

**FMO Independent Complaints Mechanism
Panel report No. 2**

**Sendou I Coal Power Plant
Bargny, Senegal**

Final Report

This report is based on the information which has been provided to the Panel by the complainants, the lenders, and other relevant parties. The expressions of opinion and judgment made by the Panel are not intended to act as a finding of fact or legal assessment and cannot be relied upon as such in any court of law.

Panel Members:

Maartje van Putten

Michael Windfuhr

Stephen Gibbons

12 October 2017

Table of Contents

Acknowledgements

Abbreviations and role definitions

1. Summary and key findings	1
1.1. <i>Overview of the appraisal and decision-making process</i>	1
1.2. <i>Key findings – process.....</i>	2
1.3. <i>Environmental impact</i>	3
1.4. <i>Land rights issues</i>	4
1.5. <i>Economic displacement of the fish dryers</i>	5
1.6. <i>Cultural issues.....</i>	5
1.7. <i>Note on recent Developments</i>	6
1.8. <i>Some future-oriented recommendations from lessons learned</i>	6
2. Background to the complaint	8
2.1. <i>Regional context.....</i>	8
2.2. <i>Introduction to the project</i>	8
2.3. <i>Summary of the complaint</i>	9
2.4. <i>Methodology of the review</i>	11
2.5. <i>Application of policies in the context of this complaint.....</i>	12
3. Overview of the appraisal and decision-making process	15
3.1. <i>Introduction and overall compliance judgement</i>	15
3.2. <i>Overview of FMO’s understanding and management of E&S issues</i>	16
3.3. <i>The Panel’s conclusions on the overall process</i>	22
4. Substantive issues	24
4.1. <i>Quality of the environmental and social impact assessment: ESIA 2009.....</i>	24
4.2. <i>The environmental impact of Sendou I.....</i>	25
4.3. <i>Land right issues</i>	36
4.4. <i>Economic displacement.....</i>	41
4.5. <i>Community engagement.....</i>	45
4.6. <i>Cultural issues.....</i>	49
5. Annexes	51
Annex I List of interviews	51
Annex II Overview of Sendou I project area	52
Annex III Aire de Cogestion de Bargny	53
Annex IV Key elements of IFC PS 1 ‘Social and Environmental Management System’	54
Annex V Draft Findings of LTA Ambient Air Dispersion Modelling, Sendou Unit 1.....	55

Acknowledgements

In the course of carrying out the compliance review in relation to this complaint, the Panel had the opportunity to consult with the management and professional staff of FMO that had been involved in the assessment and monitoring of the Sendou I Coal Power Plant at Bargny in Senegal. Panel members Michael Windfuhr and Maartje van Putten, accompanied by project assistant Steffen van der Velde, had extensive consultation meetings throughout the compliance review process, including before and after the field visit to Senegal, and wish to convey their gratitude to FMO staff for their openness and provision of information and assistance.

The Panel also wishes to thank the two different Complainant groups, the environmental NGO *Takkom Jerry* and the *Collectif des communautés de Bargny*, who both welcomed the Panel during its visit to Bargny. The *Collectif* represents several local collectives such as those representing fishermen, fish drying women, and land owners. The Panel is also grateful to all those who were present at the meeting on the beach which was attended by many people from the community of Bargny.

Staff members of the Compagnie d'Électricité de Sénégal (CES) showed the Panel around the project site. They explained the techniques behind coal power plants and how Sendou I would benefit Senegal. Furthermore, Mr. Eric L'homme, construction manager of CES, was instrumental in arranging meetings between the Panel members and local authorities.

The Panel wishes to thank Mr. Gaye Abou Ahmad Seck, Mayor of Bargny, and Mr. Baye Oumy Gueye, Prefect of Rufisque, who were willing to receive the Panel and provided useful information.

The Panel wishes to express its special thanks to Mrs. Josephine Frantzen, the Deputy Head of Mission of the Embassy of the Kingdom of the Netherlands in Senegal, for her guidance and assistance in arranging logistics for the Panel, enabling it to do its work in the field.

The Panel had a constructive meeting with the former Prime-Minister of Senegal Mr. Mamadou Lamine Loum, and Mr Abdou El Mazide Ndiay, a senior energy expert, which enabled the Panel to better understand the need for energy in Senegal. The Panel wants to thank them both.

The Panel also wishes to express its appreciation for the constructive information it received from WSP Parsons Brinckerhoff, technical advisor to the lenders.

The Panel would also like to thank the staff of Quantum Power (QP) for providing the Panel with valuable insights in relation to this complex project. The Panel recognises the fact that QP entered the project late, in 2015, when the project was behind schedule on many environmental and social issues.

Special thanks are due to the public agencies and ministries of the Senegalese Government, in particular the Ministry of Environment and Sustainable Development and SENELEC.

Finally, the Panel would like to express its thanks to members of the Secretariat of the Independent Complaint Mechanism at FMO for their professional support and last, but not least, Steffen van der Velde, for his unwavering assistance to the Panel during the compliance review, country visit, and the preparation of this Report.

Abbreviations and role definitions

AfDB	African Development Bank
AFG	Advisory and Finance Group
BOAD	West-African Development Bank
CBAO	Compagnie bancaire de l’Afrique occidentale
CES	Compagnie d’Électricité de Sénégal S.A.
CiP	Clearance in Principle
CIS	Cumulative Impact Study
COD	Commercial operation date
CTA	Common Terms Agreement
ESAP	Environmental and Social Action Plan
ESG	Environmental and Social Governance
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review System
FP	Financial Proposal
GIIP	Good International Industry Practice
HFO	Heavy Fuel Oil
IC	Investment Committee
ICM	Independent Complaints Mechanism
IFC PS	International Finance and Cooperation Performance Standards
IMR	Investment and Mission Review
LTA	Lender Technical Advisor
MB	Management Board
NGO	Non-Governmental Organisation
PPA	Power Purchasing Agreement
SO	Special Operations
SOMO	Stichting Onderzoek Multinationale Ondernemingen
WB	World Bank
WHO	World Health Organisation

Stakeholder	Role
Complainants I	Takkom Jerry, supported by Lumière Synergie pour le Développement
Complainants II	Collectif des communautés affectées de Bargny
FMO	Lender
African Development Bank (AfDB)	Lender
West-African Development Bank (BOAD)	Lender
Compagnie Bancaire de l'Afrique Occidentale (CBAO)	Lender
Compagnie d'Électricité de Sénégal S.A. (CES)	Client/project company
Nordic Power AB	Project sponsor
Quantum Power (QP)	Shareholder (50% + 1 vote)
Nykomb Synergetics Development AB	Shareholder (35%)
SBEC Systems	Shareholder (14.98%)
WSP Parsons Brinckerhoff	Lender Technical Advisor (LTA)

1. Summary and key findings

1. This complaint relates to FMO's co-financing of a 125 MW coal power plant near the town of Bargny, to the south-east of Dakar, Senegal. The complainants argued that, on a number of grounds, the financing of the project was not in line with FMO's environmental and social policies. This was based on the assertion that the project was consistently not in line with various IFC Performance Standards, which are required under FMO's policies. They raised specific questions regarding: the initial ESIA, which was finalised in 2009 and approved by the Senegalese authorities; the (cumulative) environmental impact; the socio-economic impacts on the region's fisheries industry; land rights issues; the community consultation process and cultural issues.

1.1. Overview of the appraisal and-decision-making process

2. The Panel acknowledges that there are external factors and extraordinary circumstances that have influenced the E&S performance of the project, most notably the pressure from the Senegalese government to move towards completion of the project, several significant shareholder disputes and the subsequent delay in the project implementation as a result of that dispute. However, the Panel noted that, at a very early stage, and before the loan approval, FMO had received a number of warnings regarding the project's non-compliance with certain elements of the IFC Performance Standards. In particular, the Panel notes that the Lenders' Technical Advisor (LTA) had brought a number of areas of non-compliance and E&S risks to FMO's attention during the initial due diligence phase and under subsequent monitoring reports and pre-disbursement reviews. Regardless of the fact that the ESIA had been approved by the Senegalese Authorities in 2009, a number of gaps were identified by the LTA when the project's performance was assessed against IFC Performance Standards, which are the standards that projects are expected to achieve under FMO's policies. Some of these gaps are already mentioned in the ESIA from 2009.
3. Prior to the first disbursement (2013), FMO sought and received commitments from the client to enhance E&S performance standards by including the Environmental and Social Action Plan (ESAP) in the Common Terms Agreement (CTA). However, FMO agreed to postpone the implementation of the ESAP, which was pushed back to be a precondition for the second disbursement. Considering the particular circumstances at the time, coupled with the fact that there was a formal commitment on the part of the project company to adhere to the IFC PS, this decision was understandable.
4. None of these outstanding issues were solved before the second disbursement was made in 2015; under significant pressure from the new shareholder, who insisted that, without full disbursement, the project's continuance was at stake. The LTA concurred with this assessment. In order to keep the project on track, the new shareholder requested a temporary waiver of E&S commitments in order to safeguard the continuance of the project. FMO accepted the argumentation and disbursed the remainder of the loan. A "Corrective ESAP" was drafted by FMO to address the outstanding E&S issues.
5. The Panel notes that at the moment of its visit to the location in November 2016 – one year after the second disbursement, the project failed to realize the expected progress. The Panel notes that after the restart of the project end of 2015 many issues including urgent construction issues needed to be solved at the same time and that the challenges were manifold for the new partner. Nevertheless, the Environmental and Social issues were to a large extent still outstanding at the time of the Panel's visit and the LTA concluded end of December that the project is only marginal compliant with most recommendations. The Panel noted at that time that most of those issues were pending for more than seven years under the agreed ESAPs on several E&S issues.

6. The implementation of a number of E&S requirements under the ESAP was postponed on a consistent basis due to project difficulties, including shareholder and management changes. Some of the shortcomings had already been identified in 2010. The delay in addressing concerns of the affected communities, a failure to commission adequate baseline studies on social impacts, missing up-to-date environmental impact data on air and water pollution and poor communication with the affected people and other stakeholders have clearly caused misunderstandings and created resistance among the local communities. The LTA has identified the necessary mitigation and actions that were required by the project company. However, many of these measures still remained to be implemented by the new shareholder (QP) and were again reported as remaining outstanding according to the LTA's 2016 reports. Nevertheless, after the arrival QP many remaining outstanding issues are now being addressed and closed off.

1.2. Key findings – process

7. While the Panel understands that the project had been at risk at least twice, and that FMO sought more clarity on the future of the project before pressing on outstanding E&S issues, it is difficult to understand why some basic and not costly environmental and socio-economic baseline studies needed for compliance with the IFC PS and World Bank Environment and Health standards were not finalised before the first disbursement. Implementation of pending E&S issues certainly should have been tied to the 2nd disbursement.
8. While taking into account the fact that the project was phased and delayed, the local communities were left with no specific information about the status of the project, the potential impact and required mitigation measures for a number of years. The Panel notes that FMO urged the project company to employ a community liaison expert and was pressuring the client to improve its communications. Nevertheless, at the time of the second disbursement, in view of the Panel the project was still not compliant with IFC PS in relation to the provision of information to, and communication with, the affected community.
9. The Panel recognises that during the two periods of project suspension, it was not clear whether the project would continue at all. It was due to the active role of FMO that solutions could be found to this difficult situation. It is understandable that this had an impact on the ability to ensure that all necessary E&S studies were completed in the anticipated timeframe. Nevertheless, the Panel notes that a period of more than seven years had elapsed, in which almost none of the outstanding E&S issues were dealt with in a way that would have brought the project into line with IFC Performance Standards. The Panel finds this delay very difficult to understand and justify, even taking into consideration the phases where the project was in suspension.
10. This delay, particularly in addressing the concerns of affected communities, the lack of baseline studies on social impacts, the missing up-to-date environmental impact data on air and water pollution, and the very poor communication with affected people and other stakeholders, have clearly caused misunderstandings and created resistance among the local communities.
11. This project was categorized as 'category A' and therefore, more emphasis should have been placed on consultation with the local population in the early phases of the project, most preferably during the design phase. More transparency about the project's suspension, could have prevented a lot of misunderstanding about the status of the project and time could have been used to implement the necessary baseline studies.
12. In the Panel's view, the ESIA 2009 did not comply with the requirements of IFC PS 1 (2006 version). The list of issues that have not been fully covered by the ESIA 2009 is substantial and FMO should have required its client to make significant steps to comply with the IFC PS as required, particularly to address those issues that needed to be settled before the start of the project, for example related to studying the land issues and the setting up of an adequate E&S management system. The fact that many actions and appropriate systems were not in place prior to the start of the construction phase means that FMO proceeded to support the project while aware that the project

was not in compliance with IFC PS 1 and despite the fact that several baseline assessments were missing. Moreover, failure to properly assess the impact on air quality and community health and safety in the ESIA 2009 resulted in a situation which was not compliant with IFC PS 3 and 4. FMO should have formally required that open issues should be closed off within a timebound action plan.

1.3. Environmental impact

Air quality

13. The lack of acceptable baseline data air quality and the possible impacts of the coal plant on the health of the neighbouring community and the environment at the time of signing of the CTA, and the persistent lack of accurate info on compliance to the WB Guidelines, indicates a non-compliance with IFC PS 1 and 3. These findings are supported by the regular updates of the LTA, who found that, even end of 2016, the project was only marginally compliant with many E&S components. In relation to both disbursements, FMO decided to move forward with the project's financing without the proper data on air quality and stack emissions being available as is a pre-condition for disbursement.
14. The maximum thresholds for stack emissions for all pollutants are likely to be met in this project. This conclusion corresponds with the LTA's December 2016 assessment: "Sendou I should be capable of achieving the applicable plant emission limits". In the LTA's latest ESAP status update, it was concluded that "in general, there is agreement that the air emissions will achieve WB 2008 limits for stack emissions". The Panel also notes that the LTA concludes that, eventually, Sendou I as a stand-alone project will most likely not result in significant exceedance of WB Standards for ambient air quality.
15. In 2017, FMO instructed the LTA to undertake the ambient air quality modelling. The findings show a significant improvement over what has previously been disclosed, and as such, FMO advised that the Project Company relay these findings to the stakeholders.

Cumulative impact and coal transport

16. The Panel is of the view that the cumulative impact of the coal power plant on traffic in the region of Dakar has not been adequately addressed. The LTA concluded that "the additional pressures of the project's required coal importation via the existing port may have significant cumulative effect".¹ The fact that the additional coal transport has not been acknowledged as such an effect can be considered a failure to implement IFC PS 1 correctly. Despite the inclusion of a Traffic Safety Management Plan in the ESAP, the issue of coal transport has until recently not received much attention by the project company.
17. Similarly, the cumulative impacts on air quality were difficult to analyse. The lack of baseline data on ambient air quality constituted a failure to perform a cumulative impact assessment which adequately reflects the state of air quality in the region and rules out a proper assessment of the additional effects of any new industrial development. Such analyses have not been properly carried out by the project company and FMO did not put any emphasis on the matter in its requirements for updates of ESAPs.
18. With regard to cumulative impacts of Sendou II, the Panel notes that the LTA concluded in their December 2016 report that this remains an open risk. It is the Panel's understanding that Sendou II will be designed to ensure that the cumulative impact does not exceed ambient air quality thresholds. This mitigation is contingent upon a number of factors that may not be within the control of all the Sendou I lenders. However, the lenders engaged the LTA to undertake a cumulative air dispersion model, which concluded that no significant impacts are predicted. On a

¹ LTA, *Construction Phase: Monitoring Report 001*, January 2014, p. 25.

concluding note, the Panel has noted that Sendou II might never be built. Nevertheless, for several years, and during the Panel's compliance review, it was planned and as such should have been a relevant issue for the assessments of cumulative impacts.

Impact on sea water and marine environment

19. The Panel notes that at the time of FMO's August 2013 and October 2015 disbursements, no baseline study on the effects on marine biodiversity of the coal power plant was available. Even though the carrying out of a marine impact assessment was one of FMO's priorities throughout their involvement with the project, this was still an outstanding issue in March 2017. Both disbursements were made without adequate data being available in relation to the impact on the water quality and temperature. FMO should have insisted that the data should have been available and analysed, at the latest as a condition of the second disbursement.
20. The Panel is therefore of the opinion that the second disbursement was made at a moment in which the project was not fully compliant with all elements of IFC PS 1 and 6. However, that being said, it is expected that the project's (planned) water cooling system will eventually comply with WB Standards in terms of impact caused by seawater intake and discharge and temperature differences. The recent changes in the design, including the construction of a cooling tower, will considerably reduce the marine impact.
21. This lack of appropriate initial studies also led to the failure to identify the existence of a World Bank project (a fish nursery site) in front of the coast of Bargny. The Panel concludes that the non-inclusion of the World Bank project in any other impact assessment made over a longer period testifies to a narrow understanding of the potential impact of the project on its surroundings by the project developers and the lenders. Furthermore, it is hard to understand that neither FMO, AfDB or the World Bank were aware of each other's neighbouring activities. (see also paragraph 180).

Impact on drinking water

22. The Panel wishes to point out that issues related to possible harm for the community, such as the availability of drinking water, were never included in the different E&S assessments, and, therefore, the project was not in compliance with IFC PS 4. Although the availability of drinking water is the sole responsibility of the Société des Eaux du Sénégal, FMO should have pressed for the inclusion of these specific concerns raised by the local community in the ESAPs, as an element to be addressed by the client. Again it must be said that the problem will potentially be solved as several environmental issues related to the project. Nevertheless, the Panel would like to highlight that the necessary studies were often not available at the time of the Panel visit and key information was not communicated to the affected communities.

1.4. Land rights issues

23. The Panel concludes that the process of land acquisition was carried out in accordance with Senegalese law and regulations, and the persons having physical assets on the project site were compensated. FMO confirmed that it had always been aware of the disagreements over land ownership, in particular related to the 'land titles' granted by the former Mayor of Bargny. However, based on an external legal opinion by the Senegalese law firm 'Mame Adama Gueye', FMO had always assumed that the land titles of the project sponsor were legally valid. This formal status has been confirmed by the government authorities during the Panel visit and the opinion confirmed that SENELEC's legal interpretation of the land acquisition process claim was valid.
24. The "land titles" that were issued by the former mayor of Bargny were never reflected adequately during the different phases of the project. Even if their formal legal status is complicated - some people have titles with a formal receipt of payments of fees from the prefecture, which needed to be validated – FMO should have insisted that in addition to information provided by their own

legal experts on the legality of land claims, an expert specialised in Senegalese land law should have been contracted to provide advice. The disputed land claims were already mentioned in the ESIA 2009, in several reports of the LTA, and in the E&S consultant's report of 2014.

25. There was no baseline study related to these land claims, even though the issues were apparent for eight years. FMO tried to address it in the ESAP 2010, to a degree, by requiring the project to establish a grievance mechanism. However, in the Panel's view, no adequate consultation and analysis of the validity of the claims was ever made. In the Panel's opinion, the project was non-compliant with the requirements of IFC PS 5 at both moments of disbursement. The Performance Standards would have required at a minimum adequate consultation and communications with potentially affected persons before the project start. The failure to carry out baseline studies and additional consultation meant that FMO was also not in line with its sustainability policy that provides that open environmental and social issues can be included into an ESAP for future action, but that such issues should be dealt within three years. At the time of the 2nd disbursement, FMO was aware of the non-compliant status of the project, however it waived the requirements on the basis that open issues would be solved in a later phase.² The LTA alerted FMO again and again and recommended that FMO address this project risk more comprehensively.
26. In 2016, SENELEC offered compensation to the individuals who claimed that they had land use rights on the project site, without acknowledging the legality of these claims, a position shared by FMO. The compensation has been offered too as a way to help resolve the conflict related to the coal power plant. The Panel is of the view that these negotiations offer a chance to find an interim solution. The underlying problem of displacement caused by coastal erosion needs to be addressed by government action. The Sendou I project has not caused that problem, though is encroaching upon the possibilities for the local communities to be relocated on the project site as promised by the former Mayor of Bargny. Some resettlement options for persons affected by coastal erosion have been offered and a more substantive programme will be needed in the future.

