

Environmental and Social Data Sheet

Overview

Project Name:	Senegal River Valley Rice
Project Number:	2014-0560
Country:	Senegal
Project Description:	The project encompasses phased investments to set-up a vertically integrated agri-food company near Saint-Louis (Senegal). The investments comprise the establishment of a rice farm (4,125 ha [gross]) and an industrial site with a rice mill and storage facilities. The irrigation infrastructure will be designed to enable rice growers in the project's catchment area to access irrigation water for private use.
EIA required:	yes
Project included in Carbon Footprint Exercise ¹ :	no

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project involves activities to transform marginal and degraded alkaline arable and pasture land into irrigated paddy rice fields. A project in the EU with similar technical characteristics would fall under Annex II of the EU EIA Directive 2011/92/EC. The investment in the rice mill does not fall under either the Annexes of the EIA Directive. However, under national legislation, a full environmental and social assessment (ESIA) was required.

The African Development Bank (AfDB) provided project preparation support to the promoter to make sure that the project meets AfDB's Environmental and Social Safeguards. The corresponding summary fiches were published on the AfDB website in August 2015.

A strategic environmental and social impact analysis for the overall investment programme was carried out in 2013. In addition, a full ESIA which included an ESMP (Environmental and Social Management Plan) for the first phase of the project was made in 2014. The mandatory official public hearings took place in August 2014. The competent authorities issued the environmental permit for a first rice production zone comprising 2,024.5 ha of land and for the rice processing site in November 2014. At the request of the EIB, the promoter has amended the ESIA and ESMP to take into consideration the impacts of the rice field developments of the neighboring farmers in the project area.

The second phase of the project will be required to undergo an additional environmental and social permitting process. The disbursement of the tranches of the loan related to these investments will be conditional to realization of these permitting activities in line with the EIB E&S standards.

The first phase of the Project has been approved by SAED² within the frame of the masterplan for sustainable water resource management developed by Senegal carried out for the Senegal River basin management plan (in French SDAGE³). The second phase is also located within areas earmarked in the masterplan for development and will make use of infrastructure developed by the Senegalese Government (through SAED) in collaboration with

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

² SAED: Société d'Etat, pour l'Aménagement et Exploitation du Delta.

³ SDAGE : Schémas directeurs d'aménagement et de gestion des eaux.

MCC (Millennium Challenge Corporation). Overall, the SAED permit ensures permanent water allocation to the project (including its riparian farmers) within the SDAGE and shields it from future competitive water uses for irrigation. Abstraction rights are within the sustainable water allocation to Senegal for irrigation.

The northern part of the development is adjacent to the Senegal River branch Gorom Aval that separates the Parc National des Oiseaux de Djoudj (PNOD) from the mainland delta. The PNOD is a UNESCO World Heritage site and a RAMSAR site. The authority governing the natural park was involved in the ESIA procedure from the signing-off on the ToR to the public consultation. The final environmental permit required a non-objection of the Natural Park's Directorate. The project has no direct influence on the Park or its hydrology. Potential indirect effects, such as the use of agrochemicals, or risks to the aquatic fauna at the water abstraction point at the Gorom Aval have been analysed together with all other risks in the ESIA and mitigating actions earmarked in the ESMP. No other natural conservation sites are affected by the developments related to the project.

The implementation of the ESMP contains a series of compensation and mitigation measures and is under the supervision of "Division Régionale de l'Environnement et des Etablissements Classés" (DREEC) de Saint-Louis and will be monitored by the EIB which will finance the investment. The first monitoring visit to the project by DREEC took place on June 18, 2015. Findings have been appropriately addressed by the Promoter

The project company follows a socially responsible investment approach to guarantee the project's long-term success. Land acquisition is in line with the VGGT-FAO guidelines and will not induce any physical resettlement of people from their original places of residence. A compensation package has been agreed in multiple consultation sessions with the riparian communities affected by phase I. This will add to the direct monetary compensation agreed with the former land use right owners.

With the agreed environmental and social management plan in place, the project is considered acceptable for financing by the Bank from an environmental and social perspective. Nevertheless, it will require additional environmental and social monitoring to ensure that mitigation measures are properly implemented in the medium and long term and that investments of phase II are carried out in compliance with EIB's Environmental and Social Standards and national law.

