19/03 /2012	%
	FMO Investment	USD 28.1M	USD 28.1M	USD 28.1M	USD 28.1M	
	Fair Value Equity	USD 29.1M	USD 17.7M	USD O.6M		
	Provision	-	50/100%	100%		
	Recovery	-	-	-	USD 1.4M	
Financial performance	Project FMO exposure ~ USD 27M (100% impaired)					
Client Review -key findings	FMO had 20% stake in ATJI, diluted to 7.46% as additional capital was raised. Majority shareholder (Wentworth) reportedly only interested in gas field exploitation (not the power generation and transmission) even though this was heavily loss making at the time.					
Results chain: expectations and achievements						

Logical framework	The project was conceived as a ‘gas-to-power’ project which combined two activities: i) exploration and development of a natural gas field and marketing of gas (G Project) ii) gas-to-power-to-end-consumer project including a 27km pipeline, power plant and off-grid transmission and distribution (T&D) (E Project). This project was intended to replace inefficient diesel generators with historical problems in distribution of reliable power supply to this isolated region of Southern Tanzania bordering Mozambique. Mtwara has economic potential – the 3 <sup>rd</sup> largest Indian Ocean port in Tanzania, fisheries and agriculture. Reliable power supplies were expected to attract energy-intensive industries to the region leading to higher tax revenues. The rationale for FMO investment was: <ul style="list-style-type: none"><li>• FMO has been involved in multiple aspects of the Tanzania power sector and this project is compliant with this investment strategy.</li><li>• High profile showcase for rural electrification</li><li>• High development potential (population of remote area to benefit from reliable power supply – 5000 pre-paid meters to be installed).</li><li>• ORET grant intended to promote 40000 new connections</li><li>• Contribution of ORET/LDC (IDF) funds to mobilise project</li><li>• 2004 LDC grant (including warrant) for project start up</li><li>• FMO active involvement in E&amp;S issues</li><li>• FMO considered to be a JV partner actively involved in project development</li></ul> An evaluation matrix was developed by the 2008 IOB Case Study:		
	Objective-means	Indicators/ variables	Sources
	<b>Input</b> Natural resource technology Funding from FMO and others Technical and managerial expertise Risks	<b>Input</b> Licences needed and acquired; Proven reserves (billion cubic feet); Description of technology; Total available funding, by type of funding (in million €); Employment by type, local / non-local; Identification and description of risks;	Policy and strategy documents  Project documents; Progress and completion reports; Evaluation reports; Results of interviews with key informants (FMO, client, other stakeholders);
	<b>Output</b> Development of gas field	Installed capacity for natural gas extraction (volume/year);	Project documentation

	Construction of pipeline Construction of power plant Upgrade of electricity transmission and distribution systems Installation of billing system (pre-paid meters)	Installed transport capacity of pipeline (volume/year); Installed electricity generation capacity of power plant (MW); Installed electricity distribution network Installed household connections and pre-payment meters for power Installed industrial user connections for natural gas (and power)	Results of interviews of key informants (FMO, client, other stakeholders) Site visits.
	<b>Outcome</b>		
	Increase in electricity and natural gas supply; Increase in number of households connected to improved electricity network; Increased consumption and consumption expenditure on electricity and natural gas;  Stable, reliable and cheap electricity delivery with low incidence of power failure; Reduced imports of fuel for power generation;	Natural gas (production and transport); Electricity (generation, transmission and distribution); Cost price of electricity & gas Quantity & value of electricity consumption by households; Market shares of gas & electricity  Number of power failures (outages); Incidence of power shortages; (Reduction of) import of fuel for electricity generation (volume and value)	Project information (annual reports) National and local statistical data and interviews of key informants (FMO, client, other stakeholders) Impact literature
	<b>Impact</b> Economic growth;	GDP per capita; Poverty: Proportion of households with per capita	Project information



	Poverty reduction; Environmentally sustainability	income below the poverty line; Environmentally clean energy supply: reduction in use of polluting fuels in power generation, emission of CO <sub>2</sub>	National and local statistical data and interviews of key informants (FMO, client, other stakeholders) Impact literature
<b>Assumptions</b>	<p>Project considered to be a high risk rural electrification project with additional market risk which was intended to drill for the gas and directly deliver to consumers. Proven reserves showed a 24MW power generation facility could be served (1 well tested for production) which was considered adequate for the initial E Project (12MW to be expanded to 24MW). The ultimate objective was delivery of a power generation facility of &gt;200MW with export to the Tanzanian national grid, but more reserves needed to be proved (more wells to be drilled).</p> <p>Artumas Group Inc (AGI) is a small Canadian independent oil and gas exploration and production company (E&amp;P) with concessions in East Africa. AGI had no experience in the power sector and thus subcontracted implementation of T&amp;D activities, installation and operation of generators and design and engineering of the gas infrastructure.</p>		
<b>Main project activities and achievements</b>	<p>The re-entry of the Mnazi Bay Well (funded by FMO grant) was successfully concluded in 2005. The 12MW power generation plant and pipeline connecting the gas field to the power plant was completed and operational from 2007. This plant which is extendable to 24MW replaced the TANESCO diesel-fuelled power generation facility. Providing completion of transmission and distribution (T&amp;D) the project would sell power to TANESCO (interim PPA) – upgrade, expansion and operation of the T&amp;D system was subject to an ORET subsidy to become available upon completion of debt financing (which did not go ahead). By 2009 FMO investment was 100% provisioned. Although ESIA studies (or financing proposals) have not been scrutinised it is reported that ESIA studies were comprehensive covering well re-entry, 3D seismic programme, exploration, drilling and T&amp;D. Artumas reportedly complied with the E&amp;S action plan and subsequent ESMS. Artumas also implemented a corporate social responsibility plan covering environmental awareness, H&amp;S, education and training (e.g. provision of a school for girls and an agricultural education centre for increased food production).</p> <p>The reason that the project failed was due to the failure of TANESCO to build the transmission and distribution networks to take the power that could have been generated. In fact the volumes of gas used were less than 5% of planned levels.</p> <p>A claimed development/catalyst outcome has been reported i.e. interest in similar projects in other parts of Tanzania (e.g. 3MW Mwenga Hydropower Project at Mfundi Tea Company) although no documentation has been scrutinised which corroborates such claimed catalysation effect.</p>		

Main project issues	In terms of expected development results, the local distribution of power has not been achieved as the T&D component has not gone ahead (i.e. rural connection and distribution has not been delivered). Thus, a major component of expected development impacts has not been delivered.		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	No information made available	
GHG Saving (tCo2)	T CO <sub>2</sub>	Transfer to natural gas-fired power generation reduced CO2 emissions by 5524MT and 7932MT in 2006 and 2007 respectively (Source: IOB Case Study 2008 which also noted that ‘ <i>-.other indicators if development impact could not be shown or calculated due to lack of data</i> ’)	
Installed Capacity (MW)	MW	12MW expandable to 24MW	
Production Capacity	GWh	No information made available	
People served – distribution	#	ORET grant intended to provide 40000 new connections	
People served – transport	#	--	
People served – power	#	No information made available	
People served – telecom	#	-	
People served – IT/internet	#	-	
People served – industrial/agri	#	-	
People served – farmers reached	#	-	
Forestry under management	ha	-	
Agriculture	ha	-	
Green investments	€m	Assumed all FMO investments comes under this category	
Inclusive investments	€m	No information made available	

## 2. Scoring

	Desk Review
<b>EQ 2 - Relevance</b>	
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	<p>N/A</p> <p>No comparative risk ratings of the FMO-A and IDF portfolios have been examined. The 2007 proposals for FMO-A financing of a senior secured loan to Artumas was approved but did not go ahead (for upgrading generating capacity from 12 MW to 24 MW) such that there is no evidence that FMO-A would per se have accepted less risk than IDF.</p>
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	<p>2</p> <p>The 2008 IOB case study concluded that a catalytic impact of IDF was possible but not confirmed. The contribution of FMO in the 2004 development phase and the 2006 initial participation were claimed as regards EAIIF, FMO-A and possibly potential European partners. Only the FMO-A financing was approved but was not disbursed. Thus, even if this was not immediate (and there are suggestions that a catalytic impact on FMO-A is to some extent 'in-house' and institutionalised if earlier financing has been satisfactorily implemented under IDF). Also at this stage AGI (holding company) was successfully raising funds on the Oslo Stock Exchange but the extent to which this fund-raising might have been a catalysation effect of previous IDF funding is not clear. See also below regarding additionality.</p>
JC 2-3 Additionality of IDF Loans and Equity Investments	<p>2</p> <p>The initial role of FMO/IDF was largely additional making possible re-entry to the gas field and coverage of ESG in compliance with best international practices. Once ESG had access to the Oslo Stock Exchange for fund raising so the additionality of FMO reduced (whilst still representing a plus for potential investors). Thus, the development phase was much less additional (80-90% of financing coming from equity and bonds through Oslo). See also above regarding catalysation.</p>
<b>EQ 1 - Effectiveness</b>	
JC 1.1 Trends in the nature and component balance of IDF portfolio	N/A
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	<p>1</p> <p>Some infrastructure was delivered – Mnazi Bay Well was re-entered and productive, the 12 MW power plant and pipeline were completed and operational in 2007, thus replacing the expensive</p>

	diesel-fuelled generators. However, the transmission and distribution component did not go ahead meaning only sale of electricity to TANESCO. Generation and gas extraction were reportedly heavily loss making and operating at a small proportion of installed capacity.
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	1 Most expected development results were not delivered (including indirect employment generation). Expected beneficiaries of the T&D component were some 150000-200000 persons (i.e. expected 40000 new connections).
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	1 Development outcomes have been limited as noted above. Expected economic development results included: i) benefits to consumers and industry from access to reliable power supply ii) economic development arising from i) iii) reduction of GoT regional subsidies iv) savings on hard currency by substitution of diesel generation v) increased revenue generation Actual results were i), ii), v) – not delivered; iii) no information; iv) achieved. Expected environmental development results included reduced emissions in power generation and substitution of bio-fuels for cooking. Actual results were very limited (although Artumas did initiate CSR projects including establishment of schools for girls, some upgrading of infrastructure and development of agricultural enhancement programmes. Expected social development results included direct and indirect employment generation – delivered only to a very limited extent.
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	3 FMO was involved in frequent monitoring during the development stages but during implementation reporting of progress and financial information appears to have been sketchy. Administration was characterised by the 2009 evaluation as ' <i>a bit disorganised</i> ' and a number of mistakes were identified in reporting.
<b>EQ 4 – ESG Risk Management</b>	
JC 4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio	N/A
JC4.2 IDF-financed projects contributed to green and inclusive development	3 Transfer to gas-fuelled power generation was estimated to have reduced CO2 emissions by 5524 MT in 2006 and 7932 MT in 2007 (the only years

	for which figures are available). Overall it was estimated that there would be a reduction in GHG of 200000 MT over a 7 year period (which given the reported figures for 2006 and 2007, appears to be a considerable over-estimate). A USD 3 M combined credit facility between Artumas and the Dutch Ministry VROM was arranged in 2008 for sale and purchase of project carbon emissions.
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with 2best international practices	3 Although the relevant documentation has not been made available to the evaluation it is reported that an ESIA was undertaken in compliance with national and international norms including identification of ESG risks, mitigation measures and monitoring activities under implementation of an ESMP.
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	2 'Lessons learned' were identified by the 2009 evaluation but no evidence has been examined of feedback and application of these lessons learned in the wider IDF portfolio.
<b>EQ 6 – Efficiency</b>	
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	1 there were significant shortcomings in handling of the Mtwara project ie FMO decision-making, unclear financial plans not independently verified, warrant taken without clear strategy, no clear exit strategy
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	2 Not all expected infrastructure was delivered (comments under JC1.2 above [ Effectiveness]) Although there is no information on ratios of FMO staff to value of operations there is reference to long decision-making and approval processes
JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?	1 Based upon the findings of the 2009 evaluation FMO work quality was largely unsatisfactory and did not contribute to (project or Fund) success
<b>EQ 3 – Revolvability</b>	
JC 3.1 Evolution and drivers of portfolio performance pre and post 2012	N/A .
JC 3.2 Financial Performance	N/A
JC 3.3 Focus of risk management systems and policies on long-term sustainability	N/A
JC 3.4 Revolvability	N/A Not applicable to individual project performance
JC 3.5 Individual Project Sustainability	1 The gas field is a depleting asset. The power plant is operational albeit it was not operating at expected capacity (no current power generation

	stats have been scrutinised) and presumably could be expected to operate for its design life (subject to adequate maintenance) as could the pipeline. However the plant was reportedly suffering considerable operating losses and financial sustainability is unlikely in these circumstances.
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	N/A
JC 5.2 Effects for Dutch companies and economy	There is no reference to involvement of Dutch firms in the documentation scrutinised.
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	N/A Apart from a proposal for FMO-A investment (appeared but not disbursed) there is reference to combined LDC and ORET funding (i.e. Grant for provision of 40000 new connections which did not go ahead). EAIF finding also did not go ahead.
<b>Scoring Justification</b>	
EQ 2 - Relevance	2 From the documentation examined there is no evidence that IDF has higher tolerance of risk than FMO-A. Catalysation effect of FMO is possible but not proven although, to the contrary, the FMO role was additional in permitting re-entry to the gas field and good quality ESG provisions.
EQ 1 - Effectiveness	1.5 Effectiveness was poor Although the well was re-opened and the pipeline and power plant were delivered the transmission and distribution phase did not go ahead thus limiting results.
EQ 4 – ESG Risk Management	2.5 ESG risk identification and management was reportedly in line with IFC standards
EQ 6 – Efficiency	1 Efficiency was low with reference being made to FMO shortcomings in handling this project
EQ 3 – Revolvability	1 The project did not contribute to FMO revolvability rather to the contrary as the FMO investment was heavily loss-making. FMO risk assessments concentrated on financial issues but assumed that all project components would be delivered and that TANESCO would be an efficient partner. Both assumptions were wrong
EQ 5 – Policy	N/A
<b>Comments</b>	In summary an ambitious project which was arguably beyond the capacity of the sponsor to deliver. FMO support resulted in an investment loss. Subsequent developments have rendered the well (effectively a ‘stranded asset’) more viable but

	the power station still operates at low efficiency with operating losses.
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### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A –** rating not applicable.

## 3. Lessons learned and key findings

- The proven operating practices of the national utility are an essential contribution to eventual project success or failure. TANESCO has a history financial problems, low operating efficiency and poor maintenance provision. Delayed payments to suppliers are endemic. Moreover, its capacity to deliver projects is poor. The due diligence failed to identify this key risk.
- A realistic power purchasing agreement (PPA) is a pre-requisite for commercial success. There was no such agreement with GoT/TANESCO (only an interim PPA which apparently was never ratified) although a ‘Tariff Equalisation Fund’ was agreed which was intended to subsidise the cost of power production and sales for a 4 year period. However, this subsidy was heavily under-valued.
- The role of the Regulator in setting fair tariffs which reflect production costs is key. The regulatory procedures and determination of tariffs were not transparent.
- In summary of the above findings costs, pricing and willingness to pay for electricity (by consumers and by the national utility, TANESCO) were major risk factors which were underestimated at project design stage. Similarly, other risks were identified but mitigation measures and remedial action appear not to have been effective (eg construction issues, cost over-run, insolvency risk). Given FMO experience in multiple aspects of the Tanzania power sector, this is an unexpected finding.
- Transmission and distribution of generated power are essential components for effectiveness of energy projects and yet, often, they are not considered to same extent as generating capacity. Grid stability, load shedding and outages are all a result of an ineffective T&D grid.
- Access and affordability of electricity for the poor is little considered. Expected developmental impacts are largely dependent upon adequate T&D and a realistic electricity tariff (and/or subsidies for poor households). This project was expected to be *‘a high profile showcase for rural electrification’* by way of the ill-fated ORET grant which was intended to promote 40000 new connections.
- Whatever indirect employment may have been generated by the project local direct employment is limited with skilled personnel coming from outside the immediate area.
- Local developmental support has limited sustainability (without continuing project support).
- This project was to some extent ‘train blazing’ in Tanzania and suffered from being a ‘stranded asset’ which has been overtaken by subsequent developments, some of which that were not foreseeable at project design stage (eg Chinese pipeline to Dar es Salaam, consideration of new 400MW power station for Mtwara).
- Sponsor capacity and capability is a key consideration. Artumas is an independent gas and oil exploration and production firm but was not experienced in power generation (and thus sub-contracted implementation of T&D activities, installation, commissioning and operation of generators and design and engineering of gas infrastructure). There is also a hint that Artumas was more engaged with exploration of reserves in the Rovuma Basin in norther Mozambique.



The due diligence failed to identify the very high risks in working with an untried company in such a complicated project in a very challenging environment.

- There was no involvement of Dutch firms.
- It is not possible to form an opinion on the adequacy of FMO project management or organisational structure for management of IDF as a whole. However, various shortcomings in the handling of this project have been identified (eg FMO decision-making, unclear financial plans not independently verified, warrant taken without clear strategy, no clear exit strategy).
- There is no evidence that FMO-A would, per se, have accepted less risk for this project (as proposals for FMO-A financing of senior secured loan [for upgrading of generating capacity from 12MW to 24MW] were approved in 2007).
- The initial role of FMO was clearly additional making possible re-entry to the gas field (and coverage of ESG to international standards). The subsequent development phase when Artumas gained access to the Oslo Stock Exchange was less additional as Artumas thus sourced alternative financing.
- The catalytic effect of IDF financing is possible but not confirmed.
- Some 'Lessons learned' were identified in the 2009 evaluation but there is no evidence of application of these in the wider IDF portfolio.
- Reporting on the implementation progress was sketchy whilst limited financial information appears to have been available at a time of escalating costs.
- Although documentation has not been scrutinised it is reported that an ESIA was undertaken in compliance with IFC standards (in the absence of said documentation it is assumed that this project would be categorised as 'A' or 'B').

### **Project Outcome**

In 2003 Artumas and GoT agreed to develop an integrated ‘gas to power’ project in Southern Tanzania which involved two separate activities i) exploration and development of a natural gas field and marketing of gas (G Project) and ii) gas-to-power-to-end-consumer project (E Project) including infrastructure (, gas processing plant (GPP), 27km pipeline), 12MW power plant (extendable to 24MW) and off grid transmission and distribution (T&D). The project was to replace inefficient diesel generators and upgrade and link three isolated diesel powered grids which historically had major difficulties in distribution of reliable power to this isolated region of Southern Tanzania bordering Mozambique, thus potentially relieving major constraints to regional social and economic development. Providing that the T&D component was completed the project would sell power to TANESCO (interim PPA).

Expected outcomes included provision of stable, reliable and affordable power in Mtwara province, reduction in generating costs by substitution of high cost oil imports with low cost domestic gas and private sector development thus leading to reduced national dependency on imported oil, reduced foreign exchange requirements and resultant greater ME stability of Tanzania.

Development impact was claimed to be high reaching beyond gas exploitation, transport and use in power generation to increased GDP growth and poverty reduction. These impacts were expected to be accomplished by increased household connection to the grid (rural electrification). Such expected impacts may have been unrealistic given the high cost of connection, unaffordability of tariffs by the poor and little acquisition/use of household appliances in rural Africa. The distribution component did not, in any case, go ahead, such that even more modest development aspirations were denied.

The re-entry of the Mnazi Bay well (FMO grant) was successfully concluded in 2005. The 12MW power plant and pipeline connection between the gas field and the power plant was operational from 2007. The off-grid T&D component was subject to an ORET subsidy becoming available on completion of debt financing (which did not go ahead). By 2009 the FMO investment was 100% provisioned. Power and gas extraction were reportedly heavily loss-making (pipeline operating at ~1% capacity) whilst the gas well had limited production (~1.7mmcf/day) – the well was almost ‘stranded’.

The project site was visited by a member of the evaluation team in November 2017. It is being managed by Maurel & Prom<sup>1</sup> (M&P, which took over the project in 2009<sup>1</sup>) and Wentworth (with which Artumas merged in 2010). The power plant (Now 100% owned and operated by TANESCO after handover now has an installed capacity of 18MW (9x2MW CAT reciprocating generators). Whilst gas from the Mnazi Bay well is now taken (from 2015) by a new (Chinese) 525km pipeline to Dar es Salaam together with the output of a further 4 wells (all outputs processed by the now-expanded GPP with connection to the Madiba GPP and thus to the pipeline to Dar es Salaam).

A total of 135 persons are employed on site although all skilled staff come from outside the local area.

Some community support projects were established by the project (15 projects totalling USD0.54M) the two largest projects being construction of Mnolela Secondary School (USD0.25M) and a ‘Small business and communication development project’ (USD’.12M). The filed visit reports notes that apart from the schools *‘It was not possible to see other community projects as they were completed 5-10 years ago and there is nothing left to visit’.*

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
xxi)	trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument);
xxii)	portfolio performance (including reasons for portfolio impairments);
xxiii)	co-funding/complementarity with FMO-A portfolio;
xxiv)	investment leverage/funding mobilization.
<p>2004 – FMO provided USD 1.7M grant (LDC) as a warrant for gas well re-entry and pre-development works which entitled FMO to 20% shareholding in ATJL (Artumas Tanzania Jersey Ltd).</p> <p>2006 – warrant converted into equity in combination with USD 12.8M (LDC) new equity in ATJL i.e. 20% stake (total USD14.5M)</p> <p>2006 – unsuccessful proposal to convert equity portion in ATJL into position in AGI (listed entity) for possible exit.</p> <p>2007 – follow on investment to maintain FMO/LDC equity position in ATJL with additional USD 15.3M equity investment (for re-financing expenses pre-financed by AGI (Artunas Group Inc). Facility nr. 0000100824?</p> <p>2008 – unsuccessful proposal to restructure USD 29.8M (LDC) equity investment in ATJL into two new facilities (USD 15M convertible loan by AGI and USD 14.8 M investment in Artumas Mtwara (Jersey) Ltd.</p> <p>Provision 2008: 50/100%; 2009: 100%; 2010: 100%</p> <p>2008 – 2011 – FMO shareholding lowered from ~20% to 7.46% as FMO declined to participate in additional capital calls.</p> <p>2012 – FMO exposure USD28.1M (7.46% equity of ATJL) 100% impaired. Recovery of USD1.38M for purchase of FMO shareholding.</p>	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <p>xvii) temporary/short term during the implementation period</p> <p>xviii) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</p>	
<p>Mnazi Bay Well was successfully re-entered in May 2005. The power plant (12MW) and pipeline connecting the gas field to the power plant were completed and operational in 2007 thus replacing the Tanesco diesel-fuelled facility. The T&amp;D (transmission and distribution) component has not gone ahead and the project thus sells power to Tanesco. Upgrade, expansion and operation of the T&amp;D component was dependent upon the ORET subsidy (which did not go ahead). Both power and gas activities were reportedly heavily loss-making (the pipeline reportedly operating at ~1% of capacity) whilst the Mnazi Bay exploration asset has very limited production (~1.7 mmcf/day) and is, to all intents and purposes, a 'stranded' gas field</p>	

(subsequently 'released' by construction of the Chinese-funded pipeline between Mtwara and Dar es Salaam).

Conclusion: Some infrastructure was delivered – Mnazi Bay Well was re-entered and productive, the 12 MW power plant and pipeline were completed and operational in 2007, thus replacing the expensive diesel-fuelled generators. However, the transmission and distribution component did not go ahead meaning only sale of electricity to TANESCO. Generation and gas extraction were reportedly heavily loss making and operating at a small proportion of installed capacity.

**JC1.3** *IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).*

**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

Expected development results which included secondary employment opportunities (fisheries, agriculture) have been largely unachieved. Although reference is made in documents scrutinised to strategic development of economic potential in Southern Tanzania, no figures have been noted relating to expected direct and indirect employment generation or estimates of total beneficiary populations other than in Client Credit Review 11/01/08 (Power Project – direct 140 persons, indirect 168; T&D – 176 persons; construction labour and other services – 3000 persons (2000 local) which included a training and certification process intended to improve post-construction earnings potential). However, a tentative estimate may be derived from references to intended installation of 5000 prepared meters and 40000 new connections (ORET grant) suggesting direct beneficiaries (but not necessarily employment) of new power supply of the order of ~150000-200000 persons.

Conclusion: Most expected development results were not delivered (including indirect employment generation). Expected beneficiaries of the T&D component were some 150000-200000 persons (i.e. expected 40000 new connections).

**JC1.4** *IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)*

**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

Development impacts have been limited (because the T&D component did not go ahead). Expected development results included:

*Economic Development* – a) consumer and industry in remote rural location benefitting from access to reliable power supply; b) infrastructure for economic development (industry, agriculture,

processing, further development of gas market); c) reduction of government subsidies to region (~USD 11M per annum); d) savings on hard currency for diesel power generation; e) revenue generation for TPDC and GoT (royalities and tax).

*Environmental Development* – the population of the Mtwara region is 1.27M people (2012 census) of whom ~5% have connections to power supply. The main energy source is firewood and charcoal with kerosene mainly used for lighting (AGI, through FMO, was in agreement with VROM for purchase of CDM Carbon Credits).

*Social Development* – expected direct and indirect employment generation was noted in JC1.3 above.

#### *FMO Added Value*

- FMO support in early stages launched and carried project forward, the initial grant/warrant had added value.
- AGI able to raise other financing (public and private) due to FMO participation (i.e. catalysation effect)
- FMO emphasis on environmental and social issues and on project governance structures.
- FMO appointment of board member (minority protection rights)

Conclusion: Expected economic development results included:

- i) benefits to consumers and industry from access to reliable power supply
- ii) economic development arising from i)
- iii) reduction of GoT regional subsidies
- iv) savings on hard currency by substitution of diesel generation
- v) increased revenue generation

Actual results were i), ii), v) – not delivered; iii) no information; iv) achieved.

Expected environmental development results included reduced emissions in power generation and substitution of bio-fuels for cooking.

Actual results were very limited (although Artumas did initiate CSR projects including establishment of schools for girls, some upgrading of infrastructure and development of agricultural enhancement programmes. Expected social development results included direct and indirect employment generation – delivered only to a very limited extent.

#### **JC1.5** *IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio*

**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

#### Monitoring

FMO had frequent Client contacts in 2006 and 2007 and an FMO Board Member was appointed in 2006, recessed in 2007 (potential COI) and restored in 2008. Reporting on project implementation progress in 2007 and 2008 was sketchy whilst limited financial information appears to have been available at a time of increasing project costs. The African Dept. of FMO was lead but other involved departments included LCD, Africa BD, Africa PM, PAR and ORET.

#### Administration

Characterised by the 2009 evaluation as '*a bit disorganised*' and noting a number of reporting mistakes (eg incorrect proposals, warrant not registered in Infosys, multiple errors in Delphi Cover Sheet, wrongly stated approved amount (2007), wrongly identified borrower....). IC

criticism of proposal ('lacks substance') – this proposal has not been made available or scrutinised by the evaluator.

#### Supervision Activities

Exit was reportedly considered but not advanced in 2006 on the grounds that a rise in AGI share price enabled raising of capital in the markets (i.e. FMO additionally was no longer needed). In 2008 a restructuring proposal (to split LDC equity investment of USD 29.8M into two new facilities i.e. USD 15M convertible loan to AGI and USD 14.8M investment in Artumas Mtware (Jersey) Ltd) was made as response to FMO unwillingness to meet capital calls due to escalating operation costs. The proposal did not go ahead, overtaken by bids for parts of Artumas. Exit proposals in 2008 also did not proceed as, following the world economic crisis, equity valuation became lower and lower. Reference is made mainly to the 2009 Evaluation conclusions in summarising the following assessment of FMO performance in monitoring, administration and supervision.

FMO appears to have been informed to a greater or lesser degree but failed to take action in a number of cases e.g. continuing increases in project costs were not queried (e.g. 2006 proposals estimated capex at USD 91M whilst the 2007 proposals [and 2006 figure] is USD 123M – neither proposal has been scrutinised by the evaluator).

Conclusion: FMO was involved in frequent monitoring during the development stages but during implementation reporting of progress and financial information appears to have been sketchy. Administration was characterised by the 2009 evaluation as 'a bit disorganised' and a number of mistakes were identified in reporting.

## EQ 2 – Additionality and catalytic effects

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

No comparative ratings or profiles of the IDF portfolio and FMO-A portfolio have been examined in documentation made available for this project.

The 2007 IOB Case Study noted:

*'And with respect to FMO-A catalysation was - at the very least - very delayed. In this connection also another point needs to be mentioned. It is most likely difficult for FMO-A to reject a request for financing if the project is already financed in previous rounds by FMO-LDC and processed through a similar approval procedure, as correctly noted in the advice from the IC. In fact, in such cases a catalytic impact on FMO-A is to some extent automatic and institutionalised. Finally, the holding company AGI has been reasonably successful in securing funds through its IPO, the listing on the Oslo Stock Exchange and a number of subsequent fund raising rounds. It is unclear and impossible to verify to what extent the FMO-LDC investments have influenced the results of these funding activities'.*

Conclusion: No comparative risk ratings of the FMO-A and IDF portfolios have been examined. The 2007 proposals for FMO-A financing of a senior secured loan to Artumus was approved but did not go ahead (for upgrading generating capacity from 12 MW to 24 MW) such that there is no evidence that FMO-A would per se have accepted less risk than IDF.

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*



**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.  
**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

The proposal 24/05/2007 was USD 17.5M 15 year FMO – A senior secured loan to Artumas Mtwara, as part of a USD 35M project finance facility lead arranged by EAIIF. USD 15.3M follow-on LDC equity investment in Artumas Tanzania to maintain a 19.65% share (on top of earlier USD 14.5M equity investment) (i.e. USD 1.7M grant/warrant 2004 and USD 12.8M equity investment 2006). The FMO – A proposed investment was to upgrade the generating capacity from 12MW to 24MW. Senior debt did not materialise, the EIAF mandate was cancelled and other potential investors did not come in. FMO approval thus expired.

However, the 2008 IOB Case Study discussed this issue:

*'A catalytic impact of FMO funding may be possible but could not be confirmed. The contribution of FMO in the development phase of this project in 2004 was claimed by FMO to have a catalytic impact on other funds, notably - in the development phase - IDC and later on when the project becomes bankable, possibly FMO-A, Emerging Africa Infrastructure Fund (EAIIF) and / or European Financing Partners . Also both the initial participation in 2006 and the additional participation in 2007 are claimed by FMO to have a good catalytic effect with respect to FMO-A and EAIIF financing, hence using the same (!) reasoning. We were unable to verify if the funds from EAIIF and / or European Financing Partners in fact materialised. FMO-A financing was only approved in 2007 and is still not disbursed at the time of writing this report (2009). Hence, catalysation may have taken place with respect to EAIIF, but we could not verify this'*

**Conclusion:** The 2008 IOB case study concluded that a catalytic impact of IDF was possible but not confirmed. The contribution of FMO in the 2004 development phase and the 2006 initial participation were claimed as regards EAIIF, FMO-A and possibly potential European partners. Only the FMO-A financing was approved but was not disbursed. Thus, even if this was not immediate (and there are suggestions that a catalytic impact on FMO-A is to some extent 'in-house' and institutionalised if earlier financing has been satisfactorily implemented under IDF). Also at this stage AGI (holding company) was successfully raising funds on the Oslo Stock Exchange but the extent to which this fund-raising might have been a catalysation effect of previous IDF funding is not clear

### **JC 2-3** ***Additionality of IDF Loans and Equity Investments***

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed investment, start-up, technical assistance...)

FMO's initial role was highly additional. The USD 1.7M grant/warrant made exploration of gas reserves possible and FMO also insisted on full coverage of environmental and social issues (ESIA not scrutinised by evaluator). The participation of FMO as equity provider also provided (potential) comfort to (potential) investors. With the rise in ESG share price (~2007) so ESG had access to markets and raised funding (IPO, private placement, convertible bond and the FMO (LDC) additionality and catalytic tole was less evident although the FMO-A server debt facility (which would have facilitated EIAF participation) was an attempt to continue FMO's catalytic (and additionality) role.

The 2008 IOB Case Study also casts doubt on the continuing additionality of FMO financing noting that strategic shareholder AGI had obtained access to the Oslo Stock Exchange by 2005 and the development stage was completed by 2007 (80-90% of the total investment was supplied by AGI – equity and bonds through Oslo). Thus the 2006 and 2007 equity participation by FMO was less likely to be additional. This case study was unable to verify the claimed catalytic effect of funding from EAIF and/or other financing partners ie:

*'The claimed catalytic impact on FMO-A financing is doubtful since this is conceptually not supported (not private sector funding), not fully independent of FMO-LDC involvement and very much delayed (not disbursed at the time of writing this report (2009)). After the FMO-LDC finance in 2004, 2006 and 2007 other investors participated indirectly in the funding of Artumas Tanzania Jersey Ltd, through the Oslo Stock Exchange. It is, however, difficult to find support for the assertion that interest from other investor is directly the result of the equity participation of FMO'*

**Conclusion:** The initial role of FMO/IDF was largely additional making possible re-entry to the gas field and coverage of ESG in compliance with best international practices. Once ESG had access to the Oslo Stock Exchange for fund raising so the additionality of FMO reduced (whilst still representing a plus for potential investors). Thus, the development phase was much less additional (80-90% of financing coming from equity and bonds through Oslo). See also above regarding catalysation.

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

<b>JC 3.1</b>	<b><i>Evolution and drivers of portfolio performance pre and post 2012</i></b>
<b>I-3.1.1</b>	Portfolio performance and trends, in particular 2002-2011 and 2012-2016
<b>I-3.1.2</b>	Portfolio repayments/realisations and recycling in new projects
<b>I-3.1.3</b>	Performance of projects with FMO-A and/or other government funds
<b>I-3.1.4</b>	Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<b>I-3.2.2</b>	Balance sheet strength, profitability and cash flow/liquidity
<b>I-3.2.2</b>	Utility of Carnegie revolvability model in managing IDF operations
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<b>I-3.3.1</b>	Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting
<b>I-3.3.2</b>	Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<b>I.3.4.1</b>	Updated Carnegie model including a range of performance scenarios up to 2018 and beyond
	Not applicable to individual project performance.
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>



**I.3.5.1 - Review performance and sustainability of 15 projects selected for desk review.**

Given the limited achievement of the project aims (i.e. delivery of 12MW power plant pipeline and exploration and development of a gas well (which is a depleting asset) but no delivery of (off-grid) T&D system) the project has not met expected targets for delivery of power to consumers. However, the power plant is operational but apparently not functioning at expected capacity (no power generation stats are available) but reference is made to the pipeline operating at only about 1% of capacity; the inference is thus that the power plant is operating at considerably less than the specified 12MW capacity, so, assuming gas continues to be available it is presumed that the power plant could continue to physically generate power for sale to the national grid and in that respect might be considered to be sustainable. However, the plant is reported to have significant operating losses and in that respect financial sustainability is unlikely. Conclusion: The gas field is a depleting asset. The power plant is operational albeit it was not operating at expected capacity (no current power generation stats have been scrutinised) and presumably could be expected to operate for its design life (subject to adequate maintenance) as could the pipeline. However the plant was reportedly suffering considerable operating losses and financial sustainability is unlikely in these circumstances.

**EQ 4 – ESG Risk Management**

Although the 2009 Evaluation rates environmental and social outcomes as ‘satisfactory’ no ESIA documentation has been scrutinized by the evaluator. Responses below are based upon somewhat laconic references in other source documentation.

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)****JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio**

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

Although not actually stated in documentation scrutinised it is assumed that the project was categorised as either A (significant impacts that are sensitive, diverse or unprecedented or that affect sites and facilities subject to physical works) or B (in comparison with category A potential impacts less adverse and more limited, fewer, site specific) in that a ‘full blown’ EIA was undertaken to WB standards and in compliance with IFC Performance Standards and approved by NEMC and Tanzanian national authorities.

Conclusion: It is not possible to identify the categorisation of this project but it is assumed to have been categorised A or B and it was not possible from documents scrutinised to identify trends in the nature and balance of ESG risk in the IDF portfolio as a whole

**JC4.2 IDF-financed projects contributed to green and inclusive development**

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, ‘emission avoidance’ or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of ‘doubling impact and halving footprint by 2020’

A USD 3M combined credit facility between Artumas and the Netherlands Ministry VROM was arranged in October 2008 for the sale and purchase of carbon emissions generated by the MEP project. It was estimated that this would result in a reduction of 200000T of greenhouse emissions over a 7 year period. No reference has been made to contribution towards the FMO targets (doubling impact and halving footprint by 2020).

Limited references to social impacts in the 2009 Case Study [e.g. *'no impact on society through taxes'* (loss making and potential negative impact on government budget)]. Reference to Artunus initiating CSR projects in the region including establishment of girls primary and secondary schools, development of agricultural enhancement programmes and some upgrading of infrastructure.

Conclusion: Transfer to gas-fuelled power generation was estimated to have reduced CO2 emissions by 5524 MT in 2006 and 7932 MT in 2007 (the only years for which figures are available). Overall it was estimated that there would be a reduction in GHG of 200000 MT over a 7 year period (which given the reported figures for 2006 and 2007, appears to be a considerable over-estimate). A USD 3 M combined credit facility between Artumas and the Dutch Ministry VROM was arranged in 2008 for sale and purchase of project carbon emissions.

**JC4.3** *FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices*

**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3** - Evidence of ESG risk assessment

**I-4.3.4** - Evidence of ESIA and ESAP preparation and implementation

**I-4.3.5** - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)

An ESIA was undertaken in compliance with national and international norms including identification of ESG risks, mitigation measures and monitoring activities under implementation of an ESMP. (ESIAs were carried out in 2004/5 for the well re-entry and in 2007 for the 3D seismic programme, exploration, drilling and T&D component [this latter component has not been implemented]). ESG impacts and mitigation activities have been reported annually. The 2009 Evaluation reports that *'Artumas has been a responsible and ecological and socially responsible sponsor, conscious of their direct 'neighbours' and took all deemed necessary measures to minimise negative impact'*. The E&S action plan was reportedly included in the first financial proposal (not scrutinised by the evaluator) whilst ATJL was reported to have a corporate social responsibility plan (environmental awareness, H&S, education and training).

Conclusion: Although the relevant documentation has not been made available to the evaluation it is reported that an ESIA was undertaken in compliance with national and international norms including identification of ESG risks, mitigation measures and monitoring activities under implementation of an ESMP.

**JC4.4** *Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management*

**I-4.4.1**

Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management

**I-4.4.2**

Evidence of feedback and application of lessons learned in subsequent projects

Reported monitoring of ESG issues but no reference to ESG outcomes (see above).

No reference to ES issues among the 'lessons learned' in the 2009 Evaluation report and no evidence has been examined of overt Mtwara feedback and application of ESG lessons learned in subsequent projects

Conclusion: 'Lessons learned' were identified by the 2009 evaluation but no evidence has been examined of feedback and application of these lessons learned in the wider IDF portfolio..