1.5. Economic displacement of the fish dryers

27. As lender, promoting its clients to comply with the IFC Performance Standards, FMO should take steps to ensure that the project has in place processes and actions to minimise the necessity of economic displacement, to mitigate any negative impacts and to ensure that compensation is offered to anyone affected in their economic rights by the project. What is more, FMO, in collaboration with other lenders, should have insisted that its client organise a census aimed at establishing the necessary socio-economic baseline data. The local authorities should have been engaged to contribute to the organisation of a census, aimed at establishing the socio-economic baseline data necessary to identify the persons in need of resettlement.
28. The complete lack of a sound baseline understanding of the functioning of the local economy, the number of people involved, the economic and cultural importance attached to the fish drying activities in the area, and the potential disturbances created during the construction of the project and the operational phase, is an instance of non-compliance with IFC PS 5. The potential impact is also dependent on whether fish drying is allowed or forbidden in the buffer zone. A study of these consequences should have been required linked to the 2nd disbursement. The issues were not adequately researched since the start of the project, despite the fact that the need to do so was previously mentioned in the first ESIA.

1.6. Cultural issues

² The panel is aware that in 2017 the consultation and communication has substantially improved and open discussions are held about payments to solve the dispute. Such a consultation process would have been required earlier in the project development, before 1st disbursement.

29. The Panel concludes that no up-to-date baseline assessments on the cultural issues were made and that the thresholds for adequate consultation under IFC PS 8 were not met. FMO should have insisted formally that consultation was realized at least at the point of 2nd disbursement.

1.7. Note on recent Developments

30. In November 2016, the Panel visited the project area. At that time, as mentioned above, there were a number of actions that still needed to be taken in order to make the project compliant with IFC PSs, such as adequate consultation with the communities and the delivery of environmental base line data.
31. However, despite the consistent lack of compliance with IFC Standards during the development of the project, it is important for the Panel to highlight the positive developments that appear to be taking place since the involvement of the new majority shareholder. With Quantum Power it appears as if a 'new wind is blowing through the project'. Missing data and studies are being produced and technical changes in the project design, such as a closed cooling system, have been introduced. These new measures will have a positive impact on the E&S performance of the project. Improved levels of dialogue with the communities on land issues and economic displacement started in 2017. Community engagement has been elevated to a higher priority and the Panel believes that this will be key in order to engage the local community.
32. Unfortunately, the Panel received a lot of additional information at a very late stage, including many documents which were received after a final draft had been sent to the various stakeholders for their comments and also check the status of implementation. It was therefore hard for the Panel to address adequately all of these very recent developments. That being said, the availability of studies that have been finalised in 2016 or 2017, do not alter the Panel's findings on project compliance and FMO's alignment with its own policies covering earlier periods of time, most noticeable in relation to the 2nd disbursement.

1.8. Some future-oriented recommendations from lessons learned

33. Many of the complainants' grievances and the findings of the Panel in the case of Sendou I can be traced back to the missing or inadequate communication with the people who live in the impacted neighboring community. Regular communication at an early stage, as part of the design phase of a project, is an important factor in preventing hostility to a project. When people are well informed about a planned project, given an opportunity to comment and, subsequently, are convinced that proper mitigation measures will be included in an action plan, it will be more likely that a project is implemented without opposition or conflict. The Panel would like to recommend to FMO that it develops transparent rules and procedures, aimed at ensuring that there is near real-time appropriate information provided to the inhabitants in a project area at an early stage of project development, most preferably during the design phase and especially when a project is categorized as an A project. In this context, the Panel welcomes FMO's new practice of publishing its planned Category A and B+ projects on its website before contracting.
34. In the case of Sendou I, there is still a difference of opinion between many in the community and the national authorities about the legal status of the land claims. CES holds the position that it is the legal owner of the project site and it has followed all formal requirements. Despite the fact that SENELEC fully supports this claim, they have set aside funds to accommodate the settling of any claims arising out of this dispute as a 'gesture of good will'. The actual allotment of these Funds is still an open issue. The Panel would recommend FMO to actively support the appointment of an independent facilitator in order to allocate the Funds between the different claimants.
35. Finally, the project company has expressed its plan to construct modernised facilities for those people reliant on fish drying. The 500-meter zone has created a lot of confusion and ambiguity for the women who rely on fish drying for their livelihoods and they are not sure whether they will

still be able to dry their fish in the 500-meter zone outside the fenced plant area. The Panel advises FMO to support the project company and the relevant authorities in delivering a (printed and official) safeguard decree for this group that guarantees their right to continue their activities. The construction of modernized fish-drying facilities is best developed in close cooperation with the association which represents the group.

2. Background to the complaint

2.1. Regional context

36. The story of Sendou I and Bargny is the story of a traditional fishing community that has been living on the coast, south of Dakar, for generations. Many men and women in the area explained to the Panel how regional circumstances have been changing over time. The families maintain their coloured wooden boats on the beach, and the men fish while the women dry the fish for their own consumption and for export to neighbouring countries. The families tell visitors that, for generations, they could easily catch fish right in front of the coast. Today, the fishermen have to sail further, since fish stocks are decreasing. In the waters they now fish, they have to compete with large modern European vessels operating along the West African coast.
37. Currently, the community is confronted with several developments which threaten their environment. The Panel could visibly observe a process of serious coastal erosion and noticed the remnants of houses that had already disappeared into the ocean. On the other side of the town, there is a new toll road which has effectively cut off the town from its hinterland. Some years ago, a cement factory which produced significant air pollution was built north of the community. Sendou I, the coal power plant subject to this compliance review, is situated in the southern part of the town and is currently being built. Recently, the Senegalese Government has decided to build a harbour for the trade and storage of commodities for Western Africa. This will be situated adjacent to the coal power plant.
38. The area surrounding Sendou has been designated as a modern industrial area which will eventually enclose the community. The families – who are already at risk of losing their houses through coastal erosion had counted on using the hinterland and the land to the side of the community as a place where they could relocate to escape coastal erosion. The development of the coal power plant in its current location has significantly reduced their options for resettlement. This became a major issue in the complaint which was lodged with the institutions financing the coal plant. The Panel notes that under these circumstances, there is a tension between the ability of the community to live as it traditionally has, and the development objectives being pursued by the Senegalese government, which depends on it delivering sufficient energy.
39. Senegal is a relatively stable country and offers significant opportunities for investors. Modernisation and growth creates a demand for stable energy. In this light, the decision by Netherlands Development Finance Company / Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V. (FMO) to finance a coal plant in 2009 was understandable. Coal was, and still is, a financially feasible option in Senegal since it is relatively cheap and easy to transport. However, the same decision would not have been taken today given FMO's recently adopted [Position Statement on Coal Power Generation and Coal Mining](#).

2.2. Introduction to the project

40. The complaints received by the ICM of FMO relate to the "Sendou I" coal power plant which is co-financed by FMO, the African Development Bank (AfDB), the West-African Development Bank (BOAD), and the Banking Company of West Africa (CBAO). In pursuit of economic development, the government of Senegal aims to improve the country's energy supply and ensure better reliability.
41. Senegal's energy supply is currently heavily dependant on Heavy Fuel Oil (HFO) generators, which constitute a polluting, costly, and CO₂-inefficient source of energy. The Government is seeking an alternative base load energy supply for the country. Twelve years ago, the decision was taken to build a modern, state-of-the-art coal power plant to diversify the energy supply and create the necessary base load needed to support the additional development of solar and photovoltaic

renewable energy. The overall energy production of the country is currently around 850 MW per year and is not sufficient for current and future demand. Energy shortages and power cuts are quite frequent. Energy supply was an important issue during the 2012 and 2016 presidential election campaigns. Sendou I is a 125 MW coal power plant which is initially intended to serve as an important base load power station, but might replace old HFO generators in the future.

42. The Project will require a total investment of CFAF 118 billion (ESIA 2009) and will be constructed in a coastal area on 29 hectares of land near the villages of Minam and Bargny, 32 km from Dakar. The National Electricity Board of Senegal, SENELEC, commissioned Nykomb Synergetics Development A.B. Group from Sweden to build the power station. Nykomb created the Electricity Corporation of Senegal S.A. (CES) for the construction of the power plant through a 'Build, Own, Operate' arrangement for a period of 25 years.
43. Sendou I is situated in an area that had been designated for industrial development for several decades. Therefore, this site was not directly impacted by the urban extension of the village of Bargny and other surrounding communities. These communities are growing and occupying more-and-more land. There is a large cement factory (SOCOCIM) close to the site which was developed in the last decade. The location of Sendou I was also considered for the construction of a second coal power plant (Sendou II) which was planned to be built after Sendou I started operations.
44. Moreover, the site is located next to an area recently designated by the government of Senegal for further industrial development. This includes the construction of the Bargny-Sendou mineral port, which will become Senegal's main industrial port. This port should lighten the congestion that is currently being felt in the old port of Dakar, the most important harbour for Senegal and neighbouring countries. The new port will be equipped with cargo handling equipment necessary for the export and import of dry bulk commodities.
45. The coal required for the operation of Sendou I will be imported through this new port. As an interim-solution, while the harbour is being constructed, the coal will enter the country via Dakar and be transported by road. The location of the planned port is in the vicinity of the small village of Minam. The government is considering the possibility of relocating its inhabitants. Since the site visit of the Panel in November 2016, some works for the new port have started, much to the surprise of both the local population and the project company. When construction is complete, the new port will border the project site at the south-east end and will affect some of its envisaged infrastructure (water supply, access road, and trainline). The implications of this development for the Sendou I project is still unclear to the Panel. It will certainly involve additional impacts on the land and economic displacement issues set out in this report and will lead to substantive changes in the context of environmental impacts.³

2.3. Summary of the complaint

46. The ICM received complaints from two different groups:

- One complaint came from *Takkom Jerry*, a local environmental NGO from Bargny, which received technical support from Dutch NGOs SOMO and Both Ends. They also received support from the Senegalese NGO *Lumière Synergie pour le Développement* with respect to communications with the lenders and project developers.
- The second complaint came from the *Collectif des communautés affectées de Bargny*. The *Collectif des communautés affectées de Bargny* represents several local collectives including fishers, fish dryers, land owners, and livestock herders. In the past, the *Collectif*

³ The Panel decided that it will nevertheless finalise the current report by describing the problems as observed at the time. Most of the problems and potential solutions described will be subject to changing circumstances throughout the port construction and many assessments will need to be renewed.

des communautés affectées de Bargny worked closely with several of the members of *Takkom Jerry*. The *Collectif* has strong links to different groups at the community level.

47. After checking that the complainants represent persons and groups affected by the project, the first complaint was declared admissible by the Panel on 12 July 2016, while the second complaint was declared admissible on 18 August 2016. Given that the two complainant groups basically raised the same grievances, the Panel treated the complaints as one throughout the investigative and compliance review phase and decided to address both complaints in a single report.
48. It is important to note that the Panel's mandate to review the complaint does not extend beyond the decisions and actions of FMO. As a consequence, the Panel assessed how FMO tried to ensure the highest level of E&S performance of its client, the project sponsor, during both the planning and the operational phase.
49. The complainants referred to several potential negative environmental impacts identified in the ESIA 2009 which the developers were to address prior to or during the operational phase, being:
 - A violation of the 500-meter buffer zone for Category 1 projects as prescribed in Senegalese environmental law;
 - Thermal pollution of an "aire de cogestion" in front of the coastline of Bargny through the intake and release of sea water for the cooling of the plant;
 - Alteration of the air quality due to hazardous pollutants (NO_x, SO₂, CO) and dust emissions;
 - Contribution to climate change through greenhouse gas emissions (CO₂ in particular);
 - Failure to develop, share, and implement an Environmental Management Plan;
 - Shortcomings in the ESIA 2009 such as the use of outdated standards and a failure to assess cumulative impacts of the Sendou I plant, the cement factory SOCOCIM, the coal transport from the Dakar harbour, and an additionally planned 125 MW coal power plant (Sendou II).
 - Overburdening the local water network and contamination of the local community's drinking water supply.
50. Furthermore, the complainants raised several socio-economic grievances, including economic displacement and lack of compensation for loss of property. From their perspective, the project sponsor and local authorities had not engaged meaningfully with local communities to allow for their views and interests to be taken into account in decision-making processes. Adequate and timely information with regard to the negative impacts and mitigation measures had not been provided to the affected communities.
51. According to the complainants, the project site includes 1.433 parcels of land which were given to families in the community affected by coastal erosion as part of the Minam I and Minam II relocation projects. According to FMO, the project sponsor, the project company, and SENELEC, the mayor allocated these land titles without the full authorisation of the Senegalese authorities. The parcels remained uninhabited due to the local population's remaining attachment to the old village. Without other land reserves available in the area, it was claimed that the community will be more exposed to the consequences of coastal erosion since the advancing sea will require community members to move further away from their homes which will result in a risk of family dislocation. The complainants claimed that the lack of agreement with the rights-holders of these land titles, the absence of any form of compensation, and the lack of an agreed Resettlement Plan constituted a violation of IFC PS 5.
52. The complainants asserted that the project violates Senegalese law by not respecting a 500-meter buffer zone for Category 1 projects between the installations of the coal power plant and nearest dwellings. Moreover, they feared the loss of livelihood for more than 1000 community members who dry fish at an area called "Khelkom" which is located within the 500-meter buffer zone. This issue was previously raised in the ESIA 2009 and the project company had failed to propose a sustainable solution, avoid the issue, or mitigate its impacts on this economic activity.

53. Furthermore, it was alleged that the project would block access to both an elementary school and a number of sites that are important or sacred to the community including a cemetery and two cultural sites. For example, Sendou I is located close to “Banoukhba”, a historic heritage site (a baobab tree) where the community believes that the protective spirit of the village resides. It is also located close to trenches used for livestock watering, and a reef reconstruction project financed by the World Bank which functions as a nursery for the regeneration of marine biodiversity.
54. The complainants argued that the Lenders did not take sufficient steps to ensure compliance with a number of relevant IFC Performance standards in relation to the Sendou I project. These are the following:
- The Social and Environmental Impact Assessment was inadequate, based on the standards set out in IFC PS 1;
 - The community engagement and consultation processes were inadequate, when considered against IFC PS 1;
 - Efforts related to pollution prevention and the protection of community health, safety, and security were inadequate compared to the requirements of IFC PS 3 and 4.
 - The land acquisition and involuntary resettlement process were not aligned with IFC PS 1 and 5;
 - The impact on biodiversity was not properly assessed in a way contemplated by IFC PS 1 and 6;
 - The impact on cultural heritage was not adequately assessed or mitigated, bearing in mind the standards set out in IFC PS 1 and 8.
55. The complainants requested that the Panel perform a compliance review, with no request for problem-solving or mediation. The Panel will deal with each of these allegations throughout the course of this report.

2.4. Methodology of the review

56. The Panel considered the issues raised by the complainants through the following semi-sequential process.
57. *Document review:* The Panel had access to a range of documents and reports relevant to the Project. This enabled a document review for the purposes of analysing decision-making trajectory and process in relation to FMO’s appraisal and monitoring efforts. It also allowed the panel to carry out an analysis of the various decisions made and actions implemented. As the complaints are all related to environmental and social issues, this process focused on the E&S performance of the Project. In this regard, the Panel was particularly focussed on the initial loan approval and subsequent disbursements and the E&S situation that existed at each of these points in time. This report is based on documents and data available at the time of the compliance review, which ran from September 2016 to April 2017.
58. Not all relevant documents were made available to the Panel during this period, despite attempts by the Panel to get access to all relevant information. The Panel was still receiving relevant and important documents after it had produced its draft Report.
59. *Country visit:* The purpose of visiting Senegal was to better understand the views of complainants and their constituency, the project sponsor, the authorities, and other stakeholders. During a site visit, the two Panel members who were present gained important information and insight into the situation on the ground. During the country visit, the Panel Members conducted interviews with all relevant stakeholders: the affected communities, local authorities, the prefect of Rufisque, SENELEC, the project sponsor, former politicians, the Ministry of Environment and Sustainable Development, the World Bank, the Dutch Embassy, and local consultants.

60. *London visit:* The Panel Members conducted interviews with the 'Lender Technical Advisor' (LTA), WSP Parsons Brinckerhoff, an engineering consultancy firm managing the Project from London who are tasked with performing environmental and social due diligence and monitoring of the Project. Furthermore, the Panel met with the Project's shareholders.
61. The key task of the Panel was to assess the decisions and actions of FMO at the various stages of the project and to assess the degree to which those were consistent with the institution's policies, particularly those related to environmental and social management and impact. Any other assessment would be outside the scope of the Panel's mandate. With this in mind, the Panel has been careful not to comment on the legality or propriety of any other actor or action.
62. A list of the interviews with the different stakeholders undertaken during the compliance review is set out in Annex I List of interviews

2.5. Application of policies in the context of this complaint

63. The panel considered the following policies during the review: (1) the relevant FMO policies, (2) FMO commitments on business and human rights, (3) the IFC Performance Standards from 2006 and (4) [World Bank Environmental, Health and Safety General Guidelines](#).

(1) Relevant FMO policies:

64. Relevant for the Project are the then applicable Environmental and Social Policy of FMO of 2010, which has since been superseded by FMO's Sustainability Policy (effective as of 1 January 2017). The policy, stated that all direct investments were required to comply with national E&S law as a minimum standard, and with the applicable IFC Environmental Health and Social Guidelines as developed by the IFC, whichever are stricter.
65. Furthermore, FMO's Sustainability Policy stated that: "based on the outcomes of the assessment carried out, an Environmental and Social Action Plan (ESAP) is to be agreed upon as necessary, with clear and practical milestones to be achieved within a certain period of time. The ESAP would normally allow clients a three year period at the maximum to reach full compliance with the requirements."
66. To understand the FMO own policy framework, it is important to note that in January 2013 FMO adopted a Human Rights Policy and this is incorporated into FMO's Sustainability Policy as of 1 January 2017. This policy states that "FMO's human rights due diligence with respect to clients is guided by its Environmental and Social Policy, which is based on the IFC Performance Standards. The IFC Performance Standards support the private sector's human rights responsibility. Consistent with this responsibility, FMO undertakes due diligence of the risk and impact assessment process carried out by (prospective) clients, commensurate with country, sector and sponsor capacity."

(2) Business and Human Rights Commitments

67. Since 2011, FMO has also expressly adhered to the provisions of the OECD Guidelines for Multinational Enterprises, which not only provide for initial due diligence and risk assessment but also that enterprises should take steps to "avoid causing or contributing to adverse impacts on matters covered by the Guidelines, through their own activities, and address such impacts when they occur" or to "seek to prevent or mitigate an adverse impact where they have not contributed to that impact, when the impact is nevertheless directly linked to their operations, products or services by a business relationship."
68. Further, the UN Guiding Principles on Business and Human Rights, which were expressly endorsed by FMO in 2011 provides at paragraph 19 that:

"Business enterprises should integrate the findings from their impact assessments across relevant internal functions and processes, and take appropriate action. (a) Effective integration

requires that: (i) Responsibility for addressing such impacts is assigned to the appropriate level and function within the business enterprise; (ii) Internal decision-making, budget allocations and oversight processes enable effective responses to such impacts. (b) Appropriate action will vary according to: (i) Whether the business enterprise causes or contributes to an adverse impact, or whether it is involved solely because the impact is directly linked to its operations, products or services by a business relationship; (ii) The extent of its leverage in addressing the adverse impact.”