Environmental and Social Assessment

Environmental Assessment

The rice mill will be a green field development at a distance of 620 m distance from the closest village. The promoter is using best available techniques at international level, aiming at reducing the environmental footprint, with acceptable safety standards at the rice mill and maximum potential water savings in rice cultivation. The system design for the first phase of the development will allow irrigating in 82% of the area gravitationally, i.e. without pumping.

As per national regulations, the ToR for the EIA were sent to the competent authorities for approval in October 2013. With the acknowledgement of the competent authority, the promoter started to refurbish and expand the water intake from the Gorom Aval and the main canal to allow transforming a limited amount of land with the aim to validate cultivation systems under heavily saline soil environments and test and multiply different rice varieties. These testing activities involved 52 ha of cultivated rice in the 1st semester 2014 and 165 ha in the second cycle from August to November. This surface is located within areas earmarked in the masterplan for sustainable water resource management of the Senegal Delta. Environmental authorities participated in workshops and hearing sessions on site in March 2014 and August 2014 and were regularly informed of the developments.

The River Basin Management Plan of the Senegal River (in French SDAGE) was developed with the financial support of the EU and is fully endorsed by the five riparian States in 2011.

With the approval of the SDAGE, the States also established a permanent control commission with representatives of the different States (OMVS). According to the SDAGE, the Senegal River has a broad surplus in supply of water. Current uses for irrigation along the whole river basin amount to 1.45 bn m³ (of which 1.1 bn m³ within Senegal) out of the 22 bn m³ of average water flow per year. The SDAGE has estimated a level of sustainable water abstraction⁴ from the river for irrigation of around 4.6 bn m³ which is about 3.5x current use of water for irrigation. In Senegal the OMVS and the government authorities commissioned the public entity SAED with the development and implementation of a sustainable water resource management master plan for irrigation from the Senegal River so as to make use of the important water allocation foreseen within the SDAGE. This plan shall ensure the sustainable use of water for irrigation within the delta. To control abstractions and avoid overexploitation of the resource, it has established a water allocation and dispute settling system. SAED is responsible for the approval of new irrigation projects and the allocation and control of water use and water drainage rights for all users on the left bank of the Senegal River. It is also in charge of the communication of the water demand forecasts for irrigation in the Delta to the OMVS to enable an efficient management of the river flow regulation systems.

The PNOD functions as a winter shelter for many migrant birds from Europe. The land in the proximity of the park is predominantly dry, alkaline, partially degraded Sahel steppe land used for pasture and marginal agriculture. The cultivation of paddy rice can offer additional shelter and areas for feeding to the fauna of the park and is therefore not in conflict with its biodiversity conservation objectives. The ESIA has identified a series of potential indirect impacts that can be mitigated and an ESMP that has been endorsed by the Senegalese authorities has been put in place. A gap analysis with an enhanced focus on the assessment of potential impacts on the PNOD's biodiversity and hydrological balances has been commissioned by the EIB. The analysis confirmed the ESIA conclusions with respect to the low risk of direct impacts of the project on the park's biodiversity and its hydrology. It issued a series of recommendations with regards to additional measures foreseen in the ESMP of mitigating the risk or indirect impacts, in particular with regard to the use of agrochemicals by the project. The recommendations have been built into a revised ESIA and ESMP developed by the promoter. An integrated pesticides and fertiliser management plan has been prepared and is being implemented by the operator. This guidance document has been sent for non-objection to the lenders, establishes an annual reporting requirement and will be updated on a yearly basis. Only active ingredients that can be legally used in the EU will be eligible for their application in the areas under the control of the project company. The corresponding undertaking condition will be included in the finance contract to make sure the promoter meets its monitoring and reporting requirements and continues to implement it during the project's lifetime.

The project generates greenhouse gas emissions. The main sources of greenhouse gases are the diffuse emissions of methane from the paddy fields due to the decomposition of the crop residues in a flooded anaerobic environment. These emissions are partially offset by the carbon sequestration that also will take place at the same time on land that previously had very low content of organic matter. Other important emissions are related to the fertilisation activities and the energy demand of the equipment at farm and rice mill level. As rice is produced and commercialised locally instead of imported from Thailand, the emissions from transporting an equivalent amount of white rice to Senegal will be avoided. The calculated GHG emissions for the project do not reach the methodology thresholds for the EIB Pilot Exercise as defined in the EIB draft Carbon Footprint Methodologies (above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings).