## EQ 5 – Policy

To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
N/A	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
There is no reference to involvement of Dutch companies in documentation scrutinised.	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
<p>Apart from a proposal for FMO-A investment there is only reference to combining LDC and ORET funding (which did not go ahead). The E Project was estimated at USD 94M (2007, FINVO 2007) to be funded by equity (28%), ORET (28%), EIAF/FMO project finance (35%) and internal cash generation (9%). Also, upgrade, expansion and operation of the T&amp;D system (i.e. for the Mtwara Transmission and Distribution Company) was proposed for an ORET grant (for provision of 40000 new connections) to become available upon completion of debt financing.</p>	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
<p>There is no overt reference to FMO policies in documents scrutinised. However, some themes of policy may be surmised from references to expected development impact and role of FMO, (e.g. Client Reviews Artumas 11/01/2008 and 12/05/2009 – the project was expected to have financial, economic, environmental and social development impacts whilst contributing to FMO additionality, added value and catalysation role).</p> <p>FMO-LDC perceptions of risk and compliance with FMO criteria can be summarised as follows:  04/08/2005 Memo – Fund Manager: ‘...project complies with all criteria; project considered to have good catalytic impact on FMO-A and EAFIF’  26/07/2006 Financial Proposal: ‘Mtwara is a high risk project with contractually agreed returns on the power distribution component of the project which are in line with other projects and more uncertain returns with</p>	

*an attractive upside on the natural gas distribution component.....in summary the Mtwara project is considered a high development impact project'*

IC 24/08/2006: *'The project is considered high risk and complex but has a very high development impact and fulfills FMO-A, FMO-LDC and ORET goals well'*

The 2009 evaluation refers to FMO investment and development objectives as:

- *FMO is deeply involved in multiple aspects of Tanzania's power sector and this project fits this strategy.*
- *The project is a high profile showcase for rural electrification.*
- *High development impact because the population in a relatively remote area will benefit from access to reliable electricity: 5000 prepaid meters will be installed.*
- *ORET grant is to provide for 40,000 new connections.*
- *Combining ORET and LDC funds to get a project off the ground.*
- *The 2004 LDC grant including warrant and FMO's active involvement in E&S issues since.*
- *FMO is considered a joint venture partner who actively assists in developing the project.*

The only reference to comparison with procedures of other DFIs is with reference to coverage of ES issues i.e. *'A 'full blown' ELA was performed as described by WB standards and in compliance with IFC Performance Standards....'* (2009 Evaluation).

LDC infrastructure criteria were met (except for the transaction amount exceeding the specified 10% of total FMO-LDC fund size (ie investment of USD28.1M [€22.9M] cf 10% fund limit of USD27.1M [€20.8M]) – this requirement was waived by the LDC Fund Manager ie

*'The FMO-LDC Infrastructure Fund criteria are: country of DAC list, improvement of infrastructure, element of country PRSP, in line with FMO financing policies, private ownership, financially and economically sustainable, good corporate governance, social and environmental contribution, poverty alleviation, additional & catalytic impact, expected return above required minimum (10% mezzanine, 15% equity), return in line with market, finance below maximum transaction amount of 10% of total FMO-LDC fund size, accumulated FMO products not exceeding limit (less than 40% in one sector, fund or country), stake in share capital less than 20%, FMO-LDC funding less than 49% of total transaction'.*

From the documents scrutinised it is not possible to form a clear opinion of the adequacy of the FMO organisation structure for management of IDF. However there are various references to shortcomings in the handling of the Mtwara Project e.g. (2009 Evaluation) *'Main risks were identified, problems were flagged; FMO could have taken better decisions. Weakness was unclear financial plan which was not verified by independent engineer. Warrant was taken without clear strategy. Warrant without benefit/upside potential. No clear exit.....'*

Among the lessons learned:

*1) with complicated projects like Artumas which is a fully integrated energy project that was a greenfield project combined with an inexperienced borrower/sponsor, the project assumptions and costs and financial model should be tested by an independent expert.*

*2) when reviewing project finance deals, an analysis should be made of the actual performance compared with the original projections in order to determine whether a project is well on track and to signal major differences.*

To improve CG an FMO Board member was appointed to AGI and 'key man-risk' was reduced by creating a corporate VP role to achieve segregation of functions and delegation (no 'one-man-show').

**Conclusion:** Although it is not possible to form a clear opinion of the adequacy of FMO organisational structure for management of IDF there are various shortcomings in handling of the Mtwara project ie FMO decision-making, unclear financial plans not independently verified, warrant taken without clear strategy, no clear exit strategy

**JC 6.2** ***FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support***

**I-6.2.1** - Appropriateness of available FMO experts

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

No project information on ratios of FMO staff to value of operations. Availability of FMO expertise is covered under JC6.1 above (especially reference to 'Lessons Learned').

The timing of the FMO-LDC selection and approval process is summarised below:

<i>November 21, 2003</i>	<i>LDC Grant proposal (registration date)</i>
<i>February, 2004:</i>	<i>LDC Grant proposal (date Grant Committee)</i>
<i>August, 3, 2005:</i>	<i>FINPRE (labeled as "FINVOB for review")</i>
<i>August 4, 2005:</i>	<i>MEMO LDC Fund manager to IMR, MB and deal team</i>
<i>December 13, 2005:</i>	<i>Notitie: Financial Proposal Mtwara Tanzania</i>
<i>July 26, 2006:</i>	<i>FINPRO (participation)</i>
<i>August 23, 2006:</i>	<i>IMR advice of Artumas finance proposal</i>
<i>August 24, 2006:</i>	<i>Advice from investment committee (IC)</i>
<i>August 29, 2006:</i>	<i>MB adoption of IC advice and approval financial proposal including conditions IC</i>
<i>April 11, 2007:</i>	<i>MEMO LDC Fund manager to IMR, MB and deal team</i>
<i>April 25, 2007:</i>	<i>FINPRO (additional participation)</i>
<i>May 14, 2007:</i>	<i>IMR advice of Artumas finance proposal (additional participation)</i>
<i>May 16, 2007:</i>	<i>Advice from investment committee (IC)</i>
<i>May 29, 2007:</i>	<i>MB adoption of IC advice and approval financial proposal including conditions IC</i>
<i>June 5, 2007:</i>	<i>LDC Grant proposal (date Grant Approval), costs of legal counsel</i>

The 2008 IOB Case Study observes:

*'The selection and approval process of the 2004 FMO-LDC grant for Artumas took three months and this should be characterized as moderate for a grant Selection and approval of the 2006 FMO-LDC equity participation (US\$ 14.5 mln) for Artumas should be characterized as lengthy: a previous proposal was already submitted as early as December 2005. A period of two months was needed for the selection and approval of the 2007 additional participation (US\$ 15.3 mln) and this should be characterized as short. It is was not clear why the first equity participation took so long get approved'.*

**Conclusion:** Not all expected infrastructure was delivered. Although there is no information on ratios of FMO staff to value of operations there is reference to long decision-making and approval processes

### **JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?**

**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

Effectiveness of FMO management of this project has been covered above but, with reference mainly to the findings of the 2009 evaluation.

#### *Development outcome*

- Project business success – unsatisfactory result below expectations, project in financial distress, no adequate return for equity investors.
- Contribution to economic growth – unsatisfactory
- Environmental and social outcome – satisfactory
- Development outcome rating – unsuccessful

#### *FMO Work Quality*

- Screening, appraisal, structuring – unsatisfactory
- Supervision and administration – unsatisfactory
- FMO's role and contribution – partly unsatisfactory
- FMO's overall work quality rating – unsatisfactory

#### *Government Funded Programmes*

- Contribution to programme objective – unsatisfactory
- Compliance with programme criteria – satisfactory

**Conclusion:** Based upon the findings of the 2009 evaluation FMO work quality was largely unsatisfactory and did not contribute to (project or Fund) success





## Sources of Data

The absence of financial proposals and supporting technical documentation (e.g. feasibility studies, technical reports, ESIA) limits the degree of detail as regards expected development results (outcomes and impacts). Sources for all data tables below:

Document title	Date
Investment and Mission Review	24/05/2007
Subscription and Share Transfer Agreement	05/10/2007
Subscription and Share Transfer Agreement	16/10/2007
Client Credit Review – Artumas	11/01/2008
Score Card Artumas Tanzania (Jersey) Ltd	10/06/2008
Client Credit Review	10/06/2008
Investment and Mission Review	18/06/2008
Letter FMO/Artumas: Power of Attorney	18/06/2008
Valuation Worksheet	30/06/2008
Change Request	21/08/2008
Client Credit Review	22/08/2008
Score Card Artumas Tanzania (Jersey) Ltd	22/08/2008
Letter Artumas/FO: Project Rhino	30/10/2008
Investment and Mission Review	10/09/2008
Balance Sheet	01/11/2008
Change Request	21/11/2008
Score Card	15/04/2009
Client Credit Review	12/05/2009
Client Credit Review	19/05/2009
Client Credit Review Artumas	June 2009
FMO Evaluation Form	08/06/2009
Valuation Worksheet	30/06/2009
Score Card	20/08/2009
Client Credit Review	21/08/2009
Letter Umoja/FMO: Oret Grant	23/03/2010
Letter Oret/FMO: Scope of Works	26/03/2010
Letter Oret/Umoja: Scope of Works	26/03/2010
Client Credit Review	29/09/2010
Investment and Mission Review	26/10/2010
Exit Memo	19/03/2012
Client Credit Review	20/03/2012
Client Credit Review	29/03/2012
Change Request	29/03/2012
Ending Notice	24/04/2012
Share Purchase Agreement (29835 ordinary shares in Wentworth Tanzania (Jersey) Ltd	2012



**ANNEX 1****Field visit Note: Artumas Mtwara Tanzania 6, 7 & 9/11/2017**

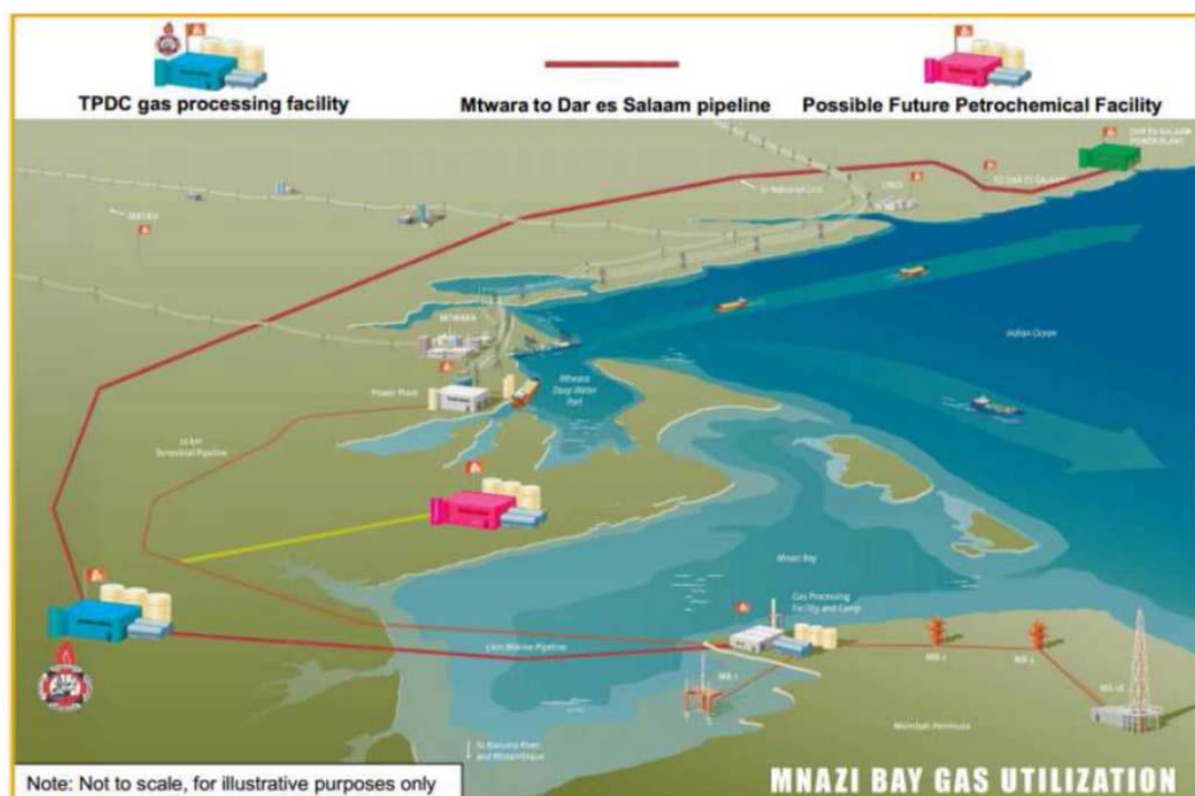
Field Visit Artumas Mtwara Tanzania - 6, 7 and 9 November 2017

Andrew Danino

1. Introduction

The field visit involved (i) meetings in Dar es Salaam with Maurel & Prom<sup>28</sup> (M&P, which took over the project in 2009<sup>29</sup>) and Wentworth (with which Artumas merged in 2010), and (ii) travel to Mtwara and Mnazi Bay to see the gas processing plant (GPP), community projects and other stakeholders. It should be noted that none of the M&P people were familiar with the original Artumas project.

Under the current structure, the Mnazi Bay GPP and related assets are owned: M&P 48.06%, Wentworth 31.94%, and Tanzania Petroleum Development Corporation (TPDC) 20%. The graphic below shows the pipelines from the GPP (bottom right).



The original Artumas project involved one pipeline to the 12MW TANESCO power plant in Mtwara. It uses natural gas fuel from Mnazi Bay and was inaugurated in March 2007. The plant is 100% owned and operated by Tanesco, it comprises of nine (9) Caterpillar Gas reciprocating generating units each with a capacity of 2MW making a total installed capacity of 18MW (shown by the thin red line). In 2015 the GPP started deliveries of gas to a 532km pipeline that goes to Dar es Salaam (thick red line) that is run by TPDC (gas processing facility in bottom left). The \$1.33 billion pipeline was built as part of a plan to add about 2,000 megawatts of new gas-fired

<sup>28</sup> M&P is a Paris listed oil and gas company

<sup>29</sup> M&P 2017 corporate presentation, <http://www.maureltprom.fr/fr/relation-investisseurs/resultats-presentations/presentations>

electricity generating power by 2018 to increase Tanzania's generating capacity to 10,000 MW by 2025<sup>30</sup>.

As a result, the Mnazi Bay GPP is no longer dependent solely on one customer, the TANESCO power plant in Mtwara (which has been upgraded to 18MW).

## 2. Persons Met

Elias Kilembe	Deputy managing director Maurel & Prom Tanzania
David Chaudronnier	Field manager M&P Mnazi Bay
Reema Mnandowa	HSE manager M&P Mnazi Bay
Haruna Mchessu	Operations leader M&P Mnazi Bay
Mussa Mziya	Manager economics, Bank of Tanzania, Mtwara
Harussi Sadala	Headmaster Msimbati Secondary School
Baraka Nsemusa	Wentworth Resources Tanzania (WWT)
Neema Ndikumwami	Consultant WWT - by phone
Peter Gathercole	CSI Tanzania - by phone

## 3. Overall Findings and Impressions

The M&P facility appears to be doing well. With its connection to the new TPDC pipeline to Dar, there is now a second outlet for processed gas. Nevertheless, the problems of dealing with TANESCO persist.

The project contributed to the electrification of the region outside of Mtwara, as evidenced in the villages along the road to Mnazi Bay. Direct employment opportunities for local communities have been limited. Community projects while modest have been important, especially in the education sector.

## 4. Meetings

### a) Baraka Nsemusa - Wentworth

Wentworth Resources is a publicly traded (OSE: WRL, AIM: WRL), independent oil & gas company with: natural gas production; exploration and appraisal opportunities; and large-scale gas monetisation initiatives, all in the Rovuma Delta Basin of coastal southern Tanzania and northern Mozambique. He was familiar with the Artumas project and the merger with Wentworth.

He provided a list projects supported by W. Although the gas processing plant has a capacity of 80 MMcfd, it is actually working at only about 40 MMcfd. The low LNG price and uncertainty over GoT policy regarding the sector has meant that many projects are on hold.

Mnazi Bay is more than an hour by road to the south of Mtwara and about 20km from the Mozambique border.

### b) Mnazi Bay Gas Processing Plant

The GPP now processes gas coming from 5 wells, as compared with only one when the Artumas project was implemented. These 4 recent wells are located on-shore close to the GPP. Gas comes

<sup>30</sup> <https://uk.reuters.com/article/tanzania-natgas/tanzania-launches-project-to-pipe-natural-gas-to-capital-idUKL1N12B0EX20151011>

from the wells at a pressure of up to 180 bar. The facility has been expanded so that it can process up to 10 MMcfd, four times the original 2.5 MMcfd capacity. As well as supplying MPP, M&P has built a new pipeline to the Madiba gas processing plant owned by TPDC some 10km from where gas can be sent in the Dar pipeline. The GPP is no longer dependent on MPP to take its output.

The gas from the wells is 97% methane and requires relatively little cleaning before leaving the facility.

There is a total of 135 people employed on the site (40 as security guards), which works on a 24-hour basis. It should be noted, however, that all skilled staff come from outside the locality and in particular Dar es Salaam and other areas where such people can be found.

The GPP is in the Ruvula Marine Park and is less than 20km from the Mozambique border.

M&P is implementing plans to increase further the capacity of its Mnazi Bay facility.



In summary the visit to M&P was relatively brief and involved a tour of the production facilities by the field manager.

#### 5. Community Projects

The M&P HSE manager gave a guided visit to the local communities. Of the projects listed below by Wentworth only the Msimbati Secondary school could be visited. The other school, in Mnolela, was too far away. It was not possible to see other community projects as they were completed five to 10 years ago and there is nothing left to visit. It should be noted that the total amount spent on these 15 projects was a modest \$0.54m, an average of \$27,000.

Artumas Wentworth Community Projects – 2004 to 2013			
	Description	Amount (USD)	Implemented
1	Small Business and Communication Development Project for Mtwara district	\$120,000	2007

2	Micro Loans & Grants (EDP)	\$6,333	2008 - 2009
3	Donations to CCBRT Hospital in Dar es Salaam	\$10,000	2008 and 2010
4	HIV/AIDS Awareness program for Schools & Companies	\$5,000	2009
5	100 Sports Ball Donation		2011
6	Education Sponsorship Program (25 pupils at secondary school – 8 went on to university)	\$16,000	2012
7	Donation: MaKuYa Festival	\$5,000	2012
8	Construction of Mnolela Secondary School	\$250,000	2007 - 2009
9	Water supply – Mnolela Secondary School	\$8,076	2012
10	Electricity supply – Mnolela Secondary School	\$10,000	2012
11	Mchepea Vegetable Farming Project	\$60,000	2005 - 2010
12	Construction of a Msimbati Secondary School	\$20,000	2004 - 2005
13	Construction of Msimbati Secondary School Kitchen	\$5,000	2013
14	Water supply – Msimbati Secondary School	\$5,576	2012
15	Community business centres	\$20,000	2007-2008
	<b>TOTAL</b>	<b>\$540,985</b>	
Sources: Wentworth Resources, Neema Ndikumwami			
Notes: Msimbati is close, and on the road to the gas processing plant in Mnazi Bay. Mnolela is about 50km north-west of Mtwara			

### Msimbati Secondary School

Msimbati is the main village close to the GPP. It is electrified but still appears to be relatively poor. The main economic activities are fishing, cashew nut farming and coconuts. As well as the secondary school, M&P has also supported the local primary school.

- The school has 172 pupils (117 girls and 55 boys). The reason for the gender disparity is that families often encourage boys to start working after primary school.
- The school has surprisingly high 21 teachers, a ratio of about 8 pupils to 1 teacher. Primary schools may have 70 or more pupils in a class.
- Teaching is undertaken in 3 languages, at the outset in primary school in the local language Kimaraba, then in Swahili and finally in secondary school in English.
- The school has a dormitory for girls even though they come from nearby. This was built to enable girls to study after lessons have ended, something they could not do if they went home, where they would be expected to do domestic work.
- An NGO supplied a large number of text books in English for the library, most of which are too advanced for pupils.



- The 5 rain fed water tanks avoided the need to bring water from 0.5km away.
- 4 high performing students have been sponsored to study at advanced secondary schools in the region
- As well as the projects listed above, in 2013 the, Wentworth Africa Foundation connected Msimbati Secondary School to electricity for the first time since the school's inception in 2004.
- Other projects that the headmaster mentioned as being necessary were:
  - Accommodation for teachers
  - Fencing
  - Better latrines
  - Completion of laboratories

#### 6. Meeting with Bank of Tanzania in Mtwara

- The power supply in Mtwara continues to be erratic. The focus is now on the replacement of the existing small Mtwara plant with a new 300MW+ plant that would serve the whole region and see the end of power supply problems.
- Government/TANESCO has been talking about a rural electrification initiative and the installation of a 132KV transmission line.
- The new 532km gas pipeline and the increase in supply from offshore fields will supply the Kinyarezi power stations in Dar as well as the new Mtwara power station and the Dongote cement factory.
- Dongote is running at a fraction of capacity as it is making losses while it uses interim diesel generators.

#### 7. Peter Gathercole – CSI Energy

PG was involved in the Artumas project while working at the engineering, procurement, and construction (EPC) contractor that was involved in the replacement of the diesel generation sets at the Mtwara power plant (MPP) with gas turbines. He outlined the reasons for the failure of Artumas project. In short, the project was dependent on TANESCO allowing Artumas to connect the upgraded MPP that it managed under a franchise<sup>31</sup> with new and existing customers in the

<sup>31</sup> Artumas in fact sub-contracted the operation of MPP and the T&D activities.

region, which did not happen. In particular, the planned T&D expansions did not happen. As a result, in 2010 MPP was handed back to TANESCO.

The Artumas project was part of a regional development plan to use electrification as a way of increasing economic activity in the south-east part of Tanzania through, inter alia, industrialisation. A flagship project that was mooted at the time of Artumas was the 3 million tons per annum capacity Dongote cement near Mtwara, which finally started operations in 2015.

Current situation:

- the new gas pipeline to Dar is taking gas to two TANESCO power stations, Kinyarezi 1 and 2 (which his firm CSI built). With Kinyarezi 3 coming on stream in 2018, the three power plants will add 600MW (50%) to Tanzania's overall generating capacity.
- In Mtwara Japan has financed a feasibility study and will provide funding for a new 400MW plant that will be operational in 3 to 5 years.
- Dongote has a 25MW gas turbine power plant at its factory that has yet to be connected to the new Dar gas pipeline. It is currently using diesel generators that are too expensive resulting in operating losses. It is only running at about 25% of capacity<sup>32</sup>.
- The M&P GPP has continuing problems with non-payment by TANESCO.
- Upgrades by TANESCO of the transmission lines in the region from 11KV to 33KV (and ultimately to 132KV) have not happened. Transmission losses and overloads remain a major problem.
- MPP is being increased to 24MW.
- TANESCO's continuing financial problems and low operating efficiency means that it is frequently delinquent in paying for gas and electricity that it purchases. Apparently, this is a major concern for M&P that is considering stopping supplies of gas from Mnazi Bay until it has been paid.

#### 8. Neema Ndikumwami

NN was involved full time with Wentworth on the community projects listed above. Currently she works in her spare time as a volunteer for the Wentworth Africa Foundation. By Skype, she provided further information on the projects:

- *Mchepea Vegetable Farming Project* - This W initiated project encouraged 100 women located near the Artumas GPP to grow vegetables (tomatoes, aubergines, peppers etc) for while it was being built. W negotiated attractive prices for the vegetables on behalf of the growers. When the plant was finished, however, the demand for vegetables dropped and it was proposed that they sell them in Mtwara. However, without transport this did not happen, and most women abandoned the cultivation of vegetables. Some women continued and there is demand from the new TPDC GPP. Overall a partial success.
- *Mnolela Secondary School* – This is located half way on the main road from Mtwara to Lindi which was the other major town that was to benefit from the regional electrification that was part of the Artumas project. W chose this school because in Mnolela village there were 7 primary schools but only 1 secondary school. Prior to the expansion, there was a shortage of secondary school places. This is the single biggest recipient, accounting for 50% of community projects. It involved expanding the school from 3 to 10 classrooms, adding teacher accommodation, an administration building and a dormitory for pupils. Funding was provided by W and individual donors. GoT provided extra teachers for the

<sup>32</sup> <http://www.miningne.ws/2017/08/11/dangote-cement-to-start-using-gas-to-power-tanzania-plant/>



expanded school. In general, primary schooling is relatively well supplied by GoT while secondary schooling is poor, especially in rural areas.

- *Small Business and Communication Development Project.* This involved the renovation of three community centres in and around Mtwara town, including connection to electricity. The rehabilitated centres were used by micro-enterprises, including groups of women making garments, freezers for fishermen and a community radio. Substantial matching grants were provided by East African Development Bank, AfDB and Finland.





# Omera Petroleum Ltd, Bangladesh

The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

**Remark:**

Following the receipt (November 2017) of documentation after 2015 there are no major data limitations. The FMO position as regards exit or hold is expected to be clarified in early 2018.

## 1. Project fiche

Project title	Omera Petroleum Ltd
<b>Project description</b>	<p>Omera Petroleum Ltd (OPL) is developing, constructing and operating 4 LPG plants (main LPG station at Mongla Port on the Passur River and 3 satellite stations (storage, bottling and distribution) at Sherpur (Begra) 200km NW of Dhaka, Gherashal 50 km NE of Dhaka and Mirsarai 120 km N of Chittagong) with a total capacity of 100000 T/year. LPG is received at the main plant, distributed to the 3 satellite plants and thus to private and commercial users. Total project costs estimated at USD 60.3M FMO financing, IDF €4.5M equity and €8.6M senior loan – the senior debt was not disbursed and the loan was subsequently cancelled. In the base case OPL will ultimately process 80,000 ton/year (which is 80% of maximum utilization), of which 90% (equals approx. 300000 households) is for domestic use in cities and semi-urbanized towns where new houses are not equipped with gas connections. First time purchase will require a larger down payment for use of the cylinder (as security deposit made by the dealer), thereafter clients pay for filling only. The cylinder remains owned by OPL.</p> <p>Omera Petroleum Limited (OPL), a subsidiary of MJL Bangladesh Limited, has launched Omera LP Gas in Bangladesh considering the growing demand of customers. OPL has started LPG venture in Bangladesh with utmost commitment to convenience, availability, functionality and safety.</p> <p>MJL Bangladesh Limited (formerly Mobil Jamuna Lubricants Limited) is the joint venture company between state owned Jamuna Oil Company and EC Securities Limited (a subsidiary of the East Coast Group).</p>
<b>Sector</b>	Energy
<b>Stage</b>	(Start-up)
<b>Operation Dates</b>	<ul style="list-style-type: none"> <li>• CIP 11/10/2012 USD 13.6 M senior secured loan (FMO-A) USD 5.5M equity (IDF)</li> <li>• CIP 24/01/2013 USD 13.6 M senior standard loan (FMO-A) USD 5.5M equity (IDF)</li> <li>• IC Decision 22/02/2013 Approved but senior debt USD 9.5M (IDF)</li> <li>• FP 14/04/2014 USD 9.5M senior debt/loan (IDF) USD 5.5M equity (IDF)</li> <li>• IC Decision 01/05/2014 Approved €4.5 M equity; €8.6 M senior loan</li> <li>• Various subsequent IMR Approval Requests               <ul style="list-style-type: none"> <li>04/09/2014</li> <li>11/12/2014 SCR</li> <li>12/12/2014 LCR</li> <li>30/03/2015 LCR</li> <li>10/06/2015 LCR</li> <li>17/09/2015 SCR</li> </ul> </li> </ul>
<b>Contract</b>	FMO Client numbers 00036916; C10001566
<b>Country/Region</b>	Bangladesh, Asia
<b>Country category</b>	LMIC

Project total cost (€)	USD 60.3M		
IDF contribution (€)	€4.5 M equity; €8.6M Senior Loan		
Co-financing (€)	MJL Bangladesh Ltd 62.5%, BB Energy 25%, FMO 12.5% BB Energy is an independent energy trading company, with consolidated experience in trading, operations, chartering, logistics, storage, refining and financing. Trading more than 17 million metric tonnes (MT) of crude and products annually, BB Energy is most active in gasoil, gasoline, bitumen and fuel oil trade in the Mediterranean. Founded in Lebanon in 1937, the Group originally started as a grain and asphalt trading company before entering the oil industry in 1963.		
Loan Terms			
Senior/Subordinated	Senior		
Convertible	No		
Amount	USD 9.5 M		
Loan Agreement Date	19/12/2014	Facility No	0000128709
Currency	USD		
Tenor	7 years		
Grace period	12 months		
Interest rate	Reference rate LIBOR; floating		
Security	Yes – sponsor guarantees payment of all amounts outstanding under the Financial Documents and will fund any cost over-run by shareholders loans		
Fees	Front end fee 1.25% Arrangement fee – Approval fee – Monitoring fee USD 10000 Commitment fee 1% Prepayment fee 2% Cancellation fee 1%		
Disbursements			
Monitoring	-		
Key covenants	IFS Performance Standards & E&S Action Plan		
Conversion features	N/A		
Equity Terms			
Direct	Equity		
Indirect – Fund	IDF		
IDF Investment (\$, €m, local currency)	USD 5.6M; €4.4M; BDT 386.4M		
Total Project/fund	USD 60.3M		
IDF Stake (%)	12.5%		
Investment date	05/02/2015	Facility No	0000128716
Disbursements	16/04/2015 Disbursement in LCV		
Direct investment – exit strategy	IPO, trade sale or put option		
Direct investment -	Put option to sponsor MJLB for higher of 18 BDT/share (cost price) or		

put option terms	NAV/State. IPO obligated after year 3 of operation, 3 year lock up thereafter				
Fund life					
Grants					
Amount					
Convertible	Yes/No				
Purpose					
Grant agreement date		Facility no			
Key terms					
Disbursement	Dates and amounts				
Conversion terms					
Financial Risk and Performance					
	Financial proposal/approval				Client Review - Most recent
Client Risk Rating		E&S Risk	CRR		EDIS
			Standard	Classification	
	03/10/2012	B+*	60	F15	71
	26/10/2012	B-		F15 - >F16	71
	21/01/2013		59	F15	71
	22/02/2013	B-		F15 - >F16	71- >61
	01/05/2014	B+		F14	
	15/04/2015			F17	
	17/09/2015			F17	
	26/10/2015	B+		F17	
	18/11/2015	B+		F17	
	31/07/2017	B+		F17	
*Limited potential adverse impacts					
Loan - Impairment provision	N/A %				%
Equity - Fair value adjustment	Fair value equity valued at historical cost of €4.9M				%
Financial performance	See below				
Client Review -key findings	Source: IRC Meeting 25/11/2015 Main issues: 1) Corporate governance: majority shareholder MJLBL is not operating in line with existing shareholders agreement (cost overruns of \$8M which are guaranteed by MJLBL have been funded with a non-subordinated short term loan while these should have been funded by equity), company/CFO does not have experience with international financing and requirements which is also reflected in the slow compliance with CPS and board meetings are dominated by CEO/ shareholder of MJLBL), 2) performance is below the projections as presented in the FP (company was expected to be profitable in 2015, but is still loss making and generating negative operational cash flows, EBITDA margins going forward are expected to be lower than what was approved) and 3) no clarity about financing structure going forward (company is not also contemplating zero coupon bond issue). FMO board member is playing active role. <b>Credit:</b> Risk profile has increased. EBITDA margins are not being realized due to higher				

	<p>operating costs (current information suggested higher cylinder inventory/costs, but further detail still needs to be provided) and first profit is now expected in 2017 instead of 2015. Energy explained that as agreed with PE at the time, both equity and debt are managed by Energy by different persons. Equity is still valued at cost. No disbursement for the senior debt will be made until there is sufficient clarity on projections going forward and decision made on (revised) financing structure.</p> <p>Client to provide an updated financial model (BRAC Advisory Services is involved at the request of FMO) and Q3 2015 results to get clarity on projections and required financing structure going forward. Based on these projections and underlying assumptions, deal team will review financing structure. When there is more clarity, deal team will discuss with credit what approval process to follow. Deal team is getting feedback from our legal department on possibility to exercise put option of the basis of the breach of shareholders agreement (which MJLBL is contesting). This will also be discussed with Credit in due course.</p> <p>With respect to the equity, other minority shareholder BB Energy shares FMO's concern. BB Energy has the right to appoint the CFO and is currently recruiting a new CFO to support the existing CEO.</p>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p>No log frame has been examined. However, the described linkage to development impacts as set out in FP 17/04/2017 ie:</p> <ul style="list-style-type: none"> <li>• <b>Inclusive finance Y:</b> Positive impact on the health and time consumption of especially women and children, near 250k households are expected to be reached representing 1,250k individuals</li> <li>• <b>Green finance 0%:</b> Although this is among the cleanest alternatives for cooking purposes, it isn't a green transaction according to FMO's definition. However for IDF it qualifies as sustainable energy as LPG for cooking projects is being promoted and supported by the SE4All Initiative (SE4All is part of IDF's sustainable energy definition). There will be no requirements for GHG emissions reporting as direct emissions are negligible. OPL will only trade in LPG; the end users (scope 3) will contribute the majority of the GHG emissions (this issue is discussed under JC 4.2 below).</li> <li>• <b>Economic growth:</b> Creating employment from import to the distribution to the end user. Offering an efficient alternative for cooking that allows for more productive time consumption.</li> </ul>
<b>Assumptions</b>	<p>The main source of references below is the FP 17/04/2014</p> <p><u>Key risks/issues and mitigants</u></p> <ul style="list-style-type: none"> <li>• Market risk – mitigated by market research (expecting rapid market growth as further supply added)</li> <li>• Forex/trade risk – mitigated by pass through pricing and substantial buffer in gross margin. Sponsor MJLBL as an experienced trade in oil related products is well aware of the possibilities and limitations of pass-through pricing and how to manage that successfully.</li> <li>• Key E&amp;S risk – H&amp;S – mitigants: plans and H&amp;S system in place plus oversight of dedicated H&amp;S personnel. ISO 9001 certification of operations of all 4 stations.</li> </ul> <p>Other risks are also identified:</p> <ul style="list-style-type: none"> <li>• Investigation report on the reputation of Mr. Mejbabuddin – Investigation done by Risk Advisory. No integrity issues were identified.</li> <li>• Report by IE whether all licenses have been obtained in a transparent and legal manner – The IE (and also Risk Advisory) confirmed it is pre-defined which</li> </ul>

*conditions are required to obtain the license and the process is transparent and has been properly followed. All currently necessary licenses are in place. Final site approvals can only be obtained after construction works (ESAP) which is an administrative process defined by law.*

#### Corporate Governance Risk Analysis

- *Chairman of the Board (Mr Mejbahuddin) is a PEP with potential conflict of interest. He works at the division of Energy and Mineral Resources of the Ministry of Power, which is also responsible for granting permits/ approvals. Risk Advisory performed an integrity check and found that he 'has no discernible track record for corrupt or otherwise concerning business practices', 'nor has he been the subject of any regulatory scrutiny' and he has 'a reputation for exerting very little influence over the decision making process at the division of Energy and Mineral Resources'.*
- *BBE has been accused of bribery by the newspaper Malta Today. BBE has taken legal steps against this newspaper and the suggestive article had to be removed from the website.*
- *CEO of the project has extensive military and weaponry background (he is retired). OPL sees this as a benefit as he is familiar with high safety standards. Discussed with Compliance and found no issue.*
- *BPC is a UBO of OPL, a competitor of OPL and also the state-entity with whom OPL has to sign an agreement for conducting LPG related services. Risk Advisory performed an integrity check on BPC and has found only few issues of corruption/ bribery against individuals. BPC is 'considered among the less corrupt Bangladesh' state owned enterprises'. Also, it seems 'that BPC is unlikely to take any action to frustrate the project' because 'the Bangladeshi government is keen to attract private investment to the LPG sector'.*
- *The shareholders agreement will incorporate minority protection rights and adequate levels of material decision making have been agreed. Potential conflicts of interest are mitigated by arm's length contracts and appropriate exemptions from voting rights.*

#### Environmental and Social Risk Analysis

*The E&S categorizations for this project are B+ and PS 1-4. This project is perceived to have limited adverse impacts on environmental and social aspects. The key issues centres around the operational phase as the construction phase is almost complete (COD expected July 2014) These key issues are occupational health hazards such as accidental events from LPG leakage during operation at the stations, accidental events during LPG transport, occupational health and safety for employees during operation, Emergency Response and fire-fighting plan in case of fire and community safety during operation. There was no involuntary resettlement or displacement of agriculture farmers due to the implementation of the project. The proposed project is expected to contribute positively to Bangladesh natural gas shortage through provision of a green liquefied petroleum gas, while simultaneously bringing development opportunities to the area in terms of increased business activities and employment generation.*

*E&S issues are considered in greater detail below.*

#### Insurances

*The company has purchased four separate Construction All Risks policies covering the construction of the LPG storage and distribution facility at Mongla plus the three bottling plants at the different locations. Once construction is completed, the borrower will be required to purchase the following policies: i) All Risks, including business interruption, which provides protection for all physical assets and cover for financial consequences in the event of an 'Act of God'; ii) Third Party and Products Liability; iii) Motor policies covering the transportation trucks and any resultant liability claims;*

	<p><i>iv) Goods in transit insurance. These insurance requirements have been discussed with the borrower, who has undertaken to discuss them with their insurers, with the view of having the policies completed before the operational phase commences.</i></p> <p><u>Due Diligence</u></p> <ul style="list-style-type: none"> <li>• <i>Information sources used: IM, market study (Mott MacDonald), integrity report (Risk Advisory), ESLA, IE technical and E&amp;S report (Royal Haskoning), audited financial statements (ACNABIN) and management accounts of the Sponsor, legal DD report to be received (Mayer Brown JSM).</i></li> <li>• <i>Information obtained from: Sponsor, financial advisor, international consultants, co-investor/ supplier BBE,</i></li> <li>• <i>Due Diligence visit: deal team performed a due diligence visit, including meetings with local counsel/ auditor, BPC, local banks and end users.</i></li> </ul>
<b>Main project activities and achievements</b>	<p><u>Activity</u></p> <p>OPL has developed an LPG project to import, store, bottle and distribute LPG throughout Bangladesh. LPG is prepared by refining a crude oil (40%), or extracted from petroleum or natural gas streams as they emerge from the ground (60%). LPG is a naturally occurring co-product of these processes, so if not used it is wasted. LPG is being traded as a worldwide commodity. OPL's main terminal including 3,600 m<sup>3</sup> storage is located in Mongla, close to one of the country's principal sea ports that has trade links with almost all major ports of the world. All imported LPG arrives here and directly loaded from ship to tank through a flexible pipeline<sup>33</sup>. Majority of the product is redistributed to 3 satellite bottling plants in Dhaka, Bogra and Chittagong. Bogra served directly from Mongla by truck. Initially planned capacity of the combined bottling facilities was 50,000 tonnes per year (20k/year in Dhaka, others 10k/year) but each of the plants have been designed such that they can be expanded to an overall 100,000 tonnes per year. The capacity increase is not so much related to capital investments, but rather organising logistical processes to handle the increased number of bottles. If the market is growing faster, expansion could be done more rapidly. 2 new storage tanks under construction are due to be completed in June 2018 which will raise storage capacity from 3,600 MT to 6,000MT. Including the 3 satellite bottling plants, total storage capacity across the 4 facilities will be 10,000 MT by the end of 2018. One of the new tanks will be to store propane and there is possible space for a 5<sup>th</sup> storage tank. This will be distributed in bulk using tankers to industrial customers.</p> <p><u>Supply</u></p> <p>OPL sources its LPG on the global market, while having a preferential agreement with BBE a global energy trader. BBE has become 25% shareholder of OPL and has a right of 'matching offer' for all LPG procurement contracts, as well as the obligation to offer a required quantity to OPL at all times. The supply contracts cover a minimum of 6 months, given this is the minimum period that allows a trader to cost-effectively charter an exclusive vessel. Logistically it is most opportune to procure the LPG from Asia, which will ultimately allow approx. 15 deliveries of 3,600 m<sup>3</sup> in this 6 month period. Pricing will be market based and fixed for the length of the supply contract based on a cost+ formula:</p>

<sup>33</sup> Terminal on Rupsha River receives 4 shipments a month (every 8 days on average). Unloading of an LPG tanker with 2,500 MT takes about 20 hours. There is therefore significant unused capacity.