69. Bearing all of the above in mind, the Panel is of the opinion that the broad framework of action that FMO should take in order to fulfil its relevant policy commitments for the purpose of the issues covered by the complaint are the following:

- Assessment of environmental, social and human rights risks in accordance with appropriate levels of due diligence;
- The determination of the appropriate steps that need to be taken by its client in order to address such risks. These may be captured in, but are not restricted to, an ESAP;
- Assessment of the implementation of the agreed steps as an ongoing process and ensure that it utilises its leverage at appropriate times to support and encourage its client in taking appropriate steps to prevent or mitigate negative impacts;
- Put in place a monitoring process to track the implementation of actions that are deemed necessary to verify whether adverse impacts are being addressed.

(3) [IFC Performance Standards](#) (2006)

70. Since FMO’s decision to invest in this project was taken in 2010, the IFC Performance Standards of 2006 apply (the Performance Standards were revised in 2012). More specifically, the following IFC performance standards were identified by the Panel as being particularly relevant for this complaint. These are:

- Performance Standard 1 on Social and Environmental and Management Systems
- Performance Standard 3 on Resource efficiency and Pollution Prevention
- Performance Standard 4 on Community health, safety, and Security
- Performance Standard 5 on Land Acquisition and Involuntary Resettlement
- Performance Standard 6 on Biodiversity and Sustainable Natural Resource Management
- Performance standard 8 on Cultural Heritage

71. For the purposes of this report, the Panel will focus on the key aspects of these provisions rather than setting them out in full. Sections of the IFC Performance Standards are set out at the beginning of each relevant section.

72. It must be stated here that the project is contractually required to comply with the 2006 version of the IFC PS. However, it’s the LTA, has since 2012 applied the latest version of the IFC PS (2012) as a matter of good practice, as did the other consultants involved. The Panel nevertheless follows the IFC PS (2006).

(4) [World Bank Environmental, Health and Safety General Guidelines](#)

73. The World Bank’s EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP), as defined in IFC’s Performance Standard 3. IFC uses the EHS Guidelines as a technical source of information during project appraisal activities, as described in IFC’s Environmental and Social Review Procedures Manual. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects will be required to achieve whichever is more stringent. For coal power plants, the [EHS Guidelines for Thermal Power Plants](#) are furthermore applicable.

74. For the purposes of this compliance review, the [World Bank Air Emission and Ambient Air Quality Guidelines](#), applicable to facilities or projects that generate emissions to air at any stage of the project life-cycle, are of particular relevance. Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimise these impacts by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines.

3. Overview of the appraisal and decision-making process

3.1. Introduction and overall compliance judgement

75. This chapter is an overview of the appraisal, decision-making, and monitoring procedure surrounding the application of environmental and social standards in respect of FMO's investment in the Sendou I coal power plant in Bargny, Senegal. The Panel has reviewed documents, reports, and communications between management and different departments within FMO. It has also reviewed reports from external experts that were tasked with evaluating whether the work completed by the project sponsor is compliant with Lender's requirements. The Panel noted that, at a very early stage and long before the loan approval, FMO had received several warnings regarding the project's non-compliance with certain IFC performance standards. It was not just the lender's technical advisor that issued such warnings. The ESIA of 2009 identified certain outstanding E&S issues that had to be addressed. These actions were subsequently incorporated into the first ESAP. The ICM also noted that, although management was aware of the situation, tranches of the loan were disbursed on two occasions (2013 and 2015) even though there was little progress on the implementation of actions agreed upon in the different ESAPs.
76. While the reasons for disbursing the loans at those particular moments are understandable, the gaps in baseline assessments on substantive social issues, the lack of communication with the local population, and the outstanding environmental studies should have been addressed at a much earlier stage. While ESAP measures might be postponed, an overview of potential impacts and relevant baseline studies should be done in advance. Failure to take these steps leads to a high risk that certain impacts or potentially affected groups will be overlooked or underestimated. In this case, if the appropriate studies were done at the beginning, the risk of negative impacts and problems would have been reduced.
77. An agreement to postpone unsolved issues and amend existing ESAPs in order to safeguard the Project can be reached via a majority Lender decision. During negotiations with shareholders, open E&S items were discussed and it was apparent that there was a conflict between the shareholders. At that moment, FMO and the Energy Department, recognizing the seriousness of not implementing the original ESAP, were willing to withhold the second disbursement.
78. On 1 October 2015, a new shareholder (QP) became involved and the Project picked up momentum. Due to the presence of a new shareholder and increasing pressure from the Senegalese Government, all stakeholders needed to be flexible. The 2nd disbursement was then approved, despite the fact that little progress was made in addressing the outstanding E&S issues included in the ESAP.
79. The Panel acknowledges the fact that refusing to disburse at this stage would have severely jeopardised the feasibility of the Project. The second disbursement was a key condition for the new shareholder to step in as an investor. Furthermore, the Panel notes FMO's stated belief that, with the new shareholder on board, progress would be made with respect to the implementation of E&S commitments. Nevertheless, the Project was significantly behind in relation to the implementation of several important elements of the ESAP. At the time of the Panel's visit in November 2016, progress towards the implementation of the ESAP was not readily observable. This has apparently changed since 2017.
80. This compliance review is more complicated due to the specific circumstances which surround the Project in question. Therefore, this chapter provides a brief update on major developments that need to be taken into consideration throughout the compliance review.
81. The Panel recognises that there were some specific difficulties with this Project which impacted the Lenders' ability to pursue certain issues at certain moments of time. At several points during the Project, there were significant differences between various shareholders which required the

replacement of shareholders on multiple occasions. The Project's future was at risk and operations on the ground, including efforts to improve the E&S conditions, came to a standstill that lasted from June 2014 to December 2015. FMO concentrated on dispute resolution and the search for new shareholders. Moreover, the Panel notes the commitments and efforts by FMO to guarantee the Project's success within the broader context of Senegal's need for accessible energy and development.

82. Despite the fact that the loan was approved in 2010, and that the construction of the coal plant is already at an advanced stage, certain E&S issues needed to be addressed at the beginning of 2017. Most notable are the cumulative impact assessment for air and marine impacts as well as stack air emissions. In this particular case, the ICM notes FMO's decisions to keep the Project moving forward, despite a constant and reliable flow of information that indicated that the Project was some way away from implementing policy and practices which would ensure IFC PS compliance. On several occasions, unfulfilled E&S issues were included in the updated ESAP.
83. This whole process invites the question: what was the purpose of the ESIA 2009 and the follow-up expert reports if these reports did not lead to issues being addressed prior to loan approval or follow-up disbursements? FMO's policy at the time stated: "Based on the outcome of the assessment carried out, an Environmental and Social Action Plan (ESAP) is to be agreed upon as necessary, with clear and practical milestones to be achieved within a certain period of time. The ESAP would normally allow clients a three-year period at the maximum to reach full compliance with the requirements."
84. The Panel understands that FMO was willing to address the E&S issues during all periods of the Project, and was consistently working to influence the Project's implementing company to be more proactive. With the new shareholder, the speed at which outstanding issues have been addressed has increased. Nevertheless, at the time of this report's publication, substantive issues concerning land rights and economic displacements are unsolved. The Panel notes that, more recently, FMO's SO Team is actively involved in trying to improve the new shareholder's commitment to E&S issues and is trying to address outstanding issues with Senegalese stakeholders. The Panel also notes that the new shareholder is eager to solve any outstanding issues.
85. The Panel therefore decided to set out the appraisal and decision-making process of FMO based on the reports prepared by the LTA and other consultants, as well as internal FMO memos. It could be part of a learning-by-doing process and might be helpful for future projects. The following overview is a condensed summary of that document. It shows that most E&S issues were known since the LTA's first report published in 2010, and that their implementation has been postponed several times over the years.

3.2. Overview of FMO's understanding and management of E&S issues

2009-2013: Assessment of E&S situation prior to 1st disbursement moment

86. **November 2009:** FMO gave "Clearance in Principle" (CiP) for the financing of the project. FMO's "Rapid Risk Screen" classified the project as a "category-A" project. As a key point of attention, this document indicated that the ESIA still needed to be checked for adherence to the "World Bank 2008 guidelines", more specifically the WB's General EHS Guidelines (Ambient Air) and Thermal Power Guideline. Overall, it was concluded by FMO at that moment that the ESIA 2009 contained many "good intentions", but that more concrete E&S policy was definitely required.⁴ In 2009 another financial institution took the lead on E&S and a review of the ESIA 2009 was done. A study was commissioned which found several gaps between the ESIA and a regular check of IFC Performance Standards.

⁴ FMO, *CIP Project Finance*, 12 November 2009, Annex 5.

87. **April 2010:** FMO developed a Full-fledged Financial Proposal (FP). The FP included the conditions imposed in the CiP. The FP included E&S conditions which should be fulfilled prior to the first disbursement of the loan, based on the IFC PS. An external review revealed a series of shortcomings in the ESIA 2009. Furthermore, this review concluded that, although the E&S Management System proposed in the ESIA contained many essential elements, it was neither sufficiently comprehensive nor sufficiently detailed, and there was little information available on E&S management during construction. Most notably, the commitment of the client to E&S policy was questioned since impacts on the surrounding communities were considered to be largely unaddressed. FMO requested a draft Environmental and Social Management Plan (ESMP) from the Project consultant which would answer all outstanding uncertainties and include all measures necessary to address those uncertainties. The IMR Department advised that FMO should take a more proactive role in order to safeguard compliance with FMO requirements.⁵ To conclude, it is the Panel's view that, at the time, there was insufficient information on critical E&S issues from client. FMO recognised that these issues had to be addressed under the umbrella of the ESMP.
88. One financial institution decided not to invest in Sendou I and the E&S lead was handed over to FMO. As a result, FMO had to develop a solution which would ensure that the Project complied with IFC PS which was acceptable to the client as well as various lenders. To that end, FMO engaged an external consultancy firm as "Lender Technical Advisor" (LTA) to perform due diligence on the proposal for the coal power plant. The LTA undertook a desk study consisting of a gap analysis between the first ESIA and the relevant IFC Performance Standards. The shortcomings, which had already been identified through earlier assessments, such as fly ash management, water intake, cooling water discharge, and plans to protect groundwater, were reconfirmed in the LTA's report. The Panel notes that, at this stage, an assessment of adherence to IFC PS 5 on land acquisition and involuntary resettlement was not flagged to be a significant issue.
89. **August 2010:** The project company made a commitment to implement the IFC Performance Standards via a written statement. In September 2010, FMO prepared an updated ESAP in which each step towards compliance with the IFC PS was detailed.⁶ These extra commitments contributed to FMO's IC approval of the loan, under the precondition that the Environmental and Social Review System (ESRS) be updated and the ESAP be included in the final contract. The ESAP was accepted by the sponsor and all Lenders.
90. **February 2011:** Changes to the composition of the shareholders in the project were implemented in February 2011 which caused a delay in the deal signing process. A new investor was introduced as majority shareholder, Sechiliene Sidec. The CTA was signed by FMO, the other lenders, the project company, and the project sponsor.
91. **November 2012:** Elections were held on May 12 after the shareholder structure of the Project was reviewed by the government. Sidec was replaced by the Advisory & Finance Group (AFG) as shareholder, acquiring a 50% stake in the Sponsor (Nordic Power). This change was caused by a request of the Government of Senegal for an option to purchase 30% of the project company. Sidec did not want to enter into an agreement under these conditions. These changes warranted a renewal of the CTA. Nykomb continued the role of majority shareholder.
92. The period between the end of 2011 and November 2012 was used, as the ICM understands, to negotiate the new shareholder structure. In the meantime, the ESAP was finalised, thereby fulfilling a condition imposed by the IC prior to the original approval. The necessary action points in the ESAP were still the same as those included in the ESIA 2009. The Panel observes that land rights issues that were already identified as a potential problem in the ESIA were at that time not yet identified as a significant issue in the ESAP. The inclusion of a grievance mechanism was meant to bring to light any potential issues.

⁵ FMO, *IMR-Advice on FP*, 20 April 2010.

⁶ FMO, *Environmental & Social Action Plan (ESAP)*, draft, 14 September 2010.

93. The Panel understands that this was partly due to the other Lenders' views on land issues. During the first three years, the project developers did not make any progress on addressing the ESAP items or any other operational issue. This was at a time when the financial future of the project was still uncertain.
94. **December 2012:** FMO signed the (renewed) CTA and the individual Credit Agreement. On E&S issues, the CTA required compliance with all IFC PS and completion of the items addressed in the ESAP. The CTA included an updated Environmental and Social Action Plan (ESAP).⁷
95. **August 2013:** The first disbursement was made in August 2013. FMO fully recognised the issue of delayed ESAP implementation. The shareholder asked for a first disbursement, arguing that the money was needed to bring in the Contractor, start preparations for the construction phase, and to further implement the ESAP. Without the disbursement, the Project would come to a halt. This was accepted by FMO, who felt that the 'no project' option would be worse for all stakeholders, including Senegal. ESAP implementation was still considered key. The original ESAP, prepared on the basis of the independent review, required implementation before the 1st disbursement for most items. In the revised ESAP, this was moved to 2nd Disbursement.

2014-2015: Assessment of E&S situation prior to 2nd disbursement moment

96. **January 2014:** The LTA published its 1st E&S Monitoring report to the lenders. An assessment of the E&S situation was made based on document review, site visits, and site monitoring findings. Reference was made to standards set out in IFC PS 2012.⁸ The report was very clear: Sendou I was non-compliant with the Lenders' requirements, and the LTA concluded that all 2nd pre-disbursement requirements were incomplete and in need of significant improvement.⁹ Moreover, the LTA advised the project sponsor to appoint an external consultancy firm specialised in E&S issues and to appoint a social specialist/resettlement expert. This social specialist/resettlement expert would be tasked with providing further clarity in relation to community engagement and in order to deal with the resettlement issue in Minam. On the issue of land rights and economic displacement, the LTA concluded that "lack of effective consultation/general engagement still remains a major issue between the residents of Minam Village and CES". The lack of effective community consultation was recognized by FMO.
97. **April 2014:** FMO concluded that the 2nd disbursement could not be justified based on the LTA's Report and a site visit by FMO staff together with the LTA and the AfDB.¹⁰ Therefore, and on the advice of FMO, a "Corrective Action Plan" (dated 24 April 2014) was drafted which was meant to address the outstanding E&S issues. The disbursement requirements attached to the 2nd disbursement were now moved to the 3rd disbursement, since none of the Corrective ESAP's action items were fulfilled and the project was in need of finance.
98. **May 2014:** The Corrective Action Plan (CAP) was accepted by the project sponsor. This was sufficient for the AfDB to approve the 2nd disbursement. By contrast, FMO was prepared to withhold the 2nd disbursement at this point and require verification from the LTA that the CAP was being sufficiently implemented. However, the LTA informed FMO that there were risks associated with withholding or delaying the 2nd disbursement until after May since it could result in the Project being halted. Therefore, a new and shortened set of E&S conditions were agreed upon between FMO and the Client which had to be fulfilled urgently. This agreement included a stack emission/ambient air quality study, appointment of an experienced E&S consultant, and appointment of a social specialist/resettlement expert. Under these new commitments, the postponement of most of the other 2nd disbursement requirements was approved by FMO. The

⁷ FMO, *Common Terms Agreement*, 19 December 2012, pp. 130-131.

⁸ This is the first time that the LTA applies the updated version of the IFC PS.

⁹ LTA, *Sendou 125mw power Plant, Senegal: environment & social monitoring report; Construction Phase Monitoring Report 001*, 27 January 2014.

¹⁰ FMO, *Back-to-Office (BTO) Report*, 25 April 2014.

2nd disbursement itself did not materialise in 2014. It must be noted here that, considering the intensity of the internal process, FMO was aware of the risks attached to this decision.

99. **July 2014:** The shareholder dispute erupted in early 2014. It became clear that the two shareholders could not work together and one of the shareholders would have to exit in order for the Project to progress. Eventually, AFG was forced to divest its stake in the Project to the benefit of a new shareholder in July 2014.
100. **August 2014:** The LTA's 3rd E&S Monitoring Report stated that community engagement, the community grievance mechanism, and the understanding of IFC PS and World Bank EHS Guidelines by the Project company were inadequate. Project performance related to PS 4 (Community exposure to diseases and emergency prevention), PS 5 (Economic displacement), and PS 6 (Impact on priority ecosystem services) remained "critically non-compliant". Overall, the Project was considered to be "marginally compliant" with the Lenders' requirements. The report identified the above-mentioned areas of non-compliance/critical non-compliance and called for them to be addressed as a matter of priority.
101. **September 2014:** An independent E&S consultancy firm which was appointed by the project sponsor, presented its Environmental, Social and Health & Safety Assessment Report on the Sendou I project. The appointment of the independent E&S consultant was a recommendation made by the LTA, and a precondition for FMO to approve the 2nd disbursement.
102. An additional consulting firm identified several challenges, including actions on the part of the Senegalese Government, the difficult socio-economic environment, and lack of communication between the project company and the local communities. However, some progress on E&S implementation and genuine commitment of company managers was noted.
103. The consultant's report specifically assessed the adequacy of the ESIA 2009 and concluded that it lacked significant and up-to-date analytical information such as social baseline studies, livelihood strategies, and community relations planning. The Report flagged "land ownership issues" as a major concern, claiming that "land ownership is at the heart of the community's reservations about the Project". Regarding environmental issues covered by the ESIA 2009, it was concluded that most environmental information provided had to be updated. Most pertinent environmental issues remained: the cumulative impacts of Sendou I and the SOCOCIM cement factory's air emissions; the impact on fisheries; fly ash storage and treatment; and traffic and transportation from and to the power plant.
104. **November 2014:** The Project was transferred to FMO's "Special Operations" team in order to take care of the financial reorganisation and the many outstanding E&S issues. The new shareholder, Quantum Power, decided to acquire 50 % plus one share in Nordic Power. Within FMO, SO received approval from Credit (previously Investment Mission Review) for the entry of QP as controlling shareholder in Nordic Power and for potential restructuring terms. However, it took over a year for all parties to reach a common agreement.
105. **August 2015:** IMR approved the 2nd disbursement of FMO's loan and an updated Common Terms Restructuring Agreement was signed.
106. **October 2015:** After almost a year of standstill and major cost overruns, CES submitted a disbursement request for the remaining part of the loan. The request was approved, under the condition that the project company appoint an E&S manager to assess the current social risk prior to disbursement. The construction of the Project effectively restarted after December 2015. FMO noted that, while the previous shareholder was unwilling to address E&S issues, the new shareholder (QP) and its new management proved to be much more committed to E&S performance.
107. Overall, it can be concluded that the Project had always been under extreme pressure to move forward. This pressure came from both the Government of Senegal and consortium partners. For example, several parts of the power plant had already been pre-constructed and were waiting for

months in the Indian port of Chennai to be shipped to Senegal. The project sponsor was therefore under pressure from BHEL, the Indian construction company tasked with delivering the hardware for the plant.