Social Assessment

⁴ Sustainable water demand in the sense of minimum water that would be available for irrigation in 9 out of 10 years after deducting from the total river flow the basic requirements to meet human consumption, ecological flow and contribution to aquatic ecosystems like the Park des Oiseaux and minimum flow to guarantee fluvial ship traffic.

The first round of transfer of land use rights to the promoter is deemed compliant with EIB's Environmental and Social Standards and has been approved by the competent Senegalese authorities. No physical resettlement was required in the first investments. The promoter followed an inclusive and participatory strategy in negotiating its access to land use. The approach was implemented successfully and a series of rounds of consultation and comprehensive stakeholder engagement led to the transfer of land use rights for the first 2,024.5 ha [gross]. According to the people involved, the process was fair and transparent and the compensation package agreed with the promoter is well accepted (please see "Public Consultation and Stakeholder Engagement"). Beside monetary compensation payments to previous right owners, the compensation package includes, for example, provision of drinking and irrigation water to riparian villages, professional formation schemes, and social amenity investments (e.g. football pitches). According to the affected communities, the development of the project itself is further seen as a real opportunity to revitalise activities in the area and to reduce unemployment and poverty in rural areas. This positive perception of the project will allow the promoter to successfully continue the implementation of the project.

At the operational level, the ESMP agreed with the riparian communities foresees compensation activities for the shepherds that currently hold livestock in the area. The elements foresee that livestock holders and communities are allowed to take up to 20% of rice straw out of the fields for each crop cycle. Furthermore, the project design establishes livestock passage areas and the main service roads will be open to local communities for passage. The promoter will put in annual allocations into a fund that will co-decide future investment allocations with the communities. The target would be to continue and develop the social work already started.

As the primary responsibility for all social issues lies with the project company, a specialist on environmental and social matters was hired. The specialist's main responsibilities are monitoring the implementation of the social action plan and assisting the management in grievance procedure.

The promoter has also put in place a formal strategy and guide for the prevention of conflicts and has established a grievance mechanism.

Public Consultation and Stakeholder Engagement

The first phase of the project has undergone mandatory public hearing related to the environmental permitting process that was organized by the regional government authority (*sous-préfecture*) in the commune de Diama on 30 August 2014 after being announced in the local press and on the radio.

The project is further subject to several public consultation procedures within the framework of the land use rights acquisition procedures and for the general engagement with populations in the area of influence of the project. The official consultations with land owners that are within the 2 024.5 ha for which land use rights have been acquired by the promoter were carried out with the relevant communities with facilitation of the Commune of Diama and Ross Béthio. The meetings were held from 25 to 31 October 2013 and from 10 to 17 August 2014.

These formal actions were accompanied by numerous information sessions with the population of all the seven communities that lie in the area of influence of the project.

The statements in relation to the project by the different stakeholder demonstrate an almost generalised sense of satisfaction with the approach and initiative of the promoter who has complied with the established rules and promoted a broad dialogue among stakeholders of the project. This inclusive approach contributed to mitigating the risk of resistance in relation to negotiations regarding land issues.

Consultations with regard to the transfer of land use rights and environmental permits for the area to be developed will be held once the promoter has identified suitable land.

Other Environmental and Social Aspects

Impact on vegetation following the clearings on the site of Djeuss: the clearing for the needs of 2,024.5 ha of agricultural development will contribute to the reduction of biological resources typical of the Sahel type of vegetation on saline terrain of the delta which has been used as land for pasture and some limited agriculture in the past. An afforestation rate of 2% corresponding to the area to be cleared has been agreed with the Forest Department in the frame of the ESIA consultation process. For the 2,024.5 ha plot this amounts to 40.5 ha with a total afforestation density of 336 trees per hectare, which will be replanted mainly in areas close to the villages. Afforestation will also restore the lost sources of firewood estimated at 16m³/ha.

The AfDB and EIB have required that the promoter prepares procedures of good rice farming practices, including labour standards that will be applied to the operation of the rice farm. These are also making reference to the good agricultural practices related to sustainable, water efficient rice management and are considered to be in line with EU standards. Similarly, the promoter will prepare procedures of good practices of rice storage and milling (including applicable labour standards) for the operation of the rice mill. The procedures handbook will make reference to quality, hygiene and safety procedures in the operation of rice processing plant, which have to be at the level of EU standard. The corresponding undertaking conditions will be included in the finance contract to ensure that the promoter follows these procedures to the satisfaction of the Bank.