	<p>Saudi Aramco CP for Propane and Butane (published on a monthly basis) + premium covering Freight, Insurance and Financing cost (traders will typically pre-finance and insure the cost of the product up till delivery in-tank at site) + trader margin.</p> <p><u>Product</u></p> <p>OPL offers 3 types of cylinders: 5.5 kg and 12.5 kg for domestic use and 35.5 kg and, more recently 45kg for industrial use. Majority of the capacity (40k tonnes) will be bottles in the 12.5 kg cylinders, and 5k tonnes in each of the 5.5 kg and 35.5 kg cylinders. Overall, close to 15,000 cylinder units are filled each day. MJLBL has set up another subsidiary, Omera Cylinder Ltd that manufactures the cylinders and sells them to OPL on arm's length base (no transfer pricing issue has been detected). The bottle manufacturing plant was expected to go for commercial production in May 2014. The capacity of the plant is above the requirement of OPL and hence it will sell cylinders to clients other than OPL. LPG can be used for cooking, heating, electricity generation, transportation (auto gas), refrigerating and many other industrial and commercial applications. OPL will mainly target domestic use as it is considered to be one of the safest, eco-friendly and healthy cooking fuels. Cooking fuel accounts for around 90% of the energy consumed by households in developing countries like Bangladesh. In urban areas Natural Gas has been the preferred option so far. Supply of natural gas is increasingly scarce though and many households are facing interruption of supply while new residential areas are no longer even connected to the mains gas pipeline. As a result LPG is growing to be the most likely alternative. For low income groups and in rural areas biomass fuels such as firewood, charcoal, dung and agricultural residues are often the only energy sources available still. LPG forms a good alternative since it is easily transported in smaller quantities to any location and has great health benefits compared to biomass fuels.</p>
<b>Main project issues</b>	<p><u>Main issues</u></p> <p>1) Corporate governance: majority shareholder MJLBL has not been operating in line with existing shareholders agreement (cost overruns of \$8M which are guaranteed by MJLBL have been funded with a non-subordinated short term loan whilst these should have been funded by equity), company/CFO does not have experience with international financing and requirements which is also reflected in the slow compliance with CPS and board meetings are dominated by CEO/shareholder of MJLBL) without consideration of rights of minority shareholders;</p> <p>2) Performance was below the projections as presented in the FP (company was expected to be profitable in 2015, but is still loss making and generating negative operational cash flows, EBITDA margins going forward are expected to be lower than what was approved) and</p> <p>3) No clarity about financing structure going forward (company is not also contemplating zero coupon bond issue). FMO board member is playing active role.</p> <p>As a result OPL was placed on the watch list and FMO has decided to exit on grounds of concern over CG issues.</p> <p><u>FMO has been pursuing an exit strategy</u></p> <p>The Put Option was exercised in Jan 2016 and main sponsor MJL accepted the exercise, however, until now the exit has not been realized.</p>



	<p>FO indicates that this is partially due to regulatory hurdles/the CB application, but it seems that MJL has also been stalling the process since it is concerned with the reputational damage which it may suffer from FMO’s early exit. MJL recently requested FMO to re-consider exiting via the put option and join in an IPO scheduled for 2017/18.</p> <p>The arrival in early 2017 of a new CEO and CFO appears to mark a change in CG at Omera. More information is now being provided to FMO and there seems to be a change in the relationship between the MJL and the two minority shareholders. It maybe that FMO withdraws the exercise of the put option and remains a shareholder until the IPO planned in the next two years.</p> <p><u>E&amp;S</u></p> <p>The transaction was not being monitored closely on E&amp;S in light of the upcoming exit. The latest LTA visit was prior to the 2015 review and at the time E&amp;S risk management was considered satisfactory. However, even if FMO exits there is an obligation to ensure that E&amp;S risk management it up to standards at the time of exit. If an IPO materialises the company carries ‘FMO’s stamp of approval’ and FMO could be exposed to negative attention if any E&amp;S shortcomings we should have addressed under our watch come to light. Subsequent E&amp;S monitoring has improved.</p>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	No information in available documents	
GHG Saving (tCo2)	T CO <sub>2</sub>	Although LPG is among the cleanest alternatives for cooking purposes, it is not a green transaction according to FMO’s definition. However, for IDF it qualifies as sustainable energy as for cooking projects are promoted and supported by the SE4ALL initiative (SE4All is part of IDF’s sustainable energy definition). There will be no requirements for GHG emissions reporting as direct emissions are negligible. OPL will only trade in LPG; the end users will contribute to the majority of the GHG emissions.	
Installed Capacity (MW)	MW	N/A	
Production Capacity	GWh	N/A	
People served – distribution	#	~1.2M people (250000-3000000 households)	

People served – transport	#	N/A	
People served – power	#	N/A	
People served – telecom	#	N/A	
People served – IT/internet	#	N/A	
People served – industrial/agri	#	N/A	
People served – farmers reached	#	N/A	
Forestry under management	ha	N/A	
Agriculture	ha	N/A	
Green investments	€m	This project is not a Green Transaction: Source: Green & GHG Screen 13/04/2015	
Inclusive investments	€m	See above	

## 2. Scoring

	Desk Review
<b>EQ 2 - Relevance</b>	
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	3 No comparative risk ratings of FMO-A and IDF have been discussed as such in project documentation scrutinised. However the relatively lower risk appetite of FMO-A can be discerned in the minutes of IC meetings which after considering overall proposals for FMO-A financing (of senior debt) and various referrals concluded that IDF would be appropriate to <i>'fund the proposed high risk project'</i> .
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3 There is little discussion of catalytic effort but it was concluded that the project was compliant with FMO/IDF funding criteria as regards catalytic role (and additionality)
JC 2.3 Additionality of IDF Loans and Equity Investments	3 FMO/IDF role was considered as additional because local banks were unable to satisfy the full financing needs of MJL (and they relied on corporate guarantees by sponsor MJLBL without which they would not be able to finance at all). FMO thus fills the gap in debt funding for which no alternative was available. For equity both BBE and MJLBL requested FMO participation (for 'name' and international experience as well as providing additional equity as a 'buffer' for debt providers).
<b>EQ 1 - Effectiveness</b>	
JC 1.1 Trends in the nature and component balance of IDF portfolio	N/A From the project documentation scrutinised it is not possible to comment upon trends in the nature and component balance of the IDF portfolio as a whole
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	2 The expected infrastructure was delivered late (i.e. Nov/Dec 2014 compared with planned COD July 2014 due to road blocks in 2014) and at extra cost (USD 65.6 M of initial budget of USD 60.1 M). Additional costs related to the jetty at Gherashal, dredging costs at Mangla and omitted work items.
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	2 Only a limited number of FT posts (~60) have been generated from this project and no estimates of indirect job creation have been included in project documents scrutinised.

	Given that the predominant identified market for gas cylinders is for cooking (and estimated numbers of <u>users</u> has been identified) there is little employment generation potential except as arising from what appears to be an expanding market.
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	2 Outcomes in terms of <u>users</u> (~250000-300000 families – 1.2M people) appear to be delivered. Associated estimated benefits can also be reasonably confidently assumed – health and environmental benefits compared with alternative fuel, wood, charcoal.
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	3 IDF M&E and reporting frameworks are, to some extent, dependent upon sponsor MJL and comment has been noted on poor compliance with reporting obligations and communication with project partners in general (this is one of the reasons for FMOs 'Reservation of Rights' letter in December 2015). However, FMO has engaged a 'Lenders Independent Engineer' (Royal Haskoning) for monitoring and review of ESG outcomes and more recently annual monitoring of all OPL installations is being undertaken by Bureau Veritas.
<b>EQ 4 – ESG Risk Management</b>	
JC 4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio	N/A Although this project was categorised B+ it was not possible from documents scrutinised to identify trends in the nature and balance of ESG risk in the IDF portfolio as a whole
JC4.2 IDF-financed projects contributed to green and inclusive development	2 This project is not classed as a green project under FMO definition and there is no requirement to report on GHG emissions. However there are benefits arising from avoidance of the use of more environmentally damaging fuels
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	4 FMO engagement in ensuring compliance with international best practices has been strong throughout FMO involvement in the project extending from without due diligence, implementation of the ESMP during construction to concern that E&S risk management is adequate at (early) exit. FMO due diligence did satisfactorily identify and manage E&S risks in accordance with international (IFC) practices.
JC4.4 Lessons learned in identification and	3

management of social and environmental risks being identified and applied to subsequent portfolio management	Lessons have not been learned as such although E&S compliance has been to best international norms. Whilst there has certainly been experience garnered from this project which may be applicable to other projects in Bangladesh or other LPG projects elsewhere, no evidence has been found of active dissemination or application of such lessons (it is arguably too soon).
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	2 It is not possible to form an opinion on the adequacy of FMO project management (other than noting concerns about CG risk management – see below) or organisational structure for management of IDF.
JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support	N/A No project information on ratios of FMO staff to value of operations. Availability of FMO expertise is covered under JC 6.1 above. From documentation scrutinised it is not possible to form an opinion on the adequacy of FMO staff resources
JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?	2 The eventual success of this project is due to identification of a strong potential market whilst satisfying FMO E&S guidelines in a national investment risk landscape which deterred other possible investors (including national banks). On the other hand CG risk was under-estimated.
<b>EQ 3 – Revolvability</b>	
JC 3.1 Evolution and drivers of portfolio performance pre and post 2012	N/A No reference has been made to overall portfolio performance in project documents scrutinised. This project falls entirely within the latter period (2012-2016).
JC 3.2 Financial Performance	2 Financial performance appears to have belatedly achieved expected profitability
JC 3.3 Focus of risk management systems and policies on long-term sustainability	2 There was little focus on risk management systems and policies on long term sustainability. That being said there is more recently reference being made to FMO seeking to ensure satisfactory E&S performance in the event of FMO early exit.
JC 3.4 Revolvability	N/A Not applicable to individual project performance
JC 3.5 Individual Project Sustainability	3 Most references to 'sustainability' refer to sustainability of LPG as an energy source

	pointing out that LPG is relatively clean energy source for cooking as promoted by SE4All Initiative (although the project does not come within the FMO definition of a green project). Sustainability of project operations depend upon affordability and continuing availability of LPG for the targeted apartment-dwelling 'middle class' in Bangladesh.
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	N/A The only involvement of Dutch companies appears to be the engagement of Royal Haskoning as FMO's Independent Engineer for technical and E&S due diligence.
JC 5.2 Effects for Dutch companies and economy	
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	N/A Other than initial proposals for FMO-A financing there has been no other references to linkages with other Ministry infrastructure programmes.
<b>Scoring Justification</b>	
EQ 2 - Relevance	3
EQ 1 - Effectiveness	2.5
EQ 4 – ESG Risk Management	3.5
EQ 6 – Efficiency	2
EQ 3 – Revolvability	2.5
EQ 5 – Policy	N/A
<b>Comments</b>	-

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learned and Key Findings

- FMO insisted upon the highest standards of ESG (to IFC standards) which in some cases were more demanding than required by national legislation (although no reference was made to FMO's target of 'doubling impact, halving footprint' – see also below regarding GH emissions. This concern extended to H&S considerations<sup>34</sup> for operations (ISO 9001 and ISO14001 currently being processed) and to an effort to ensure similar compliance after FMO exit.
- This project is not classed as a 'green transaction' under FMO definition (although it does qualify as 'sustainable energy' under the SE4All initiative. There is thus no reporting of GHG emissions which are considered as negligible under FMO reporting requirements as it is assumed that as OPL only trades in LPT it is the users of the gas that contribute to resultant GHG emissions; ergo the project, which is distributing and marketing the LPG has nothing to do with release of GHG emissions by burning the LPG thus made available. Although it is clearly understood that the use of alternative energy sources (where LPG is not available and affordable) such as charcoal or wood would be more environmentally damaging, the FMO stance regarding reporting of GHG emissions appears somewhat ingenuous.
- It is not possible to form an opinion on the adequacy of FMO project management (other than noting concerns about CG risk management – see below) or organisational structure for management of IDF.
- Considerable effort was made by FMO to investigate CG risks with concentration upon integrity checking and COI. Lack of experience of corporate management adequacy of material decision making and potential COIs were identified. Mitigation measures were put in place (shareholders' agreement, exemption from voting rights, nomination of representative board member) but these were found to be ineffective in avoiding continuing '*under performance on deliverables and fundamental requests relating to changes in business model and financial model plus appropriate governance/adherence to SMA is inadequate*' which led to FMO issuing the 'Reservation of Rights' letter and exercising a 'Put Option' in late Q4 2016 and Q1 2016 respectively. Similarly FMO made considerable efforts to undertake due diligence (market studies, audited financial statements and management accounts) but seemingly inevitable over-optimistic assumptions were made concerning cash flows and profitability. With the benefit of hindsight due diligence appears weak..
- The only involvement of Dutch companies was the engagement of Royal Haskoning as Independent Engineer for technical and E&S due diligence.
- The FMO 'name' and international experience is a recognised 'added value' of FMO participation (over and above potential 'additionality' and catalytic effects FMO involvement may bring to a project (as exemplified by MJL concern about perceived reputations damage that may arise from FMO's early exit).
- No log frame was produced. Few outcomes were defined as such – the only directly project-related outcomes refer to employment generation, business opportunities and environmental issues. Arguable this project does not target poverty reduction or the poorest segments of society as the majority of individual beneficiaries/customers are expected to be urban apartment dwellers (ie middle class).
- There is no evidence of lessons learned from this project being applied elsewhere. On the other hand reference has been made to a similar but less successful project in the Philippines in preparation of this project.
- Effectiveness of M&E and reporting frameworks are to some extent dependent upon the interest and commitment of the sponsor whose compliance with some reporting obligations

<sup>34</sup> The accident and injury rate is very low, there having been no major incidents since the installation was opened in November 2014.

has been poor (eg handling of cost over-runs) and has contributed to FMO's issuance of the 'Reservation of Rights' letter.

### **Project Outcome**

The project has involved construction and operation of 4 greenfield LPG plants (a main station at Mongla and three satellite stations) all of which will be used for storage, bottling and distribution of imported LPG<sup>1</sup> products throughout Bangladesh. Construction started in 2013 with completion scheduled for the following year. Construction and commissioning of all facilities was completed in Q4 2014 and operational from March 2015 (delays of approximately 8 months) with ~215,000 cylinders of various sizes available. Construction costs increased from USD60.1M to USD65.6M due to construction delays, additional costs (Gherashal jetty and dredging costs) and forgotten items of work – it is not clear whether cost increases were reported to project partners in a timely and transparent manner.

In the first 6 months of operation OPL gained some 11% of market share with an expectation of gaining ~25% of the market by the end of 2016. Break-even was expected to be achieved in 2015 but operations reportedly only became profitable in 2017<sup>1</sup>. Since then the operation has increased market share (currently 18% with target of 21% for 2018) and is now one of the largest LPG distributors in Bangladesh (the market leader has 24% target share). Current demand of 700,000MT is expected to grow to 3.5m MT by 2026. However a number of other companies have entered the market and with additional suppliers in the market, LPG margins will be at risk, therefore operating efficiency and diversification (such as diversification into industrial sector with supply of propane will be increasingly important).

Causes for concern have arisen regarding corporate governance as MJL was managing OPL as a wholly owned subsidiary rather than a joint venture (non-compliance with shareholder agreements (ie decisions being taken without consent of minority shareholders), cost over-runs, improper management reporting systems, management risks and lack of capacity, financing structure (coverage of costs over-runs) resulting in FMO opting for early exit (ie 'Reservation of Rights' letter in December 2015 and 'Put Option' exercised in January 2016 but not yet actually implemented). MJL subsequently requested FMO to reconsider – OPL proposes a public listing on the Dhaka stock exchange which may permit a better outcome for FMO. The OPL management structure has been changed and efforts are currently being made to remedy identified management and communication issues.

The project was transferred to PE in August 2017 – at the time of writing no decision has been made by FMO whether to exit or hold.



## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

**How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?**

<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
xxv)	trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument);
xxvi)	portfolio performance (including reasons for portfolio impairments);
xxvii)	co-funding/complementarity with FMO-A portfolio;
xxviii)	investment leverage/funding mobilization.
	<ul style="list-style-type: none"> <li>• See ‘Operation Dates’ above which gives chronological record of processing of proposals for OPL</li> <li>• The initial proposal was subject to a number of ‘on hold’ decisions by IC after consideration of a number of issues: <ul style="list-style-type: none"> <li>- whether OPL should be core focus of FMO sustainable energy drive</li> <li>- added value of debt tranche</li> <li>- lack of a partner</li> <li>- unknown financial strength of EPC contractor</li> <li>- reputational issues (CEO has military background; shareholder BB Energy accused of bribery; CEO is PEP)</li> <li>- COI by sponsor (also owns distribution network)</li> <li>- no sector regulation</li> </ul> </li> <li>• IC decision (26/10/2012) ‘on hold’ pending more information on market study, justification for FMO-A or IDF and strength of sponsor</li> <li>• IC decision (01/02/2013) ‘on hold’ – revised CIP required including substantiation of why FMO should enter Bangladesh LPG market with OPL (and not other new players identified in market report), analysis of license procedures, introduction of international LPGs player (as aligned partner for FMO in event this is not attainable in revised structure where IDF is considered for debt portion).</li> <li>• IC decision (22/02./2013) approved subject to conditions/due diligence.</li> <li>• <i>Senior debt to be reduced to USD 9.5 Mln and funded from IDF</i></li> <li>• <i>Step in rights in BBE agreement, EPC and O&amp;M agreement</i></li> <li>• <i>Independent Board Member representing FMO</i></li> <li>• <i>Extension of license until July 2014 to be obtained prior to disbursement</i></li> <li>• <i>Include disbursement milestones that are aligned to the requirements Omera must achieve for obtaining Final Approval of licenses</i></li> <li>• <i>Investigation report on the reputation of Mr Mohammed Mejbahuddin, Chairman of the Board of Omera and Secretary of the Energy and Mineral Resources Division of the Ministry of Power, Energy and Mineral Resources of Bangladesh. especially focussed on potential conflict of interest of both positions. Also investigate if Mr Mejbahuddin is a shareholder direct or indirect (through nominee shareholders) in the company or the mother company, The IC recommends to focus on this condition prior to investing resources in further due diligence.</i></li> <li>• <i>Report by an independent expert on whether all Omera licenses have been obtained in a transparent and legal manner (signatures and improper use of influence for the identified PEP).</i></li> <li>• <i>Investigation on annual renewable licenses (procedure, individuals involved, payments)</i></li> <li>• <i>Implement strongest version of ABC clauses in the contract</i></li> </ul>

Conclusion: From the project documentation scrutinised it is not possible to comment upon trends in the nature and component balance of the IDF portfolio as a whole

**JC1.2** *IDF-financed projects have delivered expected infrastructure outputs on time and within budget*

**I-1.2.1** - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)

**I-1.2.2** - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).

**I-1.2.3** - Implementation progress – time and cost compared with programme

**I-1.2.4** - Infrastructure operation – outputs/production compared with targets

**I 1.2.5** - Direct job creation (local labour and/or local subcontractors) and comparison with targets:

xix) temporary/short term during the implementation period

xx) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks

The project involves construction and operation of 4 green field LPG plants – a main station at Mongla and 3 satellite stations at Sherpur (Begra), Ghorashal and Mirsarai. All will be used for storage and distribution of imported LPG products throughout Bangladesh.

Construction started in February 2013 with a scheduled completion date (mechanical and electrical) by June 2014 and COD July 2014. Construction was under a Turn-Key EPC contract (Parlyn International) plus sub contractors. Bottling plant equipment was under a separate Turn Key package (Sigara). QA/QC verified construction and welding of LPG spheres etc. DCL constructed the Mengla jetty.

- The construction and commissioning of all stations completed (Nov-Dec 2014). Facilities and stations are finished with good quality standard.
- The LPG tanker boat ‘Omera Princess’ is operational for gas delivery journeys between Mongla and Ghorasal. Crew is complete and trained on LPG safe handling.
- The stations are fully operational since begin of March 2015 and approximately 215,000 ‘Omera’ cylinders were supplied in the market. This amount of cylinders injected in the market is a promising start. 100,000 cylinders were purchased in Thailand for the initial launch; another 50,000 cylinders were purchased for upcoming festive period in June/July.
- The operational teams are complete and were trained during commissioning.
- Weekly safety trainings are held, systems are in place and awareness raising is ongoing.
- With the issuing of all new cylinders to the customers (end users) safety leaflets are provided. Distributors are also targeted with safety training; safe transport and storage shall be an ongoing point of attention.
- Any equipment failure is covered under the one year warranty period (till end of November 2015) workshops are equipped and a spare part list has been ordered.
- All measures of the Environmental and Social Action Plan (ESAP) are fulfilled.
- The necessary permits for the establishment and operation of the stations are obtained and in place
- The construction budget increased from initial budget of 4,677 million Tk (60.1 Million USD) to 5,101 Million Tk (65.6 million USD). The increase of 424 million Tk (5.5 million USD) is caused by the extended construction period (caused by the end 2014/begin 2015 road blocks); additional costs related to the jetty in Ghorashal, dredging costs in Mongla<sup>35</sup>

<sup>35</sup> The river requires dredging annually – dredging costs are dependent upon frontage with individual occupants sharing overall costs

<p>and forgotten items. From references in documentation supplied it is not clear whether cost increases were reported to project partners in a fully transparent or timely manner. No information has been examined on employment generation during the construction period. The direct employment generated by O&amp;M of the four plants is estimated at around 200 FT posts including Mongla . which employs 116 people, including 60 drivers and cleaners with some temporary staff hired as needed.</p> <p>At present the Mongla facility is working 12 hours a day 6 days a week from 9am to 9pm. which requires 1.5 shifts.</p> <p><u>Conclusion:</u> The expected infrastructure was delivered late (i.e. Nov/Dec 2014 compared with planned COD July 2014 due to road blocks in 2014) and at extra cost (USD 65.6 M of initial budget of USD 60.1 M ie ~9%). Additional costs related to the jetty at Gherashal, dredging costs at Mangla and omitted work items.</p>	
<p><b>JC1.3</b></p>	<p><b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b></p>
<p><b>I-1.3.1</b> - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets</p> <p><b>I-1.3.2</b> - Assessment of likely sustainability of indirect jobs created after project completion</p> <p><b>I-1.3.3</b> - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks</p> <p><b>I-1.3.4</b> - Evolution of selected country level indicators on ease of ‘Doing Business’</p> <p><b>I-1.3.5</b> - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)</p>	<ul style="list-style-type: none"> <li>• No reference to indirect job creation in documents scrutinised.</li> <li>• FMO is compliant with national regulatory requirements (e.g. listing of OPL with SEC, permits, accounts, guarantees, etc, licensing, pricing, H&amp;S) but there is no component of support for revision or implementation of regulatory frameworks</li> <li>• Bangladesh has consistently deteriorated in the WB ‘Doing Business Index’. 2017 – 176/190; 2016 – 174; 2015 – 173; 2014 – 130; 2013-129 2012 – 122; 2011 – 107; 2010 – 119; 2006-65</li> <li>• IDF support is expected to permit OPL to take advantage of large market potential as a) Bangladesh faces gas shortages (priority for electricity and fertilizer sectors) and b) &lt;10% of people have access to modern cooking fuels.</li> </ul> <p>The FP 17/04/2014 notes that:</p> <p><b>Market/Supply and Demand Dynamics</b></p> <p><i>Market:</i> Even though Bangladesh is a gas rich country, the production cannot keep up with the fast growing economy and so the resource has become scarce. Since 2010 the government has not allowed new residential areas to be equipped with gas connections and all new gas resources are allocated to power and fertilizer sector. In absence of (reliable) gas connections, urban households mostly choose for LPG, wood or kerosene stoves LPG is the more expensive alternative of these but the health benefits and environmental advantages (incl. smell) of LPG are outweighing that easily for those who can afford it (living in new apartment buildings in newly established urban areas). Mott MacDonalds (‘MM’) performed a market study, which showed that the largest potential for LPG is with households that have an income of at least USD 150 per month, which is 25% of the total huseholds (as per 2012). Given the population of Bangladesh has crossed the 160 million mark, the potential is large. The continuing growth of disposable income in combination with growing urbanization will further increase demand for LPG. Current production by 6 producers is 300,000 ton/year, which represent 0.9m households (approx. 5 million people) when applying OPL’s distribution model. This leaves a huge part of the market unserved allowing premium pricing tactics by existing producers,</p>

distributors and retailers. LPG marketing in Bangladesh was pioneered by state owner Bangladesh Petroleum Corporation (BPC) in the late 1970s. However, with the increasing demand in the mid-1990s, the government allowed LPG imports and permitted private entrepreneurs to invest in LPG import, storage and bottling facilities. Currently 80% is produced in the private sector. By 2010 to further popularize the use of LPG the government has reduced tax rates for import of LPG related materials and awarded a group of new suppliers (incl. OPL) licenses to set up new import capacity and bottling plants. While 22 licenses have been awarded only 5 are serious in going ahead, as high capital investments or lack of technical ability prevents others from starting. MM expects that increased capacity will actually open up the LPG market. High latent demand will accelerate by the creation of better supply infrastructure and lower/comparable prices. Moreover the commissioning of bottling plants at various locations throughout the country will fast-track the demand in the rural regions and urban centers. Overall, MM concludes that the demand for LPG in Bangladesh is high and growing and the new forseen capacity to the market that will be added by Omera and others should be surely absorbed.

<b>Bangladesh LPG Market</b>			
<b>Company</b>	<b>Sales Volume -MT</b>		<b>Cylinders-No</b>
Bashundhara	145,000	24.0%	3,600,000
Omera	112,000	18.5%	2,742,000
Jamuna	80,000	13.2%	2,300,000
BM	68,000	11.2%	1,800,000
Laugf's	46,000	7.6%	1,200,000
Total Gaz	38,000	6.3%	1,070,000
Others	116,000	19.2%	900,000
<b>Total Sales</b>	<b>605,000</b>	<b>100%</b>	<b>13,645,000</b>
Source : Omera Petroleum			

Omera has key competitive advantages compared to its local competitors such as: strong brand name being affiliated with Mobil, large storage capacity allowing bulk import benefits, large LPG trader as shareholder securing supply, plant locations across the country and quick move to the market with flexible capacity. These competitive advantages appear to have been confirmed by the increasing OPL market share. Information on peer cost structures is not available, but LPG is the largest component of cost and sales price, which is relatively the same for all players.. The above mentioned advantages of OPL can be expected to be positively reflected in the relative cost structure as well. Sponsor MJLBL has an outstanding track record in trading, bottling and distribution of oil affiliated products.

It is reported (IMR Approval Request 17/09/2015) that OPL had been able to gain ~11% market since start-up of operations in March 2015 – it was expected that the then current 300,000 cylinders in circulation could increase to 1 M by the end of the year.

Conclusion: OPL is concentrating on the domestic cooking market (ie 5.5kg and 12.5kn cylinders) rather than the business/industrial market (35.5kg and 45kg cylinders) and thus the indirect employment generation arising from industrial use is expected to be limited (there is no reference to indirect job creation in documents scrutinised). Unless there is greater uptake by industrial users there is thus expected to be only limited development of the private sector (by means of increased long term employment opportunities, improved business environment and demonstration effects).

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
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**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

- The project has contributed to limited LT employment (~200 posts at the 4 facilities) as well as ST employment during construction. No figures have been examined regarding indirect employment.
- Identified economic development impact includes reference to *'creating employment/income from import to distribution to the end user'*. The project is expected to increase revenues of OPL and service providers and to provide increased tax revenues (although the government has reduced tax rates for import of LPG related materials for new suppliers (including OPL) licenses to set up new import capacity and bottling plants. The project is not involved in public sector investment levels.
- This project does not target the poorest and most vulnerable. The target group as having largest potential for LPG is households with an income >USD 150 per month (25% of the population) i.e. those living in apartment buildings in new urban areas (see above also on market characteristics) – arguably 'middle class' households.
- FMO Investment Criteria mainly refer to a) project, partner, sponsor and market related criteria and b) financial structure and produce criteria.

FMO criteria for funding from IDF include:

It was concluded that OPL met the specified criteria noting that:

*'strong development impact in low income country by investing in a local company. LPG is much cleaner fuel than charcoal or kerosene and will improve living conditions of users but is slightly more expensive. IDF participates in the equity thereby catalysing senior lenders and therefore the project financially and also on E&S (first financing under IFC PS).*

- Outcomes are not defined as such. The only directly project-related outcomes refer to employment generation and environmental issues.

**Conclusion:** Outcomes in terms of users (~250,000-300,000 families – 1.2M people) appear to be delivered. Associated estimated benefits can also be reasonably confidently assumed – health and environmental benefits compared with alternative fuel, wood, charcoal.

**JC1.5** ***IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio***

**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management



- Since approval of the 2 transactions in Dec 2014 and Feb 2015 there has been regular reporting of progress e.g. 29/05/2015 Technical and E&S due diligence of the Omera LPG distribution project in Bangla: Inspection Report by Lender's Independent Engineer (Royal Haskoning DHV). However it was noted (12/06/2015) that in accordance with financing conditions the client should report annually on E&S performance (to FMO reporting format). No such report was produced by the client for 2014, but, given the satisfactory lender's independent report noted above, the deficiency was not pursued as non-compliant.
- The Term Facility Agreement specifies conditionalities and reporting requirements for the client. IDF reporting of individual project activities is published annually in FMO and IDF Audit reports. These reports also report on the progress of the overall portfolio.
- The only explicit reference to 'Lessons Learned' is in the 17/04/2014 and the IC Decision in CIP 22/02/2013

### Lessons learned

*The lessons learned are taken from Pryce Gases Inc. (PGI, Philippines). At first instance, PGI focused on the market for industrial gases. But when the demand from households increased, PGI also became active in the LPG market (storage and distribution). After a successful start PGI got into financial problems, because:*

- *Increasing oil price leading to higher cost price*
- *Devaluation of PHP against USD*
- *Political intervention in LPG price*
- *Substitution of LPG with cheaper alternative fuels*
- *Growth ambitions too high leading to over-investment*
- *Corporate governance was weak*

*The risk of LPG price movements and depreciation is present in this project as well. The projects' financing is structured conservatively though, so there is a substantial buffer in the business case before there might rise a liquidity constraint. In the loan agreement and shareholders agreement conditions have been included that prevent for over spending and conflicting interest within the group are addressed*

- *In project finance, clear restrictions on investments need to be agreed upon with the client to prevent overinvestments (PRYCE)*
- *For companies that are heavily dependent on development of commodity prices (oil, copper, seeds, etc.) and who are not price-setter in their market, assess the client's hedging mechanisms and policies and stress test (do proper sensitivity analyses) for the consequences of major changes in exchange rates and commodity prices.*
- *Before financing a start-up/greenfield investment, make sure to fully understand the complete business concept especially if it concerns a niche area. This requires intense monitoring.*
- *Clear restrictions on investments to prevent overinvestments and liquidity shortages*
- *Cash at the mother-company had flown to other group activities resulting in a lack of financial support*

**Conclusion:** IDF M&E and reporting frameworks are, to some extent, dependent upon sponsor MJL and comment has been noted on poor compliance with reporting obligations and communication with project partners in general (this is one of the reasons for FMOs 'Reservation of Rights' letter in December 2015). However, FMO has engaged a 'Lenders Independent Engineer' (Royal Haskoning) for monitoring and review of ESG outcomes and more recently annual monitoring of all OPL installations is being undertaken by Bureau Veritas.

## EQ 2 – Additionality and catalytic effects

<b>Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?</b>	
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
<p><b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects</p> <p><b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio</p> <p><b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio</p> <p>No comparative ratings or profiles of the IDF portfolio and FMO – A portfolio have been examined in documentation made available for this project. However, it is noted that the original FP (11/10/2012) proposed FMO financing of senior debt (USD 13.6M) should be FMO-A. After various referrals by IC (26/10/2012; 01/02/2013) approval was finally given by IC (22/02/2013) for senior debt of USD 9.5M to be funded by IDF with the consideration: <i>'The IC endorses the high risk identified in IMRs advice and agrees that the use of IDF to fund the proposed high risk project is fully justified'</i>.</p> <p><u>Conclusion:</u> This project demonstrates that FMO-A was perceived to have a lower risk appetite than IDF (ie IDF loans and equity investments have higher risk ratings than FMO-A)</p>	
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>
<p><b>I-2.2.1</b> - Ratio of mobilisation at project level of IDF funding to commercial funding sources.</p> <p><b>I-2.2.2</b> - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)</p> <p>The original FP (11/10/2012) proposed total project costs of USD 59M to be financed 54% equity and 46% debt. Equity to be provided by the sponsor BBE and FMO-A; debt to be provided by FMO (IDF) and 3-4 local banks. After various referrals by IC approval was given (22/02/2013) for USD 9.5M IDF senior loan and USD 5.5M IDF equity, i.e. total project cost USD 58.9M financed by USD 31.7M equity (of which 30% IDF) and USD 27.1 M debt (of which 20% IDF).</p> <p><u>Conclusion:</u> There is little discussion of catalytic effort but it was concluded that the project was compliant with FMO/IDF funding criteria as regards catalytic role (and additionality).</p>	
<b>JC 2-3</b>	<b><i>Additionality of IDF Loans and Equity Investments</i></b>
<p><b>I-2.3.1</b> - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.</p> <p><b>I-2.3.2</b> - At project level, project viability endorsement and contribution from IDF participation.</p> <p><b>I-2.3.3</b> - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects</p> <p><b>I-2.3.4</b> - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.</p> <p><b>I-2.3.5</b> - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)</p> <ul style="list-style-type: none"> <li>The terms of the IDF equity and debt financing are set out above (1. Project Fiche). By comparison the terms for the originally proposed FMO-A investment (USD 13.6M senior debt) were:</li> </ul>	

- LIBOR +4.35%
- Tenor/Grace: 7 years
- Appraisal fee: 25% of grant end fee (+ USD 15k travel fee)
- Front end fee: 1.25%
- There is no discussion of relative FMO-A/IDF additionally in connection with this project. However, the FP 14/04/2014 notes the following:

*FMO Additionality*

Additionality: Local banking sector was not able to fill the full financing needs of the Company and local banks rely on corporate guarantee by Sponsor MJL Bangladesh Ltd ('MJLBL') without which they would not be able to finance at all. FMO (IDF) thus fills up the gap on the debt funding side for which no alternative is readily available. On the equity both B.B Energy ('BBE') and MJLBL requested FMO to join in order to benefit from FMO's name and experience as international finance institution, besides providing an additional portion of equity to provide sufficient buffer to the debt providers. Given the market (development) risk combined with country risk and relatively new venture for the sponsor, the risk profile fits IDF for both debt and equity.

- FMO is reported to be pursuing an exit strategy after exercising the Put option in January 2016. MJL has accepted the exercise but is concerned about reputational damage arising from FMO's early exit. MJL response has been to request FMO reconsideration and join in an IPO scheduled for 2017/18. There is no more recent information on the current situation (after visit of OPL CFO in January 2017).
- IDF criteria for funding by IDF are listed above (J.C. 1.4). This project's consideration of development rationale is restricted to a few references in the FP, i.e.

Inclusive Finance Y: Positive impact on the health and time-consumption of especially women and children, near 250k households are expected to be reached, representing 1,250k individuals.

Green Finance 0%: Although this is among the cleanest alternatives for cooking purposes, it isn't a green transaction according to FMO's definition. For however IDF it qualifies as sustainable energy as LPG for cooking projects are being promoted and supported by the SE4All initiative (SE4ALL is part of IDF's sustainable energy definition). There will be no requirements for GHG emissions reporting as direct emissions are negligible. OPI will only trade in LPG; the end users (scope 3) will contribute to the majority of the GHG emissions.

Economic Growth: Creating employment/income from import to the distribution to the end-user. Offering an efficient alternative for cooking that allows for more productive time-consumption. For low income groups and in rural areas biomass fuels such as firewood, charcoal, dung and agricultural residues are often the only energy sources available still. LPG forms a good alternative since it is easily transported in smaller quantities to any location and has great health benefits compared to biomass fuels.

The proposed project is expected to contribute positively to Bangladesh natural gas shortage through provision of a green liquefied petroleum gas, while simultaneously bringing development opportunities to the area in terms of increased business activities and employment generation.

Conclusion: FMO/IDF role was considered as additional because local banks were unable to satisfy the full financing needs of MJL (and they relied on corporate guarantees by sponsor MJLBL without which they would not be able to finance at all). FMO thus fills the gap in debt funding for which no alternative was available. For equity both BBE and MJLBL requested FMO participation (for 'name' and international experience as well as providing additional equity as a 'buffer' for debt providers).



## EQ 3 – Revolvability

<b>Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?</b>	
<b>JC 3.1</b>	<b><i>Evolution and drivers of portfolio performance pre and post 2012</i></b>
<b>I-3.1.1</b> - Portfolio performance and trends, in particular 2002-2011 and 2012-2016 <b>I-3.1.2</b> - Portfolio repayments/realisations and recycling in new projects <b>I-3.1.3</b> - Performance of projects with FMO-A and/or other government funds <b>I-3.1.4</b> - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses	
No reference has been made to overall portfolio performance in project documents scrutinised. This project falls entirely within the latter period (2012-2016).	
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<b>I-3.2.2</b> - Balance sheet strength, profitability and cash flow/liquidity <b>I-3.2.2</b> - Utility of Carnegie revolvability model in managing IDF operations	
No reference has been made to the Carnegie Revolvability Model in documents scrutinised for this project. It was reported (23/11/2016) that OPL has been placed on the watchlist due to continuous ‘under performance on deliverables and fundamental requests relating to changes in business model and financial model plus corporate governance/adherence to SMA is inadequate’. EBITDA margins have not been realised due to higher than expected operating costs and profits expected in 2015 are now only expected in 2017. However H1 16 management statement confirm MJL solvency and liquidity are sufficient to honour the put option. <u>Conclusion:</u> Financial performance appears to have belatedly achieved expected profitability	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting <b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,	
See JC1.4 above (and also reference to FMO obligations to ensure adequate E&S risk management at time of FMO exit – JC 4.3 and 4.4 below). <u>Conclusion:</u> There was little focus on risk management systems and policies on long term sustainability. That being said there is more recently reference being made to FMO seeking to ensure satisfactory E&S performance in the event of FMO early exit.	
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond	
Not applicable to individual project performance.	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.	
Project performance has been detailed above. Most references to ‘sustainability’ in project documentation scrutinised refer to the sustainability aspects of LPG as an energy source e.g. Investment Rationale – <i>LPG is among the cleanest alternatives for cooking purposes and is a type of energy promoted by the Sustainable Energy 4All initiative</i> . However this project does not qualify as a green transaction according to FMO definition although LPG does come within the SE4All, IDF sustainable energy definition (and thus no GHG reporting requirements). In consideration of	

E&S issues the project role of FMO is to *'help the company achieve a more sustainable portfolio of projects new and in the future and be in line with industry international best practices'*.

