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Ministry of the Environment and Sustainable
Development

DEPARTMENT OF ENVIRONMENT
AND EDUCATIONAL
ESTABLISHMENTS

REPUBLIQUE DE SENEGAL



MINISTRE DE L'INDUSTRIE
ET DES PMI




UPDATED STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE SOUTH AGRO-INDUSTRIAL PROCESSING ZONE PROJECT (PZTA-SUD OR AGROPOLE SUD)

INTERIM REPORT



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EXECUTIVE SUMMARY

1. BACKGROUND, OBJECTIVE AND MAIN ACTIVITIES OF PZTA-SUD

The Government of Senegal, with the support of UNIDO, AfDB, IsDB and GCF, is preparing the establishment of a Food Processing Zone Programme (PZTA-Sud) in Casamance to provide decisive support in reviving economic activities in the southern part of the country. PZTA-Sud or South Agro-pole, which is part of the Emerging Senegal Plan (ESP) is aimed more especially at sustainable prospects in the rural sector, which accounts for a huge percentage of employment of the Casamance population and which offers short- and medium-term development opportunities of the region. This sector has significant potential as well as the capacity to create a synergy between other sectors of the economy, especially agro-food industries and to serve as a lever for other sectors such as transport and trade.

The key activities of the South Agropole mainly concern the following components:

- A key module which will be located in Adéane, a village located along national highway N6, some 30 km from Ziguinchor, in the Ziguinchor Department which will house services and actors specialised in administration, trade and logistics, skills and training, energy and the environment, financing and communications, maintenance and basic social services;
- Three regional modules with processing and service facilities will be gradually developed. The Ziguinchor, Sédhiou and Kolda regions will host the three modules;
- Five departmental platforms with facilities for the collection and packaging of raw materials. These satellite sites will serve as assembly and possibly pre-processing centres before the products are sent to the regional modules and/or the central module in Adéane; and
- The construction/rehabilitation of 230 km of access roads to the modules and production areas.

These PZTA-Sud components are reinforced with support from the Green Climate Fund (GCF) whose main activities are:

- Construction of post-harvest facilities (storage, drying, processing, conditioning warehouses for basic food crops, and powered by solar energy (planned installation of 2,834 kW of solar energy);
- Promotion of local small-scale irrigation through the establishment of drip irrigation systems powered by solar pumps to increase production;
- Creation of about 20,000 ha of forests managed by farm households in a sustainable manner to generate income; and
- Installation of 3 MW of renewable energy from biogas production or about 6,682.2 m³ of biogas digester to treat livestock effluents and produce biogas for heating or electricity generation.

Though the potential positive impacts are much greater, the fact remains that the activities planned under the South Agro-pole are likely to generate negative effects on the environment during implementation or during operation.

- The sites to host the main module, the regional modules and the departmental platforms have been identified. On the other hand, the sites to host the activities planned under the GCF are not yet well defined. In addition, for all PZTA-Sud activities, the work to be carried out is not specified at this stage of the process to set up the Agro-pole. The techniques and technologies to be adopted are also not yet defined. As such, it is envisaged to prepare an SESA to ensure that the environmental and social concerns of future project activities are taken into account from planning through implementation and monitoring/evaluation. The Environmental and Social Management Framework Plan (ESMFP) resulting from the SESA will guide the Agro-pole's activities so that environmental and social issues are considered and managed in all activities implemented.

2. KEY ENVIRONMENTAL AND SOCIAL ISSUES IN THE AGROPOLE AREA

The project area is marked by a number of environmental and social issues, including:

- gradual land degradation (salinization, erosion, silting of the valleys and unsuitable farming practices);
- gradual salinization of the land;
- water and wind erosion;
- declining forest potential;
- land conflicts between natives and settlers over land occupation and use;
- sustainable water resources management;
- social conflicts relating to land management, especially those between farmers and herders relating to livestock grazing and access to water;
- parasitism of fruit trees, especially the special cases of cashew and mango trees;
- effects of climate change.

3. LEGAL AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL ASSESSMENTS IN SENEGAL

In order to prepare the body of documents that will enable the African Development Bank and GCF to endorse this request and to comply with national regulations on environmental and social management of projects, the Government of Senegal, through the Ministry of Industrial Development and Small- and Medium-sized Industries (MDIPMI), has undertaken to conduct environmental and social safeguard studies.

To ensure effective environmental protection and management in Senegal, Article L48 of Law No. 2001-01 of 15 January 2001 to institute the Environmental Code stipulates that "Any development project or activity likely to harm the environment, as well as policies, plans, programmes, regional and sectoral studies must be subject to an environmental assessment (EA)" [our translation]. The elements of the environmental assessment include: Environmental Impact Assessment (EIA), Strategic Environmental Assessment and Environmental Audit. The Environmental Code is supplemented by the following five implementation orders:

- Order No. 009471 of 28 November 2001, terms of reference for EIAs;
- Order No. 009470 of 28 November 2001, conditions for the issuance of approval of activities relating to environmental impact assessments;
- Order No. 009472 of 28 November 2001, content of the EIA report;
- Order No. 009468 of 28 November 2001, public participation in the environmental impact assessment; and
- Order No. 009469 of 28 November 2001, organisation/functioning of the technical committee for validation of the ESIA.

Environmental assessment is one of the decision-making tools for competent environmental authorities. Decree No. 2001-282 of 22 April 2001 on the implementation of the Environmental Code is an instrument for implementing the law. To this end, it sets obligations for the authorities and the project and programme promoters. Depending on the potential impact, nature, size and location of the project, the types of projects are classified in one of the following categories:

- Category 1: Projects are likely to have significant impacts on the environment; an environmental impact assessment will allow environmental considerations to be integrated into the project's economic and financial analysis. This category requires a comprehensive environmental assessment;

- Category 2: Projects have limited environmental impacts or impacts can be mitigated by measures or design changes; this category is subject to a summary environmental assessment.

Projects that require an EIA and that fall under Category 1 include: (i) projects and programmes that significantly change the practices used in agriculture and fisheries; (ii) water resources exploitation; (iii) projects undertaken in ecologically very sensitive areas and protected areas; (iv) projects that may have adverse effects on endangered species of fauna and flora or their critical habitats or may have adverse consequences for biological diversity and the movement of populations (displacement and resettlement). The following fall under category 2: (i) small- and medium-sized agro-industrial enterprises; (ii) small-scale irrigation and drainage; surface water irrigation projects ranging from 100 to 500 hectares, and groundwater irrigation projects ranging from 200 to 1,000 hectares.

At the national level, environmental management is the responsibility of the Ministry of the Environment and Sustainable Development (MEDD), which is tasked with developing and implementing the environmental policy. In the project, the following MEDD services are mainly involved: (i) the Department of Environment and Classified Establishments (DEEC); (ii) the Department of Water, Forestry, Hunting and soil Conservation (DEFCCS); the Department of National Parks (DPN); and the Department of Planning and Environmental Watch (DPVE). Within the framework of PZTA-Sud, DEEC (including its regional divisions) and DEFCCS will be the most concerned.

- AFRICAN DEVELOPMENT BANK (AfDB) SAFEGUARD POLICY REQUIREMENTS
- Like most major infrastructure projects, the implementation of South Agro-pole will undoubtedly constitute a major vector of change for the natural and human environment and therefore a major challenge in terms of managing environmental and social impacts. This study was envisaged with the aim of making the best of the project and promoting conditions for carrying out the works with low environmental and social impact.
- Regarding its environmental classification, PZTA-Sud is classified under Category 1 in accordance with the AfDB's environmental policies. This classification is justified by the fact that the project, conceived as a pole of agro-industrial development, is likely to generate major environmental and social impacts to the natural and human environment. This approach resulted in the breakdown of the Agro-pole's infrastructure on sites covering the three regions with a networking of the actors of the targeted value chains (producer-processors, aggregators, etc.). This classification is also justified by the fact that it could trigger all five AfDB Operational Safeguards.
- Within the framework of South Agro-pole, the triggered environmental and social safeguard policies of the African Development Bank concern:
- Operational Safeguard 1 (OS 1): Environmental and social assessment
- Operational Safeguard 2 (OS 2): Involuntary resettlement: land acquisition, population displacement and compensation.
- Operational Safeguard 3: Biodiversity, renewable resources and ecosystem services
- Operational Safeguard 4 (OS 4): Pollution prevention and control, hazardous materials and resource efficiency
- Operational Safeguard 5 (SO 5): Labour conditions, health and safety
- These AfDB safeguards are supplemented by the relevant provisions of other donors of the Agro-pole, especially the Green Climate Fund.
- The completion of this SESA, as well as the other environmental and social safeguard instruments (CPR, PGPV) that supplement it, contribute to meeting the requirements of the PZTA-Sud donors.

4. MAJOR NEGATIVE ENVIRONMENTAL AND SOCIAL IMPACTS

4.1 ENVIRONMENTAL AND SOCIAL IMPACT SOURCES

The main impact-generating activities are presented below.

Pre-works phase

Site installation (installation of the living area, installation of the worksite base camps, construction of the modules access roads, supply of mechanised equipment);

Recruitment of temporary workers, movement of qualified labour and presence of personnel on site and in the living area;

Purchase and supply of construction materials (iron, cement, gravel, concrete, quarry sand) and machinery.

Works phase: General activities at the Agro-pole module sites

Clearance of rights-of-way at the level of existing or planned road networks, irrigation network for the installation of the drip system, drainage network and release of plot surfaces;

Clearing of herbaceous and shrubby vegetation/tree felling for the release of rights-of-way for the installation of the module facilities;

Supply of materials and miscellaneous supplies and transportation of mechanised equipment and machinery, water, hydrocarbons and various liquids;

Opening and/or exploitation of deposits, quarries and material borrow sites (laterite, sand), extraction and operation;

Moving machinery on site (trucks, shovels, loaders, concrete mixer, smooth roller compactor, scarifier, watering tank, grader);

Construction of access roads to the module sites and bypass roads, as required;

Earthworks and civil engineering (earthworks, excavation, stripping, grading, compacting, foundation, masonry - reinforced concrete, waterproofing...) relating to the construction of buildings and VRD of the modules;

Construction of pumping stations - construction of basins for drip irrigation;

Transportation relating to off-site activities (movement of personnel and machinery) in localities and other destinations;

On-site storage materials (iron, sand, gravel) at the construction site base;

Earthworks on road platforms (scarification, reloading, material grading, watering, compaction);

Rehabilitation of the road network to the modules: rehabilitation of the road drainage network (lateral ditches) and crossing structures, stripping of the rights-of-way, widening, reprofiling of roads;

Possible clearing of additional rights-of-way;

Storage of surplus materials and other inert waste in disposal areas;

Presence of site personnel;

Maintenance of living areas and construction site bases;

Oil change, maintenance and washing of vehicles and construction site machinery at the living area and construction site bases;

Production and evacuation of waste and contaminating products;

Management of waste water and drainage water.

Site withdrawal

Site withdrawal (cleaning of construction sites, restoration, etc.);

Restoration of the various sites used (closure/rehabilitation of borrow sites and quarries);

Restoration of the various sites used (closure and decommissioning of living area and installation of work sites).

Operation phase

Commissioning of infrastructure (buildings, warehouses, irrigation system, etc.);

Actual agricultural works and presence of agricultural machinery, soil preparation, levelling, amendments (spreading of fertilisers) and phytosanitary protection, harvesting and processing;

Use of inputs and pesticides for horticulture and market gardening;

VRD maintenance sites (cleaning of irrigation and drainage canals).

5.2 MAJOR ENVIRONMENTAL AND SOCIAL IMPACTS IDENTIFIED FOR PZTA-SUD

The matrix for characterising and evaluating the major impacts of PZTA-Sud helped to identify 32 impacts, 10 positive and 23 negative.

5.2.1 Major positive environmental and social impacts

For the positive impacts, 7 are assessed as being of major absolute significance (6 come in at the operation phase) and 3 as being of moderate absolute significance. The positive impacts of major absolute significance are:

5.2.2 Major negative environmental and social impacts

Of the 22 negative impacts, 3 are of major absolute significance, 12 of moderate absolute significance, and 7 of minor relative significance.

Thus, the negative impacts of major absolute significance concern the following:

Risk of tree felling, modification of the vegetation cover linked to the release of site rights-of-way, the development of community forests and the development of drip irrigation plots;

Risk of proliferation of STI/AIDS, water-borne diseases and respiratory infections;

Risk of degradation of ground and surface water quality.

There are 10 negative impacts of moderate absolute significance, 8 of which occur during the work phase and 6 at both phases (construction and operation). They are:

Risk of deterioration of air quality due to dust emission at the worksites, during transportation of materials, etc.;

Risk of ground and surface water pollution due to the uncontrolled use of phytosanitary products and chemical fertilisers;

Risk of soil and subsoil pollution linked to the uncontrolled use of pesticides and chemical fertilisers;

Risk of disturbance of wildlife habitat due to tree felling and destruction of ecosystems during the release of rights-of-way of project sites, the exploitation of borrow sites, the development of cropping land;

Expropriation and involuntary displacement of populations;

Risk of conflicts between workers and inhabitants of localities close to the project sites;

Risks of tensions between farmers and producers relating to the extension of agricultural land, and the development of community forests for access to water and grazing;

Risk of land tenure conflicts;

Risk of increased sexual exploitation and abuse or sexual harassment that may lead to the spread of STI/HIV/AIDS and unwanted pregnancies.

The environmental and social impacts assessment of PZTA-Sud shows that the main negative impacts are general and comparable to those usually identified in similar projects (building construction works, rural roads and agricultural developments). They generally include noise pollution, liberation of dust, production of site waste, landscape degradation, water pollution risks, and worker and community safety. Moreover, most of the negative impacts last only during the works, and are therefore limited in time. They are also localised. Their residual significance is therefore irrelevant if the measures recommended during work implementation are scrupulously applied. These measures will be included in the company's specifications for consideration in order to mitigate their effects.

6 PUBLIC CONSULTATIONS

6.1 OBJECTIVE, METHODOLOGY AND CATEGORIES OF ACTORS CONSULTED

The objective of the public consultation was to sample the public's perceptions, opinions, concerns and recommendations on PZTA-Sud. The methodology used was a direct interview survey based on a semi-structured guide that allowed for fruitful exchanges with the various respondents. This made it possible to establish a framework for discussion with the actors to enable them express themselves in the best possible conditions.

The consultations took place in two different periods. The first public consultation on the SESA took place from 12 March to 12 June 2019 in several sequences. The second public consultation was conducted from 1 to 20 October 2020 to update the SESA, linked to the additional activities supported by the Green Climate Fund. As the second consultation took place during a period marked by the COVID-19 pandemic, all steps were taken to ensure scrupulous compliance with the protective measures during meetings with actors.

The public consultation concerned several categories of actors, including:

- Administrative and local authorities: Governors, Prefects, Sub-prefects and the Mayors of the Municipalities concerned;
- Regional and departmental technical services: Regional Division of the Environment and Classified Establishments (DREEC), Regional Directorate of Rural Development (DRDR), Regional Livestock Service, Regional Fisheries Service, Regional Trade Service, Regional Water and Forestry Inspectorate, Regional Hydraulics Service, Regional Mining and Geology Service (SRMG), Department of Urban Planning and Housing (SRUH), Academy Inspectorate, Chamber of Trades, Regional Labour and Social Security Inspectorate (IRTSS), Regional Department of Planning, Regional Department of Sanitation, Regional Department of Land Registry, Department of Plant Protection (DPV), National Fire Brigade (GIS4), Microfinance, etc.
- Projects, Programmes and Agencies: Regional Development Agency (RDA), National Agency for Statistics and Demography (ANSD), National Aquaculture Agency (ANA), National Agency for Agricultural Integration and Development (ANIDA), National Agency for Agricultural and Rural Consulting (ANCAR), National Agency for Maritime Affairs (ANAM), Casamance Development Pole Project (PPDC), PAPSEN: PAIS Sédhiou, Senegal's Economic and social Development Support Programme (PADESS), Ziguinchor and Kolda Regions Economic and Social Development Support Committee (CASADES), etc.;

- Producer organisations: Union des jeunes de la commune d'Adéane (UJCRA), Société des coopératives de Ziguinchor (SOCAAS), COPAD, ASSOLUCER, GIE CAMARACOUNDA, NAANGUE Fouladou, EIGs Cashew Nut Producers of Marsassoum, Regional Union of Corn Producers (URCOMS), Sandiniéry Cooperative Society, Coopérative des Terroirs Fankanta de Marsassoum, Regional Framework on Consultation of Operators of the Cashew Sector of Kolda, Ziguinchor's Regional Concertation Framework for the Rural Population;
- Populations directly affected by the project: These include the populations of Adéane and Baghagha in the Ziguinchor Department where hundreds of people were met in the form of focus groups. Other localities were also concerned because of their proximity to the sites chosen to host the modules.
- Discussions with the target audience were centred on the following points:
- Perception, concerns and expectations of the South Agro-pole;
- Likely risks or threats to the South Agro-pole;
- Recommendations for a successful implementation of the South Agro-pole.

6.2 KEY SUGGESTIONS AND RECOMMENDATIONS

The actors consulted made several recommendations, the most important of which are summarised below.

- Take all steps to address the land issue, including fair and equitable compensation for those affected by the resettlement relating to the implementation of the modules in the regions;
- Involve all actors in the entire process of setting up and managing the Agro-pole through the establishment of an inclusive consultation framework and a communication and awareness raising plan using mediums and channels adapted to all categories of actors and stakeholders of the Agro-pole;
- Strengthen the capacity and organisation of small-scale local producers and processors in order to improve production and processing conditions for a harmonious integration of local actors in the Agro-pole, and boost the local economy;
- In conjunction with the University of Ziguinchor and research institutions, support a research and development programme for the eradication of the white fly, a real scourge for mango cultivation in Casamance;
- Strengthen the capacity of CRSE and its responsibilities in project design, implementation and monitoring;
- Ensure that all environmental and social issues are taken into account (development of value chains, gender equity, participatory and inclusive approach, fight against poverty and adaptation to climate change, etc.).
- Analysis of the public consultation data shows that the Agro-pole is well perceived and enjoys social acceptance by the institutional actors and populations of Casamance, and has generated high expectations. This can be explained by the fact that the Agro-pole responds to a widely expressed need to revitalise the region's economy through agricultural sectors that provide added value, jobs, wealth and, consequently, food security.
- All the recommendations made were taken into account at the level of:
- checklists of mitigation measures;
- environmental and social selection procedure;
- capacity building programmes (training and awareness raising); and

- monitoring plan and institutional arrangements.

7 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK PLAN (ESMFP)

7.1. ENVIRONMENTAL AND SOCIAL MANAGEMENT MEASURES

Implementation of the Agro-pole could require the conduct of environmental and social assessments (in-depth environmental impact assessment, initial environmental analysis) or the application of environmental and social measures. In this light, it is necessary to previously identify the environmental work to be carried out. To facilitate the identification of the type of environmental work to be carried out depending on the issues relating to the sites where the modules are to be implemented, the conduct of such assessments is required and/or the consideration of environmental and social measures in the technical planning, the ESA proposes an approach based on the national procedure for carrying out environmental assessments, supplemented by a number of standard documents, including the environmental and social selection sheet.

The environmental and social management enhancement measures formulated below are mostly the outcome of suggestions and recommendations from stakeholders in terms of institutional and technical measures. For the implementation and environmental and social monitoring of South Agro-pole, the proposed approach to managing environmental and social risks aims at enabling the operational structures of the rural development sector, but also agricultural producers, to play their full role in the planning, implementation, monitoring and operation of infrastructure and equipment. In this light, the ESMF suggests institutional and technical support, training and awareness raising measures to strengthen the capacity of the structures and human resources involved in project implementation. The institutional and technical support, training and sensitisation actions aim at: (i) operationalising the South Agro-pole environmental management strategy; (ii) fostering the emergence of experts and professionals in environmental and social management; (iii) raising the level of professional awareness and accountability of employees in environmental management; and (iv) protecting the rural environment and the health and safety of agricultural producers and populations.

The measures to strengthen environmental and social management under South Agro-pole concern:

- Strategic measures
- Areas to be considered depending on environmental and social issues;
- Establishment of an intervention synergy among actors;
- Establishment of the baseline situation and setting up a database on cashew and mango crops;
- Gender mainstreaming;
- Climate change adaptation measures.
- Institutional enhancement measures;
- Strengthening the SCE;
- Strengthening the environmental and social expertise of the SCE and Technical Assistance;
- Strengthening the environmental expertise of consulting firms;
- Development of a Good Agricultural Practices Manual;
- Development of an environmental charter for SMEs;
- Support for the promotion of clean technologies;
- Conduct and implementation of environmental and social assessments;
- Monitoring and evaluation of project activities;

- Natural resource management measures;
- Training of the actors involved in Project implementation
- Environmental and social assessment
- Pesticide management training modules
- Training module on the environmental aspects of agricultural products processing
- Training module on land tenure.

These measures are estimated at four hundred and five million (405,000,000) CFA francs, and will be integrated into the Agro-pole's budget.

7.2 ENVIRONMENTAL AND SOCIAL PROJECT SELECTION PROCESS

The ESMFP proposes an environmental and social selection process that describes the different steps to be followed from project preparation to project implementation monitoring, including institutional responsibilities shared mainly by: the Project Implementation Unit (PIU); the Regional Divisions of Environment and Classified Establishments (DREEC); the Regional Environmental Monitoring Committees (CRSE); and the Operators and Service Providers (OSP).

7.3. PUBLIC COMMUNICATION PLAN

The PIU and the executing agencies will have to coordinate the implementation of information and awareness campaigns among local communities and agricultural producers in the Agro-pole area, especially on the nature of the works and the environmental and social issues at stake during the implementation of project activities. The need to develop such a programme was repeatedly stressed by those consulted at all levels.

In this process, local associations, producer organisations and environmental NGOs will have to be involved in the forefront. Grassroots communities will also need to be closely involved in the design and implementation of these community awareness and mobilisation strategies.

Particular emphasis should be placed on:

- Information, education and behaviour change communication (BCC) campaigns focusing mainly on the environmental problems relating to the Agro-pole, as well as the strategies to be adopted to address them;
- An information and communication campaign on the concept of agribusiness: conduct a campaign to explain the positive meaning given to the terms "Agribusiness" and "Agro-industry" in the project. This should be done among farmers and local elected officials, because these terms can have negative connotations for most farmers and some actors;
- Local meetings on land tenure and land occupancy titles: hold clarification meetings with local actors and farmers on the land tenure issue and on the fate of individual land ownership titles in relation to the Agro-pole. This is to dispel doubts and remove the mistrust observed on the part of farmers and local producers with regard to the Project. This can further strengthen adhesion to and ownership of the Project.

7.4. MECHANISM FOR MANAGING PROJECT-RELATED ENVIRONMENTAL AND SOCIAL COMPLAINTS AND CONFLICTS

PZTA-Sud will establish a Complaints Handling Mechanism (CHM) managed by the PIU with the involvement of local authorities and local NGOs. Thus, at the level of each local authority concerned by the project activities, a complaint register will be permanently available to the public at the municipal headquarters. These institutions will receive all the complaints and claims about the works, analyse the facts and decide, at the same time, and will ensure that the works are well implemented by the project in the locality. Public information on the constant presence of the collections on this register will be disseminated through community radio stations and other appropriate channels, in connection with the communities concerned, with the support of local NGOs, if necessary.

Complaints and grievances will first be dealt with at community level (communal council). In case of disagreement, the problem will be submitted to the Administrative Authority (Sub-Prefect or Prefect or Governor). This avenue of redress is to be strongly encouraged and supported. Where the petitioner is not satisfied, he or she can take the matter to court.

7.5. MAIN INDICATORS OF IMPLEMENTATION OF THE ESMFP

7.2.1 Strategic measures observed by the PIU Environmentalist

The indicators (for illustrative purposes) of the measures include the following:

- Effectiveness of the environmental selection of the Agro-pole's activities;
- Possible conduct of EIAs and implementation of ESMPs;
- Effectiveness of environmental and social monitoring and reporting;
- Level of application of environmental and social mitigation measures; and
- Number of producers sensitised on hygiene, safety, STI/HIV/AIDS and pesticide management measures.

7.2.2. Measures to be followed by State institutions responsible for environmental issues

Monitoring will be carried out "externally" by the DEEC (for monitoring of the ESIA procedure and implementation of the ESMF and ESMP), the Water and Forestry Inspectorate (vegetation), services of the Ministry of Health (for health), the Labour Inspectorate (occupational safety), the Mining and Geology Service (quarry management), and the Ministry in charge of Hydraulics for water management. Independent consultants will be added to this non-exhaustive list of technical services of the State (for evaluation). All these structures will have to be supported by the Project within the framework of this monitoring.

Some indicators are listed below as an indication:

- Number, quantity and place of sampling in the yards for the needs of the works;
- Surface areas reforested after the works and rate of reforestation;
- Volume of inputs used (pesticides, herbicides, fertilisers) annually;
- Prevalence of STI/HIV/AIDS, prevalence rate of water-related diseases (malaria, bilharzia, diarrhoea, schistosomiasis, etc.);
- Number of jobs created locally; and
- Number of social conflicts related to the Project.

7.6. INSTITUTIONAL ARRANGEMENTS AND IMPLEMENTATION OF PZTA-SUD'S ESMF

The following institutional arrangements are proposed for the project regarding implementation and monitoring roles and responsibilities. These arrangements were discussed with the main actors involved in the Project implementation and monitoring, and for the most part, they fall within the duties of each of the targeted structures. Management of the environmental and social function is structured around the following thrusts: Coordination and external supervision; Preparation and "internal" monitoring of implementation; "External" environmental and social monitoring; infrastructure development works, as described below.

7.6.1. Coordination, preparation and supervision

The PIU is, among others, tasked with coordinating the project and providing secretarial services at the Steering Committee. As such, it will have to establish an environmental and social function within the Agro-pole to manage these aspects under the project. Within the PIU, the environmental and social safeguard experts will coordinate the local monitoring of environmental and social aspects for project works.

The environmental and social safeguard experts will fill out the environmental and social selection sheets that they will send to the DEEC for the determination of the appropriate environmental categories. They will lead the conduct of possible ESIA's and the training/awareness programme. They will also carry out the selection of appropriate mitigation measures, in case it is not necessary to develop ESMFPs for the sub-projects. They will also coordinate the monitoring of environmental aspects and serve as the interface with other actors.

7.6.2. Implementation and proximity monitoring

Works companies: They must implement the environmental and social measures and comply with the directives and other environmental requirements contained in works contracts. They must have a Quality, Health, Safety and Environment manager.

Design and Control Firms: They must control the effectiveness and efficiency of the implementation of environmental and social measures and compliance with the directives and other environmental instructions contained in the works contracts. They must have an environmental and social expert in their team.

Local authorities located in the project area: Local authorities will participate in the close monitoring of the implementation of the ESMP recommendations, especially in the information and sensitization of the populations.

7.6.3. Environmental and social monitoring

DEEC and the DREECs: They will proceed with project environmental classification as well as the approval of the impact assessments. The CRSE and DREECs will ensure environmental and social monitoring at the regional and local levels of implementation of the project's environmental measures. The monitoring of CRSE and DREECs will, indeed, be a check conducted based on the internal monitoring reports of the Environmental and Social Safeguard Experts. The DREECs will forward their reports to the Agro-pole PIU.

The description of the roles and responsibilities of the various stakeholders in the implementation of the environmental and social management procedure of PZTA-Sud sub-projects is set out in the table below.

Institutional arrangement for the implementation of the environmental and social management procedure of the PZTA-Sud sub-projects.

No	Steps / Activities	Responsible	Support / Collaboration	Service Provider
1.	Identification of the location/site and main technical characteristics of the sub-project	Project Coordinator	LA	
2.	Environmental and social screening	Project Coordinator	LA	
3.	Determination of the type of specific safeguard instrument (ESIA, RAP, IPP, E&S Audit, AS, etc.)	Environmental and Social Safeguard Specialists	<ul style="list-style-type: none">• DEEC• Beneficiary• Local authority (LA)	

		(ESSS) of the PIU	• SSES / PU	
4.	Approval of the categorisation by the DEEC and the Bank	Project Coordinator	ESSS / PU	National entity in charge of EIAs (DEEC) Banque
5.	Preparation of the sub-project specific E&S safeguard instrument (ESIA <PAR, Audit, etc.) in accordance with the national procedure and the Bank's requirements			
	Preparation, approval and publication of TORs	SSES / UP	DEEC	Bank
	Conduct of the study including public consultation		Procurement Specialist (PS); DEEC; LA;	Consultant
	Document validation and obtaining of environmental certificate		PS, LA	DEEC, Bank
	Publication of document		Coordinator	Media; Bank
6.	(i) Inclusion into the sub-project's tender documents (TD), of all the measures of the work phase that can be contracted out with the company; (ii) approval of the company ESMP	Technical Manager (TM) of the activity	SSES SPM	
7.	Implementation/Implementation of measures not contracted with the construction company	SSES	SPM; RT; Financial Manager (RF); AL; xxxx	Consultant NGO Other
8.	Internal monitoring of the implementation of E&S measures	SSES	Monitoring and Evaluation Specialist (S-SE); RF; AL; xxxx	Technical Inspection Agency
	Dissemination of the internal monitoring report	Coordinator	SSES	
	External monitoring of the implementation of E&S measures	IN-EIA	SSES	
9.	Building the capacity of actors in E&S implementation	SSES / UP	Other SSES SPM	Consultants Competent public structures
10.	Auditing the implementation of E&S measures	SSES / UP	Other SSES; SPM; S-SE; EN-EIA; AL	Consultants

8. BUDGET

The budget for the implementation of the ESMFP is summarised in the table below:

#	Item	Unit	Unit cost		Total		Financing source
			Local	USD	Local	US \$	
1	Preparation of specific instruments (EIA, Env't audit) and specific ESMP implementation	9	15,000,000	30,000	135,000,000	270,000	PZTA-Sud
2	Compensation for plant losses and reforestation	F	80,000,000	160,000	80,000,000	160,000	PZTA-Sud
	Permanent Project monitoring	5	5,000,000		25,000,000	50,000	PZTA- Sud
	Mid-term evaluation of Project environmental and social performance	1	45,000,000	90,000	45,000,000	90,000	PZTA- Sud
	Pre-closing audit of ES performance	1	45,000,000	90,000	45,000,000	90,000	PZTA- Sud
3	Capacity building	F	45,000,000	90,000	45,000,000	90,000	PZTA- Sud
4	Information / awareness measures	3	10,000,000	20,000	30,000,000.00	60,000	PZTA-South
5	General measures to enhance and mitigate ES impacts	F	205,000,000	410,000	205,000,000	410,000	PZTA-South
7	Strengthening knowledge	F	200,000,000	400,000	200,000,000	400,000	PZTA-South
Total					810,000,000	1,620,000	

9. CONCLUSION

The strategic environmental and social assessment of PZTA-Sud carried out from data collected made it possible to identify, analyse and evaluate the potential impacts of the Project, based on the linking of the environmental components and Project activities. The environmental and social impacts inherent in the implementation of this Project will be negative and positive, direct or indirect interaction, having a cumulative effect owing to the socio-economic and environmental context of the study area.

The report described the current environmental status of the project area, and proposed useful and necessary measures to avoid, mitigate or compensate negative impacts, and enhance positive ones. The major positive impacts are therefore mainly in the social and economic domain. This assessment leads to the proposal of a wide range of measures, based on the analyses of the various potential impacts, as well as on the expectations, suggestions and concerns of the various stakeholders consulted.

The examination of these environmental and social measures will enable the MDIPMI, Project Owner, and the financial partners (AfDB, IsDB, GCF), to target those they consider to be within their competence in the project's activities, before distributing them under the appropriate environmental and social assessment at the level of each of the planned sites (modules) once the technical and technological aspects have been decided and the areas concerned have been located and marked out. This will make it possible to control the project's impact on the environment and improve it in order to reconcile the pillars of sustainable development, promoting the harmonised integration of its components into the hosting environment depending on the specific features of each of the planned integration zones.

An Environmental and Social Management Framework Plan including technical environmental clauses, measures to strengthen environmental and social management, monitoring and follow-up measures, as well as the estimated costs of environmental measures, are proposed in the document. Implementation of the ESMFP is structured around two main activities: environmental monitoring and environmental follow-up. The plan's implementation mechanism has also been specified. The following structures will be involved in the project's implementation, alongside the main actors namely; the Project Implementation Unit and the DEEC: the sectors concerned, State services, NGOs, etc.

In the light of the above assessments, it can be concluded that the negative impacts generated by the project can be avoided, minimised or strongly mitigated if all the measures planned by the promoter and those defined in the ESMFP are being implemented. On this basis, PZTA-Sud is environmentally and socially acceptable.

Specific Environmental and Social Impact Assessments are recommended pursuant to national regulations for some categories of sub-projects that the Agro-pole will help to implement. To supplement this SESA, a Resettlement Policy Framework (RPC) and a Pest and Vector Management Plan (PVMP) have been developed.

The cost of implementing the environmental measures, which must be an integral part of project costs, is estimated at CFAF 765,000,000 (Seven hundred and sixty-five million CFA francs), or USD1,620,000.

I. FRAMING OF THE ESA AND METHODOLOGICAL APPROACH

1.1 INTRODUCTION AND BACKGROUND

Senegal is a Sahelian country, located in the far west of West Africa, and covers a surface area of 196,712 Km². The country's population was estimated at 14,799,859 in 2016 (ANSD, Senegal's Economic and Social Situation, 2016). With a coastline of more than 700 km on the Atlantic Ocean that bounds it to the west, Senegal has immense natural resources, a great diversity of flora and fauna and ecosystems of particular significance. Average annual rainfall follows a decreasing gradient from the South to the North of the country, going from 1,200 mm in the South to 300 mm in the North, with variations from one year to another.

The environment sector continues to be confronted with anthropogenic actions (deforestation, soil degradation, etc.) accentuated by climate change. These phenomena result in the reduction of bio-diversity and soil degradation. In the more or less long term, the continuous degradation of natural resources is likely to undermine the country's sustainable development foundations.

Casamance, located along the river bearing the same name, comprises the administrative regions of Ziguinchor and Kolda, in south-western Senegal, and accounts for 14.4% of the national territory. Casamance's social and economic development has suffered over the last three decades from the region's particular conflict conditions. This conflict situation has been compounded by the serious effects of the decline in rainfall recorded since the early 1970s,

reflected, in particular, in the increasing salinisation of the rice valleys, erosion of uplands and the hillside, silting of valleys and lowlands, and heavy pressure on the natural environment (forests, mangroves, fisheries resources, etc.). The consequences of this degradation have led to a general decline in soil fertility and the unproductiveness of thousands of hectares of saline or acidified valleys. This deterioration of climatic conditions, combined with the devastating effects of the conflict situation prevailing in Casamance, has led to a deterioration of the productive water-soil-forests capital, a drop in production and income, food insecurity, and an overall deterioration in the living conditions of rural populations now increasingly in search of alternatives for livelihood.

However, since 2012, the security situation has improved significantly and, today, there are encouraging prospects for the establishment of lasting peace and development in Casamance.

In this favourable context, which brings a lot of hope for the people of Casamance, the African Development Bank has expressed its willingness to provide decisive support in reviving economic activities in Casamance through the establishment of a Southern Agro-Industrial Processing Zone (PZTA-Sud) or South Agro-pole in Casamance. The AfDB is supported in this endeavour by the Islamic Development Bank (IsDB). The support is aimed more especially at sustainable prospects in the rural sector which occupies the majority of the Casamance population and which offers short- and medium-term development opportunities for the region. This sector has significant potential as well as the capacity to synergise other branches of the economy, especially the agro-food industries, and to serve as a lever for other sectors such as transport and trade.

In this light, a Strategic Environmental and Social Assessment (SESA) and a Resettlement Policy Framework have been prepared and approved by the country's authorities. The SESA received an Environmental Compliance Certificate (Order to grant Environmental Compliance Certificate No. 03939 of 2 December 2019).

In July 2020, Senegal submitted a request to the Green Climate Fund (GCF) for support for a programme whose activities will focus on the natural region of Casamance (administrative regions of Ziguinchor, Sédhiou and Kolda), thus in the same area of activities of the Agro-pole. The programme aims at triggering a paradigm shift towards low-emission and climate-resilient development pathways in Senegal's agricultural value chains. It will thus broaden the activities and prospects of PZTA-Sud.

1.2. ESA FRAMEWORK

Based on the Inclusive and Sustainable Industrial Development Initiative (ISID), on 2 December 2013, UNIDO and the Government of Senegal concluded a partnership framework to provide Senegal with technical assistance and to contribute to the implementation of projects of the Emerging Senegal Plan (ESP), especially in the field of agro-industrial development. Thus, UNIDO supported Senegal in the identification of its Agro-poles projects included in the ESP, in line with its new vision on Agro-poles which consists in:

- Giving impetus to the structural transformation of the country's economy;
- Reducing rural poverty; and
- Creating a more conducive environment for increased investment in the agro-food and related sectors.

Through this support, UNIDO's overall objective is to contribute to Senegal's industrialisation process through the establishment and operationalisation of three competitive and integrated Agro-poles as vectors for inclusive and sustainable development, with a view to stimulating Senegal's industrial growth and subsequently contributing to income generation and job creation.

The intervention of the African Development Bank (AfDB), which is based on UNIDO's initiatives, will be materialised by the implementation of the Agro-Industrial Processing Zone Project (PZTA-Sud) or South Agro-pole. It fits well with the priorities of the Bank Group's Country Strategy Paper for Senegal (2016-2020), especially Pillar I relating to support for agricultural transformation. It is also in line with the Bank Group's West Africa Regional Integration Strategy (DSIR 2016-17) extended to 2019. It is aligned with 3 of the 5 operational priorities of the Bank's Ten-Year Strategy 2013-2025, namely (i) the Feed Africa 2016-2025 Strategy; (ii) the Industrialize Africa 2016-25 Strategy; and (iii) the Improve the Quality of Life of the People of Africa 2016-25 Strategy. In addition, the project is in line with the Bank's Second Climate Change Action Plan (CCAP2 2016-2020). Lastly, the Bank's action is part of the initiative launched several years ago to develop "Agro-industrial Processing Zones" in agricultural basins with high market potential

(national and export). This is why Senegal has entered into a strategic partnership with the Bank for the implementation of the ESP "three competitive integrated Agro-poles".

The PZTA is also in line with the Industry Development Sectoral Policy Letter (IDSPL) which aims at increasing the contribution of the industrial sector to GDP from 12% to 25% over the period 2014-2035, targeting high potential agricultural value chains (fruits and vegetables, oils, dairy products, cereals, poultry farming) in favour of the national market (substitution to imported products) and international market (fruits and vegetables, fish products, etc.). It is also in line with the guidelines of the Agro-sylvo-pastoral General Principles Law (LOASP) 2004-2024, which aims at reducing poverty and food security in rural areas.

The GCF's intervention will strengthen PZTA-Sud through a programme that aims at triggering a paradigm shift toward low-emission and climate-resilient development pathways in Senegal's agricultural value chains. In particular, this will entail strengthening value chain infrastructure, promoting climate-resilient agricultural practices through the adoption of innovative technologies.

This priority to the rural sector was strongly emphasised by the populations, farmers' organisations, NGOs and elected officials during the numerous meetings held as part of the public consultation for this study.

The vision of such a project is logically in line with the prospect of sustainable development through the integration of social, environmental and economic aspects, but also in the sense that it intends to develop and promote the adoption of strategies and activities favouring a sustainable management of the environment and natural resources. Conducting the strategic environmental assessment partly fulfils this role.

1.3. RATIONALE FOR THE STRATEGIC ENVIRONMENTAL ASSESSMENT

Senegal had long adopted and committed political actions for the protection of natural resources and the environment, given their wealth in the country and the importance of preserving them. However, given the complexity of environmental phenomena and the number of actors concerned by this issue, there is an ongoing quest for a global vision that would make the actions more focused and relevant.

In this regard, strategic environmental assessment is an invaluable tool for improving policy-making processes by integrating environmental and social factors into the formulation of policies, programmes and plans. The objective of this ESA is to identify, evaluate and describe the environmental impacts of South Agro-pole that may result from implementation of all its activities. On this basis, the ESA aims to provide a set of technical, operational, organisational, etc. measures within an Environmental and Social Management Framework Plan (ESMFP) to prevent and manage the potential environmental and social risks of the project during its implementation. More specifically, the objective of the SEA is, on the one hand, to develop a common vision of the environmental risks related to South Agro-pole and, on the other hand, to promote the development of frameworks for discussion and continuing consultation between the various stakeholders. It is therefore a systematic process that consists in assessing the possibilities, capacity and functions of resources, natural systems and human systems in order to facilitate sustainable development planning and decision-making in general, as well as to anticipate and manage the negative impacts and consequences of the activities envisaged.

In view of preparing the body of documents that will enable the African Development Bank and the GCF to endorse this request and to comply with national regulations on the environmental and social management of projects, in particular Law No. 2001-01 of 15 January 2001 to institute the Environmental Code, the Government of Senegal, through the Ministry of Industrial Development and Small- and Medium-sized Industries (MDIPMI), has undertaken to carry out environmental and social safeguard studies.

With regard to its environmental classification, PZTA-Sud is classified in category I in accordance with the AfDB's environmental policies. This classification is justified by the fact that the project, conceived as an agro-industrial development pole, is likely to generate major environmental and social impacts to the natural and human environment. This approach resulted in the breakdown of the Agro-pole's infrastructure on sites covering the three regions with a networking of the actors of the targeted value chains (producer-processors, aggregators, etc.). This classification is also justified by the fact that it could trigger all five AfDB Operational Safeguards.

Like most major infrastructure projects, implementation of South Agro-pole will undoubtedly constitute a major vector of change for the natural and human environment, and therefore a major challenge in terms of managing environmental and social impacts. It is with the aim of getting the most out of the project and promoting conditions for carrying out the works with low environmental and social impact that this study was envisaged.

Indeed, statutorily, the ESA is based on Law N° 2001-01 of 15 January 2001 to institute the Environmental Code and its implementation instruments make it mandatory to carry out an environmental assessment for any operation such as the Agro-pole. Thus, Article L48 of the Environmental Code stipulates that " Any development project or activity likely to harm the environment, as well as policies, plans, programmes, regional and sectoral studies must be subject to an environmental assessment (EA)" [our translation]. In addition, the AfDB operational safeguards and the GCF condition the financing of any project that is likely to harm the environment on the completion of a prior environmental and social impact assessment.

It is in a bid to comply with all these requirements and allow a smooth integration of the project in its environment that the Ministry of Industrial Development and Small- and Medium-sized Industries, Project Owner, commissioned this study.

Thus, the environmental strategy of South Agro-pole that will result from this study will have to be an integral part of its implementation plan. It will make it possible to propose the activities and outcomes to be achieved in the environmental and social chapters of the project.

1.4. METHODOLOGICAL APPROACH

SEA refers to a range of "analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the inter linkages with economic and social considerations".¹ It is therefore a process of assessing and considering environmental issues at the highest level of decision-making.

SEA has a strong international foothold and is an integral part of development assistance and cooperation policies. SEA is one of the practical tools recommended by OECD (2006) and endorsed by major donors and financial institutions (UNDP/UNEP, GTZ, WB, AfDB, IsDB, EU, GCF, etc.). In addition, the World Summit on Sustainable Development in Johannesburg in 2002 stressed "the importance of strategic frameworks and balanced decision-making as fundamental conditions for achieving progress towards development goals".

As such, SESA represents an important step in the decision-making and planning process. From this point of view, it contributes greatly to the effectiveness of development policies, especially in poverty reduction and sustainable development strategies, and brings many benefits such as:

- promoting integration between development and the environment;
- providing environmental data to support informed decisions, by identifying the potential collateral impacts of reform proposals;
- improving the identification of new opportunities and possibilities for decision-makers;
- avoiding a number of costly mistakes by indicating, at an early stage of the decision-making process, which development options are unsustainable;
- promoting good governance, by involving the public and stakeholders in decision-making, enhancing transparency and clarifying institutional responsibilities.

The methodology used comprised three main phases: (i) preparatory activities; (ii) field surveys and stakeholder consultations; and (iii) data analysis and report drafting.

1.4.1. Preparatory activities

Preparatory activities focused on the following tasks:

- holding of preparatory meetings;
- preparation of the activities timeline;
- development of data collection forms and tools; and

¹ Applying Strategic Environmental Assessment: Good Practice Guidance for Development Co-Operation. OECD 2016, p. 17.

- documentary review.

The documentary review made it possible to gather the maximum amount of information on the study area (geographical and hydrogeological situation, vegetation, fauna, socioeconomic context, populations, landscapes, etc.) and the environmental legislation in force in Senegal. It proved necessary to consult the directives of donors (AfDB, IsDB and GCF) to take into consideration their environmental and social requirements.

This phase also made it possible to design data collection forms, gather information on mapping of the project area, and contact the target people for public consultations.

1.4.2 FIELD SURVEYS AND ORGANISATION OF PUBLIC CONSULTATION MEETINGS

This phase led to:

- Field trips for data collection; and
- The organisation and holding of public consultation meetings.

To better understand the realities of the project's social, economic and ecological environment, field surveys were conducted with a threefold objective: (i) complete the information on the project area gathered during literature review; (ii) characterise and assess the environmental impacts; (iii) define, in consultation with the local populations, realistic measures (technical and financial) to be integrated into the ESMFP.

It was also during this phase that surveys were conducted to accurately locate the urban areas, sensitive zones and basic social infrastructure (schools, health facilities, markets, religious and cultural buildings, networks, etc.) likely to be impacted and in favour of which attendant measures could be adopted.

The public consultation stage enabled the study team members to explain the rationale for the project and the positive and negative effects likely to occur during activity implementation. These included, in particular, administrative and local authorities (regional Governors, Prefects, Mayors, Presidents of Departmental Councils), Technical Services, Agencies, Projects and Programmes, research structures, Producer Organisations, Non-Governmental Organisations and the populations directly concerned by the project. The study preferred a participatory approach that allowed the opinions and arguments of the various actors to be integrated as the project progressed.

It was also an opportunity to collect the concerns and expectations of the populations regarding the project.

1.4.3. DATA ANALYSIS AND DRAFTING OF REPORT

The data collected was analysed to highlight the main features of the natural environment and the issues associated therewith. The order of priority given to the environmental issues identified takes into consideration conservation (natural resources), the fight against climate change, improvement of the populations' living conditions and security.

The information collected from the population was processed in such a way as to:

- Summarise their requests and expectations with regard to the Project;
- Evaluate their expectations with regard to the project owner's capacity to finance their implementation;
- Identify the local know-how that can be capitalised on for the successful implementation of some recommended measures at a lower cost; and
- Focus the results of the interviews with the resource persons on the interest of the project for the target populations and the consequences in the event of its non-implementation.

The information collected was processed and developed in different ways:

- Statistical analysis;

- Photographic analysis;
- Analysis by tables and creation of a database management system (DBMS);
- Cartographic analysis; and
- Environmental impact assessment.

Based on the documents consulted during the information collection phase, using the environmental impact identification sheets, the team carried out an impact assessment. The environmental impact assessment was carried out in two stages:

This exercise was based on the following methodology:

- Identification of direct, indirect and induced impacts based on checklists, Leopold's matrix, GIS data, knowledge acquired from thematic and specialised field studies, the experience of consultants and the outcomes of public consultations; and
- Assessment of the impacts identified for different variants of the project in terms of access, borrow site, location of construction sites, etc. The assessment will be based on:
 - the notion of compliance or non-compliance with government policy guidelines;
 - comparisons with national and international standards;
 - the outcomes of cross-referencing digital and cartographic data produced by the GIS;
 - references to predefined criteria;
 - the level of social acceptability of constraints and/or a measure perceived during public consultations.

Impacts were thus assessed according to their spatial scope, duration, intensity, reversibility or irreversibility, potential targets and sensitivity, to enable their prioritisation.

- Choice of the most relevant variants with regard to environmental protection and the interests of local populations
- Identification and characterisation of possible residual impacts that are likely to occur despite the implementation of measures.
- Proposal of mitigation and/or enhancement measures.

Characterisation of the impacts and their prioritisation made it possible to identify the measures aimed at cancelling, preventing, mitigating or offsetting the negative effects of the project by complying with the following methodological points:

- for all the negative impacts, systematic identification of responses by applying the precautionary principle;
- characterisation, location and quantification of each measure, including the analysis of possible alternatives;
- analysis of the feasibility of the proposals (regulatory, technical, financial, etc.) and consistency of the measures; and
- analysis of possible negative effects of the proposed measures and identification of treatment methods.

Definition of the proposed measures was based on:

- the experience of the consultants in large irrigation and environmental protection projects;
- remarks made on other irrigated agriculture projects already in operation in the study area;
- the use of digital and cartographic GIS data; and
- the outcomes of public consultations.

Following this operation, the report was drafted in accordance with the outline required in the terms of reference. Word software was used for word processing and Excel for the tables.

However, since the initial report received an Environmental Compliance Certificate from the Ministry of Environment and Sustainable Development, this report does not make changes per se, but rather addresses the additional activities relating to the additional funding of the GCF and the associated environmental and social impacts. Some of the data, especially socio-economic data, have been updated. The overall structure of the report remains unchanged.

1.5. PLAN AND STRUCTURE OF THE REPORT

With reference to Ministerial Order No. 9472 MJEHP-DEEC of 28 November 2001 on the content of the environmental impact assessment report, and to the terms of reference of the study, the report was structured as follows:

- Executive Summary
- I. General introduction and background to the study
- II. Description of PZTA-Sud
- III. Analysis of variants
- IV. ICPE Ranking
- V. Analysis of the basic environmental and social conditions (baseline situation) which corresponds to a summary description of the biophysical, socioeconomic and human framework of Casamance
- VI. Main environmental and social issues of the PZTA-Sud zone
- VII. Analysis of the political, regulatory and institutional framework of environmental and social management in Casamance
- VIII. Public consultation
- IX. Identification of the main environmental and social issues in Casamance in relation to Agro-pole-Sud
- X. The Environmental and Social Management Framework Plan integrating measures for the enhancement of major positive impacts, measures for the mitigation of major negative impacts, as well as the institutional arrangements, measures for the strengthening environmental and social management, conditions of its implementation; etc.

The report is supplemented by bibliographical references and a series of annexes, including the following:

- Details on the public consultation;
- Sub-project screening form;
- Environmental checklist;
- Check list of impacts and mitigation measures;
- Environmental guidelines for the companies to execute the project;

- Environmental and social clauses for companies;
- Simplified grid for environmental and social monitoring;
- Abridged plan in case of displacement and resettlement of populations;
- Lay-out plans of the identified sites;
- Terms of reference for an ESIA;
- Terms of reference validated by the DEEC; and
- List of people and institutions met.

II. DESCRIPTION OF SOUTH AGRO-POLE PROJECT

2.1. SOUTH AGRO-POLE PROJECT AND ITS COMPONENTS

South Agro-pole is a driving force for regional development and industrialisation, especially through the improvement of agricultural added value created at the local level.

The Project was designed on the basis of the feasibility study financed by the State with UNIDO support, according to the following principles: (i) targeting of commodity chains with a domestic or international market potential, which led to the choice of two priority commodity chains (mango and cashew nut) and three complementary ones (maize, banana and non-timber forest products); (ii) presence of a high potential agricultural production basin; (iii) private sector's interest to invest, confirmed during the consultations (Labs) and with the creation of SOCAAS (Société Coopérative des Acteurs de l'South Agro-pole).

In its document analysing value chains for the establishment of North, Central and South agro-poles, UNIDO describes the South Agro-pole as a "multidimensional and modular dimension, with specialized poles and modules and a flexible structure that evolves according to requirements as they arise". This description has been supported with a structuring and localisation of the South Agro-pole with, a central module based in Ziguinchor and three regional modules based respectively in Ziguinchor, Sédhieu and Kolda, as well as five departmental platforms located in Oussouye, Bounkiling, Goudomp, Medina Yéro Foulah and Vélingara.

2.1.1. Project Objectives

The overall objective of the Project is to contribute to the improvement of the living conditions of the populations (including young people and women) through the creation of added value on agricultural products and the sustainable increase in productivity of the priority agro-industrial sectors (mango and cashew nut). Specifically, the Project aims to (i) create favourable conditions for private investment in the industrial processing of agricultural products, as well as in the provision of inputs and services; (ii) build stakeholder capacity in priority commodity chains to sustainably increase agricultural productivity.

PZTA-Sud is a public investment project that aims to create the conditions required to increase private investment in the targeted value chains, especially in the processing of agricultural produce, supply of inputs and providing service.

2.1.2. Project Components

PZTA-Sud (or South Agro-pole) will finance: (i) a central module for industrial processing of the products of the targeted sectors, their packaging and marketing, for a surface area (phase 1) of 40 ha, expandable to 85 ha; (ii) three regional modules for secondary packaging and primary processing (local and regional market), with a surface area to be developed of 5 ha expandable to 10 ha; (iii) five departmental platforms for aggregation, cleaning, sorting and primary packaging with a unit area of 3 to 5 ha; and (iv) collection points in villages (primary storage warehouses). Resources are also provided to ensure that the modules and platforms have access to regional networks (roads, electricity, ICT, etc.). Land registration in the agro-pole, which has been secured in accordance with the requirements of national and Bank procedures, will be done in the name of SCE.

The Project benefits from four sources of financing: Government of Senegal (CFAF 11 billion), African Development Bank (CFAF 28.3 billion), Islamic Development Bank (CFAF 18.3 billion) and the Green Climate Fund (CFAF 16.66 billion).

The various components and activities financed by the Government of Senegal, the AfDB and the IsDB are presented in the table below.