108. In November 2015, after more than a year of inactivity due to the shareholder dispute, the LTA was tasked with performing a site visit. The purpose of this visit was to assess the current E&S situation and to provide recommendations for a draft priority implementation plan for the existing ESAP after the renewed stakeholder setting was approved and the 2nd disbursement was decided.
109. **November 2015:** The project company requested an additional loan from FMO and AfDB in order to cover a funding gap which had resulted from the decision by another lender not to increase its financial exposure under the Project's restructuring terms.
110. **April 2016:** FMO's SO team and the LTA conducted a two day visit to Senegal in order to obtain opinions and perspectives from key internal and external Project stakeholders. FMO concluded that, to date, E&S efforts had been completed on a "reactionary and compulsory basis" by the former shareholder. The pressure that SENELEC exerted on the project company to meet its obligations under the agreed PPA and to complete construction of Sendou I by October 2017 was acknowledged. Moreover, the report stated that FMO should be "very concerned that this project will happen without appropriate attention to fulfilling the IFC PS". FMO stated that the Project was far from compliant with IFC Performance Standards and failed to deliver many of the actions identified in the 2014 ESAP.¹¹ Nevertheless, FMO also expressed its faith in the new project sponsor while acknowledging that resolving all E&S measures would take a long time.
111. **May 2016:** In May of 2016 the LTA concluded that, "whilst the Project has been physically progressed at the site, many of the E&S recommendations from 2014 remained incomplete." The LTA noted shortcomings related to E&S issues such as the Air Impacts and Cumulative Analysis, the Marine Works, the Thermal Discharge Impacts and Cumulative Analysis: Land Ownership and Resettlement and Economic Displacement. These studies have recently been finalized in 2017 and some of the design of the Plant was modified such as: a higher stack, usage of coal with lower sulphur content, changes to the cooling tower etc.
112. **June 2016:** An Amendment Agreement to the CTA was signed by FMO, the project sponsor, and other project lenders. This agreement provided for an additional loan and restructuring terms including the revised E&S terms.

¹¹ FMO SO Team, *Travel report Visit to Sendou I, 125 MW Coal-Fired Power Plant*, 20-22 April 2016, p. 5.

Table 1: Overview of different ESAPs

		Ext. consultant Apr 2010	ESAP Sep 2010	ESAP Dec 2012	Aug 2013	Cor. ESAP 2014	Oct 2015	ESAP 2016	Status March '17
IFC	Deliverable	Deadline							
1	Environmental & social management syst. (ISO 14001/ OHSA18001)	Within 24 months after start of operations	Two years after signing of the agreement	Two years after signing of the agreement	1. D I S B U R S E M E N T	30 months after signing of the agreement (4-4-2013)	2. D I S B U R S E M E N T	Before disb. additional loan	Delayed (for operational phase)
	Cumulative impact study	Before 1 st disb.	Before 1 st disb.	Before 2 nd disb. ¹²		Before 2 nd disb. ¹³		Before disb. ¹⁴	Open (air & marine)
	Decommissioning plan	Before 1 st signing	Before 1 st disb.	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Discharged
	Include the BHEL "HSE Manual" in the ESMP	/	Before 1 st disb.	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Discharged
	Grievance mechanism	Before 1 st disb.	Before 1 st disb.	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Discharged
	Comm. relations management plan		Before 1 st disb.	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Delayed
3	Stack air emission/ ambient air quality study WB Guidelines (2008)	Before 1 st disb.	Before 1 st disb.	Before 2 nd disb.	S B U R S E M E N T	1 month of issue of the CAP	S B U R S E M E N T	Before disb.	Open
	Ash disposal plan	Before signing	/	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Delayed
	Mollusc control, verification of biocide	/	/	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Discharged
	Emergency preparedness / response plan	Before 1 st disb.	/	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Discharged
4	community health, safety and security plan	Before 1 st disb.	/	Before 2 nd disb.	T	Before 2 nd disb.	T	Before disb.	Discharged
	Traffic safety management pl.	/	/	Before 2 nd disb.		Before 2 nd disb.		Before disb.	Discharged
	Environmental, Social and HS Consultancy	Before 1 st disb.	/	/		1 month of issue of the CAP		Before disb.	Discharged
5	Clarification on "displacement & land acquisition"	Immediately	/	/		/		/	(not in ESAP)
	Social Specialist / Resettlement Expert	/	/	/		Before 2 nd disb.		Before 1 st disb.	Delayed ¹⁵

¹² "2nd disbursement" still refers to the originally agreed schedule of seven different disbursement moments.

¹³ "2nd disbursement" refers to the revised disbursement schedule, i.e. the disbursement of the remaining part of FMO's loan.

¹⁴ "Disbursement" refers to the disbursement of an additional loan of, i.e. FMO's part of the additionally requested loan.

¹⁵ A social specialist/resettlement expert was appointed in April 2017.

3.3. The Panel's conclusions on the overall process

113. The Panel acknowledges the external factors and extraordinary circumstances that influenced the E&S performance of the project sponsor and company, most notably the pressure from the Senegalese government, the pressure from BHEL, the shareholder dispute, and the subsequent delay in project implementation.
114. With regard to the first disbursement, FMO tried to commit its client to enhancing E&S performance by including the ESAP in the CTA. However, together with the other stakeholders, FMO chose to set the implementation of different elements of the ESAP as preconditions for the 2nd disbursement. This 2nd disbursement was then made under pressure from the new shareholder, which requested a temporary waiver of E&S commitments in order to safeguard the continuance of the project given the time pressure from the Government and from BHEL. FMO accepted this argument and drafted a "Corrective ESAP" which took into account the new disbursement schedule. In light of the Project's need for funding, it was decided that most items in the Corrective ESAP would be moved to a 3rd disbursement moment, with the exception of the qualified expert who would be brought in to assist with the implementation of the Corrective ESAP. The 2nd disbursement made the realisation of this last element possible, and was justified as such. Although the project sponsor requested full disbursement of the loan, the request for an additional loan, made in November 2015, ensured that FMO's leverage over the project developers was still in place.
115. Although E&S compliance had always been on the radar of FMO's Energy Team, serious progress only became possible when the project was transferred to FMO's Special Operations team and the new shareholder stepped in. At that time, in November 2014, construction was at a complete standstill. Limited civil works were completed on the ground. FMO has proactively engaged with the project company and the shareholder in order to raise the Project's E&S performance. It can be concluded that, although rather late and after initial "damage control" by the SO Team, the Project is now slowly getting up to speed with FMO's E&S requirements.
116. It must be noted that it was not disputed that the Project was not in compliance with IFC PS before the first loan agreement was signed. It was still not compliant before the 1st disbursement, and it remained non-compliant in relation to nearly all issues before the 2nd disbursement. It is fair to say that the Project sponsor is starting to implement the requirements from the ESAP, and FMO is of the view that the project is on its way to compliance. However, there are still instances of non-compliance with IFC standards that remain. The Panel understands that the Project had been at risk of being halted twice and that FMO had sought greater clarity regarding the future of the Project before focusing on outstanding E&S issues. However, the Panel is of the view that FMO cannot be in line with its own policies by accepting that some basic and inexpensive environmental and socio-economic baseline studies were never finalised. These studies are required under the IFC PS and World Bank Environment and Health standards, which are required by FMO's standards. The Panel is of the view that FMO should have linked the 2nd disbursement to the completion of such studies or, alternatively, should have insisted on completion of these studies within a defined timeframe. Therefore, the Panel concludes that at the moment of the second disbursement, the Project was still not in compliance with key elements of the IFC PS. At the time of the Panel's visit in November 2016, most of these baseline assessments were still missing, a year after the second disbursement.
117. The Panel is of the view that there were specific issues that should have been addressed in relation to communication with the affected communities and persons. While the Panel takes note that the Project faced two periods of significant hiatus and delay, the local communities were not informed about the status of the Project and potential mitigation measures for years. The Project's performance with respect to participation and communication has consistently been out of line with IFC Performance Standards. FMO did insist at various times that communication should be improved, and urged the project sponsor to employ a community liaison manager.

Nevertheless, FMO failed to follow its own policies at the moment of the 2nd disbursement. It failed to take sufficient steps to ensure that the project implemented IFC PS principles which were reflected in the ESAP.

118. Given the extraordinary pressure by the Senegalese Government and the new investor, it is again understandable that FMO accepted an updated corrective action plan as an interim step in 2015, but it was the last moment to assert sufficient leverage on the client in Senegal. Another postponement was not foreseen, neither in FMO policies nor in IFC PS. Nevertheless, the 2015 request for an additional loan could have created a new opportunity to further influence the Project's performance.

119. The Panel finds it difficult to understand why, since the first loan documentation was signed in 2011, almost none of the outstanding E&S issues were dealt with by the client, despite the LTA's advice that significant improvements in E&S performance were required in line with the clear steps that were set out in the ESAP. The huge delay, particularly in addressing concerns of affected communities, the lack of baseline studies on social impacts, the missing up-to-date environmental impact data on air and water pollution, and the very poor communication with affected people and stakeholders has clearly caused misunderstanding and created resistance among local communities. The Panel notes that while the physical construction progressed, the E&S issues remained unsolved. This is not the way a category A project should be run. Yet, as noted before, progress has been made since the new shareholder came in.

4. Substantive issues

4.1. Quality of the environmental and social impact assessment: ESIA 2009

Introduction

120. Under Senegalese law, large projects such as the Sendou I power plant cannot proceed without prior approval from the Ministry of Environment. This approval can only be given after an environmental impact assessment has been performed that complies with Senegalese environmental law. An environmental permit for the coal power plant was indeed issued on 13 May 2009, and it stated that the project as described in the ESIA was in line with the provisions of the Environmental Code regarding the Environmental Impact Assessment. Therefore, it can be presumed that at that time the ESIA 2009 complied with Senegalese environmental law.
121. However, the lenders must adhere to other international standards besides Senegalese environmental law. Therefore, FMO's decisions to approve and disburse the loan's tranches cannot be assessed solely in the light of the ESIA 2009, but should moreover be tested against the Project's broader E&S background. The compliance review performed by the Panel is based on the standards relevant to FMO.
122. Before delving into specific substantive issues, the Panel will address procedural and PS1 questions which stem from the the ESIA 2009. Nevertheless, by reference to IFC PS 1, the complainants claim that the ESIA 2009 has several shortcomings such as the use of outdated standards and a failure to assess cumulative impacts of the Sendou I plant, the cement factory SOCOCIM, the coal transport from the Dakar harbour and an additionally planned 125 MW coal power plant (Sendou II).

IFC PS 1: Environmental and social impact assessment

123. IFC PS 1 underscores the importance of managing social and environmental performance throughout the life of a project, and requires the thorough assessment of potential social and environmental impacts and risks from the early stages of project development it provides order and consistency for mitigating and managing these issues on an ongoing basis. Concretely, it requires the establishment and maintenance of a Social and Environmental Management System appropriate to the nature and scale of the project and commensurate with the level of social and environmental risks and impacts. The elements of this management system are summarised in Annex IV Key elements of IFC PS 1 'Social and Environmental Management System': Key elements of IFC PS 1, 'Social and Environmental Management System.'
124. IFC PS 1 (2006 edition) required that, prior to the implementation of the project, a social and environmental assessment should be executed, based on recent baseline data and taking into account preconstruction, construction, operation and decommissioning. The identified risks must be addressed in a mitigation program. Where necessary, specific risks related to IFC PS 1 to 8 are to be addressed in an Action Plan. Organisational capacity must be created within the project management, and training must be provided in order to implement that Action Plan. Community engagement should take place on a continuous basis and should include information dissemination and consultation. A grievance mechanism should be put in place and the implementation of the Action plan should be subject to monitoring and reporting procedures.

The Panel's findings

125. FMO was informed about the shortcomings of the ESIA 2009 at an early stage. This flowed from an assessment of the ESIA 2009 which was performed by the LTA in 2010. The consultant's 2010 assessment of the ESIA 2009, which was in turn partly based on a prior assessment by K&M

Engineering consultancy, described a number of substantial shortcomings in the ESIA in connection with several of the IFC PS. The report concluded, inter alia, that:

- The impact of decommissioning had not been considered, as required by PS1.
- An explanation of how the negative impacts of the Project had been defined was not provided for all environmental impacts considered. The ESIA was therefore not aligned with IFC PS 1.
- The Environmental and Social Management Plan as included in the ESIA was only an “outline plan” with recommendations for the final plan to be prepared by the main construction contractor. Further environmental, social and health and safety management systems that are based on international standards needed to be established in order to satisfy the requirements of IFC PS 1.
- Plant emission limits and ambient air quality limits had been based on the old World Bank (July 1998) limits for thermal power plants and not on the more recent EHS guidelines for Thermal Power Plants 2008. The air quality assessment was therefore not aligned with IFC PS 3.
- Exceedance of the IFC ambient air quality standard for SO₂ was observed when modelling with a 100-meter-high chimney and an average sulphur content of 0.7%. The ambient air quality result for SO₂ therefore failed to align with IFC PS 3.
- The ESIA did not fully consider the potential impact on local traffic and infrastructure with regard to community health and safety as required by IFC PS 4.

126. The ESIA did identify potential land rights issues and the issue of economic displacements, acknowledging that these should be dealt with prior to the implementation of the Project. The fact that significant spatial constraints already existed which limited the local population’s ability to relocate due to the advancing sea, and the existence of claims on parcels of land within the project zone, were flagged as important points which required further attention.¹⁶

127. In the view of the Panel, the ESIA 2009 did not fully comply with the requirements of IFC PS 1 (2006). The list of issues not fully covered is substantial. Through the ESAP, FMO required its client to implement certain corrective actions in order to comply with the IFC standards, and particularly to address those issues that should have been settled before the start of the project, for example those related to the land issues and the setting up of an adequate E&S management system. FMO required its client to put a plan in place at different stages of the project development, an approach which is not unusual in project finance.

128. Despite FMO’s efforts to ensure better E&S performance by its client, many actions and necessary procedures were not in place prior to the start of the construction phase. Nevertheless, FMO approved the loan, while aware that the project was not in compliance with IFC PS 1. Moreover, failure to properly assess the impact on air quality and community health and safety in the ESIA 2009 resulted in a situation which was not compliant with IFC PS 3 and 4. FMO should have formally required closure of the open issues after the ESIA within a defined time period. Delaying important actions cannot go on forever. FMO conducted itself in a manner that was inconsistent with its own policies.

4.2. The environmental impact of Sendou I

Introduction

129. This section covers the elements of the complaints related to the environmental impact of Sendou I as already identified in section 2.3, namely: thermal pollution of an “*aire de cogestion*”; impact

¹⁶ ESIA 2009, pp. 178-179.

on air quality; the lack of an Environmental Management Plan; and general shortcomings of the ESIA 2009, such as the use of outdated standards and the lack of an assessment of cumulative impacts. The key question here is, did FMO base its decisions to disburse the two parts of the loan on up-to-date and adequate environmental information?

130. It cannot be denied that coal-fired power plants contribute to climate change. FMO adopted its new '[Position Statement on Coal Power Generation and Coal Mining](#)' in 2015, and excluded coal-based power generation and/or coal mining activities from FMO financing from that period onwards. In the position statement FMO recognised the significant negative impacts which are attributable to coal, and stated: "Coal based power plants are a significant source of greenhouse gas emissions. Until date there are no realistic commercially available solutions for capture and storage of the released greenhouse gas".¹⁷ The decision to co-finance Sendou I was taken in 2010 and could not constitute a violation of FMO's policy on greenhouse gas emission at that time.
131. In this particular case, Senegal's energy situation, which is characterised by power shortages and failures, was factored into FMO's decision to approve the loan for Sendou I. The impact of coal plants on climate change was already known in 2009. Coal constitutes a relatively cheap source of energy which is necessary to increase Senegal's base-load capacity, it will replace more heavily polluting HFO generators. Due to the fact that Senegal lacks a reliable base-load capacity and energy supply, the country is currently completely dependent on HFO or other high polluting diesel generators.
132. Moreover, the currently envisaged increase in the use of renewable energy sources, such as wind and solar, is only possible in the long term if a base load is available. On a concluding note, Sendou I will be FMO's last investment in a coal-fired power plant. The Panel does not have sufficient information to assess whether other alternatives, such as liquid natural gas (LNG), were physically and economically available and considered as alternatives. The Panel is aware of the fact that the technology was stipulated under the SENELEC Tender – and was not elected by the project company or FMO.

Impact on air quality

133. In the ESIA 2009,¹⁸ the Complainants had already asked the Project promoters to relocate the plant to another place, namely the MIFERSO site (see Annex II), on the basis of concerns about the impact on health, the environment, and their livelihoods. With a reference to hazardous pollutants (NO_x, SO₂, CO) and dust emissions (PM₁₀), the complainants point out that they have the right to a clean, safe, and healthy environment. The Complainants also stated that they were not aware of any mitigation measures adopted in order to prevent adverse impacts on the respiratory health of the communities neighbouring the coal power plant.
134. IFC PS 1 requires an assessment of potential social and environmental impacts based on current information and appropriate environmental baseline data. Risks and impacts will be assessed in the context of the Project's area of influence and will be analysed separately for the key stages of the project cycle.
135. IFC PS 3 is aimed at avoiding or minimising adverse impacts on human health and the environment by avoiding, or minimising, pollution from project activities and promoting the reduction of emissions that contribute to climate change. The client must apply the most recent version of the World Bank EHS Guidelines when evaluating and selecting pollution prevention and control techniques for the project. When host country regulations regarding stack emissions differ from the levels and measures presented in the EHS Guidelines, clients must achieve whichever is more stringent. When the project has the potential to constitute a significant source of emissions in an already degraded area, the client will consider additional strategies and adopt measures that

¹⁷ FMO Position Statement on Coal Power Generation and Coal Mining, 2015.

¹⁸ ESIA 2009, p. 95.

avoid or reduce negative effects, for example through evaluation of project location alternatives and emissions offsets. It is noted that in this particular case, based on existing data, the air shed in the region is officially ‘non-degraded’.

136. For ‘category 1’ projects like Sendou I, it is important that these impacts are modelled accurately and verified for compliance with WB standards prior to the beginning of the construction phase. This allows for communication of the impacts to stakeholders and the implementation of any necessary abatement/mitigation measures. Although the ESIA 2009 did include an air dispersion model by Fluidyn, this assessment was considered inaccurate and outdated. More specifically, the LTA was concerned that the choice of model and methodology was not robust in the context of the Project setting and WHO Guidelines.

Plant emissions

137. A review of the Plant’s emissions for four pollutants resulted in the following table, which reflects the ambiguity surrounding the emissions. It should be noted that the Project received an exemption from the Senegalese government which allowed the project to deviate from Senegalese thresholds and to apply the World Bank standards of 1998 to the Plant’s projected emissions which are less stringent.¹⁹

Table 2: Sendou Unit I, Plant emissions review throughout project implementation.²⁰

Plant Emissions	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (NO _x)	Carbon Monoxide (CO)	Particulates (PM ₁₀)
APPLICABLE STANDARDS ON PLANT EMISSIONS				
Senegalese Thresholds	436 mg/Nm ³	200 mg/Nm ³	200 mg/Nm ³	50 mg/Nm ³
World Bank Limits Thermal Power (1998)	1,700 mg/Nm ³	750 mg/Nm ³	-	50 mg/Nm ³
World Bank Limits Thermal Power (2008)	1,500 mg/Nm ³	510 mg/Nm ³	-	50 mg/Nm ³
REPORTED PLANT EMISSIONS BY PROJECT DOCUMENTATION				
ESIA 2009	1700 mg/Nm ³ (0.55–0.80% Coal S)	750 mg/Nm ³	200 mg/Nm ³	50 mg/Nm ³
AfDB Non-technical summary (Aug 2009)	1355 mg/Nm ³ (0.70% Coal S)	487.50 mg/Nm ³ (35% Effective Low NOx Burners)	200 mg/Nm ³	50 mg/Nm ³
Fluidyn Ambient Air Quality Model (Oct 2009)	1692 mg/Nm ³ (0.90% Coal S)	747 mg/Nm ³	199 mg/Nm ³	49 mg/Nm ³
CES Air Emissions Note (2016)	1355 mg/Nm ³ (0.55–0.80% Coal S)	487,5 mg/Nm ³	200 mg/Nm ³	50 mg/Nm ³

138. The Plant received its environmental permit based on compliance with legal environmental requirements, including an assessment showing compliance with norms prescribed by the Government of Senegal. These norms, which are more stringent than the World Bank’s, apply for all environmental aspects except atmospheric emissions. The Minister of Environment issued a decree on 3 October 2008 (before the publishing of the 2008 WB norms), permitting certain projects, including Sendou I, to meet the limit values set by the World Bank 1998 guidelines,

¹⁹ LTA, January 2014, p. 26.