**Conclusion:** Most references to 'sustainability' refer to sustainability of LPG as an energy source pointing out that LPG is relatively clean energy source for cooking as promoted by SE4All Initiative (although the project does not come within the FMO definition of a green project). Sustainability of project operations depend upon affordability and continuing availability of LPG for the targeted apartment-dwelling 'middle class' in Bangladesh.

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

### **JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio**

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

This project is categorized as B+ and thus PS 1-4 apply i.e. PS1 – Assessment and management of E&S summary against IFC Performance Standards; PS2 – Labour and working conditions; PS3 – Resource Efficiency and Pollution Prevention; PS4 – Community Health, Safety and Security (other PS are considered as appropriate i.e. PS5 – Land Organisation and Involuntary Resettlement; PS6 – Biodiversity Conservation and Sustainable Management of Living National Reserve; PS7 – Indigenous People and PS8 – Cultural Heritage).

The project was perceived as having limited adverse impacts on E&S aspects, key issues centering around operations and construction (i.e. occupational health hazards such as accidental LPG leakage, transport and operations). Emergency response plans for fire fighting and country safety have been prepared. No involuntary resettlement or displacement of farmers was involved.

**Conclusion:** Although this project was categorised B+ it was not possible from documents scrutinised to identify trends in the nature and balance of ESG risk in the IDF portfolio as a whole

### **JC4.2 IDF-financed projects contributed to green and inclusive development**

**I-4.2.1** Comparison of intended/actual Greenhouses gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of *'doubling impact and halving footprint by 2020'*

- There is no requirement for GHG emissions reporting as emissions are considered to be negligible under FMO reporting requirements – OPL will only trade in LPG end users contributing the majority of GHG emissions. This assignment of all GHG emissions to the users of the gas cylinders appears somewhat ingenuous (i.e. the logical thrust being that the project, which is distributing and marketing LPG has nothing to do with the release of GHG emissions, resulting from the burning of LPG). On the other hand it is accepted that in the absence of affordable LPG, more cooking would probably be done using charcoal which has its own obvious environmental issues (although most users of LPG are reported to be 'middle class' dwellers in apartment blocks for which use of charcoal may be less practical).
- The Inspection Report by Lenders (FMO) Independent Engineer (Technical and E&S due diligence) 29/05/2015 reported satisfactorily on compliance with all E&S requirements noting issuance of ISO 9001 certification.

	<ul style="list-style-type: none"> <li>No reference is made (in documentation scrutinised) to progress towards the FMO ‘doubling impacts, halving footprint targets’. This project does not comply with FMO’s definition of a green transaction (although it qualifies as sustainable energy under the SE4All initiative).</li> </ul> <p><u>Conclusion:</u> This project is not classed as a green project under FMO definition and there is no requirement to report on GHG emissions. However there are benefits arising from avoidance of the use of more environmentally damaging fuels</p>
<b>JC4.3</b>	<p><b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b></p>
	<p><b>I-4.3.1</b> - Use of Free prior and informed consent principles</p> <p><b>I-4.3.2</b> - FMO verification that higher risk projects comply with national legislation and international norms</p> <p><b>I-4.3.3</b> - Evidence of ESG risk assessment</p> <p><b>I-4.3.4</b> - Evidence of ESIA and ESAP preparation and implementation</p> <p><b>I-4.3.5</b> - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)</p>
	<ul style="list-style-type: none"> <li>FMO engagement in ensuring compliance with E&amp;S best practices has been very strong, having engaged Royal Haskoning DMV for technical and E&amp;S due diligence. This FMO sense of due diligence extends to the current exit strategy (i.e. no E&amp;S Reason for Concern 23/22/2016) ‘.....even if FMO exits there is an obligation to ensure that E&amp;S risk management is up to standards at the time of exit. If an IPO materialises the company carries ‘FMO stamp of approval’ and FMO could be exposed to negative attention if any E&amp;S shortcomings we should have addressed under our watch came to light’.</li> <li>There is only reference to ‘Free, prior and informal consent’ (in the 22/05/2014 Technical and E&amp;S due diligence’ report in connection with PS7 Indigenous People noting that; ‘No indigenous people were observed in the Project Documentation and during the field visit. Therefore PS7 does not seem to be applicable’.</li> <li>The E&amp;S due diligence makes reference to national and international standards for ESIA approvals and mitigation actions. Similarly there is full examination of ESG risk assessment, preparation of ESIA and ESAP implementation plus monitoring of compliance activity (see above also).</li> </ul> <p><u>Conclusion:</u> FMO engagement in ensuring compliance with international best practices has been strong throughout FMO involvement in the project extending from without due diligence, implementation of the ESMP during construction to concern that E&amp;S risk management is adequate at (early) exit. FMO due diligence did satisfactorily identify and manage E&amp;S risks in accordance with international (IFC) practices.</p>
<b>JC4.4</b>	<p><b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b></p>
	<p><b>I-4.4.1</b></p> <p>Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management</p> <p><b>I-4.4.2</b></p> <p>Evidence of feedback and application of lessons learned in subsequent projects.</p>
	<ul style="list-style-type: none"> <li>There is evidence of FMO monitoring and review of ESG outcomes (e.g. Inspection Report by Lender’s Independent Engineer 29/05/2015) but more recently it has been reported that ‘the transaction has not been monitored closely on E&amp;S in light of the upcoming exit’. This appears to be</li> </ul>

somewhat at variance with the reference to FMO obligation to ensure adequate E&S risk management at time of exit noted above (JC 4.3).

- There is no reference to feedback and it is possibly too early to expect application of lessons learned in subsequent projects. However, there are certainly potential 'lessons learned' on CG issues from this project.

Conclusion: Lessons have not been learned as such although E&S compliance has been to best international norms. Whilst there has certainly been experience garnered from this project which may be applicable to other projects in Bangladesh or other LPG projects elsewhere, no evidence has been found of active dissemination or application of such lessons (it is arguably too soon).

## EQ 5 – Policy

### To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?

<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
N/A	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
There is no reference to involvement of Dutch companies in documentation scrutinised other than the evaluation noting that FMO's Independent Engineer for Technical and E&S due diligence is Dutch (Royal Haskoning DHV).	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
Other than the original proposal for FMO-A to finance USD 13.6M debt there has been no other reference to linkages with other ministry infrastructure programmes.	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<p><b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process</p> <p><b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs</p> <p><b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring)</p> <p><b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF</p> <p><b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations</p> <ul style="list-style-type: none"> <li>• The project is deemed to be compliant with FMO's 2010 Investment Criteria and with the IDF Criteria for Funding (see JC. 1.4 above).</li> <li>• The only reference to comparison with requirements of other DFIs is in connection with E&amp;S due diligence (see JC4.1 above).</li> <li>• There has been continuous monitoring (in accordance with IDF procedures) throughout the period of FMO involvement. Certainly there is strong evidence of FMO due diligence (e.g. the multiple referrals by IC of the original FP in 2012/2013; concern over possible reputational FMO damage (E&amp;S issues) that might result in FMO's early exit) reportedly in connection with protection of rights of minority shareholders.</li> <li>• No information on the appropriateness of FMO organisational structure has been noted in documents scrutinised.</li> <li>• Corporate Governance issues were covered throughout the course of FMO involvement.</li> <li>• Lessons learned (from PGI Philippines) included reference to weak corporate governance whilst a Corporate Governance Risk Analysis was undertaken at FP stage (see also JC1.5 above). i.e. <ul style="list-style-type: none"> <li>- <i>Chairman of the Board (Mr Mejbabuddin) is a PEP with potential conflict of interest. He works at the division of Energy and Mineral Resources of the Ministry of Power, which is also responsible for granting permits/approvals. Risk Advisory performed an integrity check and found that he 'has no discernible track record for corrupt or otherwise concerning business practices', 'nor has he been the subject of any regulatory scrutiny' and he has 'a reputation for exerting very little influence over the decision making process at the division of Energy and Mineral Resources'.</i></li> <li>- <i>BBE has been accused of bribery by the newspaper Malta Today. BBE has taken legal steps against this newspaper and the suggestive article had been removed from the website.</i></li> <li>- <i>CEO of project has extensive military and weaponry background (he is retired). OPL sees this as a benefit as he is familiar with high safety standards. Discussed with Compliance and found no issue.</i></li> <li>- <i>BPC is a UBO of OPL, a competitor of OPL and also the state-entity with whom OPL has to sign an agreement for conducting LPG related services. Risk Advisory performed an integrity check on BPC and has found only a few issues of corruption/bribery against individuals. BPC is 'considered among the less corrupt Bangladesh' state-owned enterprises'. Also it seems 'the BPC is unlikely to take any action to frustrate the project' because 'the Bangladeshi government is keen to attract private investment to the LPG sector'.</i></li> <li>- <i>The shareholders agreement will incorporate minority protection rights and adequate levels of material decision making have been agreed. Potential conflicts of interest are mitigated by arm's length contacts and appropriate exemptions from voting rights.</i></li> </ul> </li> </ul> <p>The Financing Agreement also has provisions/conditionalities about corporate governance, i.e. 20.12 Corporate Governance</p> <p><i>The Borrower shall:</i></p>	



- a) *comply with all regulations of the Companies Act 1994 and Securities and Exchange Ordinance 1969 on corporate governance and disclosure of information to stakeholders;*
- b) *not, without prior written consent of FMO, make amendments to its constitutional documents that materially alter:*
  - i) *the distribution of powers between the governing bodies of the Borrower; or*
  - ii) *the rights of the Stakeholders;*
- c) *maintain at least the board committees and reporting lines shown in the organisation structure chart disclosed to FMO prior to the date of this Agreement;*
- d) *maintain the internal audit function and risk management function in the manner that these functions are implemented as at the date of this Agreement; and*
- e) *ensure that the board has at least the number of directors that are independent from Shareholders and management that it has at the date of this Agreement.*

FMO also nominated a Board Member for OPL for a one-year period (Aug 2015-July 2016). The objectives of this Board position are:

- i) to critically evaluate and oversee certain changes anticipated to be made in respect of business model and strategy;
- ii) to ensure (potential) related party transactions (e.g. potential COI between BB Energy being shareholder and preferential supplier of LPG to Omera).
- iii) actively challenge proposals and suggestions made by Board members representing MJLBL and BB Energy as their interests might be more focussed to their benefits than to the benefit of OPL.

Conclusion: It is not possible to form an opinion on the adequacy of FMO project management (other than noting concerns about CG risk management – see below) or organisational structure for management of IDF.

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
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**I-6.2.1** - Appropriateness of available FMO expertise

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

No project information on ratios of FMO staff to value of operations. Availability of FMO expertise is covered under JC 6.1 above. From documentation scrutinised it is not possible to form an opinion on the adequacy of FMO staff resources.

<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
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**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

The project has been operational since March 2015 [i.e. an 8 month delay with a cost over-run of ~14% (i.e. ~USD 8M)]. In the first 6 months of operation OPL has gained 11% of market share with an expected increase of numbers of cylinders in circulation from 300,000 to 1M by the end of 2016 (i.e. market share to increase to 25%). OPL was expecting to break even in 2015 but this expectation has now been pushed back to 2017 and it is reported that operations were in fact profitable by the end of 2016. OPL reported a loss of ~USD 3.4M in the period March-July 2015 (ascribed to start-up logistical problems).

Contributory causes for concern are corporate governance risks (non compliance with Shareholder Agreements – see above), cost over-runs (as noted above), no proper management reporting system, management risk (lack of capacity of financial department and experience of international financing), financing structure (potential changes which may not be acceptable to FMO updated financial model being developed and E&S risks – related to mitigation issues of tanker vessel 'Omera Princess' and safety awareness for adequate transport/storage).

FMO is continuing to monitor the client and project progress but given '*substantial information flow, cooperation and reported breaches of the Shareholder Agreement*' FMO opted for exit (Exit Memo 06/06/2015).

Conclusion: The eventual success of this project is due to identification of a strong potential market whilst satisfying FMO E&S guidelines in a national investment risk landscape which deterred other possible investors (including national banks). On the other hand CG risk was under-estimated.

## Sources of Data

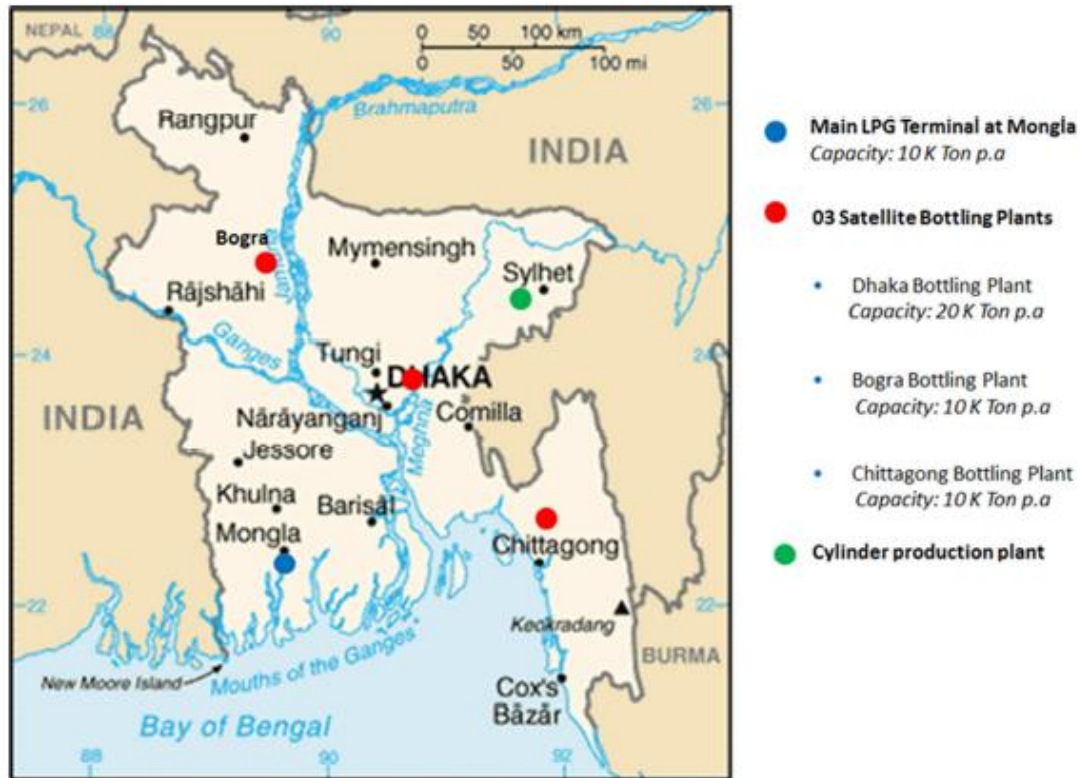
Document title	Date
Cover note & CIP Project Finance	11/10/2012
IMC/IC: Note KB (Energy)	25/10/2012
IC Decision on CP	26/10/2012
Independent Market Research Services Agreement LPG cylinder distribution in Bangladesh	Dec 2012
Cover Note & CIP Project Finance	24/01/2013
IC Decision on CP	01/02/2013
IC Decision on CP	22/02/2013
Independent E&S and Technical Services Agreement LPG distribution project in Bangladesh	14/11/2013
Technical, Environmental and Social Due Diligence of OMERA LPG distribution project in Bangladesh	22/03/2014
FP (USD 9.5M loan; USD 5.5M equity)	14/04/2014
IC Decision	01/05/2014
Analyst Advice	01/05/2014
1031 Client Credit Review	02/05/2014
Certification of Approval on ESAP	03/09/2014
IMP Approval Request (Change Request)	04/09/2014
IMP Approval Request (Small Change Request)	11/12/2014
IMP Approval Request (Large Change Request)	12/12/2014
IMR Comment	17/12/2014
Term Facility Agreement (Omera Petroleum Ltd) & FMO	19/12/2014
Facility terms and Conditions; Finance Proposal	31/12/2014
Amended and Restated Shareholders' Agreement in respect of OPL	04/02/2015
Decision Credit on Approval Request	02/04/2015
Green and GHG Screen	13/04/2015
ESRS	14/04/2015
IMS (direct investment)	15/04/2015
Technical and E&S Due Diligence of the Omera LPG distribution project in Bangladesh. Inspection Report by Lenders Independent Engineer.	29/05/2015
IMR Approval Request	30/05/2015
IMR Approval Request (Large Change Request)	10/06/2015
Email queries on BL: Environmental & Social Action Plan	01/06/2015
Credit comment box	11/06/2015
Explanatory note on absence of client's Annual E&S Monitoring Report (2014)	12/06/2015
Certificate of Approval on Technical Completion	16/06/2015
Sponsor Support Agreement (MJL Bangladesh Ltd Sponsor), Omera Petroleum Ltd (Borrower) and FMO (Lender)	29/06/2015
Amended and Restated Term Facility Agreement (Omera Petroleum Ltd (Borrower), FMO (Lender) and Brac Bank Ltd (Security Agent)	29/06/2015
Board Member Memo	03/07.2015
FINPRO Capacity Development for Approval	08/07/2015
Accounts Agreement (Omera Petroleum Ltd (Borrower), FMO (Lender), HSBC (Account Bank) and Brac Bank Ltd (Security Agent)	20/07/2015



Document title	Date
IMR Appraisal Request (Small Change Request)	17/09/2015
1031 Client Credit Review	06/11/2015
Analyst Advice	18/11/2015
1031 CCR Front page and Client Credit Review	18/11/2015
Score Card Archive	23/11/2015
Agenda IRC Meeting	25/11/2015
Reservation of Rights letter	01/12/2015
Audit Report on Financial Statement of OPL 01/01/2016-31/12/2016	23/03/2017
Statement of Financial Position – 5 year projection	30/06/2017
ISO 9001: 2015 LPG Import, Storage, Bottling and Distribution	29/07/2017
CCR	30/07/2017
CCR	11/08/2017
Audit Report on financial statements of Omera Petroleum Ltd 01/07/2016-30/06/2017	14/09/2017
Extract from Minutes of 24 <sup>th</sup> meeting of Board of Directors OPL	14/09/2017
OPL draft financial statements Q1 2017-2018 v3	30/09/2017
E&S Annual Monitoring Report OPL Main terminal - Mongla	10/10/2017
E&S Annual Monitoring Report OPL Satellite Station - Bogra	15/10/2017
E&S Annual Monitoring Report OPL Satellite Station - Mirsharai	17/10/2017
E&S Annual Monitoring Report OPL Satellite Station - Ghorashal	19/10/2017
Indenture	
Green and GHG Screen	
DS Impact Scoring Tool	
Energy Impact Scoring Tool	

## Annex 1 – Photographs and graphics<sup>36</sup>

### Station locations



### Mongla – LPG spheres & bottling hall



<sup>36</sup> Source: Technical and Environmental Due Diligence of the Omera LPG Distribution Project in Bangla, Inspection Report by the Lenders' Independent Engineer, Royal Haskoning DHV, May 2015

### **Bogra – bottling hall**



### **Marsiral – Bottling hall & water storage tank for firefighting**



### **Jetty – Mongla & Ghorashal**



## Annex 2 – Omera Petroleum Visit Notes

### OP People met:

#### HQ

- Shamsul Haque Ahmed – CEO
- Md Akter Sannamat – CFO
- Quazi Ahiq Ur Rahman – Head Sales & Marketing
- Mohammad Asaduzzaman - Head of Corporate Affairs & Company Secretary

#### Mongla Terminal and Bottling Facility

- Engr. Mukit Hasan – AGM Mongla Main Installation
- Md Shahriar Rahman – Assistant Manager SH&E
- Md Aminul Islam – Senior Executive Admin.
- Md Saifur Rahman – Electrical Engineer Operations

#### Visit to Mongla Plant

- Road to Mongla from Jessore Airport is 105 km and takes 3 hours. It is very busy and in most parts in poor state. Mongla is on a peninsula.
- Reason for LNG is due to start of decline of local natural gas production in Bangladesh.
- LPG is 30% propane and 70% butane.
- Current demand 700,000MT expected to grow to 3.5m MT by 2026. However a number of other companies have entered the market.
- Expansion of bottling plant
- 2 new storage tanks under construction due to be completed in June 2018. Will raise storage capacity from 3,600 MT to 6,000MT. Including the 3 satellite bottling plants, total storage capacity across the 4 facilities will be 10,000 MT by the end of 2018.
- One of the new tanks will be to store propane. This will be distributed in bulk using tankers to industrial customers.
- Currently:
  - Households use 12kg bottles (and some smaller 5kg bottles). Typically a family will need to refill them after about 3 weeks. These are filled with an automatic filling line.
  - Larger 35kg (and more recently 45kg) bottles are used by hotels, restaurants and catering customers. These are filled with manual filling equipment.
  - Cylinders last at least 12 years
- Possible space on site for a 5<sup>th</sup> storage tank.
- Mongla employs 116 people, including 60 drivers and cleaners. Some temporary staff are hired as needed.
- At present facility is working 12 hours a day 6 days a week from 9am to 9pm. This requires 1.5 shifts.
- The accident and injury rate is very low, there having been no major incidents since the installation was opened in November 2014.
- Terminal on Rupsha River receives 4 shipments a month (every 8 days on average). Unloading of an LPG tanker with 2,500 MT takes about 20 hours. There is therefore significant unused capacity. The river requires dredging annually.
- On the river there are 4 other LPG facilities belonging to Omera's competitors. Below is an analysis of the LPG market:

<b>Bangladesh LPG Market</b>			
<b>Company</b>	<b>Sales Volume -MT</b>		<b>Cylinders- No</b>
Bashundhara	145,000	24.0%	3,600,000
Omera	112,000	18.5%	2,742,000
Jamuna	80,000	13.2%	2,300,000
BM	68,000	11.2%	1,800,000
Laugf's	46,000	7.6%	1,200,000
Total Gaz	38,000	6.3%	1,070,000
Others	116,000	19.2%	900,000
<b>Total Sales</b>	<b>605,000</b>	<b>100%</b>	<b>13,645,000</b>
Source : Omera Petroleum			

- Omera has a barge that carries 300MT in 4 tanks (bullits) that it uses to transport LPG to it satellite near Dhaka. This journey takes 18-20 hours.
- By road Mongla to Dhaka is about 190km but takes 6-7 hours because a ferry is required to cross a river. A new 6km bridge, due to open in about 3 years, will reduce the road journey to 4-5 hours.
- A railway is planned to link Mongla port and a new airport between Kuhlina and Mongla, both due to start operations in about 5 years.
- There is a possible deal for Omera to distribute LPG for Indian Oil Company in the Indian states to the east of Bangladesh.
- Omera considering importing LNG directly into Chittagong to reduce internal distribution costs.
- ISO 9001 has been implemented. Working on 14001 certification.
- Buys only Shell gas to ensure consistent quality.
- CSR activities includes:
  - sponsorship of engineering students.
  - shooting sporting team
  - cricket

### HQ Dhaka

Omera has a total of 220 people in full time jobs, of which 116 in Mongla by far the largest facility.

### CFO Akter Sannamat

- Joined March 2017
- Transparency
- Met last week in London with BBE and FMO
- \$20m facility from IFC needs BIGA and BIDA approval 3 month LIBOR +3%for 5 year loan:
  - Cheaper based on low volatility
  - Quality endorsement helps with IPO
- Need 70% 30% debt equity
- Need new equity \$14-15m will come from majority shareholder
- Debt for overrun repaid
- \$13-14m - \$8m o/s
- Q1 o/s debt = \$100m
- UPAS loan

- Has worked ADB JAICA DFID IFC. Repaired relations with FMO. Shared info with
- Convertibility was a problem with a new FMO zero bond.
- 2019 accounts are very important for IPO that will happen in 2020 or 2021. It appears that what OP does in the next 2 years is being framed to support the planned IPO.
- IPO shares at 15 times original value of equity is estimated.
- OP has loans and standby facilities with 8 or 9 banks including HSBC + Standard Bank, Eastern + C B Ceylon.

**Marketing**

Asked for marketing ppts

**CEO**

- With additional suppliers in the market, LPG Margins will be at risk, therefore operating efficiency and diversification will be increasingly important.
- Diversify into industrial sector with supply of propane
- 18% market share (leader has 24%) target 21% for 2018

# **Pan African Housing Ltd.**

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

## 1. Project fiche

# - Project title	Pan African Housing
<b>Project description</b>	<p>Pan African Housing Fund (“PAHF” or the “Fund”) is a sector-specific fund with a focus on the housing sector in Africa. The fund, which was promoted by Shelter Afrique, had its first closing in 2012 when it reached USD 41.95m in fund size (subsequent closings did not raise additional funds), of which FMO committed USD 7.5m. Other LPs include CDC (48%), AfDB (17%), Shelter Afrique (12%), Africa Re (2%), PTA (2%), and Phatisa (1%). PHAF business model focusses on deploying equity into Special Purpose Vehicles (SPVs) that develop and manage affordable and middle-income housing projects and mixed-use developments comprising housing and aligned commercial developments. At the end of the project when the property is sold, the SPVs are dissolved and the revenues are shared among the partners. In case the properties cannot be sold, they will be rented out which requires an extension of the time horizon of the SPVs.</p> <p>Target income-/ market segment: emerging middle class with monthly incomes ranging from USD 650 – USD 1.500 and house prices in target markets Kenya, Uganda, Rwanda, Tanzania, Zambia and Mozambique varying from USD 25k – USD 150k. The Fund provides scarce risk capital to increase supply of good quality homes mainly for sale to the target income groups. Financings are ring-fenced to immunize projects from undesirable developer-/corporate-/corporate governance risks. Based on the improved equity position of the projects, the projects are then able to attract debt funding from local FI's (the Fund itself is not leveraged).</p> <p>The fund reached a first close in December 2012 and became effective in April 2013 with overall commitments of USD 41.5 m. FMO committed USD 7.5m from IDF to the Fund, which was ~ 18% of first (and final) closing commitments. Other LPs are CDC (USD 20 m), Shelter Afrique (USD 5 m), AfDB (USD 7 m), PTA Bank and AfricaRe (USD 1 m each). <b>An additional equity participation of USD 2 million was approved in 20</b></p> <p>Shelter Afrique is a Nairobi-headquartered Pan –African housing finance DFI, owned by 44 African Governments. Shelter AFrique provided the financing for the feasibility study for PAHF. The Fund is incorporated under the laws of Mauritius, but the Fund Manager Phatisa has its office in Nairobi, Nigeria.</p>
<b>Sector</b>	Infrastructure
<b>Stage</b>	Start-up
<b>Operation Dates</b>	Finpre/Clearance in Principle (CIP), Financial proposal /Approval
<b>Contract</b>	FMO Client numbers
<b>Country/Region</b>	Africa
<b>Country category</b>	LIC
<b>Project total cost (€)</b>	US\$ 50,95 million (increased fund size)
<b>IDF contribution (€)</b>	US\$ 7,5 and US\$ 2 million (18.6%)
<b>Co-financing (€)</b>	<p>Of original fund size of US\$ 41,95 million:</p> <p>CDC US\$ 20 million</p> <p>SHAF US\$ 5 million</p> <p>AfDB US\$ 7 million</p> <p>African RE. US\$ 1 million</p> <p>PTA Bank US\$ 1 million</p> <p>Of the additional fund size of US\$ 9 million:</p>



	CDC US\$ 5 million Pan African Housing DFI US\$ 2 million However, the additional funding was never realised.		
Loan Terms			
Senior/Subordinated			
Convertible			
Amount			
Loan Agreement Date		Facility No	
Currency			
Tenor			
Grace period			
Interest rate			
Security			
Fees			
Disbursements	Dates and amounts		
Monitoring			
Key covenants			
Conversion features			
Equity Terms			
Direct	US\$ 7,5 million (and US\$ 2,0 million capital increase not realised)		
Indirect – Fund			
IDF Investment (\$, €m, local currency)	US\$ 7,5 million (and US\$ 2,0 million capital increase not realised)		
Total Project/fund	US\$ 41,95 million ( increase to US\$ 50,95 million not realised)		
IDF Stake (%)	18,6%		
Investment date	Portfolio built up of 5 projects since 2013	Facility No	
Disbursements	18 disbursements of US\$ 4,38 million between 26 April 2013 and 7 July 2017		
Direct investment – exit strategy	The management fee is 2.5% for a fund size up to USD 60 m and 2% for any amount above that. Carried interest is 20% after a 8% hurdle. Investment period is 5 years, total life is 10 years from first closing with two possible 1 year extensions to permit orderly dissolutions if needed. The Manager has agreed to contribute 1.5% of the total Fund size.		
Direct investment - put option terms			
Fund life	Fund term ending 2022		
Grants			
Amount			
Convertible	Yes/No		
Purpose			
Grant agreement date		Facility no	
Key terms			
Disbursement	Dates and amounts		

Conversion terms							
Financial Risk and Performance							
	Financial proposal/approval			Client Review - Most recent			
Client Risk Rating	E&S category: A (Potential Significant Adverse Impacts) Country rating: various			Country rating: F15 in 2016			
Loan - Impairment provision	None %			None%			
Equity - Fair value adjustment	None %			0 % (15% arithmetic impairment)			
Financial performance	PAHF's project portfolio reported on in the CCR of 2017 is the following:						
	COMPANY	COUNTRY	BUSINESS DESCRIPTION	INVESTMENT TYPE	Approved Commitment in US\$	Expected Exit in US\$	YEAR
	<u>WESTPOINT® HEIGHTS</u>	Kenya	Africa Reit Limited	Residential, middle income bracket	1,279,000	2,318,000	2014
	<u>WESTLANDS® PLACE</u>	Kenya	In-Time Capital Limited	Residential, middle income bracket targeting young professionals	2,700,000	3,072,000	2014
	<u>72 MAGADI ROAD</u>	Kenya	Africa Reit Limited	Residential, middle income bracket targeting young professionals	3,465,000	3,300,000	2015
	<u>IZUBA® CITY</u>	Rwanda	Kigali Batsinda Estates Ltd	Residential, middle income bracket	3,000,000	5,948,000	2015
	<u>NAKURU® MEADOWS</u>	Kenya	Tamarind Properties	Residential, middle income bracket	4,000,000	5,277,000	2015
	<u>CAMLAND® VILLAS</u>	Zambia	Camland Estates Limited	Residential, middle income bracket	1,685,000	4,044,000	2016
	<a href="http://www.phatisa.com/portfolio/pahf-portfolio/">http://www.phatisa.com/portfolio/pahf-portfolio/</a>						
	In 2017 it was reported in the CCR that the fund is still under water since it is still in the investment period and most (5 out of 6) investments are still valued at cost. The investment pace (based on the Fund's committed but not disbursed amount) remains slow but is expected to pick up in the second half of 2017. Over the course of 2016, the Fund has made one new investment and additional investments in 2 existing projects. The total commitment per 4Q 2016 was USD 16.1m, of which USD 12.9m has been disbursed. More drawdowns are expected in the course of 2017 for additional investments and new projects, as the pipeline of projects seems positive. The investment pace was slow in 2016 with only one new project (Camland Villas) added to the portfolio. Current portfolio mainly consists of build-to-sell residential projects. Most projects are reaching the end of the construction phase and sales efforts are being put in place (Westlands Place and Westpoint Heights have already been completed). Westpoint Heights and 72 Magadi Road projects are co-invested with Africa REIT. The key partner who left, Eton Price,						

	<p>joined the sponsor of Africa REIT. This has affected the relationship between PAHF and Africa REIT negatively. The fund manager is currently trying to unwind the relationship. For Westpoint Heights, as the project is finished, parties agreed to manage it out as originally planned. For 72 Magadi Road, an agreement for PAHF to buy out Africa REIT's stake has been signed.</p>
<b>Client Review -key findings</b>	<p>The CCR of 2017 mentioned that the following risks/issues constitute reasons for concern. However, one must realise that the issues highlighted all refer to recent developments. <u>Fund size and long-term viability of fund manager:</u> The current fund size is too small to sustain the team. The small fund size had earlier already caused the departure of Eton Price (key partner) in 2015, and is in 2017 having impact on the operation. The fund manager is incurring losses, which so far are funded by Phatisa (50% owner of the fund manager). This loss situation is not sustainable and may have a further effect on team stability. To resolve the matter, a rights issue has been proposed by the fund manager, which was not approved by the partners Shelter Afrique and CDC, therefore did not go through. A controlled budget is now proposed, such that management fees will be revised on an annual basis, based on the budget. While the controlled budget is a short-term solution, fund manager and LPs are trying to find other ways to find a long-term solution for this issue.</p> <p><u>Investment pace:</u> The two consecutive key man events (being Fund Partners Jan van der Merwe and Eton Price (plus a third person) as defined in the participation agreement) in the past have delayed the investment period by 15 months. As such, only one year is left until the end of the investment period and the deployment rate is only 37% (USD13million out of USD 41,95 million). The fund manager is expecting to invest USD 25 million in 2017. The pipeline is robust but includes risky proposals. Two additional resources will be added to support deal execution, speeding up investment pace.</p> <p><u>Misalignment between Phatisa and Limited Partners (LPs):</u> Even after the LPs made clear before that they would not make up Phatisa's losses and that they expect them to share in the difficult moments, Phatisa keeps coming back with the same request. This worsens the alignment between the Sponsor and the Investor, and makes the LPs rethink about their presence in the Fund in the coming years.</p> <p><u>Potential deterioration in the risk profile:</u> Shelter Afrique is one of the fund's LPs. Shelter is a DFI aimed at housing finance in Africa. They will provide debt finance to a number of the fund's projects. However, Shelter is having liquidity problems and is trying to wiggle its way out under commitments. This is posing a risk to the fund's projects. Given the focus on affordable housing, it is unlikely to find alternative lenders.</p> <p>To avoid reputational risk, the fund is now providing the debt. While they can do so under the investment policy, LPs are worried about the risk profile.</p> <p><u>Environmental &amp; Social Risk of category A projects:</u> E&amp;S risks mainly relate to occupational health and safety (OHS). As there is a strong environmental and social Monitoring System (ESMS) in place there is confidence among the LPs that this risk is adequately mitigated.</p>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p>In an equity fund like PAHF the inputs are the investments the fund is making in housing projects. The <u>outputs</u> are the houses/apartments being built by the project developers, responsible of hiring the contractors and realising the housing developments. The <u>outcomes</u> in the housing sector are the houses/apartments being purchased by individuals or families and occupy them. The <u>impacts</u> can materialise when people living in these improved quarters, enhance their living</p>

	conditions and thereby allowing their families to thrive. Eventually, the housing projects might have a positive influence on development and on creating a solid middle class, which is crucial for stable environments.
<b>Assumptions</b>	<p>PAHF aims to do develop housing projects of USD 2 - 4 million in seize. The developers are thoroughly assessed, using a developers' checklist that is partly based on the checklist that was used in FMO's Housing department. Apart from having reliable partners, PAHF will require the developer to have clean title to the land. An Independent Engineer will monitor the technical feasibility and progress. <u>Market risk</u> is mostly mitigated by (i) phasing the development with the ability to accelerate or decelerate the construction of units, (ii) keeping the design flexible in order to change the product specifications, and design, in line with changing market sentiment, (iii) conducting price sensitivity analysis. PAHF would want full financing of a development project to be secured prior to breaking ground, such to be substantiated by a signed term sheet. Full funding can imply reliance on pre-sales during the project. The fund would want comfort that all the bank lender requirements have been met in order to unlock debt as soon as possible. In addition to the above criteria this would require an additional view on pre-sales, equity and mezzanine commitments and the cost to completion. A large emphasis is placed on the quality and rigor that developers apply to feasibilities, not just on the construction cost but also on pre-sales assumptions, sales and exit assumptions (and the associated sensitivities). Rental projects can be considered as well. In that case, an exit (e.g. an institutional investor off-taking the full project, a corporate providing housing for its employees) needs to be identified at the time of the investment. Similarly, provisions for rental management need to be in place. So far, the fund has not invested in rental projects, although the pipeline include some. All feasibilities must have adequate contingency to cater for a degree of unanticipated cost overruns. The fund will apply limits to country (30%) and single transaction (USD 6m or 15%). Special attention will also be paid to infrastructure.</p>
<b>Main project activities and achievements</b>	<p>The initial investment rationale and the long-term market opportunity for PAHF remains intact. Africa's economic growth and rising income levels are creating a burgeoning middle class and accelerating urbanisation. In many African countries urbanisation is boosting productivity, demand and investment. In 1980, just 28% of Africans lived in cities, while today, this figure is around 40% of the continent's one billion people. In 20 years more than 50% of Africa's population will be urbanised and the top 18 cities will have a combined spending power of USD 1.3 trillion, being a proportion roughly comparable to China's and larger than that of India today. However, more investment is required if Africa's new megacities are to provide a reasonable quality of life for the continent's increasingly large urban classes. The East African Development Bank estimates that East Africa alone requires some USD 12 billion over the next 20 years to keep pace with housing demand. This would equate to a need across the continent of some USD 2.5 billion per annum over the next 20 years. As Africa's growing middle classes demand affordable homes, housing units aimed at middle-income and lower middle income earners are starting to emerge in large cities across the continent.</p> <p>PAHF provides risk capital to housing projects to increase the supply of houses for the middle income segment in partnership (parallel) with capable, local developers. PAHF invest at project level only (no holding finance). Target income-/ market segment: emerging middle class with monthly incomes ranging from USD 650 – USD 1,500 and house prices in target markets Kenya, Uganda, Rwanda, Tanzania,</p>

	Zambia and Mozambique varying from USD 25k - USD 150k. The Fund provides scarce risk capital to increase supply of good quality homes mainly for sale to the target income groups. Financings are ring-fenced to immunize projects from undesirable developer-/corporate-/corporate governance risks. The CCR of 2016 mentions that since its establishment in 2012, until 30 September 2015, PAHF made 5 investments, all of which are valued at cost. Valuation is done on cost plus capitalized interest, which is common for development projects. Since then PAHF invested another USD 2.0 million in Nakuru Meadows (Kenya) and USD 2.1m in Izuba City (Kigali, Rwanda). In addition the Fund has signed legal documentation for one other project that is awaiting CP fulfilment.		
Main project issues	<ul style="list-style-type: none"><li>- First time fund with limited track record. The track record of the two appointed key persons (KPs) are purely debt transactions and a limited amount of residential projects. The third KP remained unknown at the time of project approval;</li><li>- High risk of underlying assets, whereby strength of developers remain key;</li><li>- Market risk was identified as a major issue. Although exit form (build to sell or rental) is determined prior to the investment, in the case of a build to sell structure, exits are not defined a priori, which is in line with all private equity funds (PEF);</li><li>- Risk reward remains low;</li><li>- Alignment with developers is crucial. PAHF will be investing in the projects special vehicle (SPV) through equity or mezzanine products, while the developers will bring in the land as equity-in-kind;</li><li>- Construction risk;</li><li>- E&amp;S risk through PHAF being a category FI-A project due to medium-sized housing activities to be implemented through 3<sup>rd</sup> party developers and 4<sup>th</sup> party contractors. The main E&amp;S risks relate to insufficient E&amp;S management at the funds manager's level, in terms of PS2 (labour conditions, health and safety @ contracting), PS4 community health and safety), and PS5 (land acquisition, resettlements).</li></ul>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	The documentation does not provide information on corporate tax income.	The documentation does not provide information on corporate tax income.
GHG Saving (tCo2)	T CO <sub>2</sub>		
Installed Capacity (MW)	MW		
Production Capacity	GWh		
People served – distribution	#	The housing developments serve people through providing better living conditions. In the financial proposal, no mention is made of the total number of families that should be served though PAHF-supported projects.	The six projects under development in 2017 intend to build 1274 apartments and 1340 houses.
People served – transport	#		

People served – power	#		
People served – telecom	#		
People served – IT/internet	#		
People served – industrial/agri	#		
People served – farmers reached	#		
Forestry under management	ha		
Agriculture	ha		
Green investments	€m		
Inclusive investments	€m		

## 2. Scoring

	Desk Review
<b>EQ 2 - Relevance</b>	
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	4
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3
JC 2-3 Additionality of IDF Loans and Equity Investments	3
<b>EQ 1 - Effectiveness</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	3
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	3
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	2
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	2
<b>EQ 4 – ESG Risk Management</b>	
JC4.2 IDF-financed projects contributed to green and inclusive development	3

JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	3
<b>EQ 6 – Efficiency</b>	
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	3
<b>EQ 3 – Revolvability</b>	
JC 3.5 Individual Project Sustainability	1
<b>EQ 5 – Policy</b>	
JC 5.1 Involvement of Dutch companies in IDF projects	n.a.
JC 5.2 Effects for Dutch companies and economy	n.a.
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	n.a.
<b>Scoring Justification</b>	
EQ 2 - Relevance	3
EQ 1 - Effectiveness	2.5
EQ 4 – ESG Risk Management	3
EQ 6 – Efficiency	3
EQ 3 – Revolvability	1
EQ 5 – Policy	
<b>Comments</b>	Overall rating 2.5 (Above Partly Satisfactory and below Satisfactory)

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learnt and key findings

Issue	Lesson
Lack of FMO commitment to a sector, such as Housing, when mid-term FMO strategic orientation changes and does not target housing projects as FMO-A opportunities any longer.	When an investment fund, such as PAHF, is developed with the use of IDF funding, and FMO-A co-investments in projects is expected to help develop the project development portfolio, FMO should change course mid-term, and abandon the Fund with possible FMO-A interventions. Interim solutions should have been pursued by FMO management.
Agreement on special “key man” conditionality in housing projects is a challenge as delay in project development can easily occur.	Although it caused project delays in developing the Fund, waiting for completing the right expert team (the third key man) was crucial for PAHF as it contributed to the quality of the heir investment portfolio.
Difficulty in exiting housing projects when completed due to local economic conditions	In housing projects, it is essential not to fully rely on a clean exit of a project through the sale of the development. In volatile economic circumstances, such as in Africa, housing projects should also take into account the possibility that during a certain period of time renting out the property is the only option.



## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
xxix) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument); xxx) portfolio performance (including reasons for portfolio impairments); xxxi) co-funding/complementarity with FMO-A portfolio; xxxii) investment leverage/funding mobilization.	
N.A.	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure) <b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice). <b>I-1.2.3</b> - Implementation progress – time and cost compared with programme <b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets <b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets: xxi) temporary/short term during the implementation period xxii) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks	
<p>The Fund reached a first close in December 2012 and became effective in April 2013. Since the establishment, to which FMO/IDF provided USD 7,5 million equity participation (first disbursement 26 April 2013), the Company has financed six housing developments. PAHF always invests modest amounts to the projects (amounts of about USD 3-4 million), only one USD 55 million project was financed with USD 6 million from PAHF. This project comprised a development of 840 apartments near Lusaka, Zambia. One of the limiting factors for fund's development was the Key Man Clause in the shareholders agreement, which stipulated that the fund could not make investments before a third partner had been found. It, therefore, took about a year after first IDF disbursement of the IDF funds, to realise the first investment. However, an interesting project pipeline was developed right from the start by the two existing partners.</p> <p>The number of direct staff of the Fund is modest, apart from the supports staff (nr. not available), the PAHF operates with 3 partners, 2 portfolio managers, 1 associate, 1 junior analyst and 1 E&amp;S manager. There is no information on how many jobs (short/long-term) are created in the housing projects during the project development and construction period. However, the construction sector is known for its labour intensity and it must be assumed that job-creation through investments of PAHF in the housing sector in Africa is substantial.</p> <p>Rating: 3 (Satisfactory)</p>	

JC1.3	IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).																					
<p>I-1.3.1 - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets</p> <p>I-1.3.2 - Assessment of likely sustainability of indirect jobs created after project completion</p> <p>I-1.3.3 - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks</p> <p>I-1.3.4 - Evolution of selected country level indicators on ease of ‘Doing Business’</p> <p>I-1.3.5 - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)</p>																						
<p>PAHF does not report on direct and indirect labour in the housing developments that are financed. As the housing sector is labour intensive and creates also a considerable number of jobs with their subcontractors and service providers, the short-term job creation effect during the construction period is substantial. The creation of more permanent direct and indirect job after project completion is modest, although these housing developments add to the local market of servicing real estate, for maintenance and managing of the property developments. The formal approach of PAHF towards is project development, helps the local authorities in their formulation and implementation of beneficiary country legal and regulatory business frameworks. The target markets are in Kenya, Uganda, Rwanda, Tanzania and Mozambique and the following ratings are assigned by the World Bank in its “Ease of Doing Business 2017” report:</p> <table><tr><td>Country</td><td>Ranking</td><td>Developments</td></tr><tr><td>- Rwanda</td><td>56</td><td>improving</td></tr><tr><td>- Kenya</td><td>92</td><td>improving</td></tr><tr><td>- Zambia</td><td>98</td><td></td></tr><tr><td>- Uganda</td><td>115</td><td>improving</td></tr><tr><td>- Tanzania</td><td>132</td><td>improving</td></tr><tr><td>- Mozambique</td><td>137</td><td></td></tr></table> <p>The projects that PAHF is financing will clearly benefit from the IDF funding.</p> <p>Rating: 3 (Satisfactory)</p>		Country	Ranking	Developments	- Rwanda	56	improving	- Kenya	92	improving	- Zambia	98		- Uganda	115	improving	- Tanzania	132	improving	- Mozambique	137	
Country	Ranking	Developments																				
- Rwanda	56	improving																				
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JC1.4	IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)																					
<p>I-1.4.1 - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])</p> <p>I-1.4.2 - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)</p> <p>I-1.4.3 - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p>I-1.4.4 - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p>I-1.4.5 - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p>																						
<p>There were no targets set for job creation in this project and no reporting takes place in respect of direct and indirect short and long-term job creation in the PAHF-financed projects. It can be</p>																						

assumed in that the projects in the countries where they are developed, if they eventually succeed, contribute to enhancing economic growth, through increase revenues of service providers, tax revenues, and possibly in public sector investment levels. The real estate development to which PAHF contributes involved houses and apartments for the middle income class in the country, and do benefit poorest people and vulnerable groups to a modest degree only through creating direct and indirect labour in the construction sector and the suppliers to that sector. As PAHF and their partners have a key position in realising the housing projects, the IDF funding is instrumental in partly realising the projects. The rating presented below assumes a positive development of the projects, which at this moment in time is not sure yet.

Rating: 2 (Partly Satisfactory)

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
<p><b>I-1.5.1</b> - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects</p> <p><b>I-1.5.2</b> - Evidence of availability and application of consistent M&amp;E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets</p> <p><b>I-1.5.3</b> - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management</p>	
<p>The reporting on the IDF investment in PAHF concentrated on the early stages of the projects during which the Fund team was established, a pipeline of housing projects was built and first investments were realised in housing projects in the targeted countries. Reporting on the development indicators is scarce. M&amp;E systems of FMO should better pick up development aspects of the individual projects PAHF invest in.</p> <p>Rating: 2 (Partly Satisfactory)</p>	

## EQ 2 – Additionality and catalytic effects

<b>Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?</b>	
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
<p><b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects</p> <p><b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio</p> <p><b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio</p>	
<p>No risk rating at project approval could be found in the documentation. As housing at the time was not any longer a priority area for FMO, no FMO-A funding was considered. The funds of IDF were additional because no commercial sources were willing to join the Fund.</p> <p>The country risk rating assigned to PHAF was F15 (2014).</p> <p>Rating: 4 (Highly Satisfactory)</p>	
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.  
**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

Because housing was not a priority any longer, FMO was not interested to invest in the projects that would be developed by PAHF. Along side FMO and other development finance institutions (CDC, Shelter Afrique, AfDB), limited commercial financing (only USD 2 million) was available because of the risks to invest in housing projects in Africa. The catalytic effect was, therefore, exercised towards the other development finance institutions. (Phatisa is the Fund Manager. Shelter Afrique is the Fund Promotor.)

Rating: 3 (Satisfactory)

**JC 2-3** ***Additionality of IDF Loans and Equity Investments***

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed imvestment, start-up, technical assistance...)

All shareholders, i.e. FMO (7.5 milliom), Commonwealth Development Corpration (USD 20 million), Shelter Afrique (SHAF) (USD 5 million)<sup>37</sup>, African Development Bank (AfDB) (US\$ 7 million), African Re. USD 1 million) and PTA Bank (USD 1 million), participation on an equal footing and they all have subscribed, based on the special conditions set at the beginning of the project. FMO activities in the housing sector have been discontinued and in the future there will be less opportunity to compare FMO-A infrastructure projects with IDF infrastructure projects. Agreement has been reached among the partners in respect of equity exit. Shelter-Afrique provided funding to prepare the project including funds for a feasibility study.

Rating: 3 (Satisfactory)

<sup>37</sup> Shelter Afrique is a Nairobi-headquartered pan-African housing finance DFI owned by 44 African Governments

### EQ 3 – Revolvability

<b>Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?</b>	
<b>JC 3.1</b>	<b><i>Evolution and drivers of portfolio performance pre and post 2012</i></b>
<p><b>I-3.1.1</b> - Portfolio performance and trends, in particular 2002-2011 and 2012-2016</p> <p><b>I-3.1.2</b> - Portfolio repayments/realisations and recycling in new projects</p> <p><b>I-3.1.3</b> - Performance of projects with FMO-A and/or other government funds</p> <p><b>I-3.1.4</b> - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses</p>	
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<p><b>I-3.2.2</b> - Balance sheet strength, profitability and cash flow/liquidity</p> <p><b>I-3.2.2</b> - Utility of Carnegie revolvability model in managing IDF operations</p>	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<p><b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting</p> <p><b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,</p>	
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<p><b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond</p>	
N.A.	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.	
<p>PAHF is still in the early stages of the Fund and needs more time to complete investments, i.e. sell the apartment/housing developments or create a profitable renting situation. The housing sector in Africa is very risky and taking into account the difficulties that PAHF encountered from the beginning, such as the late recruitment of a third partner with private sector experience, the difficulties with the management company/fund manager Phatisa, which resulted in the departure of one key partner (Eton Price) and departure of the second key partner (Jan van der Merwe) who concentrated on projects in Southern Africa. As a result, Phatisa and the Limited Partners (LPs) decided to drop Southern Africa as a priority area. These conflicts and the difficulty to find other partners and/or even depart from fund manager Phatisa altogether, enhance operational risk for PHAF.</p> <p>In the CCR of 2017 it was reported that the current fund size is too small to sustain the team. The small funds size had already earlier caused the departure of Eton Price (Key Partner) in 2015, and by 2016 was starting to have an impact on the operations. So far, the Fund Manager is incurring losses, which so far have been funded by Phatisa (50% owner of the Fund Manager). When the Fund could not be increased, the LPs preferred that PAHF would continue on a controlled budget basis. The role of Phatisa as sponsor of the Fund has been reconsidered. During a recent meeting of the LPs in Nairobi it was felt that a fire sale would be too destructive fund value wise and that it was best to side with Phatisa and not to continue activities in Southern</p>	

Africa on which region Jan van der Merwe concentrated. The LPs are serious in salvaging the situation in close cooperation with the Phatisa. In view of these difficulties, the rating should be negative at this point in time.

The Fund has been closed and no decision was taken to expand the fund, although FMO had already agreed to an increase of the Fund with USD 2 million of an additional USD 9 million. Eventually, CDC and Shelter Afrique decided not to provide extra financing. The jury is still out on whether the fund will be able to make a profit. Prospect are unsure as long as LPs and Phatisa have not resolved the problems and complete the partner team. See further below.

IDF's risk management guidelines and equity valuation policy and reporting follow the guidelines for FMO-A investments. The question can be asked whether the development side is adequately covered in the internal reporting. The CCRs provided by FMO present incomplete scorecards and do not sufficiently address developmental and E&S matters. However, in 2014 CCR it was stated that the E&S manager's report was not yet due.

Taken into account the problems that have arisen with the management team of the fund, which required a drastic change of Fund strategy, and also in view of the loss making situation as reported on in the CCR of 2017, Sustainability of the project is in doubt.

Rating: 1 (Unsatisfactory)

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

### **JC4.1 Trends in the nature and component balance of ESG risk in the IDF portfolio**

A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).

As the Fund is an A category project, it was conditioned that PAHF should appoint an E&S manager, responsible for all E&S issues of the Fund, including the E&S issues in the housing project under development. No E&S report was obtained from FMO. The CCR of 2017 mentions that due to some accidents reported, PAHF has stepped up its efforts to enhance the safety on-site. If there would not be a significant improvement in the future, the rating below should be downgraded.

Rating: 2 (Partly Satisfactory)

### **JC4.2 IDF-financed projects contributed to green and inclusive development**

**I-4.2.1** Comparison of intended/actual Greenhouse gases (GHG) footprint, 'emission avoidance' or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of 'doubling impact and halving footprint by 2020'

With the appointment of the E&S manager by PAHF environmental risk have been mitigated, although the recent accidents are proof that the housing sector is very risky in respect of occupational hazards. FMO and the Fund most likely will have an influence over time in formalising the housing sector and helping the local Governments in their efforts to create adequate legislation.

Rating: 3 (Satisfactory) but with a high prospect of deterioration.



<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
<p><b>I-4.3.1</b> - Use of Free prior and informed consent principles</p> <p><b>I-4.3.2</b> - FMO verification that higher risk projects comply with national legislation and international norms</p> <p><b>I-4.3.3</b> - Evidence of ESG risk assessment</p> <p><b>I-4.3.4</b> - Evidence of ESIA and ESAP preparation and implementation</p> <p><b>I-4.3.5</b> - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)</p> <p>The quality of the Financial Proposal was good and also the due diligence was adequate taking into account the efforts of FMO's Housing Department, that still existed at the time of project preparation. With the appointment of the E&amp;S manager by PAHF environmental risk have been mitigated, although the recent accidents are proof that the housing sector is very risky in respect of occupational hazards.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<p><b>I-4.4.1</b></p> <p>Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management</p> <p><b>I-4.4.2</b></p> <p>Evidence of feedback and application of lessons learned in subsequent projects</p> <p>It is important to realise that the project is a Category A project with potential Significant Adverse Impacts. Housing, through the construction activities, with often deficient labour contracts and where accidents can easily take place, is considered a very risky sector in respect of E&amp;S. The project is still young and the operational staff and E&amp;S manager should gain experience respectively, so that all the existing housing developments in which PAHF participates, have the necessary E&amp;S rules and regulations in place and they all adopted E&amp;S training programmes.</p> <p>Rating: 3 (Satisfactory)</p>	

## EQ 5 – Policy

To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
N.A.	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
N.A.	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
N.A.	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
<p>FMO has clearly defined policies and internal procedures, also in respect of equity participations, although the changes of monitoring and evaluation system over time made it more difficult to identify a consistency in the presented ratings in the scorecards, as presented in the CCRs. Due to the absence of local presence and the need to monitor from a distance, there is a danger that monitoring has not the intensity that it should have. In respect PAHF FMO's relationship manager is part of the AC and maintains ample contact with the Funds Manager, which is very common for equity -financed projects.</p> <p>Corporate governance is adequately adhered to, which is a reflection of the good cooperation among the LPs. Monitoring of equity participations and making sure to preserve value of the IDF investment does not come cheap, reason why cost-effectiveness cannot always be maintained. FMO seems to handle this investment in a professional manner with due attention</p>	



to its partners in the project. FMO is only on the Advisory Committee. In such a Fund it is not proper that one of the owners is member of the investment committee.

Rating: 3 (Satisfactory)

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
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**I-6.2.1** - Appropriateness of available FMO expertise

**I-6.2.2** - Trend in of full-time ratio equivalent staff to volume of operations

The CCRs and other reports in the project file show clearly that there is excellent equity expertise exercised by FMO's staff and that the cooperation among the LPs is good.

Rating:3(Satisfactory)

<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
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**I-6.3.1** - Identification of explanatory factors (incl. external factors) in effective implementation

**I-6.3.2** - Identification of explanatory factors (incl. external factors) in effective observed delays

The jury is still out in respect of the ultimate success of the Fund. The composition of the team of the Fund Manger can still fail and there is a possibility that the costs of the Fund cannot be contained. After the meeting in Nairobi among the LPs, now that there is clarity on how to proceed (maintaining the existing projects plus one), it is expected that performance of the Fund will improve.

Rating: 2 (Partly Satisfactory)

## Sources of data

Document title	Date
IC Decision on CIP - Minutes of the IC meeting	5/04/2012
Finance proposal	26/07/2012
IMR Decision on Financial Proposal	3/08/2012
Constitution of Pan African Housing Fund	18/12/2012
AFDB side letter	19/12/2012
CDC side letter	19/12/2012
FMO side letter	19/12/2012
FMO subscription agreement	19/12/2012
PTA side letter	19/12/2012
Management agreement	19/12/2012
CP consent letter	15/02/2013
Post-contracting change request - Waiver to FMO contracted financing	5/09/2013
Client Credit Review	12/02/2014
Post-contracting change request - Waiver to FMO contracted financing	13/03/2014
Written resolution of the class A members of the company	2015
Client Credit Review	17/02/2015
Approval for Change request	4/08/2015
Approval for Change request	25/08/2015
Client Credit Review	12/02/2016
Memo - Rights issuance increase	9/09/2016
SCA Decision - Minutes of the IC meeting	29/09/2016
Client Credit Review	28/02/2017
Approval for Change request	7/07/2017

# Robi Axiata Ltd., Bangladesh

The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

Data limitations and constraints:

- In first instance a considerable amount of data were missing on the Axiata project. During interaction with FMO staff additional information was provided, in particular the Annexes to the original project proposal as discussed in the Investment Committee should be mentioned in this respect.

There is a lack of data on developmental issues. In particular the mobile phone customer growth in rural areas compared with respective growth of Axiata's competitors. During the field visit it became clear that Axiata has contributed substantially to coverage of the network which is now at a rate of 99% with equal coverage in rural areas compared with urban areas).

## 1. Project fiche

Project title	ROBI AXIATA LTD.		
Project description	At the time of project approval Robi Axiata (Bangladesh) Limited (“Axiata” or the “Company”) aimed at maintaining its position in the mobile telecom market in Bangladesh through an investment programme of US\$ 330 million, to allow expansion of the customer base and make substantial capital investments to secure a technological advantage vis à vis its competitors. The main sponsor (TMB) from Malaysia had a 70% stake in the company and dominated the Management, while the local Kahn Group owned 30% of the shares. In 2006, FMO and DEG jointly provided financing to Robi Axiata (Bangladesh) Limited (“Axiata” or the “Company”) for the investments in their infrastructure and upgrade their existing telecoms network technology in 2006. DEG provided a loan similar to the FMO-A facility. The departure in 2008 of the Kahn Group, Axiata’s 30% shareholder and the entrance of an experience Japanese mobile phone operator NTT DoCoMo with an equal share, turned out to be very beneficial for the company in terms of technology, management qualities and financial resources.		
Sector	Telecommunications		
Stage	Expansion		
Operation Dates	Clearance in Principle (CIP): 10-8-2004 Finpre: Financial proposal approval (FP): 22-7-2005 Loan effective date: 27-10-2006 Expiration (maturity/final repayment) date: 15-1-2016		
Contract	FMO Client number: C0001551		
Country/Region	Bangladesh/Asia		
Country category	Lower Income Country (LIC)		
Project total cost (€)	US\$ 330 million		
IDF contribution (€)	Tranche A: EUR 15 million (or US\$ 18 million) equivalent in local currency (LCY) [Original amount committed: EUR 17.506,226 or BDT 1,547,492,400 (BDT 88,4=Euro 1)]		
Co-financing (€)	Tranche B: FMO-A: US\$ 15 million (7,25 years, 2 y grace) and DEG: US\$ 15 million (7,25 years, 2 y grace) Standard Chartered Bank (SBC): US\$ 50 million Supplier credit: US\$ 180 million Equity increase by the international sponsor TeleKom Malaysian International (TMI)		
Loan Terms			
Senior/Subordinated	Subordinated loan		
Convertible			
Amount	EUR equivalent in Taka: EUR 15 million (limit used amount EUR 13.1 million) and Taka 1,172.5 million (limit used amount)		
Loan Agreement Date	27-10-2006	Facility No	
Currency	EUR equivalent in local currency Taka		
Tenor	10 years		
Grace period	30 months (availability period 24 months)		

Interest rate	Fixed portion of 4.8% and a floating portion of a local benchmark plus 7% to 8%, to be capped around 12%-13%. The floating portion to linked to the financial indicator EBITDA.														
Security	2 <sup>nd</sup> charge over all assets and comfort letter from sponsor (or guarantee?)														
Fees	Commitment fee of 0.5% annually and a front end fee of EUR 180,000														
Disbursements	Dates and amounts: First disbursement: 1-10-2005 Last disbursement: 1-10-2007 Total disbursement EUR 19,343,655? Facility only EUR 15 million														
Monitoring	Monitoring/scorecard report available 10 November 2009														
Key covenants	<div>18.1.1 the Debt/Equity Ratio shall not at any time exceed 2.00:1.</div> <div>18.1.2 the Debt Service Coverage Ratio in respect of any Relevant Period shall not at the end of such Relevant Period be less than 1.50:1.</div> <div>18.1.3 the Interest Cover Ratio in respect of any Relevant Period shall not at the end of such Relevant Period be less than 3.00:1.</div> <div>18.1.4 the ratio of Consolidated Total Debt to Consolidated EBITDA in respect of any Relevant Period specified in column 1 below shall not exceed the ratio set out in column 2 below opposite that Relevant Period.</div> <table><thead><tr><th>Column 1 Relevant Period</th><th>Column 2 Ratio</th></tr></thead><tbody><tr><td>Relevant Period expiring on 31 December 2006</td><td>4.00:1</td></tr><tr><td>Relevant Period from 1 January 2007 to 31 December 2007</td><td>3.50:1</td></tr><tr><td>Relevant Period from 1 January 2008 to 31 December 2010</td><td>3.00:1</td></tr><tr><td>Relevant Period from 1 January 2011 and thereafter each</td><td>2.75:1</td></tr><tr><td>Relevant Period up to the Facility A Termination Date</td><td></td></tr></tbody></table>			Column 1 Relevant Period	Column 2 Ratio	Relevant Period expiring on 31 December 2006	4.00:1	Relevant Period from 1 January 2007 to 31 December 2007	3.50:1	Relevant Period from 1 January 2008 to 31 December 2010	3.00:1	Relevant Period from 1 January 2011 and thereafter each	2.75:1	Relevant Period up to the Facility A Termination Date	
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Relevant Period from 1 January 2007 to 31 December 2007	3.50:1														
Relevant Period from 1 January 2008 to 31 December 2010	3.00:1														
Relevant Period from 1 January 2011 and thereafter each	2.75:1														
Relevant Period up to the Facility A Termination Date															
Conversion features	None														
Equity Terms															
Direct	No equity														
Indirect – Fund															
IDF Investment (\$, €m, local currency)															
Total Project/fund															
IDF Stake (%)															
Investment date		Facility No													
Disbursements	Dates and amounts														
Direct investment – exit strategy															
Direct investment - put option terms															
Fund life															
Grants															
Amount	No grants														
Convertible	Yes/No														
Purpose															
Grant agreement date		Facility no													
Key terms															

Disbursement	Dates and amounts	
Conversion terms		
Financial Risk and Performance		
	Financial proposal/approval	Client Review - Most recent
Client Risk Rating	Country risk: D Environment: Cat. B, no big risks, mitigating instruments in place. No client risk rating presented in the financial proposal.	Country risk: F13 2015  Client risk: F12 2015
Loan - Impairment provision	0,00%	0,00%
Equity - Fair value adjustment	n.a. %	n.a. %
Financial performance	Based on the 2015 CCR: Financial performance of the Company has been positive over time and there is continuous financial stability. The performance, margins and cash flow are robust. Debt level is low. With the relatively low level of mobile telecom penetration in Bangladesh, the 3G licence that was obtained in September 2013, market prospects are good.	
Client Review -key findings	Key financial risks and mitigants: <u>Competition</u> (medium): in terms of tariffs among mobile operators could result in the further decline in ARPU and loss of market share for Axiata. <u>Mitigant</u> : Considering the low penetration rate, there is still ample room for growth for all the operators. Axiata has been able to maintain its market share and nr. 3 position. However, through the purchase of Airtel in Janaury 2016, it reached a solid 2 <sup>nd</sup> position. <u>Sensitivity to currency devaluation</u> (medium): A significant part of Axiata’s revenues are in local currency while borrowings are in USD. Possibilities for hedging are limited. <u>Mitigant</u> : USD income from roaming and conservative balance sheet (low leverage). Bangladesh is a relatively closed economy and has benefitted from strong inflow of remittances. Over last three years, the BDT either slightly appreciated or remained stable against the USD, leading to FX gains for Axiata. The USD open exposure is 21% of total assets, which is acceptable. Sensitivity analysis in the annual report shows that a change of 0.5% movement in USD would only lead to a change of 0.2%/2.2% respectively in equity/net profit. <u>Regulations</u> (medium): is not transparent. In2013, the government increased corporate tax rates (from 35%-40%) for domestically listed mobile operators. This has negatively impacted Axiata’s profits. Also, government creates an unpredictable regulatory and investment environment by announcing to grant 4G licenses to WiMAX operators, which later is retracted followed by new licence announcements, to which the large operators are protesting. Now, the operators expect that there will be an open 4G auction in 2016. <u>Mitigant</u> : Axiata’s size and financial strength partly mitigates the	

	<p>impact of increased tax rate. This was proven in the case of the SIM taxes, which were first subsidized by Axiata, but are now partly charged to customers through higher SIM prices. On the new licences; Axiata and the larger mobile operators-with the 3G concessions, have the scale, and the market to defend their territory.</p> <p><u>Development Impact:</u></p> <p>In respect of developing its position in the telecom market and serving clients in rural areas, Axiata managed to increase the number of subscribers and per end of January 2015 the subscriber-base (90-days active) has increased to 26,3 million (approximately 21% of the market). The financial proposal of July 2005 presents a total of 2.9 million subscribers in Bangladesh, of which Axiata served 29% or 1.1 million subscribers.</p>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p><u>Inputs:</u> the investment of FMO-A and IDF together with funding from its sister development finance corporation, DEG and from export finance institutions, allowed Axiata to make investments in technologically advanced equipment, building communication towers and expanding in urban and rural areas, thereby broadening its subscriber base. Through the help of the sponsor TMB from Malaysia, Axiata was able to deliver state-of the art technology required to maintain the licence from the regulator.</p> <p><u>Outputs:</u> Axiata managed to deliver a high level mobile network in Bangladesh with adequate coverage geographically, which attracted a growing number of clients. The creation of new towers allowed the Company to operate a quality network that helped maintain market share.</p> <p><u>Outcomes:</u> In view of the very low penetration rate of mobile telephone in Bangladesh in 2005 the potential for growth was enormous. But at the same time the challenges were high, as the telecom sector is of a high-tech nature and requires vast investments, also to keep up with technological developments. With the help of the FMO/IDF investments the country has now a more sophisticated mobile network which is an essential ingredient for development to take shape.</p> <p><u>Intermediate and global impacts:</u> as reported in the project documentation</p>
<b>Assumptions</b>	<p>Briefly describe assumptions and major risks as reported in the project documentation:</p> <p>The financial proposal had identified the following risks:</p> <p>Currency risks, as Axiata's revenues were primarily in LCY and the majority of the financing is in USD. The mitigation to the currency risk was found in the enormous growth potential of the telecoms industry. This industry has also the ability to increase prices to stay profitable and avoid cash flow problems.</p> <p>Network and technology risks, as capacity and coverage were not sufficient to allow intended growth, for which an extensive investment programme was necessary. Mitigation is found in a solid investment programme with technological support from the</p>

	<p>Malaysian sponsor TMB.</p> <p>Market risk was identified as the competition from new and existing mobile phone players was expected to be severe. Limited access to financing and technology would prevent new players to expand. In addition, market penetration was still very low at the time and there was interesting growth potential for existing market players.</p> <p>Different opinions between foreign and local shareholders on how to run a large professional organisation was seen as a risk, whereby delays in decision making could take place. The clear objectives of the company would help shareholders to make the project successful. The mismatch between tenor (15y) and length of the licence (10y) was seen as a risk. The authorities confirmed at the time that renewal of the licence is “an automatic process”. Compliance with the terms of the existing licence would secure renewal.</p>		
Main project activities and achievements	<p>Briefly describe, as reported in the project documentation, the following items:</p> <ul style="list-style-type: none"><li>- Activities implemented:</li><li>- Outputs achieved:</li><li>- Outcomes achieved:</li><li>- Intermediate impact achieved:</li><li>- Global impact achieved:</li></ul> <p>See the text under Logical framework above.</p>		
Main project issues	<p>The project characteristics are: (a) that there is the mobile telecoms market is a high growth market with at the time a very low penetration rate; (b) that Axiata’s has a strong market position as 2<sup>nd</sup> largest mobile operator (31% market share (May 05); (c) that the company has experienced shareholders and management in the telecoms sector; (d) the project involves introduction and application of proven products and services in developing markets; (e) Axiata has strong financial fundamentals; and (f) there is strong Government support for development of the telecoms industry.</p>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	No data available	BDT 4,042,260,000 or EUR 45.7 million
GHG Saving (tCo2)	T CO <sub>2</sub>		
Installed Capacity (MW)	MW		
Production Capacity	GWh		
People served – distribution	#	2250 jobs created	1633 jobs created; information during the field visit 1500 staff.
People served – transport	#		



People served – power	#		
People served – telecom	#	In 2004 in total 1,103,465 customers served (or 29%)	26.6 million subscribers reached (or 21%) At the moment 29%
People served – IT/internet	#		
People served – industrial/agri	#		
People served – farmers reached	#		
Forestry under management	ha		
Agriculture	ha		
Green investments	€m		
Inclusive investments	€m		

## 2. Scoring

	Desk Review	Field Visit
<b>EQ 2 – Relevance</b>		
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	3	
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	3	
JC 2-3 Additionality of IDF Loans and Equity Investments	4	
<b>EQ 1 - Effectiveness</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	4	
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).	3	
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	3	

JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio	2	
<b>EQ 4 – ESG Risk Management</b>		
JC4.2 IDF-financed projects contributed to green and inclusive development	3	
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3	
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	3	
<b>EQ 6 – Efficiency</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	4	
<b>EQ 3 – Revolvability</b>		
JC 3.5 Individual Project Sustainability	4	
<b>EQ 5 – Policy</b>		
JC 5.1 Involvement of Dutch companies in IDF projects	n.a.	
JC 5.2 Effects for Dutch companies and economy	n.a.	
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry	n.a.	
<b>Scoring Justification</b>		
EQ 2 - Relevance	3.3	
EQ 1 - Effectiveness	3	
EQ 4 – ESG Risk Management	3	
EQ 6 – Efficiency	4	
EQ 3 – Revolvability	3	
EQ 5 – Policy	n.a.	
<b>Comments</b>	Overall rating 3,26	The project seems to do very well which is demonstrated by Axiata's steady development and serving at the moment more than 26 customers, while at the

		time of approval of the loan only 1.1 million customers were served.
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### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

## 3. Lessons Learned

1	A strong technical partner with international experience contributes considerable the project's success.
2	Focus on capturing rural client and building up infrastructure in rural areas enhances a Telecoms projects development value. It is important that during the project execution adequate reporting takes place to monitor the development aspect of these projects.
3	Strong local management/shareholders, along-side international management and foreign investments, helps develop good projects whereby integrating the local context in a technology company such as Robi Axiata can help market development and company growth.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.1</b>	<b><i>Trends in the nature and component balance of IDF portfolio</i></b>
xxxiii) trends during the period 2002-2016 (evolution of process timelines – approvals, signature, disbursements, breakdown by sector, country/region, financial instrument); xxxiv) portfolio performance (including reasons for portfolio impairments); xxxv) co-funding/complementarity with FMO-A portfolio; xxxvi) investment leverage/funding mobilization.	
N.A.	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<b>I-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure) <b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice). <b>I-1.2.3</b> - Implementation progress – time and cost compared with programme <b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets <b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets: xxiii) temporary/short term during the implementation period <b>xxiv)</b> permanent/long term and contractual private/Public Private Partnership (PPP) frameworks	
<p>The project is a mobile telecoms expansion project and the investment plan was adequately executed to provide adequate capacity at a technologically high level to attract new customers/subscribers. But over the years important challenges had to be met, as the sector is: highly competitive, with price battles at times resulting in pressure on the margins; demands high levels of investments; and disappointing financial performance at time. The departure in 2008 of the Kahn Group, Axiata's 30% shareholder and the entrance of an experience Japanese mobile phone operator NTT DoCoMo with an equal share, turned out to be very beneficial for the company in terms of technology, management qualities and financial resources. Because of the licence renewal in 2011, Axiata had to pay the Government US\$ 263 million. As a result several key covenants were breached (Debt/EBITDA) and FMO needed to give a waiver (Debt/EBITDA 3.5 2011 and 4 in 1Q 2012).</p> <p>Axiata has been growing strongly and able to increase its market share, while keeping the EBITDA margins stable. Company became profitable again in the first half of 2012, while number 2 telecom player Orascom continues to be loss making. The Company has been actively monitored due to overdue reporting and outstanding fees/expenses. However, the relationship has improved, but challenges remain due to the strong financial burden of the 2G and 3G licenses and difficult regulatory environment. Comfort is derived from the fact that the client has a very strong shareholder that has provided some support, but the question remains how much additional support they are willing to provide going forward.</p> <p>In 2015 it was reported in the CCR that the Company maintained its good performance and financial stability. The performance, margins and cash flow are robust, while debt level is low. With relatively low level of mobile telecom penetration and the 3G licence that was obtained in</p>	

September 2013, market prospects are good. In respect of the key financial risks, Axiata has been reasonably successful in maintaining its market share and now occupies nr. 2 as mentioned earlier position (previously nr. 3); in respect of profitability challenges remain, although improvements have been observed because of lower interest rates; while the Company remains sensitive to LCY devaluation, Bangladesh remains a relatively closed economy which benefits from a strong inflow of FCY; regulation in the Telecoms sector is not transparent and the Government keeps on burdening the sector with additional corporate and SIM taxes. A mitigating factor is that these taxes apply to all mobile operators, and it is expected that in the long term these costs can be passed on to the customers (part of the SIM taxes were subsidized by the operators).

Rating: 4 (Highly Satisfactory)

<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).</i></b>
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**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

No systematic recording of indirect jobs has taken place. In the CCR of 2008 it is mentioned that "supporting the mobile telecom sector in a country with one of the lowest phone penetration rates in the world contributes to economic development because it created nearly 240,000 jobs, added around USD 650 million to GDP of Bangladesh." It is not clear whether this is the effect of the entire sector. There is no justification for this very high job creation figure and it would have been important to refer to a specific study on this subject. Also a study of the Telecommunications sector of 2009 does not present such figure.

If the Company continues to show positive results, it will continue to create indirect jobs, although the level of the same will be unknown. The client is not obliged to report on such an indicator.

When foreign experienced telecom operators enter a country, the local Government is under pressure to enhance legislation and to improve on the regulatory environment in the sector. It was, however, concluded already that Bangladesh regulation in the sector is not transparent.

In respect of the World Bank report "Doing Business 2017" Bangladesh ranks 179 on the ease of doing business list, which indicates that the Company has operated and is operating in a very challenging environment.

Through the IDF financing Robi Axiata Ltd. was able to benefit from the LCY financing and from the loan be subordinated, which made it quasi equity. It contributed to the growth of the Company and helped maintaining market share. The total contribution of EUR 18 million as part of an investment/financing package of USD 330 million was of course modest.

It is unfortunate that there is no clear evidence of these outcomes, although the positive effect seems plausible. Therefore the rating must be positive.

Rating: 3 (Satisfactory)

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
<p><b>I-1.4.1</b> - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])</p> <p><b>I-1.4.2</b> - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)</p> <p><b>I-1.4.3</b> - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)</p> <p><b>I-1.4.4</b> - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)</p> <p><b>I-1.4.5</b> - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support</p> <p>The Company was supposed to contribute to employment generation with in total 2250 staff. The CCRs which contain data on staff employed tell a different story, whereby in 2012, total staff created was 1715, in 2014 1595 and in 2015 1633. There is no information how much of these employees were female staff.</p> <p>The Telecoms sector in general is essential for economic development. The Telecoms sector facilitates economic subjects to communicate in an optimum way thereby helping businesses to develop. The very low penetration rate (1.9% in 2004) of mobile phones in Bangladesh was an indication for the high potential for the sector to grow. To make a difference in the sector FMO also provided financing to other telecom operators in Bangladesh.</p> <p>The CCR of 2008 states that: “Telecom companies are beneficial in particular to the poorer population in remote areas because it facilitates easy and fast access to scarce information, boosts small businesses and is helpful in emergency situations.”</p> <p>No evidence is available in respect penetration in rural areas, although the sector report of 2009 mentions that 72% of the population of Bangladesh lives in rural areas. For evidence on development outcomes it would have been important if FMO would ask the client to report on subscriber growth in rural areas.</p> <p>Although the effect on the outcomes has been positive, quantification to allow for an adequate assessment is lacking. Nonetheless a positive judgement is warranted.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
<p><b>I-1.5.1</b> - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects</p> <p><b>I-1.5.2</b> - Evidence of availability and application of consistent M&amp;E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets</p> <p><b>I-1.5.3</b> - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management</p> <p>It is recorded in the CCR of 2012 that reporting has not been optimal at times. The changes in relationship managers on the side of FMO has been blamed for this. The company experienced</p>	

ups and downs over the years and not always was The Hague informed about major changes. Monitoring has been done mainly from the financial/credit side and development issues got little attention. Also the score cards were often incomplete and focussed on financial risk. The change in score card content over time did not help the steady flow of information. In the case scorecards were complete, little explanation was given on the reasons why indicators changed. The lack of FMO resident offices is a major obstacle in doing this type of business, as it is very difficult to keep track of what is going on in the Company without local presence. However, if very high investments are made by FMO, including Dutch Government IDF financing, one would expect that more time and effort is devoted to project monitoring, including key development indicators. In addition, FMO financed more companies in the telecoms sector in Bangladesh, which would have justified more intensive monitoring.