Table 1: Main components of PZTA-Sud

COMPONENT	DESCRIPTION	DESCRIPTION
A: Support for the establishment of an ecosystem conducive to private investment (PI) in agro-industry	A1: Improvement of the regulatory and institutional framework in favour of PI	Support to the Agro-poles Steering Committee-COPIL (meetings and missions) and BOS/PES (baseline, MTR and end-of-project surveys, specific studies). Setting up of SCE by FONSIS, and of the one-stop shop by APIX
		Capacity building of State structures in charge of quality, standardisation, certification and promotion of exports (equipment, training, ad hoc studies, etc.): MDIPMI, ASEPEX, ASN, DPPI, ADPME etc.
		Agreement with the <i>Institut de Technologies Alimentaire du Sénégal</i> (ITA) for the setting up and management of the Centre of Excellence of the central module (lab)
		TA agreement with the Upgrading Office (MNB) for technical support and assistance to SMEs and SMLs in the agro-pole.
	A2: Installation of the industrial superstructure	Construction of the central module (Adéane): (i) roads & various networks (drinking water, electricity, sanitation, etc.); (ii) an administrative block (offices, conference room, etc.); (iii) a social services block (crèche, health centre, sports hall, restaurants, etc.); (iv) a services block (training centre, management centre, business incubator, etc.); (v) a logistics block (loading/unloading dock, weighing platform, storage/packaging sheds, etc.); (vi) 4 Enterprise blocks (serviced plots, car parks, etc.); (vii) a technical block (drilling, water tower, generator, etc.).
		Construction of 3 regional modules (Kolda, Sédhiou and Bignona) of 10 ha each, comprising: (i) a serviced site (earthworks, VRD, etc.); (ii) logistics & services block (administrative buildings, management centre, financial services, serviced plots for PI, market place, loading/unloading dock, weighbridge, storage/packaging shed, etc.); (iii) a technical block (water tower, drilling, generator, waste treatment, etc.).
		Construction of aggregation platforms and services (5 sites of 5 ha) with: (i) site servicing; (ii) a service block (administrative building, weighbridge, loading/unloading dock, etc.); (iii) a technical block (sorting, storage, etc.).
B: Sustainable improvement of agro-industrial sectors productivity	B1: Building the capacity of producers in agro-industrial chains	Improving the supply of non-financial services: (i) Support for training and advisory support structures for POs/SMEs (equipment, training, missions, etc.); (ii) Capacity building (technical, managerial, etc.) for POs/SMEs in the sectors (mango, cashew, maize, etc.) by a consultancy firm; (iii) Agreement with ISRA (production of maize pre-basics, mango and cashew nut plants and support for the over-grafting of mango and cashew nut trees).
		Improving the supply of financial services: (i) Capacity building of FIs: provision of financial products adapted to the needs of the sector, staff training, equipment; (ii) Access to agricultural index insurance; (iii) Medium-long term credit line (private AfDB window) in favour of 2 FIs.
		Support for the implementation of a digital platform for access to A-I services (mechanisation, storage, inputs, financing, information, etc.).
	B2: Building community	Community capacity building on approach, social marketing and conflict prevention/management, PPPs and fragility/resilience

COMPONENT	DESCRIPTION	DESCRIPTION
	resilience	Rehabilitation of 350 km of access roads to the modules and aggregation platforms, and agricultural production areas, etc.).
		Implementation of the Environmental and Social Management Plan (ESMP), the Resettlement Action Plan (RAP), the 'nutrition and health' component and the Climate Change Action Plan (CCAP)
		Support to the 3 regional follow-up task forces of South Agro-pole (meetings)
C: Coordination and management		Coordination and management, and monitoring and evaluation
		Procurement, financial and accounting management and audit
		Steering and supervision

To better take into consideration of environmental aspects, improve climate resilience, strengthen the energy efficiency of agricultural SMEs, develop irrigated agriculture and green industrialisation, a request for additional funding was successfully submitted to the Green Climate Fund (GCF). The main activities financed by the GCF fall under Components A and B of the South PZTA.

Thus, under Component A, the GCF funding will cover two main activities: (i) Supporting smallholder farmers' access to drip irrigation system technology powered by solar pumps (installed capacity of 788.04 KW) to promote horticulture and market gardening and cash crops for a surface area of at least 11,940 ha; (ii) invest in the improvement of post-harvest infrastructure by strengthening the capacity of agricultural cooperative societies, farmers' associations and agro-industrial enterprises run in particular by women and farm households to process, dry, store and package the produced staple food crops with a view to improving their competitiveness. This will entail installing 2,834 kW of solar energy for lighting, processing, drying and packaging of staple food crops.

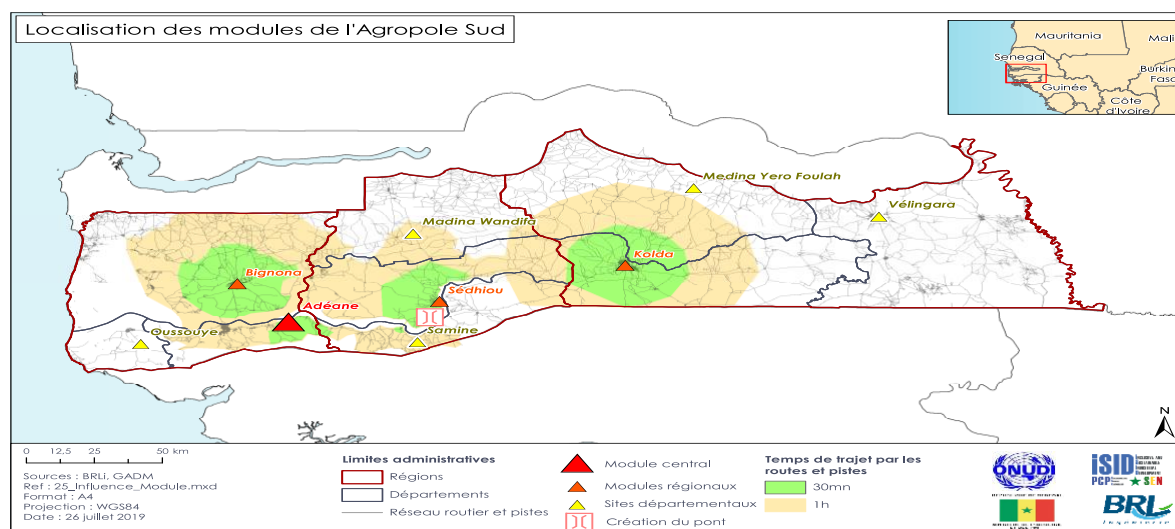
For Component B of PZTA-Sud, the contribution of the GCF will focus on: (i) an investment in agricultural practices that enhance resilience to climate change in the Project area. More specifically, this will include investments in the promotion and use of improved and climate resilient seeds, especially for rice, maize, potato and mango varieties. A partnership will be established with the Senegalese Institute of Agricultural Research (ISRA) for the production and multiplication of improved seeds. The programme will also support farm households to create sustainably managed community forests with a total surface area of about 20,000 ha for carbon sequestration and to generate income from wood, cashew nuts, mango and coffee trees; (ii) food and agricultural waste issues (solid and liquid wastes) that are likely to pose sanitation and waste management problems. The objective of this activity is to reduce GHG emissions in agricultural value chains through the use of low-carbon energy sources. This will entail installing 3 MW of renewable energy from biogas production or approximately 6,682.2 m³ of biogas digester to treat livestock manure and other waste and produce biogas for heating, cooking, cooling or electricity generation.

Generally, GCF's contribution will focus on:

- the adoption of climate-resilient agricultural practices, technologies and innovation for smallholder farmers;
- the deployment of low-carbon energy technologies;
- the use of technology and innovation such as minimum tillage, use of drought resistant and improved yielding seeds, crop rotation, integrated nutrient management, mixed cropping, sustainable agroforestry practices and livestock management, as well as the use of solar irrigation, off-grid solar energy and biogas technologies to improve diversification, value addition, productivity and profitability along the agricultural value chain;
- agricultural practices that improve resilience to climate change.

The map below shows the location of potential South Agro-pole sites.

Map 1: Location of the main modules of PZTA-Sud



2.1.3. Site selection: criteria and procedures

2.1.3.1. Selection of the central module site

The choice of Baghagha village in the Adéane commune to host the main module of the South Agro-pole was validated by the Steering Committee on the basis of the following criteria:

- land availability to accommodate a site of at least 50 ha;
- proximity to the Port of Ziguinchor;
- Proximity to the main cashew nut, mango and banana production area;
- direct proximity to a national road (RN6).
- Proximity to a SENELEC (Boutoute power plant).

Within the framework of the APS, three locations were proposed. The first was a land base of 250 ha but which, after checking with the Water and Forestry Services, was in the classified forest of Bissine, a sensitive area that should be avoided. The Ziguinchor Regional Task Force, meeting in March 2019, agreed to look for another parcel of land located outside of the classified forest and whose surface area could be around 50 ha.

The two other sites proposed were very close to each other. The first covers an area of 50 ha while the second covers 85 ha. As both sites are relatively close to the power line, the criteria for choice were mainly related to the distance from the RN6 in order to limit the costs of connection to the road network and to the available land reserve. This would offer the greatest possible potential for businesses wishing to set up in the central module of the south agro-pole. The 85 ha plot was therefore selected insofar as it met both criteria and the other aspects were more or less equivalent.

2.1.3.2. Selection of regional modules

The central module is the anchor point of PZTA-Sud. From this first anchor point, the 3 regional modules were determined depending on the existing road, storage and processing facilities and the location of the mango and cashew nut production areas.

The proposed communes to host the regional modules are:

■ Bignona

It is justified by the presence of the already existing Bignona Integrated Economic Platform (PEIB), which can serve as a relevant base to be reinforced. The platform is located north of the city on the road to Diouloulou. It covers about 3

ha and already has infrastructure that it seems more relevant to strengthen than to duplicate at the risk of making it obsolete. Due to its initial vocation, the platform will be primarily dedicated to mangoes and to a lesser extent to cashew nuts given the lower volumes produced nearby. If this crop were to develop further in the future, a new site dedicated to cashew nuts could be defined elsewhere. Lastly, in addition to mangoes in the off-season, the Bignona platform could also be used for citrus and other forest fruits produced to the west and south-west of Diouloulou.

For Ziguinchor and for mangoes, the Bignona platform is a tool that fits perfectly into the South Agro-pole system. The platform should be quite functional after the second phase of investment planned for the site, which is currently under construction. The industries of the main site of Baghagha should be well articulated with this platform which also includes 4 processing plants.

▪ **Kolda**

The proposal of Kolda Commune is based on its strategic position to move from one bank to the other of the Casamance River and as a strategic meeting point for the zones of Medina Yero Foulah and Vélingara before shipment to the central module of Adéane or the shipment of products to Ziguinchor.

The first choice to house the regional module was a site located within ISRA's CRZ in Kolda, close to the RN6 road south of the city. The CRZ has a large land reserve of several hundred hectares and quickly accepted the principle of allocating a piece of land belonging to ISRA, but the land identified corresponded to a grazing area. A new, more suitable plot of 10 ha, not far from the southern road, was selected.

Alternative sites were proposed near Kolda on the Vélingara road, but were located within the classified forest area. For this reason, these sites could not be selected.

▪ **Sédhiou**

The town of Sédhiou has a central position between Bignona and Kolda. It is also close to the high concentration of mango and cashew nut production along the right bank of the Casamance River.

Sédhiou commune already had a project for a 50 ha industrial zone that could host an incubator for agro-food projects. On this yet undeveloped site, a first hangar had been built by MIPMI while the commune was to provide water and electricity. A plot of 5 ha was selected to house the regional module of Sédhiou.

2.1.3.3. Selection of departmental platforms

The 5 departmental platforms were added to this network in order to improve the coverage of the South Agro-pole sites in relation to the existing production basins and infrastructure.

The departmental sites were defined in such a way as to propose South Agro-pole modules in departments that do not yet have a regional module or the central module. The departments concerned are Oussouye, Bounkiling, Goudomp, Vélingara and Medina Yero Foulah.

The proposed communes in each of the departments were identified following consultations with the regional task forces. Several proposals were sometimes made for the same department. The choices made were based on:

- road infrastructure to link the departmental platforms with the regional modules;
- the proximity of sites to production areas; and
- maximisation of the coverage of production areas.

At the end of the process, the communes selected are listed in the table below.

Table 2: Location of departmental modules

REGION	DEPARTMENT	PROPOSED COMMUNE	COMMUNE SELECTED
Ziguinchor	Oussouye	Oukut	Oukut
		Miomp	
Sédhiou	Goudomp	Goudomp	Samine

		Samine	
	Boukiling	Boukiling	Madina Wandifa
		Madina Wandifa	
		Bona	
Kolda	Velingara	Velingara	Velingara
	Medina Yero Foulah	Medina Yero Foulah	Medina Yero Foulah

2.1.4. Linking PZTA-Sud to smallholders

To ensure a perfect collaboration between the agro-pole and the smallholders of Casamance, there are plans to establish a mechanism for putting them in touch with each other. Indeed, linkages with smallholders are a key feature of the agro-poles and satellite modules at regional level. By grouping the products of several farms in a single location, departmental platforms and external modules will be able to link smallholder farmers to large agricultural value chains. These linkages serve two key functions: (i) effectively integrate raw material suppliers (smallholder farmers) with the demand side of the food chain; and (ii) provide appropriate raw materials to agribusinesses. This is essential for poverty reduction in rural areas and for the structural transformation of the economy.

The physical infrastructure relating to the agro-pole (modules and platforms) is supplemented by incentives for contract farming. Very few smallholder farmers currently have contractual links with agro-processors. This contributes to a supply-driven agro-industrial system characterised by uncertainty and high transaction costs, and does not provide incentives for smallholder farmers to produce the quality or quantity of raw materials needed by agribusinesses. With the development of contract farming, agricultural producers will need to reach agreements with processors on production methods and technologies, production quantity, quality and prices, as well as technical and financial support. This reduces transaction costs for both parties.

Both processors and producers should benefit from better links between farmers and agribusinesses. Processors benefit from guaranteed product delivery, while producers benefit from essential inputs and services (seeds, fertiliser, equipment, financing and technical advice) and access to stable and more predictable markets, allowing better planning of expenditures and savings.

2.2. PROMOTER OF THE SOUTH AGRO-POLE PROJECT

Following the pre-feasibility studies and the Lab, the Ministry of Industrial Development and Small- and Medium-sized Industries (MDIPMI) was designated as the Prime Contractor with the support of the Emerging Senegal Plan Monitoring Bureau (BOS) which participates in the monitoring of investments under the ESP.

The mission of the Ministry of Industrial Development and Small- and Medium-Sized Industries is, among other things, to prepare and implement industrial development strategies. It promotes the deployment of new industries and ensures their harmonious distribution throughout the territory. It encourages the establishment of industrial estates in local communities. It accompanies the restructuring of industrial companies and promotes the creation of SMIs.

In addition, it draws up and implements strategies for the development of quality promotion programmes by disseminating the culture of quality and certification within industrial companies. It encourages and supports competitiveness efforts as well as industrial products promotion and export policies.

It is responsible for implementing policies and activities relating to standardisation, industrial property protection and technological innovation. It ensures, in conjunction with the Minister in charge of the environment, the monitoring of classified industrial facilities.

The ESP Operational Monitoring Bureau (BOS/ESP) is considered as a mission administration, and meets the need to contribute, with all due efficiency, to the implementation of programmes, projects and reforms outlined in the ESP, especially the flagship actions, as well as the need to provide the authorities with appropriate decision-making and monitoring tools on a permanent basis. Thus, the BOS/ESP is responsible for monitoring, together with the ministerial departments and other structures concerned, the implementation of ESP flagship projects and reforms, periodically evaluating their progress, providing technical support to the implementing structures and submitting proposals for decisions to the President of the Republic.

2.3. TARGET GROUPS AND STAKEHOLDERS OF THE SOUTH AGRO-POLE PROJECT

The main target groups are the Government of Senegal (including the Ministry of Industrial Development and Small- and Medium-Sized Industries, the Ministry of Agriculture and Rural Equipment, the Ministry of Livestock and Animal Productions and the Ministry of Fisheries and Maritime Economy), implementing partners and potential investors, producers and processors, distributors, etc.

Stakeholders include the Government of Senegal, the private sector, local authorities and development partners.

2.4. INSTITUTIONAL MECHANISM FOR THE IMPLEMENTATION OF PZTA-SUD

The Project Executing Agency (AGEX) will be the Ministry of Industry through a Project Implementation Unit (PIU). A Steering Committee (COPIL) chaired by AGEX will be set up to: (i) formulate the strategic guidelines of the agro-pole programme; (ii) examine and approve the PTBA; (iii) analyse and adopt the activity reports (including financial) and audit reports. It will be composed of representatives from the Ministries in charge of the following portfolios: Planning and Cooperation, Finance, Agriculture, Trade, Gender and Social Affairs, Environment, Land Management, Health and Nutrition, as well as representatives of the private sector, the Sovereign Fund for Strategic Investments (FONSIS), Federations of Farmers' Organizations, Local Authorities, Consular Chambers and BOS/ESP. The Coordinator of the PIU will provide the secretarial services to COPIL.

The Project Implementation Unit (PIU) will be responsible for Project coordination, implementation and monitoring. The PIU will be based in Dakar and will in the long run be in charge of 3 Agro-pole Projects (PZTA); it will have 3 Regional branches corresponding to the 3 Agro-poles (South, Centre and North). However, only the South Agro-pole branch will be set up under this Project. The staff of the PZTA includes the following: (i) a National Coordinator; (ii) an Agro-industry Engineer; (iii) a Monitoring and Evaluation Specialist; (iv) a Procurement Specialist; (v) an Administrative and Financial Officer; (vi) an Investment and Financing Specialist; (vii) a Regional Coordinator; (viii) an Infrastructure Engineer (regional); (ix) an Agronomist, specialist in agricultural sectors (regional); (x) an Environmental Protection Specialist; (xi) a Social Protection Specialist; (xii) 3 Accountants (including one regional); (xiii) 3 Assistants (procurement, administration, monitoring-evaluation); and (xiv) support staff.

2.5. CHOICE OF COMMODITY VALUE CHAINS

In the pilot phase of the South Agro-pole, the mango and cashew nut chains were chosen because of Casamance's favourable agro-ecological conditions and the added value they can provide. This choice is the outcome of deliberations at the Lab workshop which brought together all the actors through the method referred to as "Big Fast Results". On this occasion, the previous analysis of value chains for the establishment of agro-poles was reviewed. The brainstorming and sharing made it possible to deepen and prioritise the value chains. The Southern region, which polarises the 3 administrative regions that once made up the natural region of Casamance (Ziguinchor, Kolda and Sédhiou), was selected as a pilot to host the first agro-pole. Given the southern region's potential in the production of mango (55% of national production) and cashew nut (80% of national production), the opportunities for development of both products with gains of CFAF 933 billion for cashew nut and CFAF 42 billion for mango, wealth creation and employment (4154 in 2013), both crops were validly put forward for the pilot phase of the agro-pole.

2.6. FINANCING OF THE SOUTH AGRO-POLE PROJECT

To achieve its goal of establishing an agro-pole in Casamance, the Government of Senegal will invest CFAF 11 billion. It is supported by the African Development Bank to the tune of CFAF 28.3 billion, the Islamic Development Bank CFAF 18.3 billion and the Green Climate Fund with CFAF 16.66 billion.

Thus, the Project is shoring up these achievements by financing the actions required to attract private investment in the agro-industry. The project will create 14,500 direct jobs and 35,000 indirect jobs. About 65,000 households, or approximately 365,000 people (51% of whom are women) will benefit therefrom. It will target farmers and the private sector (including small- and medium-sized enterprises) that can invest in the processing of agricultural produce and service provision. Specific actions will target young people and women in order to integrate them into segments of the agricultural value chains. The agro-pole's infrastructure development will rely on local labour. Advisory support for the creation of decent jobs with a minimum of social security will be provided to businesses.

III. ANALYSIS OF VARIANTS

The South Agro-pole is a driving force for regional development and industrialisation, especially through the improvement of agricultural added value created at the local level. It is thus a "multi-dimensional and modular dimension, with specialised poles and modules and a flexible structure that evolves according to requirements as they

arise". Based on this, the South Agro-pole, which will operate in the administrative regions of Ziguinchor, Sédhiou and Kolda, is structured around a central module in Adéane and three external regional modules based respectively in Ziguinchor, Sédhiou and Kolda. Five departmental platforms are also planned. Even though the host communes have been selected, the exact location of the departmental platforms is not yet known at this stage of the SEA.

The central module will house a "Governorate" hub with seven specialised internal service modules (administration, trade and logistics, skills and training, energy and environment, financing and communications, maintenance and basic social services) and a "Production and Industry" hub with an internal production, packaging and storage module with five components (processing of high value-added products, cashew apple processing, fruit processing, fruit and vegetable drying, product packaging and preservation). At this stage of the SEA, the technical and technological methodologies for the constructing the planned infrastructure (storage facilities and processing plants) and processing have not yet been defined.

On the basis of the above, the analysis of the variants is based here on the comparison between the "With Project" and "No Project" options.

3.1. ANALYSIS OF THE "NO PROJECT" OPTION

- An analysis of the basic environmental and social conditions in the project area shows that the Agro-pole's project area remains strongly marked by a continuous environmental and natural resource degradation, resulting from climatic deterioration and the practice of sometimes unsuitable production systems (clearing, overgrazing, bush fires, high demand for firewood and charcoal, etc.). It is also marked by an expansion of cashew nut cultivation, especially in the Sédhiou region, with significant consequences on biodiversity reduction. Thus, a considerably large portion of the population in the project area remains threatened by poverty and food and nutritional insecurity, which pushes young people especially to exodus or illegal emigration. Ecosystems in the area are in an advanced process of degradation. The option of not carrying out the Project would therefore mean maintaining the status quo. Failure to carry out of the Project in the cashew nut and mango sub-sectors would mean a renunciation of providing solutions to the precariousness and vulnerability affecting the populations of the area, a renunciation of acting on the ongoing natural resources degradation. This situation would have disastrous consequences on the populations and on the environment and will exacerbate the still latent conflicts between communities and users.
- "Doing nothing" would be tantamount to not seizing the opportunity to improve agricultural production systems, especially for cashew nuts and mangoes. "Doing nothing" would also mean giving up the opportunity to provide answers to the erosion of biological diversity due to the expansion of cashew nut cultivation to the detriment of the latter. This alternative would therefore not be in line with the objectives of environmental protection and sustainable development advocated by Senegal and its development partners.
- The "No Project" alternative, in itself, presents several impacts and negative effects (decrease in income, increased emigration, strengthening conflicts, continuation of natural resources degradation, etc.).

3.1.1. Positive effects of the "No Project" option

- The "no Project" option means "not carrying out the South Agro-pole Project". From a purely biophysical and human point of view, this would result in no major negative effects due to the fact that there would be no work leading to the generation of negative environmental and social effects.

3.1.2. Negative effects of the "No Project" option

- The "No Project" option would correspond to the situation of no action in cashew nut and mango crops, especially with regard to producer organisation and capacity building through the linking of smallholders with the agro-pole and cultivation contracts between producers and agro-processors. Indeed, these two aspects will allow for a structural transformation of the local economy.

- This would also mean no action in agri-business, the commercial development of cashew nuts and mangoes, the strengthening of producers' bargaining power, the construction of processing plants and storage infrastructure, etc. Such a situation would reflect a lack of will in the country's agricultural policy and especially a lack of ambition in the development of cashew value chains, the fight against food insecurity and poverty in rural areas.
- Also, the absence of the South Agro-pole Project would constitute a slow-down in the country's cashew and mango agri-business development policy in view of its enormous potential and ripple effects.

3.2. ANALYSIS OF THE "WITH PROJECT" OPTION

3.2.1. Positive effects of the "With Project" option

- The South Agro-pole project is designed to play an important role in the socioeconomic development of Casamance. The area has a major agro-food potential, especially for cashew nut and mango. The weather and soil conditions are suitable for the development of these two crops.
- Implementation of the South Agro-pole Project will make it possible, among other things, to stimulate private investment in the cashew nut and mango sectors. On the environmental front, the Project will promote better land management and the preservation of natural areas and wetlands that are currently under great threat.
- Socially, the project will improve cashew and mango production techniques and systems, reduce post-harvest losses, increase incomes, improve marketing conditions, enhance the value of production through processing, and strengthen the skills of the various actors involved in these chains (producers, traders, transporters, economic operators).
- At the level of the population, the impacts will relate to the contribution to food security, the creation and enhancement of agricultural jobs, the improvement of living conditions and environment, and the fight against famine.

3.2.2. Negative effects of the "With Project" option

- The negative environmental and social impacts of the South Agro-pole's activities will mainly concern the risks of vegetation loss and natural habitat degradation in the event of deforestation for the setting up of the modules, the construction works for processing plants and storage facilities, the risks of pollution and degradation of the water table and watercourses linked to possible use of pesticides and fertilisers in mango and cashew tree orchards to boost production and combat pests, etc.
- Socially, there could be land conflicts or conflicts between herders and farmers relating to the wandering of livestock. However, these impacts can be avoided or greatly reduced through the implementation of appropriate measures. On this basis, the "with Project" option must be adopted in view of its potential economic, environmental and social benefits.

III. CONCLUSION ON OPTIONS ANALYSIS

The comparative analysis of the two implementation options for the South Agro-pole Project highlights the necessity and urgency of carrying out the Project.

Indeed, apart from the consequences described above, the "no Project" option is not in line with the country's agricultural development policy, which aims to guarantee food security, increase and diversify agricultural exports, ensure the rational management and preservation of agro-sylvo-pastoral resources, and improve the living environment of rural populations.

The status quo will be a major constraint to the development of sustainable cashew nut and mango production. It therefore does not promote food security and the increase of producers' incomes, and therefore their social well-being.

The "with Project" option described above is to be adopted, because it allows the development of agro-industry while taking into account small producers by building their capacity to preserve natural resources. This option has both positive and negative impacts that will be further developed in the subsequent sections. Appropriate measures will be proposed to mitigate the negative impacts and enhance the positive impacts of the Project.

IV. ICPE RANKING

The infrastructure to be built under the PZTA-Sud project include classified installations, according to the nomenclature established by the Ministry of the Environment and Sustainable Development. These facilities are the Agro-pole itself and the cold rooms entered under the headings A205, A1402, A1406, A1901, A2201 and A2202. Their classification thresholds are described below.

4.1. THE AGRO-POLE

- The Agro-pole is classified under A205 ("preparation, processing and preservation of fruit and vegetables") and A1901 of the official nomenclature of Installations Classified for the Protection of the Environment (ICPE) of the Ministry of the Environment and Sustainable Development. The table below contains an analysis of the classification regime and the type of prior environmental impact assessment to be carried out..

Table 3: ICPE classification table of the components and activities of PZTA-Sud

HEADING	ACTIVITIES REFERENCED BY THE ICPE NOMENCLATURE	CLASSIFICATION REGIME	TARGETED AGRO-POLE ACTIVITIES	TARGETED AGRO-POLE ACTIVITY CLASSIFICATION	TYPDE OF EIA
A205	Preparation, processing and preservation of and vegetables	Authorisation if the production or storage capacity exceeds 10 tonnes/day Declaration if the production or storage capacity is between 1 and 10 tonnes per day	Adéane central module should produce or preserve more than 10T/day.	The central module of the Agro-pole is subject to authorisation as the planned storage quantities are greater than or equal to 10 tonnes per day.	Initial environmental assessment
A1901	Trade, warehouses and halls for perishable goods	Authorisation when the sales or storage area is greater than or equal to 500 m ² . Declaration when the sales or storage area is greater than 200 m ² but less than 500 m ² .	The planned storage area for the modules is more than 500 m ² .	Authorisation for all regional and departmental modules	Initial environmental assessment

Source: DEEC, ICPE Nomenclature

4.2. ENERGY PRODUCTION

Table 4: ICPE ranking for the PZTA-Sud power generation

HEADING	ACTIVITIES REFERENCED BY THE ICPE NOMENCLATURE	CLASSIFICATION REGIME	TARGETED AGRO-POLE ACTIVITIES	TARGETED AGRO-POLE ACTIVITY CLASSIFICATION	TYPDE OF EIA
• A1402	• Electricity production and distribution (thermal power plant, generators, etc.)	• Authorisation if maximum thermal power exceeds 2 MW • Declaration if maximum thermal power is more than 500 KW and less than 2 MW	• 788.04 KW will be installed to supply the solar pumps.	• Authorisation because the power is between 500 KW and less than 2 MW.	• Initial environmental assessment
A1402	• Energy production for the solar-powered agro-industry	Authorisation if maximum thermal power exceeds 2 MW • Declaration if maximum thermal power is more than 500 KW and less than 2 MW	• Planned installation of 2,8344 KW for the supply of agro-industries at the central module.	• Declaration because the planned power to be installed is greater than 2 MW	• Extended Impact Assessment (EIA)

• Source: DEEC, ICPE Nomenclature

4.3. COLD ROOMS

The central module is designed to accommodate cold rooms. These are classified under A1406 ("Refrigeration or compression - installation of - ").

Table 5 below shows an analysis of the classification regime and the type of environmental impact assessment.

Table 5: ICPE classification for PZTA-Sud Cold rooms

HEADING	ACTIVITIES REFERENCED BY THE ICPE NOMENCLATURE	CLASSIFICATION REGIME	TARGETED AGRO-POLE ACTIVITIES	TARGETED AGRO-POLE ACTIVITY CLASSIFICATION	TYPDE OF EIA
A1406	<ul style="list-style-type: none"> Refrigeration or compression (installation of) 	<ul style="list-style-type: none"> Authorisation when the power consumption is over 200 KW Declaration when the absorbed power is greater than 20 KW and less than 200 KW 	The central module in Adéane will accommodate cold rooms.	<ul style="list-style-type: none"> Authorisation because the power, even if it is not yet precisely known, should be more than 200 KW 	<ul style="list-style-type: none"> Initial environmental assessment

Source: DEEC, ICPE Nomenclature

4.4. WASTE MANAGEMENT

Table 1: ICPE classification for PZTA-Sud waste management

HEADING	ACTIVITIES REFERENCED BY THE ICPE NOMENCLATURE	CLASSIFICATION REGIME	TARGETED AGRO-POLE ACTIVITIES	TARGETED AGRO-POLE ACTIVITY CLASSIFICATION	TYPDE OF EIA
A 2201	<ul style="list-style-type: none"> Centre for the collection and sorting of waste destined for disposal 	<ul style="list-style-type: none"> Irrespective of the capacity 	<ul style="list-style-type: none"> The Agro-pole provides areas for grouping and sorting waste destined for disposal. 	<ul style="list-style-type: none"> Authorisation is required 	<ul style="list-style-type: none"> Extended Impact Assessment (EIA)
A 2202	<ul style="list-style-type: none"> Energy production for the solar-powered agro-industry 	<ul style="list-style-type: none"> Authorisation if maximum thermal power exceeds 2 MW Declaration if maximum thermal power is more than 500 KW and less than 2 MW 	<ul style="list-style-type: none"> Planned installation of 2,8344 KW for the supply of agro-industries at the central module. 	<ul style="list-style-type: none"> Declaration because the planned power to be installed exceeds 2 MW 	<ul style="list-style-type: none"> Extended Impact Assessment (EIA)

• Source: DEEC, ICPE Nomenclature

4.5. CONCLUSION

An authorisation to open and operate an ICPE is required prior to the start of operations at the Agro-pole, and a declaration for solar energy production facilities.

V. ANALYSIS OF THE BASIC ENVIRONMENTAL AND SOCIAL CONDITIONS OF SOUTH PZTA ZONE

This chapter deals with the basic environmental and social conditions in Casamance, the host zone of the South Agro-pole Project, which corresponds to the administrative regions of Ziguinchor, Kolda and Sédhiou. It is thus a brief analysis of the biophysical and socioeconomic conditions of the Project area. It will be supplemented by an analysis of the two commodity chains selected for the first phase of the South Agro-pole, namely mango and cashew nut. The objective is to shed light on their potential and the main constraints identified, as well as recommendations for their development.

5.1. ADMINISTRATIVE SITUATION AND DEMOGRAPHIC ELEMENTS

5.1.1. ZIGUINCHOR REGION

Located between the Republic of The Gambia to the north, the Republic of Guinea Bissau to the south, the Sédhiou Region to the east and the Atlantic Ocean to the west, the Ziguinchor Region covers a surface area of 7,339 km². Administratively, it is divided into 3 departments (Bignona, Oussouye and Ziguinchor), 8 sub-divisions, 25 territorial communes and about 502 villages.

The RGPHAE 2013 Report findings show a resident population of 549,151 people (51.1% men and 48.9% women) mainly composed of Diolas (57.8%), Mandingues (11.10%), Pulaars (10.5%), Wolofs (3.9%), Manjacques (3.5%), Balantes (2.9%), Sérères (2.7%) and Mancagnes (2.4%). However, an ANSD 2015 projection estimates the population at 583,525 inhabitants or 4.1% of the national population. In 2013, the active population was estimated at 145,490 individuals consisting mainly of men (65.7%), which explains the relatively high level of unemployment in the region (26.5%) compared with the national situation (25.5% in 2013). According to the 2017 RGPHAE Regional Report, 78% of this population is Muslim, 18% Christian and a strong presence of animists and pagans, especially in the department of Oussouye (32.7%). In 2018, population projections for the region were estimated at 621,171 inhabitants, including 318,925 men and 302,246 women (ANSD, March 2018).

The population is typical of developing regions where fertility is high and relatively constant, and mortality is declining. It is also noted that people aged 65 years and over constitute 5% and young people under 15 years 40% of the population, while children under 5 years of age represent 13% of the total. The population is also marked by a disparity between departments. In fact, Bignona, which has 46% of the regional population and a density of 48 inh/km², is the most populated pole of the region, followed by Ziguinchor with 45.2% and the department of Oussouye with barely 8.8%. The region's urbanisation rate was 45.94% in 2013 (which is above the national average of 45.2%). The department of Ziguinchor raises the regional average with an urbanisation rate of 37.38% while those of Bignona and Oussouye are respectively 7.67% and 0.88%.

The activity rate is 52.9% for men and 32.0% for women. By residence, it is 42.6% in urban areas and 60.2% in rural areas.

The unemployment rate observed in 2013 was 26.5% in the region, 18.4% for men and 42.1% for women.

Regarding migration, the exit index is 25.3 against an entry index of 12.2. Thus, the Ziguinchor region is more of an emigration than an immigration region. As for international migration, it is 6.1 in the region and remains the largest of the Casamance regions. The migratory phenomenon mainly concerns young people between 15 and 24 years of age and men.

5.1.2. SEDHIOU REGION

Sédhiou Region was established by Law No. 2008-14 of 18 March 2008, and corresponds to the Middle Casamance. It covers an area of 7,330 km², or 3.7% of the national territory. It is bounded to the north by the Republic of The Gambia, to the south by the Republic of Guinea-Bissau, to the east by Kolda Region and to the west by Ziguinchor Region. This position, both bordering and central to Casamance, gives the region enormous geostrategic potential in the economic, social and cultural dynamics of the sub-region (ANSD, Final Regional Report, Sédhiou Report, 2017).

In terms of administrative organisation, Decree No. 2008-747 of 10 July 2008 specifies the administrative division of the Region into 3 departments (Boukiling, Goudomp and Sédhiou) and 9 sub-divisions. There are 46 local authorities, including 3 departmental councils, 4 urban communes and 39 rural communes. Officially, there are about 957 villages.

The 2013 census estimates the population of the Region at 452,994 inhabitants, or 3.35% of the national population, with a density of 62 inhabitants per km². The population was estimated in 2018 at 517,016 inhabitants, including 261,713 men and 255,303 women (ANSD, March 2018).

Composed mainly of Mandingo, Fulani, Balantes, Diolas, Mandiacks, Mancagnes, Wolof and Sérère, 2/3 of this population is under 25 years old, and 50.7% are men. Persons under 20 years old make up 60.2% of the population and only 4.8% is 60 years old and above.

The activity rate of the region's population, which is higher in rural areas (60.2%) than in urban areas (42.6%), is 56.5%. This activity rate is practically the same in the departments of Sédhiou and Goudomp with 53.7% and 53.1% respectively, with Boukiling recording the highest activity rate in the region with 63%.

Unemployment in the Region is quite high with a rate of 21.7%, of which 16.5% is among men and 12.1% among women. This proportion is higher in rural areas (22.6%) than in urban areas (18.3%). In addition, the unemployment rate is higher in the department of Goudomp (27.3%), followed by that of Sédhiou (20.10) and Boukiling (17.4%).

In the Sédhiou Region, the exit index is 14.3 against an entry index of 5.5. This shows that Sédhiou is more of an emigration than an immigration region. Nevertheless, it receives populations mainly from the regions of Ziguinchor, Dakar, Kolda, and Kaolack. International migration remains low in the region.

In the last 10 years, there has been a high intensity of migratory movements between the ages of 15 and 24, with 4,294 immigrants and 8,651 emigrants. This phenomenon decreases as one moves up to the older age groups.

During these periods, migration is more observed among men than women, with 11,533 male emigrants compared to 10,916 female emigrants.

5.1.3. KOLDA REGION

The Kolda Region acquired its current configuration through Law No. 2008-14 of 18 March 2008 to amend Sections 1 and 2 of Law No. 72-02 of 1 February 1972 on administrative organisation. It occupies an area of 13,721 km² (7% of the national territory), and is bordered to the north by the Republic of The Gambia, to the east by the Tambacounda Region, to the west by the Sédhiou Region and to the south by the Republic of Guinea Conakry and that of Guinea Bissau. This position gives it a significant geostrategic potential in terms of economic, social and cultural dynamics in the sub-region.

In terms of administrative demarcation, the Region has 3 departments (Kolda, Medina Yoro Fouta and Vélingara), 3 department councils and 40 communes including 3 urban communes and 37 rural communes. The number of official villages is estimated at 1,589 villages (Presentation of the Kolda Region, ANSD, 2014).

In 2013, ANSD estimated the resident population of the Kolda Region at 662,455. ANSD projections have estimated this population at about 703,779 inhabitants or 4.9% of the national population with a regional average density of 51 inhabitants per km². In 2018, the population was estimated at 748,451 inhabitants, including 378,190 men and 370,261 women (ANSD, March 2018). The Peulhs are in the vast majority. Nevertheless, the Region remains cosmopolitan with the presence of the Mandings, Wolof, Sarakolés, Diolas, Serer and other ethnic minorities and nationalities. This population is characterised by a high proportion of children and youth, but also by a small percentage of elderly people. Children under the age of five make up 17% of the Region's population, children under 15 (including under-fives) make up 48%, while those 65 and above make up 3% of the regional population. The 2013 RGPHAE shows that the Vélingara department has the largest number of people in terms of population size. It is followed by the Kolda department and lastly the Medina Yoro Fouta department which has only one fifth of the regional population. These results show an unequal distribution of the regional population among the three departments.

The other characteristic of this population is its unequal distribution between rural and urban areas and its progress in terms of urbanisation. In fact, nearly three quarters of the population resides in rural areas (74% of the total population) and only 26% in urban areas. In 2002, the rural population accounted for 84% of the total population and the urban population only 16%. The urbanisation rate of the Kolda Region increased to 26% in 2013. In the same year, the Region's working age population was 329,421 inhabitants or 49.7% of the total population of the Region. In terms of distribution by sex, there is a slight domination of women (51% of the total) over men, respectively 166,428 against 162,993. The activity rate is 55.6% for men and 60.0% for women. By residence, it is 42.5% in urban areas and 46.5% in rural areas.

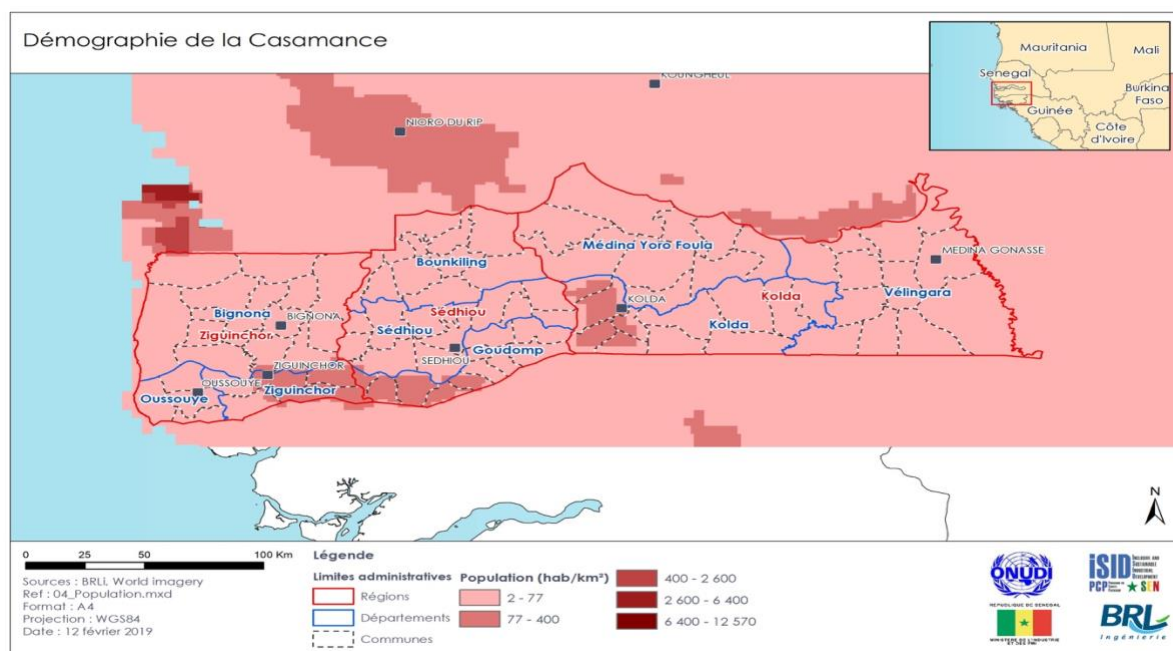
The unemployment rate observed in the 2013 census was 38.8% overall in the Kolda Region. It was 30.6% for men and 53.7% for women. The exit index of the region is 8.5 against an entry index of 6.8. Kolda is more a Region of emigration than immigration. International migration is 6.1 in the region and remains the largest after that of the Ziguinchor Region. The migratory phenomenon mainly concerns the class composed of young people between 15 and 24 years old and that of men.

Map 2: Administrative boundaries of Casamance



Sources: BRLi, GADM, February 2019

Map 3: Map reflecting the demography of Casamance



- Sources: BRLI, World Imagery, February 2019

5.2 BIOPHYSICAL CHARACTERISTICS OF CASAMANCE

5.2.1 ZIGUINCHOR REGION

RELIEF AND SOILS

The relief of the region is generally flat; the plateaus belonging to the terminal continental hardly exceeds 50 m, and gradually decreases from the southeast, starting from the last foothills of Fouta Djallon to the west to reach sea level. Along the Casamance River, the relief has the same level with the sea.

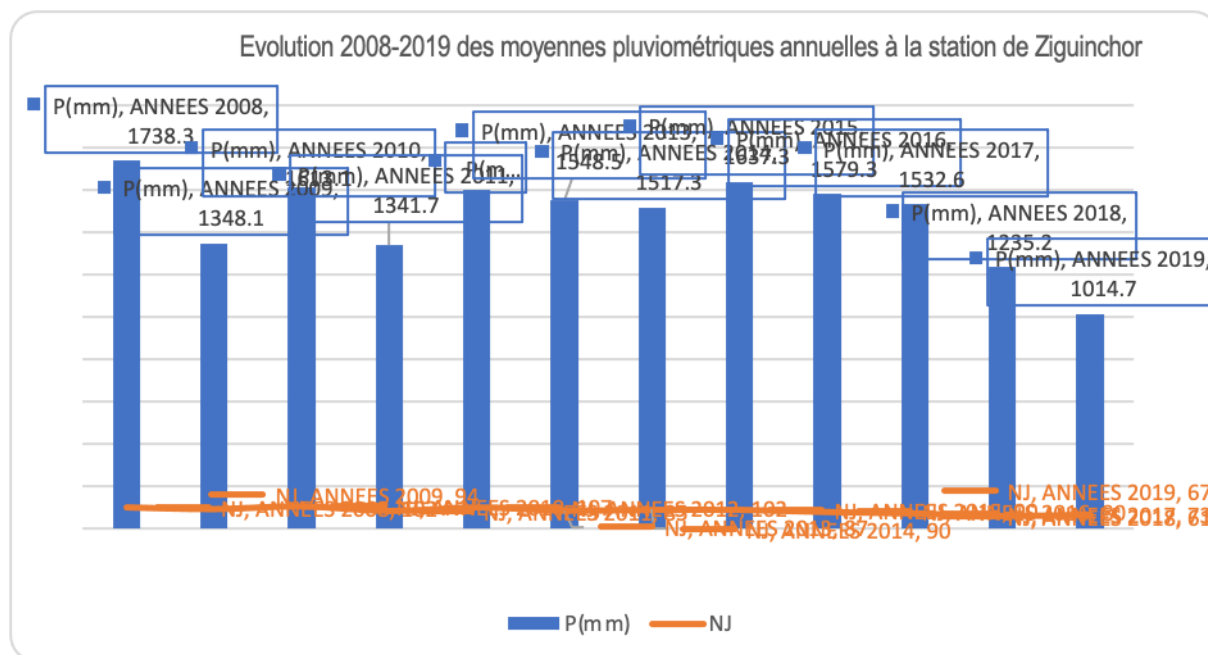
The main types of soils encountered in the region are:

- hydromorphic soils with gley suitable for rice cultivation and market gardening;
- acidified salty soils (mainly ancient mangroves), affected by a poor drainage system;
- leached tropical ferruginous soils and sandy ferrallitic soils suitable for dry crops. It should be noted, however, that the gradual salinization of soils and land management problems are a handicap to regional development prospects. Nevertheless, the rainfall recorded in recent years has watered down the rate of salinization, which can drop as low as 3,000 mg/l.

CLIMATE

The region is influenced by the sub-Guinean climate which favours high rainfall compared to the central and northern regions of the country. So far, it has recorded the highest rainfall in the country (over the last normal period), although with spatial and temporal variations. In 2008, the Ziguinchor station recorded 1,738.3 mm in 102 rainy days, 1,600.3 mm in 102 days in 2012 and 1,532.6 mm in 73 days in 2017, for example. The average annual rainfall decreased from 2017 to 1235.2 mm and 1014.7 mm in 2018 and 2019, respectively. The rainy season is spread over an average of five months, from May to October. The rainfall trends recorded at the Ziguinchor station between 2008 and 2019 is presented in Graph 1 below.

Graph 1: Rainfall trends recorded at the Ziguinchor station between 2008 and 2019



Source: DRDR Ziguinchor, 2018

The average temperature during the year varies by 4.1°C. In May, the hottest month of the year, the average temperature is 28°C. In January, the coldest month of the year, the average temperature is 23.9°C. The cool season (November - March), which is influenced by the boreal air masses, is followed by a warm season that begins in May, with the installation of warm southern air. The average annual temperature is 27.5°C, while the monthly thermal averages vary between 24°C (January) and 31°C (May, June).

HYDROGRAPHIC NETWORK AND WATER RESOURCES

The hydrographic network of the region consists of the 300 km long Casamance River, its tributaries and numerous streams. The Casamance River, which has a semi-permanent regime with a flow that lasts from June to March, is often bordered by mangroves and invaded by marine waters up to 200 km from its mouth (Diana Malari/Sédhiou) where very variable volumes are discharged (60 to 280 million m³ of water per year).

The three aquifer formations in the region constitute a considerable reserve. They are:

- the surface water table of the Continental Terminal or water table, which is between 10 and 15 m deep towards Oussouye, between 2 and 5 m towards Ziguinchor; it is practically saline between 15 and 25 m in the Bignona.
- the semi-deep water table of the Miocene/Eocene between 40 and 100 m deep and that of the Eocene/Paleocene between 100 and 200 m deep. The water is more or less salty, with a salt content that decreases as one moves away from the coast.
- The Maestrichtian water table is between 400 and 600 m deep where the water is low in mineralisation and of good quality.

VEGETATION AND FOREST RESOURCES

From a vegetation point of view, the Ziguinchor Region belongs to the Southern forest eco-geographical zone whose forest resources are known for their diversity. This situation explains the presence of a forest estate made up of dense dry forests and gallery forests located mainly in the southern part. Open forests and heavily wooded savannahs populate the plateau and terrace areas.

The fluvio-maritime zone is colonised in places by mangroves. The plant formations also include specific stands: borassus, palm grove with *Elaeis guineensis*, bambusaie, swampy meadow.

The Ziguinchor Region has 30 forests covering an area of 116,776 ha. Most of the region's classified forest heritage is found in the Bignona department (85.98%) followed by the Ziguinchor department (8.48%) and the Oussouye department (5.54%). The forest capital includes valuable species: Vene (*Prosopis africana*), Cailcedrat (*Khaya senegalensis*), Linké (*Azizlia africana*), Dimb (*Cordia pinnata*), Fromager (*Ceiba pentandra*), Tomboiro noir (*Chlorophora regia*).

WILDLIFE

Concerning wildlife, the Region enjoys a favourable biotope made up of remarkable forest ecosystems. The wildlife potential is made up of several species of furry and feathered game. The largest populations of Senegal's large mammals (giant elk and bay eland) are found in the sub-Guinean part. It is also the habitat of arboreal primates, rare reptiles (Seba's python, the royal python, the spitting naja, the green mamba, the black mamba, etc.), rodents and birds of prey. In the forest formations (classified forests, gallery forests), antelopes (guibs, duikers, etc.), monkeys (green monkeys, patas and colobus), porcupines and some reptiles such as snakes, Nile varan, sand varan and crocodiles can be found.

5.2.2. Sédhiou Region

RELIEF AND SOILS

The relief is essentially composed of plateaus, valleys and lowlands.

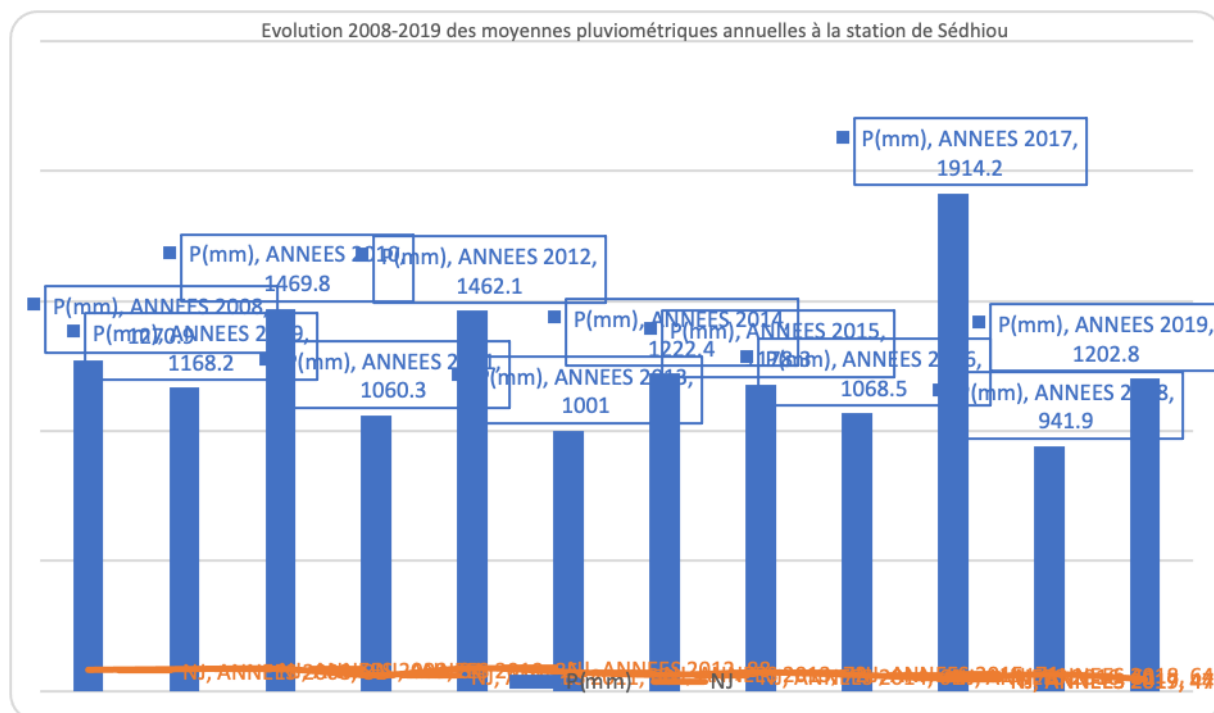
The types of soils encountered in the region are tropical ferruginous and/or ferrallitic soils with variations depending on bioclimatic conditions. They are commonly referred to as Deck soils and cover most of the region. These soils are characterised by their suitability for the cultivation of cereals and groundnuts. Clay-silt soils are located on the slopes of the valleys. This is the domain of the palm groves, and this area is characterised by its suitability for arboriculture and market gardening. Hydromorphic soils or grey soils are located at the bottom of the slopes. These soils are suitable for rice growing. The Gley salty hydromorphic soils are the result of the fluvio-marine alluvial contact and border the Casamance and Soungrou rivers. These soils are suitable for rice-growing in the rainy season, but are often exposed to salt intrusion. Acidified halomorph soils are marked by high salt content which makes them unusable.

CLIMATE

The Sédhiou Region is marked by relatively abundant rainfall (1,000 mm of rain per year on average). The climate is suitable for agro-sylvo-pastoral activities with thousands of hectares of land without major constraints.

The climate is determined by the circulation of air masses from the atmospheric hearths of the Sahara and the South Atlantic. For this reason, Sédhiou is one of the best watered regions of the country, with rainfall varying between 700 and 1,300 mm. The rainfall trends recorded at the Sédhiou station between 2008 and 2019 is presented in Graph 2 below.

Graph 2: Rainfall trends recorded at the Sédhiou station between 2008 and 2019



Sources: DRDR Sédhiou, October 2020

The lowest monthly average temperatures are recorded between December and January. They vary between 25° and 30°C. The highest temperatures are recorded between March and September, with variations of 30° to 40°C.

HYDROGRAPHIC NETWORK AND WATER RESOURCES

The Region has a fairly dense hydrographic network composed essentially of the Casamance River (the middle) which separates the departments of Goudomp and Sédhiou, the tributary Soungrougrou which separates the departments of Bounkiling and Sédhiou, temporary and permanent ponds and bolongs. Groundwater is of good quality and is an asset for the promotion of rural development.

The Maestrichtian water table, with a depth of about 400 m west of the Sénoba-Bafata axis, is accessible at less than 160 m in the central and south-eastern part of the region. The Lutetian water table can be tapped at less than 60 m to the west with flow rates of 200 to 300 m³/hour. In the north-west, the semi-deep aquifer residing in the sands, can be reached between 50 and 150 m deep with flow rates of 20 to 280 m³/hour. The continental aquifers are fed by rainfall and rivers. Their depths are less than 40 m. Water quality is good and flows can vary from 5 to 10 m³/hour for wells and from 10 to 60 m³/hour for boreholes.

VEGETATION AND FOREST RESOURCES

In the Sédhiou Region, the forest estate, which accounts for 12% of the total area, is made up of wooded savannahs on the plateaus, dry open forests in the south (presence of oil palm, venom, kapok tree, linké néré, dimb etc.) and humid open forests (palm groves, Khaya senegalensis, Santan, cauliflower, Cola cordifolia). The region has 12 classified forests covering an area of 83,543 ha, and 6 unaltered zones covering 178,201 ha. Various forest products derived from these plant formations contribute significantly to meeting the needs of the local population and improving living conditions.