²⁰ Data retrieved from LTA reviews.

though for atmospheric emissions only. This decision was justified by the fact that the tariff for the Project for the sale of electricity was based on WB norms only in relation to atmospheric emissions. SENELEC holds the Project to these norms.

139. As can be seen above, at the time of the ESIA 2009, the Plant emissions would have been in compliance with the applicable stack emissions at the time – i.e. those of the World Bank Limits for Thermal Power 1998. However, shortly after finalisation of the ESIA 2009, the World Bank Group limits were revised and became more stringent with respect to SO₂ and NO₂. This may have contributed to the perception that the Plant was not in compliance per se, unaware of the complication arising through the World Bank revisions and timing of the disclosure.

Ambient air quality

140. With regard to ambient air quality, the ESIA 2009 referred to a Norwegian study from 2006 to assess the initial air quality near the project site. The study has two major shortcomings: the Norwegian study was executed in the period of October 2005 to January 2006, rendering the results rather outdated at the time of the ESIA's publication. Furthermore, the ESIA indicated that the data was collected "at some distance" from the project area.²¹ The available data did not indicate the air shed to be 'degraded' with respect to NO_x and SO₂. Subsequently, this assessment has held true.
141. The ESIA 2009 concluded that the coal power plant's impact on air quality will be of a local nature, for a long duration, and of an average intensity (meaning less health risk), resulting in an impact of "medium importance".²² However, the ambient data used in the ESIA was not recent and did not appear to satisfy the minimum duration and detail required to develop an impact assessment to World Bank / IFC Standards. Moreover, it was not apparent from the ESIA whether the results were based on a robust and quantitative assessment method or an ambient air quality model.
142. The stack height was subject to discussion. In the ESIA of 2009 the stack height was foreseen at 100m. During the 2014 site visit, the sponsor presented a plan for a stack height up to 170 meters. It is now confirmed that the height will be 150 meters.
143. It should be noted that on two occasions where cumulative impacts were measured, the ESIA 2009 uses old data or studies for its assessment of the initial state of the environment. For example, outdated information was also applied to the initial assessment of the quality of sea water.
144. The LTA reported the following data in a note to FMO. Red indicates persisting ambiguity or exceedance of the World Bank recommendation, with the latter implying that one single Project should not contribute more than 25 % to the maximum national threshold of a certain pollutant.²³

²¹ ESIA 2009, p. 59.

²² ESIA 2009, p. 169.

²³ World Bank Group, *EHS Guidelines; Thermal Power Plants*, December 2008, p. 3.

Table 3: Sendou Unit I, Air dispersion outcome of LTA review February 2017.²⁴

Ambient Air quality impact	Sulphur Dioxide (SO ₂) (average)			Nitrogen Dioxide (NO _x) (average)		Carbon Monoxide (CO) (average)	Particulates (PM ₁₀) (average)	
	Annual	24hr	10 min.	Annual	Hourly	24hr	Annual	24hr
Senegalese maximum threshold	50 µg/Nm ³	125 µg/Nm ³	/	40 µg/Nm ³	200 µg/Nm ³	30 µg/Nm ³	80 µg/Nm ³	260 µg/Nm ³
WHO Guidelines (WB 2008)	/	125 µg/Nm ³	500 µg/Nm ³	40 µg/Nm ³	200 µg/Nm ³	?	70 µg/Nm ³	150 µg/Nm ³
WB <25% recomm.	12.5 µg/Nm ³	31.25 µg/Nm ³	/	10 µg/Nm ³	50 µg/Nm ³	7.5 µg/Nm ³	20 µg/Nm ³	65 µg/Nm ³
Fluidyn Air Model (Oct. 2009) ²⁵	44.69 µg/Nm ³	/	/	19.81 µg/Nm ³	/	2.49 µg/Nm ³	1.31 µg/Nm ³	14.59 µg/Nm ³
CES Air dispersion (LTA review Feb 2017)	12.5 µg/Nm ³	?	?	4.40 µg/Nm ³ (0 exceedances)	139.3 µg/Nm ³ (0 exceedances)	? 5.25 µg/Nm ³ (LTA Dec 2016)	0.45 µg/Nm ³	?

145. In December 2016, the LTA concluded: “it is considered relatively unlikely that Sendou I, in isolation, will result in a significant exceedance of ambient air quality thresholds. However, this has yet to be verified through submission of an updated air quality assessment”.²⁶ This conclusion seems to hold true for the annual maximum average for the assessed pollutants, though cannot yet be verified for the 24hr and 10-minute threshold for SO₂, and the 24hr maximum threshold for PM₁₀. It should be noted that with respect to the latter pollutant, Sendou I will be installed with Electrostatic Precipitators which should effectively negate the release of PM₁₀.

146. Subsequently, FMO decided to instruct the LTA to undertake the ambient air dispersion themselves, based on the available Project information. Whilst this is non-routine and outside the ordinary scope of an LTA, FMO decided that it was necessary in order to obtain a clear understanding of the level of ambient air quality impacts associated with Sendou Unit 1. At the time of writing, the LTA’s draft findings have been produced and indicate that WB Guidelines will be met for all pollutants (see

²⁴ Data retrieved from LTA reviews.

²⁵ Worst case data taken from: LTA, January 2014.

²⁶ LTA, December 2016, p. 12.

147. Annex V Draft Findings of LTA Ambient Air Dispersion Modelling, Sendou Unit 1.

148. It can be concluded that the maximum thresholds for stack emissions for all pollutants will be met. This conclusion corresponds with the LTA's December 2016 assessment: "Sendou I should be capable of achieving the applicable plant emission limits".²⁷ In the LTA's latest ESAP status update, it was concluded that "in general, there is agreement that the air emissions will achieve WB 2008 limits for stack emissions".
149. The Panel is of the view that the assessment of air quality and possible impacts of the coal plant on the health of the neighbouring community and the environment at the time of the CTA's signing was not of a sufficient quality and was based on out of date data. Measurements of the current ambient air quality only started at the end of 2016. The lack of this baseline data at the time of the CTA's signing, and the persistent lack of accurate information on compliance with WB Guidelines, most notably on SO₂ levels, was not in line with IFC PS 1 and 3. FMO failed to act in accordance with its own policies by disbursing further funds while the project had failed to make any progress towards the appropriate IFC PS standards as identified in the ESAP.
150. In 2017, FMO instructed the LTA to undertake ambient air quality modelling. The findings show a significant improvement over what had previously been disclosed, and as such, FMO advised that the Project Company relay these findings to the stakeholders. The Panel follows the LTA in its conclusion that, eventually, Sendou I will most likely not result in significant exceedance of WB Standards for ambient air quality. That being said, with regard to both disbursement moments, FMO decided to move forward with the project financing without the proper data on air quality and stack emissions.

Cumulative impact of Sendou I, SOCOCIM and coal transport

151. The complainants argue that a fundamental problem with the ESIA 2009 is its failure to perform a cumulative impact assessment for Sendou I in relation to other projects emitting pollutants near the power plant. Most notably, the complainants refer to the presence of *SOCOCIM*, a cement factory located on the other side of Bargny, and the effects of an additional coal-fired power plant (Sendou II) to be located next to Sendou I.
152. As long as Sendou II was realistically foreseeable, it can be argued that cumulative impact assessments were warranted.
153. According to IFC PS 1, clients are obliged to carry out an environmental impact assessment in the context of the project's "area of influence". This area of influence encompasses, among others: the primary project site(s) and related facilities; areas potentially impacted by cumulative impacts from further planned development of the project; other project-related developments which are realistically defined at the time of the assessment; and areas potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location.²⁸
154. The Panel note that FMO always took the lack of a cumulative impact assessment serious, and the request for a cumulative impact assessment was included in the initial ESAP (2010) and subsequent updates. Due to FMO's recently adopted Position Statement on Coal Power generation and Coal Mining²⁹, the Bank will not take part in the financing of Sendou II. Nevertheless, the two coal power plants cannot be seen in isolation from each other.
155. It must be concluded that FMO decided to move forward with the Project, even though no adequate cumulative impact assessment had been carried out.

²⁷ LTA, December 2016, p. 11.

²⁸ IFC PS 1 (2012), p. 8.

²⁹ FMO Position Statement on Coal Power Generation and Coal Mining. 2015

156. In the Panel's view, Sendou II became at least foreseeable when the new shareholder entered as a partner in the consortium in 2015. For SENELEC and the shareholder it was clear – as indicated in the interviews with the Panel – that a second power plant is needed in order to increase Senegal's base-load capacity and enable the replacement of HFO. From that moment on, it would have been appropriate to take the impacts of both powerplants into consideration when assessing the air quality for the surrounding communities. The LTA noted that the development of Sendou II and its cumulative impacts on ambient air quality remains an open risk. The mitigation measures necessary to ensure that Sendou II will remain within the limits of the ambient air quality thresholds are contingent on a number of factors, and will to a large extent not be within the control of FMO.
157. Nevertheless, the lenders engaged the LTA to undertake a cumulative air dispersion model which concluded that no significant impacts are expected.³⁰ In addition, it is understood that the LTA's Air Dispersion Modelling, which has been commissioned by FMO and is currently in draft form, has included a scenario where Unit I and Unit II are operating in parallel, on a 'like-for-like' basis. The results of this modelling will be available shortly and can be used by the developers to inform the necessary abatement measures to be incorporated within Sendou Unit II.
158. SOCOCIM, the cement factory in the vicinity of Sendou I, is technically not a 'related project' or 'related facility'. However, it is an existing source of pollution and inclusion of this pre-existing air pollution in the Project's Cumulative Impact Assessment should be considered. The SOCOCIM plant is more than 3.5km from the project site, and in order for the pollution to combine with the Power Plant, winds in opposite directions would be required, i.e. winds dispersing SOCOCIM pollution south, and winds dispersing the Power Plant pollution north. More generally, the potential for in-combination impacts is limited by the distance from the respective sources of emissions.
159. As a result, consideration of cumulative impacts is largely constrained to Unit I and Unit II in combination. Nevertheless, the baseline data on ambient air quality should reflect the quality of the air in the region, which will also be affected by the operations of SOCOCIM. The lack of any relevant baseline data on ambient air quality exacerbates the failure to perform a cumulative impact assessment which adequately reflects the state of air quality in the region and rules out a proper assessment of the additional effects of any new industrial development.
160. On a concluding note, the Lenders engaged the LTA to undertake a cumulative air dispersion model which found that no significant impacts are expected. This assessment will include scenarios in which Unit I and Unit II are operating in parallel. The analysis will provide a quantitative overview of the potential cumulative air impacts which can also be used to adopt any necessary additional mitigation measures to be included within Sendou II.
161. The coal used in the Sendou I plant will be imported from South Africa, and will initially arrive in the port of Dakar. The coal will then be transported from the port to the project site in sheeted trucks in order to prevent pollution along the route. The ESIA 2009 indicates that coal from South Africa is not very "dusty". The coal will be transported via Autoroute 1, which is the country's main highway. A coal power plant that consumes 386,000 tons of coal per year, and the importation of coal on vessels with a capacity of 43,000 tons, would warrant nine shipments of coal per year. 8,600 tons can be unloaded daily, which would be equivalent to the loading of 287 30-ton trucks. In total, the unloading of one ship will take place over a period of five days. The transport of coal from the port to the power plant is projected to take place 24-hours a day. 45 days per year will thus be necessary to offload the nine ships of coal necessary to fuel the power plant for one year. This will lead to an increase in traffic density and an increased risk of accidents on the sections of

³⁰ LTA, December 2016, p. 13.

the highway in question. The ESIA indicates that an emergency response team is planned to be on constant stand-by to intervene in case of accidents with a truck.³¹

162. Several of the interviewees raised concerns regarding the volume and frequency of the necessary coal transport and believe that increased traffic will create even more jams and problems for Dakar's already overburdened traffic system. SENELEC and the project company both argue that the transport that is already taking place in order to supply the cement factory is of a similar volume as the transport necessary for the supply of the coal power plant, and that they do not expect that the additional need for coal supplies will create more problems. On the other hand, other interviewees convincingly argue that the doubled transport means double the amount of trucks, double the amount of pollution, and double the amount of associated security and health risks.

163. The ESIA 2009 did not identify 'traffic' as a major concern. Nevertheless, the first ESAP of 2010 already included a requirement to conduct a traffic study. As such, the importance of this item was recognised by FMO. The risks associated with additional coal transport through the centre of Dakar will be completely mitigated in the long term through the development of the mineral port. Nevertheless, since the completion of the port is still far away, coals transport by road will be necessary for a prolonged period of time.

164. The Panel is of the view that the cumulative impacts on air quality have not been fully analysed. The lack of this baseline data on ambient air quality illustrates the lack of a cumulative impact assessment which adequately reflects the state of air quality in the region and rules out a proper assessment of the additional effects of any new industrial development. Such analyses have not been undertaken by the project company and FMO did not put any emphasis on the matter in its requirements for ESAP updates.

165. With regard to cumulative impacts of Sendou II, the Panel notes that the LTA concluded in their December 2016 report that this remains an open risk. It is the Panel's understanding that Sendou II will be designed to ensure that the cumulative impact does not exceed ambient air quality thresholds. This mitigation is contingent upon a number of factors that may not be within the control of all the Sendou I Lenders. However, the lenders engaged the LTA to undertake a cumulative air dispersion model, which concluded that no significant impacts are predicted. On a concluding note, the Panel has noted that it is not yet decided that Sendou II will be constructed. Nevertheless, for several years, and during the Panel's compliance review, it was planned to be constructed and as such is a relevant issue for the assessments of cumulative impacts.

166. The Panel is of the view that the cumulative impact of the coal power plant on traffic in the region of Dakar has not been adequately addressed. As was already concluded by the LTA, "the additional pressures of the projects required coal importation via the existing port may have significant cumulative effect".³² Despite the inclusion of a Traffic Safety Management Plan in the ESAP, the issue of coal transport has not received sufficient attention by the project company.

Impact on sea water and marine environment

167. The ESIA 2009 noted a range of potential negative impacts that had to be addressed prior to or during the Project's implementation. This included 'thermal pollution' of the sea through the release of hot water, water pollution due to evacuation of waste water from the plant, and the 'sweep up' of small fish and mollusc resulting from the cooling system's sea-water intake. Nevertheless, the ESIA 2009 did not project any long-term major negative effects on sea water and marine biodiversity and deemed the overall risks acceptable provided that the correct mitigation measures were in place.

³¹ ESIA 2009, pp. 20-21.

³² LTA, *Construction Phase: Monitoring Report 001*, January 2014, p. 25.

168. IFC PS 1 requires the assessment of potential environmental impact be based on current information and appropriate environmental baseline data. Risks and impacts will be analysed in the context of the Project's area of influence.
169. IFC PS 6 requires that clients consider direct and indirect project-related impacts on biodiversity and ecosystem services. This process should consider relevant threats to biodiversity and ecosystem services, especially focusing on habitat loss, degradation and fragmentation, hydrological changes, and pollution.
170. World Bank guidelines on thermal dispersion of discharge water state that any discharge may not result in an increase of more than 3°C of the ambient temperature of the receiving water body at the edge of a scientifically established mixing zone, or at 100 meters from the point of discharge where a scientifically established mixing zone has not been defined.
171. The ESIA 2009 acknowledged the lack of recent baseline data on the quality of the seawater in the Project's area of influence. It used the results of a 2002 study which was performed in the context of a project on the protection and development of artisanal fishing activities.³³
172. According to the ESIA 2009, the marine ecosystem will be affected by cooling water discharges from the coal power plant. Localised thermal pollution, which may be high intensity, will be created at the outlet of the envisaged discharge channel. This change in the local water household may result in a shift in the delicate balance of pelagic species, phytoplankton, and other fragile organisms. The ESIA recommended further in-depth research on this issue covering both immediate and long-term effects of localised increases in seawater temperature.³⁴
173. In 2014, a specialized consultant produced an impact study on the thermal plume dispersion. However, this study was based on old project designs and as such is no longer relevant for the purposes of assessing the project's impact on seawater temperature.
174. The follow-up study was completed at the end of 2016. From this report, it emerged that the discharge solution of Sendou I is compliant with the WB threshold of maximum 3°C rise in temperature caused by the thermal plume. As indicated in the report, the plume would moreover affect an area of no more than 28 metres from the point of discharge, well within the 100 meters allowed by the WB.
175. The intake structure which was shown to the Panel during its study of the Project and visit to Senegal uses a fully buried pipe which runs approximately 280m offshore and through which water flows by gravity. The only extrusion above the seafloor is a small (5x5m) intake head which is designed to limit marine life ingress.
176. Notwithstanding the above, the project company has now proposed a cooling tower solution for the plant. As such, the potential marine impacts should be greatly reduced, since both sea water intake and discharge will be decreased significantly so thermal impacts will also be greatly reduced. Clearly documented baseline and impact assessments for this design change were not yet available.
177. The Panel notes that at the time of FMO's August 2013 and October 2015 disbursements, no baseline study on the effects on marine biodiversity of the coal power plant was available. Even though the carrying out of a marine impact assessment was one of FMO's priorities throughout their involvement with the Project, this was still an outstanding issue in March 2017. Both disbursements were made without adequate data showing the Project's impacts on water quality and temperature. FMO should have insisted that, at least at the moment of the second disbursement, the data be made available and analysed.

³³ ESIA 2009, p. 81.

³⁴ ESIA 2009, p. 119.

178. The Panel is of the opinion that the second disbursement was made at a moment in which the project was not fully compliant with all elements of IFC PS 1 and 6. However, that being said, it is expected that the Project's water cooling system will eventually comply with WB Standards in terms of impact caused by seawater intake and discharge and temperature differences.

The World Bank's "West Africa regional fisheries program"

179. There is a specific reason why the complainants are worried about the impact of the cooling water outflow. The World Bank sponsored an "*aire de cogestion*" (see Annex III Aire de Cogestion de Bargny), a fish nursery project in front of the Bargny coastline. This project was designed as an initiation phase that establishes the foundation for sustainable fisheries management in West Africa. It aims to increase the overall wealth generated by the exploitation of marine fishery resources, and the proportion of that wealth captured by West African countries. The project is part of a larger sequence of projects executed along the West African coastline. 'Phase I' was closed down on 15 September 2016. The World Bank is preparing a 'phase II', since the first phase was considered a success.³⁵

180. According to a WB project document approved in 2008, the World Bank project was not identified as an area enjoying special protection by the Senegalese environmental authorities or other project developers at the time of the ESIA. The ESIA concluded that there is "no protected area in front of the coastline".³⁶

181. FMO had extensive discussions about the Sendou I project with the World Bank, however, according to FMO, the WB fisheries project was never mentioned by WB management. Subsequent failure to identify the existence of a World Bank project in the plant's sphere of influence can probably be attributed to the fact that the envisaged use of sea water for cooling was only considered at a later stage.