Over time, monitoring and evaluation of development contributinos have diminished and under the new monitoring and evaluation system there is little scope for project evaluation, other than the high-level indicataors which are often of an indirect nature. The rating therefore cannot be positive:

Rating: 2 (Partly Satisfactory)

## EQ 2 – Additionality and catalytic effects

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

**I-2.1.2** - Annual risk ratings of IDF portfolio compared with FMO-A portfolio

**I-2.1.3** - Country risk profile of IDF portfolio compared with FMO-A portfolio

At entry the risk rating was C1: moderate for the IDF loan and B2: satisfactory for the FMO-A loan.

In 2009 the facility risk rating of the IDF loan was Poor (7) and the FMO-A loan was Moderate (6).

In 2011 the risk of the IDF loan remained Modorate (5) and of the FMO-A loan Satisfactory (3).

In 2012 client risk rating for the IDF loan was F15 and for the FMO-A loan also F15.

In the CCR of 2015 the client risk rating was change from F13 to F12.

Over time the risk rating categories have changed, reason why it is difficult to make comparisons between the years.

The country risk profile for Bangladesh as LDC has improved over the years: 2009 6; 2011 3; 2012 F13; 2014 F13; 2015 F13

Rating: 3 (Satisfactory)

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.



**I-2.2.2 - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)**

As was stated above, the contribution from IDF to the finance plan of the Company was modest with about 5% of the total finance plan. The subordinated character of the loan helped the company arranging the financing, although the financial proposal indicated that the IDF funds would be used to repay a USD financing from EFIC, a export finance institution. As there were delays in arranging the financing and realising the project, by the time the loans were effective, the Company had already repaid the EFIC financing as the conditions on this financing were too restrictive. Therefore the IDF funds could be used to buy equipment.

Apart from the funding from FMO with the FMO-A USD 15 million facility, the DEG from Germany also provided development funding. The remainder came from commercial banks and in the form of export finance.

Rating: 3 (Satisfactory)

**JC 2-3    *Additionality of IDF Loans and Equity Investments***

**I-2.3.1** - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.

**I-2.3.2** - At project level, project viability endorsement and contribution from IDF participation.

**I-2.3.3** - Comparison of FMO additionality scores with those for FMO-A projects in general and FMO-A infrastructure projects

**I-2.3.4** - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.

**I-2.3.5** - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, seed investment, start-up, technical assistance...)

The IDF loan was a subordinated loan with a relative high interest rate capped to 12-13%, including a fixed and floating portion (linked to a financial indicator). This type of loan was unique for Bangladesh and showed a high commitment from the side of FMO and the Dutch Government providing the IDF financing. The FMO-A loan was LIBOR based with a margin of 2.5%. Common conditions precedent were in place. At the time the IDF loan was granted the loan was highly Additional.

Rating: 4 (Highly Satisfactory)



### EQ 3 – Revolvability

Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?	
<b>JC 3.1</b>	<b><i>Evolution and drivers of portfolio performance pre and post 2012</i></b>
<p><b>I-3.1.1</b> - Portfolio performance and trends, in particular 2002-2011 and 2012-2016</p> <p><b>I-3.1.2</b> - Portfolio repayments/realisations and recycling in new projects</p> <p><b>I-3.1.3</b> - Performance of projects with FMO-A and/or other government funds</p> <p><b>I-3.1.4</b> - Risk reward tradeoff between anticipated high development outcomes/impacts and high financial risks/investment losses</p>	
<p>The Robi Axiata project has performed well, although over time the risk ratings have fluctuated. However, the company is now (2015) doing very well financially and has developed its customer base from a level of 1 million in 2005 to more than 26 million in 2015. The loan has been repaid according to schedule and therefore contributed positively to the revolvability of the fund. At the beginning the risks were quite high as the operation was in a LDC country, but the sector risks were moreate as the sector had enormous potential to grow. Over the years Axiata managed to maintain above 20% market share. The quality of the Malaysian sponser, and in the early days the local sharehoder, well placed in the Bangladesh society, helped reduce risk of operating in an LDC environment. After 2008 when the local Kahn Group was substituted by the Japanese telecoms operator NTT DoCoMo the Company could benefit from their expertise, which helped improve overall performance. As mentioned earlier, there was a lack of monitoring development outcomes/impact.</p> <p>Rating: 4 (Highly Satisfactory)</p>	
<b>JC 3.2</b>	<b><i>Financial Performance</i></b>
<p><b>I-3.2.2</b> - Balance sheet strength, profitability and cash flow/liquidity</p> <p><b>I-3.2.2</b> - Utility of Carnegie revolvability model in managing IDF operations</p>	
<p>Most of the years the financial performance of the Company was positive. 2008 and 2011 net losses were made of USD 17,1 million and USD 10,1 million respectively. In 2011 a waiver for a breach of covenant was granted (see CRR and Waiver memorandum of 2011). This was caused by the high level of investments required for buying the necessary licence. The EBDIT of 2.75 was breached and a waiver for an increased ratio was granted. In later years no breach of covenants took place and no waivers were required. Sovlveny has remained strong over the years and profit was positive compared with their peers. Net profitability figures are the following:</p> <p>2006 US\$ 62.7 million</p> <p>2007 US\$ 1.5 million</p> <p>2008 US\$ -17.1 million</p> <p>2009 US\$ 12.4 million</p> <p>2010 US\$ 14.1 million</p> <p>2011 US\$ -10.1 million</p> <p>2012 US\$ 11.4 million</p> <p>2013 US\$ 47.4 million</p> <p>2014 US\$ 56.4 million</p>	

2015 US\$ 12.0 million (three months) Rating: 4 (Highly Satisfactory)	
<b>JC 3.3</b>	<b><i>Focus of risk management systems and policies on long-term sustainability</i></b>
<p><b>I-3.3.1</b> - Review IDF risk management guidelines, loan provisioning policy, equity valuation policy and reporting</p> <p><b>I-3.3.2</b> - Appropriateness of IDF accounting policies and guidelines for (i) exposure limits by sector, country, region, type of borrower/investee, instruments,</p> <p>IDF risk management guidelines follow those for FMO-A facilities. In this case the Company obtained two facilities, one from IDF and one as FMO-A. FMO was able to negotiate a 2<sup>nd</sup> mortgage on all assets, although it involved a subordinated IDF loan. The CCRs give an adequate recording of both facilities. However, the monitoring of a project such as Axiata could have been more intense, as the CCR at times criticize the intensity of the monitoring.</p> <p>Rating: 3 (Satisfactory)</p>	
<b>JC 3.4</b>	<b><i>Revolvability</i></b>
<p><b>I.3.4.1</b> - Updated Carnegie model including a range of performance scenarios up to 2018 and beyond</p> <p>n.a.</p>	
<b>JC 3.5</b>	<b><i>Individual Project Sustainability</i></b>
<p><b>I.3.5.1</b> - Review performance and sustainability of 15 projects selected for desk review.</p> <p>Robi Axiata Ltd. turned out to be highly sustainable. The excellent partners and the very low penetration rate of mobile phones in Bangladesh, helped sustainability of the Company.</p> <p>Rating: 4 (Highly Satisfactory)</p>	

## EQ 4 – ESG Risk Management

<b>What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)</b>	
<b>JC4.1</b>	<b><i>Trends in the nature and component balance of ESG risk in the IDF portfolio</i></b>
<p>A portfolio analysis will provide an indication of the relative proportion of different ESG risk category projects (A, B+, B, C), a brief description of project and associated risks and the evolution (number and size) of risk over time (see also JC 1.1).</p> <p>The project was assigned E&amp;S risk Category B: Limited Potential Adverse Impacts (lower risk profile).</p> <p>As a telecom project, in general the environmental and social impacts are not large. The project was categorized as “light” B. During due diligence FMO learned that the Company did not have a safety and health plan, which was remedied when the loans were granted. The Company accepted FMO’s guidance in this respect. Overall, FMO was satisfied with the physical conditions, social benefits and training of the Company. The initial environmental and social risk score was 2. Over time this risk has not changed.</p> <p>Rating: 3 (Satisfactory)</p>	

<b>JC4.2</b>	<b><i>IDF-financed projects contributed to green and inclusive development</i></b>
<b>I-4.2.1</b>	Comparison of intended/actual Greenhouses gases (GHG) footprint, ‘emission avoidance’ or other environmental effects
<b>I-4.2.2</b>	Comparison of intended/actual social effects including social inclusion
<b>I-4.2.3</b>	Progress in moving towards FMO Impact Model targets of ‘ <i>doubling impact and halving footprint by 2020</i> ’
	There were no adverse environmental effects. The social benefits in the Company have remained acceptable over time and there is no negative recording on this indicator in the CCRs. “Doubling impact and halving footprint”, was not an issue with this project, dating back to 2005. Rating: 3 (Satisfactory)
<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
<b>I-4.3.1</b>	- Use of Free prior and informed consent principles
<b>I-4.3.2</b>	- FMO verification that higher risk projects comply with national legislation and international norms
<b>I-4.3.3</b>	- Evidence of ESG risk assessment
<b>I-4.3.4</b>	- Evidence of ESIA and ESAP preparation and implementation
<b>I-4.3.5</b>	- Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)
	Robi Axiata was not a high risk project in respect of E&S. In all CCR the E&S risk factor was presented in the scorecard. Risk factor over the years: 2009: 66 2011: 66 <b>Rating:</b> 3 (Satisfactory)
<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
<b>I-4.4.1</b>	Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management
<b>I-4.4.2</b>	Evidence of feedback and application of lessons learned in subsequent projects
	This is a Category “light” B project. Rating: 3 (Satisfactory)

## EQ 5 – Policy

<b>To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?</b>	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
n.a.	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
n.a.	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
n.a.	

## EQ 6 – Efficiency

<b>Has FMO efficiently and appropriately managed the Fund?</b>	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
<p>FMO has clearly defined policies and internal procedures, although the change of monitoring and evaluation system made it more difficult to identify a consistency in the presented ratings in the CCRs. Due to the absence of local presence and the need to monitor from a distance, at times there was a lack of information on how the Company functioned and sometimes the Management did not inform FMO prior to certain events taking place. In particular the CCR of 2012 was critical in this respect, and in later years the monitoring intensified with monitoring visits to Bangladesh, including from senior management of FMO.</p> <p>Corporate governance was adequately adhered to, which is a reflection of the first class shareholders the Company has always had.</p> <p>Rating: 4 (Highly Satisfactory)</p>	

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<b>I-6.2.1</b> - Appropriateness of available FMO expertis <b>I-6.2.2</b> - Trend in of full-time ratio equivalent staff to volume of operations	
When a deficiency in the monitoring of the project was identified, monitoring was intensified. Rating: 3 (Satisfactory)	
<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<b>I-6.3.1</b> - Identification of explanatory factors (incl. external factors) in effective implementation <b>I-6.3.2</b> - Identification of explanatory factors (incl. external factors) in effective observed delays	
The fact that FMO is willing to invest along side IDF with FMO-A funds is positive. As long a the conditionalty of both loans satisfy requirements of the two sources of finance. The structure of the Fund management secures adequate handling of IDF funds. Rating: 3 (Satisfactory)	

## Sources of data

Document title	Date
Amendment to FINVOB for information	3/06/2004
Evaluation formulier	10/06/2004
Auditor's report and financial statements	31/12/2004
Finance proposal	12/07/2005
Investment & Mission Review (IMR) - Minutes of the IC	14/07/2005
FP change request	20/12/2005
Term facility agreement	7/02/2006
Client Credit Review	18/03/2008
FP change request	15/08/2008
Consent letter to transfer of shares and resignation of Director	25/08/2008
Investment & Mission Review (IMR)	25/11/2008
FP change request	10/06/2009
IMR Advice on change request	22/07/2009
Bangladesh Telecommunications Report	September 2009
Axiata Scorecard	2/11/2009
Client Credit Review	11/11/2009
Investment & Mission Review (IMR)	10/12/2009
Client Credit Review	21/04/2010
Client Credit Review	30/09/2011
Client Credit Review	17/10/2011
Investment & Mission Review (IMR)	14/11/2011
Consent letter for transfer of passive assets to wholly owned subsidiary	28/07/2012
Client Credit Review	3/10/2012
Investment & Mission Review (IMR)	8/10/2012
Post-contracting change request	8/02/2013
Post-contracting change request	3/06/2013
Client Credit Review	15/09/2014
Client Credit Review	7/05/2015
Proposed amalgamation	15/12/2015
Waiver letter	13/01/2016
Project Evaluation Fiche	N/A
Qualification of project according to FMO investment criteria	N/A
Bangladesh Telecomm Industry Stats	N/A

## Annex 1

### Robi-Axiata – 18 January 2018 Meeting Notes

Dewan Nazmul Hasan – VP M-Money Regulatory & Compliance

Nazmul has worked for 20 years since RA was established. He was involved with the FMO-A and IDF loans and continues to be the contact manager with FMO.

#### Market

- There is now 99%+ mobile network coverage across the country. Rural areas are as well served as the cities. This is perhaps due to the relatively small land area and large 170m population. In rural areas there are places where the big 3 sometimes share towers.
- Axiata is no2 with a market share of 29%, some way behind the 45% of Grameenphone (GP), but ahead of Banglalink which has 23%. It became no2 after taking over the no4 company Airtel. Airtel and Axiata are marketed separately with Airtel generally being viewed as a low-cost service. GP became market leader by investing more quickly than RA which was more concerned with profitability.
- Call rates have fallen from 6.9 BDT (€0.07) to 0.4 BDT (€0.004) across the market with some call plans at even lower rates. AR is focusing on data and other services such as mobile money for revenues and profitability.
- 4G services will be introduced in the coming months.
- 98% of SIMs are on prepaid plans. Recharges can be through ATMs and using mobile money.
- People can use their phones to pay utility bills and make other payments.
- Students in particular may have 2 or more SIM cards and use dual SIM phones.

#### Robi Axiata

- Merged with Airtel in January 2016<sup>38</sup>
- Pays a 6.5% sales tax to the regulator BTRC. Corporation tax is levied at 45%.
- Employs 1,500 people.
- Plans to have 50% of revenues from data services.

#### Views on FMO

- FMO is a very good development partner to work with. The covenants are not too tough. It shows flexibility and responds quickly.
- Reporting requirements are reasonable.
- Disadvantage is that it is not as open as other DFIs, notably DEG, to opportunities in Bangladesh. It could do more in the country if it wanted especially if it met the Government more often. Regular FMO officer visits.
- DEG has an office in Dhaka with 1 officer. It is very active and has done lots of projects, especially in the textile sector.
- Overall happy with the relationship.

<sup>38</sup>

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjsxuqS9eDYAhVBcq0KHYoBBiQQFggmMAA&url=https%3A%2F%2Fwww.robicom.bd%2Fmedia-room%2Fpress-release%2Faxiata-and-bharti-airtel-agree-to-merge-operations%3Flang%3Deng&usg=AOvVaw1AfCU0Ryn1JQqoYxu1zj9T>





# Songas

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

**Remarks:**

This was one of the first projects financed by IDF. Key documents detailing the origin of the project and the rationale for FMO/IDF participation in Songas were not available, most importantly the September 2003 Financial Proposal and the October 2003 Investment Agreement. Key background information was therefore obtained from secondary sources, in particular a 2001 World Bank appraisal document, CCRs and an internal FMO evaluation approved on 2 July 2008. A field visit to the project in Tanzania (both Songo Songo Island and Dar es Salaam) was undertaken in November 2017 (Field Visit Report – Annex 2).

## 1. Project fiche

Project title	Songas
Project description	<p>Songas is an integrated gas-to-electricity facility including gas processing plant, transportation pipeline and power plant. The project involves (i) processing/cleaning<sup>39</sup> gas produced from 5 existing well heads around Songo Songo island, (ii) transporting the cleaned gas through a 225-km marine and onshore 30cm diameter pipeline to Dar es Salaam, (iii) using the gas in an existing power plant owned by Songas (Ubungo<sup>40</sup>, which supplies 20% of Tanzania's electricity needs) in Dar es Salaam and (iv) sale of electricity to the state-owned utility TANESCO (Tanzania Electric Supply Company) under a 20-year Power Purchase Agreement (PPA). Songas also processes and transports gas on behalf of the owners of the gas field to Dar es Salaam where it delivers gas to several other power generation facilities and other industrial consumers. The first gas to be processed and transported by pipeline was in July 2004.</p> <p>Having started in around 2000, the project was already under construction and close to completion in 2003 when the sponsor US power group AES<sup>41</sup> decided for financial reasons to exit the project<sup>42</sup>. Globeleq acquired US power group AES's 'A' shares in Songas. Globeleq is owned by CDC (70%) and Norfund (30%) and is an IPP operator in Africa and other developing regions. CDC already had 'B' shares in Songas alongside AES. To reduce CDC's direct and indirect (through Globeleq) investments in Songas, Government of Tanzania (GoT) instructed it to sell its B shares to other DFIs. FMO and DEG were approached by CDC to buy its 'B' shares. In the end DEG declined to buy its allocation citing concerns over the high project risk and especially the offtake power company TANESCO and GoT involvement. As a result, all of CDC's 'B' shares were acquired by FMO through IDF.</p> <p>Songas is owned 54% by Globeleq, and 46% by Government (29% TPDC, Tanzania Petroleum Development Corporation, 8% TDFL, Tanzania Development Finance Company Ltd. and 9% TANESCO Tanzania Electric Supply Company)<sup>43</sup></p> <p>Songo Songo Island gas processing plant and start of pipeline</p>

<sup>39</sup> Natural gas processing in the plant on SSI involves the removal of water, liquid hydrocarbons and other contaminations from the gas that is pumped from the wells.

<sup>40</sup> Converted from diesel to run on natural gas.

<sup>41</sup> <http://www.aes.com/home/default.aspx> revenues in 2016 \$14bn

<sup>42</sup> The August 2001 World Bank appraisal document showed that it was funded by AES Corporation, CDC, TDFL/EIB, EIB and World Bank (through GoT). <http://documents.worldbank.org/curated/en/418391468761059141/pdf/multi0page.pdf>

<sup>43</sup> CCR 18 May 2010



Ubongo Power Plant



Sector	Energy		
Stage	Start-up/implementation		
Operation Dates	<ul style="list-style-type: none"><li>• Finpre/Clearance in Principle (CIP), 1 May 2003</li><li>• Financial Proposal approved 2 September 2003 and</li></ul>		
Contract	FMO Project number 00015226		
Country/Region	Tanzania Africa		
Country category	LIC		
Project total cost (\$)	\$310m		
IDF contribution (\$)	\$16.95m		
Co-financing (€)	None – IDF bought shares from CDC		
Loan Terms			
Senior/Subordinated	Mezz – B shares		
Convertible	Conversion of preference shares in 2009 into \$13.2m Series B Loan Notes to resolve corporate law problems in Tanzania that prevented dividends and redemption of preference shares.		
Amount	€ 14,078,000		
Loan Agreement Date	16/10/03	Facility No	15540
Currency	Dollar equivalent		
Tenor	Conversion of 161,216 preference B shares in 2009 into \$16.1m junior Loan		

	Notes to enable legal problem with dividends on and redemption of preference shares in Tanzania. Redeemable over 5 years to 2014.		
Grace period	not available		
Interest rate	not available		
Security	not available		
Fees	not available		
Disbursements	October 2003 and July 2004 a total of USD 18.1 m equivalent to EUR 14.1 m		
Monitoring	CCRs		
Key covenants	not available		
Conversion features			
Equity Terms			
Direct			
Indirect – Fund			
IDF Investment (\$, €m, local currency)			
Total Project/fund			
IDF Stake (%)			
Investment date		Facility No	
Disbursements	Dates and amounts		
Direct investment – exit strategy	n/a		
Direct investment - put option terms			
Fund life			
Grants			
Amount	n/a		
Convertible	Yes/No		
Purpose			
Grant agreement date		Facility no	
Key terms			
Disbursement	Dates and amounts		
Conversion terms			
Financial Risk and Performance			
	Financial proposal/approval	Client Review - Most recent	
Client Risk Rating		Repaid final 2013 CCR F15	
Loan - Impairment provision	%	fully repaid <sup>44</sup>	
Equity - Fair value adjustment	%	%	

<sup>44</sup> A 25% provision was made when there were delays in servicing the loan notes because of cashflow difficulties at Songas caused by a failure of TANESCO to pay for electricity delivered under the 20-year offtake agreement. Subsequently loan note servicing resumed, and the provision reversed.

Financial performance	<table><tr><th colspan="11">Songas - Financial Highlights</th></tr><tr><th>\$m</th><th>2004</th><th>2005</th><th>2006</th><th>2007</th><th>2008</th><th>2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th></tr><tr><td>Revenues</td><td>26.7</td><td>70.2</td><td>81.6</td><td>88.9</td><td>87.0</td><td>85.3</td><td>100.0</td><td>93.7</td><td>105.1</td><td>85.8</td></tr><tr><td>Net income</td><td>- 2.6</td><td>- 6.4</td><td>- 7.4</td><td>- 4.9</td><td>1.3</td><td>2.8</td><td>8.7</td><td>7.5</td><td>24.7</td><td>12.5</td></tr><tr><td>Total assets</td><td>349.6</td><td>356.7</td><td>343.7</td><td>346.4</td><td>373.2</td><td>364.2</td><td>341.5</td><td>345.7</td><td>323.0</td><td>n/a</td></tr><tr><td colspan="11">Source - CCRs 2013 is projected</td></tr></table> <p>Since the project was fully repaid in 2014 no further data is available.</p>	Songas - Financial Highlights											\$m	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Revenues	26.7	70.2	81.6	88.9	87.0	85.3	100.0	93.7	105.1	85.8	Net income	- 2.6	- 6.4	- 7.4	- 4.9	1.3	2.8	8.7	7.5	24.7	12.5	Total assets	349.6	356.7	343.7	346.4	373.2	364.2	341.5	345.7	323.0	n/a	Source - CCRs 2013 is projected										
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Source - CCRs 2013 is projected																																																																			
Client Review -key findings	<p>Project implementation and operation went well.</p> <p>Problems related to the form of the IDF investment and a chronic inability of TANESCO to make contractual payments for electricity supplied to by Songas.</p> <p>Loan notes redeemed on time and interest payments all finally made, although some were late.</p>																																																																		
Results chain: expectations and achievements																																																																			
Logical framework	<p><b>Input</b></p> <ul style="list-style-type: none"><li>Financing by AES, CDC, TDFL, EIB, World Bank, later Globeleq and FMO</li><li>Natural resource</li><li>Technical and managerial expertise</li><li>Technology</li></ul> <p><b>Output</b></p> <ul style="list-style-type: none"><li>Development of gas field</li><li>Construction of pipeline</li><li>Construction of power plant</li><li>Upgrade of electricity transmission and distribution systems</li><li>Installation of billing system (pre-paid meters)</li></ul> <p><b>Outcome</b></p> <ul style="list-style-type: none"><li>Increase in electricity and natural gas supply;</li><li>Increased consumption and consumption expenditure on electricity and natural gas;</li><li>Stable, reliable electricity delivery with lower incidence of power failure;</li><li>Reduced imports of fuel for power generation;</li></ul> <p><b>Impact</b></p> <ul style="list-style-type: none"><li>Economic growth;</li><li>Poverty reduction;</li><li>Environmentally sustainability</li></ul>																																																																		
Assumptions	<p>According a 2009 IOB case study, the FP for Songas listed the following risks:</p> <ul style="list-style-type: none"><li>reserve risk – low because large proven gas reserves</li><li>construction, operation and technology risks low because of advanced stage of construction</li><li>off-take and political/regulatory risk were judged to be substantial. In particular, it was noted that TANESCO was the major risk, the parastatal to which power is sold, was financially weak. Its capacity to make</li></ul>																																																																		

	payments to Songas was judged as poor. [This subsequently turned out to be a major cash flow problem for Songas] <ul style="list-style-type: none"><li>• currency risk due to revenues in shillings and loans/obligations in dollars</li></ul>		
Main project activities and achievements	Project opened in July 2004 on time and budget. Operationally, project worked as planned in delivering gas through pipeline and generating electricity. Ubungo power plant successfully converted to run on natural gas and capacity increased from 115MW to 180MW (12% of national generating capacity). Songas reached profitability in 2008. Last IDF loan notes redeemed on schedule in 2014		
Main project issues	2 issues hampered the project: <ul style="list-style-type: none"><li>• Late payments by TANESCO for power supplied by Songas under an offtake agreement. This led to delays in making payments to IDF.</li><li>• FMO instrument. Initially investment was in the form of preference shares that had to swapped for loan notes so that interest payments and reimbursements to IDF could occur in conformity with the corporate law in Tanzania.</li></ul>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review - Most recent
Corporate Income Tax	€m	\$100m	
GHG Saving (tCo2)	T CO <sub>2</sub>	65,000	
Installed Capacity (MW)	MW	190MW	Being increased to 250MW+
Production Capacity	GWh		
People served – distribution	#		More than 20% of generating capacity in Tanzania
People served – transport	#		
People served – power	#		
People served – telecom	#		
People served – IT/internet	#		
People served – industrial/agri	#		
People served – farmers reached	#		
Forestry under management	ha		
Agriculture	ha		
Green investments	€m		
Inclusive investments	€m		

## 2. Scoring

	Desk Review	Field Visit
<b>EQ 2 - Relevance</b>		
JC 2.1 IDF Loans and Equity Investments have higher financial risk ratings than FMO-A	Although there was no FMO-A funding, refusal of DEG to participate may be viewed as a proxy for the lower credit risk that FMO-A would have required to participate. 3	Although there was no FMO-A funding, refusal of DEG to participate may be viewed as a proxy for the lower credit risk that FMO-A would have required to participate. 3
JC 2.2 Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects	N/a as IDF was asked to purchase shares owned by CDC because GoT wanted a neutral shareholder	N/a as IDF was asked to purchase shares owned by CDC because GoT wanted a neutral shareholder to reduce Globeleq's influence
JC 2-3 Additionality of IDF Loans and Equity Investments	3 IDF was asked to purchase shares owned by CDC because GoT wanted a neutral shareholder. It also nominated a board member	3 N/a as IDF was asked to purchase shares owned by CDC because GoT wanted a neutral shareholder. It also nominated a board member
<b>EQ 1 – Effectiveness</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget	4 Gas processing plant, pipeline and Ubungo power plant (UPP) have all performed to high performance levels	4 Gas processing plant, pipeline and Ubungo power plant have all performed to high performance levels
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer-term employment opportunities, improved business environment and demonstration effects).	3 UPP provides 20%+ of all electricity in Tanzania in a very reliable manner	3 UPP provides 20%+ of all electricity in Tanzania in a very reliable manner
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)	4 Expected outcomes fully delivered	4 Expected outcomes fully delivered
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for	3 CRRs were of acceptable quality and	3 CRRs were of acceptable quality and

management of results of the IDF-financed portfolio	identified the main issues of TANESCO payment delays and need to restructure IDF shares as loan notes	identified the main issues of TANESCO payment delays and need to restructure IDF shares as loan notes
<b>EQ 4 – ESG Risk Management</b>		
JC4.2 IDF-financed projects contributed to green and inclusive development	3 Lower GHG emissions due to switch from liquid fuels to LNG at UPP	4 Lower GHG emissions due to switch from liquid fuels to LNG at UPP Major social and development benefits evident on SSI which has increased in population from 2,000 in 2004 to 6,700 now. Strong Songas commitment to E&S
JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices	3 IDF invested after project implementation had started. However, WB appraisal identified issues well.	3 However, WB appraisal identified issues well
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management	3 Satisfactory	3 Satisfactory
<b>EQ 6 – Efficiency</b>		
JC 6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness	3 Satisfactory	3 Satisfactory.
<b>EQ 3 – Revolvability</b>		
JC 3.5 Individual Project Sustainability	3 Songas has a satisfactory financial performance and commercial viability.	3 Songas has a satisfactory financial performance and commercial viability. UPP is being expanded.
<b>EQ 5 – Policy</b>		
JC 5.1 Involvement of Dutch companies in IDF projects	n/a	n/a
JC 5.2 Effects for Dutch companies and economy	n/a	n/a
JC 5.3 Linkages with other infrastructure	n/a	n/a



programmes (ORIO, DRIVE, D2B) from the Ministry		
<b>Scoring Justification</b>		
EQ 2 – Relevance	3 IDF played a satisfactory role in bringing about a satisfactory shareholding structure	3 IDF played a satisfactory role in bringing about a satisfactory shareholding structure
EQ 1 - Effectiveness	4 Project fully delivered on all financial and commercial goals	4 Project fully delivered on all financial, commercial and development goals, including E&S on SSI
EQ 4 – ESG Risk Management	3 Satisfactory	4 Songas and its parent company Globeleq have a strong commitment to E&S
EQ 6 – Efficiency	4 Songas was well implemented and is very well managed	4 Songas was well implemented and is very well managed
EQ 3 – Revolvability	3 Commercial and viability achieved	4 Expansion programme for UPP and increase in capacity of pipeline
EQ 5 – Policy	n/a	n/a
<b>Comments</b>	A very successful project	A very successful project that demonstrates the importance of a committed and competent sponsor (Globeleq) that specialises in power projects in Africa. Economic and E&S goals achieved. Project being upgraded and expanded.

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### **3. Lessons learnt and key findings**

- The success of the project is primarily due to the project promoter and manager, Globeleq, a specialised power generation company that operates in Africa and developing countries.
- IDF played a crucial role as an honest broker in the project that is 54% owned by Globeleq and 46% by Tanzanian state companies, including TANESCO (Tanzania Electric Supply Company).
- Songas brought prosperity (jobs, social infrastructure...) to Songo Songo island where the gas used in the Dar es Salaam power station is extracted and sent by pipeline.
- Despite late payments by Tanesco, Songas has managed to be profitable and operates at 95% of capacity, the highest of all PPPS in Tanzania. State owned generators operate at no more than 80%.
- It is expanding generating capacity by 60 to 70MW to 250MW, about 20% of the total capacity in Tanzania.
- Strong commitment by Globeleq to high environmental and social standards.
- IDF loan notes redeemed on schedule in 2014.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>-1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <p>xxv) temporary/short term during the implementation period</p> <p>xxvi) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</p>	
<p>It should be noted that the IDF FP was not available. Information from other sources has therefore had to be used, in particular the 2001 World Bank project appraisal document (PAD).</p> <p>IDF participated indirectly in financing of the Songas project at the end of 2003 after project implementation had begun. It did not finance Songas directly. Instead it acquired B preference shares from CDC, one of the original project financiers that was asked to sell them by the Tanzanian government (GoT) after it took de facto control (through Globelec in which it has a 70% stake) of the project when the original promoter, AES, withdrew. By the time that IDF became involved, the construction of this gas-to-power project was well under way having started in 2000/01 and was in fact very near completion. At Songo Songo Island the five wells were operational, a gas processing plant was in place, a 225-km marine and onshore pipeline to Dar es Salaam were almost finished and the conversion of the Ubungo Power Plant was also near to full realisation. On July 20, 2004 the first gas was received at the Ubungo power plant in Dar es Salaam and the Commercial Operation Date (COD) was achieved. In mid-2005, less than one year after COD, an expansion of the power plant of 65MW was realized, increasing the total power generating capacity of Ubungo from 115MW to 190MW, using six gas turbines account for the total capacity of the Songas power plant at Ubungo. UPP is currently being upgraded with 6 new gas turbines that will take the capacity more than 30% higher to 250MW+.</p> <p>The project was completed at a cost of \$350m, about \$55m above the \$295m project cost<sup>45</sup>, a modest 19% overrun for an infrastructure project of this type.</p> <p>A 2015 USAID Tanzania Investment Brief on the electricity sector<sup>46</sup> stated that natural gas now accounts for 594MW (40%) of the total 1,494MW installed generating capacity.</p>	

<sup>45</sup> <http://documents.worldbank.org/curated/en/418391468761059141/pdf/multi0page.pdf> Songas project appraisal document 21 August 2001

<sup>46</sup> [https://www.usaid.gov/sites/default/files/documents/1860/Tanzania%20IG\\_2015\\_05\\_03.pdf](https://www.usaid.gov/sites/default/files/documents/1860/Tanzania%20IG_2015_05_03.pdf)

Songas accounts for 12% of notional national capacity (but about 20% of actual available capacity<sup>47</sup>) and one third of the natural gas capacity. It is therefore a significant part of the sector. In addition, it should be noted that the majority, but not all, the gas going through the pipeline is used in the power station. There are non-negligible amounts delivered to industrial users, the most important being Twiga Cement.

In terms of natural gas production, the Songo Songo gas field began commercial production in 2004, and is producing at a rate of 2.0-2.5mn cubic metres per day (Mcm/d)<sup>48</sup>. Output from the field is mainly used to supply the Songas Ubungu power plant in Dar es Salaam. According to BMI, the only other gas pipeline (the much larger 532km one from Mtwara to Dar es Salaam) currently operating was completed much later in 2015<sup>49</sup>.

The Songas project was implemented on schedule and has performed well. The pipeline has operated without problem and its capacity expanded. The power plant is being increased. Overall a very satisfactory project implementation.

<b>JC1.3</b>	<b><i>IDF financed projects contribute to the development of the private sector (by means of increased longer-term employment opportunities, improved business environment and demonstration effects).</i></b>
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**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.3** - Provision of support to formulation and implementation of beneficiary country legal and regulatory business frameworks

**I-1.3.4** - Evolution of selected country level indicators on ease of 'Doing Business'

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

According to the 2017 World Bank Doing Business report for Tanzania<sup>50</sup>, the country ranks 87 in the world for 'Getting Electricity' a decline from 83 in DB2016. The reliability of supply is rated as 4 (a middle ranking in the scale 0 best to 8 worst) and better than the Sub Saharan Africa (SSA) average of 0.42. This apparently reasonable assessment of electricity availability in Tanzania should, however, also be seen in the context of the access to electricity. Despite improvements in supply, electricity consumption per capita in Tanzania, annually 97kwh<sup>51</sup>, remains one of lowest in the world. At the end of 2013, TANESCO had about 1.3 million connected customers<sup>52</sup>, about 16% of households<sup>53</sup>, which is very low for a country with a 55 million population. Only eight countries have a lower electrification rate.

<sup>47</sup> According to Songas managers in meetings held in Tanzania

<sup>48</sup> BMI Research – Tanzania Oil and Gas Report, Includes 10-Year Forecasts To 2025; Q4 2016 (www.bmiresearch.com)

<sup>49</sup> Ibid, page 49 Songas pipeline capacity 3m m<sup>3</sup> per day Mtwara 22m m<sup>3</sup> per day

<sup>50</sup> <http://www.doingbusiness.org/data/exploreeconomies/tanzania#getting-electricity>

<sup>51</sup> [Oxford Institute for Energy Studies, July 2016, Sustainable electricity pricing for Tanzania, table 1](https://www.oxfordenergy.org/wpcms/wp-content/uploads/2016/07/Sustainable-electricity-pricing-for-Tanzania-EL-20.pdf)  
<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2016/07/Sustainable-electricity-pricing-for-Tanzania-EL-20.pdf>

<sup>52</sup> Ibid page 18

<sup>53</sup> <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS>

The Songas website<sup>54</sup>, states that it sells electricity at a competitive price of TZS 110 (US\$0.05) per kwh while the average tariff to consumers is TZS 272<sup>55</sup>. Songas management in Tanzania said that the Ubungo plant operates at a 95% utilisation rate, compared with 70% to 80% for TANESCO plants. It claims that its electricity is produced at 30% or more lower cost than TANESCO. Tariffs in Tanzania appear about average for SSA, although they are about 20% lower than neighbouring Kenya and Uganda<sup>56</sup>.

It should also be stressed that the Songas project was principally about the conversion of the Ubungo power station from running on imported diesel fuel to using local natural gas. The benefits to Tanzania came mainly in the form of savings of foreign currency and the lower greenhouse gas emissions.

The 65MW increase in the generating capacity of Ubungo in 2005 represented a modest (5%) increase in the overall capacity in Tanzania. While increases in generating capacity are welcome, as well as the availability of gas for industrial users, the overall effect on the private sector can only be judged to have been marginal or modest at best.

The project can, however, be judged as an important demonstration of what is possible with a well-designed, implemented and managed IPP that has been able to deliver broadly on target the project objectives. The role and competence of Globeleq has been key.

In summary, private sector benefits have been limited. Nevertheless, the project was well implemented. A 3-satisfactory rating is merited.

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
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**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long-term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

Songas has contributed to the socio-economic development of Tanzania, at the following levels:

- At a country level, the shift to another source of power supply is likely to improve stability and reliability of supply, as measured by the number of outages and shortages of power. Additionally, all oil needs to be imported and requires a lot of scarce foreign exchange. Hence, the conversion of the existing oil fuelled to natural gas fuelled power generation contributes to a reduction of oil imports and a decreased dependency on these imports, savings in foreign exchange and a reduction of CO2 emissions.

<sup>54</sup> <http://www.songas.com/community.html>

<sup>55</sup> <http://144.76.33.232/wp-content/uploads/2016/04/TANESCO-ORDER-2016-ENGLISH.pdf>

<sup>56</sup> <http://pubdocs.worldbank.org/en/444681490076354657/Electricity-Tariffs-Power-Outages-and-Firm-Performance.pdf>

Despite improvements in supply, electricity consumption per capita in Tanzania, annually 97kwh<sup>57</sup>, remains one of lowest in the world. At the end of 2013, TANESCO had about 1.3 million connected customers<sup>58</sup>, about 16% of households<sup>59</sup>, which is very low for a country with a 55 million population. Only eight countries have a lower electrification rate.

Songas's contribution to the LDC Fund's objectives is indeed that the project - and by extension FMO's investment has strongly improved Tanzania's socio-economic infrastructure by establishing a gas market infrastructure and by establishing the infrastructure for an increased and more reliable supply of electricity, making appropriate use of locally available natural resources. Private infrastructure development was the only option available to Tanzania at a time when the Government could not have obtained financing for implementing the project in the public sector. The infrastructure developed is, meanwhile, not just benefiting power production, but is also providing access to relatively cheap energy to a considerable number of other industrial gas-users

According to Globeleq<sup>60</sup>, by using the country's own natural gas resources, it is estimated that the Songas facilities have saved Tanzania more than US\$6.5 billion by helping to avoid the high costs of importing fuel oil used for power generation and industrial applications.