WILDLIFE

The wildlife that depends on these different types of ecosystems is quite diverse and relatively abundant, depending on the species. The animal species found in these plant formations include, for furry game: warthog, wart hog, dog-head, green monkey, harnessed wad, hare, palm rat, porcupine, civet, wild cat, duiker; for game birds: turtledoves (collared, mated, winey, cape, wood, weeping), pigeons (Guinea, rook, green); ganga, francolin, guinea fowl, rock hen, pelican, hornbill, geese, fishing eagles, crowned crane. There are also some reptiles, such as snakes, Nile varan, sand lizard and crocodiles.

5.2.3. Region of Kolda

RELIEF AND SOILS

The relief of the Region is formed by sandy-clayey sandstone plateaus forming plateaus with abundant natural vegetation (savannah or clear forest), interspersed with valleys in which rice fields and lowland pastures are found.

HYDROGRAPHIC NETWORK AND WATER RESOURCES

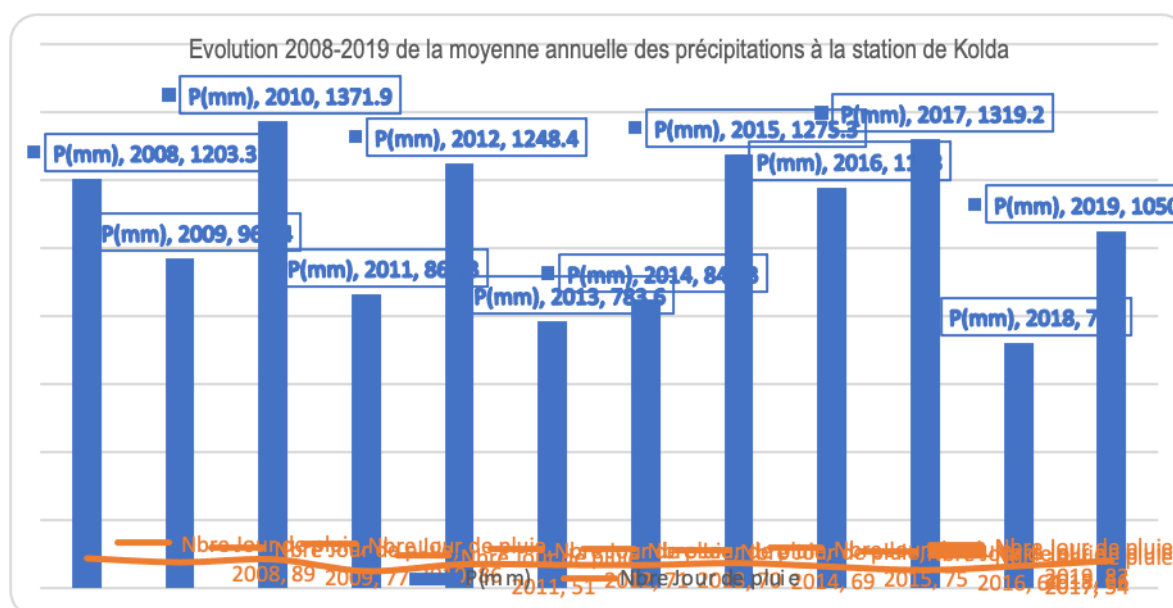
The region is marked by a dense hydrographic network composed of a main river, the Casamance River and its tributaries. Its right bank is skirted by the streams of Saré Kouyatel while the left bank is irrigated by the streams of Thiango Dianguina, Khorine and Dioulacolon. The Kounkané zone is watered by River Kayenga and its affluent, Anambé. The Ndiandouba and Anambé dams erected respectively on these rivers ensure that the area has water continuously.

In addition, rainwater feeds the surface water tables of the Continental Terminal, the Miocene (50 and 150 m deep) and the Quaternary. The Maestrichtian is accessible at less than 160 m in the south-central and south-eastern part of the region. Water quality is good.

CLIMATE

The climate is Sudano-Guinean, and the rainy season runs from June to October with maximum intensity in August and September. The dry season covers the period from November to May. Average rainfall varies between 700 and 1,300 mm.

Graph 3: Rainfall trends recorded at the Kolda station between 2008 and 2019



Source: DRDR Kolda, October 2020

The lowest monthly average temperatures are recorded between December and January and range from 25° to 30°C. The highest temperatures are recorded between March and September with variations between 30° and 40°C.

VEGETATION AND FOREST RESOURCES

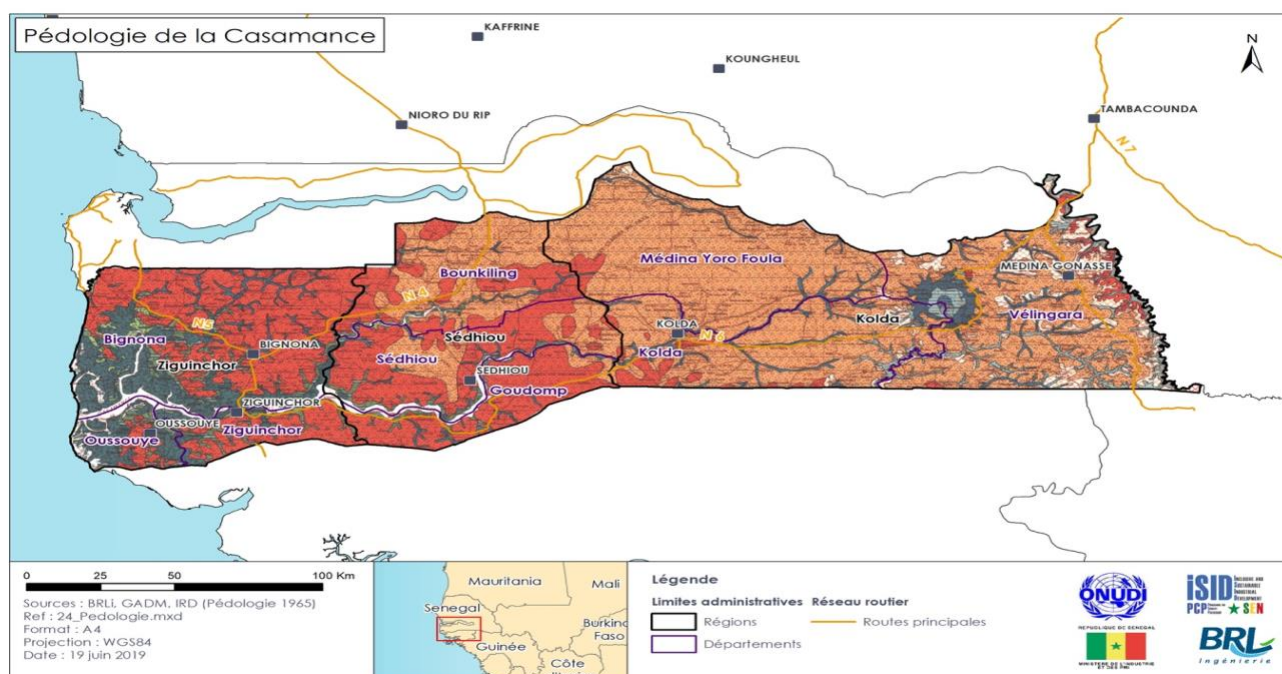
In terms of vegetation and forest resources, the Kolda Region has significant potential. It has 280,290 ha of classified forests divided into 14 massifs representing a classification rate of more than 20%. It is also home to 50,000 ha of the Niokolo Koba National Park, 12 amended zones with a total area of 508,525 ha and several managed massifs. The most characteristic species include *Khaya senegalensis*, *Ceiba pentandra*, *Cordyla pinnata*, *Sterculia setigera*, *Azelia africana*, *Chlorophora regia* (Black Tomboiro), *Terminalia macroptera*, *Combretum lecardii*, *Pterocarpus erinaceus*, *Oxyanthra abyssinica*, *Bombax costatum*, *Detarium senegalensis*, *Parkia biglobosa*, *Adansonia digitata*, *Sterocarya birrea*, *Daniellia oliverii*. However, the flora of the region is in decline due to its over-exploitation for timber (*Ceiba pentandra*, *Cordyla pinnata*, *Khaya senegalensis*, *Daniellia oliverii*, *Azelia africana*, *Pterocarpus erinaceus*), service wood, fuel wood or for the non-timber products it provides.

WILDLIFE

The wildlife potential is made up of several species of furry and feathered game. The sub Guinean part hosts Senegal's largest populations of large mammals (giant elk and bay). It is also home to arboreal primates, rare reptiles (Seba's python, the royal python, the spitting naja, the green mamba, the black mamba, etc.), rodents and birds of prey. In the forest formations (classified forests, gallery forests), antelopes (guibs, duikers, etc.), monkeys (green monkeys, patas and colobus), porcupines and some reptiles such as snakes, Nile varan, sand varan and crocodiles can be found.

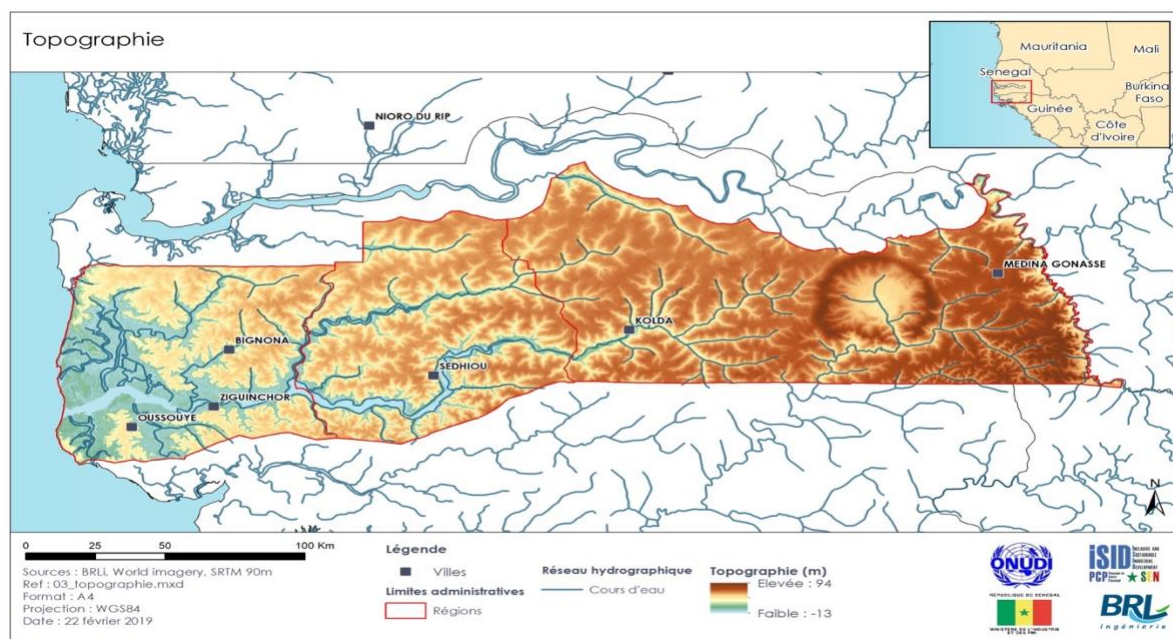
The avian fauna is essentially composed of turtle doves (collared, mesh, cape, wood, weeping...), pigeons (Guinea, rook, green), gangas, francolins, guinea fowls, rock hens, pelicans, hornbills, geese, dendrocygnes, fishing eagles, Senegal coucals, crowned cranes.

Map 4: Map reflecting the pedology of Casamance



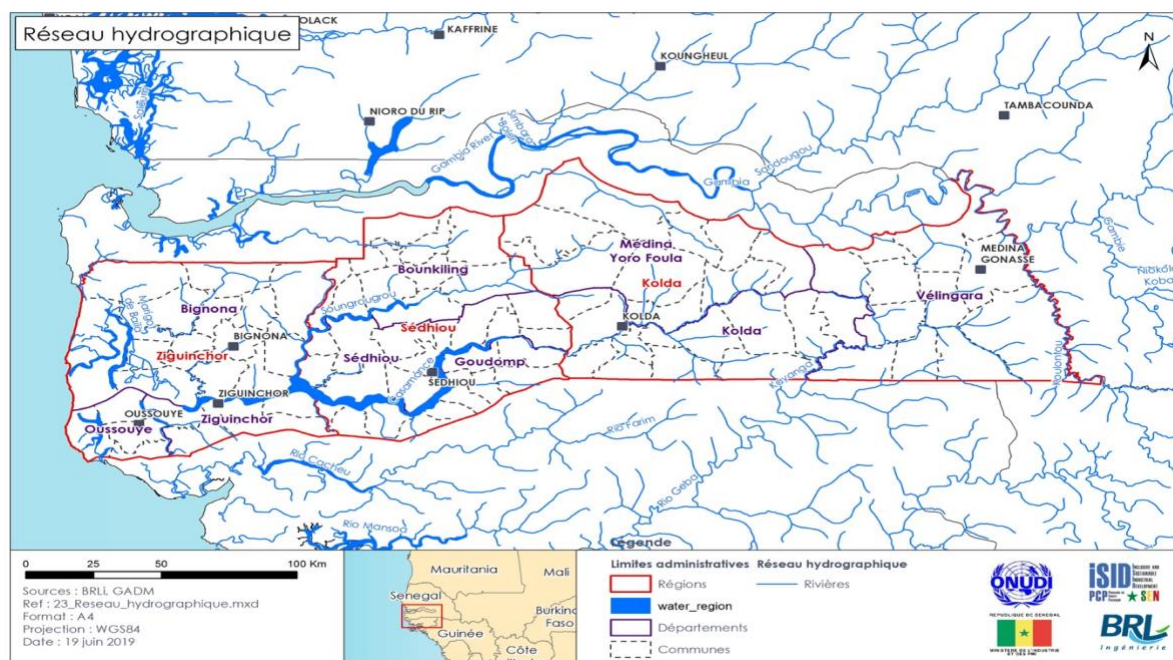
Sources: BRLi GADM, IRD (Pedology 1965), June 2019

Map 5: Map reflecting the Casamance topography



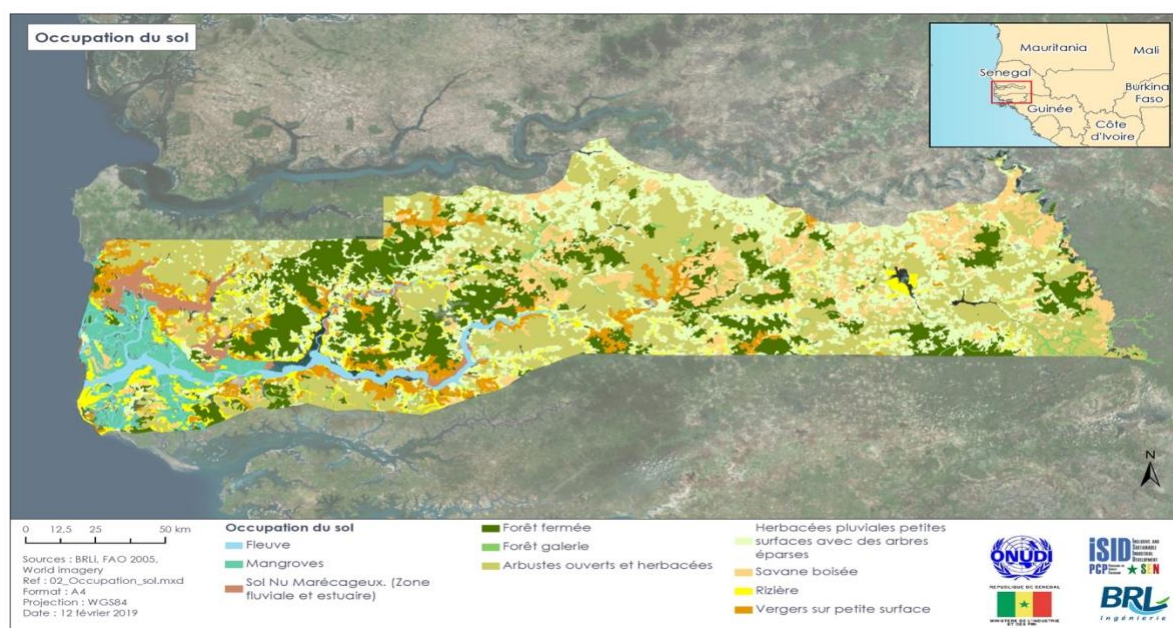
Sources: BRLi, World imagery, SRTM 90m, February 2019.

Map 6: Map reflecting the Casamance hydrographic network



Sources: BRLi, GADM, June 2019

Map 7: Map reflecting Casamance land use



Sources: BRLi, FAO 2005, February 2019

5.3 CASAMANCE SOCIOECONOMIC ACTIVITIES

5.3.1 Ziguinchor Region

AGRICULTURE

According to the ANSD 2013 RGPHAE Report, 24,601 farm households practise rain-fed farming compared with 738 who are in irrigated farming and 263 who practise flood recession farming. In the area of arboriculture, 53.8% of farm households grow mango trees, 30.3% bananas and 39.7% citrus fruits.

The main cereals grown are rice, maize, millet and sorghum. The Ziguinchor DRDR 2018 Report forecasted an increase in cereal production in the region between 2013 and 2017. Thus, rice production increased from 33,107 tonnes in 2013 to 141,205 T in 2017. During the same period, maize production increased from 378 tonnes to 2,697 tonnes, millet from 4,630 tonnes to 3,282 tonnes, and sorghum from 243 tonnes to 515 tonnes.

The same report stated that for the period 2013-2017, remarkable production had been recorded in recent years thanks to significant State investments through integrated programmes such as PRACAS, PNAR, PPDC, P2RS, ANCAR, etc., (supply of agricultural equipment and quality seeds, efficient supervision, etc.). In addition, there was good rainfall in the region as well as timely availability of inputs. Indeed, in 2017, the production volumes of rice and other cereals increased by 47,769 tonnes and 37,272 tonnes respectively compared with 2016. However, apart from sorghum, which recorded an upsurge, other crops (millet and maize) declined significantly, under the combined effects of the drop in sown areas and yields.

However, there are two major constraints. The first, relating to the soil, concerns salinisation, land acidification and silting of the valleys, which reduces the cultivable area and lowers yields. The second and no less significant constraint is the dwindling youth labour force in some localities due to the rural exodus caused by the unattractiveness of the agricultural sector to young people.

LIVESTOCK

Regarding livestock breeding, one of the key facts is that one of the main roles assigned to animal genetic resources is to build up savings that can be mobilised in case of need (purchase of food, clothing, medicines, etc.). This is reflected in the structure of herds of cattle and small ruminants characterised by a strong presence of adult males. In terms of production, the region stood out in 2017 with 5.55 tonnes of meat and offal, 112,500 units of hides and skins, 220,020 litres of milk and 47,000 eggs for consumption. The quantities produced in 2013 were respectively 1,060 tonnes of meat and offal, and 11,659 eggs for consumption. Productions figures for hides and skins and milk were not provided by the RAC 2018 for the Ziguinchor region.

FISHING

With regard to fishing and aquaculture, Ziguinchor is one of the richest fishing areas in Senegal, with Ziguinchor, Elinkine, Diogué, Kafountine and Cap-Skiring as the main landing points. According to sources of the Ziguinchor regional fisheries service, fish landings increased from 55,454 tonnes to 64,430 tonnes for artisanal fishing between 2013 and 2017. For industrial fishing, the quantities increased for the same period from 116 T to 196 T. During the same period, the volume of aquaculture production increased from 263 T to 179 T. This general performance is related to the significant investments made by the State between 2015 and 2016, which resulted in an increase in the number of canoes and fishing gear, but also a significant movement of fishermen from the north of the country.

The main constraints in this sector in the Ziguinchor Region can be summarised as follows:

- no hydrocarbon terminal in Ziguinchor to supply industrial fishing boats with diesel fuel;
- numerous fishing stops observed in artisanal fishing, due to the regularly agitated state of the sea;
- consequences of climate change on aquatic ecosystems and the migration of schools of surface fish (small pelagic fish);
- difficulties in accessing appropriate financing (Bank, Operational Support Fund);
- the absence of developed areas for artisanal processing of fishery products in Elinkine, Diogué, Cap-Skiring, Kafountine and Boudody;
- poor fishing practices.

5.3.2. Region of Sédhiou

AGRICULTURE

The regional economy is essentially agricultural. According to the RGPHAE 2013, more than 4/5 of households practise agriculture. The dominant crops remain groundnuts and millet. Cereal production increased from 310,467 T in 2016 to 278,658 T in 2017. Groundnut production fell from 87,289 T in 2016 to 47,562 T, a decrease of 45.51%. Forestry and arboriculture, especially fruit, is a sector that brings hope to the population.

Rain-fed agriculture is the main major type practised in the region (27,520 households). Market gardening is practised by 1,690 households and fruit growing by 4,702 households. The region has huge rivers and shallow waters. Thus, 1,447 of all households are involved in fishing or aquaculture. Floriculture and flood recession cultivation are practised by only a tiny proportion of households in the region.

Livestock farming, which is mainly extensive, is an essential activity in the region's economy. The species raised are generally cattle. In terms of production, according to the RAC 2018 of Sédhiou, in 2016, the region produced 707,589 T of meat and offal, 9,957 units of hides and skins, 46,000 litres of milk, 261,000 eggs and 25,500 litres of honey against 466,732 T, 8,011, 4,400, 966,000 and 22,000 respectively in 2013.

LIVESTOCK

Meat and offal production increased between 2013 and 2016. At the same time, there were significant drops in the production of eggs for consumption (966,000 eggs in 2013 and 261,000 eggs in 2016). Poultry production fell sharply between 2013 and 2014 before improving and exceeding its level in 2015 and 2016. This result is explained by the bankruptcy of a poultry company in Sédhiou.

FISHERIES

In the field of fishing and aquaculture, the region is developing important fish farming activities. The main species caught are carp, mullets and crustaceans. However, there is an increasing scarcity of fish resources. In 2016, 3,227 T of artisanal fishing landings, including 1,784 T of crustaceans and 1,443 T of fish were recorded against 410 T and 1,453 T respectively in 2013.

The striking fact is the very high growth rate of crustacean production (61.45%) and the strong decrease in fish production (29.06%). Fish catches (mainly tilapia) are intended for local consumption while crustaceans (shrimp), owing to their high commercial value, are mainly intended for export and thus contribute significantly to the improvement of fishermen's income and the creation of many temporary jobs. On the other hand, there is little infrastructure (landing docks and refrigeration infrastructure as well as the absence of landing docks for industrial fishing) at the regional level. In addition, there is a fall in the size of the species caught.

Furthermore, the volume of aquaculture production shrank from 16 T in 2015 to 13 T in 2016, a decrease of 18.75%. This decrease in production is due to several reasons relating to the aquaculture farms:

the dilapidated state of the aquaculture infrastructure;

the lack of organisation;

low investment by promoters who are still waiting for State support (feed, fry and infrastructure support).

5.3.3. Kolda Region

AGRICULTURE

Regarding agriculture, the area of cultivable land is estimated at 2 million hectares, and agricultural activities mobilise about 80% of the region's assets over a period of 8 to 9 months of the year. Rain-fed agriculture is the main major type of agriculture practised by households in the region (52% of households). Here, 8% of households practise market gardening and only 2% practise fruit growing. Irrigated farming other than market gardening is rarely practised (1% of households). Forestry is practice by households is very low (1% of households). Floriculture and flood recession cultivation are only practised by a tiny portion of households in the region (1%). The main crops grown for food are millet, maize, sorghum, rice and fonio. Cash crops are represented by groundnuts, cotton, cowpeas, cassava and sesame. Thus, according to the 2018 statistics of the DRDR of Sédhiou, the cereal production in 2017 stood at 33,668 T, 26,966 T, 47,562 T and 192,505 T for millet, sorghum, maize and rice respectively. The production of these same cereals in 2013 was 18,863 T, 17,249 T, 44,449 T, and 22,724 T, respectively.

Most households in the region practise both rain-fed agriculture and livestock farming. Pastoral activity in the Kolda Region involves 36% of households. Of all households, only 166 do fishing or aquaculture.

Agriculture in the region is faced by several constraints, including physical (silting of valleys, water erosion on upland soils), organisational and logistical (almost general lack of certified seeds, difficulties in accessing credit, under-equipment of farms, marketing difficulties, lack of training of actors), and cyclical (labour shortage due to rural exodus).

LIVESTOCK

Livestock farming is the second largest primary sector in the region after agriculture. This activity enjoys favourable conditions due to the richness of the natural rangelands, the long experience of the breeders and a very dynamic close supervision. The breeding system is extensive and traditional, and constitutes a source of income and protein through the sale and consumption of animal products such as meat and milk. The species present are cattle, sheep, goats, horses, asses, pigs and poultry. Livestock farming is an activity with little involvement of women. Women are more involved in poultry or small ruminant farming.

In 2017, the region produced 5,500 T of meat and offal, 46,500 hides and skins, 112,000 litres of milk and 220,020 eggs for consumption. In 2013, production stood at 1,060.45 T of meat and offal, 11,659 hides and skins (RAC Kolda, 2018).

Despite the continuous increase in production, the lack of large-scale projects in the sub-sector remains the major constraint.

FISHERIES

In the fishing sector, which employs 3,200 people, regional production was estimated at 7,529 T in 2018, including 930 tonnes of local production and 6,599 tonnes of external contribution (Report of the Regional Fisheries Service, 2019) of fishery products. The total commercial value of these landings is estimated at CFAF 7,946 million. Concerning fish farming, the region has a hatchery and 10 private farms ensuring an annual production of 2.5 tonnes in 2017.

While most of the fish consumed in the region comes from the fish trade with sardinella as the most common variety, tilapia remains the most caught fish in continental waters. One of the major constraints to the development of fishing in the region is the early drying up of the Casamance River at the Kolda station.

5.4. BASIC SOCIAL SERVICES IN CASAMANCE

5.4.1. Ziguinchor Region

HEALTH

In the health sector and according to the 2015 MSAS statistical Yearbook, the Ziguinchor Region has 3 hospitals, 1 psychiatric village, 1 regional supply pharmacy, 1 hygiene brigade, 1 centre for sexually transmitted infections, 1 regional office for education and health information. The region has 5 health centres with 12 private Catholic dispensaries and 83 health booths and 99 health posts.

The population/health facility ratios show that in the region there is 1 hospital per 356,721 inhabitants, which is more than double the WHO standard of 1 hospital per 150,000 inhabitants.

Unlike hospitals, the health centre coverage is very low in the region compared with the WHO standard. Indeed, there is 1 health centre for 142,688 inhabitants whereas the standard is 1 health centre for 50,000 inhabitants.

For health posts, the level is quite acceptable with a ratio of 7,206 inhabitants for 1 health post while the WHO standard is 10,000 inhabitants for 1 health post.

In terms of facilities, the health coverage of the region is presented in Table 2 below.

Table 7: Situation of health facilities in the Ziguinchor region in 2019

District	No. of Communes	Population		Health centre	Health post	Health boooth	Hospita ls
		MEN	WOMEN				
ZIGUINCHOR HD	6	142,506	138,315	1	33	10	2
BIGNONA HD	9	76,531	72,122	1	35	49	
DIOULOLOU HD	4	48,042	42,743	1	19	23	
THIONCK ESSYL HD	6	23,467	22,769	1	15	5	
OUSSOUYE HD	5	28,221	26,448	1	14	9	
TOTAL RMZ	30	318,767	302,397	5	116	96	2
		621,164					

Source: Ziguinchor Medical Region, June 2019

EDUCATION

Regarding education, literacy in French is fairly widespread (58.9%), especially in the department of Oussouye (62.4%), followed by Ziguinchor (61.5%) and Bignona (55.6%). Literacy in Arabic is not very widespread. The highest rate of 6% is found in the department of Bignona. Literacy in national languages is more common, with 21.6% of the population being able to read and write in national languages. In 2013, the rate of school attendance in the region was lower in the department of Bignona (70.4%) than in the other two where the rate was 76.1%.

The infrastructure and enrolment status in 2019 was as shown in Table 3 below.

Table 8: Status of school infrastructure and enrolment in the Ziguinchor region in 2019

	PRIVATE			PUBLIC			TOTAL		
	NO. SCH	ENROLMENT		NO. SCH	ENROLMENT		NO. SCH	ENROLMENT	
		TOTAL	GIRLS		TOTAL	GIRLS		TOTAL	GIRLS
PRE-SCHOOL	77	6,312	3,135	197	14,495	7,167	311	23,326	11 64,1
ELEMENTARY	45	11,765	5,650	429	96,517	47 090	474	108,282	52 740
AVERAGE	14	4,351	2,127	91	46,326	22,752	105	50,677	24,879
SECONDARY	49	11,712	5,747	23	18,811	8,469	72	30,523	14 216

Source: Ziguinchor Academy Inspectorate, June 2019

ROAD INFRASTRUCTURE

In terms of transport infrastructure, the region has a road network of 1,125 km, of which 461 km are paved, i.e. 59%. The departments of Ziguinchor and Bignona have the largest share due to their size, compared with that of Oussouye. In addition, concerning the length of earth roads constructed, rehabilitated and treated in periodic maintenance, there was an increase of 24 km in 2017 to contribute to the opening up of the region.

PORT OF ZIGUINCHOR

Ziguinchor has a port that can be used for the operation of the agro-pole, especially for transporting products from the southern capital to Dakar and other destinations outside the country. To strengthen these navigability and safety capacity, the channel of the Casamance River was dredged in 2018. Indeed, as part of implementation of the ORIO programme, the National Agency for Maritime Affairs dredged the Casamance River up to the southern capital of the country, allowing the channel to be navigable by day and night with beacon lights. The project funded by the Government of The Netherlands to the tune of CFAF 23 billion is included in the list of "Integrated Logistics Hubs" projects of the Emerging Senegal Plan.

The project aims to improve navigation safety on the Casamance River, whose average depth for navigation at the mouth was initially 3.2 meters. This physical constraint, coupled with silting at the mouth, limited the capacity of vessels to a maximum of 1,800 tonnes. Today, after the dredging and marking of the Casamance River, vessels with a draught of 6.5 meters can access the Port of Ziguinchor in complete safety at any time, by day or by night, with a transport capacity of at least 6,000 tonnes. Thus, 4000 tonnes vessels can now dock, compared with 1000 tonnes a few years ago. The impact of dredging is clear because it has enabled a flow of ships that transported more than 32,000 tonnes of cashew nuts to Dakar in 2018. With a much larger berth, the Port of Ziguinchor now allows products from the natural Casamance region to be marketed.

The Agro-pole project could take advantage of the infrastructure of the Port of Ziguinchor to transport processed and unprocessed products under good conditions to Dakar and other destinations outside the country.

5.4.2. Region of Sédhiou

HEALTH

The 2013-2014 health map of the Sédhiou medical region showed 1 hospital, 5 health centres, 36 health posts and 87 health booths. According to the population health coverage indicators, the number of inhabitants per health facility (post, centre, hospital) increased by 3.5% between 2013 and 2014 (ANSD, 2014). These indicators all exceeded WHO standards. The smallest deviation from this standard is observed at the level of health coverage in health posts. As for health centres and hospitals, the number of inhabitants covered is three times higher than the WHO standard.

Almost all women of childbearing age have no health coverage (98.2%). Statistics show that 10.3% of women and 8.3% of men have chronic diseases. The HIV prevalence rate is 2%, and is higher among young people aged 15-24 years with 2.1%. A good proportion (38.4%) of the population does not have access to mosquito nets.

The situation of the health facilities in the region is presented in Table 4 below.

Table 9: Situation of health facilities in the Sédhiou Region in 2019

District	No. of Communes	Population 2019		Health centre	Health post	Health booth	Hospitals
		MEN	WOMEN				
Boukiling	14	90,521	87,186	1	23	22	0
Goudomp	15	95,638	94,923	2	17	38	0
Sédhiou	14	93,972	90,770	1	22	39	1
TOTAL	43	280,131	272,879	4	62	99	1

Source: Sédhiou Medical Region, June 2019

EDUCATION

Much effort has been made to strengthen the educational system in recent years. However, much still has to be done, especially at the early childhood and elementary school levels, with the opening and operation of private Franco-Arabic schools and experimental classes in national languages. In 2013, the region had 449 elementary schools, 61 CEM and 22 government high schools.

In 2014, the overall gross access rate (GAR) was 124.43%. This means that many children were admitted at an age above the legal age for access to the initiation cycle (IC). This rate was slightly higher for girls (126.95%) than for boys (122.10%) in 2014. The year 2014 saw a decline in the gross enrolment rate (GER) to 99.8%. It was higher for girls (101.5%) than for boys (98.3%) in 2014. The situation of school infrastructure in the region in 2019 is presented in Table 5 below.

Table 10: Status of School Infrastructure and enrolments in the Sédhiou Region in 2019

	PRIVATE			PUBLIC			TOTAL		
	NO. SCHOOLS	OF TOTAL	GIRLS	NO. SCHOOLS	OF TOTAL	GIRLS	NO. SCHOOLS	OF TOTAL	GIRLS
ELEMENTARY	12	2,540	1,221	488	96,359	46,800	500	9,889	4,802
AVERAGE	4	1,002	417	61	26,739	11,794	65	2,774	1,221
SECONDARY	18	2,655	1,064	19	8,548	3,172	37	1,120	4,236

Source: Sédhiou Academy Inspectorate, June 2019

For pre-school, 93 public and 12 private schools were identified for a total of 14,272 kids, including 7,066 girls.

ROAD INFRASTRUCTURE

In terms of transport infrastructure, the region has a very weak road network (dirt or paved). In 2013 and 2016, the density of the network per 100 km was estimated at only 7.09% and 10.04% respectively. This poor existing network is also in an advanced state of degradation, especially on the unpaved network. Concerning the paved roads, the region is crossed by three national roads (RN4, RN6, RN12) for a total linear distance of 337 km, of which only 283 km are fully paved.

There are some constraints to economic development. For example, one of the major constraints hampering the development of production and marketing activities is the fact that the internal and external isolation of the region has not been fully resolved because it is cut off from the north of the country and has poor connections with neighbouring regions and countries, and internal communication routes (road and river) are either very impracticable or insufficiently developed in terms of adapted means of transport. However, some progress has been made in recent years with the construction of the Farafégné bridge in The Gambia, which has already been commissioned and is the shortest access route, the asphaltting of the Sédhiou - Marsassoum road, and the rehabilitation of rural roads and treatment of critical points within the region. In addition to this relatively low mobility of people and goods, there is also a lack of telecommunication facilities. But more generally, the Sédhiou Region is facing an infrastructure deficit. In some parts of the region, cell phone network coverage is not effective and Internet access is very low and mainly concentrated in large cities. In terms of air transport, the only available infrastructure is the Diendé airstrip, which is designed for very small aircraft with virtually no traffic.

Overall, the Sédhiou Region suffers from a glaring deficit in basic socioeconomic infrastructure. Thus, the indicators for pre-schooling (10.04%), assisted childbirth (35%), access to drinking water (37.3%), sanitation in urban areas (22.5%), and sanitation in rural areas (8.1%) are among the lowest in Senegal. Even the performance noted in the area of schooling (129.40%) must be put into perspective by the high proportion of temporary shelters (46%) and the low level of provision of schools with minimum service packages (latrines, drinking water, etc.).

5.4.3. Kolda Region

HEALTH

With regard to health, in 2014, the region had 540 health facilities attached to the three health districts. There is still need for human resources and health facilities. Most of the ratios recommended by the WHO are not respected, especially the number of inhabitants covered by qualified health personnel. The health map is composed of 1 hospital, 43 complete health posts with maternity, 181 functional health booths, 2 private dispensaries, 10 private practices, 2 clinics and one private maternity. The number of specialised personnel is very low: 1 doctor for 66,246 inhabitants, 1 midwife for 1,429 women of childbearing age and 1 gynaecologist for 327,437 women.

There is still a need for human resources and health facilities. Most of the ratios recommended by the WHO are not respected, especially the number of inhabitants covered by qualified health personnel.

The situation of health facilities in the region in 2019 is presented below.

Table 11: Situation of health facilities in Kolda Region in 2019

District	No. of Communes	Population		Health centre	Health post	Health booth	Hospitals
		MEN	WOMEN				
KOLDA	15	149,287	146,509	1	28	76	1
MYF	11	84,311	81,729	1	15	74	0
VELINGARA	14	169,252	165,494	2	23	100	0
TOTAL	40	402,849	393,733	4	68		1
		796,582					

Source: Kolda health region report, 2018

EDUCATION

All segments of education are represented in the region: (i) pre-school with 109 schools, 8,398 kids and a gross enrolment rate of 11%; (ii) elementary school with 1,099 schools and 113,875 kids; (iii) middle school with 77 schools, 30,809 learners and a gross enrolment rate of 47.8%; (iv) secondary school with 8,814 students. The Kolda Region is still very deprived of ancillary facilities or amenities. Overall, school attendance is highest in Kolda district with 53.2%, followed by Velingara district (42.0%) and Medina Yoro Fouta district (40.3%). Depending on the area of residence, it is clear that school attendance is higher in urban than in rural areas, regardless of the department considered. Kolda has a rate of 67.3% in urban areas compared with 44.2% in rural areas. In the rural areas of Velingara and Medina Yoro Fouta departments, more than half of the people are uneducated. By gender, regardless of the department, men are more educated than women. The proportion of women with the lowest level of education is observed in the department of Médina Yoro Fouta, with a rate of 34.8%.

The situation of school infrastructure and enrolments in the region in 2019 is presented in Table 7 below.

Table 12: Status of school infrastructure and enrolments in 2019 in the Kolda Region

Locality	Com/Ass			Private			Public			Total		
	No. of schools	Enrolment		No. of schools	Enrolment		No. of schools	Enrolment		No. of schools	Enrolment	
		Total	Girls		Total	Girls		Total	Girls		Total	Girls
KOLDA	0	0	0	10	722	363	67	5,430	2,697	77	6,152	3,060
MYF	0	0	0	0	0	0	23	1,122	557	23	1,122	557
VEL	20	1,131	565	6	489	244	48	3,258	1,609	74	4,878	2,418
REGION	20	1,131	565	16	1,211	607	138	9,810	4,863	174	12,152	6,035

Source: IA Kolda, June 2019

ROAD INFRASTRUCTURE

The region has a 1,900 km long road network, consisting of 559 km of paved roads (29%) and 1,340 km of unpaved roads (71%). The rural roads identified represent 42% of the regional road network, i.e. 797 km. The transport sector thus constitutes a major handicap to the Kolda Region's economic development. Indeed, much of the region has long suffered from isolation due to a lack of quality road infrastructure.

With regard to energy, supply is very low in the region, with only 21% of households having access to modern energy services.

5.5 PRESENTATION OF THE CASAMANCE MANGO AND CASHEW NUT SECTORS

5.5.1. The mango sector

Out of an average national production of 80,000 tonnes, including more than 55% from Casamance, 15,000 tonnes were exported in 2014 against 11,500 tonnes in 2013, generating a turnover of over CFAF 2 billion. Even if Senegalese mango exports are increasing year after year (30% between 2013 and 2014), it should be noted that they only absorbed about 10% of the 2014 production.

According to the Directorate of Horticulture, mango production in Senegal increased from 125,000 tonnes in 2012 to 128,000 tonnes in 2018.

The 2012-2018 statistics of mango production in Senegal are presented in the table below.

Table 13: 2012-2018 statistics of mango production in Senegal

YEAR	2012	2013	2014	2015	2016	2017	2018
PRODUCTION (T)	125,000	130,000	1,315 000	125,000	130,000	132,000	128,000

Source: Directorate of Horticulture, Horticultural Statistics 2012-2018

Most of the fruit are produced in the natural region of Casamance in the south of the country, and the Thies region. An analysis of fruit growing in Senegal reveals that fruit production is still carried out in a traditional manner with a certain tendency towards modernisation. It is limited by a number of constraints, the removal of which would allow its full development to meet growing demand. The opening up of European markets to agricultural produce export has contributed greatly to this development, which is particularly felt in mango production and export.

In Senegal, mango production is growing due to the increase in surface areas allocated to this crop. Production runs from April to November with a peak between July and September. The production areas are mainly in the regions of Dakar, Thies, Kolda, and Ziguinchor.

PRODUCTION AREAS, VARIETIES AND CATEGORIES OF PRODUCERS IN SENEGAL

For decades, apart from a few rare plantations and the fruit station of Mboro, production has come from individual growers, or from the orchards around the concessions in the free coastal area of Niayes, in some localities of the Petite Cote and especially in the natural zone of the South (Casamance, Kolda, and Tambacounda) including western Casamance (Le Blouff, Dioulouloulou), the Balantacounda, Kolda, (Sédhiou), and Tambacounda. This ensemble constitutes the Sudano-Guinean transition to the Guinean zone. It enjoys rainfall of more than 1,000 mm. It is marked by the cohabitation of several local, improved varieties of mango and those of the neighbouring countries.

In terms of the areas occupied by mango cultivation in Casamance, the available data are very approximate. For this reason, a study for the establishment of a reference situation on the surface areas of orchards as well as statistics on producers will be proposed in order to establish the basis for monitoring these data over time.

The dominant type of plantations is that of large mango trees, sometimes up to 10 m in height. The plants evolve in their natural state without any particular care. In recent years, especially in the Blouff and Diouloulou areas, farmers have been organising themselves to improve the orchards (varieties and maintenance), for a good harvest and marketing of the produce. The regions of Tambacounda, Kolda and Ziguinchor are naturally adapted for extensions. However, while mangoes have been replaced by bananas in Tambacounda, the other two regions remain dependent on the rebellion that has been raging there for more than 30 years.

The nurserymen and farmers receive support from the water and forestry services as well as the major development projects in Casamance. Thus, technical knowledge has been perpetuated from farmer to farmer, from father to son. The nurserymen often have a good mastery of grafting, while the farmers and processors do not always master the processes well.

In addition to the losses due to flies (fruit losses of nearly 80% on mangoes in Casamance), yields in Casamance are quite low (5-3T/ha). This productivity is partly due to the low level of technical skills of the players in the sector. Indeed, good agricultural practices (GAP) are little known there, unlike the other production pole of Niayes (15-20T/ha) where the populations have benefited greatly from the presence of export entities which, to maximise and sustain their capacity, have been obliged to train local growers on GAP.

In Senegal, local varieties have been identified, including:

- the mango, also known as Sierra Leonean mango,
- Balante and Diourou in the Southern area,
- Bouko Diekhal, Biram Ndao, Dieg bou gath are all varieties that can be found in the franche des Niayes and the Petite Cote.

Thanks to the fruit improvement programme, American and Caribbean varieties have been introduced and stabilised in our environment. The main varieties exploited for plantation improvement and export are:

- the Kent variety, which accounts for more than 70% of mangoes exported,
- the Keit variety which is the second variety exported by Senegal.

Photo 1: Mango orchard and mango variety in the department of Bignona



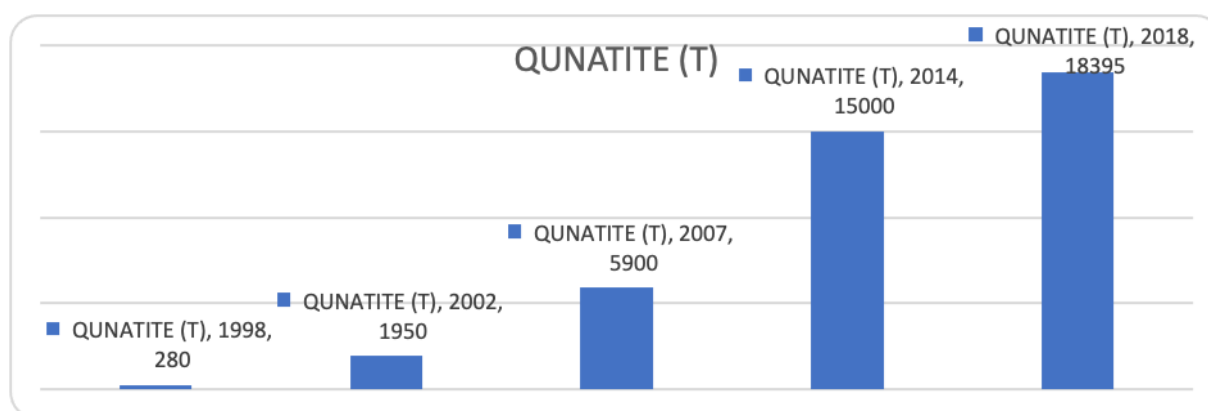
- The mango sector directly employs about 23,600 people (13,050 men and 10,550 women), of which 44.7% are women, and involves many rural households. It thus contributes to the fight against rural exodus and poverty reduction in accordance with the objectives of the Emerging Senegal Plan.

MARKETING

Today, the mango sector offers interesting export market opportunities in three directions. Europe is the main export market for mangoes from Senegal. It is a buoyant market, which has been growing strongly over the last ten years and in which Senegal has a small share in terms of volume. However, Senegal is now a new origin of choice with its colourful varieties of very good taste quality. Outside Europe, the mango production period (July-August) also allows Senegal to supply sub-regional markets, especially Morocco.

In 2014, exports reached a record figure of 15,000 tonnes, still considered too low compared with national production. Of this quantity, 76% goes to the European Union (8,700 tonnes), with an average annual growth of 20% between 2000 and 2013. Shipments outside Europe mainly concerned Mauritania (1,800 tonnes), Morocco (600 tonnes) and Ghana (400 tonnes). The export situation improved significantly in subsequent years. Indeed, in 2018, Senegal exported 18,395 tonnes (Directorate of Agriculture, 2019) on a production estimated at about 100,000 tonnes. The graph below shows the trends in Senegal's mango exports between 1998 and 2018.

Graph 4: Senegal mango export trends between 1998 and 2018



Source: DRDR Ziguinchor, Diagnostic of the mango sector in Ziguinchor, November 2015, Directorate of Agriculture 2019

AGRICULTURAL COMMUNICATION AND INFORMATION SYSTEM (ACIS) GENERATED BY THE SECTOR

Information and communication within the mango marketing chain is generated through the different actors involved. This entails analysing information sources, the way information circulates within the actors of the chain and the feedback therefrom.

ACIS ON TECHNICAL ASPECTS

Technical information concerns, among others, the technological packages for fruit and forest plant production, mango processing and quality control.

The sector is being taken over by the "bana-bana" which is key in generating information on demand and supply for growers and wholesalers. It is usually the bana-bana that informs farmers of the harvest period, harvesting techniques and market prices. They are therefore important players in the informal marketing chain.

ACIS ON ORGANISATIONAL ASPECTS ACCORDING TO A COMMODITY CHAIN APPROACH

There are groups and federations of planters here and there in the different regions, namely Kolda, Sédhiou and Ziguinchor, which are not functional and do not currently provide services to their members. However, there are a few professional organisations such as APAD which are making efforts to take into consideration the needs of their members at grassroots level.

With regard to collection, there are many young collectors commonly known as "bana-bana" who are not organised, but who individually negotiate collection contracts with growers, wholesalers or processors. In the context of export development, teams of collectors have been set up for supply.

As for processing, many women's groups, most of which are organised as EIGs, practise this activity with artisanal processing plants and a few modern processing plants. In Senegal, 15 to 20 operators who regularly export are members of the two most important professional organisations in the sector: ONAPES and SEPAS. In recent years, other orchard owners have begun to export their own production by supplementing their programme with the purchase of mangoes from other growers (the case of APAD). Small producers are also organising themselves into groups to manage their own exports. It was noted that the various actors in the sector have been making isolated and unrelated organisational efforts. There is an apparent good structural organisation at the level of growers and exporters. However, this good structuring/organization is not functional. At the level of the organisations, there are farmer leaders capable of playing the role of catalyst. Moreover, it has been observed that the actors of the sector have no knowledge of the functioning of a value chain. Each actor develops strategies to maintain itself alone in the chain, but not to maintain and develop the chain in the process.

MAIN CONSTRAINTS

The low level of mango processing and the insufficient transport, packaging and processing infrastructure are the root causes of the unprofitable integration of mango producers into global value chains. In addition, large quantities of mango are wasted because they cannot be fully consumed by local populations. Other constraints include:

- low yields per hectare of about ten (10) tonnes in Casamance while in the Niayes area and the Fatick region, they are up to twenty (20) tonnes per hectare;
- persistent devastating effects of the fruit fly (anthracnose) in the rainy season and the mango tree malformation disease (*Fusarium spp*);
- issue of access to land for the creation of new and improved plantations;
- animal raving;
- lack of financing for the sector;
- early varieties are mostly of small size, not very appreciated by Senegalese and are not intended for export;
- harvesting stages and techniques not well developed;
- truck transport is not only expensive, but the fruit is piled up, resulting in significant losses between the volume harvested and the volume sold. In addition, the journey time is longer due to the crossing of the Gambia and its threats; mangoes are highly perishable products;
- existence of many "mangoes": small fruits, fibrous pulp and turpentine smell, rarely consumed by the local population;
- mango export to developed countries is subject to compliance with specific technical standards that producers can hardly meet;
- frequency of diseases such as the fruit fly, which enjoys very favourable climatic conditions for its proliferation. This situation makes it increasingly difficult to export Senegalese mango, despite the fact that it is highly cherished internationally because of its quality. Treatment against the disease exists, but must start at flowering and continue until maturity, which is very expensive and poses a problem of profitability.

Photo 2: Mango orchard in the Ziguinchor department and setting of fruit fly traps



RECOMMENDATION FOR BETTER DEVELOPMENT OF THE SECTOR

Implement good cropping practices (irrigation, fertilisation, phytosanitary protection and other cropping care);

Develop a fruit fly control strategy within a global framework of research and development in Casamance, in conjunction with the research entities;

Build producers' capacity (modern orchard installation techniques, orchard maintenance, rejuvenation and grafting techniques, etc.);

Control data on orchard areas, producers by type, quantities produced, etc. and mapping.

5.5.2 Cashew nut industry

Formerly used as a reforestation species, cashew (*Anacardium occidentale*) has become one of Senegal's leading export crops. It has also become one of the primary sources of income and food security for the population.

Global cashew nut production has grown extremely rapidly in recent years. Indeed, between 1961 and 2010, it has increased tenfold, from 288,000 tonnes in 1961 to 2,200,000 tonnes in 2012. It amounted to 2.5 million tonnes in 2015 (ACI RONGEAD, 2015). At the same time, the global demand for finished cashew nut products has grown rapidly over the last twenty years. Imports have grown by 10% in the last decade and reached a value of US\$1,969 million and a volume of 353,000 tonnes (Fitz Patrick, 2015).

THE SITUATION OF THE CASHEW NUT SECTOR IN SENEGAL

While there are some smaller stands in Dakar, Thies and along the coast, the cashew nut production areas remain essentially the regions of Kolda, Sédhiou, Ziguinchor and Fatick. The Ziguinchor and Fatick regions were pioneers in the cashew nut sub-sector. While in Fatick this situation can be explained by the implementation of the Senegal-German Cashew Project (PASA), in the Ziguinchor Region, the massive influx of Bissau-Guinean populations has largely contributed to boost production.

The zone of Sokone, which benefited from ASAP, has the best quality of raw nuts. For the Ziguinchor and Sédhiou regions, the quality of the nut is good with an out-turn of 50 and 52. In the Thiès region, a significant production comes especially from the Méouane district where the intervention of the Village Reforestation Project in the North-Western Arachid Basin (PREVINOBA) has contributed to the development of cashew tree plantations throughout the area (IRSA and IRD, 2013).

Photo 3: Mature cashew and cashew tree orchard in the Ziguinchor department



CASHEW NUT-PRODUCING HOUSEHOLDS IN SENEGAL

According to surveys conducted in 2016 by PADEC on the cashew nut sub-sector, about 22,551 households are involved in cashew nut production in Senegal with a dependent population (total population of producer households) estimated at 351,991 individuals. This accounts for 1.4% of the households surveyed in Senegal and nearly 3.0% of agricultural households.

The surveys produced the various statistics shown in Tables 8 and 9 below.

Table 14: Number of households involved in cashew nut production by region

REGION	TOTAL NO. OF HOUSEHOLDS	TOTAL NO. OF FARM HOUSEHOLDS	TOTAL NO. OF CASHEW HOUSEHOLDS	TOTAL SHARE OF HOUSEHOLDS	SHARE OF FARM HOUSEHOLDS
FATICK	72,402	57,568	3,640	5%	6.30%
KOLDA	70,931	51,097	8,012	11.30%	15.70%
SEDHIOU	40,870	32,319	7,092	17.30%	21.90%
ZIGUINCHOR	75,956	42,540	3,807	5%	8.90%
TOTAL	260 159	183 524	22 551	8.70%	12.30%

Source: IRD and PADEC (2013; 2014)

Table 15: Total population involved in cashew nut production in Senegal by region

REGION	TOTAL POPULATION	RURAL POPULATION	CASHEW DEPENDENT POPULATION	SHARE OF TOTAL POPULATION	SHARE OF RURAL POPULATION
FATICK	714,392	603,903	52,123	7.3%	8.6%
KOLDA	662,455	492,818	125,365	18.9%	25.4%
SEDHIOU	452,994	365,980	126,876	28.0%	34.7%
ZIGUINCHOR	549,151	296,895	47,627	8.7%	16.0%
TOTAL	2,378,992	1,759,596	351,991	14.8%	20.0%

Source: IRD and PADEC (2013; 2014)

Cashew nut-producing households are mainly concentrated in the Kolda and Sédhiou regions, which account for 67% of the total. In these two regions, cashew nuts represent 15.7% and 21.9% of farm households respectively.

CASHEW NUT PRODUCTION AND MARKETING

Cashew tree plantations are estimated at about 59,493 ha. The cashew tree park in the Ziguinchor region, with its 8,519 ha, remains significant despite the decline in surface area, and ranks behind the regions of Sédhiou, Kolda, and Fatick. This imbalance can be explained by the conflict and the great availability of new land in the Kolda and Sédhiou regions. The Ziguinchor region accounts for 14.3% of the occupied areas and 31.2% of the cashew tree stands, ranking it first in terms of number of trees.

Table 16: Surface area, number of trees and density of cashew tree plantations by region

REGION	TOTAL ACASHEW REA (HA)	TOTAL NO. OF TREES	DENSITY (TREE/HA)
FATICK	8,874	741,202	84
KOLDA	17,406	785,049	45
SEDHIOU	24,694	209,553	9
ZIGUINCHOR	8,519	786,049	92
TOTAL	59,493	2,521,853	42

SOURCE: IRD AND PADEC (2013; 2014)

Cashew tree cultivation is on the rise in the southern regions. However, growth, productivity and yields are low compared with the Asian regions. This is due to a combination of several factors, including:

- lack of plantation protection;
- use of direct sowing by the growers and marginalisation of the practice of grafting;
- almost total non-existence of the use of fertilisers, phytosanitary products and heavy presence of diseases at the plantations;
- low adoption of good production practices (firebreaks; pruning, etc.).

In Senegal, producers use several varieties, most of which have lost their purity. In 2013, an ISRA and IRD study identified 22 cashew varieties.

Senegal's total production is estimated at 17,552 tonnes of raw cashew nuts per year with an average yield of 297 kg of raw nuts per hectare. This estimate is based on the total area covered by cashew trees and average yields by region.