182. On a general note, the fact that the World Bank and the project developers of Sendou I were not aware of each other's activities, despite being adjacent to one another, raises questions about the overall communication on development in the region between relevant stakeholders.

183. The Panel concludes that the failure to include the World Bank project in any other impact assessment made over a longer period demonstrates an unduly narrow understanding of the impact of the project on its surroundings from the side of the project developers and the lenders. Furthermore, it is hard to understand that neither FMO, nor the AfDB, nor the World Bank were aware of each other's neighbouring activities.

Impact on drinking water

184. The complainants raised concerns regarding the proximity of the Project to the town's water supply, as well as the added stress on the already constrained water supply caused by the plant's usage of drinking water and water for sanitary purposes. IFC PS 4 requires that the client avoids or minimises adverse impacts due to project activities on soil, water, and other natural resources in use by the affected communities.

185. Although the ESIA 2009 mentioned that the power plant will use the network of the '*Société des Eaux du Sénégal*', the Senegalese authorities did not assess whether current capacity of the network can also cope with the added water usage of Sendou. Furthermore, the ESIA 2009 failed to address the issue of potential ground water contamination. None of the ESAPs refer to the mitigation of the potential impact of the Project on local water supplies.

³⁵ Interview with World Bank staff.

³⁶ ESIA 2009, p. 85.

186. The project design includes facilities for all surface water and storm water to be collected and treated before discharge. The treated water should not exceed the threshold values for the applicable parameters. As such, ground water contamination was not regarded as a major issue. Drinking water availability was not flagged as a potential issue in the 2010 ESAP. The plant's extra consumption from the existing network was to be reviewed in the context of other projects in the region. These assessments were not available to the Panel.

187. The Panel can only conclude that issues related to possible harm to the community, such as the availability of drinking water, were never included in the different E&S assessments carried out and therefore the Project was not in compliance with this element of IFC PS 4. Although the availability of drinking water is the sole responsibility of the Société des Eaux du Sénégal, FMO could have included these concerns of the local community in the ESAPs, as an element to be resolved between the project company and the Senegalese authorities.

4.3. Land right issues

Introduction

188. The town of Bargny and the smaller village of Minam are both under threat from the rapidly advancing sea and coastal erosion. At a national level, coastal erosion in Senegal is considered both a natural and a man-made phenomenon, though in the case of the coastline of Bargny and Minam, the human factor seems to be less of a factor. Interviews with the villagers and other stakeholders, including the Ministry of Environment, indicate a steady inland advance of the sea of approximately up to a meter per year in that region.³⁷ Many remember that in their youth the sea was many meters further away. Regardless of the exact rate of change, the Panel members have observed the evidence of destruction caused by the advancing sea, and the problem can indeed be considered imminent. Yet the attachment of the local populations to the original nucleus (a traditional village) is based on its closeness to the coastline, since most of the affected families live from fishing. Many people living directly at the coastline need to be relocated within the coming years. Houses have already been destroyed by the advancing sea in the last years; a process that continues.

Complaints

189. It is against that background that the complainants argue that the “land acquisition” and “involuntary resettlement process” linked to the Project had been inadequate, constituting a violation of IFC PS 1 and 5. According to the complainants, the project site includes 1.433 parcels of land which were given to families in the community affected by coastal erosion as part of the Minam I and Minam II relocation projects. These parcels remained uninhabited due to the local population remaining in the old village. Without future available land reserves, the community will be more exposed to the consequences of coastal erosion as the advancing sea will oblige the community to move further away from its homes on the coastline which will in turn create a risk of family dislocation. The complainants claimed that the lack of agreement with the rightsholders of these land titles, the absence of any form of compensation, and the lack of an agreed Resettlement Plan constituted a violation of FMO policy. The project company and the lenders consider these claims to be without legal base.

IFC PS 5: Possible future Physical displacement

190. IFC PS 5 states that feasible alternatives to the project design should be considered in order to minimise the impact of the project on the local population. It is also provided that the client should engage in meaningful consultation with the local communities and establish a community grievance mechanism. Furthermore, the client should carry out a census with appropriate socio-economic baseline data to identify the persons who will be displaced by the project. The client should cooperate with the national authorities responsible for the resettlement process. Where this process falls short of adherence to the IFC PS, the client will prepare a Supplemental Resettlement Plan (IFC PS 2012).

191. Displaced persons may be classified as persons: (i) who have formal legal rights to the land they occupy; (ii) who do not have formal legal rights to land, but have a claim to land that is recognised or recognisable under national laws; or (iii) who have no recognisable legal right or claim to the land they occupy. A census will establish the status of the displaced persons.

192. If people living in the project area must move to another location, the client will: (i) offer displaced persons choices among feasible resettlement options, including adequate replacement housing or cash compensation where appropriate; and (ii) provide relocation assistance suited to the needs of each group of displaced persons, with particular attention paid to the needs of the poor and the vulnerable. Alternative housing and/or cash compensation will be made available prior to

³⁷ As reported to the Panel during the visit to the Ministry of Environment.

relocation. New resettlement sites built for displaced persons will offer improved living conditions.

193. In the case of physically displaced persons holding formal rights or rights recognised under national law, the client will offer the choice of replacement property of equal or higher value, equivalent or better characteristics and advantages of location, or cash compensation at full replacement value where appropriate. In the case of physically displaced persons who have no recognisable legal right or claim, the client will offer them a choice of options for adequate housing with security of tenure so that they can resettle legally without having to face the risk of forced eviction. Where these displaced persons own and occupy structures, the client will compensate them for the loss of assets other than land, such as dwellings and other improvements to the land, at full replacement cost, provided that these people occupy the project area prior to the cut-off date for eligibility.

The Panel's findings

(1) Land claims: Resettlement plans of Minam I and Minam II

194. The former Mayor of Bargny initiated a resettlement project aimed at relocating those persons and families directly affected by the advancing sea in the future. To that purpose, those families were offered allotments located in two plots of land called 'Minam I' (750 parcels, 1996) and 'Minam II' (682 parcels, 2007), each parcel comprising approximately 150 m². The legal nature of such titles has not been fully investigated and different understandings of their legal nature were noted by the Panel. They have not been claimed formally by the affected persons either through resettlement requests or through legal proceedings. According to the interviews with the complainants,³⁸ the mayor can give out land titles, but the list of allotments has to be validated by the prefect, as the representative of the national government in this context. Without this prefectural approval, no valid land title can be created. The people that have been granted parcels of land on Minam I and II, had to pay administrative fees of, respectively, 30,000.- FXOF and 45,000.- FXOF.
195. During the Panel's site visit, documents were shown to the Panel (photo documentation is available) which appeared to indicate the attribution of parcels of land on Minam I under payment of a "*tax de bornage*" of FXOF 30,000. For example, one of these documents was dated 30 October 1995, and was signed and stamped by the prefect of Rufisque in his capacity as "*Président de la Commission d'Attribution*".³⁹ It can be concluded from these documents that some form of transaction took place and that the local population apparently relied on the validity of these transactions to stake their claims on the parcels of land on Minam I and II.
196. FMO confirmed that it had always been aware of the disagreements over land ownership. However, based on an external legal opinion by the Senegalese law firm 'Mame Adama Gueye', FMO had always assumed that the land titles of the project sponsor were legally valid. This formal status has been confirmed by the government authorities and the opinion confirmed that SENELEC's legal interpretation of the land acquisition process claim was valid.⁴⁰ The ESAP from 2010 included community consultation and a grievance mechanism in order to seek more clarity on the land/compensation issues. SENELEC has always denied the validity of the claims made by the local population as did the present prefect in the interviews with the Panel.

(2) The formal land acquisition process: SENELEC expropriates and sells the land to CES

197. The present project site was selected mainly for the following reasons: the land was already government property; the site is in the vicinity of Dakar and the ocean, making coal transport easier and providing the water necessary for the cooling of the plant; and the site is in the

³⁸ Interview Takkom Jerry; Interview Mr. Loum.

³⁹ Documents presented to the ICM by the complainants.

⁴⁰ Interview FMO SO Team.

proximity of the electricity grid. Because the land was designated for industrial development it was basically uninhabited. The coal transport will become easier with the planned mineral port. The permission to use the 29ha of land for the purposes of the building of a coal power plant was granted in November 2008 by the Government of Senegal.⁴¹

198. In order to effectuate the government's claim to the land, President Wade declared the terrain between Bargny and Minam to be of "public utility", and all titles resting thereon transferable by Decree N° 2009-849 of 3 September 2009. Under Senegalese law,⁴² the government can take back control over land for public purposes, under the restraint of providing fair compensation to anyone affected by the expropriation. However, in order to be eligible for compensation, land owners have to invest in physical assets or initiate economic activities on the territory within two years after acquisition of their title; i.e. they have to have effectuated their "*ius fructus*". When no investments have been made after two years, the Government of Senegal can reclaim the land without being liable for paying any form of compensation.
199. SENELEC, on behalf of the Senegalese Government, sold the land to the project sponsor for the sum of 1,450,000,000.- FXOF on 14 October 2009,⁴³ with the latter presuming to have become the legitimate and full owner of the terrain. This was also the Lenders' understanding which was confirmed by an external legal opinion. In 2009, the government investigated the existing buildings located on the 29ha needed for the construction of the power plant and how these structures were used. Nine or ten individuals were identified with invested assets on the expropriated site. Those individuals have been compensated for a total sum of 151,350,988.- FXOF. It was believed that with the expropriation of the land occupied by those 9 or 10 individuals, the land was released of all remaining titles. However, as was also concluded in May 2016 by the LTA, the compensation process undertaken by SENELEC did not take into account the allocated land parcels for future development handed over by the former mayor of Bargny. Compensation in 2009 was limited to the legally prescribed persons with "physical structures erected at the time".
200. The compensation of these 9 or 10 individuals was carried out based on the fact that these families owned structures on the envisaged project site. As such, this compensation process should be seen as a separate process and did not confer any rights on persons claiming compensation based on the Minam I and II resettlement project. A formal investigation of the land claims from Minam I and II would have been recommended, in the view of the Panel.
201. The lack of an investigation was explained by the Prefect of Rufisque: the (former) mayor of Bargny was not authorised to issue land or property titles. The land was also not physically used after two years. While some of the people and families that received the Minam II land titles paid their fee to the prefecture⁴⁴, the present prefect denied that these land titles had ever been formally recognised by the responsible institution, i.e. the prefecture. The Panel cannot clarify this conflicting information, though it notes that the land claims of Minam I and Minam II were already public knowledge in 2009, when the first ESIA was made and when the final decision over the sale of land was taking place. The lenders were already informed about these claims through the first report of the LTA back in 2010 and should have insisted on the execution of a thorough baseline study on land ownership including the nature and quality of these claims.

(3) Demands for compensation for the Minam I and II parcels

202. Since the sale of the territory to the project sponsor, approximately 600 individuals - from the overall number of 1433 parcels - have come forward claiming entitlement to the parcels of land

⁴¹ FMO, *Full-fledged Financial Proposal*, 12 April 2010, Annex II, p. 5.

⁴² Loi n° 76-67 du 02 Juillet 1976, *relative à l'expropriation pour cause d'utilité publique et aux opérations foncières d'utilité publique*.

⁴³ LDS Report: "Bargny face à 2 Centrales Electriques à charbon", Sept 2014 – Annexe 7, p 68.

⁴⁴ The Panel were shown receipts of the prefecture, whose validity could not be confirmed by the Panel.

on either Minam I or II, and demand compensation for the loss of the right to use the territories that were given to them by the former mayor.

203. Many persons claim to be in possession of documents with both the mayor's and the prefect's stamp/approval, plus receipts of administrative fees paid to the authorities, i.e. the Prefecture (30,000.- FXOF for parcels on Minam I, 45,000.- FXOF for parcels on Minam II). These documents need further assessments of their validity.
204. Although SENELEC is not legally required to provide compensation to individuals that have not effectuated their rights within two years after their purchase, SENELEC reserved 600 million FXOF in order to compensate all persons having a *bona fide* claim on a parcel in either Minam I or II. According to the project sponsor, this is the generally accepted amount for a reasonable expropriation, though the people of Bargny and the mayor demand more. For the government and SENELEC it is clear that these are funds to help find a socially acceptable settlement of the dispute. These negotiations are ongoing. In this process, the positions of different segments of the affected population vary. From the interviews, and the public gathering with more than 200 participants attended by the Panel, it emerged that strong resistance can be detected among segments of the local population who oppose the power plant. Other factions of the population of Bargny and Minam seem to have accepted that the power plant will continue to be built and are in favour of settling this case. The major elements of the present disagreement are related to the amount of compensation and the alternative resettlement location offered by the local authorities.
205. The prefect of Rufisque informed the local communities in June 2014 of the allocation of new land, within the Commune of Bargny, which would be sizable enough (50ha) to house all the people in possession of an administrative act proving land ownership. The land is located behind the road no 1 and the highway, more than 1 km from the coast line. It has been argued that this land might be too far away and the highway is in between the new plots of land and their old neighbourhoods and the sea. Some of the fishers have therefore rejected this proposal while others have already moved to other parts of Bargny.
206. The prefect was asking why the claimants do not go to court in Senegal to effectuate their rights. During the meeting with the affected communities, it emerged that the people of Bargny are considering a case which will be lodged in a Senegalese court. The affected communities have engaged a lawyer in order to prepare their case.

(4) Final consideration

207. Senegalese law provides that the Government can reclaim allotted parcels of land without having to pay compensation when no investments have been made thereon within two years. The nine or ten families with investments on the terrain were compensated according to this rule.
208. Although the project sponsor's land title (*de jure* claim) is valid, the fact that rival claims (*de facto* claims) were made to the land before the project started, should have triggered further investigation, especially in the context of the local restraints on availability of land due to the coastal erosion. The 2009 ESIA recognised that "compensation for affected property and property rights is absolutely necessary prior to commencing the work on the construction of the power plant", and that an "exhaustive inventory of affected rights and properties should be made" (ESIA 2009, p. 179).
209. It is clear that none of the individuals that were designated to relocate to Minam I and Minam II had started to settle on the new lands. Therefore, no direct displacement was needed. Minam I and II were offered as a future area for housing in case coastal erosion continues. The recognition of a potential land rights issue in the ESIA 2009 should have triggered the application of IFC PS 5, even though, technically, "physical displacement" did not take place. The preparation of an inventory of all existing land titles prior to the start of construction could have prevented the present difficulties.

210. To sum up, the Panel is well aware of the fact that the land entitlement disagreement is not a straightforward issue, though is also of the view that the lenders could have done more to seek a greater degree of clarification of the legal situation related to land acquisition prior to their decision to disburse the first part of the loan. While studies of the legal nature of these claims were reportedly made by the project company, there was a lack of baseline data for all potential land claims and therefore the first disbursement could have been made at a time when the project was in non-compliance with IFC PS 5. The lack of baseline data on land ownership should have been a trigger for FMO to assume a more active role, for example by insisting that its client organise a census to accumulate the necessary socio-economic baseline to identify all persons with claims for compensation. This exercise would have been able to prevent much of the present disagreement on land claims.

211. The Panel concludes that the process of land acquisition was carried out in accordance with Senegalese law and regulations, and the persons having physical assets on the project site were compensated. FMO confirmed that it had always been aware of the disagreements over land ownership. However, based on an external legal opinion by the Senegalese law firm 'Mame Adama Gueye', FMO had always assumed that the land titles of the project sponsor were legally valid. This formal status has been confirmed by the government authorities and the opinion confirmed that SENELEC's legal interpretation of the land acquisition process claim was valid.

212. Nevertheless, the land titles that were issued by the former mayor of Bargny were never reflected adequately during the different phases of the project. Even if their formal legal status seems to be in question, some persons had titles with a formal confirmation of payment from the prefecture, whose correctness needed to be validated. FMO should have insisted that in addition to information provided by their own legal expertise on land transfers, a lawyer specialised in Senegalese land laws should have analysed the issue thoroughly. The disputed land claims were already mentioned in the ESIA 2009, in several reports of the LTA, and in the E&S consultant's report of 2014.

213. Such a clarifying baseline study on these land claims in the area was not made during the last eight years, even though the issues were known. FMO tried to address it in the ESAP 2010 by insisting that the project establish a grievance mechanism. However, in the Panel's view, no adequate consultation and analysis of the validity of the claims was ever made. In the Panel's opinion, the Project was non-compliant with the requirements of IFC PS 5 at both moments of disbursement. The Performance Standards would have required at least adequate consultation and communications with potentially affected persons before the start of the Project. The failure to carry out a comprehensive baseline study and additional consultation means that the Project was also not in line with FMO's Sustainability Policy which requires that open environmental and social issues can be included into an ESAP for future action, but that such issues should be dealt with in three years. At the time of the 2nd disbursement, FMO was aware of the non-compliant status of the Project, however it waived the requirements under the apprehension that open issues would be solved in a later phase.⁴⁵ The LTA alerted FMO again and again and recommended that FMO address this Project risk more comprehensively.

214. In 2016, SENELEC offered compensation to the individuals claiming land use rights on the project site, without acknowledging the legality of these claims, a position shared by FMO. The compensation has been offered as a way to solve the conflict surrounding the coal power plant. The Panel is of the view that these negotiations offer a chance to find an interim solution. The underlying problem of displacement caused by coastal erosion needs to be addressed by government action. The Sendou I project has not caused that problem, though is significantly encroaching upon the possibilities for the local communities to be relocated on the project site as

⁴⁵ The panel is aware that in 2017 the consultation and communication has substantially improved and open discussion are held about payments to solve the dispute. Such a consultation process would have been required earlier in the project development, before 1st disbursement.

promised by the former Mayor of Bargny. Some resettlement options for persons affected by coastal erosion have been offered but a more substantive programme will be needed in future.

4.4. Economic displacement

Introduction

215. A fish processing site is situated between Bargny and Minam. According to the ESIA 2009, “hundreds/approximately 500 women use the area to dry fish (sardines) using traditional methods”. Fish drying generates income for the artisanal fishing families living in the two villages. The bulk of the fish harvest is sold on local markets, a second part is for self-consumption, and a third part is exported to the neighbouring countries Mali, Burkina Faso, and Guinea. During the interviews conducted on-site, the fishers estimated that around 25 % of their income is based on these exports. The drying is mostly done by women along the whole coast line. For the fishing communities of Bargny and Minam a part of the fish drying is currently done within the 500-meter zone of the Sendou project.
216. During their unannounced site visit on a Saturday morning, the Panel members identified approximately 40 to 50 individuals spread out over the area and working in smaller clusters. The Panel was unable to assess the exact number of people making a living from that economic activity. The number observed that day was influenced by the fact that the site visit took place on a Senegalese holiday (“*Gran Magal*”). The fish is offloaded in front of Bargny and a part of it is taken by carriage via the road between Bargny and Minam to be processed by the “*femmes transformatrices*”, who dry the fish on the ground using peanut shells and pieces of carton for the smoking process. Once done, the dried fish is taken to another location behind the school of Minam, where the fish is prepared for export. According to the local population, the fish-processing sector provides for at least a quarter of the total economy in the area, and any possible disturbance of the delicate value chain created by the construction and operation of the power plant should be carefully assessed. Fish drying in the 500-metre zone is limited by the fact that parts of the land are inundated for some months each year. The group is mentioned in the ESAP of 2010 and the need to further investigate the size and importance of this economic activity has been highlighted in the LTA reports of 2014 and it was taken up in the 2014 ESAP. Nevertheless, at the end of 2016, no reliable data exists about the size of the problem, the number of persons affected, or the coping strategies which can address the problem.