- At the local level on Songo Songo island and along the route of the pipeline
  - Songas has established strong relations with local community groups both on the island and along the pipeline way leave.
  - Songas provides free water, electricity, student bursaries and jobs to the islanders as well as an upgrade of the dispensary.
  - The project also establishes connecting points along the pipeline for gas-usage by villages along the way leave.
  - At the insistence of IMR, Songas now has in place HIV/AIDS guidelines, providing ARV's and other treatment to affected employees.
  - After the World Bank E&S evaluation mission, two attention points were raised:
    1. the support to the island has worked so well, that now an increasing number of people moves to SSI. Consequently, Songas proposed to concentrate on the villages along the pipeline.
  - FMO has attracted TDFL to take over the pref. shares from CDC.
- At the project level, the February 2013 Datasheet Infrastructure Development Fund (IDF) showed:

## II. Development Indicators

1. Contribution to National Income (EUR or USD mln) <sup>1</sup>	Actual Up to 2012	Predicted Up to 2013
1.a. Total fiscal effects	+/- \$ 82.6m	+/- \$ 100.6m
2. Employment Effects		

<sup>57</sup> [Oxford Institute for Energy Studies, July 2016, Sustainable electricity pricing for Tanzania, table 1](https://www.oxfordenergy.org/wpcms/wp-content/uploads/2016/07/Sustainable-electricity-pricing-for-Tanzania-EL-20.pdf)  
<https://www.oxfordenergy.org/wpcms/wp-content/uploads/2016/07/Sustainable-electricity-pricing-for-Tanzania-EL-20.pdf>

<sup>58</sup> Ibid page 18

<sup>59</sup> <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS>

<sup>60</sup> <https://www.globeleq.com/power-plants/songas/> the owner and operator of Songas

2.a. Total short-term <b>direct</b> employment	200*	200*
2.a.i. Of which employed by women	25	25*
2.b. Total long-term <b>direct</b> employment	69	69*
2.b.i. Of which employed by women	8	8*
2.c. Total short- and long- term <b>indirect</b> employment	50*	50*
<b>3. Beneficiaries Reached</b>	<b>Actual Up to 2012</b>	<b>Predicted Up to 2013</b>
3.a. Total number of people served	1.9* Million	2.2 Million
<b>4. Environmental Effects</b>	<b>Actual Up to 2012</b>	<b>Predicted Up to 2013</b>
4.a. Total CO2 emissions reduction (tCO2 eq.)	65,232.2*	65,232.2*

It has not been possible to validate these figures.

In summary the project has delivered fully on its goals both commercial and developmental, meriting a 4 rating

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
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**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

FMO/IDF appointed a staff member from the Energy department as a director in 2004. He was on the board for 8 years.

The quality of the monitoring of the IDF investment was high with annual CCRs of good quality prepared. While the project was operating generally as planned (transporting gas and generating electricity) there were two issues that required a lot of IDF attention. First the IDF investment in preference shares was problematic because the losses in the early years prevented dividends being paid because of the corporate law in Tanzania. A lot of effort was spent finding a solution that in 2009 led to an exchange for loan notes on which Songas interest and principal repayments could be made.

The second issue was the chronic failure of TANESCO (a shareholder in Songas and the principal customer through the 20 year power offtake agreement) to make payments to Songas. A huge amount of effort was required to obtain payments from the financially weak TANESCO. The CCRs addressed well these issues.

Overall IDF monitoring was satisfactory, a 3 rating.



## EQ 2 – Additionality and catalytic effects

**NOTE** – Without the 2003 FP, which was not available, it is not possible to comment directly on the rationale of the IDF investment and the IDF role. Instead, these must be inferred from other documents.

Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?	
<b>JC 2.1</b>	<b><i>IDF Loans and Equity Investments have higher financial risk ratings than FMO-A</i></b>
<b>I-2.1.1</b> - Risk ratings of IDF projects at entry compared with FMO-A projects <b>I-2.1.2</b> - Annual risk ratings of IDF portfolio compared with FMO-A portfolio <b>I-2.1.3</b> - Country risk profile of IDF portfolio compared with FMO-A portfolio	
<p>FMO-A did not provide funding. It is, however, possible to gauge the high level of financial risk that IDF was prepared to accept by the eventual refusal of DEG to co-invest alongside IDF. At the outset of the transaction it was proposed that IDF and DEG would jointly fund the purchase of CDC's preference shares in the Songas. Following due diligence, DEG declined to invest citing, inter alia, the risk that TANESCO the state-owned power utility - with which Songas had signed a 20 year off-take agreement – could not be relied on to pay for power delivered by Songas. It is therefore reasonable to infer that DEG is a reasonable proxy for FMO-A and therefore that the risk rating for IDF was higher than FMO-A (which often co-finances with DEG) would have accepted. Accordingly a 3 satisfactory rating is appropriate.</p>	
<b>JC 2.2</b>	<b><i>Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects</i></b>
<b>I-2.2.1</b> - Ratio of mobilisation at project level of IDF funding to commercial funding sources. <b>I-2.2.2</b> - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)	
<p>Songas was too risky to be funded by FMO-A. It was though suitable for the recently formed IDF in 2003.</p> <p>There was no additionality as IDF funding was used to purchase preference B shares owned by CDC one of the original project financiers. CDC was, in essence, forced by GoT to sell its shares to other DFIs to avoid it having undue influence over Songas. This was deemed necessary after the exit of the American project promoter, AES, whose stake was taken over by Globeleq, that is 70% owned by 70% by CDC. The stake represented about 5% of the project cost. It was originally planned that the CDC stake would be divided between FMO/IDF and DEG. DEG, however, declined to become a shareholder as it judged the business and regulatory risks as being too high, in particular the poor financial condition of TANESCO that purchases the electricity generated by Songas's Ubungu power plant. IDF was, though, willing to accept the risk for the whole.</p> <p>While IDF did not have a traditional mobilisation role, it is fair to say that its willingness to take all the CDC stake was important in ensuring that the financing structure was balanced. I A 3 satisfactory rating is therefore appropriate.</p>	



JC 2-3	<i><b>Additionality of IDF Loans and Equity Investments</b></i>
	<p><b>I-2.3.1</b> - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.</p> <p><b>I-2.3.2</b> - At project level, project viability endorsement and contribution from IDF participation.</p> <p><b>I-2.3.4</b> - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.</p> <p><b>I-2.3.5</b> - Analysis of development rationale for grants and development equity investments by sector, country and type of project (project development, ssed investment, start-up, technical assistance...)</p>
	<p>It is important to note that Tanzania was one of the original seven LDCs eligible for IDF support. Moreover, the development/expansion of the power sector in Tanzania was, and remains, a key infrastructure priority for the 9<sup>th</sup> least electrified countries in the world.</p> <p>As already noted the IDF funding was secondary in that it was to buy CDC's preference shares that GoT had insisted be transferred to DFIs. It occurred about 3 years after the original financing package that launched the project. FNO/IDF did not, however, bring any specific contributions to the structuring of the project in areas such as E&amp;S because these issues had already been dealt with earlier when the conditions for the original project financing package were negotiated.</p> <p>With a FMO staff member on the board and close monitoring by FMO, it is clear that the IDF participation played an important role in the implementation/operation of the project. Although it had a relatively small stake (equivalent to 5% of total project cost) FMO/IDF was able to play an important, independent role in Songas, particularly on the board. FMO's independent role was dependent on it being respected by both CDC (with whom it has worked on many projects) and GoT.</p> <p>The 8 years on the board and 10 years that it held preference shares/loan notes ensured that IDF saw the project through to viability.</p> <p>Overall, IDF's additionality in the project can be seen to have been satisfactory and a 3 rating is appropriate.</p>

## EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

### JC 3.5 Individual Project Sustainability

#### I.3.5.1 - Review performance and sustainability.

Set out below are key financial statistics.

Songas - Financial Highlights										
\$m	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Revenues	26.7	70.2	81.6	88.9	87.0	85.3	100.0	93.7	105.1	85.8
Net income	- 2.6	- 6.4	- 7.4	- 4.9	1.3	2.8	8.7	7.5	24.7	12.5
Total assets	349.6	356.7	343.7	346.4	373.2	364.2	341.5	345.7	323.0	n/a
Source - CCRs 2013 is projected										

At the profitability level Songas performed quite well, with a positive net income attained in 2008. The last CCR reviewed (May 2013) showed a profit for 2012 of \$24.7m with a forecast for 2013 of \$12.5m. Profitability is helped by the paydown in debt which reduces debt service charges. Revenues in dollars are volatile as they can be affected by the TZS/\$ exchange rate, although the offtake agreement is dollar linked. As a business, revenues in TZS are stable and predictable. Songas has a 20 year power offtake agreement that runs until 2024.

Cashflow, however, has been badly affected by payment delays at TANESCO. An IRC update memo to IMR in June 2012, for example, disclosed that TANESCO arrears to Songas amounted to \$30m. TANESCO is a chronically lossmaking parastatal<sup>61</sup>. This has been due to large amounts of electricity not being billed or paid for<sup>62</sup>. Also, GoT will not raise the tariffs to customers to profitable levels. A lot of Songas management time has been spent trying to get TANESCO to pay for electricity it has supplied.

As a business, Songas is a stable infrastructure company whose medium to long term viability appears assured. It is an important and efficient company in the has to power sub-sector which is of strategic importance to the development of the energy sector in Tanzania. Much of the credit for Songas's performance must go to AES the original promoter and Globeleq which took it over shortly before project completion and continues to operate the company. Globeleq currently runs 8 power projects in 5 countries<sup>63</sup> across Africa.

For IDF despite some delays in servicing the loan notes due to TANESCO, all interest and redemptions were made. The final notes were redeemed in 2014.

It continues to perform well in a difficult regulatory and operating environment, accordingly a 3 rating.

<sup>61</sup> TANESCO audited 2015 financial statements

<sup>62</sup> <http://revoalex.blogspot.fr/2011/04/challenges-facing-tanESCO.html>

<sup>63</sup> <https://www.globeleq.com/operations/#overview>

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

**JC4.2** *IDF-financed projects contributed to green and inclusive development*

**I-4.2.1 Comparison** of intended/actual Greenhouses gases (GHG) footprint, ‘emission avoidance’ or other environmental effects

**I-4.2.2 Comparison** of intended/actual social effects including social inclusion

**I-4.2.3 Progress** in moving towards FMO Impact Model targets of ‘*doubling impact and halving footprint by 2020*’

Since IDF participated after the project was almost built, it had to accept the E&S commitments that Songas had already committed to. In particular E&S reports and CCRs refer to compliance with World Bank standards. This was fully acceptable since FMO generally insists on IFC/WB standards. Without the FP it is only possible to understand the E&S commitments by reference to the WB 2001 project appraisal document (PAD<sup>64</sup>) for its \$183m of finance for the project (60% of the total, provided through GoT agencies). The PAD states that Songas was Environmental Category: A, as would be expected for this type of project. \$13m of WB funding was to be used for

- (i) an E&S component and
- (ii) ‘Wayleave Village electrification and resettlement infrastructure:
  - solar home systems to around 25 villages,
  - grid extension to around five villages, and
  - gas-based electricity access to 5 townships along the pipeline route and to the inhabitants of Songo Songo Island.
  - the inhabitants of Songo Songo Island population and “a number of” villages along the pipeline route to receive clean water supply; a number

Also, Songas committed to:

- Setting up an E&S management and monitoring unit
- Environmental and Social Management Plan (ESMP): The key mitigation activities relate to:
  - (a) Biodiversity and forestry management in the pipeline corridor is
  - (b) Converting the Ubungu power station to gas firing.
  - (c) Involuntary resettlement

According to the 2008 CCR Songas ‘...provides free water, electricity, student bursaries and jobs to the islanders as well as an upgrade of the dispensary. The project also establishes connecting points along the pipeline for gas-usage by villages along the way leave. At the insistence of IMR, Songas now has in place HIV/AIDS guidelines, providing ARV’s and other treatment to affected employees’.

The extent of environmental improvement of power generation can be measured by the reduction in CO<sup>2</sup> emission, which is also calculated as the oil equivalent of natural gas based power generation realised in the Ubungu power plant.

<sup>64</sup> World Bank Report no: 21316-TA Project Appraisal Document, Proposed Credit (US\$183 Million Equivalent) to Tanzania - Songo Gas Development and Power Generation Project August 21, 2001

Also, Tanzania relied too heavily on hydroelectric power that was subject to generation shortfalls during droughts. While gas fired power plants contribute greenhouse gases they provide a reliable base. A more diverse mix of power sources is good for the reliability of supply.

The CCRs note satisfactory/full compliance with all E&S requirements.

The field visit (annex 2) found a wide range of benefits (electricity, water, health and education) for SSI residents such that the population has increased from 2,000 to 6,700 as it has attracted people looking for a better life from other parts of Tanzania.

Also, Globeleq has a strong commitment to E&S issues as shown by the operating and maintenance audit that was taking place at the time of the visit to SSI.

Overall E&S effects have been very satisfactory, a 4 rating

<b>JC4.3</b>	<b><i>FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices</i></b>
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**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3** - Evidence of ESG risk assessment

**I-4.3.4** - Evidence of ESIA and ESAP preparation and implementation

**I-4.3.5** - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)

As noted in JC4.2, IDF relied on the existing E&S commitments that Songas given to the World Bank as part of its due diligence, which met FMO standards, that are based on WB Group standards. E&S issues were satisfactorily addressed in CCRs and ESG reports. For example, it was noted that during 2007, a follow up study on flora and fauna at Songo Songo island was done. The study observed that SONGAS activities on the island had minor impact on the flora and fauna biodiversity with some recommendations made. The last ESG issued in April 2013, prior to the last redemption of the loan notes in 2014, stated that Songas was 'showed full compliance.'

Also through its board seat, IDF monitoring of Songas's E&S performance was possible. In particular the FMO/IDF director was able to play an independent role which was important given that Songas was controlled by Globeleq while GoT through it agencies had a significant minority stake.

Given the unusual circumstances of the IDF participation, FMO due diligence and E&S monitoring should be judged as satisfactory, 3.

<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
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**I-4.4.1** Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management.

**I-4.4.2** Evidence of feedback and application of lessons learned in subsequent projects.

The project monitoring was satisfactory although there is no evidence of feedback in other projects.

## EQ 5 – Policy

To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
No Dutch companies involved	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
n/a	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process <b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs <b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring) <b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF <b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations	
<p>Without the 2003 FP it is not possible to judge the quality of the due diligence. Nevertheless it is evident that the project involved high risks, particularly in relation to offtaker TANESCO's ability to pay, and the Government of Tanzania's willingness to maintain an adequate tariff structure and regulatory environment. The newly formed LDC Fund (IDF) was the appropriate source of funding in a strategically important infrastructure project. Songas would not have met FMO-A's credit risk criteria, as DEG's ultimate decision not to take part shows – DEG's investment criteria being similar to those for FMO-A. that are/were similar to those of FMO-A. The appointment of an FMO staff member was appropriate given that the project's operating viability was still to be established.<sup>65</sup>. Having a board seat also helped to ensure that appropriate CG standards were maintained.</p> <p>Despite the absence of the FP, the FMO investment in Songas was handled in a satisfactory fashion - 3</p>	

<sup>65</sup> CCR May 2013

<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<b>I-6.2.1</b> - Appropriateness of available FMO expertise <b>I-6.2.2</b> - Trend in ratio of full-time equivalent staff to volume of operations	
<p>Based on the documentation available, it is evident that FMO used experienced and competent staff throughout the period that IDF had an investment in Songas, including for 8 years an IO who was on the board.</p> <p><b>Rating 3 - satisfactory</b></p>	
<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<b>I-6.3.1</b> - Identification of explanatory factors (incl. external factors) in effective implementation <b>I-6.3.2</b> - Identification of explanatory factors (incl. external factors) in effective observed delays	
<p>The key factor in the success of the project was the quality of the project sponsor and implementer, initially AES and subsequently Globeleq, both of which specialise in power projects in Africa. It used experienced power sector specialists to implement the project.</p> <p><b>Rating 3 - satisfactory</b></p>	

## Sources of Data

Document title	Date
World Bank Report no: 21316-TA Project Appraisal Document, Proposed Credit (Us\$183 Million Equivalent) to Tanzania - Songo Gas Development and Power Generation Project	21 August 2001
Series B Loan notes certificate	18 December 2008
CCRs	May 2008, January and May 2009, April and May 2010, May 2011, May 2012, May 2013
ESG annual reviews	May 2011, April 2012 and April 2013
<a href="http://documents.worldbank.org/curated/en/418391468761059141/pdf/multi0page.pdf">http://documents.worldbank.org/curated/en/418391468761059141/pdf/multi0page.pdf</a>	
Songas project appraisal document	
Datasheet Infrastructure Development Fund (IDF)	28 Feb 2013
Board memo TANESCO non-payment and enforcement	09 April 2012
Internal Evaluation	July 2008
IDF eligibility criteria checklist	14 March 2008
IOB 2009 case study	2009
Datasheet Infrastructure Development Fund (IDF)	February 2013
BMI Research – Tanzania Oil and Gas Report, Includes 10-Year Forecasts To 2025 ( <a href="http://www.bmiresearch.com">www.bmiresearch.com</a> )	Q4 2016
Oxford Institute for Energy Studies - Sustainable electricity pricing for Tanzania	July 2016
TANESCO 2015 financial statements	2015
TPDC Songo Songo Island gas processing plant	
<a href="http://www.ogj.com/articles/2016/06/tanzania-s-songo-songo-gas-plant-enters-commercial-operation.html">http://www.ogj.com/articles/2016/06/tanzania-s-songo-songo-gas-plant-enters-commercial-operation.html</a>	
Globeleq Website <a href="https://www.globeleq.com/">https://www.globeleq.com/</a>	
Songas Website <a href="http://www.songas.com/">http://www.songas.com/</a>	

## ANNEX 1

### Field Visit Songas Tanzania - 6,7 and 9 November 2017

Andrew Danino

#### 9. Introduction

Songas' business consists of two different operating streams – gas processing/ transportation and power generation. Gas from the Songo Songo gas field is processed and then transported through a 225-km pipeline to Dar es Salaam where it is used in Songas' 190 MW Ubungo power plant.

Songas also processes and transports gas on behalf of the owners of the gas field to Dar es Salaam where it delivers gas to several other power generation facilities and other industrial consumers who use the natural gas in various manufacturing processes. Using six gas fired turbines, Songas supplies the national electricity grid under a 20-year power purchase agreement, and supplies about 20% of the country's electricity. By using the country's own natural gas resources, it is estimated that the Songas facilities have saved Tanzania more than US\$6.5 billion by helping to avoid the high costs of importing fuel oil used for power generation and industrial applications<sup>66</sup>.

The facilities are owned and operated by Songas Limited, of which Globeleq holds a majority interest.

The field visit comprised three components. First, a meeting with the Songas managing director in Dar es Salaam. Second, a visit to Songo Songo Island (SSI) where the gas processing plant and the start of the pipeline to Dar are located. Third, a visit to the 190MW Ubungo power plant in Dar.

FMO/IDF was fully repaid in 2014.

#### 10. Persons Met

Nigel Whittaker	Songas Tanzania managing director
Marc Clissen	Globeleq Director of Operations and Maintenance (Africa)
Catherine Gaelle	ESG Associate Globeleq Cameroon
Ndaganza Mzonya	Deputy site operations manager Songo Songo gas plant
David Jansson	Songas, Operations and maintenance manager Ubungo power plant
Nicodemus Chipakapaka	Songas community relations manager
Mzee Abdurabi Mjaka	Village elder Songo Songo Island
Francis Bweigoge	Clinical officer, clinic Songo Songo Island
Saeed	Headteacher secondary school Songo Songo Island

#### 11. Overall Findings and Impressions

- Songas has been a very successful project both commercially and from an E&S standpoint.
- Globeleq has managed the project very well both operationally and its relations with the Government. The Ubungo power plant is probably by some margin the most efficient and reliable one in Tanzania, and compares well with other countries
- SSI has benefitted greatly from the Songas gas processing plant. The island now has electricity, clean water and much better schools and health facilities.
- Globeleq is committed to high operating and HSE standards as evidenced by in-depth operating and maintenance audits every 2 years.

#### 12. Nigel Whittaker Songas MD

<sup>66</sup> <https://www.globeleq.com/power-plants/songas/>



NW, who has been with Songas in Dar for 2 years, explained that despite problems that other IPPs in Tanzania have had, Songas has a good relationship with GoT. This is in large part due to the fact that 3 SoEs (TANESCO, TPDC and TDFL<sup>67</sup>) hold in total hold 45.9% of Songas shares<sup>68</sup> and are represented on the board. Also, Songas has a strong operating performance with a 95% level of operating efficiency.

Since IDF was repaid there has been a modernisation programme to replace the six gas turbines that currently produce around 32MW each. 4 new GE G6 turbines with an output of 35 to 40MW have already been installed. A decision will be made shortly to install either 2 more GE6 gas turbines or the more powerful Siemens SG800 alternatives that can each produce 47MW+. After the upgrade, the generating capacity of Ubungo will rise to 250MW+, a 31% increase.

In recent years TANESCO has been better at making payments for electricity supplied by Songas.

The pipeline bringing gas to Dar has to be monitored to ensure that there is no storm damage or sand erosion

### 13. Visit to Songo Songo Island 14 November 2017

Songo Songo Island (SSI) is 16km<sup>2</sup> and located about 220 km south of Dar, 20 km off the mainland. At the time the project was launched there were about 2,00 inhabitants, today there are according to the village elder about 6,700. People arrive from the mainland, Mtwara in the south and Zanzibar in search of jobs.

AD was accompanied by the Songas CSR manager for the visit.

#### a) Gas production

Songas built and owns:

- the gas processing plant on SSI
- pipeline to Dar that crosses 20km under the sea to the mainland and then 200 km overland to Dar. It passes through 65 villages.

The actual wells are owned by TPDC and connected to the gas plant. Songas controls the wells extracting the gas required. Gas in the wells is accessed at a depth of 2,000m at a pressure of 160 bar, it is processed at 80 bar and enters the pipeline at 70 bar which is sufficiently high for it to move to Dar without pumps.

The gas process plant is actually managed by a subcontractor Pan African Energy Tanzania<sup>69</sup> is the operator of the Songo Songo gas wells and gas processing plant on behalf of Songas Ltd, the owner of the infrastructure. The infrastructure includes two gas processing trains each rated at 35 MMscfd<sup>70</sup> (70 MMscfd total); a high pressure 25-kilometre 12" offshore pipeline and a 207-kilometre 16" onshore pipeline. Songas operates the high-pressure pipeline system. With demand for gas having increased since production began in 2004, the 70 MMcfd infrastructure limit created a serious bottleneck. To address this issue, Songas initially approved the re-rating of the gas processing plant on Songo Songo Island to 90 MMscfd following certification of the increased rate by Lloyds Register. Then during September 2010, the company undertook further technical analysis and Lloyds Register re-rated the plant to operate at 110 MMcfd. In early 2011 PanAfrican Energy negotiated a Re-rating Agreement with TANESCO and Songas to run the gas processing plant at levels up to 110 MMcfd until the announced Songas Expansion Project is operational.

<sup>67</sup> TDFL is now only 32% state owned.

<sup>68</sup> Globeleq (70% CDC and 30% Norfund) has control with its 54.1% majority stake.

<sup>69</sup> <http://panafricanenergy.com/operations/production/>

<sup>70</sup> Million standard cubic feet of gas per day

As well as the Songas gas processing plant, the state-owned Tanzania Petroleum Development Corp. (TPDC, a shareholder in Songas) built in 2015 a second gas processing plant on SSI<sup>71</sup> to process production from another gas field. Up to 30 MMcfd are processed and sent to Dar through the Songas pipeline.

b) Employees

The facility on SSI employs 72 people, of which 43 are in operations and maintenance. Due to a lack of the requisite skills, local people from SSI have been employed primarily in support positions in security, catering and the like. Technical staff have come from the mainland, primarily Dar. They work 4 weeks on (7 days a week) and 4 weeks off.

c) Water

Using reverse osmosis Songas produces 50,00 litres per day, about 30% of which is used by Songas and the majority is distributed by pipes to 5 tanks around the island that serve the local people. Before Songas, the inhabitants relied on rain water and local bore holes that produced and still produce brackish (slightly salty) water that often led to diarrhoea. There are still sellers of water from local bore holes. Water demand from the inhabitants is increasing as the population increases so the Songas plant is running at near full capacity.

d) Globeleq Audit

A 6-member team from Globeleq the operator was undertaking an operations audit of Songas that is done every 2 years. The scope of their work includes: health and safety, environmental, social, reviewing new capital expenditure and crisis management procedures. It is being led by the ex-managing director of Globeleq's Azito power plant in Cote d'Ivoire. It shows a strong commitment to running Songas to meet high international operating standards. 2 of the team accompanied Songas's CSR manager and AD on visits to community projects on SSI.

e) Local Housing

There appears to be a trend away from straw roofs to corrugated metal sheeting, a good rough indicator of improving incomes. Also, there were quite a few satellite dishes mounted on houses with electric connections.

f) Songas supported projects on SSI:

(i) *Contractual Obligations:*

- Supply of water – 35,000 litres a day
- Supply of Electricity – 99,200 Kwh per month

(ii) *Others:*

**1) Health:**

1. Renovation of the village dispensary and Doctors houses
2. HIV/AIDS awareness training and testing
3. Medicine for the village dispensary

<sup>71</sup> <http://www.ogj.com/articles/2016/06/tanzania-s-songo-songo-gas-plant-enters-commercial-operation.html>

4. Supply of Doctor – twice a week.

## 2) Education:

1. Furniture for the secondary school
2. Construction of Classrooms for the secondary school and renovation for the primary school
3. Support the construction of teachers' housing
4. Meals for secondary school students -114
5. Scholarships to best performing students - 16
6. Part-time teachers – 2 teachers
7. *Kitchen (to be constructed in this year)*

## 3) Livelihood:

1. Training of youth – vocational training - 33 youth
2. Training to fishermen and sea weed farmers – creation of micro economic groups – 200 people
3. Community empowerment on marine resources management – to end use of dynamite by fishermen.

### g) Meetings and projects visited:

- (i) **Village elder Mzee Abdurabi Mjaka**, a fisherman by trade. He was happy with what Songas has done for the island. The challenges that SSI faces are the result its relative prosperity that has attracted people to move from as far away as Mtwara on the Mozambique border and Zanzibar as well as the adjacent mainland. The population has more than tripled since 2004. He raised the issue of better fish stock management and the need to stop the use of dynamite by fishermen.
- (ii) **Dispensary - clinical officer Francis Bweigoge** (more trained than a nurse but less than a doctor) at clinic/dispensary that was doubled in size by Songas, who arrive on SSI 2 years ago. Healthcare remains very rudimentary. Any seriously ill patients have to be sent to the mainland.





- (iii) Saeed, headmaster of SS Secondary School that has 114 pupils. Songas built an extra classroom, a dormitory (for girls that enables them to study which is often not possible at home where they must do domestic tasks) and supplied desks.







10 of the pupils that completed the high school exam went on to university. The school clearly met an important need on SSI.

- (iv) We met a local fisherman who had bought a domestic freezer to store fish prior to it being transported to the mainland in cold boxes for sale. Without electricity this would not have been possible.

#### 14. Ubungo Power station

The Songas PP is located on the Morogoro Road in the north-west suburbs of Dar, about 12km from the centre. Nearby are 2 other power stations:

- 1 owned and managed by TANESCO (Ubungo Gas Plant 1 and 2) with a total generating capacity of 200MW+.
- A 120MW IPP run by Symbion that stopped operations in 2016 following a dispute with off-taker TANESCO. In early 2017 Symbion commenced a legal action against TANESCO at the International Chamber of Commerce's International Court of Arbitration in Paris at arbitration of \$561m<sup>72</sup> alleging breach of contract. This loss of generating capacity is equivalent to more than 10% of the total capacity.

The Songo PP originally built in the mid-1990s and was powered by liquid fuels that produced much higher levels of GHGs than the LNG that is delivered by the Songas pipeline and converted 10 years ago. It operates at a utilisation of 94.8%, the highest of the PPs operated by Globeleq. This compares with 70% to 80% at state owned power stations. The much higher Songas efficiency is ascribed to much better preventative maintenance than TANESCO stations. On the wall of a

<sup>72</sup> <https://www.reuters.com/article/tanzania-power-symbion/u-s-firm-seeks-561-million-from-tanzania-in-power-supply-dispute-idUSL2N1GY1T8>

meeting room there is a chart showing the detailed maintenance schedule for every part of the plant for the next 10 years.

As a result of much higher levels of efficiency at Ubungo, Songas estimates that its power is US 3 to 4 cents per kwh cheaper than TANESCO plants, Songas 6 cents compared with around 10 cents at TANESCO. The PP has 72 employees.

This greater efficiency and reliability of the Songas PP, combined with maintaining close relations with TANESCO and GoT (both represented on the board), has meant that Songas has avoided disputes like the one that led to the contractual impasse between Symbion and TANESCO.

# Zanzibar – Sugar

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The document is made of four parts:

1. Project fiche, which provides only descriptive information on the project
2. The scoring of the project regarding evaluation criteria
3. Lessons learnt and key findings
4. Findings at indicator level, with a view to feed into the EQ analysis

## 1. Project fiche

Project title	Zanzibar Sugar Factory
Project description	<p>Restart and rehabilitation of a sugar plantation and factory in Mahonda, Zanzibar with a nucleus farm of 4,000 acres (1,600 hectares). Project involves the expansion of: (i) processing capacity from 500 MT/day of sugarcane to 800MT/day, (ii) the nucleus farm by 1,380 acres, and (iii) Establishment of outgrower program with nearby farmers to provide up to 36% of the cane. Planned annual capacity of the factory is 200,000 MT, based on 250 days of production.</p> <p>The factory dates back to the 1970s when Tanzania and China entered into a project to set up a sugarcane estate and factory that was a Tanzanian state owned enterprise until it closed in 1998 due to poor performance. A previous partial privatisation to an Asian entrepreneur in 2005 failed. In 2013 Export Trading Group<sup>73</sup> (“ETG”) and the owners of Vegpro Kenya Holdings bought 75% of the companies’ shares. ETG has extensive interests in agribusiness, horticulture and trading in eastern and southern Africa with a turnover of with revenues of \$3.7bn<sup>74</sup>.</p>
Sector	Agribusiness
Stage	Start-up/expansion
Operation Dates	Clearance in Principle (CIP) - 24 April 2015 Financial proposal /Approval - 23 July 2015
Contract	Client no C10002635
Country/Region	Tanzania, Africa
Country category	Poorest
Project total cost (\$)	21.3m
IDF contribution (\$)	\$11.5m (54%)
Co-financing (€)	<p>No co-financing. Instead \$1.8m of the loan was used to repay a short-term facility from the East African Development Bank.</p> <p>In addition, the MASSIF fund provided a grant of €0.13 million<sup>75</sup> to finance the consulting firm RMI Outgrower Development to implement the outgrower programme. This capacity development project has two aims: (i) to support outgrowers to increase their income by growing a crop for income generation, and (ii) ensuring the food security of outgrowers through teaching intercropping techniques. This grant was signed on 12 February 2016.</p>
<b>Loan Terms</b>	
Senior/Subordinated	Senior
Convertible	No
Amount	\$11.5m

<sup>73</sup> <http://www.etgworld.com/about.php> Founded in Kenya in 1967, ETG is one of Africa’s largest Agricultural Conglomerates. ETG’s footprint expands across sub-Saharan Africa, North America, Europe, the Middle East and South East Asian countries. Annually, ETG moves an approximate five million metric tonnes of agricultural commodities around the world and directly employs more than 7 000 people globally. The portfolio of commodities includes: cashews, various types of oilseeds, sugar, coffee, a variety of pulses, wheat, fertilizer, rice, maize and sesame seeds.

<sup>74</sup> CCR 28 September 2017

<sup>75</sup> In CIP it was proposed that MASSIF would provide a loan of \$3m to finance out-growers. The FP states that this did not happen.



Loan Agreement Date	16/12/2015	Facility No	0000139239
Currency	US\$		
Tenor	11 years		
Grace period	2.5 years, repayments start in July 2018		
Interest rate	LIBOR +5%		
Security	Plant & equipment + shares of sponsors		
Fees	Front end, commitment + monitoring		
Disbursements	04/05/2016 - 100%		
Monitoring	Schedule 7 of LA - Development Impact Reporting - Agribusiness <ul style="list-style-type: none"><li>• Employment</li><li>• Number of smallholders supported</li><li>• GHG-emissions (if GHG-emissions &gt; 25,000 ton equivalents per year)</li></ul>		
Key covenants per LA	18. Financial Covenants 18.1 Net Debt to EBITDA Ratio: not to exceed 3.5:1; 18.2 Interest Cover Ratio: at a minimum 3:1; 18.3 Current Ratio: at a minimum of 1:1; and 18.4 Solvency Ratio: at a minimum of 40%.  19. Positive Undertakings 19.8 Environmental and Social Action Plan 19.11 Production capacity ... minimum levels of sugar cane shall be crushed: 19.11.1 154,000MT in 2017; and 19.11.2 190,000MT in each year thereafter.  Schedule 7 - Development Impact Reporting Pursuant to Clause 17.3.5 ( <i>Information: miscellaneous</i> ) of this Agreement, the Borrower is obliged to report to FMO on the development impact of the activity (co-) financed by FMO. For this activity, the agribusiness reporting obligation extends to (see for a definition next page under B): <ul style="list-style-type: none"><li>• Employment</li><li>• Number of smallholders supported</li><li>• GHG-emissions (if GHG-emissions &gt; 25,000 ton equivalents per year)</li></ul>		
Conversion features	n/a		
Equity Terms	n/a		
Grants	n/a		
Financial Risk and Performance			
	Financial proposal/approval	Client Review - Most recent	
Client Risk Rating	F14	F16 but kept at F17 due to uncertainty. Credit risk is modest due to parent company guarantee and financial support commitment.	
Loan - Impairment provision	0%	0% - if no improvement by 2018 then project may be moved to	

	Special Operations
<b>Financial performance</b>	Project is 1 year behind schedule in implementation
<b>Client Credit Review - key findings</b>	<p>CCR Sept 2017</p> <ul style="list-style-type: none"> <li>• projections were adjusted for FY16/17 due to start-up delays.</li> <li>• Capex in factory is complete.</li> <li>• Fundamental problem is that cane production has been much lower than forecast due to 2 factors: (i) lower than expected yields and old cane in 2016/17, (ii) much lower areas being cultivated, especially with outgrowers.</li> <li>• Cane crushed in year to March 2017 47,000 mt compared with target in loan agreement of 154,000 mt (30%)</li> <li>• Land allocation for nucleus farm slower than planned, has also remained slow because the government is functioning as an outgrower, slowly rolling out plots of land over time, rather than leasing the land to ZSFL as originally planned.</li> <li>• Factory was unused between October 2016 and October 2017.</li> <li>• Due to the slow land acquisition and low yields, the client is about 2 years behind schedule.</li> <li>• Large operating losses, \$2.74m in year to March 2017, little changed from \$2.76m loss in 2016. Parent company injecting funding to keep ZSFL operating, USD 2.1m already.</li> <li>• Project is not viable without shareholder support that enables interest on IDF loan to be paid.</li> <li>• Reputational risk due to a large parcel of GoZ prison land (500 acres) being cultivated for sugarcane by prisoners that will be a de facto outgrower for factory. FMO has asked for ZSFL to commission a review.</li> <li>• A large change request has been submitted to request approval to i) waive the Net Debt/EBITDA and ICR covenant breaches and ii) to make a one-off modification to the Sponsor support amount from covering the aggregate losses from both FY2016 and FY2017 to covering FY2017 losses only.</li> <li>• IRC decision(s) proposed: None; reassess need for SO Consultation in 2018 review</li> <li>• Portfolio management &amp; commercial actions proposed/planned:</li> </ul> <p>Summary:</p> <ul style="list-style-type: none"> <li>• Viability of project depends on 200,000 mt of cane sugar being processed annually. This will only be possible when sufficient land has been acquired for the nucleus farm to bring around 7,000 acres into cultivation with around 1,000 acres for outgrowers.</li> <li>• Servicing of IDF loan is dependent on parent company funding. Without it IDF loan would be in default.</li> </ul>
<b>Results chain: expectations and achievements</b>	
<b>Logical framework</b>	<p>Briefly describe the chain from <b>Inputs</b></p> <ul style="list-style-type: none"> <li>• Rehabilitation/expansion of sugar refinery and plantation</li> </ul>

	<ul style="list-style-type: none"><li>• Setting up of outgrower scheme for up to 36% of cane supply</li></ul> <b>Outputs</b> <ul style="list-style-type: none"><li>• Modernised, efficient sugar refinery</li><li>• Higher yields from nucleus estate</li><li>• Supplies of cane from outgrowers</li></ul> <b>Outcomes</b> <ul style="list-style-type: none"><li>• Import substitution - up to 21,000 tons of sugar for Zanzibar/Tanzania market</li><li>• Production of 1.7m to 2.1 m litres of ethanol for use in cooking stoves</li><li>• Higher incomes for farmers that switched to sugar cane cultivation</li><li>• Demonstration of viability of sugar production in Zanzibar</li></ul> <b>Impacts</b> <ul style="list-style-type: none"><li>• Economic diversification/development in Zanzibar</li><li>• Poverty reduction in Zanzibar</li><li>• Reduced use of charcoal and greenhouse gas emissions from charcoal.</li></ul>		
Assumptions	<p>Key Risks / Issues set out in FP</p> <ul style="list-style-type: none"><li>- <b>Market risk</b> - business case remains dependent on the continuation of high import tariffs.</li><li>- <b>Supply (Outgrower) risk</b> – dependence on success of outgrower scheme (around 30% of cane to be processed) to reach full capacity.</li><li>- <b>Land availability/Zanzibar government support</b> – the government has signed a letter to support the company with additional land (1500acres) yet this will roll out gradually with the government as an outgrower rather than leasing all land at once.</li><li>- <b>E&amp;S risks</b><ul style="list-style-type: none"><li>i. the outgrower scheme, building enough trust and support to have a steady supply with sustainable practices.</li><li>ii. for the prison lands that will supply cane, the risk of using of forced labour</li><li>iii. dependence on local government actions for asbestos</li></ul></li></ul>		
Main project activities and achievements	<p>Briefly describe, as reported in the project documentation, the following items:</p> <ul style="list-style-type: none"><li>- Activities implemented:</li><li>- Outputs achieved:</li><li>- Outcomes achieved:</li><li>- Intermediate impact achieved:</li><li>- Global impact achieved:</li></ul>		
Main project issues	<ul style="list-style-type: none"><li>- Slower than planned</li><li>- Jobs created</li></ul>		
Quantitative Indicators			
	Unit	Ex-ante: Financial proposal /approval	Ex-post: Client Review – Field Visit
Corporate Income Tax	€m		0
GHG Saving (tCo2)	T CO <sub>2</sub>	Max GHG emission is 25,000 tons of CO2eq/yr.	
Installed Capacity (MW)	MW		
Production Capacity	GWh		
People served – distribution	#		
People served – transport	#		

People served – power	#		
People served – telecom	#		
People served – IT/internet	#		
People served – industrial/agri	#		
People served – farmers reached	#		
Forestry under management	ha		
Agriculture	ha	Nucleus farm 1,500ha Outgrowers 800 ha	Nucleus 4,000 Outgrowers 500
Green investments	€m	Bagasse fuelled refinery	Bagasse fuelled refinery
Inclusive investments	€m	Outgrowers	

## 2. Scoring

	Desk Review	Field Visit
<b>EQ 2 – Relevance</b>		
IDF Loans and Equity Investments have higher financial risk ratings than FMO-A		n/a
JC 2.2 Catalytic effect – mobilisation of commercial and development institution financing in IDF financed projects	1	1
JC 2-3 Additionality of IDF Loans and Equity Investments	1 to 2	3
<b>EQ 1 – Effectiveness</b>		
JC1.2 IDF-financed projects have delivered expected infrastructure outputs on time and within budget		1
JC1.3 IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).		1
JC1.4 IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)		1
JC1.5 IDF M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio		2
<b>EQ 4 – ESG Risk Management</b>		
JC4.2 IDF-financed projects contributed to green and inclusive development		2

JC4.3 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices		3
JC4.4 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management		n/a
<b>EQ 6 – Efficiency</b>		
JC6.1 FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness		2 FP and CIC should have focused more on project risks on what was in essence a green field project
JC6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support		2 Technical due diligence was inadequate
<b>EQ 3 – Revolvability</b>		
JC 3.5 Individual Project Sustainability		1
<b>EQ 5 – Policy</b>		
JC 5.1 Involvement of Dutch companies in IDF projects		None
JC 5.2 Effects for Dutch companies and economy		n/a
JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry		None
<b>Scoring Justification</b>		
EQ 2 - Relevance		2 No financial additionality offset by strong FMO support on E&S issues and MASSIF grant for outgrower scheme.
EQ 1 - Effectiveness		1.25 Project has failed to date to reach required sugarcane production levels that are required for viability of factory. Outgrower scheme has proved much more

		difficult to implement than planned and is being scaled back.
EQ 4 – ESG Risk Management		2.5 Good due diligence and support offset by failure of outgrower scheme
EQ 6 – Efficiency		2 Technical due diligence and project risks not well assessed.
EQ 3 – Revolvability		1 Project viability is highly uncertain due to sugarcane production and processing a long way from viability levels and doubts over how this can be achieved.
EQ 5 – Policy		n/a
Comments		

#### Rating Scale for evaluation scores:

**4 – Highly Satisfactory:** Evaluation criteria (EC) have been fully met and there are no shortcomings with the EC.

**3 – Satisfactory:** Evaluation criteria have been substantially met with only minor shortcomings with the EC.

**2 – Partly Satisfactory:** Evaluation criteria have been partially met but there are significant shortcomings with the EC.