Table 17: Cashew nut production statistics in the main production regions

REGION	TOTAL AREA (HA)	YIELD (KG/HA)	TOTAL PRODUCTION (TONNE)	RELATIVE SHARE
FATICK	8,874	349	3,535	20.1%
KOLDA	17,406	314	4,758	27.1%
SEDHIOU	24,694	240	6,040	34.4%
ZIGUINCHOR	8,519	445	3,220	18.4%
TOTAL	59,493	297	17,552	100.0%

Source: IRD and PADEC (2013; 2014)

In terms of quality, the nuts produced in Senegal are very good based on a number of benchmarks set by exporters and nut processors. The zone of Sokone (Fatick region) with the PASA project which introduced improved varieties and more efficient production techniques is in the lead (out-turn varying between 51 and 54) followed by Ziguinchor and Sédhiou with an out-turn between 50 and 52. The Kolda nut is of lower quality (out-turn between 47 and 49) with, however, gradual improvements noted with the advent of the Canadian cooperation projects KPRT and PAEFK. The Ziguinchor region enjoys abundant rain-fall and suitable physical conditions.

CASHEW NUT PROCESSING IN SENEGAL

Cashew processing in Senegal is driven by development projects and NGOs. Thus, the first processing plants were established with the support of ASAP during the 1980s in the Fatick region, while in the Ziguinchor and Sédhiou regions, the processing plants were supported with Entreprises Works and PROMER between 1990 and 2000. The second generation of processing plants was promoted by USAID projects (Wulaa Naafa, SAGIC/PCE, etc.), followed by PADEC, IRD, AVSF, and PDIF.

Table 18: Status of production plants and volumes of cashew nuts processed

REGION	NO. OF PLANTS	AVERAGE VOLUME PROCESSED (KG)	TOTAL VOLUME PROCESSED (KG)
FATICK	10	36,333	327,000
KOLDA	4	7,100	28,400
SEDHIOU	7	3,571	25,000
ZIGUINCHOR	16	4,695	51,642
TOTAL	37	13,937	432,042

Source: IRD AND PADEC (2013; 2014)

In terms of volumes processed, the Fatick region, which has easier access to the urban markets of Kaolack, Fatick and Mbour, and even Dakar, is leader (327,000 kg), even though the number of plants is higher in the Ziguinchor region (16). The plants in Ziguinchor, Sédhiou, and Kolda essentially supply the local market, although there are few opportunities to reach urban markets (Dakar, for example, during trade fairs). The quantity processed is around 500 tonnes, or 2.8% of total production.

According to the IRD and PADEC surveys, analysis of organisational characteristics shows that the processing plants are owned by EIGs, limited liability companies and cooperatives (see table below).

Table 19: Organisational characteristics of processing plants

REGION	FORMALISED ORGANISATION			NON FORMALISED GROUP
	GIE	SARL	COOPERATIVE	
FATICK	90.00%	0.00%	0.00%	10.00%
KOLDA	75.00%	0.00%	25.00%	0.00%
SEDHIOU	71.40	14.30%	0.00%	14.30%
ZIGUINCHOR	81.30%	12.50%	6.30%	0.00%
TOTAL	81.10%	8.10%	5.40%	5.40%

Source: IRD AND PADEC (2013; 2014)

CASHEW NUT MARKETING IN SENEGAL

In Senegal, Indians purchase the bulk of the produce for export. The cashew season starts in March-April with the arrival of Asian traders, especially Indians, who helped set up a supply chain from producer to local processor and exporter.

Cashew nut employs at least 27,000 people in the various links of the production, distribution and export chain as shown in the table below.

Table 20: Turnover of the cashew nut sub-sector in Senegal

LINK	STAGE	TURNOVER (CFAF)
Production	Production and harvest	5,124,000,000
Trade and Export	Collection, trade and export	30,000,000,000
Transport	Transport	1,500,000,000
Processing	Artisanal processing	225,000,000
	Semi-industrial processing	90,000,000
Distribution	Retail sale	250,000,000
TOTAL		37,189,000,000

Source: IRD AND PADEC (2013; 2014)

Table 21: Number of jobs created per link

LINK	STAGE	NO. OF JOBS CREATED	
		TOTAL	WOMEN
Production	Production and harvest	25,337	1,717
	Seasonal workers	256	125
Trade and export	Collection, Trade, Bagging	600	147
	Traders and exporters	32	1
Transport	Transport	27	1
Processing	Artisanal processing	900	725
	Semi-industrial processing	80	51
Distribution	Retail sale	500	350
TOTAL		27,732	3,117

Source: IRD AND PADEC (2013; 2014)

MAIN CONSTRAINTS TO THE DEVELOPMENT OF CASHEW NUT CULTIVATION IN SENEGAL

An analysis of the cashew nut sub-sector shows that, despite its strategic importance, cashew nuts receive little attention in the definition of agricultural and rural development strategies. The value chain is almost completely outside the formal channels of financing and access to quality inputs. Economic incentives are almost non-existent. The value chain is strongly driven by exports of raw nuts, which contributes to the fragility of the processing sector.

The improvement of production techniques and renewal of plant material should thus help increase household income and employment. However, the viability of the chain requires an increase in performance in the production link to improve the quality of the nuts and also yields. It will also require increased processing capacity and better positioning on consumer markets.

Cashew tree plantations are home to various pests. These are mostly termites that attack the roots, trunk and/or branches and lead to the weakening, drying and death of the tree, bacteria (anthracnose), leaf and nut browning, mildew, and insect pests (*Analeptes trifasciata*). This phenomenon could be amplified with the advent of the southern agro-pole with the extension of cashew tree orchards in Casamance. Moreover, diseases and pests control strategies could lead to the use of inappropriate pesticides with negative consequences on human health and biological diversity.

These constraints are compounded by the absence of seed orchards, lack of monitoring and transfer of skills to producers and processors, the issue of access to land for the creation of new improved plantations, lack of financing for the sector, poorly controlled technical itineraries, lack of regulations for marketing, poorly organised marketing circuit with no guarantee of minimum income to producers, poor mastery of quality control techniques, and insufficient control of production costs.

These are all challenges that the South Agro-pole Project will have to face in order to take control of this sector for the development of the project in Casamance.

5.5.3. Raw material needs and processing volumes

The forecast trend within the central module for 2023 is 17,952 tonnes of cashew. However, an investigation of the individual productions of the 8 nut processing plants (Miftah, Cord/B, Saly, Siaka, Dynamique Sud, GAA, Agribiosolar) reveals an average nut capacity per plant of 100 tonnes/month during the year, i.e. a plant with a capacity of 5 tonnes of nuts/day (625kg/h for an 8-hour working day). Thus, even if the 8 plants managed to have sufficient stock to operate all year round at full capacity (i.e. a capacity of 1,200 tonnes of nuts/year), the total need for raw material would not exceed 9,600 t/year, which is much lower than the 17,952 tonnes announced.

The forecasts of the promoters identified for the South Agro-pole are estimated at 43,000 tonnes of mangoes/three-month season or 715 tonnes/day to be processed (Lab, 2018) for the 2020 forecasts.

Table 22: Volume of raw materials needed for the Agro-pole

Raw material	Volumes of raw products (t)	Finished products	Volumes targeted by the LAB projects (t)
Export mango (Kent, Keitt)	4,000	Fresh mango packaged for export	2017
Mango for local consumption and processing (Sierra Leonean, Gabonese, papaya, etc.).	48,159	Fresh mango	2,2416
		Mango juice	7965
		Mango pulp	5,509
		Mango purée	2754
		Mango almond butter	2,000
		Mango jam	1500
		Dried mango	1031
		Mango concentrate	1000
		Mango infusion	420
		Mango Thiacrylate	133
		Mango Couscous	133
		Mango cake	30
		Mango biscuit	30
Cashew apple for juice	11,652	Cashew apple juice	3338
		Cashew apple vinegar	566
Cashew nut	12,000	Plain cashew almond	3,000
		Roasted cashew almond	180
		Cashew nut oil	1,000
		Whole roasted almond	400

Source: Lab projects

5.6. ANALYSIS OF THE ANCHOR INFRASTRUCTURE IN THE SOUTHERN AGRO-POLE AREA

The South Agro-pole area has a number of facilities set up in recent years by successive government projects. They concern several sectors and sub-sectors of the country's development: agriculture, animal husbandry, industry, transport, education, health, etc.

In order to flourish and achieve the mission assigned to it, the Agro-pole Project will have to rely on these different infrastructure. Such is reason for the brief analysis of Casamance's infrastructural mechanism to see to what extent it can constitute a support for the emergence of the Agro-pole. Emphasis will be placed on those relating to the value chains targeted by the Project.

5.6.1. Contribution of projects and programmes in the establishment of anchor infrastructure in Casamance

Most of the infrastructure is built by the State through projects and programmes, however, with the intervention other stakeholders to support the communities.

Tables 23, 24 and 25 below provide an overview of the infrastructure present in the three regions. These data were obtained from the capitalisation of past or ongoing projects and programmes in Casamance.

Table 23: Infrastructure in the Ziguinchor region

Sector	Type	Composition	State
Agriculture	Warehouses Mini group platforms Fruit and vegetable processing plants Project and programme facilities		Dilapidated original facilities Unsuitability or under-utilisation of new facilities
Livestock	Boreholes, vaccination parks, farms, processing plants, pharmacies and slaughterhouses		Insufficiency Lack of modern processing and marketing channels
Industry	Agro-industry Agricultural, livestock Fisheries Tourism, hotel Transport Trade Handicraft	15,749 economic plants, ² 267 of which are formal: 0.1% medium-sized enterprises 0.6% small-sized enterprises 14.1% very small 85.2% enterprising	
Maritime transport (Port facilities)	Port of Ziguinchor Fishing Port of Boudody (Ziguinchor)	100 boats for goods and people transport, container ships, RORO vessels	85 km of seafront 300 km of river
Air transport (Airport facilities)	Airports: Ziguinchor Cap Skiring		
Trade	Permanent markets	4 in Ziguinchor 4 in Bignona 2 in Oussouye	
Technical education and vocational training	25 schools	68% are State-owned 17 in Ziguinchor 6 in Bignona 2 in Oussouye	
Higher education	18 schools, including 2 universities	72% are private	

Tableau 2: Infrastructure in the Kolda Region

Sector	Type	Composition	State
Agriculture	Warehouses Project and programme facilities Ndiandouba and Anambé dams		Dilapidated original facilities Unsuitability or under-utilisation of new facilities
Livestock	Boreholes, vaccination parks, farms, processing plants, pharmacies and slaughterhouses		Insufficiency Lack of modern processing and marketing circuits
Industry	Agro-industry Agricultural, livestock Tourism, hotel Transport Trade Handicraft	21188 economic plant, ³ 57 of which are formal: 0.2% small-sized enterprises 40.5% very small enterprises	

² Report of General Census of Enterprises, ANSD 2016

³ Idem

Sector	Type	Composition	State
		59.3% enterprising	
Air transport (airport facilities)	Kolda airports		
Trade	Permanent markets: 8 Weekly markets: 19	Kolda 3; MYF 2; Vélingara 3 Kolda 8; MYF 4; Vélingara 7	
Technical education and vocational training	9 schools	State-owned 4 in Kolda 1 in MYF 1 in Vélingara	

Table 25: Infrastructure in the Sédhiou region

Sector	Type	Composition	State
Agriculture	Warehouses New facilities for projects and programmes Diop Counda Dam Development of 4,000 ha of valleys for rainfed rice DAC of Séfa		Dilapidated original facilities Unsuitability or under-utilisation of new facilities
Livestock	Boreholes, vaccination parks, farms, processing plants, pharmacies and slaughterhouses	3 vaccination parks and a modern poultry farm	Insufficiency Lack of modern processing and marketing circuits
Industry	A gro-industry Agricultural, livestock Tourism, hotel Transport Trade Handicraft	14058 economic plants, ⁴ 25 of which are formal: 0.1% small-sized enterprises 71.7% very small businesses 28.2% enterprising	
River transport	Motorised canoes on River Soungrougrou		Dilapidated canoes Shortage of safety equipment (life jackets)
Air transport (airport facilities)	Diéndé airstrip		
Trade	11 permanent 12 weekly	10 in Goudomp: 5 + 5 in Bounkiling: 4 + 4 5 in Sédhiou : 3 + 2	
Technical education and vocational training	1 school	Sédhiou CETF	

Quite recent achievements with the PADEC and PPDC projects could be identified. These include storage warehouses, mini-platforms as grouping points for fruits and vegetables, the Integrated Economic Platform of Bignona (PEIB) and cashew nut or mango processing plants.

For the 2014-2017 period, during a needs assessment, IRD (International Relief and Development) identified 16 operational cashew processing plants in Senegal, of which 3 are medium-sized plants with capacity of 1,200 tonnes, 1,000 tonnes and 750 tonnes respectively, and the remaining 13 are small processing plants with a capacity of less than 100 tonnes each.

4 Idem

So far, all the processing plants, with an overall capacity of 4,150 tonnes, manage to process barely 350 tonnes (8% of their capacity or less than 1% of national production). Although the small- and medium-sized processing plants are supported by the Casamance Economic Development Support Programme (PADEC) and IRD, the bulk of Senegal's cashew nut production is exported as raw nuts. The local plants have difficulty sourcing raw material because of the high purchase prices offered by their foreign competitors.

Cashew processing has always been supported by development projects and NGOs. It started in the Fatick region with the Senegalese-German project PASA in 1980. In the southern regions, the first experiments appeared with PROMER and Enterprises Works in the 1990s. This was followed by USAID projects then by PADEC, IRD, AVSF and PDIF. A total of 37 processing plants have been identified, 27 of which are in the southern regions.

Table 26: Artisanal and semi-industrial processing plants

Region	Number of plants	Average volume processed (kg)	Total volume processed (kg)
Kolda	4	7,100	28,400
Sédhiou	7	3,571	25,000
Ziguinchor	16	4,695	51,642
Total	27	15366	105042

Sources: IRD and PADEC (2013; 2014)

Such plants will have to be operated under the business relationships to be found between the South Agro-pole sites and existing facilities. It is important to develop the plants within the framework of the Agro-pole, even if their cumulative capacity is still low. Some of them have real development and extension capacity, such as the Sanankoro plant, which has introduced a project and should increase its processing capacity fivefold shortly.

Table 27: Processing capacity of installed plants

Plant	Number	Unit capacity installed (t/season)	Total capacity (t/season)	Lab forecasts
Cashew	13	5	65	14,652
Mango	14	50	700	42,440

Sources: IRD and PADEC (2013; 2014)

The post-harvest infrastructure available in the southern region also consists of storage warehouses for rice (15 units) and mini platforms (14) serving as grouping centres for fruits and vegetables in the communes of Nyassia in Dioher, Kataba 1 in Bandjickaki, Thionck-Essyl, Niaguis and Diéoune for the Ziguinchor region. Mini platforms are market access infrastructure in the form of fruit and/or vegetable grouping centres that help to structure the supply of urban markets by setting up marketing organisations or cooperatives. Thus, they can serve as collection points before going up to the departmental or regional platforms of PZTA-Sud.

The strength of these units is their distribution over the territory and the knowledge of supply and distribution channels. They provide support at the level of financial and especially storage capacity in order to have sufficient raw materials.

5.6.2. Road network: current situation and prospects

Land communication with some localities is still problematic at the national level and even more so in the southern zone. The Ministry in charge of infrastructure has designed a strategy paper: the National Road and Motorway Master Plan (SDRAN) which sets out the State's major guidelines in terms of road infrastructure for the period 2015 - 2035.

The master plan gives preference to anchor infrastructure that act on long-term economic growth and improvement of access. In this respect, it will make a major contribution to facilitating the flow of products from production areas to markets, via development facilities such as the south Agro-pole sites.

In the master plan currently being drawn up, there is mention of the sub-regional and trans-African integration roads that service Senegal, such as:

- Kaolack Transgambienne - Farafénié (Gambia border) - Sénoba (Senegal border) - Bignona;
- Vélingara (CF RN6) - Badiara (Gambia border) road;

- National road RN6 from Ziguinchor to Tamba Soccé;
- Interconnection roads with Guinea Bissau:
- Sédhiou - Tanaff - Dungal (Guinea Bissau border);
- Kolda - Salikénié ; Dabo - Saré Bocar (Guinea Bissau border);
- Wassadou - Pirada (Guinea Bissau border).
- Other development works have already been carried out. These include the following:
- Blouf loop, Thionk Essyl - Balinghor section
- repair of the Tendieme-Thionck Essyl section
- MCA projects: completion of work on RN6 (Ziguinchor Tanaff)
- MCA projects: Vélingara Kounkané (29 km) and Dabo Sinthian Aladji (30 km)
- PPDC: Rural road Rehabilitation/Maintenance
- PPDC: Treatment of critical points in the regions of Sédhiou and Kolda
- asphaltting of the Sédhiou - Marsassoum road (54 km).

The following major projects have also been launched:

- Rehabilitation of the Sénoba-Ziguinchor-Mpack road
- Rehabilitation Sénoba-PK40 segment, including 4 km of road at Bounkiling, lot 1
- Rehabilitation of the PK40-PK 80 (Oulampane) segment, including 8 km of road in Bignona, lot 2
- Rehabilitation of the PK 80 (Oulampane)-Mpack segment (lot 3) plus heavy duty truck parking at Ziguinchor
- Development and asphaltting of the Kalounayes Loop
- Development of the Boudier Loop, Segment: Sédhiou-Bambali-Djirédji-Djibabouya-Marsassoum (81 km) + 8 km of roads in Sédhiou and Marsassoum + Marsassoum Bridge.

Casamance has a relatively dense network of major roads, rural roads and paths. In fact, the following figure shows that almost all of Casamance's territory is less than 5 km from a major road, rural road or path.

Although the territory appears to have a dense road network, the state of the network does not always allow the movement of all types of vehicles in all seasons. Some rural roads or major roads are in more or less degraded states, not always allowing the movement of trucks to easily collect and evacuate local products.

The choice of sites likely to accommodate the various modules was based in particular on the presence of quality road infrastructure and proximity of port and airport facilities. This analysis was carried out on the basis of a time-distance matrix between the main cities and strategic crossroads in Casamance.

5.6.3. The Port of Ziguinchor

The Port authorities have already made a diagnosis of the situation and proposed solutions have been put forward since the dredging along 85 km of the Casamance River.

In addition to the fact that the draught has been increased from 3.5 to 7.5 m, thus allowing the port to accommodate vessels of nearly 6,000 tonnes (previously 2,000 t), there are also plans to:

- increase the maritime fleet with about ten boats shuttling between Dakar and Ziguinchor;
- construct the fishing port of Boudody (Ziguinchor Commune);
- build an 82,000 m³ hydrocarbon terminal;
- extend the Port of Ziguinchor by 2 ha;
- implement pontoons for docking, beaconing and maintenance dredging; and
- construct barges for local products transport.

With the South Agro-pole Project, the State of Senegal has every interest to very quickly implement these various projects which contribute to the fluidity of people and goods traffic. This is a determining factor in the economic growth of Casamance with the development of local productions through their valorisation.

The Marsassoum bridge under construction will reduce the distances to be covered by nearly 40 km (or about 25 min.) between the two sites. The distance and travel time would still remain relatively long (nearly 2 hours 20 minutes of transport) and would imply a very high increase in truck traffic along National Road 4 between Tobor and Ziguinchor. The ongoing rehabilitation of this road is an absolute necessity in view of the increase in traffic envisaged with the commissioning of the Agro-pole sites.

With the validation of the Baghagha site in Adéane to house the central module of the Agro-pole, it seems necessary to consider the construction of a new bridge over the Casamance River at Bambali (Sédhiou department) and Diattacounda (Goudomp department). This solution would make it possible to significantly reduce the distances between the various production basins to transport the products to the central site of Adéane: the distance to be covered between Adéane and Sédhiou would thus be reduced to about 60 km and would make it possible to attract significant mango and cashew nut production areas.

This new infrastructure would be a strong development thrust for Casamance inasmuch as it will greatly facilitate movement from one bank to the other and ease access to the mango and cashew nut production areas located on the right bank of the Casamance River.

In addition to the gain in transport time to reach the central site in Adéane from a large part of the northern bank of Casamance, this solution would also have the advantage of controlling truck traffic on the Tobor-Ziguinchor road and reducing the logistical impact for transporters leading to the export of raw cashew nuts or fresh mangoes through The Gambia. The construction of such a bridge would make it possible to connect directly, in less than an hour, the production basins of the regional module of Sédhiou with the departmental platform of Goudomp (based in Samine) and the central module, while extending the collection basin of Sédhiou on the project area of Samine.

5.6.4. Traffic development prospects at the Port of Ziguinchor

In view of the traffic development prospects at the Port of Ziguinchor, the National Maritime Affairs Agency (ANAM) has announced a programme for the construction of barges to transport local products along the Casamance River. The Casamance River derives its source around Fafacourou located about 50 km northeast of Kolda.

Near Kolda, the river is embedded in sandy deposits and is only about 50 metres wide. Downstream from Diana-Malari, the Casamance River widens gradually, reaching 2 km wide upstream from Séfa. Downstream of Adéane, the river, about 4 km wide, narrows near Ziguinchor (640 m at the level of the Emile Badiane Bridge) before widening again towards the mouth where it can reach 8 km⁵.

Dredging beyond Ziguinchor would be possible for the navigability of barges with a capacity of 5 to 10 tonnes for drafts of 1 to 2 m.

A combination could be found between these barges that would go up the river to meet producers having means such as tricycles with a capacity of 500 to 1000 kg along the loops of the Kalounayes and the Boudier (Sédhiou-Bambali-Djirédji-Djibabouya-Marsassoum).

⁵ The Geography of the Casamance Estuary, ISRA 1976

5.7. CONCLUSION

An analysis of the initial environmental and social conditions in the PZTA-Sud zone shows that, in general, Casamance has significant agronomic and forestry potential compared to the rest of the country. However, it still faces environmental and socioeconomic problems that will have to be addressed if they are not to be resolved, in order to give the Project a better chance of being implemented in the best possible conditions.

Indeed, Casamance's significant natural resources are subject to over-exploitation, especially oil palms, rooks and forest products, thus constituting a serious threat to forest formations. In addition to these factors, poor pastoral practices and the traditional exploitation of honey are causing devastating bush fires. Salinization is gaining more land, thus reducing the agronomic potential of the soils.

With regard to basic social services, access to drinking water remains a major problem, especially in rural areas. In Ziguinchor and Sédhiou, drinking water is mostly supplied from the tap, but in the Kolda region, the well is the main source of water.

In the area of health, despite the many efforts made in recent years and the progress observed, the zone still suffers from insufficient health care for its population. The number of active health care personnel does not meet World Health Organization standards (ANSD, 2013).

In terms of education, the pupil/teacher ratio still needs to be improved. This is mainly related to the shortage of staff, school infrastructure and the high dropout rate due mainly to the poverty of the population (ANSD, 2013).

With regard to cashew nut and mango crops in Casamance, despite the increase in the unfortunately uncontrolled area under cultivation, several constraints of various kinds are undermining the development of these two sectors from the point of view of production, processing, packaging and marketing.

As a result of these factors, the implementation of the SEA of the Agro-pole will have to take into consideration the initial situation, which will constitute the benchmark level (or baseline situation), from which it would be possible to assess the effectiveness of the measures and good practice guides proposed in the Environmental and Social Management Framework Plan (ESMFP).

VI. MAIN ENVIRONMENTAL AND SOCIAL ISSUES OF THE PZTA-SUD AREA OF ACTIVITIES

In Senegal, as in most developing countries, natural resources are the main sources of supply for the needs of the population, especially in rural areas. This situation results in overexploitation of the resources, leading to environmental degradation.

Despite this desire to integrate environmental protection and poverty reduction in the targeted sectors, it must be noted that the application of these directives is not always effective on the ground.

The analysis of the basic environmental and social conditions discussed in Chapter 5 has made it possible to identify a number of environmental and social issues in the Project area. The aim of this chapter is therefore to define and align the issues relating to the development of the agricultural sector, so as to promote and ensure the rational exploitation of resources, without irreversible damage to the environment and other natural resources available in Casamance.

The major issues identified in the Project area and that could impact the South Agro-pole in the short, medium or long term are briefly presented in the following sections.

6.1. GRADUAL LAND DEGRADATION (SALINISATION, EROSION, SILTING OF VALLEYS AND UNSUITABLE FARMING PRACTICES)

The disappearance of the vegetation cover in grazing areas, the depletion of cropland, acidification and salinization of rivers and wetlands, soil denudation through erosion, are the causes of the decline in the population's income. The main causes of land degradation are analysed below.

6.1.1 Gradual land salinisation

Salinization is due to the advance of marine waters throughout the hydrographic network, the invasion of coastal land by marine waters, the general decline in the level of water tables, salinization and acidification of the mudflats occupied by mangroves, which have thus disappeared over large areas. According to the National Institute of Pedology, the phenomenon of land salinization affects 300,000 ha of arable land in Casamance⁶. The soils of lowlands and basins suitable for agriculture suffer the rise of salt intrusion. In Sédhiou, for example, salt intrusion has resulted in high pressure on arable land. The salinization of rice fields has pushed many women who used to grow rice to clear new land for millet and groundnut cultivation.

The phenomenon of land salinization has been exacerbated by the degradation of the anti-salt dams and other structures that have not been maintained and monitored by the populations.

6.1.2. Water and wind erosion

Water and wind erosion are factors that contribute to the loss of land productivity. The former is caused by the compactness of the soil and the latter is accentuated by clearing and bush fires. According to the INP, the combination of these two forms of erosion concerns 320,000 ha of arable land in Casamance. Erosion also leads to the silting up of rice-growing valleys, especially in the Sédhiou region, with the consequence of reducing the rice-cultivable areas. The phenomenon results from the accumulation, in rice fields, of sand and fine elements carried by runoff from bare plateaus.

With the advent of the South Agro-pole, there is likely going to be an extension of the areas of mango orchards, cashew trees and market gardening in Casamance. The issue of gradual land degradation will be acute in the medium to long term.

6.2. DECLINE IN FORESTRY POTENTIAL

The Project area has considerable forest resources, the survival of which comes up against various constraints leading to a decline in stands and a decrease in income. It contains the most significant forest formations of the country both in terms of volume and in terms of quality. With the expansion of agricultural areas and the exploitation of timber, these forests are experiencing a slight decline.

Furthermore, the increase in salinity and acidity caused the decline of natural mangrove vegetation (surface area decrease of 87 km²) and the extension of salt flats, whose area increased by 107 km² in Lower Casamance (Sall, 1983). In addition, the forest of Lower Casamance has experienced a strong degradation of anthropogenic origin, leading Pélissier (1966) to state that the current forests of this region are, in large part, residues of the original forest.

Thus, despite its significant forestry potential, Casamance remains a fragile environment constantly under attack. The numerous factors are both natural (climatic stress) and anthropogenic. Their intensities may vary from one period to another. The main constraints are: bush fires, excessive deforestation (clearing for crops and orchards, logging and quest for fuelwood), excessive tree felling, clandestine exploitation of wood, carbonisation, the lack of materialisation of the limits (boundary mark), mining, the weakness of the surveillance system and the lack of development.

This fragility is accentuated by the prevailing insecurity. Indeed, it is believed to have led to the reconversion of farmers into "loggers" or other opportunistic activities requiring no investment. This increases the pressure on forest resources and leads to the slowing down of various resource management activities in the area (development, inventory, monitoring, etc.). Other no less significant physical factors (drop in rainfall, salt intrusion, etc.) contribute to the phenomenon of resource degradation. The following are also worthy to be noted:

- land degradation (wind and/or water erosion, lack of soil enrichment, disappearance of fallow);
- the silting up of rice fields;
- bush fires;
- clandestine exploitation;

⁶ Presentation at the Soil Partnership Launch Workshop, Accra, 4 February 2013

- degradation of grazing areas (overgrazing, wood pruning, etc.);
- depletion of cultivated land;
- acidification and salinization of rivers and wetlands, development of “salt flats”;
- degradation of water resources;
- depletion of animal resources and degradation of habitats;
- estuarine degradation, especially mangroves;
- generalised drop in groundwater levels;
- demographic pressure (extension of farmlands, development of hydro-agricultural facilities, etc.);
- profound modification of land use systems and natural resources exploitation;
- advance of the agricultural colonization front (accelerated destruction of forests); and
- conflicts between herders and farmers.

In addition to these constraints, there is also the weak capacity of local communities to manage the natural resources transferred to them. Some local communities do not even have a forestry officer.

There have been reported cases of conflicts relating to the exploitation of forest resources. In addition to those that can occur between technical service and the offender, others occur between villages for access to resources. In some localities, the populations do not accept that the resources of their land be plundered by foreigners.

Some operators also come up against the vigilante committees currently set up in many villages.

Implementation of the South Agro-pole could exacerbate the phenomenon of forest area shrinking in Casamance due to a frantic search for new land for cashew and/or mango development in Casamance.

6.3. LAND DISPUTES BETWEEN INDIGENOUS AND NON-INDIGENOUS POPULATIONS ON LAND OCCUPATION AND USE

The causes of land disputes between indigenous and non-indigenous populations on land occupation and use are most often linked to:

- changes in farming systems and the impact of development programmes implemented in the region. The progress of the agricultural colonisation front, especially in the Kolda region (also causing an accelerated destruction of forests) contributes to the exacerbation of competition for space. This competition is also rife between agricultural and pastoral activities. Since these activities are carried out by different groups, the conflicts between them take on a special tone; all the more so as the law on the national domain does not recognise breeding as a form of land development.; and
- physical degradation (decrease in rainfall, drought, salt intrusion).

6.4. SUSTAINABLE WATER RESOURCES MANAGEMENT

The water sector is one of the priorities of the national policy. Casamance is the wettest region in Senegal (rainfall greater than 800 mm). It is also an area with a high hydrographic network density which makes it very suitable for rice growing, especially in the lowlands.

However, salt intrusion contributes to the salinisation and acidification of productive lands, especially in the mudflats and certain lowlands in Lower and Middle Casamance.

The demand for water for agricultural purposes has an accelerated long-term effect on the reduction of the potential and the decline of the quality of water resources in the project area. Indeed, an over-exploitation of water resources can lead, in particular, to an infiltration of salt water in the fresh water networks, the concentration of salts in water and pollution, etc. In addition, the knock-on effects of the use of agricultural inputs (fertilisers, pesticides) could lead to a degradation of water resources in terms of salinity, increase in the content of nutrients (nitrogen and phosphorus) and chemical micro-pollutants.

Therefore, the mainstreaming of the environment in water resources management constitutes a huge challenge that Casamance must deal with in order to ensure its sustainable development and achieve the strategic goals of combating poverty.

6.5. LAND MANAGEMENT-RELATED SOCIAL CONFLICTS

The insecurity and the crisis in the region are responsible for a strong sensitivity on land occupation, and have resulted in latent social conflicts (ANSD, 2013). In general, there could be increased risks of demographic pressure in the project area due to the need to expand the land occupied by mango and cashew orchards, but also migration for work purposes. Thus, the uncontrolled expansion of the land to be cultivated could constitute a risk of real negative social conflict.

In addition, the increase in surfaces also compounds land management conflicts between farmers and herders.

6.6.0 PARASITISM OF FRUIT TREES, PARTICULAR CASES OF CASHEW AND MANGO TREES

6.6.1. Case of the cashew tree

Various attacks and parasites can be seen in cashew plantations: (i) termites (isoptera, termidae, *Macrotherm* sp.) which attack the roots, trunk and/or branches and lead to tree weakening, drying out and death; (ii) bacteriosis (anthracnose, browning of leaves and nuts, mildew; (iii) insect pests (*Analeptes trifasciata*). This situation could be worsened with the advent of the South Agro-pole due to the expected extension of cashew orchards in Casamance. Moreover, the fight against these diseases and pests could lead to the use of inappropriate pesticides with enormous consequences on human health and biological diversity.

6.6.2. Case of the mango tree

The mango tree, like the cashew tree, is home to several diseases and parasites. The most well known vector due to the extent of the damage caused is commonly known as the fruit fly, *Bactrocera invadens*. Fruit flies, especially *Bactrocera invadens*, cause significant losses in mango production, ranging from 30 to 50% in the Niayes area and 60% in the Ziguinchor region (USAID, 2006). The invasive capacity of this species and the dynamics of its population suggest that *B. invadens* does not yet have natural enemies at the national level that can exert effective biological control.

Any development based on the mango sector must take this situation into consideration, if it does not find the appropriate solutions.

6.7. CLIMATE CHANGE Impact

Among the most crucial challenges facing the Agro-pole in the medium and long term, is climate change. Indeed, available climate forecasts indicate that average temperatures in Senegal are likely to increase by 1.8°C by 2035, while annual rainfall will decrease and the sea level will continue to rise.⁷ These changes are already affecting the availability of fresh water in the country.

Climate change risks, including desertification, are expected to have negative effects on food security, access to clean water, public health and the population's traditional livelihoods. An overall decrease in rainfall, coupled with increasing rainfall variability and intensity, could reduce crop yields by 30%.

⁷ Third National Communication, 2016.

In Casamance, the already observable effects of climate change and forecasts could impact the project, but in a limited way. In fact, mango and cashew orchards are not found in lowlands, which are areas threatened by salinisation. In addition, the orchards are not irrigated; the effects of climate change on water resources will therefore not impact the targeted crops. On the other hand, supplying market gardening perimeters through the drip system with solar energy would contribute to the fight against climate change through a rational and sustainable use of water and clean energy. However, the probable increase in ETP and the increase in periods of drought could pose a risk to the development of fruits (impact of drought causing water stress at the time of flowering) and young plants. In addition, the increased risk of fires (periods of drought create favourable conditions for fires) could cause loss of crops or orchards. Lastly, to date, little information is available on the effects of climate change on pest dynamics. On this subject, it is therefore difficult to comment on its impact on the project.

Thus, PZTA-Sud is potentially impacted (at the level of crops planted) by disturbances which risk increasing in terms of rainfall and periods of drought. Horticultural orchards are also potentially vulnerable to the increased risk of bush and forest fires.

VII. ANALYSIS OF THE POLITICAL, LEGAL AND INSTITUTIONAL FRAMEWORK APPLICABLE TO SOUTH AGRO-POLE

This chapter reviews the political, legal and institutional framework relevant to PZTA-Sud. Indeed, Senegal is party to several international protocols and conventions, and has adopted strategic documents and sector policy letters as well as normative instruments. It has also set up an institutional framework, especially in the areas of agriculture, the environment and natural resources, industry and trade. This body of legal and normative instruments is supplemented by the the African Development Bank's environmental and social safeguard policies.

7.1. NATIONAL POLITICAL FRAMEWORK

The South Agro-pole Project operates in a context marked by the existence of strategic guideline documents and national policies on agricultural development, natural resources, the agro-food industry, the development of regional poles, poverty reduction and improving the conditions for processing and marketing agricultural products.

7.1.1 Political framework applicable to the South Agro-pole Project

Aware of Senegal's high potential in the agricultural sector and the synergy links that this sector maintains with other branches of the economy, in particular the direct links with the agro-food industries, as well as its influence and leverage effects in other sectors of activity (transport, trade, etc.), the ESP has identified it among the six (6) priority sectors that should contribute to the transformation of the structure of Senegal's economy in order to support a strong, sustainable and inclusive growth dynamic.

Table 28 below reviews the relevant national policies for the South Agro-pole.

Table 3: Presentation of national policies relevant to the Agro-pole

POLICY/PLAN/PROGRAMME	REFERENCE INSTRUMENT
Emerging Senegal Plan (ESP)	Senegal has adopted a new development model to accelerate its march towards emergence. This strategy, called the Emerging Senegal Plan (ESP), constitutes the framework for economic and social policy in the medium and long term. The vision of the ESP is that of an emerging Senegal by 2035 with a society based on solidarity and the rule of law. The ESP is based on three main thrusts: (i) Structural transformation of the economy and growth, (ii) Human capital, social protection and sustainable development, (iii) Governance, institutions, peace and security. Agriculture, an essential pillar of the first thrust of the ESP, is one of the “drivers of employment and social inclusion” and should contribute to: reducing food dependence on cereals, making agriculture a powerful and stable export engine, controlling rural exodus by maintaining local jobs and stimulating the rural economy. The ESP aims at achieving the following objectives: (i) Build a structured exchange network for a more balanced development of the territory in order to promote the emergence of agro-pastoral, mining, tourist and fishing economic activity poles; (ii) Improve access to production areas through a network of roads and rural roads; (iii) Develop an integrated multimodal transport network (road, air, rail, sea and river); (iv) Strengthen the attractiveness and competitiveness of the economy by reinforcing the infrastructure for integration into the sub-regional market and boosting trade with the outside world.
Act III of Decentralisation	<p>The Government of Senegal is considering a major overhaul of the State's territorial action, through the decentralisation reform project. The general objective, targeted by this reform, called “Act III of Decentralisation”, is to organise Senegal into viable, competitive territories that promote sustainable development.</p> <p>This reform has four fundamental objectives:</p> <ul style="list-style-type: none"> Anchoring of territorial coherence for a renovated administrative architecture; Clarification of competences between the State and the local communities; Development of contracts between these two decision-making levels; Modernisation of territorial public management, with reform of local finances and sustained promotion of the quality of human resources.
National Action Programme to Combat Desertification (PAN/LCD)	Desertification and the degradation of natural resources constitute, in several areas of Senegal, the most acute environmental problems. The <i>PAN/ LCD</i> , which is a major component of the National Environment Action Plan (PNAE), emphasises restoration, reforestation, capacity building and awareness raising on natural resource management.
Community Development Emergency Plan (PUDC)	The PUDC is a contribution to improving access to basic social services for the population, especially rural populations, and is one of the objectives pursued by the priority action plan (PAP) of the ESP for the period 2014-2017. The overall objective of the PUDC is to transform the living conditions of populations and fight against social inequalities.

7.1.2. Environmental Policy Framework

Table 29 below presents the relevant national environmental policies for the South Agro-pole.

Table 4: National environmental policy framework

POLICY/PLAN/PROGRAMME	REFERENCE INSTRUMENTS
Environment and Sustainable Development Sector Policy Letter (LPSEDD 2016-2020)	The aim of the environmental policy set out in this document is "to ensure rational management of the environment and natural resources in order to contribute to poverty reduction with a view to sustainable development". It is part of the search for conditions of sustainability of economic and social development compatible with an ecologically rational management/ exploitation of natural resources and the environment. The overall objective of Senegal's environmental and sustainable development policy is: "to combat environmental degradation, promote the principles of sustainable development and reduce the vulnerability of populations to climate change".
Agro-Sylvo-Pastoral Framework Law (LOASP)	Promulgated in 2004, the LOASP is aimed at economic efficiency, social equity, environmental sustainability, market economy, decentralisation, the empowerment of local communities, agricultural professional organisations and civil society. The LOASP is a long-term vision (20 years) of Senegal's agro-sylvo-pastoral development policy which integrates the implementation of operational programmes such as the National Agricultural Development Programme (PNDA), the Forest Policy of Senegal (PFS) and the National Livestock Development Plan (PNDE). In this case, the project is in full compliance with the law; it can help achieve the objectives set out therein.
Review the National Environment Action Plan (PNAE)	PNAE is the strategic reference framework for environmental planning. The rational management of natural resources and improvement of the living environment of the populations are becoming priorities in the implementation of development policies.
Forest Policy of Senegal (PFS) 2005-2025	Faced with deforestation linked to climatic and anthropogenic factors, the PFS reflects the Senegalese government's desire to establish sustainable and concerted management of national forest resources. Senegal's forest policy is defined in the context of decentralisation and the fight against poverty for the period 2005–2025. The actors of the forest sector are united by a common vision which is projected in the year 2025 and which is to "contribute essentially to poverty reduction through the conservation and the sustainable management of the forest potential and of biodiversity, maintaining socioeconomic balances in order to meet the needs of the populations in services and wood and non-wood forest products ...".
National Strategy for Adaptation to Climate Change	It aims at establishing a harmonised framework for the management of climate change-related programmes.
Biodiversity Conservation Strategy and Action Plan	In the implementation of the International Convention on the Conservation of Biodiversity, Senegal has developed a strategy and an action plan for the conservation of biodiversity. The strategy strongly emphasises the need to preserve biodiversity sites by reducing the risk of destruction of natural habitats and disturbance of ecosystems.
Circulars: No. 009 PM.SGG/SP of 30 July 2001; No. 0001/PM/SP of 22 May 2007; No. 0008 PM/SGG/SP of 24 June 2010	They remind all national structures of the need to comply with the provisions of Law No. 2001-01 of 15 January to institute the Environmental Code and of Implementing Decree No. 2001/282 of 12 April 2001 by stipulating that any project development or activities likely to harm the environment and the health of populations, as well as public policies, plans and programmes must be subject to an environmental assessment before their implementation.

7.2. LEGAL FRAMEWORK APPLICABLE TO THE SOUTH AGRO-POLE PROJECT

This section briefly presents the national and international instruments applicable to the South Agro-pole Project.

7.2.1. International legal framework

In the environment sector, Senegal has ratified several international agreements. Those concerning the South Agro-pole are briefly presented in Table 30 below.

Table 30: International agreements relevant to PZTA-Sud

INSTRUMENT	AREA OF INTERVENTION	RELEVANCE TO THE PROJECT
Convention on Biological Diversity	Biological resources	The main module of the South Agro-pole is located about 2 km from a classified forest marked by an interesting plant biological diversity that provides habitat, shelter and food to some animal species. The South Agro-pole could change this function and negatively affect animal species. In addition, this agreement requires that an environmental impact assessment be carried out prior to any potentially negative activity.
Convention for the Protection of the Ozone Layer	Protecting the ozone layer	This Convention establishes a framework for cooperation and the formulation of agreed measures to protect human health and the environment from the adverse effects resulting from changes in the ozone layer by human activities. This instrument is relevant to the South Agro-pole because of the cold room installations which involve refrigerating gases.
Kyoto Protocol to the Convention on Climate Change (1998)	Limiting greenhouse gas emissions into the atmosphere	The South Agro-pole Project involves transport activities and associated gas emissions
Regulation 14/2005/cm/UEMOA	No. It relates to the harmonisation of standards and procedures for controlling the gauge, weight, and axle load of heavy goods vehicles in the member States of the West African Economic and Monetary Union (WAEMU)	Transporters involved in the South Agro-pole will use heavy-duty trucks and will have to comply with this regulation

7.2.2. National Legal Framework

The national legal provisions applicable to the South Agro-pole Project are presented in Table 31 below.

Table 31: National legal framework applicable to the Agro-pole

DOMAIN	INSTRUMENT	YEAR	MAIN CONTENT	RELEVANCE TO THE PROJECT
Environment and natural resources	Constitutional Law No. 2016-10 of 5 April 2016 to amend Senegal's Constitution of 2001	2016	Basic instrument of the country.	Section 25(2): "The right to a healthy environment is constitutionally enshrined and no one can infringe on this right. The project must be carried out with respect for health and the environment. Public authorities have the obligation to preserve and restore essential ecological processes ..., to require environmental assessment for plans, projects or programmes, ... to ensure the protection of populations in the development and the implementation of projects and programmes with significant social and environmental impacts.
	Environmental Code (Law No. 2001-01 of 15 January 2001) and (Law No. 2001-01 of 15 January 2001) and Decree No. 2001-282 of 12 April 2001 to implement the Environmental Code	2001	Defines the main principles governing environmental protection, including the obligation, for development projects likely to have an impact on the environment, to carry out an environmental assessment (Sections L48 to L54). It defines the main principles which govern the environment and determine the penalties incurred in the event of infringement of the regulations (Sections L13, L27, L30, L42 and L43)	Activities planned in the various phases of the South Agro-pole Project are associated with the environmental impacts referred to in the instrument.
	Additional instruments relating to environmental impact assessment	2001	Order No. 9471 MJEHP-DEEC of 28 November 2001 on the content of the Terms of Reference (ToR) of EIAs; Order No. 9472 MJEHP-DEEC of 28 November 2001 on the content of the EIA report; Order No. 9468 MJEHP-DEEC of 28 November 2001 to regulate public participation in EIA Order No. 9469 MJEHP-DEEC of 28 November 2001 on the organisation and functioning of the Technical Committee	As the project is subject to an environmental assessment, it must be carried out in accordance with these instruments.

DOMAIN	INSTRUMENT	YEAR	MAIN CONTENT	RELEVANCE TO THE PROJECT
LIFE ENVIRONMENT - SANITATION - HYGIENE - HEALTH - SAFETY AND WORK			Order No. 9470 MJEHP-DEEC of 28 November 2001 to lay down the conditions for issuing Approval for the exercise of activities relating to EIA Regulation/ICPE nomenclature: 2007	
	Law No. 98-03 of 8 January 1998 to institute the Forestry Code which is supplemented by Implementing Decree No. 98-164 of 20 February 1998	1998	It relates to forestry training and its regulations.	Section L. 44 stipulates that "All deforestation must comply with the procedures established in Section L44 of the Forestry Code. In fact, clearing is subject to an application for authorisation and the payment of felling tax."
	Sanitation Code: Law No. 2009-24 of 8 July 2009	2009	It relates to the organisation of the public service of water and collective sanitation and defines the main principles of the organisation of collective and autonomous sanitation.	During the operational phase of the PEIB, some activities (washing of products in particular) will generate wastewater.
	Senegalese Standard NS 05-060		It regulates exhaust gas emissions from engine-driven equipment.	Due to its activities, the Southern Agro-pole will generate exhaust gas emissions with the movements of large trucks in particular.
	Senegalese Standard NS 05-062	2003	It aims to protect the environment and people against harmful or unpleasant atmospheric pollution.	Construction works as well as certain operational activities have the potential to cause pollution and nuisances targeted in this standard.
	Senegalese Standard NS 05-061	2001	It is an instrument for preventing the risks of water pollution by effluents.	The Southern Agro-pole, by its nature, will induce wastewater discharges, the quality of which must take into consideration the requirements of said standard.
			Prevention and control of pollution and nuisances (Chapter I; Section L 9): concerns activities that present either dangers to health, safety, public hygiene, nature and the environment in general, or disadvantages for the environment. For these activities, measures and actions must be taken to minimise such adverse effects. Air pollution and unpleasant odour (Chapter II; Sections L 78 and	The Agro-pole construction works will include activities that are potentially associated with the effects targeted by these provisions. Some activities in the two phases of the project (transport in particular) are associated with atmospheric emissions. The construction phase includes activities covered by Section L 84.

DOMAIN	INSTRUMENT	YEAR	MAIN CONTENT	RELEVANCE TO THE PROJECT
	Environmental Code	2001	L79): prescribes measures to avoid atmospheric pollution and the steps to be taken to this effect. Noise pollution (Chapter IV; Section L 84): prohibits the emission of noise likely to harm human health, to cause an excessive nuisance to the neighbourhood or harm the environment and prescribes measures to be taken to suppress them	
			Waste management (Chapter III; Sections L31, 37, 41, 42): the Code regulates the treatment of waste.	During the construction phase and the operation phase, waste will be generated and its management must be carried out in accordance with the requirements of the Environmental Code.
	List of classified installations	2007	Classifies installations and the targeted substances according to thresholds which subject them to authorisation or declaration.	The Agro-pole itself is an installation classified under two headings, with a third one encompassing the projected cold rooms.
	Environmental Code and implementing Decree	2001	Chapter I on Installations Classified for the Protection of the Environment (ICPE): defines the opening and operating procedures; the duties and taxes to which the operator of an ICPE is liable.	The South Agro-pole in itself is an ICPE; it includes other ICPEs; and is therefore subject to the provisions of the Code relating to ICPEs.
	Law 81-13 of 4 March 1981 on the Water Code	1981	Section 49 stipulates: "No direct or indirect discharge, flow, disposal or deposit into an underground water or a watercourse likely to modify its physical characteristics, including thermal, radio atomic, chemical, biological or bacteriological characteristics, may be made without authorisation granted, after investigation, by the Minister in charge of water supply and sanitation"	The activities that will be carried out during the operation of the South Agro-pole will involve the production of wastewater.
	Public Hygiene Code: Law No. 83 - 71 of 5 July 1983	1983	Regulations relating to environmental nuisances (water, sanitation, environmental hygiene); Its purpose is to ensure collective health within the establishment and its surroundings.	During the operational phase, the Agro-pole will contain potential sources of nuisances referred to in this instrument. Section II relating to food of plant origin, in particular Section L 41, applies to the Agro-pole; as does Section IX: Hygiene of personnel in charge of handling foodstuffs in its Article L49. The provisions relating to the rules of hygiene of industrial installations in Section L30 also apply to the Agro-pole: the

DOMAIN	INSTRUMENT	YEAR	MAIN CONTENT	RELEVANCE TO THE PROJECT
				premises and surroundings of industrial and commercial establishments must not be unhealthy. Given that in the operational phase the Agro-pole will recruit staff, it must be subject to periodic medical examinations in accordance with this instrument.
	Law No. 97-17 of 1 December 1997 to institute the Labour Code	1987	Relating to working conditions and safety	This instrument regulates, among other things, working conditions in Section X: working hours, night work, work for women and children, weekly rest, etc. Health and safety in the workplace are regulated in Section XI. Article L.171 states: "The employer must ensure that workplaces, machinery, equipment, materials, substances and works processes under his/her control do not present a risk to the health and safety of workers". To this end, he/she must take (1) technical measures, (2) measures for the organisation of occupational medicine and (3) measures for the organisation of works. If these measures are insufficient, he/she must implement individual protection measures against occupational risks and monitor the health of workers. According to this Law, an employer must ensure the safety of workers by ensuring that work equipment can be used safely and is properly maintained, with the aim, in particular, of ensuring his safe operation.
	Decree No. 2006-1251 of 15 November 2006 on work equipment	2006	Occupational Health and Safety	Establishes minimum health and safety requirements for the use by workers of works equipment such as machinery, apparatus, appliances and other installations with the aid of which works are implemented.
	Decree No. 2006-1253 of 15 November 2006 to establish a medical labour inspectorate and setting its duties;	2006	Occupational Health and Safety	Ensures application of the provisions relating to legislation, regulations on occupational health and safety and the protection of workers in the workplace by monitoring the functioning of occupational medical services.
	Decree No. 2006-1256 of 15 November 2006 fixing the obligations of employers in terms of safety at work	2006	Occupational Health and Safety	Sets the obligations of employers to improve the safety and health of workers.
	Decree No. 2006-1258 of 15 November 2006 setting the missions and rules for the			Regulates the procedures for recruiting occupational physicians and the organisation, operation and financing of occupational health services.

DOMAIN	INSTRUMENT	YEAR	MAIN CONTENT	RELEVANCE TO THE PROJECT
	organisation and operation of occupational medicine services	2006	Occupational Health and Safety	
	Decree No. 2006-1259 of 15 November 2006 relating to occupational safety signalling measures	2006	Occupational Health and Safety	These measures shall be introduced to warn workers of the existence of a risk or danger, of the prohibition to engage in behaviour likely to present a risk, of the obligation to behave in a particular way, of the location of the fire-fighting equipment and the location of the emergency routes and exits and first aid facilities.
	Decree No. 2006-1260 of 15 November 2006 relating to the conditions of ventilation and sanitation of workplaces	2006	Occupational Health and Safety	The decree lays down the conditions to be met in this respect and the measures to be taken.
	Decree No. 2006-1261 of 15 November 2006 setting the general hygiene and safety measures in establishments of all kinds	2006	Occupational Health and Safety	Regulates the quality of workplaces and workstations, the quality and order in workplaces, the services and premises to be provided to workers (work clothing, changing rooms and lockers), means of ensuring individual cleanliness, provision of toilets, protection and prevention services, first aid, fire-fighting and worker evacuation measures.
	Decree No. 99-259 of 24 March 1999 relating to quality control of horticultural products	1999	The Decree relates to the quality control of horticultural products	For a sustainable management of the various selected products, the South Agro-pole will have to comply with the prescriptions of this decree.
	Law No. 2002-30 of 24 December 2002 to institute the Highway Code and Implementing Decree No. 2004- 13 of 19	2002	It relates to the control of traffic offences	The operation of the South Agro-pole involves significant road traffic. Therefore, appropriate measures must be taken to make this activity safe.

DOMAIN	INSTRUMENT	YEAR	MAIN CONTENT	RELEVANCE TO THE PROJECT
Decentralisation, Town Planning and Land	January 2004			
	Law No. 73-37 of 31 July 1973 to institute the Social Security Code	2013	Transfer of skills to local communities, especially in the protection and enhancement of the environment and the improvement of the living environment.	The project, in addition to its internal Adéane module, will have regional and departmental modules. The SCE managing the project will be responsible for ensuring that the project complies with the relevant legal provisions in its transferred areas.
	Law No. 2013-10 of 28 December 2013 to institute the General Code of Local Authorities	2013	Transfer of skills to local communities, especially in the protection and enhancement of the environment and the improvement of the living environment.	The various modules of the South Agro-pole are located within the perimeter of territorial municipalities which are responsible for ensuring project compliance with the relevant legal provisions in its transferred areas.
TOWN PLANNING AND URBAN DEVELOPMENT	Law No. 64 - 46 of 17 June 1964, relating to the national domain and Implementing Decree No. 64 - 573 of 30 July 1964	1964	It relates to regulation of the national domain	They specify that holders of a formal or informal right to land in the national domain may be displaced for reasons of general interest.
	Law No. 2008-43 of 20 August 2008 to institute the Town Planning Code	2008	It relates to urban planning issues in Senegal.	Installation of the modules must take into consideration the urban planning rules of the sector. The promoter of the Agro-pole must follow the procedures for obtaining demolition and construction authorisations, including the authorisation to construct a Public Access Establishment (ERP). Article R195 states: "Establishments Receiving the Public must obtain, after ascertaining that the installations and fittings comply with the requirements relating to safety, an authorisation to open to the public ..."
CIVIL PROTECTION	Environmental Code and Implementing Decree	2001	Article L56 requires the operator of a classified installation subject to authorisation to establish an Internal Operation Plan (IOP) which must be approved by the Ministry of the Interior and the Ministries in charge of the Environment, Industry as well as the Ministry of Public Health and any other relevant Ministry.	South Agro-pole is a first-class ICPE.
	Order No. 5945 of 14 May 1969	1969	Establishes safety rules against the risks of fire and panic in Establishments Receiving the Public (ERP).	The Agro-pole is an ERP

7.3 THE AFRICAN DEVELOPMENT BANK'S ENVIRONMENTAL AND SOCIAL SAFEGUARD POLICY

The African Development Bank (AfDB) has positioned itself as the main donor to the Agro-pole along with the Islamic Development Bank (IsDB). For this reason, all project activities must comply with Bank's environmental and social safeguard policies. In this regard, the environmental and social policy it has adopted to integrate environmental and social aspects into its operations is presented in the following sections.