Complaints

217. The complainants asserted that the development of the project violates Senegalese law by not respecting a 500-meter buffer zone for Category 1 projects between the installations of the coal power plant and nearest dwellings. Moreover, they feared the loss of livelihood for more than 1000 people drying fish at an area called ‘*Khelkom*’, located within the 500-meter buffer zone. This issue was already raised in the ESIA 2009 and the complainants claim that the project company had so far failed to come up with a sustainable solution or to avoid or mitigate the impact on this economic activity.

IFC PS 5: Economic displacement

218. IFC PS 5 (2006 edition) aims to avoid or minimise involuntary (physical and economical) resettlement wherever feasible by exploring alternative project designs. It aims to mitigate adverse social and economic impacts from land acquisition or restrictions on affected persons’ use of land by: (i) providing compensation for loss of assets at replacement cost; and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.
219. Furthermore, IFC PS5 provides that clients should aim to improve or at least restore the livelihoods and standards of living of displaced persons. When economic displacement cannot be

avoided, the client will offer displaced persons and communities compensation for loss of assets at full replacement cost and offer assistance to help them improve or at least restore their standards of living or livelihoods.

220. The client has to establish a grievance mechanism consistent with PS 1 to receive and address specific concerns about compensation and relocation that are raised by displaced persons or members of host communities. Furthermore, the client will carry out a census with appropriate socio-economic baseline data to identify the persons who will be displaced by the project, to determine who will be eligible for compensation and assistance. The client will explore opportunities to collaborate with the responsible government agency and play an active role in resettlement planning, implementation, and monitoring.
221. It should be noted that IFC PS 5 (2012 edition) provides for even more elaborate *ex ante* obligations for clients compared to the 2006 edition. For example, according to the updated PS 5, the client can take possession of acquired land and related assets only after compensation has been made available and, where applicable, resettlement sites and moving allowances have been provided to the displaced persons in addition to compensation. Decision-making processes related to resettlement and livelihood restoration should include options and alternatives, where applicable. In the case of projects involving economic displacement only, the client will develop a Livelihood Restoration Plan to compensate affected persons and/or communities and offer other assistance that meet the objectives of this Performance Standard. The Livelihood Restoration Plan will establish the entitlements of affected persons and/or communities and will ensure that these are provided in a transparent, consistent, and equitable manner. For persons whose livelihoods are natural resource-based and where project related restrictions on access envisaged in paragraph 5 apply, implementation of measures will be made to either allow continued access to affected resources or provide access to alternative resources with equivalent potential livelihood-earning and accessibility.
222. Both the LTA and the E&S Consultant apply the IFC PS 2012 edition in their reports compiled after 2012. They explained to the Panel that this is how they usually approach project assessments, as projects and standards develop over time. That being said, following the IFC PS from 2006, the standards relevant at time of project initiation, and those applicable to the Project for FMO, the client would still have had an obligation to analyse the potential economic displacement through a base-line assessment and to address the livelihood consequences of economic displacement adequately.

The 500-meter buffer zone

223. Under Senegalese law, any installation qualified as “class 1” is subject to a minimal buffer zone of 500 meter, measured from the installation and not from the fence surrounding the installation, that is classified as such.
- “Cette autorisation est obligatoirement subordonnée à leur éloignement, sur un rayon de 500 m au moins, des habitations, des immeubles habituellement occupés par des tiers, des établissements recevant du public et des zones destinées à l’habitation, d’un cours d’eau, d’un lac, d’une voie de communication, d’un captage d’eau”⁴⁶
224. The main purpose of the buffer zone is to protect surrounding neighbourhoods from potential environmental and security threats. At the moment, the size of the buffer zone is subject to political debate in Senegal, which might result in downsizing the perimeter in the future in order to better accommodate such economic activities including those of the women reliant on fish drying.
225. The zone is explicitly meant to exclude any permanent structures and activities of a permanent character. Therefore, it might be asked if the activity of fish drying is permanent enough to be no

⁴⁶ Article L 13 Senegalese Environmental Code.

longer allowed. The Panel was confronted with both views during the visit by different government authorities. There are examples of people that are allowed to pick mangos near other power plants, for example. The decisive factor for allowing a particular activity is its level of 'permanence' and how often and how long a person has to be within the safety zone to perform the activity. Agriculture, on the other hand, seem to be generally deemed too permanent in character and therefore not allowed within these zones. A definite judgement on this issue was still open when the Panel visited the area.⁴⁷

226. In order to perform activities within the buffer zone, a "Safeguard Decree" should be issued by the Minister of Urbanism. According to the information provided in the interview with the Panel by SENELEC, the Decree for this particular project is currently being decided upon.⁴⁸ This Decree is also required in order to arrange the physical demarcation of the buffer zone.⁴⁹ Whether fish drying activities are too near to the plant and will be prohibited remains to be seen.
227. The fish drying activities are contributing to the income of the affected fisherfolk of Bargny and Minam. While the Panel cannot specify the size of the contribution of fish drying and exports to local income, it is at least an important part of the livelihood of the affected families. Similarly, the Panel cannot determine the exact number of people affected (see below). Nevertheless, such information should be available from the beginning of the project planning, because the Project could lead to the economic displacement of the women affected

The Panel's findings

228. The complainants also argued that there are inhabited structures within the zone. According to SENELEC, it concerned a number of structures which had become inhabited recently. SENELEC has compensated 9 / 10 individuals for the loss of the use of their structures in 2009. The Panel concludes that, currently, no people are permanently living within the 500-meter zone but that economic activities are ongoing, which potentially must be terminated in order to meaningfully implement the 500-meter buffer zone. In the view of the Panel, any such relocation of economic activities has to be dealt with as a matter of economic displacement under IFC PS 5.
229. The complainants also argue that a health centre (at 395,29 meter), Ngadjé-NdiagaSamb, one of Bargny's outer districts (at 494 meter), and Minam's primary school (at 520,52 meter) are located too near to the project site. The Panel does not have sufficiently detailed data which is available. The health centre seems to be abandoned and the school seems to be outside the 500-meter zone.
230. In the context of the development of a mineral port on the south-east side of the Sendou I project site, the government of Senegal is contemplating the relocation of the village of Minam. This would permanently solve the issue of the violation of the 500-meter buffer zone, and might be the best solution for the people of Minam who, in the long term, will be caught between Sendou I and II and the envisaged mineral port. How this would affect the issue of a potential economic displacement of the fish-drying women from Minam and Bargny should be investigated.
231. First and foremost, the Panel members acknowledge a large difference of assessments concerning the actual number of women drying fish in the area. During the site visit, the Panel could observe at least 40 to 50 women drying fish within the 500-meter buffer zone. The mayor mentioned a number of 4000 (probably referring to the entire region), and FMO's SO Team mentioned that "only a few are actually working within the 500-meter zone". The President of "*Khelkom*", the association of "*femmes transformatrice*", assumed that about 1000 women are involved in this

⁴⁷ In 2017 CES and Senelec informed the panel, that probably the women can stay in area of the buffer zone. The panel is still unaware of a formal settling of the issue.

⁴⁸ Status of report is end of 2016

⁴⁹ LTA, December 2016, p. 16.

economic activity” which is closer to the estimate contained in the 2009 ESIA. They use the space on a rotating basis depending on whose boat had landed.

232. As lender, and in the interest of promoting IFC PS compliance, FMO should have taken steps to ensure that the Project has in place processes and actions to minimise the necessity of economic displacement, to mitigate any negative impacts, and to ensure that compensation is offered to anyone affected in their economic rights by the Project. This should happen irrespective of the number of affected persons.
233. What is more, FMO, in collaboration with the other lenders, should have insisted that its client should organise a census aimed at establishing the necessary socio-economic baseline data. This baseline data would be aimed at identifying persons in need of resettlement, and the local authorities should have been engaged to contribute to any census.
234. The complete lack of a sound baseline and understanding of the functioning of the local economy, the number of people involved, the (economic and cultural) importance attached to the fish drying activities in the area, and the potential disturbances created during the construction of the project and the operational phase, is an instance of non-compliance with IFC PS 5. The Panel notes that there are open questions relating to the permanence of this activity, and whether or not they can be maintained within the security zone after the finalization of the power plant. The issues were not adequately researched since the start of the project, despite the fact that the need to do so was mentioned in the first ESIA. FMO should have done more to press its client on this issue, particularly at the point of second disbursement.
235. The issue had been known to the lenders from the beginning of the project. The ESIA 2009 already acknowledges the existence of these fish drying activities, but then failed to address the potential problem of economic displacement. First it needs to be clarified whether the women have to stop their economic activity in the buffer zone. The ESIA furthermore mentioned that a “modernisation project” is underway, providing the women with storage facilities, child care facilities, better sheltering and delimitation of processing sites (ESIA 2009, p. 88). The problem has also been highlighted in several reports of the LTA as an unresolved and important issue. The facility does not exist yet.
236. The Panel noted that, in the meantime, the project company has allocated \$ 250,000 for community programs, which include the establishment of a fish-drying facility. Still, at the end of 2016, seven years after the ESIA 2009, nothing had been developed as an alternative for the fish drying women. In the interviews, most of them were also unaware about concrete plans and have not been consulted properly but would be eager to learn about options. So far, the allocated budget remains unused. While CES has explained in interviews that they are looking for practical alternatives such as houses for fish drying, the issue has not been solved and it was not discussed with the affected persons such as the organisation of “femmes transformatrice”.
237. For the upcoming period, as concluded by the LTA, it will be key for the project company to develop a sound baseline understanding of these activities in order to: (i) modify construction techniques or programs as necessary and reasonably practicable; (ii) consult with the relevant affected persons to inform them of the potential disturbance; and (iii) verify claims for compensation should these be brought forward in the event of loss of income/earnings.⁵⁰

⁵⁰ LTA, *Environmental & Social Monitoring Visit (ES004)*, Report, April 2016, p. 11.

4.5. Community engagement

Complaints

238. Both the complainants and the village groups that the Panel met brought up the issue of inadequate communication and consultation with relevant local stakeholders during the project. Although consultations took place within the context of the ESIA 2009, important groups were not identified and subsequently consulted, most notably the fish drying women. This was highlighted during the Panel's community meeting at the beach of Bargny. Moreover, those consulted did not fully understand the size and format of the Project. In the complaint, both groups assert that from their perspective, the project company and the local authorities had not engaged meaningfully with local communities to allow opportunities for their views and interests to be taken into account in decision-making processes.
239. Until the start of the new "Community Committee" of Bargny in September 2016, the communication and consultation around the project was minimal. What is more, up until the actual commencement of construction works in 2013, the Project and its relevant developments were unknown to most local groups. The community groups which the Panel met during the compliance review complained that they were never consulted and had vaguely heard about the project. When construction works on the project site started at the end of 2015, concerns from the local population also re-emerged.

IFC PS 1: Consultation and community engagement

240. According to IFC PS 1, the client has to identify individuals and groups that may be differentially or disproportionately affected by the Project because of their disadvantaged or vulnerable status. Furthermore, where groups are identified as disadvantaged or vulnerable, the client will propose and implement differentiated measures so that adverse impacts do not fall disproportionately on them, and they are not disadvantaged in sharing development benefits and opportunities.
241. Community engagement is an on-going process involving the client's disclosure of information. When local communities may be affected by risks or adverse impacts from a Project, the engagement process will include consultation with these groups. The nature and frequency of community engagement will reflect the Project's risks and adverse impacts on the affected communities. The disclosure of relevant project information helps affected communities understand the risks, impacts, and opportunities of the project.
242. If affected communities are subject to risks or adverse impacts from a project, the client will undertake a process of consultation in a manner that provides the affected communities with opportunities to express their views on project risks, impacts, and mitigation measures, and allows the client to consider and respond to them. If the client anticipates ongoing risks or adverse impacts on affected communities, the client will establish a grievance mechanism to receive and facilitate resolution of the affected communities' concerns and grievances about the client's environmental and social performance.
243. To conclude, IFC PS 1 requires that the client must inform potentially affected groups in advance, make them understand the impacts and address the potential impacts. A functioning grievance mechanism is also part of the communication infrastructure. It can be argued that a coal power plant, certainly among the installations entailing significant environmental and social impacts, warrants a continuous consultation and community engagement process that adheres to the highest of standards.

Consultation in the ESIA 2009

244. The ESIA 2009 indicated that consultation with all parties involved took place, including the communities of Bargny and Minam. It was reported that the local authorities were generally in favour of the Project from a socio-economic perspective. According to the ESIA 2009, the people

of Bargny were more reserved about the coal power plant, this was based on their experience of the cement factory nearby (SOCOCIM) that was already affecting the quality of the local environment. However, even under these circumstances, the people understood the country's need for energy and the potential socio-economic improvement this Project might bring along. The local population would have preferred that the Project be located on the MIFERSO site,⁵¹ which would ensure a greater level of coherence with other projects in that area.

245. Other outstanding concerns of the people in Bargny as identified through the consultation in 2009 were, among others: the fact that people in Minam had been promised parcels of land north of the site; whether the fish drying women could keep performing their activity; health risks for children related to coal; and the issue of compensation for people that needed to be resettled. Furthermore, concerns were voiced which related to: the transport of coal; the temperature of the ejected water; and the impact on artisanal fishing activities.⁵²
246. In other words, most of the concerns that have now been formulated in a complaint directed towards the Panel in mid-2016, were already on the minds of the local population in 2009 and addressed to the client and known to the lenders. Although the Project suffered from two major standstills during 2012-2013 and 2014-2015, the fact that many of these issues are still not addressed in a way that satisfies the IFC Performance Standards testifies to a lack of commitment from the side of the project developers and the local authorities. On several occasions, the lenders demanded that the project developers improve communication with affected groups and persons. Although the panel acknowledges that the Project had two major periods of standstill, the long period prior to the start of the Project would have allowed for baseline studies and to initiate an exchange with potentially affected persons as required by the IFC PS. Even if one argues that for a long period it was unclear whether the project would materialise, the baseline studies should have been initiated or finalised before the first disbursement. Alternatively, they should have been done immediately after the project was "restarted" in Autumn 2015.
247. Both the report of the E&S Consultant and the LTA reports of 2014 advised FMO to take these issues seriously. The gathering of missing knowledge by using participative communication methods with the affected communities should have been a precondition before any disbursement. Although some public outreach activities had been implemented between 2012 and 2015, as well as some community liaison activities (see below), these activities were not directed at informing the affected communities about potential impacts of the project or at initiating a common search for solutions. Several of the affected groups which the Panel met at the public event, and that are part of the second complainant group, were still not consulted by the time the Panel visited the site.
248. That being said, communication between the project developers and the local communities has improved considerably since the end of 2015.⁵³

Views on the consultation process by SENELEC, CES and the complainants

249. SENELEC confirmed that organising local consultations is a requirement under Senegalese law in order to receive project approval. A public hearing has to be organised during which the local communities affected by the Project are invited to present their views. Finally, based on the outcome of these procedures, the Minister has to make a decision. SENELEC is of the opinion that, when these hearings came to an end in 2009, they gained the approval of the local population for the construction of the power plant, despite any concerns that were voiced. However, it should be noted that according to the communities affected, the outcome of these hearings and the conclusions attached to them are subject to interpretation, were not discussed with them, and

⁵¹ A plot of land reserved for the development of industrial activities bordering the project site.

⁵² ESIA 2009, pp. 94-96.

⁵³ The panel is aware that particular in 2017 after the Panels visit communication has been improved substantially.

therefore subjective in nature. The legitimacy of these formal meetings was questioned by the complainants.

250. The project sponsor claimed that even during the “project hiatus” (i.e. the terminology adopted for the period between November 2012 and August 2013 during which the implementation of the project effectively came to a halt due to disagreements among the shareholders), the project company kept performing community outreach activities. Despite uncertainties relating to financial backing and the overall future of the Project, the project company continued to carry out some community outreach. It must be indicated here that no documented proof was provided of such activities for that particular period.
251. According to documentation provided by the project company, including photographic material, the following community projects and activities were carried out from May 2014 onwards. For example, in May 2014, the project company supported the reconstruction of the mosque of Minam village, and in December 2014, the company provided school supplies to the school of Minam. Such activities have been carried out ever since and are still ongoing (and furthermore include: safety trainings; “Ramadan food packages”; classroom furniture; flood defences; pilgrimage support; celebration of international environment day; planting of trees; donation of cement/building materials).
252. In 2015, the project company hired Mr. Faeye, a retired police officer with good connections in the communities, to act as its part-time community liaison in order to step up its community outreach. Furthermore, the project company put in place a grievance mechanism in the form of suggestion boxes on the project site as well as via the community liaison. The project company, in cooperation with Earth Systems, is in the process of improving this mechanism. So far, one complaint was received via this mechanism, in which the mayor raised concerns about the project’s water discharge in the nearby lagoon.
253. From the interviews, it emerged that the complainants are of the opinion that they were not consulted in a way that addressed their main concerns. What is more, in cross-referencing the list provided by the project company with the complainants from Bargny, there appear to be great differences in terms of what the parties qualify as “community engagement”.
254. The representative of the affected communities of Bargny provided the Panel with documents that confirmed their participation in three meetings: the 28 February 2009 meeting (ESIA public hearing); the 28 July 2014 meeting (E&S consultant), and a 5 August 2014 meeting (E&S consultant), which was not included on the list provided by the project company.
255. The project company seemed to have included several titles for the different local dignitaries that were incorrect in the eyes of the complainants, who believed that the project company did this in order to claim that they had met with many different local leaders. Furthermore, the complainants reiterated their claim that the project company had never approached them in a way that acknowledged the existence of different interest groups within the local communities, such as the fish drying women and the fishermen.
256. The other complaining party, the environmental and cultural NGO from Bargny “Takkom Jerry”, felt excluded from all decision-making procedures. They were never informed by the mayor of the meetings that were organised on his behest from the time when he took office (September 2014). From the list of community meetings provided by the project company, it emerges that Takkom Jerry has twice participated in these meetings: once in January 2014, and once in September 2015. The latter was confirmed by the complaining party after inquiries were made by the Panel.

The Panel’s findings

257. The Panel is of the view that the most comprehensive contact about the Project with potentially affected groups was done in 2009 during the ESIA. After that, communication about impacts with affected communities did not happen as required by the IFC PS. The fact that first formal contact

with the fish-drying women was only made in January 2016 by the project company reveals how the economic and social impact of the coal power plant was underestimated by project developers and lenders. One positive note is that the first meeting happened shortly after the new project sponsor started at the end of 2015. According to IFC PS 1, the client has to identify individuals and groups that may be disproportionately affected by the project. In this regard, the failure to identify the *femmes transformatrice* as such a group, can be considered an instance of non-compliance with IFC PS 1.