**1 – Unsatisfactory:** Evaluation criteria have not been met.

**N/A** – rating not applicable.

### 3. Lessons learnt and key findings

- This project highlights the challenges inherent in agricultural and agroprocessing projects where the industrial processing challenges are relatively easy to manage. Instead the uncertainty and volatility in building up sufficient quantities of sugarcane were under estimated and not properly addressed during the due diligence.
- Local knowledge is key for an agriprocessing project. Identifying and managing projects from The Hague is not viable. The placement of an FMO agribusiness officer in Nairobi is a step in the right direction.
- Agribusiness projects are more difficult for FMO than the energy or financial sectors where FMO has considerably more experience. Technical specialists should be hired as part of the due diligence teams, especially for start-up projects which in essence is what ZSFL is.

## 4. Findings at indicator level to feed into the EQ analysis

### EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?	
<b>JC1.2</b>	<b><i>IDF-financed projects have delivered expected infrastructure outputs on time and within budget</i></b>
<p><b>1.2.1</b> - Provision of financing for infrastructure investments (new, rehabilitation and expansion of existing infrastructure)</p> <p><b>I-1.2.2</b> - Provision of grants for project preparation design or supervision of implementation of infrastructure projects (in accordance with international best practice).</p> <p><b>I-1.2.3</b> - Implementation progress – time and cost compared with programme</p> <p><b>I-1.2.4</b> - Infrastructure operation – outputs/production compared with targets</p> <p><b>I 1.2.5</b> - Direct job creation (local labour and/or local subcontractors) and comparison with targets:</p> <p>xxvii) temporary/short term during the implementation period</p> <p>xxviii) permanent/long term and contractual private/Public Private Partnership (PPP) frameworks</p>	
<p>Outputs therefore relate to (i) on the processing side the rehabilitation of the sugar factory that dates back to the 1970s and (ii) the supply of sufficient sugarcane from a nucleus sugarcane farm and an outgrower scheme. It should be noted that as disbursement of the IDF loan only occurred in May 2016 it is too early to make firm judgements on the project outputs. Nevertheless there are major operating problems and shortfalls in financial performance that need to be addressed in the near term, especially on the production of sugarcane.</p> <p>Set out below are key findings from the September 2017 CCR and the ADE field visit in November 2017.</p> <ul style="list-style-type: none"> <li>• The factory buildings were rehabilitated and extended while the processing equipment some dating to the 1970s was replaced. The sugar mill boilers were retrofitted to burn excess bagasse (a by-product of sugar refining), and rehabilitated with state of the art milling technology that is completely automated. As well as being in very good condition and modern, the factory has the space to perhaps double processing capacity at a later time.</li> <li>• Despite the factory being complete and ready to process cane, it is severely underutilised. There was a delay in starting operations (due to the late arrival of equipment) at the factory which only began production in March 2016 at only 31% of planned capacity. Crushing started in June 2016 using cane from the and cane was supplied by around 200 outgrowers. There was, however, no sugar refined between October 2016 and October 2017.</li> <li>• Land allocation for the nucleus farm has also been slow because the government decided to function as an outgrower, slowly rolling out plots of land over time, rather than lease the land to ZSFL as originally planned. The Outgrower development programme (funded by a MASSIF grant) managed by RMI experts began in August 2016 but has been much slower than planned. As a result the plan to reach 4,000 acres of outgrower production has been scaled back to only 1,000. and Capacity Development funding will support scaling up the program.</li> </ul>	

- The factory is planned in the season to March 2018 to be operating for 120 days (vs 180 days in the adjusted/reduced forecast). running at only 30% of capacity. The table below shows the large shortfalls in the area being cultivated and the amount of cane being processed.

#### Outgrower Sugarcane Production

- To reach a viable level of utilisation will depend on outgrowers as the following table from the FP shows:

Cane supply in MT	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22
Cane nucleus	64,512	162,000	154,200	159,000	162,000	154,200	159,000
Cane outgrowers -		32,400	72,600	80,400	77,400	85,200	80,400
% from outgrowers	0%	17%	32%	34%	32%	36%	34%

- Cane yields have been lower than expected, especially on outgrower farms. The outgrower scheme is proving more difficult to implement than planned. The consultants RMI has said that about 25% of the planted area of outgrowers will not become productive due to bad agriculture practice. Also, outgrower plots are too small to be properly supported by ZSFL.
- Two outgrowers were visited, each about 30minutes from the factory. Although much larger than the average outgrower farms (10 and 7 acres) which are about 1.5 acres it was noted that access was difficult with the cane fields about 1 km from the main road down a narrow sandy path that can only be accessed by tractors and 4 wheel drive vehicles, but not trucks. ADE was told that it is necessary to haul the cane in small loads to the main road for loading on trucks to the factory. Delivery costs are therefore high. Moreover, the sandy ground quickly becomes impassable after it has been raining. The logistical issues of outgrower farms are much greater than expected.
- As a result of the major implantation difficulties in signing up farmers, target for outgrower production has been dramatically scaled back from 4,000 acres (1,600 hectares) to about 1,000.
- It is noted that number of smallholder farmers supported is the primary agribusiness impact indicator in the June 2016 Impact Card Manual for Corporates.

#### Factory Outputs

Production Highlights					
	Jun-16	Mar-17	Mar-18	Jun-17	Jun-18
	Actual	Actual	Revised	Planned	Planned
Operating days	30	65	180	270	270
Land harvested acres	3,000	4,156	4,800	7,200	8,400
Cane crush Tonnes	7,001	46,764	129,600	216,000	252,000
Source: CCR 28 September 2017					

- It can be seen that the under-utilisation of the factory will continue for some time to come. Only 1,300 tonnes (3%) out of a total 47,000 tonnes processed came from outgrowers.
- In a major change from the original plan, the project has been revised so that sugarcane production will be principally the nucleus farm supplemented by large government management farms and a much more modest contribution from outgrowers.



- Government has committed to hand over a 775 acre plot as part of its original commitment to provide 1,500 acres for cane cultivation.
- For 2017/18 it is forecast that there will be a decline in land harvested to 3,800 acres, due in part to some Government land being taken out of production and used for sand mining.
- There is also the reputational issue of sugarcane being grown for ZSFL by the GoZ Prisons Department using prisoners to do the cultivation and harvesting. This substantial (500 acre) piece of land is also one of the most productive with a yield of around 40 mt per acre. FMO has asked ZSFL to bring in independent experts to verify that prison labour is being used in an acceptable way.

In summary, while the factory has been modernised and expanded to good standards, the challenge to be resolved is how to increase sugarcane production to the planned 200,000 mt per year necessary for viability. Given this, a rating of only 1 unsatisfactory is appropriate.

**JC1.3** *IDF financed projects contribute to the development of the private sector (by means of increased longer term employment opportunities, improved business environment and demonstration effects).*

**I-1.3.1** - Indirect job creation supported by the project (including establishment of new enterprises) and comparison with targets

**I-1.3.2** - Assessment of likely sustainability of indirect jobs created after project completion

**I-1.3.5** - Evidence of IDF clients benefitting from IDF support (development of new markets, expansion of existing markets, increased turnover)

It should be noted that the sugar market in Tanzania is heavily protected with high import barriers to imported sugar. As well as the challenges in implementing the project, its viability and private sector benefits are dependent on the continuation of such protection.

The FP listed the following benefits to the private sector:

- Outgrowers who will form the largest category of direct private sector beneficiaries.
- Suppliers of goods and services to the factory and the estate
- Other businesses that benefit from the greater spending power of workers and outgrowers



The factory itself employs up to 200 people at peak periods. In addition there was expected to be large numbers of outgrowers involved who were farmers that had switched to sugarcane production. As noted in JC 1.3, the outgrower scheme has been scaled back to a target of only about one quarter of the planned size. Some of the indirect jobs that might have been created

will be replaced by jobs on the nucleus and government farms but at a smaller level given the scope of economies of scale in farming on large plots.

The main supplier benefits are modest given the nature of sugarcane production and processing. Haulage companies will be required to move cane from outgrowers and government farms to the factory. However, this is something for the future and is dependent on a large increase in production.

Demonstration effects to date are minimal given the problems that the project has had. According to ZSFL there are no other potential sugar projects being considered in Zanzibar.

ZSFL through the MASSIF grant to develop the outgrower scheme has benefitted from non-financial support. Unfortunately, the scheme has not achieved its goals. Moreover, attempts to obtain a GoZ endorsement of a scaling up of the outgrower scheme in \$10m project involving, inter alia, AfDB and IFAD, failed.

Overall the delays in project implementation, particularly in building up sufficient sugarcane production means that the private sector benefits have been modest at best or even poor. An unsatisfactory 1 rating is appropriate.

<b>JC1.4</b>	<b><i>IDF-financed projects have delivered expected outcomes (in targeted beneficiary populations or more widely)</i></b>
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**I-1.4.1** - Evidence of IDF-financed projects contributing to employment generation. (This indicator will be informed by findings of I-1.2.5, I-1.3.1 and I-1.3.2 [direct and indirect short term and long term job creation])

**I-1.4.2** - Evidence of IDF-financed projects contributing to enhanced economic growth (increased revenues of service providers, tax revenues, public sector investment levels)

**I-1.4.3** - Evidence of outputs of IDF-financed infrastructure investments being available and accessible to the poorest people and vulnerable groups (and that the needs of such populations were coherently identified and addressed in IDF-financed interventions)

**I-1.4.4** - Evidence that IDF-financed support strategies and interventions proactively target outcomes (that may contribute to poverty reduction)

**I-1.4.5** - Evidence that outcomes of IDF-financed projects may be isolated and attributed to IDF support

According to the FP:

- The project is expected to have a high local impact in Zanzibar, primarily due to job creation, directly at the sugar mill (220 jobs) and indirectly, with outgrowers and to a lesser extent local suppliers of goods and services. Outgrowers prior to this project were subsistence farmers. Sugar is a cash crop that generally produces higher incomes for farmers. The extent of the impact will to a large extent depend on how successful the outgrower scheme is encouraging smallholder farmers to switch to sugar.
- The project is also expected to have a demonstration effect in showing that commercial agriculture - sugar, and perhaps other agricultural products is possible in Zanzibar. At present the island is heavily dependent on tourism
- Green Finance: pending. The project will partly qualify as green, because its using bagasse to produce energy for the sugar mill.

A weakness of the project, and of all sugar projects in Tanzania, is its business model which is dependent on the continuation of high import tariffs. To support local production and the goal of ending the import of sugar, according to the FP, imported sugar is subject to a 100% tariff and also an 18% VAT, as a result a CIF value of \$430 becomes a total imported price of

\$1,014<sup>76</sup>. While this is good for ZSFL that plans to sell at as low a price as \$665 per ton. The downside is that Tanzanian consumer are paying much higher prices for sugar to sustain a local sugar industry. Consequently the economic rate of return (ERR) for the project will be negative.

According to ZSFL the project at full production will produce widespread Social and Economic Impact as shown in the graphic below.

Social and Community Infrastructure:	Employment: Direct 400 Indirect 200, Total - 600	Vocational Training:	Wealth Creation: Out Growers produce 100,000 Tons of raw cane	Local Production: Estimated 20,000 Tons of sugar per annum	Molasses By Product: (Estimated 2M Litres of rectified spirit p/a) for use in medical industry	Bagasse by Product: Used in production of power to run the mill (Minimum 1.4 MW)
Brand new clinic funded at USD100K to serve staff and local community	Estimated revenue earned USD 350K	Zanzibar has a severe shortage of skilled and semi-skilled labour	Estimated revenue earned USD 2.7Million	Estimated revenue earned USD 18 Million	Estimated revenue earned USD 2 Million	Renewable and green source of energy
Refurbishing of boreholes to supply water for local community	Most of this is spent locally thus stimulating the economy	As the mill staff acquire new skills, this will increase their productivity levels	The bulk of this is spent locally on farms, labour and transport thus creating wealth in the community long term	Contributes to self sufficiency in sugar production for local use	Direct contribution to the Zanzibar economy to and eventually reflected in the GDP	Excess power over time can be fed into the national grid once the feed in infrastructure is established.

Source: Presentation to ADE at ZSFL 17 November 2017

While these economic and developmental benefits could materialise, at present the project is at least two years behind schedule. Moreover, no sugarcane was processed between October 2016 and October 2017 with the factory lying idle. As noted, a major problem has been implementing the outgrower scheme that even with consultants funded by a MASSIF grant has achieved little in the year that it is been going. In the year to March 2017 there were poor sugarcane yields as well due to climatic factors and other issues. 25% of cane planted by the smallholder was lost in the past year due to poor farming management.

Job creation has been primarily at the factory, although it should be noted that 43 of the permanent jobs have been taken by expatriates from India who occupy all the management and senior supervisory positions. Local jobs have been mainly at the clerical and manual level.

IDF was the only provider of debt finance for the project.

In short it remains unclear whether ZSFL can reach financial viability and deliver the economic and development outcomes that were forecast. It is important to note that even with high sugar prices in Tanzania which are the result of high import tariffs there is considerable doubt as to whether ZSFL is developmentally a good project for Zanzibar.

Given the uncertainty over the outcomes of the project and its dependence on artificially high prices, an unsatisfactory 1 rating is required.

<b>JC1.5</b>	<b><i>IDF M&amp;E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio</i></b>
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<sup>76</sup> The Sugar Industry Act amended in May 2015 to protect local producers and decrease illegal sugar trading. At the time of the feasibility study there was an estimated excess of consumption over local production of nearly 200,000 tons.

**I-1.5.1** - Evidence of timely and comprehensive reporting of progress and results of IDF-financed projects

**I-1.5.2** - Evidence of availability and application of consistent M&E systems (indicators, methodologies) leading to assessment of effectiveness of the individual projects in attainment of expected results and of the IDF portfolio as a whole in achievement of IDF development objectives and progress towards targets

**I-1.5.3** - Evidence of feedback and application of lessons learned in subsequent projects and wider portfolio management

Two CRRs in 2016 and September 2017 have been prepared. They included a detailed review of both project implementation and progress on the environmental and social action plan was issued in October 2016. The CRRs also focus on the financial performance of ZSFL and especially the financial support that is being provided to the Company under a parent company guarantee from the ETG Group. The project delays are discussed.

The ADE field visit in November, however, provided a lot more insight into the problems and challenges facing ZSFL. It is evident that ZSFL is in considerably more trouble than indicated by the latest CRR. For IDF, however, the ETG guarantee in essence means that it will repaid irrespective of whether the project succeeds or fails. Issues of the challenges in building up the outgrower scheme are not adequately addressed in the CRR.

Consequently IDF M&E can only be rated as partially satisfactory, 2.

## EQ 2 – Additionality and catalytic effects

**Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?**

**JC 2.1** *IDF Loans and Equity Investments have higher financial risk ratings than FMO-A*

**I-2.1.1** - Risk ratings of IDF projects at entry compared with FMO-A projects

No FMO-A involvement because of high project risk.

**JC 2.2** *Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects*

**I-2.2.1** - Ratio of mobilisation at project level of IDF funding to commercial funding sources.

**I-2.2.2** - Ratio of mobilisation at project level of IDF funding to development sources (including FMO-A)

There was no catalytic effect as no additional funding was mobilised. In fact \$1.8m of the \$11.5m IDF loan used to repay EADB loan. There was no discussion about the rationale for the funding other than it being used as a possible first step into a relationship with a very large agribusiness group with over \$2 bn of revenues and a number of interests in east Africa.

Therefore a negative 1 unsatisfactory rating is appropriate

JC 2-3	<i>Additionality of IDF Loans and Equity Investments</i>
	<p><b>I-2.3.1</b> - Terms of IDF loans and equity investments compared with those of other funding sources (including FMO-A) in project financing plans.</p> <p><b>I-2.3.2</b> - At project level, project viability endorsement and contribution from IDF participation.</p> <p><b>I-2.3.4</b> - Other than for normal equity exits, review of appropriateness of transfers of IDF projects.</p>
	<p>The role of FMO in the funding of the rehabilitation of ZSFL is not explicitly discussed in the FP. It is though clear that FMO/IDF brought considerable value to the project in the area of E&amp;S issues, specifically in working on the Environmental &amp; Social Action Plan<sup>77</sup> (ESAP) that ZSFL was required to commit to in the loan agreement and whose implementation FMO is closely monitoring. Moreover, there has been considerable value added in the design and operation of the outgrower scheme through the MASSIF grant.</p> <p>One question that is not clearly addressed is the appropriateness of a loan denominated in US dollars to a project with revenues in local currency. While it is noted that the sugar price in Tanzania currently tracks that of US\$ priced imports, it is not clear what might happen if imports come to an end, the goal of the Tanzania government for local production to cover local consumption. It is possible that in such a scenario the link to US\$ international prices might be broken and that a depreciation in the Tanzanian shilling might break down making debt service more expensive for ZSFL. It is unknown whether the possibility of a local currency was considered/discussed.</p> <p>The FP included at Annex 2 the IDF eligibility checklist. It concludes that ZSFL ‘is well aligned with IDF’s agribusiness mandate.’</p> <p>In short satisfactory role for IDF – 3 rating.</p>

<sup>77</sup> Document 9 in the FP pack.

### EQ 3 – Revolvability

**Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?**

#### **JC 3.5 Individual Project Sustainability**

##### **I.3.5.1 - Review performance and sustainability of 15 projects selected for desk review.**


Given the early stage of project implementation only about 18 months after disbursement, it is too early to judge the medium to long term sustainability of Zanzibar Sugar. Nevertheless it is fair to say that performance has been disappointing, particularly in the year to June 2017. The project is according to the 2017 CCR “Zanzibar Sugar is one year behind the adjusted forecast and (at least) two years behind the initial plan.” Below are financial highlights.

Financial Highlights				
year to	Jun-15	Jun-16	Mar-17	Jun-17
\$000	actual	actual	9mths	forecast
<b>Turnover</b>	<b>96</b>	<b>278</b>	<b>2,215</b>	<b>3,758</b>
EBITDA	- 500	- 484	- 635	455
<b>Net Profit</b>	<b>- 1,920</b>	<b>- 2,812</b>	<b>- 2,737</b>	<b>- 2,408</b>
Gross Margin	-31%	-26%	11%	47%
Operating Cash Flow	- 1,928	- 11,856	- 1,862	- 1,797
<b>Total Assets</b>	<b>9,913</b>	<b>27,100</b>	<b>21,906</b>	<b>32,253</b>
<i>Interest coverage ratio (&gt;3)</i>	- 5.6	- 16.4	- 3.9	- 1.7

Source: CCR 28 September 2017

It can be seen that ZSFL's performance has been disappointing with operating losses and negative cash flows of a similar magnitude in 2017 as 2016. This is perhaps not surprising for an ambitious rehabilitation/expansion agribusiness project. Key operating problems relate to planting enough land to produce sugarcane (especially outgrowers) and reaching planned yield levels. The business model is dependent on a higher capacity utilisation of the factory. The table below shows the crushing and production statistics since March 2016.



		<b>ZANZIBAR SUGAR FACTORY LIMITED</b>			
<b>Crushing and Production details for the year 2016</b>					
<b>DESCRIPTION</b>	<b>Mar-16</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>
Cane Crushed(Mts)	7,001	4,667	14,866	15,710	11,521
Sugar Bagged(Mts)	391	332	1,412	1,485	1,200
Molasses produced(Mts)	400	180	735	740	590
Refined Spirit produced(Ltrs)	10,350	-	94,800	100,100	36,400
<b>Crushing and Production details for the year 2017</b>					
<b>DESCRIPTION</b>	<b>Oct-17</b>				
Cane Crushed(Mts)	7,695				
Sugar Bagged(Mts)	677				
Molasses produced(Mts)	395				
Refined Spirit produced(Ltrs)	-				
<b>Season wise Crushing and Production details</b>					
<b>Description</b>	<b>Cane crushed</b>	<b>Sugar bagged</b>	<b>Molasses Produced</b>	<b>RS Produced</b>	
	MT	MT	MT	litres	
Season to March 2016	7,001	391	400	10,350	
Season to March 2017	46,764	4,430	2,245	231,300	
Season to March 2018 to date	7,695	677	395	-	
Source:ZSFL email 4 December 2017					

The project is a very long way from meeting the annual crushing target of 190,000 MT of sugar cane set out in the loan agreement. In the year to March 2017 it achieved only about 25% of this target. The challenge of growing and sourcing enough sugarcane for the factory is unlikely to be resolved before 2019 and perhaps later.

Unsurprisingly given the project delays, ZSFL is in breach of a number of financial covenants, most notably the ICR, which improved in 2017 but still remained negative against a minimum covenant of +3. Further shareholder funding (\$2.1m) has been injected to fund operating losses. On the positive side the capex programme is almost complete so that the balance sheet remain quite strong provided operating performance continues to improve. expected to be stable since capex is more or less complete and the Shareholders have continued to support with cash injections in HY2018.

If the financial situation does not improve in the current financial year then the Special Operations department may have to be involved. The project is currently on a watchlist.

It should be noted that IDF’s credit risk is relatively modest because there is a guarantee from ZSFL’s parent company, which is the holding company for a large international agricultural conglomerate (ETG) founded in Kenya in 1967 with revenues of \$3.7bn<sup>78</sup>.

As a project ZSFL is in major difficulty. Accordingly a 1 unsatisfactory rating.

<sup>78</sup> CCR 28 September 2017

## EQ 4 – ESG Risk Management

**What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)**

**JC4.2** *IDF-financed projects contributed to green and inclusive development*

**I-4.2.1** Comparison of intended/actual Greenhouses gazes (GHG) footprint, ‘emission avoidance’ or other environmental effects

**I-4.2.2** Comparison of intended/actual social effects including social inclusion

**I-4.2.3** Progress in moving towards FMO Impact Model targets of ‘*doubling impact and halving footprint by 2020*’

As noted in the 2015 FP, the principal feature of the project that almost eliminates the GHG footprint is the use of sugarcane waste (bagasse) to power their processing facility, making this a potential green transaction as no externally sourced fuels are used. Below is the modern bagasse storage shed which was seen on the field visit.



The key environmental features which ensure that ZSFL does not pollute and minimises water consumption are:

- a) Waste water management system (ETP Plant of 250m<sup>3</sup>/day capacity) that treats the effluent water coming from the sugar plant to reduce the chemical and bio-chemical levels so that the treated water can be utilized to irrigate the nucleus farm.



- b) The generation of bio-fertilizers for the nucleus farm from the effluent generated in the ethanol distillery.
- c) Water conservation by adding natural cooling towers that use heat exchangers so that water can be recycled in the factory.
- d) The use of molasses produced in the refining process to make a highly concentrated ethanol (alcohol) that can be used in stoves as an alternative to charcoal fuel. UNIDO is implementing a project to use the rectified spirit as clean energy source for special cooking stoves.



- e) Installation of a multi-cyclone dust collector system to reduce air pollution from the boiler.

At the social level the key effects come from the outgrower scheme (a form of contract farming) which it was planned would provide around 30% of sugarcane for the factory. ZSFL provides all the technical support to small farmers as far away as 20 km from the factory who have been encouraged to switch from subsistence crops to sugarcane. It provides to outgrowers seeds, chemicals for seed treatment, fertilizers (basal and top), herbicides and /pesticides and, if necessary, and financially viable for the farmer, mechanization. The input package is provided on a loan basis, where ZSFL agrees to buy the sugarcane produced according to the weight and quality at a minimum predetermined price. Individual farmers also grow ratoon crops<sup>79</sup>. Key to the out grower scheme is working in groups, preferably with neighbouring plots. It was noted that one challenge during the initial phase is the lack of interest and motivation of the smallholders to join the scheme.



Visits to two outgrower farms were made and a Skype call made to the RMI consultant contracted to build up the outgrower scheme (see Annex 1) who also provided a copy of his recently issued annual progress report<sup>80</sup>. It is clear that the scheme has not been rolled out as quickly as anticipated. To date only 424 farmers on 598 acres (an average of 1.41 acres = 0.6 hectares) have been enrolled. Moreover, during the last growing season there were major problems in cultivating cane involving poor yields due to the wrong sugarcane varieties been planted and bad farming practices. The two farms visited were located about a kilometre or more in the bush raising the cost of transport. The financial attractiveness of cane, is unproven, despite what are by international standards high prices in Zanzibar and Tanzania. Plans to bring in donor and financial support for the outgrower programme involving, inter alia, AfDB and IFAD, have not materialised due to a lack of support from GoZ. Consequently, the programme has been scaled back from the planned 4,000 acres (2,500 hectares) to a revised target of 1,000 acres. In short the outgrower scheme has to date been a relative failure.

<sup>79</sup> *Ratooning* is an ancient method of propagation in sugarcane in which subterranean buds on stubble – the part of cane left underground after harvesting plant cane, gives rise to succeeding crop stand which is usually referred to as ‘ratoon’ or the ‘stubble crop’.

<sup>80</sup> Report on Zanzibar Sugar Outgrower Programme August 2016 to August 2017 - RMI Services Ltd 20 November 2017

A risk raised in the FP that of prison labour being used on land cultivated by a nearby prison has become an actual problem. The 2017 CCR noted that on a monitoring visit it was found that ZSFL not only leased prison land but that the prison also put its prisoners to work on those lands to farm sugar cane for the company. After discretely sounding other DFI's (incl. IFC) on their experiences with prison labour, it was decided to request a review as this turned out to be a unique case. The review was done by a prison rights expert in July 2017. As a result FMO has demanded that ZSFL address issues related to the voluntary nature, remuneration and transparent monitoring of the prisoners' labour. The matter is still being dealt with. In summary, ZSFL can be considered as a green and inclusive project. It should, however, be recalled that ZSFL like other sugar companies in Tanzania can only be viable with the benefit of high import taxes on foreign sugar. The outgrower scheme, a key feature of the project in terms of social inclusion has had to be scaled back. As a result a partial satisfactory 2 rating is appropriate.

**JC4.3** *FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices*

**I-4.3.1** - Use of Free prior and informed consent principles

**I-4.3.2** - FMO verification that higher risk projects comply with national legislation and international norms

**I-4.3.3** - Evidence of ESG risk assessment

**I-4.3.4** - Evidence of ESIA and ESAP preparation and implementation

**I-4.3.5** - Evidence of FMO monitoring of client ESG risk management (and responsive action as necessary)

The project was categorised and remains B+ according to IFC standards that FMO follows.

The due diligence found that E&S risk management of the project did not meet FMO/IFC standards. factory and nucleus : DD showed that present level of risk management is not up to standard, especially EHS, and that resources are insufficient. Client is committed though to improve and to invest; they regarded EHS important once the factory is up and running and less so during construction;

Annex 9 to the FP has a detailed 13 page Environmental and Social Review Summary (ESRS) that was prepared by a FMO E&S specialist with the IOs following a five day DD visit to the project in May 2015. The annex and the main text in the FP states, inter alia:

(i) potential core E+S risks

- Environmental, health and safety (EHS) risks at factory
- HS at the factory; labour and working conditions (living wage, housing);
- SCM (fair treatment of out growers, child labour, deforestation).

(ii) Potential core opportunities:

- Introduction of best practice sugar cane growing with IPM,
- Soil quality management,
- Improving living conditions of smallholder farmers.

(iv) EHS management not up to standard; labour and welfare conditions and out growers approach needed formalization and further consideration.

(v) Commitment from the client to meet E&S requirements as shareholder ETG an IFC and Proparco client; shareholder Vegpro has a very good reputation.

(vi) The E&S specialist recommended investing in the project as the risks were manageable and not irreversible, except for the unlikely case of uncontrolled success, which would stimulate

smallholders to deforest or develop new land. Opportunities lie in better farming techniques which will give better production and quality in a sustainable way.

(vii) the outgrower scheme requires building enough trust and support to have a steady supply with sustainable practices. Mitigant: together with CD FMO will monitor the implementation of the outgrower scheme implemented by consultant RMI;

(viii) for the prison lands, the chance of forced labor needs to be investigated. Mitigant: This is a new issue and FMO will ask the company to provide a plan for how to assure no such violations occur, and have this monitored in-depth by a consultant during the next monitoring visit due early next year;

(ix) Dependence on local government actions for instance in asbestos removal and other issues can cause delays for the company. Mitigant: FMO to monitor that the company keeps actively pushing the government as much as possible.

Attached to the ESRS was a 4 page time bound Environmental and Social Action Plan (ESAP) that had actions under 3 IFC performance standards:

- assessment and management of environmental and social risks and impacts
- labour and working conditions
- resource efficiency and pollution prevention

The December 2015 loan agreement contains specific commitments by ZSFL to:

19.6 Compliance with Environmental and Social Requirements - The Borrower shall (a) comply with the Environmental and Social Requirements; and (b) take all reasonable steps in anticipation of known or expected future changes to or obligations under the same.

19.7 Environmental and Social Management

19.7.1 The Borrower undertakes to ensure that it will diligently design, construct, operate, maintain and monitor all of its plants, sites and equipment in a safe, efficient and business-like manner.

19.7.2 The Borrower shall implement, maintain and continuously improve an adequate Environmental and Social Management System.

19.7.3 The Borrower shall appoint and maintain a senior officer of the Borrower with management responsibility, who will among other things, ensure proper operation and maintenance of the Environmental and Social Management System.

19.8 Environmental and Social Action Plan - The Borrower shall, satisfactory to FMO, implement all actions as provided in the Environmental and Social Action Plan within the time-frames mentioned. The Borrower will provide FMO with the relevant deliverables/compliance indicators evidence directly upon completion of such action items.

In Schedule 1 - Conditions Precedent it is stated that as a condition of disbursement ZSFL provides to FMO:

4 (f) Evidence that an independent environmental and social consultant acceptable to FMO has been appointed by the Borrower to (i) conduct a full environmental and social assessment of the out grower scheme and the plant and the nucleus (including additional land) for compliance with the IFC Performance Standards, (ii) assist with the development and implementation of the Environmental and Social Action Plan and (iii) ensure good environmental, health and safety practice.

The 27 September 2016 Client ESG Report and October 2016 CCR shows some progress in implementing the ESAP but much remains to be done. As part of the E&S monitoring, a FMO mission met with RMI consultant group (including their local arm - Tanzania Outgrowers

Development Partnerships “TODEP”) which has been contracted to i) train and expand the current 200 outgrowers to 500 and ii) do a feasibility study to scale up to 4,000 farmers. It was noted that the government has decided to act as an outgrower on the 1500 acres of land it has promised rather than lease it out, which benefits ZSFL since the government will then be responsible to guard the land.

The 2017 CCR highlighted 2 main risks i) the company’s use of prison labour (as described above), and ii) the outgrower scheme, building enough trust and support to have a steady supply with sustainable practices. In short, the CCR found that ‘The company is doing fairly well in completing their ESAP. At the time of writing, 7 items are completed and 4 items (with revised due dates) are still outstanding.’

In summary, the E&S due diligence and monitoring was thorough and merits a satisfactory 3

<b>JC4.4</b>	<b><i>Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management</i></b>
I-4.4.1	Evidence of project monitoring and review of actual ESG outcomes of IDF-financed projects leading to assessment of effectiveness ESG risk management
I-4.4.2	Evidence of feedback and application of lessons learned in subsequent projects
ZSFL is at too early a stage (less than 2 years since loan agreement signed) to assess the ESG outcomes and draw up lessons learned.	

## EQ 5 – Policy

<b>To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?</b>	
<b>JC 5.1</b>	<b><i>Involvement of Dutch companies in IDF projects</i></b>
A portfolio analysis will provide the evolution (number, size and sector) of Dutch companies involvement in IDF projects, especially since 2013 (amendment to the subsidy decision on the involvement of Dutch companies).	
No Dutch companies involved	
<b>JC 5.2</b>	<b><i>Effects for Dutch companies and economy</i></b>
<b>I-5.2.1</b> - Evidence of IDF projects contribution to Dutch companies goals <b>I-5.2.2</b> - Number of companies – Small and medium sized enterprises (SME) in particular - internationally active <b>I-5.2.3</b> - Level of exports to and investments in IDF eligible countries <b>I-5.2.4</b> - Jobs created in projects financed by IDF	
n/a	
<b>JC 5.3</b>	<b><i>Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry</i></b>
<b>I-5.3.1</b> - Evidence of synergies between IDF and other infrastructure programmes <b>I-5.3.2</b> - Number and volume of projects co-financed	
No involvement of any other Government programmes	

## EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?	
<b>JC 6.1</b>	<b><i>FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness</i></b>
<p><b>I-6.1.1</b> - Clearly defined policies and internal procedures underpinning FMO's investment process</p> <p><b>I-6.1.2</b> - Comparison with the requirements of the procedures of other DFIs</p> <p><b>I-6.1.3</b> - Smooth application of policies and internal procedures throughout the investment process (client selection, appraisal and approval, contracting and monitoring)</p> <p><b>I-6.1.4</b> - FMO organisational structure appropriate for management of IDF</p> <p><b>I-6.1.5</b> - Sound corporate governance embedded in FMO's clients' organisations</p>	
<p>There was a thorough review of the project by the Investment Committee at the CIP stage with concerns being raised over the guarantees involved and the rationale for the involvement of MASSIF. A second IC meeting was required for approval. The checklist verifying the eligibility of the loan for IDF funding was included at Annex 2 in the FP. The FP was a thorough document. However, the issue of the viability of the project being dependent on high import taxes was not highlighted by the IC in its approval. Also, there is no evidence of an IDF technical review in Zanzibar to assess the issues involved in growing sufficient sugarcane to keep the factory adequately utilised.</p> <p>Monitoring of the project has been reasonable, although it should be noted that the two CCRs do not consider in sufficient detail the major operating difficulties that the project faces. Instead the capacity of ZSFL's parent company that provided a guarantee to FMO IDF has been a particular focus.</p> <p>Corporate governance issues were not addressed in any detail. There was a modest 50 score in the scorecard. The FP says simply: 'Corporate Governance Risk Management Analysis: the Company is transparent and adheres to the same high standards of their main shareholders. Shareholders are also DFI clients(IFC).' and 'Corporate Governance Rapid Risk Screening Tool has been completed and filed in CRM. The CG risk is rated as moderate.</p> <p>In summary a partially satisfactory 2 rating is appropriate.</p>	
<b>JC 6.2</b>	<b><i>FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support</i></b>
<p><b>I-6.2.1</b> - Appropriateness of available FMO expertise</p> <p><b>I-6.2.2</b> - Trend in ratio of full-time equivalent staff to volume of operations</p>	
<p>Experienced FMO staff have been involved in processing and monitoring ZSFL, at analyst, investment officer, FMO management (FO and Credit) and IDF management level. Nevertheless, the technical due diligence was inadequate. It appears that FMO accepted without question the technical review in the project proposal presented to it. Given that a sugar project in Zanzibar was a high risk project, as a minimum an independent sugar specialist should have been hired to look at the project, with a particular focus on the cultivation of sugar and the development of an outgrower scheme. FMO It should be noted that the particular challenges in an agroprocessing factory that is dependent on a secure supply of sugarcane were not addressed in sufficient detail. This lack of sufficient sugarcane threatens the viability of the project</p> <p>Overall, a partially satisfactory 2 rating.</p>	

<b>JC 6.3</b>	<b><i>Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?</i></b>
<b>I-6.3.1</b>	- Identification of explanatory factors (incl. external factors) in effective implementation
<b>I-6.3.2</b>	- Identification of explanatory factors (incl. external factors) in effective observed delays
<p>Comprehensive due diligence should include a thorough analysis of the technical aspects of a project. This was not the case with ZSFL where the feasibility study was accepted with no visit to Zanzibar by a sugar sector expert. The failure to understand the risks and challenges in producing sufficient sugar at outgrower farms was a major deficiency in the DD. For IDF there was however no increase in the financial risk because a parent company guarantee was obtained.</p> <p>Rating 2 – partly unsatisfactory.</p>	

## Sources of Data

Document title	Date
Zanzibar Sugar Factory Limited – Final Feasibility Study Report	4 December 2014
CIPs	2 March, 20 March and 16 April 2015
Financial proposal	23 July 2015
SCA decision	30 July 2015
Loan agreement with Zanzibar Sugar Factory	16 December 2015
Change request for condition of disbursement re E&S	21 March 2016
Client ESG Report	27 September 2016
Credit Approval Request Post-Contracting	7 December 2016
CCR	03 October 2016
CCR	28 September 2017
Report on Zanzibar Sugar Outgrower Programme August 2016 to August 2017 - RMI Services Ltd	20 November 2017
Presentation to ADE at ZSFL	17 November 2017