Indeed, aware that the continent's well-being is especially dependent on the quality of the environment and the sustainable use of natural resources, the African Development Bank (AfDB) strives to ensure that its operations do not have any unintended negative impact - direct or indirect - environmental and social, on communities. As a result, it has adopted a series of five operational safeguards. Safeguard OS 1 sets out the Bank's general perspectives that enable borrowers or clients to identify, assess and manage the potential environmental and social risks and impacts of a project, including climate change issues. Safeguards OS 2 to 5, on the other hand, support the implementation of safeguard OS 1 and establish the precise conditions relating to the various environmental and social issues, including gender and vulnerability issues that are triggered if the assessment process reveals that the project may present a risk.

7.3.1 Operational Safeguard 1 (OS 1): Environmental and Social Assessment

The objective of the overarching OS 1 and all the OS that support it, is to integrate environmental and social considerations, including those related to vulnerability to sustainable development into the Bank's operations and thus contribute to sustainable development in the region.

This OS applies to all public and private lending operations of the Bank as well as programmatic lending operations attributed to individual sub-projects as well as lending operations to financial intermediaries, project activities financed by other financial instruments managed by the Bank, with the exception of short-term emergency aid which is expressly exempted.

The environmental and social assessment carried out under this OS determines which activities or components of operations pose specific risks covered by OS 2 to 5, and therefore whether the applicable conditions have to be met. The Bank reviews and discloses all documentation relating to impact assessment before presenting a project to the Boards.

This safeguard is triggered if a project is likely to experience potential (negative) environmental risks and impacts in the project area. PZTA-Sud is triggering this policy because some of the sub-projects to be carried out are subject to an environmental and social impact assessment.

7.3.2. Operational Safeguard 2 (OS 2): Involuntary resettlement: land acquisition, population displacement and compensation

Operational Safeguard 2 aims at facilitating the operationalisation of the Bank's 2003 Policy on Involuntary Resettlement as part of the implementation requirements of OS 1 and, in doing so, to integrate resettlement factors into the Bank's operations.

It concerns projects financed by the Bank which result in the involuntary resettlement of people. It aims to ensure that those who need to be displaced are treated fairly and equitably, and in a socially and culturally acceptable manner, receive compensation and resettlement assistance so that their standard of living, their capacity to generate income, their production levels and all of their livelihoods are improved, and that they can enjoy the benefits of the project which induces their resettlement. Resettlement is considered involuntary when those affected by the project are unable to refuse activities that result in their physical or economic displacement. This occurs in cases of legal expropriation or temporary or permanent restrictions on land use, and negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use in the event that negotiations with the seller fail.

This OS applies to all of the Bank's lending operations, both public and private sector, and to project activities financed by other Bank-managed financing instruments. Its applicability is established during the environmental and social assessment process, more specifically during the project selection phase during which the scale, strategy and the resettlement schedule will need to be determined.

In accordance with the policy framework on involuntary resettlement, this OS addresses the economic, social and cultural impacts associated with Bank-financed projects, which involve the involuntary loss of land, the involuntary loss of other assets, or restrictions on land use and access to local natural resources which result in: (i) relocation or loss of housing by people residing in the project area; (ii) loss of assets, in particular the loss of structures and goods of cultural, spiritual and social importance or the restriction of access to assets, in particular national parks and protected areas or natural resources; (iii) loss of sources of income or livelihood as a result of the project, whether people are required to move or not.

This safeguard is triggered by the South Agro-pole because the release of the sites selected for the implementation of the modules may lead to displacement or loss of economic activities. A Resettlement Framework Plan (CPR) will be drawn up for this purpose to deal with involuntary resettlement issues relating to the implementation of the South Agro-pole modules.

7.3.3. Operational Safeguard 3: Biodiversity, Renewable Resources and Ecosystem Services

The objective of OS 3 is to define the conditions required for borrowers or clients to:

- identify and apply opportunities to preserve and sustainably use biodiversity and natural habitats,
- observe, implement and respect the prescribed conditions for the preservation and sustainable management of priority ecosystem services.

It reflects the objectives of the Convention on Biological Diversity to preserve biological diversity and promote the sustainable management and use of natural resources. The OS is also in line with:

- the Ramsar Convention on Wetlands,
- the Convention on the Conservation of Migratory Species of Wild Animals,
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- the World Heritage Convention;
- the United Nations Convention to Combat Desertification; and
- the Millennium Ecosystem Assessment.

Its recommendations are also compatible with the International Plant Protection Convention which covers the movement of invasive alien species, pests and pest risk analysis for quarantine organisms, including analysis of environmental risks and living modified organisms.

OS 3 applies to all of the Bank's public and private sector lending operations and to project activities financed through other financing instruments managed by the Bank. It also applies to Bank operations which:

- are located in areas that provide ecosystem services on which potentially affected stakeholders depend for their survival, subsistence, livelihoods or primary income, or which are used to maintain the project;
- exploit renewable natural resources as a primary objective (e.g. forest plantations, commercial harvesting, agriculture, animal husbandry, fisheries and aquaculture); and
- use the indigenous knowledge system.

OS 3 is triggered by the South Agro-pole, but implementation of the recommended environmental and social measures will make it possible to avoid, minimize or offset the environmental and social impacts that could arise during project implementation.

7.3.4. Operational Safeguard 4 (OS 4): Pollution Prevention and Control, Hazardous Materials and Resource Efficiency

OS 4 outlines the main conditions for pollution prevention and control so that borrowers or clients can achieve high-quality environmental performance throughout a project's life cycle.

It applies to all the Bank's public and private sector lending operations, and to project activities financed through other financing instruments managed by the Bank.

The borrower or client will apply pollution prevention and control measures in accordance with national legislation and standards, international conventions in force and internationally recognized standards and good practices, in particular the Environment, Health and Safety Directives. This OS covers aspects relating to:

- waste management,
- greenhouse gases emission;
- hazardous materials management; and
- pesticide use and management.

The provisions of the project in terms of waste management, health and safety, and the measures recommended by the environmental and social assessment of the sub-projects will help to curb any negative impacts that could arise during the implementation of the Agro-pole.

7.3.5. Operational Safeguard 5: Labour Conditions, Health and Safety

Operational Safeguard 5 sets out the main conditions that borrowers or clients must meet to protect workers' rights and meet their basic needs. Its goals are to:

- protect workers' rights;
- establish, maintain and improve relations between employees and employers;
- promote compliance with national legal requirements and provide additional prescriptive diligence where national laws are silent or inconsistent with the OS; ensure alignment of the Bank's prescriptions with core labour standards of the ILO and the International Convention on the Rights of the Child (UNICEF), where national laws do not provide equivalent protection;
- protect the working population against inequalities, social exclusion, child labour and forced labour; and
- put in place requirements to ensure occupational safety and health.

OS 5 applies to public and private sector investments in which the Bank is a direct contractual partner. Its applicability is established during the environmental and social assessment process.

7.4. NATIONAL ENVIRONMENTAL MANAGEMENT INSTITUTIONAL FRAMEWORK

The Agro-pole will involve several national, regional and local institutions and structures that can play various roles in environmental management. These are the technical services of the State, local authorities and non-governmental actors. The analysis of these institutions aims to identify the structures in place in the Agro-pole area and assess their capacity to manage environmental and social aspects. It will also entail identifying the capacity building needs of these institutions in the implementation of the Environmental and Social Management Framework Plan. Table 32 below analyses the institutions in place likely to be affected by PZTA-Sud.

Table 5: Institutional framework applicable to the South Agro-pole

INSTITUTIONS	STRUCTURES	FIELD OF INVOLVEMENT
Ministry of Environment and Sustainable Development	Directorate of Environment and Classified Establishments (DEEC) and Regional Division for Environment and Classified Establishments (DREEC) of Ziguinchor, Sédhiou and Kolda	Compliance control/instruction, management and follow-up of files; Validation procedure for the environmental and social assessment report; Monitoring of ESMPs
	Directorate of Water, Forestry, Hunting and Soil Conservation Regional Water and Forestry Inspectorate (IREF) of Ziguinchor, Sédhiou and Kolda	These Directorates have many missions, including the following: Ensuring respect for the law; Ensuring the development and improvement of spaces Restoring degraded areas and protecting all endangered species; Providing cutting permits and technical advice for clearing authorisations.
The Technical Committee (established by Ministerial Decree No. 9469/MEHP of 28 November 2001) and the Regional Technical Committee (CTR) set up by decree of the Governor in each region		Support to MEDD in the validation of environmental assessment reports. Secretarial services are provided by the DEEC and the Chair changes depending on the sector of the project under study.
Ministry of Agriculture and Rural Equipment	Department of Agriculture	Consistency of the Agro-pole with the national agricultural policy
	Department of Horticulture	Consistency of the Agro-pole with the national agricultural policy
	Directorate for Plant Protection	Support for fruit tree pest and disease control
	National Agency for Agricultural and Rural Council (ANCAR)	Support for the Agro-pole: strategic guidelines, technical support, etc.
	Regional Directorate of Rural Development (DRDR)	Support for the Agro-pole: strategic guidelines, technical support, etc.
Ministry of Commerce, Consumption, the Informal Sector and SMEs	Regional Trade Service	Implements the laws and regulations applicable to commercial activities; Implements strategies for the development of Small- and Medium-sized Enterprises (SMEs) and promotes the emergence of entrepreneurship
	The Chamber of Commerce, Industry and Agriculture (CCIA)	Under the supervision of the ministry in charge of trade, the CCIA represents, in each region, the economic operators and defends the general interests of industrial, commercial and agricultural companies at regional level. In addition, CCIAs can be the operators of the Agro-pole.
Ministry of Territorial Communities, Development and Territorial Planning	Local Development Support Department	Support for implementation of local development
	Department of Territorial Communities	Support for implementation of the decentralisation policy

INSTITUTIONS	STRUCTURES	FIELD OF INVOLVEMENT
	National Agency for Regional Planning	Ensures consistency of development policies and programmes at the national level
	Departmental Council	Management of local development and advisory support to local communities
	National Waste Management Programme	Supporting the establishment of an effective and efficient solid waste management system
Ministry of Infrastructure, Land Transport and Access Improvement (MITTD)	Road Transport Department	Ensures the coordination and implementation of State policy in the field of transport, traffic, safety and road information throughout the national territory; Provides axle control of large vehicles.
	Regional Division of Land Transport	DTR branch CETUD manages aspects relating to transport and traffic regulation. AGEROUTE manages the road network.
Ministry of the Interior	Regional Governorate and Departmental Prefecture	The Ministry of Interior is responsible, <i>inter alia</i> , for public and civil security on the entire territory of the Republic, civil protection and the fight against fires and natural disasters. This mission is carried out by the Governorate at regional level and the Prefecture at departmental level.
	Fire and rescue group	It covers the regions of Casamance. It is especially in charge of the fire and emergency rescue group and the fight against fires, perils and accidents of all kinds.
Ministry of Health and Social Action.	Regional Hygiene Brigade	Branch of the National Hygiene Service (SNG) which is attached to MSAS and whose missions include: the preparation and implementation of the health policy in matters of hygiene, education of the population on hygiene and public sanitation, implementation of actions to enforce hygiene legislation and regulations, and investigation and reporting of hygiene violations.
	Health Districts (HDs)	Operational component of the health system, it deals with curative, preventive, social and educational aspects of health
Minister of Labour, Social Dialogue and Relations with Institutions	General Directorate of Labour and Social Security	Compliance with the Labour Code, in particular working and hygiene conditions; Occupational illnesses Employment promotion.
Non-governmental Organizations and CBOs	NGO and CBO	They can be privileged partners in the project implementation, given their experience in the area.

VIII. PUBLIC CONSULTATION

Public involvement is a key element of SEA. It takes into account the public's perception, apprehensions, expectations and recommendations on the implementation of PZTA-Sud. It also makes it possible to measure and take into consideration the impacts or effects that will result from its implementation, to minimise or eliminate the negative impacts and reinforce the positive effects of the project. Being a form of involvement of the territorial administration, technical services, local elected officials and populations, public consultation allows the integration of the project in its socioeconomic context, and thus becomes a parameter for measuring its social acceptability, and contributes to its sustainability.

8.1. PUBLIC CONSULTATION PRINCIPLE AND METHODOLOGY

The methodology used is the direct interview survey based on a semi-structured guide which made it possible to establish fruitful exchanges with the various respondents. This helped to create a framework for discussion with the stakeholders so that they could express themselves in the best possible conditions. The objective of the survey was to collect the perceptions, opinions, concerns and recommendations of the public on the South Agro-pole Project.

The consultations took place in two different periods. The first public consultation which concerned the conduct of the SESA took place from 12 March to 12 June 2019 in several stages. After the validation of the SESA report and obtaining an environmental compliance certificate, the GCF considered supporting the Government with additional funding. For this reason, the SESA had to be updated to take into consideration the activities planned under the GCF. This justified the second public consultation which was carried out from 1 to 20 October 2020.

Discussions with the target public centred on the following points:

- Perception, concerns and expectations on the South Agro-pole;
- Possible risks or threats to the South Agro-pole; and
- Recommendations for a successful implementation of the South Agro-pole.

The public consultation involved more than two hundred actors through the following socio-professional structures:

- Territorial administration: Governors and Prefects;
- Territorial councils and consular chambers: City Councils, Departmental Council, Chamber of Commerce, Chamber of Trades and Crafts;
- Regional and departmental technical services: Regional Environment and Classified Establishments Division (DREEC), Regional Directorate of Rural Development (DRDR), Regional Livestock Service, Regional Fisheries Service, Regional Trade Service, Regional Inspectorate of Water and Forestry, Regional Hydraulic Service, Regional Service of Mines and Geology (SRMG), Regional Service of Town Planning and Housing (SRUH), Academy Inspectorate, Chamber of Trades, Regional Labour and Social Security Inspectorate (IRTSS), Regional Planning Service, Regional Sanitation Service, Regional Cadastre Service, Department of Plant Protection (DPV), National Fire Brigade (GIS4), Microfinance, etc.
- Projects, Programmes and Agencies: Regional Development Agency (ARD), National Agency for Statistics and Demography (ANSD), National Aquaculture Agency (ANA), National Agency for Integration and Agricultural Development (ANIDA), National Agricultural and Rural Advisory Agency (ANCAR), National Agency for Maritime Affairs (ANAM), Casamance Development Pole Project (PPDC), PAPSEN: PAIS Sédiou, Senegal Economic and Social Development Support Programme (PADESS), the Economic and Social Development Support Committee of the Ziguinchor and Kolda regions (CASADES), etc.;

- Producers' organisations: Union des Jeunes pour la Commune d'Adéane] (UJCRA), Ziguinchor Cooperative Society (SOCAAS), COPAD, ASSOLUCER, GIE CAMARACOUNDA, NAANGUE Fouladou, EIG of Cashew Producers of Marsassoum, Regional Union of Corn Producers (URCOMS), Société Coopérative de Sandiniéry, Coopérative des Terroirs Fankanta de Marsassoum, Regional Consultation Framework for Operators of the Cashew Sector of Kolda, Regional Consultation Framework for Rural People of Ziguinchor;
- The populations of Adéane and Baghagha in the department of Ziguinchor where hundreds of people were met in the form of focus groups.

The second consultation having taken place in a period marked by the COVID-19 pandemic, all measures were taken to ensure scrupulous compliance with the preventive measures during meetings with stakeholders.

8.2. ANALYSIS OF THE OUTCOMES OF THE PUBLIC CONSULTATION

8.2.1. General appreciation of the project by stakeholders

The public consultation made it possible to determine the overall appreciation of the South Agro-pole by the various actors met. In general, the project is well received and perceived as a need and even a necessity that comes at the right time. In fact, given the enormous economic potential presented by the main targeted sectors (mango and cashew nut) in the area, the actors expect the project to provide them with many opportunities: job creation, especially for young people, improvement of the environment and the quality of life of the population, increase in productivity, production and development of agricultural produce, strengthening of resilience in the face of climate change, etc. The Agro-pole is thus highly expected by all categories of actors, and most of them are impatient for its implementation.

However, this shared hope aroused by the Agro-pole has not concealed certain concerns often expressed in the form of recommendations. In general, these include the need to take into consideration environmental preservation, land tenure issue, involvement of all actors especially at grassroots level, in the establishment and operation of the Agro-pole, communication, capacity building, etc.

The perceptions, opinions, concerns and main recommendations of the stakeholders by socio-professional categories and by region have been summarised in the following sections.

8.2.2. Administrative authorities

Ziguinchor Region

CONCERNS

The deforestation of several hectares which would contribute to the reduction of forest areas and the erosion of biological diversity with ecological consequences which can be enormous in the more or less long term;

The risk of accidents with increased transport density, especially at the sites targeted to accommodate the various Agro-pole modules;

The security of people and goods in view of the latent conflict in the area;

The non-appropriation of the project by the communities which can constitute an obstacle to its ownership;

The availability of land, which may be lacking, in particular in the Ziguinchor region;

The possible shortage of qualified manpower in view of the lack of vocational training schools, especially with regard to processing plants for agricultural products;

Water and soil pollution by the expected production of a lot of solid and liquid waste from the processing processes of the factories that will be established in the Agro-pole;

The marginalisation of families whose land has been impacted by the project;

Technical constraints: organisation of sectors, integration of international markets, etc.;

The degradation of morals among indigenous populations (prostitution, drug use, etc.) due to an expected massive influx of people looking for work.

EXPECTATIONS

Increase in added value and the opportunity of outlets for local products and the increase in the wealth of the populations;

Preservation of the interests of communities, especially through the creation of jobs and wealth among young people and women, which could contribute to the fight against illegal emigration in the region, and the construction of social infrastructure (schools, health facilities, etc.);

The lever for the economic development of the Adéane commune through the increase in tax revenues for the commune.

RECOMMENDATIONS

Choose the sites for the Agro-pole modules on a concerted and legal basis, and set up sustainable consultation frameworks guaranteeing the involvement and inclusion of all the actors concerned;

Further involve the technical services and sign an agreement between them and the Agro-pole with a view to providing support in the areas of their expertise;

Respect the deadlines for setting up the Agro-pole and support producers, especially in product processing activities; and

Based on the success of the test phase on mango and cashew nuts, extend the activities of the Agro-pole to other products such as madd, toll, etc., and create secondary platforms at district level to facilitate the collection of produce.

Sédhiou region

CONCERNS

Low involvement of local authorities in the choice of sites to host the Agro-pole modules;

Accessibility of Adéane, central module, in relation to the departments of Bounkiling and Sédhiou;

Low communication between central and decentralised levels which does not facilitate good coordination for the implementation of the Agro-pole; and

Failure to respect the commitments made by stakeholders which could wipe out all efforts and engulf the hopes of the people of Casamance.

EXPECTATIONS

Promotion of the mango and cashew sectors, an economic and social impact on the populations through the supervision of the value chain (from the producer to the national and international market enabling each stakeholder to make the most of it);

Development of a strategy to support production (seeds, inputs, improved species) in relation with research institutions (ISRA, University of Ziguinchor) in order to improve production quality and reduce production losses in the mango chain;

Building the capacity of producer organisations and SME actions;

Enhancing the agricultural potential of the southern zone through the creation of value chains for the promotion of added value and the consolidation of performance in all sectors, especially rice;

Establishing socioeconomic infrastructure to promote the development of income-generating activities, job creation and the fight against unemployment and precarious living conditions; and

Enhancing the competitiveness and attractiveness of the regions as well as the development of the secondary sector through industrialisation.

RECOMMENDATIONS

Advocate a participatory approach by involving all actors from decentralised to deconcentrated authorities, while clearly defining their role and responsibilities and establish regular departmental development committees (CDD) to share information at each stage of the Agro-pole setting up process;

Ensure fair compensation for the populations affected by the Agro-pole (farmland, houses), and equitable representation of the families of actors in the project steering bodies;

Create secondary platforms at district level to facilitate the collection of products;

Create a waste treatment plant that can be reused within the framework of the Agro-pole;

Ensure compliance with commitments by the various stakeholders, transparency in project management, and rigour in the choice of companies to carry out the work, especially with regard to their logistical, financial and technical capacity.

Kolda region

CONCERNS

Decision-making at the central level without the involvement of the local level can be a risk factor for success;

Lack of rigour in the choice of sectors and failure to take into consideration the environmental dimension and the local workforce can be a source of failure for the Agro-pole;

Tensions that may arise from the expropriation of land, loss of assets or activities among the populations in the implementation of the modules;

Non-involvement of the populations upstream and downstream of the process of setting up the South Agro-pole, especially since the project is intended for them to create jobs and set up production plants; and

Taking into consideration health aspects relating to the flow of workers from elsewhere.

EXPECTATIONS

Decomartmentalisation of the area and improvement of the economic situation in terms of job opportunities in the various links of the value chains (production, processing, transport, etc.);

Improvement of the nutritional or food status of the population if a large part of the processed products is marketed locally; and

Strengthening the relevance of the energy network that the Government of Senegal is now installing, especially through the 225 KW line between Kédougou and Ziguinchor, crossing all the localities of Fouladou. The supply of electricity through this line will eventually allow many companies to leave Dakar and set up in Casamance. The Agro-pole will be able to align itself with this dynamic by investing in high-voltage electricity transport and the connection to the network of future companies that will set up in the area.

RECOMMENDATIONS

Involve all stakeholders (population, task force, authorities, etc.) in the process of creation, implementation and operation of the Agro-pole by relying on a concerted communication programme;

Ensure that not all production is exported, and facilitate access of the local population to processed products;

Promote the employment of young people, especially local young people;

Work closely with the administrative authority throughout the process of setting up the Agro-pole, and ensure that the technical services are properly involved in project activities; and

Ensure preservation of the environment throughout the process of setting up and operating the Agro-pole.

8.2.3 Local elected officials

Ziguinchor Region

CONCERNS

The fact that Adéane was chosen to host the central module of the South Agro-pole to the detriment of other competing localities in the district can be a source of frustration that can lead to sabotage, with the consequences of discouraging potential donors;

Insecurity due to the fact that the village of Baghagha which houses the central module is attacked every year by criminals;

The resurgence of diseases (STI/HIV/AIDS for example) with the arrival of foreigners looking for work with the advent of the Agro-pole;

Clearing land for the installation of the modules can be a source of destruction of flora and non-timber forest products (néré, maad, toll, etc.) which take time to regenerate;

The sensitive nature of the land tenure issue in Casamance, and the need to raise awareness among the populations concerned in the choice of sites for the modules;

A commercial risk (sale of products) due to the absence of markets for their sale;

Safeguarding the interests of the communities so that they can feel included in the project, especially in terms of employment;

The Bana-bana can pose a threat in that they can bypass the system and prevent producers from bringing their products to the module/platform, in case of poor organisation between the producers and the Agro-pole; and

The real threat posed by the white fly to mango production despite ISRA's intervention in this area.

EXPECTATIONS

Opportunity for young people to stay in their homelands with the creation of jobs, which could reduce illegal emigration to Europe and the Gambia and rural exodus to Dakar;

Opportunities for the creation of basic social amenities especially for health and education, improvement of the living conditions of the populations (creation of new sources of income, improvement of conditions of life, increase in purchasing power) as well as the socioeconomic development of Casamance through the enhancement of natural resources; and

Contribution to increasing the visibility of the region thanks to "made in Casamance" products that will be sold throughout Senegal and the world.

RECOMMENDATIONS

Ensure that the community and the population are involved in this project firstly through the workforce and investments (schools, health posts, ambulance) that corporate social responsibility should take into consideration;

Ensure that the Adéane Commune benefits from spin-offs, especially with regard to taxes;

Proceed with the extension of the housing estate in Baghagha village, i.e. provide it with space to accommodate foreigners who will come, given the current lack of living space in the village;

Increase electricity capacity and access to water to improve the living conditions of the populations in the Adéane Commune and in particular in Baghagha village, which hosts the central module;

Design and implement an information and awareness-raising programme for the populations on the Agro-pole project, in order to enable them better understand the project; and

Find upstream markets for the marketing of finished products in order to avoid commercial risk.

Sédhiou Region

CONCERNS

Environmental and social risks, various plant pathologies (fruit flies, insect attacks) constitute a serious threat to the viability of the Agro-pole Project;

Risks of raw material shortages due to the seasonality of production in the targeted sectors;

Land issue (availability of land) linked to the installation of the modules and the consequences it may generate at project level in terms of acceptability by the populations;

Accessibility of the central module (Adéane) which can be a problem for transporting products from the departments of Sédhiou and Goudomp to this location;

Lack of roads and feeder roads in the region, which can have a negative impact on the transportation of products to the satellite modules;

Non-involvement of structures, local authorities, populations and local workforce, which can be a source of frustration and constraint for the social acceptability of the project; and

Change of mores at the local level with the arrival of workers from other localities.

EXPECTATIONS

Development of satellite plants, which must be functional and play their true role in the pre-processing of products;

Building the capacity of women in the processing of agricultural products;

The Agro-pole will revolutionise mango processing and the processed products can be exported, thereby contributing to the sustainable development of the area;

Draw up regulations defining the roles and responsibilities of each actor (departmental councils, City councils, decentralised technical services, population, partners); and

Facilitated flow of all production (fruit, agricultural, forestry products, etc.) from community centres and aquaculture centres.

RECOMMENDATIONS

Strengthen satellite plants and train producers, while giving preference to local labour;

Design and implement a communication programme, especially for local people, and a capacity building and support programme for producers;

Reflect on the opportunity to provide financial benefits to the departmental council;

Ensure respect for indigenous customs and cultures;

Take all measures to improve road infrastructure to facilitate the movement of people and goods, in particular by building a bridge over Témento, at Bambaly or later transferring the Marsassoum ferry there, rehabilitating the Diopcounda dam and paving the road linking Saré Téning to RN6; and

Positive discrimination in the recruitment of the workforce.

Kolda Region

CONCERNS

The insecurity that has plagued the area for several decades is a risk factor in the development of the Agro-pole; and

Deforestation due to the clearing of targeted sites in each region which will contribute to forest resources degradation.

EXPECTATIONS

The Agro-pole can contribute to the harmonisation of activities in the three regions, the improvement of access to targeted sites and to the development of economic sectors; and

Building the capacity of those who will work in the Agro-pole, development of forest products, the fight against underemployment, and the empowerment of women promoted by economic activities.

RECOMMENDATIONS

Involve all actors, especially at the grassroots level, to ensure the successful ownership and sustainability of the agropole; and

Build the capacity of the stakeholders, especially in the fields of new technologies and entrepreneurship.

8.2.4 Technical Services

Ziguinchor Region

CONCERNS

The difficulty of finding 250 ha of land without the risk of encroaching on classified areas or human settlements;

The availability of funds for the Environmental and Social Management Framework Plan, complementary studies (in-depth impact assessment or an initial or other environmental analysis, institutional support for technical services, capacity building of actors such as technical services, territorial command, local actors, etc.);

Accessing Adéane from the Administrative Districts of Goudomp and Sédhiou without a bridge in Goudomp ;

The risks of respiratory pathologies with the raising of dust by companies during construction work on the agropole 's modules;

The absence of a reference situation for the sectors targeted (mango and cashew nut) by the agropole, especially with regard to land use, from which the progress of these crops can be assessed in terms of land clearance;

The destruction of vegetation cover when the modules of the agropole are set up, with the consequences of soil erosion, destruction of fauna and flora, and ecological imbalance in the area;

Pressure on land which can be a source of conflict, as well as pressure on forest products (forest fruits and wood resources) and forests as a result of a frantic race to increase the land area to cultivate mangoes and cashew nuts;

Poor waste management from the agropole (waste water, solid waste) which can be a source of pollution of the aquatic environment;

The risk that the agropole will be the source of the development of a cashew nut and mango monoculture with emphasis on these two crops;

The insecurity that still prevails in the area with a potential risk of conflict;

The consequences of climate change, the development of diseases and the parasitism of fruit trees, which can be a risk for the reduction in the quantities of fruit production (raw materials) in Casamance;

The risks of land expropriation and the disappearance of small processing units for the benefit of the multinationals that will be set up with the new agropole;

The year-round operation of the agropole, given that mangoes and cashew nuts are seasonal products (several units close for lack of raw materials at a certain period of the year);

The risk of rapid degradation of production tracks by large carriers; and

The competition that may exist between the agropole and existing processing units, which can destroy the activities of women fruit processors if horizontal coordination is not established.

EXPECTATIONS

The effective involvement of technical services to enable them to play their full role in the establishment and operation of the agropole;

Contribution to the socio-economic development of the region by creating many jobs which can reduce illegal emigration, create income-generating activities, and reduce poverty by building economic infrastructure;

The possibility for producers to sell their products to industrialists at approved prices for mango and cashew, which can enable them earn an income and significant benefits;

The valorisation and increase in the added value of products such as cashew nuts;

Compliance with phytosanitary and quality regulations;

The application of sanitary and phytosanitary measures in accordance with world trade law;

If the products will be exported, the guarantee of a good sanitary state of these products in accordance with the legislation of the importing countries and Senegal; and

Strengthening the performance of the vocational training centres that are expected to train future employees of the agropole by developing their reception capacity, their equipment and the training of trainers, especially in the fruit, vegetable and cereal processing sectors.

RECOMMENDATIONS

Accelerate the implementation of the project, given that, with approved prices, it raises a lot of expectation among the producers in the three regions. Even if the cashew sector is more organised, the producers have not yet seen any rewards. Farmers will stand to gain more with the stable prices under this agropole ;

Set up a multidisciplinary committee involving all the services to find solutions to any challenges;

Conduct a census of the operational processing units in order to avoid establishing existing units on the platform;

Include the agropole in the overall development plan of Casamance;

Stop the export of raw cashew nuts, and ensure that a large proportion of producers can have contracts and marketing agreements with the agropole at least to secure the processing activity;

Implement an exhaustive census of mango and cashew tree orchards and producers in order to assess the region's production capacity, supervise producers, and create a synergy between the small processing units and the agropole to at least guarantee the survival and smooth operation of the project;

Preserve forest resources from the extension of cashew and mango plantations, and if necessary, allocate part of the revenues to a fund to secure forest resources through a mechanism to be defined;

Introduce taxes on the collection of nuts, and compel economic operators to support production and Water and Forests for the permanent production of good quality cashew seedlings;

Raise awareness among producers so that they continue the good agricultural practices that are the first link in the defence of horticulture, which is the sector that gangrenes more harmful organisms that can spread from one continent to another;

Have a good space, good land for the establishment of the agropole in compliance with quality standards;

Ensure that sanitary and phytosanitary measures are observed in this agropole;

Increase the transport and instructional means for the DPV for more efficient service.

An attractive legal and fiscal environment

Focus on infrastructure

Ensure peace and stability to overcome the fear of insecurity by better promoting Casamance as a great destination

Ensure that the sites are accessible to fire engines (vehicle tracks and ladders);

Carry out smoke extraction in warehouses and work premises, with confinement if necessary in accordance with Technical Instruction No. 246 ;

Install and equip with fire-fighting equipment: fire extinguishers, fire hydrants in sufficient numbers and well distributed in relation to the risks to be protected against;

Set up devices to facilitate the intervention of firefighters, such as posting the plans;

Take measures to prepare the areas for the storage of dangerous products (retention basin);

Ensure the submission of construction files including safety instructions and plans to the fire brigade for review and approval;

Put in place operating (to avoid operation errors) and safety instructions (what to do in the event of an accident); and

Establish collaboration between the agropole and the University of Ziguinchor to train students and develop training courses aimed at integrating them into the agropole.

Sédhiou Region

CONCERNS

Compliance with social support measures and environmental standards, and the involvement of all stakeholders in the implementation of the Agropole project;

Climate change risks (irregular rainfall, which can have a negative impact on cashew nut and mango production in the region), diseases due to attacks by, for example, fruit flies and insects, which can affect production (poor yield);

The degradation of the environment with the production of waste and all types of pollution, both during the construction phase and during the operation of the agropole;

Emergence of new diseases related to the influx of people from elsewhere for employment purposes;

The land issue, especially the expropriation of land and the issue of compensation for those affected, the lack of effective involvement of the population, which are factors that could negatively the acceptance of the project by the population;

The risks of marginalisation of cereal crops in favour of cashew nut and mango crops in the region;

The difficulty of selling processed products, which is a crucial issue that needs to be managed from the commencement of the project, while thinking about conservation (storage and conservation warehouses);

The insecurity that prevails in Casamance, which can be an obstacle to the smooth operation of the agropole;

The salinisation of the land and the silting up of the valleys;

Risks of raw material shortages due to the seasonality of production of the two targeted products;

The ageing of the mango trees, with a consequent drop in production; and

The enclavement of certain production areas.

EXPECTATIONS

Support to the environmental monitoring committee (institutional support, capacity building) which will enable it to monitor properly;

Development of the Sédhiou region through the project, which will bring a plus to the Sédhiou community, and ensure that the populations benefit from it through the jobs created, the development of infrastructure, and supporting measures (health, education, etc.) ;

The promotion of added value to processed local products, and a benefit for women who are the central link in the processing of fruits and vegetables;

Integration of the various targeted sectors and the involvement of the actors in these sectors;

Presence of transformative projects to set up Heads of Livestock Development and Modernisation Centres (CIMEL) to boost production, but also the setting up of a regional laboratory for the quality control of foodstuffs of animal origin (DAOA).;

Equipment adapted to industrialisation which allows the DAOA (dairy products, eggs, wax, meat, hides and skins, etc.) to be processed on site is also expected;

Development of aquaculture ;

The creation of equipped training centres within the agropole to strengthen the capacity of producers; and

Receiving general education students to enable them to discover the world of work, which may lead to vocations, but above all change the erroneous conception that students have of vocational and technical training, which is that only the "scum" of the system go there.

RECOMMENDATIONS

Approach the technical services and involve them closely in the project ;

Ensure compliance with environmental standards and regulations in general;

That the roles and responsibilities of the institutional actors be clearly identified and defined within the framework of this study;

Develop and implement a communication programme down to village level using local radio stations, and set up a permanent capacity building mechanism for the various actors involved in the targeted sectors;

Organise exchange visits to localities in Senegal, Africa or elsewhere if possible, areas where the populations have agreed to vacate their land for the success of a major project;

Promote the Casamance label and create connections between the agropole and existing farms;

Regularly carry out evaluations of project implementation in order to measure performance and make the necessary corrections;

Build bridges to link Sédhiou and Goudomp and thus facilitate the transportation of products and access to the central module in Adéane;

Strengthen peace; and

Ensure good working conditions, and prioritize the use of local labour.

Kolda Region

CONCERNS

The land issue related to the implementation of the regional modules which can lead to conflicts in polarised villages;

Transporting products out of enclaved sites in certain localities such as in the region of Médina Yoro Foula;

The agropole risks benefiting only multinationals to the detriment of the region's small producers and can be lead to the exploitation of Casamance's forest and mining resources;

The salinisation of the land, which is accelerating in the region with soil pollution that constitutes a real constraint to agriculture;

The low level of vocational training for young people, which may hinder the employment of this category of actors in the region and favour young people from other regions of the country;

The recurring costs of setting up a factory in Casamance can cause the discouragement for investors;

The prioritization of economic aspects over social aspects (status, recruitment methods, type of contract, etc.) ;

Guinea Bissau, which produces large quantities of cashew nuts could compete with Senegal if the right measures are not taken to deal with this eventuality by setting up a good framework for consultation and cooperation between the two countries;

Lack of raw materials during a certain period of the year due to the seasonality of cashew nut and mango production, a situation that may be exacerbated by the phenomenon of climate change;

The lack of reliable data on the selected commodity value chains;

Diseases and outbreaks on mango (fruit fly) and cashew nut plantations, and the lack of reliable data on these two crops;

The return of definitive peace in Casamance;

The extension of cashew and mango fields to the detriment of forests and other crops;

The development of cashew nut and mango crops to the detriment of other crops, which could lead to the development of monocultures in Casamance and the diseases that could ravage production.

EXPECTATIONS

A real lever for the economic and social development of the natural region of Casamance through the improvement of the quality and the valorisation of horticultural and agricultural products, the creation of jobs which reduces unemployment and clandestine emigration, and the general increase in the purchasing power of the populations of the Southern zone;

Substantial investments in aquaculture in the region, which are often lacking, given the importance of fish in the region compared to mangoes and cashew nuts;

Reduction of post-harvest losses (mango rotting), and promotion of local consumption of processed products from Casamance;

Organisation of the sector and the socio-professional organisations, accompanying, organising and training them;

The improvement of production through research, the organisation of the sector and socio-professional organisations and the preservation of producers' interests.

RECOMMENDATIONS

Develop aquaculture in the agropole, in particular by setting up fish cages or ponds that require heavy investment;

Set up socio-economic infrastructure

Implement an information and awareness programme to show the importance of the project and avoid frustration among the population and other stakeholders;

Ensure, as far as possible, that the economic imbalance between the three regions is corrected;

Ensure that the economic imbalance between the three regions is corrected as far as possible;

Effectively involve all stakeholders in the region, especially the technical services, in the process of setting up the agropole;

Ensure that the ESIA is carried out properly, insisting on the analysis of variants, and provide an exhaustive description of the different components in order to make a good choice of technologies, in terms of social, economic and environmental feasibility, basic environmental conditions, i.e. prepare a baseline situation of the three regions, the conditions for good environmental monitoring through a good definition of the strategy to be adopted, and make available the financial resources for the implementation of the ESMFP;

Ensure the inclusion of environmental and social clauses in the bidding documents for the selection of companies to implement the agropole works;

Create the conditions for the sustainability of the project's achievements and its extension to other parts of the country;

Set up strategies that will provide reliable data on the sectors selected for the agropole.

Include research in the development of the agropole;

Provide for good water management; and

Diversify the sectors to be developed in the the agropole.

8.2.5. Producers' organisations

Ziguinchor Region

CONCERNS

Lack of communication on the agropole ;

Deforestation due to the implementation of the different modules of the agropole and the significant environmental and social impacts (pollution, deforestation, waste, etc.); and

Disappearance of local processing units due to unfair competition between small processing units and the agropole, and the exportation of all processed products to the detriment of the local market.

EXPECTATIONS

Many opportunities for Casamance: increased production of mangoes and cashew nuts and an increase in their added value, job creation, increased income, improvement of the living environment and strengthening of the social fabric;

A good organisation of producers that will enable the development and harvesting of mango and cashew nut orchards; and

Significant reduction in production losses of both products and the development of other economic activities along side the mango and cashew nut.

RECOMMENDATIONS

Commence the project very early to avoid suspicion, and set up a consultation framework in which local actors will be involved as stakeholders;

Set up a communication centre for the agropole and sensitisation of the populations for a better social acceptability of the agropole;

Improve the quality of raw materials with the support of competent technical services;

Ensure that human, financial and material resources are mobilised in time to implement the project in the best possible conditions; and

Facilitate access to the agropole by setting up an adequate transportation system.

Baghagha and Adéane Villages

CONCERNS

The employment of non-locals instead of locals;

The negative impact on the lives of the village youth, the changes in morals, the debauchery of young girls and boys with the arrival of foreigners as in the case of the gold zone of Sabodola ;

Waste management that can have negative impacts on fields and the river;

The non-compensation of the landowners of the host site; and

The decrease in the purchase price of cashew nuts.

EXPECTATIONS

Reduction of unemployment rate, especially among young graduates, and the return of young people to their local areas;

Improvement in the living environment of the municipality's population with the construction of access roads, educational and health infrastructure and an increase in electricity capacity;

Establishment of a definitive peace in Casamance and stability in all the villages with the creation of jobs and the improvement of the living conditions of the population;

Construction of vocational training centres to support and enable the qualification of young people in order to constitute a qualified workforce for the agropole; and

Adding value and reviving agriculture in Casamance.

RECOMMENDATIONS

Speed up the project's implementation, and take into consideration security aspects in all their forms;

Build a vocational training centre in the factory to train the population in agricultural trades and techniques for exploiting agricultural products;

Find niche markets and markets for processed products;

Train, supervise and support producers in planting productive varieties of good quality, especially mangoes, to be cultivated in large areas in order to ensure the availability of good quality raw materials;

Reinforce the sanitary aspect in the municipality by setting up a sanitary structure worthy of the name and capable of meeting the needs, especially with the massive arrival of workers and staff of the agropole in Baghagha;

Develop other sectors based on citrus fruits, apples, grapes, etc., given the agricultural potential of Casamance to diversify its tree and financial resources;

Set an approved price for cashew nut and mango products.

Sédhiou Region

CONCERNS

Participation of all stakeholders in the process of setting up the agropole;

Decrease in cashew nut production, which may compromise the proper functioning of the agropole;

Lack of organisation of producers and the absence of partners for the marketing of production;

Planned extension of mango and cashew tree fields which may contribute to deforestation and even bush fires which may destroy the region's forest heritage;

The isolation of production sites;

Lack of communication which can lead to a poor perception of the objectives of the agropole, resulting in the non-ownership of the project by the populations.

Presence of predators and the development of fruit diseases (white fly), both of which have a real impact on mango and cashew nut production; and

Climate change which impacts the development of mango and cashew tree crops..

EXPECTATIONS

Support for producers in improving production capacity, cashew nut collection, storage and disposal of products and the development of infrastructure (storage warehouses);

Financial autonomy for producers through the establishment of platforms that will enable them to group their products and sell them easily at an acceptable price.

Food self-sufficiency;

Support for organisations (economic interest groups, cooperatives) to become unions, good organisations in order to be able to join national federations.

Retain young people in their local areas; and

Increased wealth at the local level and improved health and education conditions.

RECOMMENDATIONS

Provide producers with adequate means, especially means of transport during the rainy season to harvest the products;

Inform and raise awareness among producers active in the mango and cashew nut sectors to better integrate the agropole;

Involve all actors in the process of setting up the agropole and its operation;

Identify the real actors in the field (producers, traders, processors, etc.). Do not just do office work; and

Support producers in all areas (seeds, fertilisers, equipment, etc.) for good quality production.

Kolda Region

CONCERNS

Uncertain future of existing processing units with the advent of the agropole;

Availability of raw materials in all seasons, given the seasonality of the production of the selected sectors (mango and cashew nut);

Diseases and attacks on plants (for example, fruit flies) that can impact production, especially mangoes; and

The non-involvement of the various actors and the lack of dialogue in decision-making.

EXPECTATIONS

Support producers with organisation and training in order to increase the value of the mango and cashew nut sectors for the benefit of all producers, and the creation of jobs for young people; and

Support local processing units (electric shelling machine, working capital to purchase more raw materials) to enable them to create more jobs locally and increase production.

RECOMMENDATIONS

Visit existing local units and see how to work with their owners so that the central module in Ziguinchor can operate as it should;

Discuss with all actors on everything that is planned at the level of the agropole, i.e. from the producers to the processors, including collectors, traders, transporters, etc. Discuss with them on all the different phases of the project and avoid returning each time to share ideas that have already been defined;

Finance and support first those who are active in the sector, i.e. the direct actors, instead of financing new actors; and

Gradually renew old cashew and mango trees with improved high-yield varieties.

8.2.6 Agencies, Projects and Programmes

Ziguinchor Region

CONCERNS

The resumption of the conflict which may jeopardize the future of the project;

The export logistics which can arise regarding boats capable of transporting the expected quantities of products; otherwise, small boats that come to the port of Ziguinchor can be used, and once in Dakar, use River boats for export which can increase the costs;

The seasonality of production for the two selected sectors (mango and cashew nut) can impact the 12-month operation of the agropole;

The organisation of farms, given what is happening in the Niayes, and building the capacity of producers to become real planters and not just orchard farmers;

Calling on research through ISRA, the University of Ziguinchor (Agroforestry Department) and the Agricultural High School of Bignona) to improve mango and cashew varieties and boost production;

Given the lack of arable land in Casamance, if there is no return on investment (land donated by the population), we can expect very negative reactions from the population;

The lack of consultation mechanisms..

EXPECTATIONS

Involve local entrepreneurs, a better structuring of value chains for the benefit of all actors, create sustainable jobs, develop other infrastructure such as production tracks and improve the living conditions of the populations;

Facilitate the return of immigrants (executives) from Europe, the USA (setting up of exchange platforms between associations of the diaspora and Casamance) who can find opportunities in the agropole for return, in collaboration with other partners in the central module as well as in the secondary modules. There are credit lines to encourage returns. These lines can be reinforced by bilateral funding;

Setting up training courses (quality specialists, apprenticeships in enterprises, etc.), laboratories that provide young people with a springboard to access the agropole through very practical applications;

Environmental and waste management by implementing a battery of measures (clean farming, technology transfer) to avoid all kinds of pollution.

RECOMMENDATIONS

Involve all categories of actors, share information with the populations and ensure that the agropole does not hinder agro-pastoral activities in the area;

Ensure that there is a good environmental and social management plan and that the right-of-way of the Adéane site does not have an impact on the areas of displaced villages so as not to hinder the return of people to these localities;

Work with the technical services, especially in environmental management, and strengthen the role of the administration, especially the territorial administration (Governor, Prefect, Sub-Prefect, etc.);

Set up steering committees, which bring together all actors to take into consideration the decisions of each actor, the expectations of the population and conflict management.

Sédhiou Region

CONCERNS

Environmental risks including deforestation linked to the expansion of cashew and mango fields, salinisation of land and security issues;

Risks of annihilation of small producers by the agropole.

EXPECTATIONS

Develop employment at the local level and retain young people in their local areas

Harmonise and search for synergy with projects and programmes such as PPDC, PAPSEN/PAIS, PAPEJ, PRODAC, ANIDA, etc.

RECOMMENDATIONS

Involve local stakeholders in the implementation of the agropole and discriminate positively in favour of the region in terms of employment;

Use the training schools in Sédhiou to strengthen the capacity of young people to integrate the agropole;

Harmonise the interventions of the different actors.

Kolda Region

CONCERNS

Lack of project ownership by local actors;

Fruit diseases, especially fruit flies;

Sub-regional competition in cashew production;

The ageing of plantations, which has a significant impact on productivity and production; and

The risk of disruption to the functioning of the agropole due to a lack of raw materials as the targeted sectors have seasonal production.

EXPECTATIONS

Integrating small processing units into the agropole system (federating processing efforts) and boosting the region's economy;

Opening up production areas;

Building the capacity of the actors who will work in the agropole, especially in the craft sector, to enable them meet the needs and standards required in this platform.

RECOMMENDATIONS

For cashew nuts, take into consideration the territorial continuity between Senegal and Guinea Bissau, especially with regard to price competition with producers;

Involve all stakeholders in the process of setting up and operating the agropole and reflect on the other promising sectors (honey, milk, rice, etc.) in the region;

Develop an information and sensitisation programme for all stakeholders to ensure good project acceptability; and

Develop and finance a research programme through ISRA and the Department of Plant Protection on fruit diseases.

8.3. SUMMARY OF THE RESULTS OF THE PUBLIC CONSULTATION

8.3.1. Expectations for the Agropole Sud

The PZTA-Sud raises a lot of hopes among the actors and populations met because it can enable them to emerge from precariousness and reach a higher and more stable level of development. It is a relevant response to the challenges of processing local products that do not sufficiently benefit producers due to disposal problems and outlets (for example, many mangoes rot due to lack of outlets). The agropole will thus contribute to solving the problem of post-harvest management.

The other aspect is that mangoes and cashew nuts do not sufficiently benefit the State because they are sold in their raw state abroad, especially to India in the case of cashew nuts. This means that foreigners benefit the most out of the wealth from these products. Whereas, once processed, these products can generate more income than in their raw state. For example, the 2018 cashew crop year recorded more than CFAF 20 billion and more than thirty thousand tonnes transited through the port of Ziguinchor. These statistics were obtained due to measure taken by the state to ban exports by land, which shows the weight of this product on the regional economy. Producers in Casamance could now benefit from the added value due to the agropole.

The agropole will meet a need that has been repeatedly expressed by the region's producers. This is the establishment of a large-scale processing industry to process products at a very large scale. Furthermore, the agropole could act as a structuring instrument that will encourage the development of other economic activities such as transportation, the creation of other industrial units including a packaging factory, etc., and thus boost the development of Casamance.

The relevance of the Agropole Sud project is that it enables the development of sectors, and improves the production, marketing and processing of products. It will also contribute to job creation, especially among young people. It will thus contribute to strengthening the resilience of populations.

A problem that has always arisen and which is linked to productivity is the strengthening of agricultural activities, logistics and market gardening perimeters to be set up. As for women's groups, their main problems include the storage and processing of farm produce. In this respect, the establishment of an agropole should help to solve the problem of post-harvest losses (rotting of certain products) by packaging the products and transporting them to market outlets.

The intervention of the Green Climate Fund was highly appreciated as it helps to dispel certain concerns on environmental degradation. Thus, the use of clean energy (solar energy, biogas) in different areas of the project's activities (lighting, processing, packaging of products), the use of drip irrigation for market gardening, the promotion of green jobs through community forestry, were strongly emphasised.

8.3.2. Concerns

However, the many hopes expressed by the actors met do not hide certain concerns that deserve to be addressed for the success of the agropole. They mainly concern:

- The delicate land tenure issue related to the establishment of the modules in the regions and departments (availability of land, forced expropriation or unfair and unjust compensation, lack of consensus on the choice of site, etc.), but also the rush for land for the expected expansion of cashew and mango fields with the advent of the agropole (enhancement of the mango and cashew nut value chains, which may generate interest in these crops). These potential sources of social conflict can be exacerbated by conflicts between farmers and herders through the encroachment or reduction of pastoral areas following the expansion of cashew and mango fields.
- Deforestation and related problems are also of concern to the actors involved. Indeed, the implementation of the modules in the regions and departments will require relatively significant deforestation in a region marked by the progressive degradation of its natural resources. The expansion of agricultural orchards also raises fears of incursions into forest areas in search of fertile land.
- The year-round supply of raw materials to the agropole is another concern. In fact, the two sectors selected (mango and cashew) have seasonal productions (approximately 5 months out of 12). Moreover, the annual production of Casamance seems to be insufficient for the agropole to function properly.
- Fruit tree diseases, which are rampant in the region and cause extensive damage to mango and cashew trees. They cause reduced yields and production in mango trees, especially the white fly.
- Some actors fear the "disappearance" of small farmers and processors in the region with the establishment of the agropole, given their paltry means in relation to the project.
- The lack of harmonisation of project and programme interventions; and
- The non-involvement of young people in the various production chains.

Other concerns which are no less important were expressed in the form of a lack of involvement of all the actors, especially at the grassroots level, the ageing of mango and cashew trees resulting in lower yields, the disenfranchisement of indigenous people in favour of foreigners in terms of employment, the health aspects linked to the massive influx of migrants in search of employment, the degradation of morals, the management of industrial waste, etc.

8.3.3. Suggestions and recommendations

Based on the expectations and concerns outlined above, the actors have made several recommendations, the most important of which are summarised below.

- Take all necessary measures to address the land issue, including fair and equitable compensation for those affected by the resettlement related to the implementation of the modules in the regions;
- Involve all actors in the entire process of setting up and managing the agropole through the setting up of an inclusive consultation framework and a communication and awareness-raising plan using media and channels adapted to all categories of stakeholders and actors in the agropole;
- Strengthen the capacity and organisation of small local producers and processors in order to improve production and processing conditions for the harmonious integration of local actors in the agropole, and boost the local economy;
- Speed up the commencement of the project, for which the population's expectations are high; and

- Support, in conjunction with the University of Ziguinchor and research institutions, a research and development programme to eradicate the white fly, which is a real scourge for mango cultivation in Casamance.

8.3.4 CONCLUSION

Analysis of the data from the public consultation shows that the agropole is well perceived and is socially accepted by the institutional actors and populations of Casamance, and is eagerly awaited. The reason for this is that the agropole responds to a widely expressed need to revitalise the region's economy through agricultural sectors that bring added value, jobs, wealth and therefore food security.

Proper consideration of the recommendations made by the actors will not only encourage good support from the populations, but also, and above all, the success of the project, which brings a lot of hope.

8.4. INTEGRATION OF THE RECOMMENDATIONS INTO THE ESMF

All the recommendations made have been taken into consideration at the following levels :

- checklists of mitigation measures;
- the environmental and social selection procedure;
- capacity building programmes (training and sensitisation); and
- the monitoring plan and institutional arrangements.

IX. IDENTIFICATION AND ANALYSIS OF POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS OF PZTA-SUD

This section analyses the environmental and social impacts of the South PZTA. The methodology adopted for the identification and characterisation of the impacts and the relevant appropriate environmental and social measures is presented. The aim of this exercise is to guarantee the project the best conditions for its integration in its receiving environment. It should be remembered that the impact of a project at a given moment is defined as the gap between the initial state of the environment and the final state with the planned project. It is for this reason that the basic environmental and social conditions (initial state) have been analysed in chapter 5, while chapter 2 provides a detailed description of the Project.

9.1. METHODOLOGY FOR IMPACT IDENTIFICATION AND ANALYSIS

9.1.1. Identification of impacts

The identification of impacts is based on the environmental and social parameters of the receiving environment and on the impact factors related to the different components of the project. The method chosen is a matrix approach (Leopold's matrix method), which indicates, for each component of the environment and socio-economic milieu, which are the impact receptors (the rows of the matrix), the probable impacts of the actions resulting from the project which are the sources of impact (the columns of the matrix).

The identification of these impacts also takes into account the results of public consultation meetings, interviews with resource persons, direct observations in the field, and is based on the experience of experts from the study team in the environmental management of other projects.

The impact receptors are the Valued Environmental Components (VECs) that will potentially be affected by the planned works. The VECs are divided into the following groups of components:

- The physical environment (landscape, air, soil, surface and groundwater, acoustic environment);
- The biological environment (vegetation and flora, fauna, fragile ecosystems); and

- The socio-economic and human environment (security, health, jobs, income, economic activities, living environment, etc.).

The sources of impact are the various activities planned in the project and likely to have a direct or indirect impact on the VECs, either during the works implementation phase or during the operation and maintenance phase.

For the purposes of this strategic assessment, only major impacts will be considered. Once all the project sites have been precisely identified and the technologies adopted, an in-depth environmental and social impact study will subsequently refine the work of identifying and characterising the environmental and social impacts of the PZTA Sud.

The cross-tabulation of the components of the receiving environment and the activities included in the project only indicates that an impact is possible without reference to its duration, extent or intensity. In other words, the matrix facilitates the identification of potential impacts through the interaction between the project activities and the VECs likely to be affected. This double-entry table therefore has the advantage of:

- visually describe the relationship between two sets of factors; and
- help identify the impacts of the different phases of the project.

9.1.2. Description of Impacts

The approach used for the environmental impact assessment of the PZTA Sud is based essentially on the assessment of the intensity, extent and duration of the anticipated impact, whether positive or negative.

9.1.3. Characterisation of Impacts

The intensity or magnitude of the impact indicates the relative importance of the consequences attributable to a component's alteration. It is deemed **high** (when the work requires special attention), medium (when the work requires special attention but does not cause concern) or **low** (when the work causes little concern) depending on the value added by the development works.