258. The issue of economic displacement and the general future of the fishing communities of Bargny and Minam have been on the table since the adoption of the ESIA 2009. The fact that, at the time of this report, seven years have passed without a thorough baseline study and any search for a definitive solution for the future of these women and the value chain along which they operate should be considered a failure from the side of the project developers, the local authorities, and the lenders. FMO insisted continuously that community relations should be improved. They insisted that a community liaison needs to be employed by the project sponsor. Nevertheless, at the moments of the 1st and 2nd disbursement, the project was in non-compliance with its own policies due to the project company's failure to adhere to IFC PS 1, more specifically because of the long period of non-implementation of an adequate consultation policy with local and potentially affected communities.
259. Another striking conclusion that can be drawn from the list of community meetings is that between February 2009 and January 2014, no single meeting with community representatives was held. Even taking into account FMO's explanation that the concrete start of the project was late 2013, it means that five years passed without any meaningful consultation with the local communities. Therefore, it is not surprising that the local community had almost forgotten about the project when it restarted at the end of 2015.
260. It can be argued that during the first project hiatus (November 2012 – August 2013), the shareholder dispute diverted all attention since the continuance of the project was at stake, shifting the focus from implementing E&S policy to saving the coal power plant. However, even when accepting this line of defence, this still leaves a period of no interaction with the local communities of four years that is left unaccounted for before the first disbursement. It is true that once the project was back on track, and the new shareholder stepped in, the process of community engagement was revived, as can be seen from the list of meetings.
261. As concluded before, the potentially severe environmental and social implications of a coal power plants warrant a continuous consultation process of the highest standard. Such a process was not in place in the present case, and as a consequence the project has been in non-compliance with IFC PS 1 for most of the time. Again, it must be noted that FMO has been pushing the client to intensify local contacts. The 'restart' of the project in 2015 would have been an opportunity to undertake the necessary baseline studies on the potential impacts on affected communities and to take the results of such baseline studies as a starting point for a renewed communication with the affected communities. It is the view of the Panel that FMO should have insisted that such a baseline study be done in time, and in compliance with IFC PS 1.1 which states: "[...] the system entails the thorough assessment of potential social and environmental impacts and risks from the early stages of project development." By not insisting on a solution to the situation constitutes non-compliance with FMO policy from the moment of the 2nd disbursement.
262. An important step to foster communication was established by the new mayor of Bargny in September 2016, when a new 'Community Committee' was established. After the initial multi-stakeholder meeting on 20 September, a group of 40 representatives was nominated by the Mayor to take a seat in this Committee in order to discuss the different project-related grievances. The project company and SENELEC were also taking part in these exchanges.
263. To conclude, regardless of the accuracy of the list of community outreach moments as provided by the project company, the Panel recognised that a great difference exists between the

complainants and the project company in their respective interpretations of the concept of “community consultation”. This conclusion is in line with the Panel’s previous assessment that the project company’s understanding of E&S implementation, especially in the early stages of the project, could be qualified as limited and that in this regard, the project company had yet to make significant progress.

264. The complainants are of the view that the meetings listed were either: not an accurate reflection of who was present; not aimed at addressing their concerns; not aimed at identifying the different economic groups; or of a very informal character. The Panel is of the opinion that there has been a lack of a structured approach to communication and participation. Such an approach might have consisted of regular meetings with local communities, and would have been aimed at identifying the concerns of the different economic groups based on a consolidated baseline study. Further, the lack of a community grievance mechanism from the outset is not in line with important elements of IFC PS 1 and 5.
265. Regardless of the number of meetings Takkom Jerry was invited to or participated in, the fact is that the NGO felt compelled to act upon what they perceive as a failure by the project developers to address the concerns voiced by local communities.
266. That being said, it is expected that the Community Committee, in which the two complainants from Bargny (Mr. Wade and Mr. Guye) have a seat, has helped to improve communication. It is worth noting that in its December 2016 report, the LTA noted that “the project sponsor appears to make a significant contribution to the Local Community and is committed to making a positive contribution where possible”.⁵⁴

4.6. Cultural issues

Complaints

267. The complainants also referred to impacts on their cultural heritage. They argued that the Project would potentially block access to an elementary school in Minam if it is included in the security zone. Furthermore, the complainants asserted that the Project would limit their access to ‘Banoukhba’ (a baobab tree), a sacred place located on the project site where the protective spirit of the village resides. Finally, the complainants argued that the Project impeded access to a cemetery located between Minam and Bargny. The complainants were arguing that the impact on their cultural heritage was not adequately assessed or mitigated and that this constitutes a violation of IFC PS 1 and 8.

IFC PS 8: Cultural issues

268. IFC PS 8 requires a good consultation process with communities and standards for treatment of cultural sites: “Where a project may affect cultural heritage, the client will consult with affected communities within the host country who use, or have used within living memory, the cultural heritage for longstanding cultural purposes to identify cultural heritage of importance, and to incorporate into the client’s decision-making process the views of the affected communities on such cultural heritage. Consultation will also involve the relevant national or local regulatory agencies that are entrusted with the protection of cultural heritage.” (IFC PS, 2006, 8, para 6).

Results of the site visit

269. According to the data available to the Panel, the school of Minam is located 520 meters from the coal power plant and should thus be able to continue to operate. The issue has probably been raised by the complainants because of the lack of communication between the project company and the affected communities, resulting in a lack of any information about the future of the

⁵⁴ WSP Parsons Brinckerhoff, *Sendou 125mw power Plant, Senegal: Environment & Social Monitoring Visit; Construction Phase Monitoring ES005*, 1 December 2016, p. 2.

school. The Panel sees that problem as related to the problematic communication patterns during project implementation. With the creation of the new mineral port, apparently the whole village of Minam might be in need of relocation, including the primary school. The assessment of this additional change is beyond the scope of this report.

270. The case of the cemetery between the villages of Minam and Bargny represents another example of poor communication between the local communities and the project company. The cemetery might be affected by the construction of the water intake and outflow system of the coal power plant, depending on the final design of the cooling system. The Panel could observe during the visit that the cemetery is to a large extent already destroyed through coastal erosion. The Panel also notes that there was no adequate information exchange with the communities about the future of the cemetery and the question if it will be affected by the construction of the water intake and cooling system. The Panel received different information regarding how and if the pipes will be built and if the cemetery will be affected.
271. The Panel notes that, even if the cemetery will most likely be destroyed by coastal erosion, IFC PS 8 would have required dialogue on what to do with this cultural heritage site, given it might be affected by the construction of the water intake and outflow system, depending on the new cooling system. It is again an issue of exchange, communication, and community participation. An early offer to help safeguard the graves due to the threat of coastal erosion would have been a collaborative measure which included affected communities.
272. With regard to the ability to have continued access to the Baobab tree, which is perceived as being sacred by the local community, the Panel observed that the tree is indeed located on the site of the power plant. The project company assured the Panel that all villagers would have unfettered access to the tree and would be allowed to worship their spirits there if they wish to do so. A community priest, whom the Panel met in the Barney assembly on the last day of the Panel's visit, asserted that she was denied access to the tree on several occasions, for example during the night when the construction site is closed. The Panel is of the view that the project company is trying to address the issue in a serious way and that there should be sufficient room to find a solution acceptable to all parties. Again, more communication with the affected community in Bargny would have been helpful and is needed here.

The Panel's findings

273. The presence of cultural issues in the construction area and the buffer zone triggers the application of IFC PS 8, which requires consultation with the affected communities aimed at understanding their cultural interests, and at finding adequate mitigation measures. The three cultural issues are not considered of "critical cultural heritage quality"⁵⁵, which would hinder the project developer's ability to "damage, alter, or remove cultural sites".
274. Given the overall inadequate consultation process with the affected communities, these issues have not been solved in a timely manner and during adequate moments of the project's development. Concerning access to the Baobab tree, the project company is trying to be transparent and cooperative.
275. The Panel concludes that the consultation and communication with affected communities regarding these issues were deficient and did not meet the threshold for adequate consultation under IFC PS 8. FMO has insisted through the Project that communication be improved. They should have more formally insisted that such consultation took place, particularly during the early stages of project development.

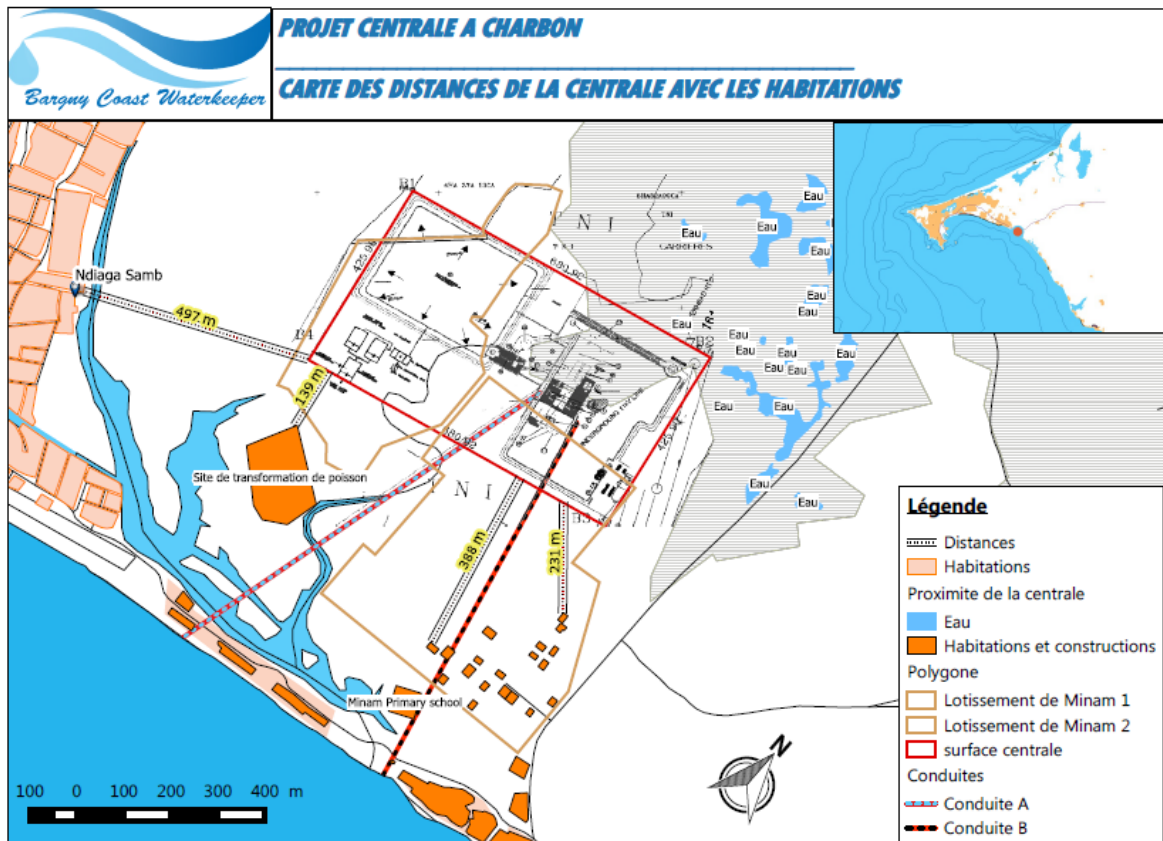
⁵⁵ IFC PS 8, par. 8.

5. Annexes

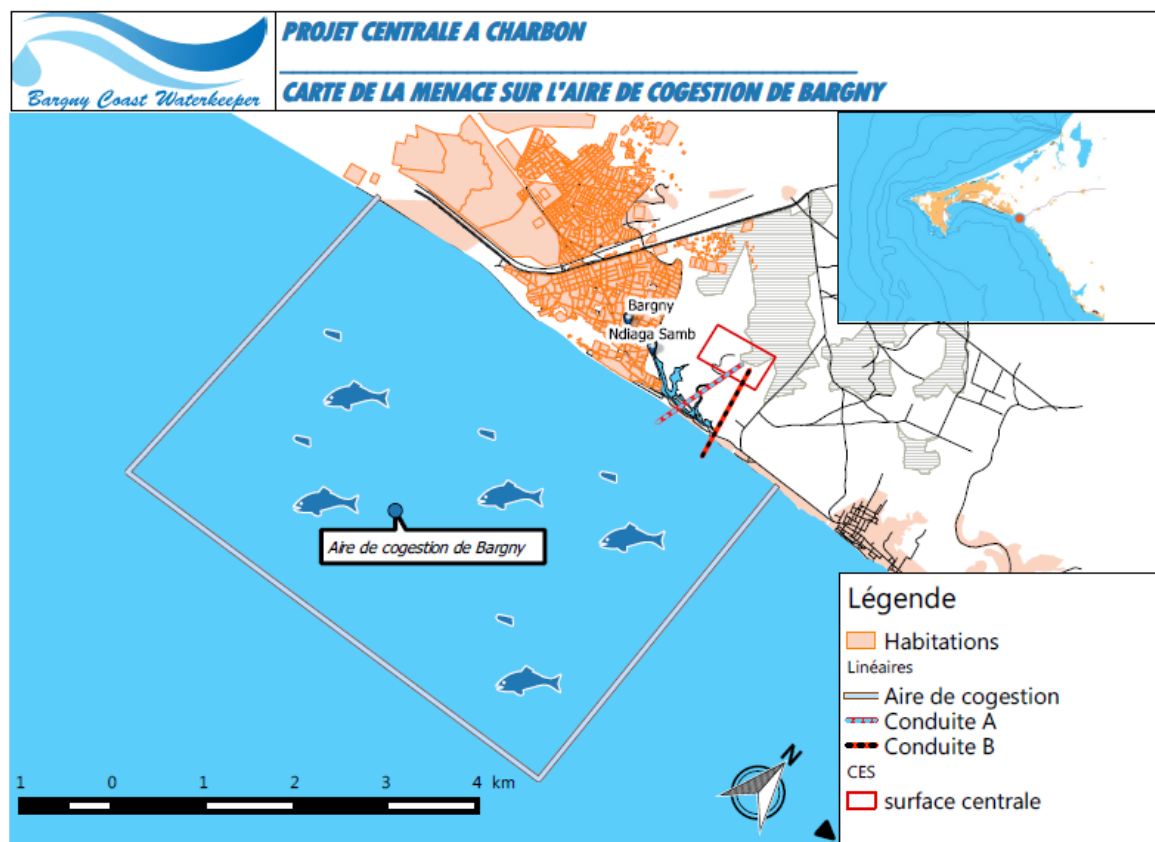
Annex I List of interviews

Date	Interviewee
13 September 2016	FMO SO Team
4 October 2016	Lumière Synergie Développement/SOMO/Both Ends
17 October 2016	Quantum Power
17 October 2016	WSP Parsons Brinckerhoff
20 November 2016	Lumière Synergie pour le Développement
21 November 2016	Deputy Head of Mission Dutch Embassy Mrs J. Frantzen
	Ex-PM Mr. Lamine Loum / Mr. Mazide Ndiaye Société Internationale d'ingénierie et d'Etudes de Développement en Afrique
	World Bank
22 November 2016	CES, Engineering & Environment Services
	Quartz Afrique
	Mayor of Bargny, Former Head of Police, Directeur du Cabinet
	Prefect of Rufisque
23 November 2016	Takkom Jerry (Complainants I)
24 November 2016	Senegalese Centre for Human Rights
	SENELEC
25 November 2016	Earth Systems (Consultancy local partner)
	Ministry of Environment and Sustainable Development
26 November 2016	collectif des communautés affectées de Bargny (complainants II)
18 January 2017	FMO SO Team
18 March 2017 (call)	WSP Parsons Brinckerhoff

Annex II Overview of Sendou I project area



Annex III Aire de Cogestion de Bargny



Annex IV Key elements of IFC PS 1 'Social and Environmental Management System'

IFC PS 1 entails the establishment and maintenance of a Social and Environmental Management System appropriate to the nature and scale of the project and commensurate with the level of social and environmental risks and impacts. The System must entail the following elements:

- i. *Social and Environmental Assessment*; considering in an integrated manner the potential social and environmental (including labour, health, and safety) risks and impacts of the project. The Assessment process must be based on current information, including an accurate project description, and appropriate social and environmental baseline data; Risks and impacts will be analysed in the context of the project's area of influence. Risks and impacts will also be analysed for the key stages of the project cycle, including preconstruction, construction, operations, and decommissioning or closure. Where technically complex issues are involved, project sponsors may be required to retain external experts to assist in the Assessment process. Projects with potential significant adverse impacts that are diverse, irreversible, or unprecedented will have comprehensive social and environmental impact assessments. This assessment will include an examination of technically and financially feasible alternatives to the source of such impacts, and documentation of the rationale for selecting the particular course of action proposed.
- ii. *Management program*; Taking into account the relevant findings of the Social and Environmental Assessment and the result of consultation with affected communities, the client will establish and manage a program of mitigation and performance improvement measures and actions that address the identified social and environmental risks and impacts. Where the client identifies specific mitigation measures and actions necessary for the project to comply with applicable laws and regulations and to meet the requirements of Performance Standards 1 through 8, the client will prepare an Action Plan.
- iii. *Organisational capacity*; The client will establish, maintain, and strengthen as necessary an organisational structure that defines roles, responsibilities, and authority to implement the management program and the Action Plan.
- iv. *Training*; The client will train employees and contractors with direct responsibility for activities relevant to the project's social and environmental performance, including the implementation of the Action Plan.
- v. *Community engagement*; establish an on-going process involving the client's disclosure of information. When local communities may be affected by risks or adverse impacts from a project, the engagement process will include consultation with them. The nature and frequency of community engagement will reflect the project's risks to and adverse impacts on the affected communities. For projects with adverse social or environmental impacts, disclosure of the Assessment document should occur early in the Social and Environmental Assessment process and, in any event, before the project construction commences. If the client anticipates ongoing risks to or adverse impacts on affected communities, the client will establish a grievance mechanism.
- vi. *Monitoring*; the client will establish procedures to monitor and measure the effectiveness of the management program.
- vii. *Reporting*; Internally, senior management in the client organisation will receive periodic assessments of the effectiveness of the management program. Externally the client will disclose the Action Plan and progress on implementation to the affected communities.

Annex V Draft Findings of LTA Ambient Air Dispersion Modelling, Sendou Unit 1

Pollutant	Air Quality Threshold (ug/m3)			Modelled Plant Impact on Ambient Air Quality (ug/Nm3) ^(C)	
	Averaging Period	Senegalese Limit	WHO Guideline ^(A)	Max. Concentration	No. Exceedances
Nitrogen Dioxide	1 Hour	200	200	20.4	0
	Annual	40	40	1.90	0
Sulphur Dioxide	10 Minute	-	500	245	0
	Daily (24 Hour)	125	125 (Target 1) 20 (Guideline)	28.1	0 (Against Target 1)
	Annual	50	30 (Agricultural Crops) 20 (Ecological Impacts)	8.0	0
Carbon Monoxide	Daily	30,000	-	N/A ^(D)	-
	8 Hours	-	10,000	N/A ^(D)	-
	1 Hour	-	30,000	N/A ^(D)	-
	30 Minutes	-	60,000	N/A ^(D)	-
	15 Minutes	-	100,000	N/A ^(D)	-
Particulate Matter (PM ₁₀)	Daily	260	150 (Target 1) ^(B) 50 (Guidelines) ^(B)	0.94	0
	Annual	80	70 (Target 1) 20 (Guideline)	0.27	0
<p>Notes:</p> <p>Taken from WHO Air Quality Guidelines Global Update, 2005 except Annual SO₂ for vegetation which are taken from WHO Air Quality Guidelines for Europe 2000.</p> <p>Assessed as 99th Percentile of Daily Means within a Year.</p> <p>Projected Plant Emissions impacts on Ambient Air Quality modelled using five years' of meteorological data (2012 – 2016)</p> <p>The maximum impact of Sendou Unit 1 on ground level concentrations of carbon monoxide is less than 0.1% of any relevant standard, including all WHO guidelines and the Senegalese Ambient Air Quality Standards (AAQS), across all applicable averaging periods; and therefore, is readily classified as insignificant. The background concentration amounts to less than 10% of the AAQS and, as such, no significant effects are likely whether Unit 1 of Sendou is operating or not.</p>					