The extent or scope of the impact refers to the scope or spatial radiation of the effects generated by an intervention on the environment. This notion refers either to a distance or a surface over which the changes will be felt by the population that will be affected by these changes. It is considered **regional** (when the impact is felt over a vast area or by a large population in the receiving environment), **local** (when the impact is felt over a restricted area or by a limited proportion of the population) or **punctual** (when the impact is felt in a very restricted area or by a small number of individuals).

The duration of the impact specifies its temporal dimension, that is, the period of time during which the changes experienced by a component will be felt. This notion is not necessarily equal to the period of time during which the direct source of impact is active and must take into consideration the frequency when the impact is intermittent. It is considered to be long (when the effects are felt continuously during the life of the infrastructure or equipment or even beyond), medium (when the effects are felt continuously and over a longer period of time but for a shorter period of time than the life of the infrastructure or equipment) or short (when the effects are felt for a limited period of time equivalent to the period of construction of the infrastructure or equipment).

Interaction describes the relationship between the project and the identified impact. The impact is deemed direct when it is directly caused by the works. When it is indirectly caused by the project, it is considered as indirect.

Occurrence or probability of occurrence indicates the possibility that an impact will occur. Thus, the impact may be certain or probable.

Reversibility refers to the possibility of an affected environmental component returning to its initial state even over time. For example, an impact may be **reversible** if the affected environmental component is likely to return to its initial state. On the other hand, if the affected part of the environment is no longer likely to return to its initial state, it is said to be **irreversible**.

Cumulativity: the impact that the project can have on a component of the environment may be influenced by another on-going project in the study area; or when the project may amplify an existing impact. On this basis, an impact may or may not be cumulative.

9.1.4. Impact Assessment

The environmental impact assessment consists of combining its characteristics to determine its absolute and relative importance and to predict the value of the residual impact that will result from the application of the proposed environmental measure. The value of absolute importance is obtained by combining three criteria, namely intensity, scope and duration, using Martin Fecteau's grid.

Depending on the combination of these three criteria, absolute importance can be major, medium or minor. Fecteau's method follows the principles here under:

- each parameter used to determine the importance carries the same weight;
- in case the values of two parameters have the same level of severity, it is ascribed the value corresponding to that level independently of the level of severity of the third criterion;
- in case the values of the three parameters are different, it is ascribed the value of medium importance.

Relative importance, on the other hand, includes determining other parameters such as reversibility, occurrence, the value of the affected component, the cumulative nature of the impact as well as the expert's judgement. The situation is considered to be of concern when the impact is irreversible, certain, cumulative and the affected component highly valued. Thus, when at least three of these criteria are verified, the value of the absolute importance of a category is increased to obtain that of relative importance.

On this basis, the environmental measure is proposed according to the relative importance of the impact. However, after the measure has been implemented, a residual impact may remain, whose value is obtained depending on the way in which this impact is assessed or considered by laws and regulations, institutions or society. In the end, the overall assessment of the project's impact on the environment will be based on the residual impacts. The impact assessment was also based on consultation meetings, interviews with resource persons, field observations and feedback from experts of the consultancy team in the environmental management of other projects.

It is worth recalling that in the framework of the strategic assessment, only major impacts will be taken into account and analysed.

The table below is the grid that will be used to assess the significance of the impact. Only the major impacts among those identified are considered within the framework of the SESA in this grid.

Table 6: Impact Assessment Grid

Intensity	Scope/Extent	Duration	Absolute importance
High	Regional	Long	Major
		Average	Major
		Short	Major
	Local	Long	Major
		Average	Average
		Short	Average
	Occasional	Long	Major
		Average	Average
		Short	Minor
Average	Regional	Long	Major
		Average	Average
		Short	Average
	Local	Long	Average

	Occasional	Average	Average
		Short	Average
		Long	Average
		Average	Average
		Short	Minor
Low	Regional	Long	Major
		Average	Average
		Short	Minor
	Local	Long	Average
		Average	Average
		Short	Minor
	Occasional	Long	Minor
		Average	Minor
		Short	Minor

9.2. IDENTIFICATION OF THE POTENTIAL IMPACTS OF PZTA-SUD

The main impact-generating activities are outlined here under:

9.2.1. Works phase

PRE-WORK PHASE

Installation of the site (installation of the camp, installation of the sites bases, installation of the access paths to the modules, bringing of the mechanised equipment);

Recruitment of temporary workers, relocation of skilled labour and presence of personnel on site and in the camp; and

Purchase and delivery of construction equipment (iron, cement, gravel, concrete, quarry sand) and machinery.

GENERAL ACTIVITIES AT THE AGROPOLE MODULES SITES

Clearing of rights-of-way at the level of existing or planned networks of tracks, the irrigation network for the installation of the drip system, the drainage network and the clearing of plot surfaces;

clearing of herbaceous and shrubby vegetation / tree felling to free up rights-of-way for the installation of module infrastructure, for the development of agricultural plots and community forests;

supply of materials and miscellaneous and transportation of mechanised equipment and machinery, water, hydrocarbons and various liquids;

opening and/or exploitation of deposits, quarries and borrowing of materials (laterite, sand), extraction and exploitation;

moving machinery on site (trucks, excavators, loaders, concrete mixer, smooth roller compactor, scarifier, watering tank, grader);

Layout of access roads to the module sites and bypass roads as required;

earthworks and civil engineering (earthworks, excavations, stripping, levelling, compacting, foundations, masonry-reinforced concrete, waterproofing, etc.) related to the construction of buildings and access roads and utility networks of the modules;

construction of pumping stations - construction of basins for drip irrigation ;

transportation related to off-site construction activities (movement of personnel and machinery) in the localities and other destinations;

storage of materials on site (iron, sand, gravel) at the construction site base;

excavation of access road platforms (scarification, refilling, material grading, watering, compaction);

Rehabilitation of the network of access roads to the modules: rehabilitation of the drainage network of the roads (side ditches) and crossing structures, removal of top soil on the right-of-way, widening, reshaping of roads;

possible clearing of additional rights-of-way;

storage of surplus materials and other inert waste in storage areas;

presence of site personnel;

maintenance of life bases and worksite bases;

emptying, maintenance and washing of vehicles and construction site machinery on the service bases and construction site bases;

production and evacuation of waste and contaminating products; and

management of waste water and drainage water.

SITE DEMOBILISATION

site demobilisation (cleaning of site sites, restoration, etc.) ;

restoration of the various sites used (closure/rehabilitation of borrowings and quarries); and

restoration of the various sites used (closure and disaffection of camps and installation of worksites).

9.2.2. Operations phase

putting infrastructure into operation (buildings, shops, irrigation system, etc.) ;

commissioning of solar power plants;

commissioning of digesters for biogas production

actual agricultural work and presence of agricultural machinery, soil preparation, levelling, soil improvement (spreading of fertilisers) and plant health protection, harvesting and processing activities;

use of inputs and pesticides for horticulture and market gardening;and

maintenance works for access roads and utility networks (cleaning of irrigation and drainage canals).

9.2.3. Matrix of interrelation between Project activities and environmental components

Table 34 below presents the interrelationships between the activities and the environmental and social components.

Table 34: Interrelation matrix between South PZTA activities and environmental components

PHASE	IMPACT-GENERATING ACTIVITY	PHYSICAL COMPONENT						NATURAL COMPONENT						SOCIO-ECONOMIC COMPONENT							
			Access to land and subsoil	Physical structure of soils (structure, profile, sensitivity to erosion)	Soils and subsoils	Water resources (surface water and groundwater)	Landscape	Vegetation cover	Fauna	Human/fauna interaction and the emergence of pests	Diseases	People's goods and resources	People's health, spread of serious diseases (STI/HIV/AIDS, malaria and other water-related diseases, epidemic diseases) and the risk of accidents and animal attack	Living environment (genes and nuisances, social behavior (alcoholism, delinquency), non-respect of habits and customs)	Road safety and mobility	Gender aspects (inequality of opportunities between the two sexes), access of youths to education	Social cohesion and conflict	Rural production, jobs and income	Local and regional socio-economic fabric		
PRE-WORK PHASE	Recruitment of research companies														X						
	Studies, marking of the plot of land, delimitation and acquisition of spaces (borrow sites)					X	X			X				X					X		
	Site installation (installation of living and work site bases; installation of access roads to the sites; bringing in mechanised equipment, etc.).	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	Recruitment of temporary workers, movement of skilled labour and presence of personnel on life and site bases	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X		
	Purchase and supply of construction materials (iron, cement, concrete, gravel, quarry sand, etc.).	X	X			X									X			X	X		
WORK PHASE	Clearing of rights-of-way at the level of existing or planned networks of tracks, the irrigation network, the drainage network and the release of plot surfaces, by destroying herbaceous and shrubby vegetation/cutting down trees	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X			
	Development of site access roads and bypasses, opening and operation of borrow pits and quarries.	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		
	Construction/rehabilitation of access tracks to the agropole sites (side ditches) and crossing structures, stripping of rights-of-way, widening, reprofiling of tracks, etc.	X	X	X	X	X		X	X	X	X		X		X						
	Opening of trenches, excavations, cuttings and embankments for building construction, creation of earth channels and drains, installation of semi-buried channels for the G&G system	X	X	X	X	X	X	X	X	X	X		X		X	X		X			
	Construction of pumping stations and basins for the G&G system	X	X	X	X	X	X	X	X	X	X		X		X	X		X			
	Transportation related to off-site activities (movement of personnel and machinery within localities and to/from major destinations (cities, borrow) sites, construction sites)	X	X		X	X		X	X	X	X		X	X	X	X	X	X	X		
	Storage of materials on site (iron, sand, gravel) on construction site base or temporarily at sites	X		X		X								X							
	Moving machinery on site (on drainage and irrigation networks), trucks, loading shovels, concrete mixer, compactor, scarifier, watering tank, grader, etc.	X	X	X	X	X		X	X	X	X		X		X						
	Excavation of runway platforms (scarifying, reloading, grading of materials, watering, compacting)	X	X	X	X	X	X	X	X	X	X		X		X						

PHASE	IMPACT-GENERATING ACTIVITY	PHYSICAL COMPONENT					NATURAL COMPONENT					SOCIO-ECONOMIC COMPONENT							
			Major towns and villages	Physical structure of soils (structure, profile, sensitivity to erosion)	Soils and subsoils	Water resources (surface water and groundwater)	Landscape	vegetation cover	Fauna	humanfauna interaction and the emergence of pests	Disasters	People's goods and resources	People's health, spread of serious diseases (STI/HIV/AIDS, malaria and other water-related diseases, epidemic diseases) and the risk of accidents and animal attack	Living environment (genes and nuisances, social behavior (alcoholism, delinquency), non-respect of habits and customs)	road safety and mobility	Gender aspects (inequality of opportunities between the two sexes), access of youths to education	Social cohesion and conflict	Rural production, jobs and income	Local and regional socio-economic fabric
	Supply of materials and miscellaneous and transport of mechanised equipment and machinery, water, hydrocarbons and various liquids			x		x							x				x		
	Storage of surplus materials and other inert waste in the disposal area	x	x	x	x	x	x	x	x	x	x		x						
	Presence of personnel on site	x	x		x			x	x	x	x		x	x	x		x	x	x
	Maintenance of life bases and building site bases	x			x	x	x	x		x	x		x		x				
	Emptying, maintenance and washing of vehicles and site machinery	x	x	x	x	x	x	x	x	x	x		x	x	x			x	
	Production and disposal of waste and contaminants	x		x	x	x	x	x	x	x	x		x	x	x		x	x	
	Water and drainage water management	x		x	x	x	x	x	x	x	x		x	x	x		x	x	
	Cleaning, purging or flushing: canals and hydraulic works, VRD	x	x	x	x	x	x	x	x	x	x		x		x				
WORKS WITHDRAWAL	Worksite retrenchment (cleaning of worksite sites, rehabilitation s)	x	x	x	x	x	x						x	x	x		x	x	x
	Rehabilitation of the various sites used (closure / rehabilitation of borrow pits and quarries and disposal areas)	x	x	x	x	x	x	x					x	x	x		x	x	x
	Restoration of the various sites used (closure and decommissioning of camps and worksite installation	x	x	x	x	x	x	x					x	x	x		x	x	x
OPERATION PHASE	Putting infrastructure into operation	x	x	x	x	x	x	x					x	x	x		x	x	x
	Water distribution management			x	x	x		x	x	x	x	x	x			x	x	x	x
	Use of inputs and pesticides	x			x			x	x	x	x	x	x	x		x		x	x

9.3. DESCRIPTION, CHARACTERISATION AND EVALUATION OF THE IMPACTS OF THE SOUTH AGRO-INDUSTRIAL PROCESSING ZONE PROGRAMME (PZTA-SUD)

Possible sources of impact are identified in those activities relating to both the “Construction” and “Operational” phases of the Agropole Sud project. This SEA phase will only address major impacts. The other impacts will be discussed within the framework of sub-projects (modules) of the Agropole Sud Project, and for which an analysis grid will be presented in the present study's ESMFP.

This section will first focus on the positive impacts that can be amplified in order to improve on the environmental and social performance of the Agropole Sud Project. It later on elaborates on the negative impacts requiring mitigation measures in order to reduce or eliminate them.

9.3.1. Description, characterisation and assessment of the potential positive impacts of the PZTA-Sud

The Agropole Sud Project is an important factor for the economic and social development of Casamance, as it aims to operate in the three regions (Ziguinchor, Sédhiou and Kolda) to develop, in its first phase, the mango and cashew nut sectors. This project is in line with national policy guidelines as it contributes to increasing the productivity, production and competitiveness of cashew nut and mango production, increasing the bargaining power of producers, resilience to climate change, job creation for young people in particular, and the fight against poverty.

The construction and operation of the agropole will bring about a number of positive results on the local, regional and even national economy, both in the construction and operational phase. The main positive impacts are outlined below.

9.3.2. Positive impacts of the construction phase of the PZTA-Sud

PROMOTION OF LOCAL BUSINESSES

The development of infrastructure for the agropole (buildings, roads leading to agricultural sites and zones, the installation of solar power plants and biodigesters, etc.) will require the recruitment of companies for works implementation. These companies will enjoy considerable financial benefits. They will also offer employment opportunities at the local level, especially for young people, at the various construction sites. From a socio-economic point of view, this impact will greatly contribute towards raising the living standards of the people benefiting from these jobs.

PROMOTION OF COMMERCIAL AND INCOME-GENERATING ACTIVITIES

Another positive impact of the works to be conducted will be an increase in the population's income with local materials: borrow materials (stone, sand, gravel, laterite), purchase of materials on the local market (cement, wood, concrete reinforcing bars). These construction works will therefore inject liquid cash into local markets, which will directly boost socio-economic activities. Such works also see the sprouting of retail trades around construction sites. The supply of construction materials and equipment can increase business transactions in the villages.

9.3.3. Positive impacts of the operational phase of the PZTA-Sud

IMPROVING THE PRODUCTIVITY AND PRODUCTION OF TARGETED CROPS (MANGO, CASHEW, MARKET GARDENING, ETC.)

In order to ensure perfect collaboration between the agropole and smallholder farmers in Casamance, provision has been made for a linking mechanism meant to connect smallholder farmers to the large agricultural value chains. This connection will help to: (i) effectively integrate the suppliers of raw materials (smallholder farmers) into the demands of the food chain; and (ii) supply appropriate raw materials to agro-industries.

This will be complemented by the development of contract farming through partnership agreements between agricultural producers and processing companies on production methods and technologies, production quantity, quality and prices, as well as technical and financial support. Processing companies will benefit from the guaranteed products delivery, while agricultural producers will benefit from the availability of essential inputs and services (seeds, fertilisers, equipment, financing and technical advice) and access to stable and more predictable markets, allowing for better planning with regards to expenditure and savings.

The creation of a relationship between agricultural producers, the development of the agro-industrial processing sites and farming contracts will have the major effect of improving the production conditions for mangoes, cashew nuts and market gardening crops in Casamance: extension of the number and surface area of orchards, compliance with good agricultural practices, productivity and better quality production with better sales and marketing opportunities. This will also promote the creation of agricultural jobs and the fight against illegal emigration.

PROMOTION OF HORTICULTURE IN CASAMANCE WITH THE INTRODUCTION OF INNOVATIVE TECHNOLOGIES

The promotion of drip-irrigated farming using a solar powered dewatering and distribution system will boost horticultural production and improve the working conditions of agricultural producers in Casamance. Indeed, this technology will increase the efficient use of water and save time and labour in farming. The drip system is not only water efficient, but also less energy consuming. It also preserves soil structure and fertility. In this regard, the system helps to combat climate change and enhances the resilience of local populations.

INCREASING THE BUDGET OF MUNICIPALITIES

Most municipalities rely on endowment funds and tax revenues for investments and their functioning. With the advent of the agropole, municipalities in which the constituent projects (regional, departmental) are located will see a marked increase in revenue creation from the various project activities (trade, parking fees, etc.).

JOB OPPORTUNITIES

Casamance's population is mainly comprised of young people who, for the most part, have difficulties getting employment. The construction and operation of the agropole could be an asset for these young people since it can offer direct and permanent employment opportunities. Projections in this field see the creation of 2,882 jobs at its early stages and 4,124 by 2023. Thus, the agropole could be a means to create more stable jobs both in the main activities and related activities such as transport and other services (accommodation, catering, etc.) that service providers could offer to project users. The increase in income resulting from job creation will contribute to the fight against poverty, rural exodus and illegal emigration. This could also benefit the local crafts industry. In essence, the installation of biodigesters for the supply of biogas will require the involvement of local craftsmen, which can somehow be beneficial to them.

The development of community forests, mango and cashew tree orchards will promote the creation of green jobs in the region. This implies that, beyond the beneficial effects on the climate (carbon sequestration, local microclimates, etc.), these forests will contribute to job creation, better living standards for the people, the diversification of horticultural farming in the region, etc.

ORGANISATION AND DEVELOPMENT OF THE MANGO, CASHEW AND HORTICULTURE SECTORS

Casamance has a significant potential for horticultural products, especially mangoes and cashew nuts, which are not highly exploited due to the lack of production, marketing, conservation or processing facilities. The establishment of the agropole will see the elimination of some major constraints and boost the targeted sectors. The main expected impacts include: (i) an increase in the income of mango and cashew nut farmers and processing companies; (ii) the professionalization of farmers; (iii) a reduction in farm to market costs thanks to collection by intermediaries; (iv) a reduction in losses caused by poor transportation conditions, etc.;

This impact can be optimised through information and awareness-raising campaigns among local farmers on the function of the agropole on the one hand, and to encourage them adopt behaviours that will ensure the sustainability of the infrastructure on the other.

IMPROVEMENT OF SOCIO-ECONOMIC AND ENVIRONMENTAL CONDITIONS AT LOCAL AND REGIONAL LEVELS

With regards to the economy, the implementation of the PZTA-Sud will, among other things, stimulate private investment in the targeted sectors (especially for cashew nuts and mangoes). A significant number of constraints could be eliminated by building storage infrastructure and processing units, improving the business environment, etc., while providing considerable support to national and foreign private sector institutions all along the value chain.

From an environmental standpoint, the cultivation of cashew nut and mango trees has a positive impact insofar as it helps to protect, preserve and restore the soil. The mango tree and especially the cashew tree remain ideal plants for the restoration of degraded soils (the cashew tree can grow on marginal lands making it possible to reclaim these soils and enrich them) and for carbon sequestration. Moreover, the agropole Sud project will lead to better farmland management (optimization of density) through the capacity building of farmers on good agricultural practices. With the advent of community forests, the fight against climate change will be reinforced thanks to their potential for carbon sequestration, the preservation of biodiversity, soil protection, and more generally the maintenance of life-support systems. Furthermore, the use of so-called clean energies (solar energy, biogas) for irrigation, lighting, drying, product processing, etc. greatly contributes to the fight against climate change.

At the social level, the positive impacts of the agropole's activities are, for the most part, based on the following points: (i) improvement of agricultural techniques and production systems; (ii) reduction of post-harvest losses; (iii) improvement of income and marketing conditions; (iv) better valuation of production through processing; (v) capacity reinforcement of the various actors involved in the cashew and mango sectors (farmers, traders, transporters, economic operators).

With regards to the population, the impact shall be felt in: (i) the contribution to food security; (ii) the creation and encouragement of agricultural professions (thereby reducing unemployment) and the reduction of the exodus of young people by creating local employment opportunities; (iii) the improvement of the living conditions of the people.

In addition, the agropole falls within the framework of the ECOWAS agricultural policy, the orientations of which aim to curb the major trends in West African agriculture by attempting to root out obstacles to productive investment, improving productivity and creating a favourable business environment for agricultural producers in the region. From this point of view, the project's activities effectively contribute towards meeting these objectives.

IMPROVEMENT OF THE QUALITY AND MANAGEMENT OF PRODUCTION BY STORAGE FACILITIES

In the regions and districts of Casamance, the Agropole Sud provides for the creation of three regional modules and five aggregation and service platforms at the departmental level in addition to the Adéane central module (Ziguinchor region). These facilities will enable the temporary storage and pre-processing of products before their eventual transportation to the central module. They will eventually improve product packaging. They also help protect the harvest against insects and other rodents, preserve product quality, increase their shelf life, and reinforce the negotiating capacity of farmers.

DEVELOPMENT OF HORTICULTURAL PRODUCTS THROUGH PROCESSING

The processing facility provided for in the Adéane central module and the regional modules in Kolda, Sédhiou and Ziguinchor will encourage the farming of cashew nuts, mango and other horticultural products. In fact, processed products have more added value than in their raw state. In addition, processing improves the flow and marketing of products that meet the required standards and sanitary conditions. It also helps to keep the products in a healthy state, preserve their nutritional value and organoleptic acceptability. It also provides jobs and income for stakeholders of the sector.

BUILDING THE CAPACITY OF STAKEHOLDERS

The project foresees the linking of smallholders and the agropole to create a platform for perfect collaboration. Thus, grouping the products of several farms in one place (external modules, secondary modules, departmental platforms) will link smallholder farmers to the large agricultural value chains. These relationships will help: (i) achieve efficient integration of raw material suppliers (smallholder farmers) to the requests of the food chain; and (ii) provide appropriate raw materials to agro-industries. This will contribute to the structural transformation of the economy and reduce poverty in rural areas.

The establishment of connections between smallholders and the agropole is supplemented by contract farming. The connection between smallholders and agro-processing companies on the basis of agreements on production methods and technologies, production quantity, quality and prices, as well as technical and financial support. Beyond reducing transaction costs for both parties, farmers and agribusinesses benefit from better connections. Thus, agro-processing companies benefit from guaranteed product delivery, while farmers benefit from essential inputs and services (seeds, fertilisers, equipment, financing and technical advice), as well as access to stable and more predictable markets, allowing for better planning of expenditures and savings.

CONTRIBUTION TO THE FIGHT AGAINST CC THROUGH THE REDUCTION OF GREENHOUSE GAS EMISSIONS FROM THE USE OF BIOGAS AS AN ENERGY SOURCE FOR THE DRYING, PROCESSING AND PACKAGING OF AGRICULTURAL PRODUCTS.

Biogas production technologies have a positive impact on the energy dependence of producers on other sources.

- In terms of health :
 - a reduction in respiratory and eye diseases caused by the use of firewood or coal ;
 - a reduction in the risk of accidents related to the handling of firewood; and
 - an improvement in the living environment of households through a better management of cow dung and domestic wastewater, especially through the connection of toilets to biodigesters.
- Biophysical impacts
 - Fighting deforestation: the use of firewood and charcoal is on a decline as technology becomes more widespread;
 - Fighting greenhouse gas emissions: the methane contained in biogas is a powerful greenhouse gas (GHG). One tonne of methane is equivalent to 21 tonnes of CO₂ according to the tables of the Kyoto Protocol. The destruction of large volumes of methane is therefore a significant contribution to the fight against climate change.

The GHG effect of a biogas recovery plant is 15 times higher than that of a solar or wind power plant of the same capacity. The overall effect of biogas production and use is very beneficial. Although the biogas produced by the biogas methanisation process consists mainly of two important greenhouse gases (carbon dioxide and methane), this production is considered to be either neutral or beneficial for the environment. In fact, the carbon dioxide released is equivalent to the carbon dioxide used up during the growth cycle of organic matter, and its emission is therefore part of the natural life cycle of the biomass. Methane (CH₄) is a gas whose effects on the climate are 21 to 25 times greater than those of carbon dioxide (CO₂). This is why it is preferable to burn it in landfill sites that produce biogas under anaerobic conditions, in order to limit its impact on the ozone layer. Bio-methanisation units make it possible to recover these same organic materials before landfills (so no methane is produced in landfill sites), and to recover them in the form of energy. This produces an alternative source of renewable energy replacing more polluting fossil fuels.

- Prevention of soil degradation: after methanisation, the digestate produced can also be used for soil enrichment, thus reducing the need for chemical nitrogen fertilisers, which are more polluting. and
- Improvement of indoor air quality

The burning of wood, charcoal, crop waste, manure, butane, mineral coal, releases pollutants that can affect human health. The main substances emitted during combustion are carbon dioxide (CO₂), carbon monoxide (CO), methane (CH₄), non-methane volatile organic compounds (NMVOCs), breathable particulate matter (PM), nitrogen dioxide (NO₂), and sulphur dioxide (SO_x). Long periods of exposure to these emissions can cause eye diseases, lung cancer and respiratory diseases (acute lower respiratory tract infection and chronic obstructive pulmonary disease).

Women, children and the elderly are the most physically weak in the home and are the most exposed persons to indoor air pollution induced by household combustion.

IMPROVING THE MOBILITY OF GOODS AND PEOPLE

The project includes the rehabilitation and construction of 350 km of access roads to the modules and production areas. These roads will not only serve the different project modules and agricultural production areas, but will also provide access to markets for products. The mobility of goods and people will thus be greatly improved.

Table 35 below summarises the positive impacts of the South Agro-Industrial Processing Zone Programme according to the project phases and areas of intervention.

Table 7: Summary of the positive impacts of PZTA-Sud

Activities	Positive Impacts
Construction Phase	
Construction of infrastructure of the modules (buildings, shops, access roads over 350 km, VRD, servicing, etc.), Installation of digesters for biogas production (3 MW of renewable energy from biogas production or about 6,682.2 m ³ are expected) Installation of 2,834 kW solar power plants	Job creation through the heavy use of local labour and some specialized workers (masons, carpenters, carpenters, plumbers, electricians, etc.).
	Increase in the population's income through the use of local materials: borrowed materials (stone, sand, gravel, laterite), purchase of materials on the local market (cement, wood, concrete iron, etc.).
	Development of socio-economic activities in a more direct way by injecting fresh money into local markets.
	Promotion of local companies selected to carry out the work
	Development of the retail trade around the building sites
	Promotion of local trade: purchase of building materials (cement, concrete, etc.)
	The increase in income from the jobs created, from local small trade contributes to the fight against poverty
Installation of drip irrigated vegetable and horticultural perimeters (11,940 ha) Management of community forests (20,000 ha)	Rationalisation of the use of irrigation water for market gardening
	Extension of horticultural areas
	Improvement of soil quality
	Improvement of productivity and horticultural production and producers' incomes
	Building resilience to climate change
	Improvement of the quality of life and living environment of the population
OPERATION PHASE	
Storage, pre-treatment and preliminary processing of products at module level	JOB CREATION
	BETTER STORAGE OF CROPS
	INCREASE IN SHELF LIFE
	<ul style="list-style-type: none"> Building the negotiating capacity of producers Improved product quality

Activities	Positive Impacts
	<ul style="list-style-type: none"> Strengthening food security through securing product stocks through conservation techniques and improving storage conditions
Packaging, product processing at the central module in Adéane	<ul style="list-style-type: none"> Valorisation of cashew nut and mango production Reversing the strong trend to export in raw form Job creation Limitation of losses and good preservation of products Conquering the international market Industrial integration
Drip-fed vegetable and horticultural perimeter farming	<ul style="list-style-type: none"> Job creation Improved productivity and horticultural and market gardening production Increasing producers' incomes and strengthening their resilience to climate change Improvement of the living environment
<ul style="list-style-type: none"> Operation of solar power plants and digesters for the production of energy for lighting, conditioning, etc. 	<ul style="list-style-type: none"> Control of methane emissions from the open-air fermentation of animal dejecta, and thereby controlling GHG emissions. Reducing GHG emissions and thus fighting climate change Reduction of wood smoke in kitchens, thus reducing the risk of respiratory and eye infections. Production of good quality organic fertilisers to promote agriculture Decrease in the consumption of biomass, and therefore reduction of the pressure on deforestation for wood energy (preservation of natural resources, biodiversity) and climate change. Strengthening food security Creation of jobs and income-generating activities Reducing the energy deficit of the population while helping to preserve fragile ecosystems (mangroves in particular), and know-how Development of a local economic sector around the construction of the biogas infrastructure (transfer of expertise). Develop the bio-digestat from biogas production and waste water in market gardening and farming operations, thus providing additional income for operators
Organisation and Capacity Building of stakeholders	<ul style="list-style-type: none"> Increase in productivity and production Intensification of production and optimization of yields Limitation of harvest risks linked to poor quality seeds Promotion of carbon sequestration Improvement of the organization and motivation of producers and a change of mentality favored Improvement of the quality and quantity of productions Guarantee of the flow of production to producers and of raw material to food processors Structural transformation of agriculture Increase in the purchasing power of producers and fight against poverty Capitalization of acquired knowledge and exchange of experiences

9.3.4. Conclusion

The projects envisaged within the framework of the South Agro-Industrial Processing Zone Programme are very significant in that they will provide local poverty stricken communities with infrastructure and equipment for the production, storage and processing of cashew nuts, mangoes and horticultural products. These communities will also benefit from increased entrepreneurship. These structuring elements will enable a better handling of social, economic, environmental and cultural problems. With this infrastructure and equipment, local authorities will be in a better position to conduct dynamic policies that can mobilise the entire community around a common goal and vision centred on the fight against poverty. The rehabilitation and construction of access roads to modules and agricultural production areas will contribute to improving the mobility of goods and people. The project will thus make a significant contribution to the implementation and promotion of innovative rural policies, with a view to achieving sustainable rural development, in which environmental issues, solidarity and better living conditions will play a key role.

9.3.5. Description, characterisation and assessment of the potential negative impacts of the PZTA-Sud

The implementation of project activities may generate negative impacts in the short, medium or long run, if appropriate measures are not taken and implemented during its implementation.

The different potential negative impacts are briefly presented in the following sections on the basis of the construction or operational phase of the project.

9.3.6. Negative impacts of the construction phase

Avenues of negative impacts during the construction phase mainly have to do with the construction of service (buildings), storage, pre-processing, packaging and processing infrastructure at the module level (central module, regional modules, departmental platforms). The main risks identified are related to the choice of sites where the modules will be erected, the vacating of selected sites and the opening of quarries.

NEGATIVE IMPACTS RELATED TO THE CHOICE OF SITES

The choice of sites for the implementation of the modules is a socially sensitive issue. Indeed, if the choice is not made on a consensual basis, it can lead to social conflicts arising from protest movements within the community, which can have a negative impact on the agropole, especially concerning its social acceptability.

Furthermore, if the choice of a site involves land belonging to or exploited by individuals, families or groups, and which might require expropriation for public utility, this can be a source of conflict if individuals, families or socio-professional groups are not compensated fairly and equitably.

The displacement of individuals or families may be necessary if their houses or job sites are within an area where an infrastructure has to be erected. If the procedures for the resettlement of these people or families are not carried out under the conditions required by law, such displacements can be a source of social conflict, which can sometimes be very serious within the community.

Each of these cases has a negative impact on the agropole, especially in terms of its social acceptability and even its sustainability.

NEGATIVE IMPACTS ASSOCIATED TO THE OPENING OR EXPLOITATION OF QUARRIES

The supply of construction materials (sand, laterite, and other crushing equipment) for the construction of module infrastructure and access roads is done at the level of existing quarry sites or those opened for the needs of the construction sites. If new quarries are opened, there may be risks of tree felling. These new structures could change the landscape considering the holes dug for the extraction of materials. In such cases, legal provisions on the management of mines and quarries must be strictly applied. Borrow sites for materials necessary for the development of infrastructure, which have not been rehabilitated, could encourage the proliferation of disease vectors (malaria), cause drowning, especially among children, and encourage the development of bilharzia due to the stagnation of water after the rainy season. The new quarries may lead to a further degradation of ecosystems, both in terms of soil, flora and fauna, especially in the long term if used for other construction works. In the long term, this activity could lead to soil losses and soil erosion.

NEGATIVE IMPACTS RELATED TO POST-HARVEST INFRASTRUCTURE (STORAGE, PACKAGING AND PROCESSING WAREHOUSES)

For the construction of these infrastructure, the negative environmental and social impacts of the project will mainly be due to the construction of access roads to the sites, service buildings and storage facilities: tree felling to clear the sites; soil erosion, soil and water pollution, loss of vegetation, noise pollution, generation of construction site waste; occupation of private land, etc.

LOSS OF VEGETATION RESULTING FROM THE CLEARING OF ALLOCATED INFRASTRUCTURE SITES, INSTALLATION OF DRIP IRRIGATION SYSTEMS, EXPLOITATION OF COMMUNITY FORESTS

The sites selected to host infrastructure for the modules (central and external) cover a total of around 100 hectares (the Adéane site covers 50 expandable to 85 ha, the 5 regional sites 10 ha each and 5 ha for each departmental site), and these are areas with relatively dense vegetation. The clearing of these sites for the installation of infrastructure will therefore lead to a relatively significant loss of vegetation and the fauna dependent on these ecosystems.

In addition, the Agro-Industrial Processing Zone Programme will help smallholder farmers gain access to funding for the installation of solar-powered drip irrigation systems, for a total area of 11,940 ha. This will require significant deforestation and clearing, as well as levelling (soil disturbance) for the installation of the system. The same applies to the exploitation of community forests for the populations.

LANDSCAPE MODIFICATION

The construction of the agropole's infrastructure will lead to a modification of the existing landscape through works to free the sites: felling, clearing, earth and construction works. Added to this is a strong visual impact due to the presence of the construction site especially if the site is situated in an urbanised environment.

The evacuation of allocated land and the installation of companies (living quarters, construction area) on the sites will also be a source for several other negative impacts such as soil erosion, soil and water pollution, loss of vegetation, poor living conditions, generation of construction site waste, occupation of private land, etc.

The installation of the drip irrigation system, which is accompanied by significant deforestation, will also contribute to the modification of the landscape.

WASTE PRODUCTION

Construction sites (civil engineering) are generally associated with the production of waste (material residues, offcuts, packaging, waste water, etc.). If not properly managed, this waste can be a source of unhygienic living conditions or pollution. If poorly managed, such waste can cause nuisances or inconveniences such as congested roads, impaired movement, an obstacle to the drainage of run-off water, etc.

WORKS-RELATED NUISANCES

During deforestation and earthmoving works on sites that are to harbour infrastructure of the agropole's modules, people working in its environs suffer the negative effects of dust, smoke and noise.

Construction works, by generating dust and smoke (due to rolling stock), create favourable conditions for bronchopulmonary diseases. Moreover, these emissions as well as noise pollution will constitute a nuisance to the living environment which can cause much discomfort.

The people most exposed to these nuisances are mainly construction site workers and, to a lesser extent, passers-by.

TRAFFIC ACCIDENTS

The movement of trucks to supply construction sites with building materials and other supplies poses risks of traffic accidents.

In the human environment, the movement of vehicles transporting equipment and construction materials for infrastructure and access roads may hamper traffic and mobility in general, in addition to the nuisances (noise, dust) people will be exposed to. The same applies to the risk of traffic accidents.

The impact of the supply of construction materials on air quality will be most evident in the emission of construction site dust at the extraction site, along the transport route and at the construction site.

SOIL AND GROUNDWATER CONTAMINATION

The construction work will require the use of motorised machinery and equipment. The use of these machines is associated with risks of soil contamination by accidental spills or leaks of hydrocarbons on the ground which may, by infiltration, reach the water table.

IMPACTS ON WATER RESOURCES

Water needs of the work sites will result in the extraction of water from nearby water points (streams, boreholes, etc.). Extraction from streams and rivers can alter the quality of the resource if appropriate measures are not taken.

DISRUPTION OF SOCIO-ECONOMIC ACTIVITIES

Construction works on the modules of the Agropole Sud project and the access roads to the sites may result in a limited loss of income, especially because of the inconvenience of disrupting traffic for shops and markets, the possible destruction of crops present on the site and the destruction of fruit trees, etc.

EMPLOYMENT ISSUES

Failure to use local work force in the construction of infrastructure could lead to frustrations if unemployment is high in the localities concerned. The insufficient involvement of workers at the local level is a potential negative impact of the implementation works, which could most certainly prevent a clearer understanding of the project.

The impacts described above are common to all planned infrastructure (access roads to the sites, pre-processing and storage modules, a central module including service, packaging, processing and VRD buildings, mango, cashew nut and horticultural product processing units).

MORAL DECADENCE

The arrival of workers and job seekers from different backgrounds in the project area may expose the population, especially young people, to moral decadence and exposure to STI/HIV/AIDS. This risk is all the more significant as the vulnerability of young people in the localities hosting the agropole's modules is increased by the prevailing context of poverty.

9.3.7. Negative impacts during the operation phase

In the operation phase, the sources of impact are associated with the operation of storage, packaging and product processing infrastructure. Impacts arise due to waste production (solid and liquid waste), nuisances, employment issues, human health problems following the uncontrolled use of pesticides in orchards, etc.

IMPACTS RELATED TO THE EXPLOITATION OF MODULE INFRASTRUCTURE

➤ LANDSCAPE MODIFICATION

The establishment of the agropole will lead to the disappearance of vegetation and the appearance of new buildings. The presence of infrastructure will thus modify the natural landscape and the visual landscape of the areas concerned. The scenery of the sites hosting the modules will therefore be adversely affected.

➤ WASTE PRODUCTION

Solid waste

The solid waste that will be generated in the agropole includes rot (mango, cashew nuts, crop residues, etc.) and common waste associated with the presence of people on the site. This waste is likely to negatively affect the living environment.

Liquid waste

The liquid waste will consist of black water from showers and toilets and at the processing units (mango, cashew nut, etc.). Thus, large volumes of such water can be expected at the different sites. These waters are potential sources of pollution, degradation of the living environment and infectious diseases.

It should be pointed out that at the level of the Adéane central module, the agropole has made provision for a solid and liquid waste management system.

➤ POLLUTION OF AIR QUALITY

The sources of impact are mainly the vehicles and heavy-duty trucks that frequent the agropole. The use of these vehicles is associated with particle emissions (smoke and dust). Organic waste from the agropole and black water are associated with odours that can affect local air quality. Indeed, products in a state of decomposition (rotten fruit) are considered as green waste, potential sources of pungent smells, especially when they are not properly collected (covered bins).

➤ HEALTH RISKS

The operation of the agropole will lead to a revaluation of the host sites, which will become new centres of interest for the populations of the municipality, the district, stakeholders of the sectors, workers of the established companies, service providers, etc. The agropole will also become a centre of interest for the local population. Consequently, it will be a meeting point for hundreds of strangers. Ultimately, this demographic change and the resulting intermingling of foreigners and natives could increase the vulnerability of the local population, especially the young people who make up the largest group, to risky behaviour. Indeed, this influx of people, combined with the context of poverty prevailing in certain localities, may increase young people's exposure to sexually transmitted infections, including HIV/AIDS.

In addition, the packaging of agricultural products with inappropriate products could be harmful to the health of consumers. Moreover, contaminants may be produced from biogas combustion.

➤ SOIL AND GROUNDWATER CONTAMINATION

During the operation of the agropole, the sites can be used as parking spaces for several vehicles, especially large vehicles used to transport the products from the collection points to the external modules and from the external modules to the central module. The risk of soil contamination by hydrocarbons could be expected, especially due to leaks from the engines of vehicles that frequent the site. These hydrocarbons may reach the ground as a consequence of the drainage of unexploited run-off water.

➤ TRAFFIC ACCIDENTS

The operation of the agropole will intensify vehicle traffic. There may be schools, markets or homesteads close to the sites, with relatively heavy traffic, especially at peak times. Under these conditions, the traffic caused by the agropole will be associated with risks of accidents, especially along access roads to the site.

RISKS RELATED TO THE ORGANISATION AND CAPACITY BUILDING OF AGRICULTURAL PRODUCERS.

The organisation and capacity building of producers will increase farmers' motivation to further grow cashew nut and mango trees.

The geographical expansion of these crops will have consequences on land degradation and soil fertility, the degradation of forest resources and biodiversity, human health through the indiscriminate use of pesticides, social conflicts related to the expansion of cashew and mango cultivation land, etc. These impacts are briefly reviewed in the following sections.

RISKS RELATED TO LAND DEGRADATION AND POOR SOIL FERTILITY

Poor agricultural practices (massive use of pesticides, poorly executed ploughing, etc.) can lead to land degradation and poor soil fertility. These practices will have negative effects on the development of agriculture in general and the preservation of natural resources.

RISKS RELATED TO THE DEGRADATION OF FOREST RESOURCES

The expected geographical expansion of cashew and mango orchards because of the increased motivation of producers due to their reinforced capacity with the advent of the agropole, could be to the detriment of forest areas if not controlled. This expansion will be accompanied by land clearing and the destruction of delicate ecosystems. The consequences include the reduction of forest resources and biodiversity. There may even be a risk of encroachment on the boundaries of protected forest areas.

RISKS OF SOCIAL CONFLICTS LINKED TO THE DEVELOPMENT OF MANGO, CASHEW TREE AND MARKET GARDENING ORCHARDS.

The expansion of mango and cashew tree orchards could lead to the obstruction of livestock transhumance corridors or encroachment on pastoral areas. This expansion of crops will have a negative impact on livestock development in the region, and could lead to conflicts between producers and herders.

HEALTH RISKS RELATED TO THE USE OF PESTICIDES

Linking smallholders to the agropole and the establishment of farming contracts between agricultural producers and agro-processors will have significant effects on the structural transformation of agriculture.

Farmers will be better organized and more motivated in their activities. This may lead to an expansion of cashew nut and mango tree growing in the region. Such expansion may be accompanied by crop intensification and possibly lead to the use of pesticides with negative impacts on human and animal health. In the absence of effective integrated pest control, the search for increased agricultural production could lead to an increased use of chemical pesticides, which could have negative effects on the environment.

HEALTH RISKS ASSOCIATED WITH THE USE OF BIOGAS

Pungent smells can be considered as the main negative environmental impact of domestic and industrial biogas production systems. Biogas, in fact, is composed of different gases including methane, carbon dioxide and other low-dose gases such as hydrogen sulphide (H₂S), water vapour (H₂O), oxygen (O₂), dinitrogen (N₂) and dihydrogen (H₂), which explains the high emission of odours from biodigesters. Biodigesters used for domestic or agricultural purposes are often a source of odour pollution (odours of rotten eggs, biogas, putrescible matter, dung and manure) when they are not equipped with an appropriate odour control device. However, it should be specified that bio-methanisation, or the refinement of biogas, is not a source of odour pollution; on the contrary, it rather contributes to its reduction. Indeed, as anaerobic decomposition takes place in a confined environment, odour pollution is therefore specifically limited to the transport of waste, its storage and the spreading of the digestate.

Table 36 below summarises the Negative impacts of the PZTA-Sud according to the Project phases and areas of intervention.

Table 8: Summary of the major negative impacts of the agropole

Areas/Activities	Negative Impacts
• Works Phase	
Construction work on the infrastructure of the modules (buildings, shops, access roads over 350 km, VRD, servicing, etc.), Installation of digesters for biogas production (3 MW of renewable energy from biogas production or about 6,682.2 m3 are expected) Installation of 2,834 kW solar power plants	<ul style="list-style-type: none"> • Deforestation, soil degradation through erosion, destruction of habitats during land clearing • Clearing of land during the release of rights-of-way from the module sites • Destruction of microfauna and organic matter • Loss of grazing land (encroachment on sylvopastoral areas) • Landscape modification • Traffic accidents related to the movement of construction machinery and transport vehicles, • Dust, noise, pollution by construction site waste, health and safety problems (accidents) related to infrastructure construction work at module level • Social conflicts linked to the sites where the infrastructure is located (illegal occupation of land, encroachment on rangelands or pastoral areas, non-involvement of local labour in the recruitment of site personnel, etc.). • Development of STI/AIDS during construction works on the modules, transformation units, access sites to the modules • Pollution of the environment by discharges from the worksite • Social risks in the event of discrimination in the choice of installation sites • Risk of water and soil pollution from the discharge of used batteries • Non-use of local labour
Installation of drip irrigated vegetable and horticultural perimeters (11,940 ha) Management of community forests (20,000 ha)	<ul style="list-style-type: none"> • Risk of weakening and eutrophication of water bodies by agricultural activities • Deforestation, soil degradation through erosion, destruction of habitats during land clearing • Destruction of microfauna and organic matter • Risks of loss/reduction of grazing areas (encroachment on sylvopastoral areas) • Dust and disturbance (works phase) • Threats to livestock, fisheries and EAF due to the increasing pace of development • Deforestation, soil degradation through erosion, destruction of habitats during land clearing • Strong pressure on land and water • Possible loss of income or property during the work • Risks of diseases such as STI/HIV/AIDS
• Operation Phase	
Storage, pretreatment, and preliminary transformation of products at the level of the module	<ul style="list-style-type: none"> • Modification of the landscape by the presence of infrastructure • Production of solid and liquid wastes related to the processing of products • Impairment of air quality • Health risks • Soil and groundwater contamination • Traffic accidents • Pollution linked to the production of solid (shells, solid residues from apple processing) and liquid wastes, Cashew Nut Shell Liquid (CNSL) and smoke from burning cashew nutshells, which can harm the environment and human health. • Lack of hygiene in storage and processing both in the central module in Adéane and in the satellite modules. • Gradual deterioration of the environment in the absence of a conservation and protection programme for the environment through the discharge of solid, liquid and gaseous waste, especially in connection with cashew nut and mango processing activities.
Packaging, Product processing at the central module of Adéane	<ul style="list-style-type: none"> • Water and soil pollution from pesticides and fertilisers • Health risks related to the use of pesticides • Destruction of non-targets by pesticides • Nuisance in case of uncontrolled use of organic manure • Increase in water-related diseases • Increased farmer-herder conflicts over access to water or grazing land • Risks of diseases such as STI/HIV/AIDS • Risks of conflicts of use (drinking water supply, agriculture, animal husbandry and fishing), • Risks of land disputes between the project and indigenous people
Drip farming of market garden	<ul style="list-style-type: none"> ○ Nuisances linked to the emission of unpleasant odour fumes

Areas/Activities	Negative Impacts
and horticultural perimeters	
Organisation and Capacity Building of stakeholders	<ul style="list-style-type: none"> ○ Degradation of land and soil fertility ○ Degradation of forest resources ○ Social conflicts linked to the development of mango and cashew tree orchards ○ Degradation of forest resources ○ Water and soil pollution from the possible use of pesticides and fertilisers ○ Increasing tensions between farmers over land issues or between livestock owners and farmers over livestock raising ○ Unauthorised (and non-consensual) occupation of indigenous lands ○ An influx of agricultural investors resulting in the need for drinking water and sanitation infrastructure, schools and health centres, but also for the reinforcement of existing police and gendarmerie structures to guarantee the security of goods and people, and all other services (electricity, trade, credit, etc.). ○ Destruction of non-targets by pesticides

9.4. ASSESSMENT OF THE MAIN IMPACTS OF THE PZTA-SUD

An analysis of the impacts at this project appraisal stage (pending an in-depth impact study) is presented in the form of a summary table (Table 37) which shows the overall intensity of the envisaged consequences of the project in terms of absolute and relative importance. Only the major impacts have been presented.

Table 9: Synoptic impact summary matrix (combination of the different criteria for characterising and assessing impacts)

VALUED ENVIRONMENTAL ELEMENTS		No.	DESIGNATION OF THE IMPACT IDENTIFIED	PERIOD	NATURE	CHARACTERISATION PARAMETERS						EVALUATION		
						INTENSITY				INTERACTION	INTENSITY			INTERACTION
PHYSICAL ENVIRONMENT	Climate	1	Reducing greenhouse gas emissions by controlling methane emissions from the open-air fermentation of animal waste using biogas combustion technology	Exp	+	D	M	L	Lt	C	Ir	Average	Average	Minor
		2	Carbon sequestration linked to the management of community forests for populations	Exp	+	D	M	R	Lt	C	Ir	Major	Major	Minor
		3	Risk of microclimate change and contribution to climate change	Trx/Exp	-	I	B	L	Ct	C	Re	Minor	Minor	Non significant
	Landscape	4	Risk of degradation / mutilation of the landscape at the various sites.	Trx	-	D	B	L	Ct	C	Re/Ir	Average	Minor	Non significant
		5	Landscape beautification at module level	Exp	+	D	M	L	Lt	C	Ir	Average	Minor	Minor

VALUED ENVIRONMENTAL ELEMENTS		No.	DESIGNATION OF THE IMPACT IDENTIFIED	PERIOD	NATURE	CHARACTERISATION PARAMETERS							EVALUATION		
						INTENSITY			INTERACTION					INTERACTION	
	Air quality	6	Risk of deterioration in air quality due to dust emission on building sites, during transport etc.	Trx	-	D	M	L	Ct	C	Re	Average	Minor	Non significant	
		7	Risk of air quality deterioration due to odour emissions from biogas combustion	Exp	-	D	B	L	Ct Pr		Re	Minor	Minor	Non significant	
		8	Risk of disturbance of the sound environment / Noise and nuisance	Trx	-	D	M	L	Ct	P	Re	Minor	Minor	Non significant	
	Surface and ground water	9	Risks of pollution of surface and ground water by oils and other liquid products from machinery and vehicles used to transport materials.	Trx	-	D	H	L	Ct	P	Re	Minor	Minor	Non significant	
		10	Risks of pollution of ground and surface water due to the uncontrolled use of plant protection products and chemical fertilisers	Exp	-	D	M	L	Ct	P	Re	Average	Minor	Non significant	
		11	Risk of pressure on water resources due to the extension of cultivation plots with irrigation in GàG, and other demands on water resources	Trx	-	D/I	H	L	Ct	P	Re	Minor	Minor	Non significant	
	Soils and sub-soils	12	Risk of soil and subsoil pollution from the uncontrolled use of chemical pesticides and fertilisers	Trx	-	D	M	L	Lt	P	Re	Average	Minor	Non significant	
		13	Risk of altering soil structure through the use of tillage machinery	Trx	-	D	B	L	Ct	C	Re	Minor	Minor	Minor	
	ORGANIC ENVIRONMENT	Vegetation	14	Risk of tree felling, modification of the vegetation cover linked to the release of site rights-of-way, the development of community forests and the development of plots for the GàG	Trx	-	D/I	M	R	Ct	C	Re	Major	Average	Average
15			Decrease in the consumption of biomass linked to the use of biogas, and therefore reducing deforestation for wood energy needs (preservation of natural resources, biodiversity) and climate change.	Exp	+	D	M	L	Ct	C	Re	Major	Average	Minor	
Fauna		16	Risk of disturbance of wildlife habitat due to tree felling and destruction of ecosystems in the context of the release of rights-of-way from project sites, the exploitation of borrow sites, the development of cropland plots	Trx	-	D	B	L	Ct	P	Re	Average	Average	Minor	

VALUED ENVIRONMENTAL ELEMENTS		No.	DESIGNATION OF THE IMPACT IDENTIFIED	PERIOD	NATURE	CHARACTERISATION PARAMETERS							EVALUATION		
						INTENSITY				INTERACTION	INTENSITY				INTERACTION
SOCIO-ECONOMIC AND HUMAN ENVIRONMENT	Health and safety	17	Risk of proliferation of STI/AIDS, waterborne diseases and respiratory infections,	Trx/Exp	-	I	F	L/R	Mt	P	R e/l r	Major	Average	Minor	
		18	Risk of deterioration of producers' health due to non-compliant use of pesticides	Trx	-	D	M	R	Ct	L	R e	Average	Minor		
		19	Risks of traffic and work accidents	Trx/Exp	-	D	M	R	Lt	C	R e	Minor	Minor	Non significant	
	Population and community life	20	Expropriation and involuntary displacement of the population	Trx	-	D	M	L	Ct	P r	R e	Major	Average	Non significant	
		21	Risk of conflicts between workers and residents in localities close to the project sites.	Trx	-	D	M	L	Ct	P	R e	Average	Minor	Non significant	
		22	Pollution linked to the production of solid (shells, solid residues from apple processing) and liquid wastes, Cashew Nut Shell Liquid (CNSL) and smoke from burning cashew nutshells, which can harm the environment and human health.	Exp	-	D	M	L	Lt	P	R e	Major	Average	Minor	
		23	Risks of tensions between farmers and producers linked to the extension of agricultural land, and the management of community forests for access to water and grazing.	Exp	-	D	M	L	Lt	P	R e	Average	Minor	Minor	
		24	Facilitation of access to infrastructure and basic public services for the populations living in the vicinity of the project sites.	Exp	+	D/I	H	R	Lt	C	R e/l r	Major	Major		
		25	Fire risks due to the handling of hydrocarbons and biogas	Trx	-	D	M	L	Ct	P	R e	Minor	Minor	Non significant	
		26	Strengthening resilience to CC, and improving the living environment of the population	Exp	+	D	M	L	Lt	P	Ir	Major	Average	Average	
		27	Improvement of the tax system in the different municipalities concerned with the Project.	Trx/Exp	+	D	M	L	Lt	P	Ir	Average	Average	Average	
		28	Development of a local economic sector around the construction of biogas infrastructure (transfer of expertise).	Exp	+	D	M	L	Lt	P	Ir	Average	Average	Minor	

VALUED ENVIRONMENTAL ELEMENTS		No .	DESIGNATION OF THE IMPACT IDENTIFIED	PERIOD	NATURE	CHARACTERISATION PARAMETERS							EVALUATION		
						INTENSITY					INTERACTION		INTENSITY		
	Land and basic infrastructure	29	Risk of land conflicts	Trx/Exp	-	D	w	L	Lt	P	R	Average	Minor	Minor	
	Cultural heritage	30	Risk of disruption of customs and habits due to the mixing of the indigenous population with workers from other backgrounds	Trx	-	D	M	L	Lt	C	R	Minor	Minor	Non significant	
	Jobs and income	31	Job opportunities / boosting of lucrative activities and development of localities	Trx/Exp	+	D/I	M	N	Ct	C	R	Major	Major	Major	
	Gender-based violation	32	Risk of increased sexual exploitation and abuse or sexual harassment that may lead to the spread of STIs/HIV/AIDS and unwanted pregnancies	Trx/Exp	-	D	w	L	Ct	P	R	Average	Minor	Minor	
		33	Creation of economic opportunities and promotion of gender	Trx/Exp	+	D	w	L	Lt	P	R	Average	Average	Minor	

Table 10: Qualification and symbolism of environmental and social impact characterisation parameters

PARAMETER	Qualification and symbolism		
Nature of the impact	Positive (+)	Negative (-)	
Intensity of impact	Strong (S)	Average (A)	Low (w)
Extent or scope of impact	Regional (R)	Local (L)	Occasional (O)
Impact interaction	Direct (D)	Indirect (I)	
Occurrence of impact	Certain (C)	Probable (Pr)	
Duration of impact	Long term (Lt)	Medium term (Mt)	Short term (St)
Reversibility of impact	Reversible (Re)	Irreversible (Ir)	

The matrix for identifying and evaluating the major impacts of the South Agro-Industrial processing Zone Project made it possible to identify 32 impacts, of which 10 were positive and 23 negative.

For the positive impacts, 7 are assessed as being of major absolute importance (the 6 are in the operational phase) and 3 as being of medium absolute importance. The positive impacts of great absolute importance include:

- Reduction of greenhouse gas emissions by controlling methane emissions from the open-air fermentation of animal waste using biogas combustion technology, and the use of solar energy for drainage and the distribution of water for market gardening using a drip irrigation system;

- Carbon sequestration associated with the management of community forests for the populations;
- Decrease in the consumption of biomass due to the use of biogas, and therefore a reduction of the pressure on deforestation for wood energy needs (preservation of natural resources and biodiversity) and climate change;
- Facilitation of access to infrastructure and basic public utilities for populations living near the project sites;
- Reinforcement resilience to CC, and improvement of the living environment of the people;
- Development of a local economic sector around the construction of biogas infrastructure (transfer of expertise);
- Job opportunities / boosting of lucrative activities and development of the localities.

The 3 positive impacts of average absolute importance include:

- Landscape beautification at module level;
- Improvement of the tax system of the different municipalities affected by the project; and
- Creation of economic opportunities and promotion of gender balance.

With regard to the 22 negative impacts, 3 are of great absolute importance, 12 are of average absolute importance and 7 are of minor relative importance.

Thus, the negative impacts of significant absolute importance include:

- Risk of tree felling, modification of the vegetation cover due to the release of allotments for the project, the development of community forests and the development of drip-irrigated plots;
- Risk of proliferation of STI/AIDS, water-borne diseases and respiratory infections; and
- Risks of degradation of groundwater and surface water quality.

There are 10 negative impacts of average absolute importance, 8 of which occur during the construction phase and 6 during both phases (construction and operation). They include:

- Risk of deterioration in air quality due to the emission of dust at construction sites, during the transportation of materials, etc.;
- Risks of pollution of ground and surface water due to the uncontrolled use of phytosanitary products and chemical fertilisers;
- Risk of soil and subsoil pollution resulting from the uncontrolled use of pesticides and chemical fertilisers;
- Risk of disturbance of wildlife habitat as a result of the felling of trees and destruction of ecosystems in areas allocated for project sites, the exploitation of borrow sites, the development of farmlands;;
- Expropriation and involuntary displacement of populations;
- Risk of conflicts between workers and indigenes in localities close to the project sites;
- Risks of tensions between farmers and producers due to the extension of agricultural areas, and the development of community forests for access to water and grazing;

- Risk of land ownership conflicts; and
- Risk of increased sexual exploitation and abuse or sexual harassment that may lead to the spread of STIs/HIV/AIDS and unwanted pregnancies.

There are 8 negative impacts of minor relative importance, 5 of which occur during the construction phase. These impacts concern:

- Risk of micro-climate change and contribution to climate change;
- Risk of air quality pollution due to the emission of odours from biogas combustion;
- Risk of disturbance of the sound environment / Noise and nuisance;
- Risk of high demand for water resources due to the extension of cultivation areas with drip irrigation and other water needs;
- Risk of modification of soil structure with the use of tillage machinery;
- Risk of traffic and occupational accidents;
- Risk of fire due to the handling of hydrocarbons and biogas; and
- Risk of disruptions to lifestyles and customs because of the integration of indigenous populations by workers from other backgrounds.

The analysis of the summary table shows that the main negative impacts of the South Agro-Industrial Processing Zone Programme are general and comparable to those usually seen in similar projects (construction works, tracks and agricultural facilities). They include noise pollution, dust generation, construction site waste production, landscape degradation, water pollution risks, worker and community safety. However, most of the negative impacts only last during works, and are therefore limited in time and location. Their long-term impact is therefore insignificant if the measures recommended during the work implementation are scrupulously applied. These measures will be included in the company's contract specifications to mitigate their effects. The other negative impacts occur both in the Construction phase and in the Operation phase. These impacts are also localised, and the adoption of appropriate measures will make it possible to eliminate or mitigate them.

9.5. OVERVIEW OF CUMULATIVE IMPACTS

Cumulative effects are defined as changes to the environment resulting from action in combination with other past, present and future human actions. In this regard, two cases may be identified.

The first scenario corresponds to the implementation of projects simultaneously or successively in a given area. If these projects have the same negative, but minor or moderate effects in a given intervention zone, the accumulation of their effects can have considerable and disastrous negative impacts on the said environment.

The second case concerns several different projects each generating minor or moderate negative impacts. The cumulative effect of these projects may, as in the first case, result in significant negative impacts on the environment.

For this reason, this SESA provides an overview of the cumulative effects of projects and programmes in the South Agro-Industrial Processing Zone. Indeed, the Agropole Sud will be operating in an area marked by the presence of several projects and programmes, including the Casamance Development Pole Project (PPDC) and the National Agricultural Investment Programme Support Programme (PAPSEN), the Project to Improve the Competitiveness of Senegalese Mango (PACMS), the Water Valorisation for Value Chain Development Project (PROVALE CV), the Strengthening resilience to food and nutrition insecurity in the Sahel (RP2RS), etc. to name but a few.

9.5.1. A brief presentation of sample projects in the PZTA-Sud Zone

Before identifying their cumulative negative effects, each of these programmes or projects is briefly presented below.

(i) **Casamance Development Pole Project (PPDC)**

The PPDC, operational in the three administrative regions of Casamance (Ziguinchor, Sédhiou and Kolda), has the overall objective of contributing to reducing the vulnerability of Casamance's youth and women by expanding their options for income-generating activities in order to address the root causes of the conflict. More specifically, the project development objective (PDO) is to: (i) Increase productivity in targeted agricultural sectors in favour of young people and women; and (ii) improve the accessibility of targeted rural areas in Casamance.

The main components of the project are: (i) Support for the production, post-harvest and marketing of agricultural products, the main activities of which aim to create favourable conditions for improving the incomes of those involved in rice, horticulture and oyster farming; (ii) Rural accessibility, which aims to open up the most isolated rural communities and improve the population's accessibility to roads leading to local markets; and, (iii) Implementation of a citizen engagement mechanism and project management to support the development or updating of communal planning documents (CPDs) in 3 communes of the 3 regions by establishing pilot citizen engagement mechanisms, focusing on participatory planning, management and, complaint and dispute resolution mechanisms.

(ii) **Senegal's National Agricultural Investment Support Programme (PAPSEN)**

PAPSEN supports rural development in the regions of Sédhiou and Kolda. The general objective of the Programme is to contribute to the achievement of the First Millennium Development Goal; to reduce extreme poverty and hunger, by increasing agricultural production and improving the income of rural populations, by increasing food security and promoting local economic development. The specific objective of the Programme is to increase the income of rural populations living in the intervention regions through the increase and diversification of agricultural production by means of the dissemination of modern agricultural practices such as micro-irrigation, but also through the improvement of the technical and entrepreneurial know-how of the farmers involved. It focuses on rural development and the adaptation of agricultural production systems to climate change. The direct beneficiaries of the PAPSEN programme are small-scale producers (most of whom are women), producer groups and associations, rural youths and women, small entrepreneurs, producer organisations and local communities.

(iii). **Project to Improve the Competitiveness of Senegalese Mango (PACMS)**

PACMS intervenes in the mango sector in the Niayes, Centre and Casamance zones, the main mango-producing localities in Senegal. This project aims to increase the contribution of the mango sector to the socio-economic development of Senegal, by contributing to poverty reduction in an inclusive manner. In terms of outlets, the project aims at improving the competitiveness of mango and its by-products on the international market, in order to diversify the export markets for Senegalese mangoes.

Concretely, the project's activities are oriented towards the capacity building of stakeholders along the mango value chain, through training, provision of equipment and materials to improve quality and facilitate better access to current and potential international markets.

(iv). **Water Valorisation for Value Chain Development Project (PROVAL CV)**

The overall objective of PROVALE CV is to contribute to strong, inclusive and sustainable economic growth and to Improve the living conditions of rural populations. Specifically, the project seeks to sustainably increase agricultural production, employment and income in rural areas through the exploitation of surface and groundwater. It is operational in the regions of Fatick, Kaolack, Diourbel, Thiès, Kaffrine, Ziguinchor, Sédhiou and Kolda.

PROVALE CV will mainly work on water management and on the valorisation of value chains, as well as the development of rural entrepreneurship. The main areas of intervention of the project revolve around: (i) the development of hydro-agricultural and anti-salt works; (ii) the construction of pastoral infrastructure and marketing facilities; (iii) the valorisation and development of value chains; (iv) the promotion of youth employment and support for women and youth entrepreneurship.

(v). Regional Programme for the strengthening of resilience to food and nutrition insecurity in the Sahel (P2RS)

The project aims to strengthen the resilience of populations vulnerable to food and nutrition insecurity in the Sahel by sustainably increasing productivity and agro-sylvo-pastoral and fisheries production. Conceived in a long-term regional approach, i.e. four 5 year phases, the Programme has limited its intervention in seven (7) countries most affected by food crises in the Sahel, namely Burkina Faso, Gambia, Mali, Mauritania, Niger, Senegal and Chad, where project investments are being made.

P2RS has capitalized on the experiences gained from the implementation of PAPIL and PADERCA and will help in the consolidation of the achievements of these two projects. Phase 1 concerns the regions of Fatick, Kédougou, Kolda, Matam, Tambacounda and Ziguinchor.

The activities planned under Component A include the construction of water collection structures, pastoral water points, livestock markets, vaccination parks, mini dairy factories, honey factories, storage warehouses, multi-purpose platforms, fish feed factories, hatcheries and fish farms, village water points, health centres, training centres, farmland development, micro-enclosures and fire-breaks.

For Component B, the planned activities have to do with the development of seed chains, support for agricultural production, promotion of non-timber forest products, reforestation and forest management, installation of family sheep barns, promotion of improved village poultry farming, installation of fish farmers, support for the development and marketing of fishery products, nutritional support for women, children and vulnerable persons, strengthening the mechanism for the prevention and management of food security and natural and climatic risks, building the entrepreneurial capacity of young people, support for innovative initiatives by rural youths and women.

Each of these projects and programmes of the South Agro-Industrial Processing Zone Programme somehow generates negative impacts, whatever the gravity. If assessed individually, impacts generated by the projects and programmes may not be as significant as is the case with the South Agro-Industrial Processing Zone Programme. However, the combined impacts of all the projects and programmes can reach significant levels due to their cumulative effect on both the biophysical and human environment.

9.5.2. Summary of major cumulative impacts

The analysis of planned or ongoing activities for each of the projects and programmes shows the need for an assessment of the interaction between these projects and the South Agro-Industrial Processing Zone Programme. The implementation of all the components of the agropole and those of the other projects and programmes will help boost the productivity and valorisation of agricultural production, the provision of complementary access and energy sources, the strengthening of resilience to climate change, as well as economic development in the area. It is therefore necessary to blend interactions to limit cumulative impacts.

At the least, expected outcomes include:

- An increase in the risks of expropriation and resettlement;
- An extension of deforestation and clearing zones;
- A risk of encroachment between projects and contradiction between objectives if the areas of influence are not taken into consideration and encroached upon;
- A combined influx of people;
- A risk of increased demand for natural resources that may lead to the depletion of some basic resources (wood, availability of land for cultivation, etc.);

- Health risks associated to the uncontrolled use of pesticides, water-borne diseases due to irrigation, STIs HIV/AIDS, etc.;
- An increase in conflicts (land conflicts, farmer-herder conflicts over access to grazing land and water) and insecurity;
- High demand for basic services (health, housing, education, transport and food) in the project area.

At the present stage, studies on the project design do not allow for a precise assessment of these cumulative impacts. Nevertheless, they will be taken into account in the elaboration of measures.

9.6. RISK ANALYSIS AND MANAGEMENT

The Agropole Sud project will generate considerable positive impacts and effects in both the socio-economic and biophysical environments. Despite these positive aspects, the project will nevertheless generate risks in the overall project environment and in the operation of the modules.

9.6.1. Risks relating to the general project environment

The main risks related to the overall project environment concern:

- The insecurity that has plagued the region for more than three decades. Since 2012, relative calm has been observed in the region despite some sporadic jolts recorded in certain localities of Casamance. The resumption of hostilities is so feared because it could destroy current efforts to revive Casamance's socio-economic activities.
- The risks linked to the non-appropriation of the project by various stakeholders currently involved in sectors selected for the agropole's pilot phase (cashew nut and mango).
- The risks related to social conflicts that may arise during the expropriation of land for the establishment of regional and departmental modules for the benefit of the beneficiaries, but also the probable extension of mango and cashew nut orchards with the success of the project, which could lead to encroachment on corridors or pastoral areas with conflicts between farmers and herders being the resultant consequence.
- The risks of competition between the agropole and the small-scale mango and cashew nut processing units currently operating in the region, which may eventually slow down or put an end to the activities of these groups and adversely affect the local economy.
- The risks associated to various plant diseases and pests, especially for the mango and cashew nut tree, which account for huge production losses each year in Casamance. These risks must be taken into consideration, as they could be a determining factor for the success of the agropole. The fight against these diseases and pests could lead to the abusive use of pesticides which, in the long term, could pose a threat to both human health and biological diversity..

9.6.2. Risks related to the operation of the agropole

The main risks linked to the operation of the agropole are listed below:

- Risks of vehicle and machinery traffic accidents: the construction and operation of the agropole will lead to an increase in vehicle traffic, especially large vehicles, in the Adéane central module area. This activity exposes users of access roads to the infrastructure (motorists, motorbike riders and pedestrians) to risks of traffic accidents.
- Risks of fire and explosion due to the presence of electricity and the storage of flammable products (fuels, lubricants, bitumen, gas, etc.);
- Risks related to accidental leaks of liquid products;

- Acts of sabotage: establishments such as the modules of the agropole may be exposed to an act of sabotage. Reasons for such situations may include the search for targets, the desire to frighten the population, political motivations, revenge, etc.

Occupational risks:

- Risks associated with danger on works sites (respiratory illnesses following the inspiration of particles, noise and vibration related illness, high falls, manual handling and lifting operations),
- Risks of fire and explosion,
- Risks associated with electricity,
- Risks associated with machinery and works equipment, and
- Risks associated with refrigeration equipment, risks associated with night work, etc.

In order to limit the risks of accidents, the Company must implement the following preventive measures:

- Enclose the different units and regulate their accessibility;
- Equip the workforce with appropriate safety equipment (safety shoes, helmets, dust masks, gloves, etc.);
- Store hazardous substances in watertight containers, in secure storage areas, safe from harmful conditions. Keep storage areas locked and keep an inventory of these substances;
- Enforce speed limits of: 20 km/h on construction and quarry sites; 35 km/h in temporary deviations; 80 km/h in the open country and 40 km/h in urban areas; Design and build construction site facilities so that the transportation, loading, unloading and storage of materials does not compromise safety;
- Prohibit smoking in car parks and in premises where flammable or explosive materials are stored or used.

It is also recommended that an emergency response plan be put in place with the aim of preventing accidents and reducing damages; etc. This plan will, among other things, take into consideration:

- A formal commitment to safety;
- Awareness raising and training in compliance with safety requirements and instructions;
- The constitution and training of a safety team;
- Equipping the work site with safety supplies and devices: pharmacy, fire extinguishers, etc.
- The periodic performance of exercises/simulations to implement the intervention plan in order to ensure each emergency is dealt with appropriately.

In addition to these measures, the company will insure all its personnel against risks of accidents and occupational diseases (more details on measures to be taken are contained in the Environmental and Social Clauses in annex).

During the operation phase of the agropole, the Project Management Unit will have to take all necessary measures to deal with these risks based on specific complementary environmental and social impact assessment studies for each sub-project based on the approach proposed in the ESMFP.

9.7. CLIMATE CHANGE IMPACTS AND MITIGATION MEASURES OF THE PZTA-SUD

9.7.1. Climate change impacts

Rainfall and temperature are the two climatic parameters with the greatest climatic impact on resources and the main sectors of activity due to their evolutionary trends and, above all, their inter-annual and intra-seasonal variability. Indeed, available climate forecasts indicate that average temperatures in Senegal are likely to increase by 1.8°C by 2035, while annual rainfall will decrease and sea level will continue to rise. These changes are already affecting freshwater availability in the country (Third National Communication, 2016).

The risks associated with the predicted climate change (rising extreme temperatures, increasing rainfall deficits and rainfall violence) have potentially disastrous consequences for the country (desertification, food security, access to drinking water, public health and traditional livelihoods of the population), also relying on rain-fed agriculture. Thus, an overall decrease in rainfall, combined with increasing rainfall variability and intensity, could reduce agricultural yields by 30%.

The most expected adverse effects are: the decrease and high variability of rainfall, the rise in temperatures that will lead to droughts, famine, floods, water-borne diseases that can seriously affect the life and health of the poorest and most vulnerable sections of the population. Table 39 below summarises the vulnerability of key sectors to climate change.

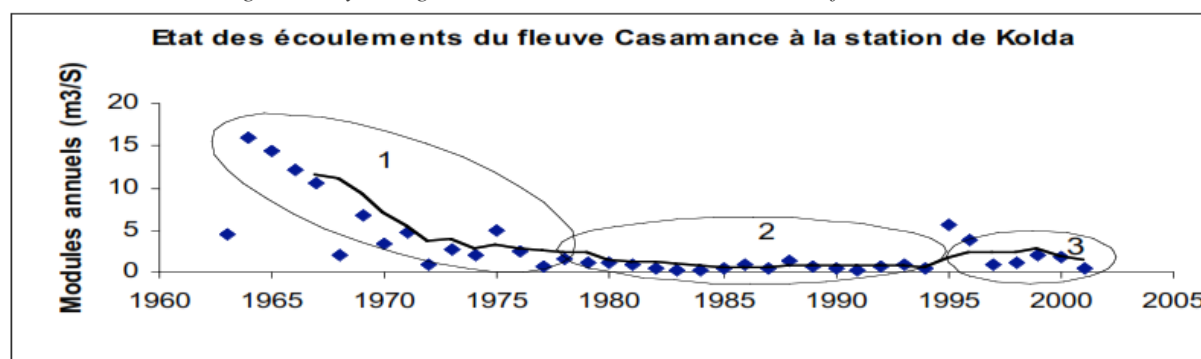
Table 11: Vulnerability of key sectors to climate change

Vulnerable Sector	Explanatory factors for climate change and variability in relation to sectoral vulnerability			
General	<u>Excess rainfall</u> Flooding and erosion phenomena <ul style="list-style-type: none"> • Destruction of crops; • Drowning of livestock; • Surface water pollution 	<u>Decrease in rainfall variability</u> <ul style="list-style-type: none"> • Decrease in the water table level • Recurring droughts • Adverse migration of isohyets • Pockets of drought during the season • Abrupt cessation of rainfall • Shift of the rainy season 	Rising temperatures <ul style="list-style-type: none"> • Increased evaporation from water bodies • Acceleration of soil lateritisation phenomena ; • Increase in the need to provide water for crops 	Increase in wind speed Wind violence Frequency of sand winds (bare areas) ; Soil erosion by wind deflation
Agriculture Sector	<ul style="list-style-type: none"> • - Reduced yields, run-off and water erosion • - Rice production in flood-prone areas <ul style="list-style-type: none"> • - Soil leaching • - Crop Losses 	<ul style="list-style-type: none"> • Disruption of the agricultural calendar • Drop in agricultural yields • Risk of disappearance of species less resilient to climatic conditions • Water shortage for crops • Food insecurity 	Degradation of the agronomic quality of soils Extension of fields to compensate for lower yields <ul style="list-style-type: none"> • Disappearance of certain species • Outbreaks of certain crop pests (locusts, caterpillars) • Decrease in vegetable production 	Destruction of fruit trees Deflowering of crops Decrease in YIELD

The Casamance River will not be left out. Indeed, it will undergo the effects of climate change in terms of the rise of the salt tongue (up to more than 200 km from the mouth), high concentrations of salt in places, loss of cultivated land and a drop in agricultural production, acidification of the secondary valleys due to the disappearance of the mangrove.

Figure 1 below shows the impacts of climate change on the Casamance River. There has been a decline in modules since the 1970s, with a drop of between 5 and 10 m³/s between 1970 and 2000.

Figure 1: Hydrological baseline situation at the Kolda reference stations



Source: Plan national 2006

Table 40 below shows the impacts of climate change on the water sector in the Casamance areas.

Table 12: Impact of climate change in Casamance on water resources

AREA	WATER SECTOR
Eastern Senegal / Upper Casamance Tambacounda and Kolda regions	Major constraints: trypanosomiasis and onchocerciasis <ul style="list-style-type: none"> • Decrease in annual rainfall of about 400 mm • No sewerage system
Lower and Middle Casamance Ziguinchor region	<ul style="list-style-type: none"> • Decrease in annual rainfall of about 400 mm • Lack of water supply infrastructure. • Increase in salinity, acidity, iron and aluminium toxicity in rice fields • Marine invasion in watercourses • Low flow rates, leading to salinization of lowlands

Senegal, National Action Plan 2006

Impacts on soils and agriculture in Casamance

The saline invasion of soils and its consequences on agriculture is especially visible in estuaries (Marius et al., 1986) and is evidenced by the presence of acid sulphate soils. The rainfall deficit recorded since the early 1970s accelerated the first processes leading to the supersalting and acidification of soils in these estuarine environments. It was estimated in 1991 that soil salinisation had reached 30,000 ha in the Senegal Delta, 90,000 ha in the Saloum estuary and 650,000 ha in the Casamance basin (PNA, 2006). The chemical degradation of the soil has annihilated any possibility of developing previously rice-growing land. Salt extraction activities are developing at the same time (Debenay et al., 1994).

Table 13: Impact of climate change in Casamance on agriculture

ZONE	AGRICULTURAL SECTOR
Eastern Senegal/High Casamance; Tambacounda and Kolda regions	<ul style="list-style-type: none"> • Shallow soils that are vulnerable to wind erosion and runoff after deforestation • Deterioration of the vegetation cover due to coal mining • Frequent bush fires ;
Lower and Middle Casamance Ziguinchor region	<ul style="list-style-type: none"> • Acidification of lowland soils • Water Erosion

- Deforestation and bush fires (loss of forest diversity).

National Action Plan 2006

Socio-economic Impacts

Given the loss of agricultural land, the impact on Casamance's economy and migration is potentially negative. Indeed, rice cultivation is strongly impacted by the decline in the average annual flow of the Casamance River and the salinisation of the land.

9.7.2. Measures to mitigate climate change impacts in the PZTA-Sud

PZTA-Sud is vulnerable to climate risk, according to the African Development Bank's Climate Sensitivity Classification, (classified under Category 2). However, given the measures taken at both national and project level, the impacts of climate change will be greatly mitigated.

Indeed, Senegal, in its Nationally Determined Contribution (NDC), agreed to unconditionally reduce greenhouse gas emissions by 3%, 4% and 5% respectively in 2020, 2025 and 2030, compared to "business as usual" (BAU) emissions for those years. The project will contribute to Senegal's climate change policies, especially for the agricultural sector, with a view to adapting and achieving the mitigation objectives set out in its Nationally Determined Contribution (NDC), especially at the regional level (Ziguinchor, Kolda and Sédhiou).

For this reason, risk management and adaptation options have been incorporated into project design. Thus, the sizing of the structures will be done taking into consideration the geotechnical and climatic conditions specific to each site. This includes adaptation and mitigation measures in the agriculture, forestry and other land use sectors. The project will support measures to enable farmers to mitigate and increase their climate change adaptation capacity and resilience, through (i) capacity building of state services (ISRA) to produce resilient and high-yielding varieties (cashew, mango and maize); (ii) supporting farmer organisations for better access to efficient and resilient technologies; (iii) strengthening the quality of advisory support services to farmers (climate information, digital platform, etc.); (iv) building the capacity of farmers' organisations to adapt to climate change; and (v) building the capacity of farmers' organisations to adapt to climate change.); (iv) facilitating access to index insurance for farmers; (v) improving and adapting plant and forest production techniques; (vi) changing agro-forestry practices to sustainably improve the production, yields and income of agro-foresters; (vii) adding quality and value to agricultural production through post-harvest operations (storage and primary processing facilities); and (viii) access to more profitable markets through private investment provided for in the agricultural product processing modules (central and regional).

9.8. PZTA-SUD AND GENDER MAINSTREAMING

The project is classified under Category 3 according to the African Development Bank's Gender Marker System. Indeed, PZTA-Sud will be implemented in a social environment where gender inequalities persist. The zone is also exacerbated by the high level of male migration, especially among the youths. This situation reinforces the role of women with its corollaries of work overload and poverty. For this reason, the project has planned to take into consideration the specific needs of women and men as well as youths of both sexes. The aim is to reduce the unequal access of women and men from all social categories to the opportunities offered by the agropole. Actions to be taken include : (i) the promotion of a gender-sensitive regulatory and institutional framework; (ii) equity in the implementation of project activities, including a quota of 50% of agricultural project aggregation/primary processing of women-run cooperatives and SMEs (project selection, training, financing, etc.), (iii) development of gender-sensitive infrastructure (childcare facilities, separate and secure water-equipped showers and toilets, etc.), (iv) development of a gender-sensitive approach to the implementation of the project, and (v) the promotion of a gender-sensitive approach in the implementation of the project activities (project selection, training, financing, etc.).), (vi) support for women's cooperatives and SMEs through the structuring of their businesses and adapted training (especially in functional literacy, financial inclusion, processing, storage and conservation of agricultural products, natural resource management, etc.), (vii) promoting women's inclusion and leadership in the committees set up/consolidated under the project; (viii) a campaign to sensitise, combat and prevent malnutrition.

X. ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK PLAN (ESMFP)

This section presents the different components of the Environmental and Social Management Framework (ESMF) of the Agropole Sud, based on the priorities above and taking into account the requirements of the Environmental Regulations as well as the relevant standards and good practices of the financial partners. Its goal is to ensure the integration of environmental and social issues into the design, planning, management and implementation process of project activities through optimisation, mitigation, institutional, support, capacity building, good practice, etc. measures.

In addition, the interviews and consultations carried out with the various actors have enabled the collection of various suggestions and recommendations that have been taken into account in the present ESMFP.

More specifically, the objectives of the ESMFP include:

- to serve as a guide for the various project stakeholders in identifying the positive and negative impacts of the different activities ;
- to define guidelines for the different actors on the timeliness and nature of the environmental assessments to be undertaken;
- to provide criteria for the modalities of formulating mitigation measures;
- enable the preparation of a monitoring and evaluation plan for mitigation measures;
- to build capacity within the structures involved in the process of identifying, assessing and monitoring environmental and social impacts.

The ESMFP includes : (i) measures to enhance positive impacts; (ii) measures to mitigate major adverse impacts; (iii) the environmental screening process; (iv) measures to strengthen environmental and social management; (v) the monitoring/evaluation programme; (vi) the environmental and social monitoring plan; (vii) the institutional arrangements for the implementation and monitoring of the ESMFP; (viii) the public consultation process; (ix) the implementation schedule of the ESMFP; and (x) the cost assessment to ensure effective management of environmental impacts. In order to be effective, the ESMFP must be fully consolidated into the overall management effort and taken into account during the Project cycle.

The ESMFP will be included in the Implementation Manual of the Agropole Sud. The *Société de Construction et d'Exploitation de l'Agropole Sud* (SCE operations department), in collaboration with the Environment and Classified Establishments Division (DEEC) and the Regional Environment and Classified Establishments Division (DREEC) of each Casamance region, will be responsible for implementing the ESMFP.

10.1. MEASURES TO ENHANCE POSITIVE IMPACTS

Table 42 below shows the measures to enhance the major positive impacts of the PZTA Sud

Table 14 : Measures to enhance the major positive impacts of the PZTA-Sud

MAIN IMPACTS	ENHANCEMENT MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
Reduction of greenhouse gas emissions by controlling methane emissions from the open-air fermentation of animal dejecta using biogas combustion technology and the use of solar energy for market gardening. Strengthening resilience to CC and improving the living environment of the population	Raising awareness among the population and employees on the dangers of waste incineration and the use of bush fires for clearing and banning these practices Prioritise the use of solar panels for the energy supply of basic needs. Equipping chimneys with catalytic converters Companies	Companies PZTA-Sud Producers	DEEC/DREEC CRSE	Implementation of information and awareness-raising campaigns on climate change	Throughout the project (construction and operation phases)	PM (incorporated in the project costs)
Carbon sequestration linked to the management of community forests for populations	Proceed with the replanting of IREF community forests	IREF PZTA-Sud	DEEC/DREEC CRSE	Identify sites and reforestation needs Involve all stakeholders throughout the process	Prior to the commencement of works	PM (incorporated in project costs)
Decrease in the consumption of biomass linked to the use of biogas, and therefore reduction of the pressure on deforestation for wood energy needs (preservation of natural resources, biodiversity) and climate change	Information / awareness on CC Promoting the use of renewable energy instead of biomass in the PZTA-Sud project area	PZTA-Sud IREF	DEEC/DREEC CRSE	Preparation of an IEC programme on climate change	Throughout the project	20 000
Development of a local economic sector around the construction of biogas infrastructure (transfer of expertise)	Train local craftsmen in the manufacture of biogas infrastructure, economic management and the use of financial services	PZTA-Sud Services in charge of the craft industry	DEEC/DREEC CRSE	Information and awareness-raising for local artisans Integrate modules on biogas infrastructure into technical training schools.	At the commencement of the project	PM (incorporated in project costs)

MAIN IMPACTS	ENHANCEMENT MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
				At the beginning of the project		
<p>Job opportunities / boosting of lucrative activities and development of localities</p> <p>Improvement of the fiscal situation of the various municipalities involved in the project;</p>	<ul style="list-style-type: none"> • Include in the contractual clauses of the companies in charge of the works, the obligation to recruit local labour, with priority being given to local labour (including women and youths) at least 50% in labour-based activities; • Prioritise the subcontracting of certain works to local SMEs; • Establish an employment contract for all employees hired on the sites and provide for a progress plan. • Organize regular hands-on training and refresher sessions for employees on job sites according to their speciality • Issuing end-of-contract work certificates or attestations of employment to employees to enable them to justify their experiences in the event that they are offered another opportunity for similar jobs; 	<p>Municipalities PZTA-Sud SME/SMI Decentralised financial services</p>	<p>DEEC/DREEC CRSE</p>	<p>Information, awareness- raising of stakeholders</p> <p>Intermediation with decentralised financial services</p>	<p>Through out the Project</p>	<p>PM (incorporated in project costs)</p>

MAIN IMPACTS	ENHANCEMENT MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	<ul style="list-style-type: none"> • Establish a transparent recruitment process focused on disseminating information on job opportunities through the channels most accessible to the population (posters, local radio announcements, announcements in places of worship, etc.); • Ensure social security for all employees on the project sites and operating activities; • Give priority consideration to youths and women in the process of allocating arable plots ; • Structure/restructure women and youth groups through the creation/officialization of professional cooperatives; • Provide support for the development of product processing structures; • To pay the salaries of all project employees through local financial services (banks and micro-finance); • Purchase the maximum 					

MAIN IMPACTS	ENHANCEMENT MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	possible input (materials and equipment) for the project works and basic necessities at the local level if available.					
Creation of economic opportunities and promotion of gender.	<p>Adopt a gender approach in determining allocation criteria, including setting minimum quotas of arable land to be allocated to women and young people;</p> <p>Organise awareness campaigns on the benefits of women's empowerment and its effects on household prosperity and stability;</p> <ul style="list-style-type: none"> • Provide women and young people with support in income-generating activities through training, awareness-raising and the supply of materials; • Support local private initiatives aimed at giving economic autonomy to women in the project area; • Organise educational talks targeting husbands and wives who benefit from Project activities (access to land, credit, etc.) on the benefits of women's 	PZTA-Sud	DEEC/DREEC CRSE	Information and awareness-raising on job opportunities	Throughout the project	PM (included in project costs)

MAIN IMPACTS	ENHANCEMENT MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	<p>empowerment and management of household resources;</p> <ul style="list-style-type: none"> • Identify the risks of GBV in relation to construction work and women's economic empowerment; • Set up medical, psychosocial and legal assistance for GBV survivors; • Support existing structures for the fight against GBV 					

10.2. MEASURES TO MITIGATE MAJOR NEGATIVE IMPACTS

The table below summarizes the mitigation measures proposed for the management of the adverse environmental and social impacts of the agropole:

Table 15: Mitigation measures for the major negative impacts of the PZTA-Sud

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
Risk of landscape degradation, felling of trees and forest resources, loss of habitats for fauna, reduction of biodiversity linked to the release of rights-of-way and the opening/exploitation of borrow sites, development of horticultural plots, etc.	compensating reforestation according to the ratio 1 tree cut / 10 trees planted Promotion of intensive organic farming	IREF Enterprises PZTA-Sud	DEEC/DREEC CRSE	Sensitisation and training of producers on cutting and reforestation methods.	Prior to the commencement of project works	80,000
Risk of disturbance of wildlife habitat due to felling of trees and destruction of ecosystems in the context of the release of rights-of-way from project sites, exploitation of borrow sites, development of crop plots, etc.	<ul style="list-style-type: none"> Organising awareness campaigns aimed at protecting wildlife and prohibiting hunting without a permit issued by the wildlife administration Encourage livestock activities and prohibit the consumption of so-called bush meat on the work site Limit the destruction of wildlife habitats and burrows as much as possible. Create conditions far from perimeter sites favorable to the installation of wildlife Minimize damage to 	IREF/ National Parks Businesses PZTA-Sud	DEEC/DREEC CRSE	Sensitisation and training of site personnel and producers	During the works	10,000

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	microfauna by storing excess materials following an earthwork plan harmonious with the environment and by making it as easy as possible for the microfauna to reclaim space					
Risk of deterioration in air quality due to the emission of dust on construction sites, during the transportation of materials, etc.	<ul style="list-style-type: none"> • Equipping lorries transporting materials (sand, earth, cement, etc.) with protective tarpaulins and imposing a speed limit on them when crossing localities. • Install speed bumps at the locality level • Ensure regular watering during the dry season of the portions of roads and/or tracks used to transport materials, work areas and crushing sites, near sensitive sites (schools, health centres, village crossings, etc.). • Raise awareness among local residents and employees about the risks of odour nuisance 	Enterprises, PZTA-Sud	DEEC/DREEC CRSE	Sensitisation and training of machine operators and site personnel	During the works	PM (incorporated into project costs)

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAP)
	<ul style="list-style-type: none"> Require all workers to wear dust masks. Plan and hold reforestation campaigns. 					
Risks of degradation of groundwater and surface water quality	<ul style="list-style-type: none"> Prohibit the handling and dumping of fuels, chemicals, and solid and liquid wastes in major waterways and drainage channels. Make rational use of agricultural inputs Prohibit any discharge of waste water into the environment and set up a system for collecting and treating construction site water. Ensure regular maintenance of the irrigation network 	PZTA-Sud	DEEC/DREEC DPV PZTA-Sud	<p>Inform and raise awareness among site personnel and producers about the dangers of water pollution.</p> <p>Implementing a regular water quality monitoring programme by an approved laboratory</p>	At the commencement of the operation phase	20 000
Risk of soil and subsoil pollution due to the uncontrolled use of chemical pesticides and fertilisers; Risk of deterioration of producers' health due to non-compliant use of pesticides	<ul style="list-style-type: none"> Application of appropriate pesticide management measures Strict control of pesticides distributed to farmers; Elimination of obsolete pesticides 	PZTA-Sud	DEEC/DREEC CRSE	<p>Development and implementation of a guide to good agricultural practices including pesticide management</p> <p>Inform and raise</p>	At the end of works	

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	<ul style="list-style-type: none"> • Management of empty pesticide packaging • Training in integrated pesticide management • Compliance with the doses of pesticides prescribed by management • Better control of pesticide application periods • Promotion of the use of organic manure • Training of actors on the use of inputs • Biological control • Sensitisation and training of producers • Implementing a monitoring programme for the quality of ground and surface water. 			awareness among producers on the use of pests and pesticides		
Risk of proliferation of STI/AIDS, water-borne diseases and respiratory infections,	<ul style="list-style-type: none"> • Inform and sensitise site personnel and the population on STI/HIV/AIDS, water-borne diseases and ARIs. 	Enterprises PZTA-Sud Medical region	DEEC/DREEC CRSE Medical region	Develop and implement a health IEC programme focusing on STI/HIV/AIDS, waterborne diseases and ARIs.	At the commencement of workst	20 000

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
Expropriation and involuntary displacement of populations	<ul style="list-style-type: none"> Establish an effective consultation process with the population to ease fears. Raise awareness of the population on the fair and non-discriminatory process of allocating cultivation plots Organise information campaigns in the area to popularise the process of allocating and compensating people for the loss of plots of land, if the case arises. Prioritise the population concerned/affected by the Project in the process of allocating cultivation plots Set up a mechanism for managing complaints and conflicts, with a platform for dialogue with local populations under the supervision of administrative, local and customary authorities as soon as the process of allocating plots of land is 	PZTA-Sud Municipalities	DEEC/DREEC CRSE Administrative authorities	Develop and implement a Resettlement Action Plan whenever necessary	Prior to the commencement of workst	PM (incorporated into project costs)

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	<p>launched</p> <ul style="list-style-type: none"> To inform in a transparent manner about the regulations and the scales for the allocation of plots of land Involve local observers to support the population in the process of land allocation and resettlement. 					
Risk of conflicts between workers and residents in localities close to the project sites.	<ul style="list-style-type: none"> Establish a transparent and flexible complaints management mechanism Define a code of conduct for project employees and train them to comply with it Raise awareness among locals about living together Granting compensation or indemnity in case of destruction of another person's property Set up a committee to choose the areas for borrowing materials in 	PZTA-Sud	DEEC/DREEC CRSE Administrative authorities	Holding regular consultation meetings between workers and the local population.	All through the works process	PM (incorporated into project costs)

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	each village and include chiefs and opinion leaders.					
Pollution linked to the production of solid and liquid waste that can harm the environment and human health	Organise a poster awareness campaign and training for project staff on the increased risks linked to pollution, the PHSST, the importance of sorting, collecting, storing and recycling waste, as well as the prohibitions and sanctions provided for in the regulation, concerning the uncontrolled discharge of solid and liquid waste into the natural environment.	Agro-industrial Businesses PZTA-Sud	DEEC/DREEC CRSE	Conception and preparation of a solid and liquid waste management plan	During construction and operation phases	PM (incorporated into project costs)
Risk of tensions between farmers and producers linked to the extension of agricultural areas, and the management of community forests for access to water and pasture.	<ul style="list-style-type: none"> Implementing an information and communication programme on the project and its implementation modalities Participatory and consensual delimitation of livestock rangelands. 	PZTA-Sud	DEEC/DREEC CRSE (DRDR, Livestock, etc.)	Broad consultation between stockbreeders and farmers on livestock routes with the technical services and municipalities concerned.	Prior to the operation phase	20,000
Risk of land conflicts	<ul style="list-style-type: none"> Prevent the populations concerned from being evicted beforehand. Raise public awareness 	PZTA-Sud Municipalities Administrative authorities	DEEC/DREEC CRSE	Participatory and consensual identification and delimitation of crop plot boundaries	Prior to the commencement of project workst	PM (incorporated into project costs)

MAIN IMPACTS	MITIGATION MEASURES	RESPONSIBLE FOR IMPLEMENTATION	RESPONSIBLE FOR MONITORING THE IMPLEMENTATION	IMPLEMENTATION STRATEGY	PHASE	COSTS (x1000CFAF)
	<p>of the ban on occupying the private domain of the State</p> <ul style="list-style-type: none"> • Ensure the resettlement of affected populations • Compensate for the development of sites located on the right-of-way of the works to be developed; • Implement the recommendations of the CPR • Organise an information campaign among the populations concerned by the evacuation operations before the work begins. 			Application of PCR measures whenever necessary		
Risk of increased sexual exploitation and abuse or sexual harassment leading to the spread of STIs/HIV/AIDS and unwanted pregnancies	Inform and raise awareness among site personnel and the general public about sexual abuse and sexual harassment.	Businesses PZTA-Sud	DEEC/DREEC CRSE	Integrate aspects related to sexual abuse and harassment into the STI/HIV/AIDS IEC programme.	At works commencement	10 000

10.3. ENVIRONMENTAL AND SOCIAL SELECTION, CONDUCTING, VALIDATION PROCESS OF ESIA AND IMPLEMENTATION AND MONITORING

The aim of the environmental and social selection process is to ensure that environmental and social requirements are effectively taken into consideration throughout the process of planning, preparation, implementation and monitoring of Agropole Sud activities.

The selection process will:

- identify the activities of the agropole that are likely to have major negative environmental and social impacts;
- identify appropriate mitigation measures for activities with harmful impacts;
- identify the activities requiring an additional ESMP;
- describe the institutional responsibilities for:
- analysing and approving the results of the screening, implementing the proposed mitigation measures, and preparing additional EIA reports ;
- monitoring environmental indicators during implementation and operations activities.

The environmental selection process is described in the stages here under:

STAGE 1: FILLING IN THE ENVIRONMENTAL AND SOCIAL SELECTION AND CLASSIFICATION SHEET

The filling in of the initial selection sheet (see Annexes) will be carried out by the experts in environmental protection and the CEP (Environmental Expert and Social Expert). They will then proceed to the classification of the activity concerned. The agropole's activities likely to have negative impacts on the environment are classified under three categories:

- Category A: Project with a certain major environmental and social risk;
- Category B: Project with moderate environmental and social risk;
- Category C: Project without significant environmental impacts.

STAGE 2 : APPROVAL OF THE ENVIRONMENTAL AND SOCIAL SELECTION AND CLASSIFICATION

The environmental and social classification of the sub-projects will be approved by the DEEC. Sub-projects classified under category A will not be eligible for funding, since the project falls under the B category. On the other hand, if a sub-project is under category A and is indispensable, the government will refer the subproject to the donor for special dispensations. If no safeguard policy is triggered and the sub-project is approved (on other aspects of the assessment), then the procedure will continue ;

If the sub-project triggers a safeguard policy, the DEEC and the environmental and social safeguard experts of the PIU will ensure that measures are taken in order to be in compliance with the triggered policy.

After analysis of the information contained in the selection results and after having determined the right environmental and social category, and thus the extent of the environmental and social intervention required, the environmental and social safeguard experts, in collaboration with the DEEC, shall make a recommendation as to whether or not:

- environmental and social intervention will not be required;
- the application of simple mitigation measures will suffice;

- a specific ESMP will have to be implemented.

Cases where an ESMP is not required

In this case, environmental and social safeguard experts consult the checklists and environmental clauses in the Annexes to choose appropriate mitigation measures.

Cases where an ESMP is required

The PIU's environmental and social safeguard experts, with the support of DEEC, will implement the following activities:

- Preparation of the ToRs for the ESMP (see annex Model ToRs for developing an ESMP);
- drafting of the environmental and social statement, recruitment of approved consultants to prepare the ESMP;
- conducting public consultations in accordance with the ToR;
- review of the management plans and submission to the DEEC for approval.

STAGE 3: REVIEW AND APPROVAL OF EIAs REPORTS

Environmental and Social Impact Assessment reports are reviewed and validated at the national level by the DEEC Services.

In order to determine the mitigation measures to be included in the ToR of the sub-project in question, the impact and mitigation checklists in the annex will serve as a basis for the implementation of activities. The ESMP will be prepared by qualified consultants recruited by the PIU.

Table 44: Environmental Assessment Procedures for Projects Requiring an ESMP

Stages	Activities
Stage one	<p>Preparation of ToRs</p> <p>Depending on the results of the identification and the necessary scope of the ESMP, ToRs will be prepared. The ESMP will be prepared by a certified consultant and the report will follow the following format:</p> <ul style="list-style-type: none"> • Description of the study area • Description of the sub-project • Description of the environment • Legal and regulatory considerations • Determination of the possible impacts of the proposed sub-projects • Analysis of variants, including the "without project" variant • Public consultation process; and • Development of mitigation measures and a monitoring plan, including institutional capacity building and cost estimates
Stage Two	Choice of consultant
Stage Three	Carrying out the ESMP with public consultation
Stage Four	Review and approval of the ESMP for the sub-project.
Stage Five	Publication / Dissemination of the ESMP

In the event that the ESMPs are implemented, the DEEC, with the support of the other technical services concerned, will examine them for activities classified under category B for their approval (or rejection). Within the framework of the review of an ESMP, the DEEC may request additional information from the consultant who prepared the ESMP or from the PIU. Subsequently, the DEEC shall issue an opinion to the PIU on the environmental feasibility of the sub-project. In the event of an unfavourable opinion, this must be duly substantiated.

STAGE 4: PUBLIC CONSULTATION AND PARTICIPATION AND DISSEMINATION

The national legislation on EIAs provides that public information and participation must be ensured during the implementation of the environmental impact assessment, in collaboration with the competent bodies of the administrative district and the municipality concerned. Consultations should also be conducted during the environmental and social selection process of projects. Public information will include one or more meetings together with local authorities, populations, etc to present the project to the public. These consultations will help in identifying the main problems and in determining how the various concerns will be addressed in the Terms of Reference of the ESIs to be conducted. The results of the consultations will be incorporated into the EIAs report and will be made available to the public. In order to meet the consultation and dissemination requirements, the PIU will have to conform to the country's procedure for the publication of safeguard instruments.

In the case of sub-projects with significant negative impacts requiring an ESMP, a copy of the report will be deposited at the level of the region concerned, with a reasonable period of time to make its remarks through written comments. The PIU will also prepare, in collaboration with the communities concerned, the holding of public hearings on the restitution of the EIA report. The modalities for the holding of the hearings will be agreed upon with the different parties involved. Public information the project will be responsible.

STAGE 5: INCORPORATION OF ENVIRONMENTAL AND SOCIAL MEASURES IN THE BIDDING DOCUMENTS

In the case of ESIs or ESMPs, the PIU's environmental and social safeguard experts will ensure that the recommendations and other environmental and social management measures resulting from these studies are incorporated into the bidding documents and the implementation of the works by the companies.

STAGE 6: IMPLEMENTATION OF ENVIRONMENTAL AND SOCIAL MEASURES

For each project, private service providers and companies are responsible for the implementation of environmental and social measures.

STAGE 7: SUPERVISION, AND ENVIRONMENTAL AND SOCIAL MONITORING

Monitoring and evaluation shall be implemented as follows:

- Supervision by PIU's environmental and social safeguard experts and the Communities (CADL) ;
- Monitoring (internal proximity monitoring) of the implementation of the project's environmental measures shall be ensured by the Control Missions;
- External monitoring shall be conducted by the DEEC through its regional branches (DREEC) in consultation with the Regional Environmental Monitoring Committees for this purpose, under the coordination of the DREEC; and
- Evaluation will be carried out on a regular basis by Independent Consultants.

RESPONSIBILITIES FOR THE IMPLEMENTATION OF THE ENVIRONMENTAL AND SOCIAL SELECTION PROCESS

The table below summarises the stages and institutional responsibilities for the selection and preparation, appraisal, approval and implementation of sub-projects.

Table 45: Summary of environmental selection steps and responsibilities

No	Steps/Activities	Responsible	Support/ Collaboration	Service provider
1.	Identification of the location/site and main technical characteristics of the sub-project	Project Coordinator	CRSE	
2.	Environmental and social screening	Project Coordinator	CRSE	
3.	Determination of the type of specific safeguard instrument (ESIA, RAP, IPP, E&S Audit, AS, ...)	Environmental and Social Safeguard Specialists (ESSS) of the PIU	<ul style="list-style-type: none"> • DEEC • Beneficiary ; • Local Authority (LA) • ESSS/UP 	
4.	Approval of the categorisation by the DEEC and the Bank	Project Coordinator	ESSS/UP	<ul style="list-style-type: none"> • National Entity in charge of EIA (DEEC) • Bank
5.	Preparation of the specific sub-project E&S safeguard instrument (ESIA< PAR, Audit, etc.) in accordance with the national procedure and the Bank's requirements			
	Preparation, approval and publication of TOR	ESSS/UP	DEEC	Bank
	Conduct of the study including public consultation		Procurement Specialist (PS); DEEC ; LA ;	Consultant
	Validation of the document and obtaining the environmental certificate		PS, LA	DEEC, Bank
	Publication of the document		Coordinator	Media ; Bank
6.	(i) Inclusion in the sub-project's tender dossier (DAO) of all the measures of the works phase that can be contracted with the company; (ii) approval of the company's ESMP	Technical Manager (TM) of the activity	ESSS PS	
7.	Implementation/implementation of measures not contracted with the construction company	SSS	PS ; TM ; Chief Financial Officer (CFO) ; LA ;	Consultant NGO Others
8.	Internal monitoring of the implementation of E&S measures	ESSS	Monitoring and Evaluation Specialist (MES) ; RF ; LA	Control office
	Dissemination of the internal supervisory report	Coordinator	ESSS	
	External monitoring of the implementation of E&S measures	EN-EIA	ESSS	
9.	Capacity building of stakeholders in E&S implementation	ESSS/UP	<ul style="list-style-type: none"> • Other ESSS • PS 	<ul style="list-style-type: none"> • Consultants • Competent public structures
10.	Audit of the implementation of E&S measures	ESSS/UP	<ul style="list-style-type: none"> • Others ESSS ; 	<ul style="list-style-type: none"> • Consultants

No	Steps/Activities	Responsible	Support/ Collaboration	Service provider
			PS ; MES ; EN- EIA ; LA	

Mitigation measures (see Annex checklist of impacts and mitigation measures) are identified to ensure that the project objectives are achieved while preventing and minimising undesirable environmental impacts.

These are, at first glance, typical mitigation measures for project components/activities with a potential impact on the environment. It is possible that other more specific measures for the different components may be identified as part of the specific environmental work (Environmental and Social Assessment) for those sub-projects that require further investigation of impacts as required under the environmental legislation in force in Senegal.

10.4. MEASURES TO STRENGTHEN ENVIRONMENTAL AND SOCIAL MANAGEMENT

The following measures to strengthen environmental and social management are mostly suggestions and recommendations from actors on institutional and technical measures. Regarding the implementation and environmental and social monitoring of the Agropole Sud, the proposed approach to managing environmental and social risks aims at enabling the operational structures of the rural development sector and agricultural producers, to play their full role in the planning, implementation, monitoring and operation of infrastructure and equipment. In this perspective, the ESMF suggests institutional and technical support, training and awareness-raising measures to strengthen the capacity of the structures and human resources involved in project implementation. These institutional and technical support, training and awareness-raising measures are aimed at: (i) making the environmental management strategy for the Agropole Sud operational; (ii) promoting the emergence of expertise and professionals in environmental and social management; (iii) raising the level of professional awareness and responsibility of staff in environmental management; (iv) protecting the rural environment and the health and safety of agricultural producers and populations.

10.4.1. Strategic Measures

AREAS TO CONSIDER ACCORDING TO ENVIRONMENTAL AND SOCIAL ISSUES

The intervention strategy of Agropole Sud in the choice of sites for the modules must take into consideration areas where the environmental and social stakes are high, especially by referring to the provisions of Article L13 of the Environmental Code. The project must pay particular attention to these areas. These include protected areas and wetlands of national or international importance. For each of these areas, the project must ensure that the regulatory distance is respected and that there is no encroachment during the implementation of regional modules or departmental platforms and the possible expansion of cashew or mango plots.

SETTING UP A SYNERGY OF INTERVENTIONS BETWEEN ACTORS

There are several ongoing projects and programmes (PPDC, P2RS, PAPSEN/PAIS, etc.) or future projects and programmes in the intervention zone of Agropole Sud. In this sense, creating a synergy of interventions between the different Projects intervening in the value chains targeted by the Agropole Sud through a consultation and coordination platform could help to maximise results and avoid duplication and redundancy.

ESTABLISHING THE REFERENCE SITUATION AND SETTING UP A DATABASE ON CASHEW AND MANGO TREE CROPS

Managing the expansion of plots and controlling the annual production volumes of cashew and mango trees is a major issue in Casamance. The control of land tenure and the evaluation of occupied areas, the typology and the number of producers disaggregated by gender should be a priority in Casamance. These data should be implemented in a geographic information system (GIS) regularly updated by the PIU.

MAINSTREAMING GENDER

Within the framework of the implementation of the Agropole Sud, women have definite assets to participate fully in achieving food self-sufficiency. The project should therefore develop a strategy that takes the gender dimension into consideration. This strategy could be based on:

- Encouraging women to become owners of cashew and mango plots to promote women producers of mango and cashew nuts ;
- Encouraging women to become more involved in mango and cashew processing, as starters or with already acquired experience, know-how and technical skills;
- Enhancing capacity building activities to improve the quality of women's training and access to information;
- Carrying out a participatory diagnosis to better identify the issues and challenges of gender/agriculture in the implementation of the agropole.

The approach to be adopted should be integral and cross-cutting to ensure that gender is genuinely taken into account. It should be open and flexible with regard to the social and cultural realities of Casamance, while remaining attentive to the transformations that will take place in the country.

Gender mainstreaming will be based on a twofold approach aimed at:

- strengthening women's organisational dynamics and building their production capacity, so that they can specialise in certain sectors and have a more decisive influence in decision-making processes within families and the community; and
- providing women with local support/advice and promoting their access to credit and efficient management of the activities they carry out. Within this framework, they will benefit from training in the development of entrepreneurial capacity, as well as in the management of their economic activities.

In addition, other vulnerable groups deserve to be taken into consideration in the agropole, especially disabled people, unemployed youths and the elderly.

CLIMATE CHANGE ADAPTATION MEASURES

The agricultural sector will have to take into consideration the changes in water availability and the multiplication of extreme climate events. The following measures are recommended:

At the strategic level

Incorporate climate change impacts into the agropole's strategies and activities.

At the institutional level

Set up a partnership framework between the agropole, the Hydrological Services and the Meteorological Services. Through this partnership, a monitoring and warning system to forecast the evolution of climate change will be set up (implementation and monitoring of meteorological and climatological data).

From this perspective, the agropole will support in training agents and equipping regional and national structures (Agricultural and Meteorological Services, etc.) to build up adaptation capacity to cope with future climate risks (weather forecasts) and enable investors-farmers to take action to protect their farms.

10.4.2. Institutional Enhancement Measures

STRENGTHENING THE PIU

The PIU set up to steer the implementation of the agropole's plans to include the Ministries of Agriculture, Environment, Trade, Industry, Economy, Commerce and Finance, as well as other structures, which will enable the environmental strategic orientations to be better taken into account and ensure compliance with environmental and social standards.

The PIU will include an expert in environmental safeguards and an expert in social safeguards recruited by the PIU in order to ensure the integration of environmental and social aspects in the implementation of the project activities. These experts should assist the PIU respectively in the incorporation of environmental and social aspects and in the internal monitoring of the activities, in close collaboration with the DEEC in each region.

STRENGTHENING THE ENVIRONMENTAL AND SOCIAL EXPERTISE OF THE EXECUTING AGENCIES OF THE AGROPOLE

The main implementing structures of the agropole must possess adequate capacity in environmental and social management. An Environmental and Social Focal Point (ESFP) shall be designated at the level of each implementing structure for the specific monitoring of environmental and social issues in addition to those already existing at the Ministries. The Ministry of Environment should be given greater responsibility for the environmental and social function of the agropole.

STRENGTHENING THE ENVIRONMENTAL EXPERTISE OF CONSULTING FIRMS

The agropole could finance the recruitment of consulting firms or other service providers to support the project in its implementation. In the recruitment criteria, the PIU should include the presence of an environmental and social expert who will act as the Environmental and Social Focal Point (ESFP).

10.4.3. Technical and knowledge enhancement measures

The technical enhancement measures are:

- the drafting of a manual of good agricultural practices;
- the provision for the development and implementation of a possible ESMP; and
- the monitoring and evaluation of agropole activities.

DEVELOPMENT OF A GOOD AGRICULTURAL PRACTICES MANUAL

The SCE provides for the establishment of a relationship between the project and smallholders to ensure that the two parties work together. The partnership will aim at:

- effectively integrating the suppliers of raw materials (small farmers) with the food chain demand;
- providing appropriate raw materials to agro-industries;

Crop contracts between producers and agro-processors shall also be provided for through legally binding agreements on production methods and technologies, quantity, quality and production prices, as well as technical and financial support.

For these reasons, the agropole project will have to support agricultural investors in the preparation of good agricultural practice procedures to support activity implementation (environmentally friendly farming techniques, use of pesticides and fertilizers; etc.).

DRAFTING OF AN ENVIRONMENTAL CHARTER FOR SMEs

To enable the SMEs which will be located in the agropole to comply with environmental rules and practices for maximum control of polluting emissions, agropole's PIU will have to support private investors (SMEs) to have standards and procedures of good practices on packaging, processing, bagging, marketing and recycling of mango and cashew nut waste. The sharing of responsibilities between the SMEs and the agropole manager (PIU) will be defined under an environmental and social charter.

OVERALL WASTE MANAGEMENT STRATEGY

To implement the agropole, the project will incorporate a waste management system to mitigate the potential negative impacts of solid and liquid waste on the project's environment and a renewable energy production system (solar, wind and biomass) to minimise its carbon footprint. Under the comprehensive impact assessment complementary to this ESA, a comprehensive solid and liquid waste management strategy should be developed to efficiently address this aspect in the overall management of the agropole.

- economical and appropriate waste management systems and practices;
- an appropriate waste management facility;
- practical, sound and effective, legislative and regulatory policy measures;
- communication strategies to support waste management activities;
- mechanisms to support solid waste management systems in a financially and economically viable manner;
- mechanisms to support solid waste management research and development; and
- capacity building mechanisms to empower users to manage their waste in an environmentally sustainable manner.

SUPPORT FOR THE DEVELOPMENT OF CLEAN TECHNOLOGIES

The use of low-polluting, environment-friendly and, if possible, low raw material-consuming technologies would be beneficial to the SMEs that will locate in the agropole. To this end, it would be necessary for the PIU to provide assistance for the promotion of clean technologies (processes that pollute little or use few raw materials or improve the working conditions of employees) under the aegis of the ministry in charge of SMEs. The technological offer could be in the form of virtual libraries, an exchange bank with specialised technological centres, or by preparing specific dossiers.

PREPARATION AND IMPLEMENTATION OF ENVIRONMENTAL AND SOCIAL STUDIES

Environmental and Social Impact Assessments (ESIAs) are recommended for certain project activities classified under Category "A" or "B" to ensure that they are environmentally and socially sustainable. If the environmental classification of the activities indicates that ESIAs are required, the project will provide financial resources to pay for accredited consultants to conduct these studies and implement the related Environmental and Social Management Plans (ESMPs).

MONITORING AND EVALUATION OF PROJECT ACTIVITIES

The monitoring programme will include permanent monitoring (proximity monitoring), supervision, and annual evaluation. This annual independent evaluation will focus explicitly on the cumulative environmental and social impact of the sub-projects. It will be necessary to provide a budget for this monitoring. Supervision at the national level will also need to be budgeted for, to enable the PIU and other services to participate.

10.4.4. Natural resource management measures

These are development and reforestation measures, compensation/restoration of sites hosting the agropole's modules. Furthermore, the agropole's activities could lead to minor disturbances around protected areas, classified forests and other wetlands, and as such will need to be better demarcated, protected and even compensated for in the event of logging.

10.4.5. Training actors involved in Project implementation

In order to ensure that project activities are carried out in an environmentally and socially sustainable manner, it is recommended that investors, service providers, SCE agents, including Technical Services at regional and local level be trained on procedures and techniques relating to environmental and social management and monitoring of the activities to be implemented.

The goal is to pursue and strengthen the training dynamics of all the actors involved in the environmental and social management of the project and sub-projects (training of trainers, researchers, executives from the Ministries of Agriculture and Environment, Producers' organisations, etc.). This will involve creating a critical mass of national trainers in environmental and social management who will thus be able to multiply the results at the level of the actors in the field, especially private investors and producer organisations.

Training workshops will be organised in the project area to enable the regional structures involved in the monitoring of the works to familiarise themselves with the provisions of the ESMF, the environmental selection procedure and the responsibilities in the implementation.

Topics could be centred around:

- environmental and social issues related to agricultural activities and environmental assessment procedures ;
- health and safety issues related to the activities; and
- appropriate environmental regulations. During the training, the actors must also become familiarised with national environmental assessment regulations, donor guidelines (African Development Bank, Islamic Development Bank, GCF), environmental assessment methods, environmental monitoring and follow-up.

Qualified Consultant-trainers in environmental and social assessment could be recruited by the PIU, with the assistance of DEEC, to conduct these trainings. The capacity building programme conducted should ensure that the sustainability of the measures taken is actually owned by the beneficiaries.

The main areas presented below can be taken into account.

TRAINING MODULES ON ENVIRONMENTAL AND SOCIAL ASSESSMENT

Good knowledge of the procedures for organising and conducting ESIA's;

Objective assessment of the content of ESIA reports;

Knowledge of national environmental and social procedures and of the landlord; and

Knowledge of the process of monitoring the implementation of ESIA's; and

Gender mainstreaming in rural development activities.

TRAINING MODULES ON PESTICIDE MANAGEMENT

Basic knowledge of pesticide handling and risk management procedures;

Wearing of protective and safety equipment;

Risks related to the storage and transport of pesticides;

Procedures for handling and managing used / expired packaging and pesticides;

Emergency and rescue measures in the event of poisoning from plant protection products; and

Process and residue monitoring.

TRAINING MODULES ON ENVIRONMENTAL ASPECTS OF AGRICULTURAL PRODUCT PROCESSING

Hygiene and quality standards;

Environmental and social aspects of the management of processing waste; and

Protection and safety measures.

TRAINING MODULES ON LAND TENURE

The different statuses of land (modern and traditional);

Decentralisation and land tenure;

Women's access to land (legal and sociological aspects);

The status of agribusiness;

Agriculture and the environment;

Professionalisation of the agricultural sector; and

The management of conflicts over land tenure issues.

10.4.6. Information and sensitisation of populations and actors concerned

The SCE and the executing agencies should coordinate the implementation of information and sensitisation campaigns among local authorities and agricultural producers in the agropole area, especially on the nature of the works and the environmental and social issues at stake during the implementation of the project activities.

In this process, local associations, producer organisations and environmental NGOs must be involved at the forefront. Grassroots communities are also required to be closely involved in the development and implementation of these strategies to raise awareness and mobilise communities.

The specific objectives of this action include:

- prepare the population to implement and manage agricultural activities;
- sensitise women to action in the field and support them in the process of recognising their rights;
- sensitise the population on aspects of hygiene – sanitation / health;
- sensitise the technical agents and agricultural producers involved in the management of infrastructure;
- ensure the monitoring and support of the solutions put in place;
- Be the intermediary between the different actors of the project (population, associations, local authorities, producers, technical services) and manage conflicts;
- organise information and facilitating sessions in each targeted site;
- organise popular meetings at each site; and
- sensitise the population through previously trained local facilitators; etc.

This will involve implementing major actions aimed at farmers and elected officials to create the conditions for a perfect ownership of the project and its social success.

These actions are as follows:

- An information and communication campaign on the concept of agribusiness: conduct a campaign to explain the positive connotations of the terms "agribusiness" and "agro-industry" in the project to farmers and local elected officials involved, given that, these terms can have negative connotations for most farmers and certain actors.
- Local meetings on land tenure and land tenure titles: hold clarification meetings with local actors and farmers on the land tenure issue and on the fate of individual land tenure titles in relation to the agropole. This will dispel the mistrust observed among farmers and local producers regarding the project. This can further strengthen support for and ownership of the project.

Information, education and Behaviour Change Communication (BCC) should focus primarily on the environmental problems associated with the agropole, as well as the strategies that need to be adopted to deal with them. The production of pedagogical materials must be developed and all existing channels and media must be used rationally to convey appropriate messages.

Table 16: Summary of training and awareness activities for actors

Nature of the action	Target	Implementing body	Duration
Training workshop on AfDB environmental procedures, completion of screening forms, identification of potential impacts and selection of mitigation measures from checklists.	<ul style="list-style-type: none"> • DEEC/DREEC • CRSE members • Executing agencies • PIU 	<ul style="list-style-type: none"> • Training organisation • Environmental consultant 	<ul style="list-style-type: none"> • 6 days (2 days per region) for the entire duration of the project
Training workshop on the implementation of the ESMFP and the monitoring and follow-up plan	<ul style="list-style-type: none"> • DREEC • CRSE • PIU 	<ul style="list-style-type: none"> • Environmental consultant 	<ul style="list-style-type: none"> • 6 days (2 days per region) for the entire duration of the project
Training workshop: <ul style="list-style-type: none"> • solid and liquid waste management • infrastructure maintenance techniques 	<ul style="list-style-type: none"> • Managers of modules, processing facilities 	<ul style="list-style-type: none"> • Environmental consultant 	<ul style="list-style-type: none"> • 6 days (2 days per region) for the entire duration of the project
• Information and awareness-raising			
<ul style="list-style-type: none"> • Information and awareness-raising campaigns on the nature of the work, the involvement of local stakeholders, environmental and social issues • Raising awareness on good agricultural and pastoral practices • Raising awareness on safety, health and hygiene when carrying out agricultural activities • Sensitisation on the 	<ul style="list-style-type: none"> • Populations, • Associations of local agricultural producers (POs, NGOs, etc.), • Etc. 	<ul style="list-style-type: none"> • Prime Contractor 	<ul style="list-style-type: none"> • 6 campaigns (2 campaigns per region) for the entire duration of the project

Nature of the action	Target	Implementing body	Duration
vulnerability factors of agricultural activities (HIV / AIDS, malaria, severe malnutrition, etc.)			

10.5. MONITORING AND EVALUATION PROGRAMME OF THE ESMFP

Monitoring and evaluation are complementary. Monitoring aims at correcting "in real time", through continuous surveillance, the methods of implementation of interventions and operation of infrastructure. Evaluation on the other hand, aims to: (i) check whether the objectives have been met and (ii) draw lessons from operations in order to modify future intervention strategies. Environmental monitoring will include the entire agropole and will apply to all phases of the activities to be implemented or supported.

10.5.1. Contexte and objective of the monitoring – evaluation of the ESMFP

Despite having knowledge of certain environmental and social phenomena linked to the generic impacts of the agropole, there is still a certain degree of uncertainty in the precision of other impacts, including the widespread and residual impacts. As such, it is necessary to prepare an environmental monitoring and follow-up programme that will be implemented within the framework of the agropole.

The aim of this environmental and social monitoring is to ensure compliance with:

- the measures to be included in the project's impact study, especially with regard to mitigation measures ;
- the conditions set by the Environmental Code, the application decrees, the decrees relating to EIAs and the relevant texts relating to the preservation of natural resources in force in Senegal; and
- the commitments of the Project Owner and the Prime Contractor in relation to other laws, regulations and prescriptions in terms of hygiene and public health, management of the population's living environment, protection of the environment and natural resources.

The monitoring programme describes:

- the items to be monitored;
- monitoring methods and mechanisms;
- monitoring responsibilities; and
- the monitoring period.

Each of the elements of the implementation mechanism should include a monitoring mechanism aimed at:

- verifying the occurrence of the potential impacts predicted;
- verify the effectiveness and efficiency of the implementation of the selected mitigation measures; and
- take corrective actions to the environmental management plan.

Monitoring includes the analysis of the changes in certain impact receptors (natural and human environments) affected by the agropole, including:

- changes in the quality of water resources;
- the evolution of land degradation phenomena and soil fertility;

- monitoring of biological indicators (regeneration of plant cover, reconstitution of areas in reforested zones, presence and quantity of fauna, etc.);
- statistics on pesticide-related accidents and poisonings; and
- the level of evolution of diseases linked to the agropole's activities.

The first stage of the monitoring programme consists of establishing "the initial status" in relation to the concrete mitigation measures proposed. Variations in this "initial status" will be monitored during and after the completion of works. Monitoring will also include the effectiveness of the implementation of the mitigation measures retained in the ESMFP.

MONITORING DURING THE IMPLEMENTATION PHASE OF AGRICULTURAL ACTIVITIES AND THE CONSTRUCTION OF FACILITIES FOR THE COLLECTION, STORAGE AND PRELIMINARY PROCESSING OF AGRICULTURAL PRODUCTS

During construction work and agricultural activities, the regulations in force and in particular those concerning the environment must be observed. Infrastructure development (collection, storage, mango and cashew processing infrastructure) needs to be implemented within the framework of a quality management plan including compliance with environmental constraints corresponding to the measures presented in the Environmental Management Framework Plan.

MONITORING DURING THE OPERATING PHASE OF THE CASHEW AND MANGO COLLECTION, STORAGE AND PROCESSING FACILITIES

In the operational phase, monitoring will focus on the essential components described in the above framework, in particular: the state of water resources; water quality; soil degradation; physical properties of the soil; soil behaviour and use; changes in fauna and the state of flora and biodiversity; ecology and protection of natural environments; hygiene and health (diseases, intoxication); pollution, nuisances and safety during operations; monitoring of claims and conflicts).

10.5.2. Monitoring indicators

Indicators are parameters used to provide quantitative or qualitative information on the environmental and social impacts and benefits of the agropole. The indicators are used, on the one hand, to describe, with verifiable accuracy, the impact generated directly or indirectly by the activities of the components of the agropole and, on the other hand, to highlight the significance of the impact. They provide a summary description of the situation and constraints and make it possible to observe the progress made or degradation suffered over time or in relation to targets. They reveal past trends and serve, to some extent, as forecasting tools. As such, they are an essential component in the Environmental and Social Assessment of the agropole. The following environmental and social indicators should be considered when assessing the effectiveness of the agropole's activities.

STRATEGIC INDICATORS TO BE MONITORED BY ENVIRONMENTAL EXPERT OF THE PROJECT IMPLEMENTATION UNIT (PIU) OF PZTA-SUD

The strategic indicators to be monitored by the Environmental Expert include the following:

- Effectiveness of the environmental selection of the agropole's activities ;
- Completion of specific EIAs and implementation of the ESMPs;
- Implementation of training/sensitisation programmes on the agropole's ESMFP;
- Effectiveness of environmental and social monitoring and reporting;
- Number of trees planted or landscaped areas completed; wildlife observed;
- Level of application of environmental and social mitigation measures;

- Number of training sessions organised ;
- Number of awareness sessions organised ;
- Number of producers sensitised on hygiene, safety, STI/HIV/AIDS and pesticide management measures ;
- Level of involvement of local authorities and actors in the monitoring of the work;
- Level of consensus (approval) on the choice of installation sites for facilities (regional and departmental modules, etc.);
- Level of compliance with health and safety measures;
- Types of waste management measures ; and
- Number and type of complaints and conflicts.

INDICATORS TO BE MONITORED BY STATE INSTITUTIONS IN CHARGE OF ENVIRONMENTAL ISSUES

Monitoring will be implemented "internally" by the Environment Focal Points of the Ministries at the regional level during the entire project implementation phase.

Monitoring will be implemented "externally" by the DEEC (for monitoring the ESIA procedure and the implementation of the ESMF and ESMP), the Water and Forestry Inspectorate (vegetation), the Ministry of Health Services (for health), the Labour Inspectorate (occupational safety), the Mining and Geology Service (quarry management), the Ministry of Hydraulics services for water management. This non-exhaustive list of State technical services will be supplemented by independent consultants (for evaluation). All these structures will have to be supported by the project within the framework of this monitoring.

Special attention will be given to strengthening the capacity of the staff of the administrations involved in environmental and social monitoring by organising training sessions in environmental and social management. This activity should be implemented by the PIU.

Table 17: Framework for environmental and social monitoring of the agropole

Indicator or Type	Environmental Component / Theme	Indicator	Collection Frequency	Collection Method	Responsible
Indicators For Monitoring Sub-Projects	Air	Number Of People Sensitised Number Of Workers Wearing Ppe Number Of Protective Equipment Number Of Trucks With Protection Linear Access Section Watered Per Day Works Implementation Period	During Field Trips	Visual Observations, Surveys And Mission Reports	Control Mission / Prime Contractor
	Water	Physico-Chemical Parameters Of The Quality Of Water Points	End Of Works	Results Of Physico-Chemical Analyses	Control Mission / Prime Contractor
		Bacteriological Parameters Of Water Tables			Control Mission / Prime Contractor
		Presence Of Solid And Liquid Waste From Works In Water Bodies	During Field Trips	Visual Observations, Surveys And Mission Reports	Control Mission / Prime Contractor
		Number, Quantity, And Location Of	During Field	Visual	Control Mission /

Indicator or Type	Environmental Component / Theme	Indicator	Collection Frequency	Collection Method	Responsible
		Samples Taken From The Yard For The Purposes Of The Work	Visits	Observations, Surveys And Mission Reports	Prime Contractor
		Turbidity Of Water Bodies Due To Erosion	During Field Visits	Visual Observations, Surveys And Mission Reports	Control Mission / Prime Contractor
	Soils	Number Of Gullies And Soil Erosion Points	During Field Visits	Visual Observations, Surveys And Mission Reports Control Mission	Control Mission/Prime Contractor
		Number Of Uncontrolled Waste Deposits	During Field Visits	Visual Observations, Surveys And Mission Reports	Control Mission/Prime Contractor
		Number Of Sites Contaminated By Liquid Waste	During Field Visits	Visual Observations, Surveys And Mission Reports	Control Mission/Prime Contractor
		Number Of Quarries Opened And Rehabilitated	During Field Visits	Visual Observations, Surveys And Mission Reports	Control Mission/Prime Contractor
	Soils	Developed Areas	Annual	Annual Reports Agricultural Statistics	Water Resources And Forests
		Abandoned Areas	Annual	Annual Reports Agricultural Statistics	Water Resources And Forests
	Vegetation / Fauna	Areas Deforested During The Works	Annual	Annual Reports Of Service In Charge Of Forests	Water Resources And Forests
		Areas Reforested After The Works And Reforestation Rate	Annual	Annual Reports Of Service In Charge Of Forests	Water Resources And Forests
		Encroachment Rate In Protected Areas	Annual	Annual Reports Of Services In Charge Of Forests	Water Resources And Forests
		Disappearance Of Certain Species (Plants And Fauna)	Annual	Annual Reports Of Services In Charge Of Forestry	Water Resources And Forestry
	Production Systems	Volume Of Inputs Used (Pesticides, Herbicides, Fertilisers)	Annual	Annual Reports	DPV
		Rate Of Adoption Of Integrated Pest Management Methods	Annual	Annual Reports DPV	DPV
		Use Of Organic Manure	Annual	Annual Reports DPV	DPV
		Areas Under Organic Cultivation	Annual	Annual DRDR/DAPS Reports	DRDR/DAPSA
		Management Of Waste (Liquid, Solids) From Processing Activities	Annual	Annual Reports SCE	PIU

Indicator or Type	Environmental Component / Theme	Indicator	Collection Frequency	Collection Method	Responsible
		Recovery Rate Of By-Products From Processing Industries	Annual	Annual Reports SCE	PIU
		Agronomic Quality Of Soils Outbreak Of Certain Crop Pests	Annual	Annual Reports	ISRA/DPV
	Health Impacts	Mortality Rate	Annual	Health Statistics Survey	Structure Of Health Pyramid Present On Site (Health Post, Infirmary...
		Infant Mortality Rate (<5 Years)	Annual	Annual Reports Health	Health Service
		Rate Of Malnutrition (< 5 Years)	Annual	Annual Reports Health	Health Service
		Prevalence Of Diarrheal Diseases	Annual	Annual Reports Health	Health Service
		Evolution Of Household Health Budgets	Annual	Annual Reports Health	Health Service
	Human Environment	Respect Of On-Site Hygiene Measures	Annual	Annual Reports Health	Health Service
		Waste Management Practices	Annual	Annual Reports Of Hygiene Services	Health Service
		Actions To Combat Water-Borne Diseases	Annual	Annual Reports Of Hygiene Services	Sanitation Service
		Prevalence Of STI/HIV/AIDS	Annual	Annual Report Of Health Services	Health Service
		Wearing Adequate Protective Equipment	Annual	Monitoring Report Of SCE	PIU
		Presence Of Disease Vectors	Annual	Monitoring Report Of SCE	PIU
		Prevalence Rate Of Water-Related Diseases (Malaria, Bilharzia, Diarrhea, Schistosomiasis, Etc.),	Annual	Report Of Health Services	Health Service
		Number Of Poisonings Linked To The Use Of Pesticides	Annual	Report Of Health Service	Health Service
		Availability Of Safety Instructions In The Event Of An Accident	Annual	Reports Of Safety Services	Safety Services
		Number And Types Of Complaints	Annual		Services
	Human Environment: Socio-Economic Activities	Number Of People Affected And Compensated	Annual	National Statistics	National Statistics Services
		Number Of Jobs Created Locally		Annual Reports Of Water Services	Hydraulic Services
		Number Of Social Conflicts Linked To The Project	Annual	Annual Reports Of Water Services	
		Quality Of Infrastructure Built	At The End Of Works	Monitoring Reports	

Indicator Type	Environmental Component / Theme	Indicator	Collection Frequency	Collection Method	Responsible
		Level Of Compliance With Hygiene And Safety Measures			
	Gender	Women's Activity Rate	Annual	Annual Socio-Economic Reports	Statistics Services
		School Enrollment Rate For Young Girls			
	IEC/Communication	Number Of Training Sessions Organised	Annual	Annual Monitoring Reports	DEEC
		Number Of Awareness Sessions Organised	Annual	Annual Monitoring Reports	DEEC
		Number Of Local Associations (Ocbs) Involved In Implementation And Monitoring	Annual	Annual Monitoring Reports	DEEC
		Number Of Ngos Involved In The Implementation And Monitoring	Annual	Annual Monitoring Reports	DEEC
		Level Of Involvement Of Communities And Local Stakeholders In The Monitoring Of Works	Annual	Annual Monitoring Reports	DEEC
		Number Of Small- And Medium-Sized Enterprises (Male And Female) By Type Of Works And Contracts	Annual	Annual Monitoring Reports	DEEC
	Soil Restoration At The Drainage Basin	Reforested Area And Species Diversity In Each Reforestation Area	Once A Year For 3 Years From The End Of Works	Sampling On Reforestation Areas	Water And Forestry
Works Monitoring Indicators	Environmental Management Of Construction Site	% Of Companies Respecting Environmental And Social Clauses During The Works	At The End Of Works	On-Site Inspections And Report Of The Engineer In Charge Of Control Environmental Monitoring Reports	Project Manager
		Number Of Water Points Polluted By The Works	At The End Of Works	Mid-Term Evaluation Of The Project	Hygiene Service

Indicator or Type	Environmental Component / Theme	Indicator	Collection Frequency	Collection Method	Responsible
		Number Of Sites Whose Waste Is Well Managed	At The End Of Works	Periodic Monitoring Reports	PIU/ DEEC
		Number Of Quarries Opened And Rehabilitated	At The End Of Works	Monitoring Reports	DEEC
		Number Of Local Labour Used For The Works	Periodic	Monitoring Reports	DEEC
	Training	Number Of Control Offices Or Controllers Trained In Environmental Monitoring Of Sub-Projects	Periodic	Monitoring Reports	Executing Agency/ DEEC
		Number Of Workers Made Aware Of Hygiene And Safety Measures And Stis-HIV-AIDS	Periodic	Periodic Monitoring Reports	PIU / Executing Agencies/ DEEC
		Number Of Agents Trained	Annual	Annual Reports	PIU/ Executing Agencies/ DEEC
Monitoring Indicators Of ESMP Measures	Carrying Out Environmental And Social Studies For Sub-Projects	Number Of Esias Carried Out	Once During The Life Of The Project	Final Evaluation Report Of The PGES	Project Manager
		Level Of Application Of Mitigation Measures	Annual	Annual Monitoring Reports	DEEC
	Development Of Maintenance Manuals	Maintenance Manual	Annual	Annual Reports	PIU / Executing Agencies / DEEC
	Monitoring And Evaluation Measures	Number And Types Of Indicators Monitored	Annual	Annual Reports	PIU
		Number Of Follow-Up Missions	Annual	Annual Reports	DEEC
	Training, IEC Awareness	Training Sessions In Environmental And Social Evaluation And Monitoring, Organised Projects	At The End Of Each Training	Training Reports	DEEC
		Number Of Modules In Environmental And Social Evaluation And Monitoring Of Projects Developed	Annual	Annual Reports	DEEC
		Number Of IEC Sessions Organised	Annual	Annual Reports	DEEC
		Number And Type Of People Made Aware	Annual	Reports	PIU/ Executing Agencies/ DEEC

These indicators will be regularly monitored during the establishment and progress of the sub-projects and will be incorporated into the Agropole Implementation Manual.

10.6. ENVIRONMENTAL MONITORING

Environmental monitoring is an important step in the implementation of the ESMFP. The Prime Contractors (PC) will be responsible for verifying the application of mitigation measures, through indicators linked to these measures defined in future environmental and social assessments.

Regarding the costs of monitoring, they mainly relate to the services of Prime Contractors who, in addition to technical monitoring, will include environmental and social monitoring. To this end, it will be a question of including this aspect in their contracts. The monitoring of technical and social aspects (including compensation in the event of loss of assets) is borne by the control office and the social engineering office respectively.

During the operation phase, environmental monitoring will be under the direct responsibility of the PIU in charge of project management. It will have to put in place the material and financial resources necessary for its proper implementation. The PIU will have to develop an environmental monitoring manual during the operational phase to harmonise this component and a model of directives that users will have to comply with and which will be included with the private service delegate.

10.7. INSTITUTIONAL ARRANGEMENTS FOR THE IMPLEMENTATION AND MONITORING OF THE ESMFP

The following institutional arrangements are proposed for the project with respect to roles and responsibilities for implementation and monitoring. These arrangements have been discussed with the main stakeholders involved in the implementation and monitoring of the project, and for the most part they fall within the framework of the sovereign missions of each of the targeted structures. The management of the environmental and social function is centred around the following areas: Coordination and external supervision; Preparation and "internal" monitoring of implementation; "External" environmental and social monitoring; Infrastructure development implementation works), as described below:

COORDINATION, PREPARATION AND SUPERVISION

The PIU is, among other missions, responsible for the coordination of the project and the secretariat of the Steering Committee. In this regard, it will be responsible for the establishment of an environmental and social function within the Agropole to manage these aspects within the framework of the project. Environmental and social safeguard experts in the PIU will coordinate local monitoring of environmental and social aspects of the Project works.

The environmental and social safeguard experts will complete the environmental and social selection sheets which they will send to the DEEC to determine the appropriate environmental categories. They will lead the performance of any possible ESIA and the training/awareness programme. They will also choose the appropriate mitigation measures in the event that there is no need to develop ESMPs for the sub-projects. They will also coordinate the monitoring of environmental aspects and interface with other stakeholders.

CLOSE IMPLEMENTATION AND MONITORING

Works implementation companies: They must carry out environmental and social measures and comply with the directives and other environmental requirements contained in the works contracts. They must have a Quality, Health, Safety and Environment manager.

Design and control offices: They must ensure the control of the effectiveness and efficiency of the implementation of environmental and social measures and compliance with directives and other environmental requirements contained in works contracts. They must have an environmental and social expert on their team.

Local communities located in the project area: Local authorities will participate in the close monitoring of the implementation of the recommendations of the ESMP, especially in informing and sensitising the population.

ENVIRONMENTAL AND SOCIAL MONITORING

DEEC and DREEC: they will carry out project environmental classification as well as the approval of impact assessments. The CRSEs and DREECs will ensure the environmental and social monitoring at regional and local level of implementation of the environmental measures of the project. The monitoring of CRSEs and DREECs will in fact be a contradictory verification based on the internal monitoring reports of Experts in environmental and social protection. The DREECs will send their reports to the PIU of the Agropole.

10.8. PUBLIC CONSULTATION PROCESS

Public participation in the conduct of an environmental assessment is a relevant step in situating the project in its socio-economic context.

Public consultation makes it possible to take into consideration the opinions, observations and comments of the various stakeholders. This refers in particular the local population and the technical services, in an interactive manner, to measure and take into consideration the impacts or incidences of the project associated with its implementation, in order to minimize or eliminate the negative impacts and enhance the beneficial effects.

This participation takes place through:

- public consultation, that is meetings and get togethers during the study, in the localities concerned in order to obtain the opinions of the populations or their representatives; and
- a public hearing which is intended to widely disseminate the completed study to the population in order to record any possible objections and also opinions on the solutions, proposals, recommendations and mitigation measures contained in the report.

It is also a form of presentation that makes it possible for the populations to check whether their opinions, proposals and especially their interests are taken into account.

10.8.1 Consultation procedure before and during project implementation

Public consultation will be based on a plan whose objective is to create the conditions for the social acceptability of the project at the community level, by putting all the actors in a network for sharing information both on the environment and on the project itself. At the level of local authorities, the plan seeks to have a common vision and shared objectives of the actions undertaken by the project before (identification and preparation phase), during (implementation phase) and after the project (management, operation and retrospective evaluation phase). The consultation process reflects the need to fully involve the population in identifying needs, monitoring activities and evaluating them from a perspective of citizen control, sharing of knowledge and knowhow, participation and social efficiency.

The social acceptability of the project and knowledge of the environment of the project area will be at the heart of the exchanges using tools and techniques that comply with the fundamentals of social and educational communication.

10.8.2 Stages of Consultation

The consultation plan can take place through three processes:

- local consultation or the organisation of public days;
- the organisation of community forums; and
- sectoral meetings of social groups and/or interests.

The public consultation process should be structured around the following points:

- preparation of public consultation files, description of the activities already identified (location, characteristics, etc.) and survey sheets;
- preparatory missions to potential project sites and consultation;

- public announcements; and
- public surveys, data collection on project sites and validation of results.

10.8.3 Organisational And Capacity Building Measures Of Beneficiaries

Organisational measures mainly concern grassroots actors, especially the population through their different forms of organisation. There are already forms of organisation. The PIU can analyse them and make improvements, if necessary, to make them more operational as part of a results-based approach.

For greater efficiency in action, the different organisations could come together under an umbrella organisation. This would be in a better position to act as an interlocutor to deal with other actors such as private individuals and donors.

Training will be necessary in various technical fields and in fields related to accounting-management, entrepreneurship, etc. These trainings could be carried out within the framework of functional literacy using local languages to reach the maximum number of beneficiaries.

For a best capacity building of actors and beneficiaries, the development of a training plan is necessary. This development involves a detailed analysis of the needs in relation to the activities, but also and above all in relation to the sustainability of the achievements during and after the project. This sustainability requires the empowerment of beneficiaries who will be able to continue their activities once the project is over.

10.8.4 Training programme

For a better implementation of project activities, it is important to develop a training programme which indicates the measures (training places, logistical aspects, resource persons for training, costs, etc.) and the training plan (detailed training planning). This approach will make it possible to give more precise objectives of the training. It will promote an analysis of the roles and responsibilities of the various actors in the implementation of project activities. It will thus promote not only the identification of needs, but also and above all their analysis.

The training programme will be guided by technical capacity building, but also by the need to sustain actions after the end of the project. This concern calls for better identification of training themes that will promote the empowerment of actors and beneficiaries beyond the life of the project.

The development of the training programme will provide the opportunity for a better identification of the contents of the training. The trainings will be designed within the framework of the skills-based approach since they will have to meet specific concerns.

10.8.5 Communication strategy and consultation plan

A communication strategy will be developed by the project to make the project activities better known, but also to share the knowledge and other achievements that it will record. It will make it possible to identify the actors and their communication needs. It will also identify the targets for which the communication should aim as well as the tools to achieve them.

The communication strategy will integrate the “awareness and action” component for the benefit of the actors concerned.

A consultation plan will be developed to take into consideration the opinions and concerns of stakeholders throughout the duration of the project. This consultation plan incorporates the measures and directives relating to public participation in the framework of the environmental and social assessment procedures and the environmental and social safeguards of the donor.

10.9. ESTABLISHMENT OF A COMPLAINTS MANAGEMENT MECHANISM

The implementation of the PZTA-Sud can give rise to complaints and grievances on different issues: (i) occupation of land during the development of valleys (deposit of rubble or materials); (ii) disclosure of Project decisions and documents; (iii) the procedures for consultation and participation of the population; (iv) impacts related to the design, works, and operation phase of the infrastructure; (v) pollution problems linked to the use of pesticides or the impact on the health of users of these products; (vi) the introduction into the natural environment of solid or liquid wastes; (vii) site accidents occurring during construction works; (viii) social conflicts linked to the increase in social or gender inequalities following the implementation of the Project or the non-use of local labour.

The management of complaints and grievances from the population and stakeholders of the PZTA-Sud requires the establishment of an operational mechanism for their management. The outline of a complaints handling procedure is set out below. The main stages of the system concern: (i) access to the system; (ii) handling of complaints; (iii) acknowledgment of receipt; (iv) verification and response proposal; (v) monitoring and evaluation; and (vi) feedback.

ACCESS TO INFORMATION

This step describes: (i) how users are informed of the existence of the PPDC complaints management system; and (ii) the modalities for transmitting user complaints to the Project.

Receiving complaints assumes that people are well informed of the possibility of filing complaints. This information covers the mechanism, rules and procedures for handling complaints and remedies. This information is disseminated to all stakeholders and at all levels to enable the complainant to get to know it well in order to use it if necessary.

SORTING AND PROCESSING

This step allows them to categorise, register and classify complaints. This is how all complaints sent to the Project are sorted by the complaints management body set up for this purpose. A complaints register is set up to record all complaints, in any form of transmission.

RESPONSE TO COMPLAINANTS

The response should determine whether a simple action can solve the problem or whether the level of complexity requires additional assessment and dialogue with the complainant and other stakeholders on the best course of action. It may also happen that the resolution of the problem requires a thorough assessment involving multiple stakeholders and addressing multiple issues. In this case, an extended joint fact-finding, dialogue and negotiation procedure will be necessary.

Following communication of the response to the complainant, the options may be: (i) an agreement to proceed as proposed; (ii) a request for reconsideration of the admissibility decision or for referral to another body; (iii) further dialogue on the proposed action; (iv) or participation in the proposed assessment and engagement procedure.

FRIENDLY RESOLUTION MECHANISM

The complaints management body within the project ensures the handling of complaints by promoting amicable settlement. They can call on any resource person to help address the complaint. Finally, in the event that all possible attempts at settlement have been exhausted, the applicant can take legal action.

Administrative arrangements and recourse to justice

Though the recourse to the courts is not advisable for the project's smooth progress (risk of disrupting the works, stoppage of works, delays, etc.) remains the solution of last resort in case an amicable solution cannot be reached.

ANALYSIS AND SUMMARY OF CLAIMS

To further improve this process, project staff should periodically analyse the complaints received, their handling and the responses provided. A summary report is written periodically. This report includes the necessary statistics and comments, as well as suggestions for improving the system. In addition, the complaints filed and the follow-up to them will be presented in the periodic environmental and social monitoring report of the project.

MONITORING AND EVALUATION

This step makes it possible to define: (i) the complaints monitoring system; and (ii) the complaint analysis method. Complaints and grievances are followed up directly by the Monitoring and Evaluation Manager.

FEEDBACK

The sixth and final step of the system determines how users of the system are informed of the results and actions taken to resolve complaints. Indeed, feedback is of utmost importance. It is systematic and is done by direct information to the complainants.

10.10. MEASURES IMPLEMENTATION SCHEDULE

The following schedule (Table 48) has been proposed for the implementation of the measures.

Table 48: Timetable for the implementation of measures

Measures	Actions proposed		Implementation period
Mitigation measures	See list of mitigating measures by sub-project		During implementation
Institutional measures	Appointment of Environmental Focal Points		1er mois, avant le début de la mise en œuvre
Technical measures	Implementation of ESIA and ESMP for certain Agropole		Before implementation or at least during the first 3 months of implementation
	Guidelines, good agricultural practices and infrastructure maintenance manual		Immediately upon implementation
Training	Training of Environmental Focal Points (EFPs) in environmental management of projects		1 month their appointment
Awareness	Awareness and mobilisation of the local population and agricultural producers		Immediately upon identification of sub-projects
Monitoring measures	Environmental monitoring and follow-up of the Agropole	Close monitoring	During implementation
		Supervision	Every month
	Assessment	Final	At the end of the first phase of the Agropole

10.11. ESTIMATED COSTS OF ENVIRONMENTAL AND SOCIAL MEASURES

The estimated costs of environmental and social measures, estimated at CFAF 810,000,000, include:

- technical reinforcement costs (performance of ESMPs in the event of sub-project classification in category (B) requiring an additional environmental and social assessment; provision for the implementation of ESMPs or other additional safeguard documents; preparation of a manual of good agricultural practices; establishment of the reference situation of mango and cashew nut cultivation in Casamance (areas concerned, number of producers by type, production, etc.); support for research and the fight against fruit and pest fly in Casamance in partnership with the Department of Plant Protection (DPV); general measures to improve positive impacts and mitigate negative impacts; natural resource management measures;
- costs for information/awareness measures;

- costs for monitoring and evaluation costs of Agropole activities; and
- costs for technical capacity building costs in terms of training of stakeholders.

Table 18 : Estimate of the costs of environmental and social measures of the ESMFP of the Agropole

No.	Component	Period/Duration of the action	Quantity	Unit cost (CFAF)	Total amount of the component (CFAF)
1	Environmental and social studies and measures, monitoring and evaluation				330,000,000
	Realisation and implementation of ESIA and ESMP	Before the start of works	9	15,000,000	135,000,000
1.1.3	Compensation for loss of crops and reforestation	During works	-	-	80,000,000
	Permanent monitoring of the project	During the entire duration of the project	5 years	5,000,000	25,000, 000
7.1	Mid-term evaluation of the environmental and social performance of the Project	5 years after the start of the implementation of the Agropole	1	45,000,000	45,000,000
7.2	Pre-closing audit of ES performance	At project completion	1	45,000,000	45,000,000
	Information/awareness measures				30,000,000
1.2.1	Information and awareness of the population and local authorities on: Safety and hygiene Environmental and social issues Etc.	First 3 years	3	10,000,000	30,000,000
2	Capacity building measures				45,000,000
2.1	Training programmes of the PIU, local authorities, members of CRSEs on: ES management ES legislation and procedures Monitoring of ES measures Monitoring of hygiene safety standards Safeguard policies of the AfDB and other project donors Etc.	During the works and operation of the project	3	15,000,000	45,000,000
4	Knowledge reinforcement measures				200 000 000
4.1	Research - development and support for the fight against fruit flies and pests in Casamance - Partnership with the DPV	From the start of Agropole activities			100,000,000
4.2	Establishment of the reference situation on cashew and mango cultivation in Casamance (areas occupied, producers, etc.) and establishment of a GIS	First year of the Agropole	-	-	100,000,000
6	General improvement and impact mitigation measures				205,000, 000
6.1	Measures to improve the major	As the project is			20,000,000

No.	Component	Period/Duration of the action	Quantity	Unit cost (CFAF)	Total amount of the component (CFAF)
	impacts of the project	implemented			
6.2	Mitigation measures for the major impacts of the project	During project implementation			160,000,000
6.3	Development of a manual of good agricultural practices	Before implementation			25,000,000
	TOTAL				810,000,000

The gross overall cost of the environmental measures proposed within the framework of the Agropole is eight hundred and ten million (810,000,000) CFA francs. It should be noted that part of the financing for the implementation of the PESMFP is the responsibility of the companies and it will be included in the contracts, in particular the costs related to the respect of the environmental and social clauses.

XI. GENERAL CONCLUSION

The strategic environmental and social assessment of the PZTA-Sud conducted based on the data collected made it possible to identify, analyse and assess the potential impacts of the Project, based on the linking of the environmental components with the activities of the project. The environmental and social impacts inherent in the implementation of this project will be of a negative and positive nature, of direct or indirect interaction, having a cumulative effect considering the socio-economic and environmental context of the study area.

The report described the current environmental situation of the project area and proposed useful and necessary measures to avoid, mitigate or compensate for the negative impacts and enhance the positive ones. The major positive impacts therefore mainly relate to social and economic matters. This assessment leads to the proposal of an extended panel of measures, based on the analysis of these various potential impacts, as well as on the expectations, suggestions and concerns of the various stakeholders consulted. This set of environmental and social proposals seeks to respond through general site measures, adapted measures and measures responding to specific issues (water issues, land use issues, etc.).

The consideration of these environmental and social measures will enable the MDIPMI, Project Owner and the financial partners (AfDB, IDB, GCF), to target those they consider to be their responsibility in the project portfolio, before breaking them down into the framework of the in-depth impact assessment at the scale of each of the planned sites (modules) once the technical and technological aspects have been decided and the areas concerned located and mapped out. This will make it possible to limit the repercussions of the project on the environment and improve it in order to reconcile the pillars of sustainable development, promoting a harmonised integration of its components into its receiving environment according to the specificities of each of the envisaged integration zones.

An Environmental and Social Management Framework Plan comprising the technical environmental clauses, measures to strengthen environmental and social management, monitoring and follow-up measures as well as the cost estimate of environmental measures, are proposed in the document. The implementation of the ESMFP is structured around two main activities, which are environmental surveillance and environmental monitoring. The plan's implementation mechanism was also indicated. Several structures will intervene alongside the main stakeholders, namely the Project Management Unit and the DEEC: the sectors concerned, State services, NGOs, etc.

With regard to the actual practical arrangements on construction sites, following the technical examination of this report, it is suggested that environmental actions be taken by companies to limit the impact on the site. These environmental clauses must be part of the company's contractual obligations. As such, it must be a document in the contract.

The monitoring of the application of environmental and social measures will be ensured by the Works Control Mission (MCT) under the coordination of the Project Management Unit. The DEEC and CRSE for each region will be responsible for monitoring while the Environmentalist and Social Manager of the Project Management Unit will coordinate.

Regarding the perception and acceptability of the project, it is important to stress that all the stakeholders consulted are in favour of the implementation of the PZTA-Sud. Several reasons worked in favour of the project.

There is first of all the fact that it contributes in the increase in productivity, production and valuation of cashew, mango, corn and market garden crops in Casamance at the level of all segments. of these sectors (production, packaging, processing, marketing, export);

It contributes in the reduction of GHG emissions, and consequently strengthens the fight against climate change;

It also contributes in the improvement of the living conditions of the population concerned (generation of jobs, creation of wealth, fight against poverty, etc.), and therefore to the economic and social development of Casamance;

Specific Environmental and Social impact assessments are recommended according to the national regulations for certain categories of sub-projects that the Agropole will help to set up. To complete this ESSA, a Resettlement Policy Framework (RPF) and a Pesticides and Vectors Management Plan (PVMP) will be developed.

In the light of the above assessments, it is possible to conclude that the negative impacts that the Project will generate could be avoided, minimized or greatly mitigated if all the measures planned by the promoter and those defined in the framework plan of environmental and social management are implemented. On this basis, the PZTA-Sud can be considered environmentally and socially acceptable. The cost of implementing environmental measures, which must be an integral part of the project costs, is estimated at CFAF 810,000,000 (Eight-hundred and ten million CFA francs).

ANNEX 1 : ACRONYMS AND ABBREVIATIONS

AfDB	:	African Development Bank
ANAT	:	National Agency for Regional Development
ANIDA	:	National Agency for Integration and Agricultural Development
ANSD	:	National Agency for Statistics and Demography
APAD	:	Association for the Promotion of Sustainable Agriculture
ARD	:	Regional Development Agency
BFR	:	Big Fast Results
BOS / ESP	:	Operational Office / Emerging Senegal Plan
CADL	:	Local Development Support Centre
CASADES	:	Economic and Social Development Support Committee
CCIA	:	Chamber of Commerce, Industry and Agriculture
CRCR	:	Regional Council for Rural Dialogue
CRSE	:	Regional Environmental Monitoring Committee
DEEC	:	Environment and Classified Establishments Division
DPV	:	Department of Plant Protection
DRDR	:	Regional Directorate of Rural Development
DREEC	:	Regional Environment and Classified Establishments Division
DTR	:	Road Works Department
EA	:	Environmental Assessment
ECOWAS	:	Economic Community of West African States
EIA	:	Environmental Impact Assessment
EIG	:	Economic Interest Group
ERP	:	Establishment Receiving the Public
ESMFP	:	Environmental and Social Management Framework Plan
ESMP	:	Environmental and Social Management Plan
ESP	:	Emerging Senegal Plan
EU	:	European Union
FONSIS	:	Sovereign Strategic Investments Funds
GAR	:	Gross Access Rate
GCF	:	Green Climate Fund
GCF	:	Green Climate Fund
GER	:	Gross Enrolment Rate
GIS	:	Geographic Information System
GTZ	:	German Development Cooperation
ICPE	:	Installation Classified for the Protection of the Environment
IREF	:	Regional Water and Forestry Inspectorate

IRTSS	:	Regional Labour and Social Security Inspectorate
IsDB	:	Islamic Development Bank
ISID	:	Initiative for Inclusive and Sustainable Development
JAR	:	Joint Annual Review
LOASP	:	Agro-sylvo-pastoral Framework Law
LPSEDD	:	Environment and Sustainable Development Sector Policy Letter
MAER	:	Ministry of Agriculture and Rural Equipment
MDIPMI	:	Ministry of Industrial Development and Small- and Medium-Sized Industries
MEED	:	Ministry of the Environment and Sustainable Development
MITTD	:	Ministry of Infrastructure, Land Transport and Access Improvement
MPEM	:	Ministry of Fisheries and Maritime Economy
NGO	:	Non-Governmental Organisation
OHADA	:	Organisation for the Harmonisation of Business Law in Africa
ONAPE	:	National Organisation of Producers and Exporters of Fruit and Vegetables
OPS	:	Service Provider Operators
PADEC	:	Casamance Economic Development Support Project
PADERCA	:	Casamance Rural Development Support Project
PAIS	:	Italy Senegal Agricultural Programme
PAN / LCD	:	National Action Programme to Combat Desertification
PAPEJF	:	Youth and Women's Employment Promotion Support Project
PAPSEN	:	National Agricultural Investment Programme Support Programme
PASA	:	Senegal-Germany Cashew Project
PIU	:	Project Implementation Unit
PNAE	:	National Environment Action Plan
PPDC	:	Casamance Development Pole Project
PRODAC	:	Community Agricultural Lands Programme
PUDC	:	Community Development Emergency Plan
PZTA	:	Agro-Industrial Processing Zone Programme
RGPHAE	:	General Census of the Population, Housing and Agriculture
SCE	:	Société de Construction et d'Exploitation
SEA	:	Strategic Environmental Assessment
SEPAS	:	Senegal Agricultural Products Exporters Union
SME	:	Small- and Medium-Sized Enterprise
SRMG	:	Regional Service of Mines and Geology
SRUH	:	Regional Service of Town Planning and Housing
UJCRA	:	Union des Jeunes pour un Changement Rationnel
UNDP	:	United Nations Development Programme
UNEP	:	United Nations Environment Programme
UNIDO	:	United Nations Industrial Development Organization

USAID	:	United States Agency for International Development
WAEMU	:	West African Economic and Monetary Union
WB	:	World Bank
WHO	:	World Health Organisation

ANNEX 2: BIBLIOGRAPHY

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ANNEX 3.: DETAIL OF PUBLIC CONSULTATION IN THE ZIGUINCHOR, SÉDHIOU AND KOLDA REGIONS

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
ZIGUINCHOR REGION		
ADMINISTRATIVE, LOCAL AUTHORITIES AND CONSULAR CHAMBERS OF THE ZIGUINCHOR REGION		
Babacar NIANG , Development Assistant Tel. : 77 529 06 27	Expectations <ul style="list-style-type: none"> • The implementation of the project. Let it not be in the state of reflection only. Speed up procedures; • Information sharing at all levels of the project; • Take into consideration all aspects of people's concerns; • Support for the activities of women processors and local stakeholders; • Develop feeder roads to production area and means of transport for good accessibility to production, because all sectors (agricultural, forestry will be boosted; • The creation of jobs for young people; • The development of Casamance, that the Agropole be beneficial to the population of the three regions. 	Recommendations <ul style="list-style-type: none"> • Raise awareness to set up sustainable consultation frameworks; • Sign agreements between the Agropole and the technical services by setting objectives; • Increase the involvement of technical services; • Set up a consultation framework bringing together the three regions of Casamance (inter-regional body).
Ibra FALL , Prefect of Ziguinchor (2019) Tel. : 77 529 05 92	Expectations <p>It is a project that responds to a need repeatedly expressed by producers in the region, that is, the establishment of a large-scale processing industry that would make it possible to process products on a very large scale. Our expectations lie in the creation of:</p> <ul style="list-style-type: none"> • outlets for local products; • added value, wealth; • jobs • increase in tax revenue for the municipality, • use of local labour, therefore creation of jobs and wealth, • construction of social infrastructure (schools, health facilities, etc.) <p>It will probably be a structuring instrument that will promote the development of other economic activities such as transport activity, the creation of other industrial units, in particular the creation of packaging factories,</p>	Potential risks or threats: <ul style="list-style-type: none"> • Environmental risks: this is a project that will require the development of large areas, we have talked about 250 hectares; so dozens of hectares of vegetation and trees will be destroyed, thus harming the environment. • The densification of the transport activity with the risk of traffic accidents and others. • Security risk, because we are in a conflict zone Recommendations for the success of the project <ul style="list-style-type: none"> • Define the bases of establishment and the conditions for the choice of the site by following the legal procedures already mentioned. The procedure must be participatory, inclusive, all stakeholders must be involved in the

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	etc. This is a structuring element that will boost the development of Casamance.	<p>choice of the site.</p> <ul style="list-style-type: none"> After a successful implementation of the test phase (mango and cashew nut), to see the Agropole expand to other products (maad, toll, etc.); Ensure, a participatory nature at all stages of the procedure, that all the stakeholders concerned are involved in order to avoid obstacles that could hinder the implementation of the project.
Pape El Hadj Madické DRAME Ziguinchor Tel. : 775290592	<p>Expectations</p> <ul style="list-style-type: none"> Fight against youth unemployment and underemployment Socio-economic development Work/support/supervise EIGs Promote their product <p>Concerns</p> <ul style="list-style-type: none"> Involve stakeholders at all levels 	<p>Recommendations</p> <ul style="list-style-type: none"> Share information with authorities; Establish collaboration with stakeholders Data sharing Inform about the objectives and missions
Babacar Ndiaye Prefect of Bignona 775290593	<p>Perception</p> <ul style="list-style-type: none"> Important project for the development of Bignona <p>Expectations</p> <ul style="list-style-type: none"> Boost the agricultural sector Modernise agriculture Create jobs Create added value <p>Concerns</p> <ul style="list-style-type: none"> Access road to the site Water availability Availability of land Autonomy in energy resources 	<p>Recommendations</p> <ul style="list-style-type: none"> Include livestock in the project Develop exports Good communication with the population Empower local authorities and elected local officials Extend modules
Richard Biram FAYE Sub-Prefect Niaguis	<p>Expectations</p> <ul style="list-style-type: none"> Supervision of producers, to meet the demand that the Agropole needs in terms of mango and 	<p>Concerns</p> <ul style="list-style-type: none"> The non-consideration of people affected by the project (PAP). They

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>cashew production</p> <ul style="list-style-type: none"> • The development of agricultural and arboricultural perimeters because the population only does primary uncontrolled developments; • Develop a social CSR policy because the Agropole will occupy a perimeter of 80 hectares and it is farmers who will be relocated, so a CSR policy will allow them grant them fair compensation, strengthen their resilience and allocate them new land so that they can relocate and continue their agricultural activities. But make a CSR policy for the affected locality by creating basic social infrastructure (reinforcing of the medical technical platform of the health post, increasing the water capacity of the borehole, education among others); • Try to attenuate the negative impacts on the environment as much as possible; • Make agricultural improvements for the villagers. Drip irrigation is a good initiative for developing market gardening and tree areas; • The creation of jobs for the young people of the locality and for employment, with equal qualifications and skills, giving priority to the local people. 	<p>must be compensated correctly and develop a social CSR policy for them (development of perimeters and additional funding).</p> <ul style="list-style-type: none"> • Pollution also, we must try to reduce the negative impacts on the environment <p>Recommendations</p> <ul style="list-style-type: none"> • Develop an inclusive relationship between those in charge of the project and the local administration so that information can be shared in real time; • Compensate the PAP and develop a CSR for them and the local authority; • Support the administration and the municipality with coordination resources because we will have to lead awareness-raising talks, assess expenses, and make security arrangements so that the Agropole can settle in good conditions • Support producer groups to form a cooperative to better defend their sectors and their interests because the Agropole will have the producers as relays; • Carry out green financing projects and develop solar energy in the villages which is necessary for the development of their agricultural activities; • Carry out the project for the benefit of the population of Casamance.
<p>Kadialy GASSAMA</p> <p>Secretary General of the Departmental Council and in municipal councilor charge of the municipal road network and civil status of Ziguinchor</p> <p>77 901 40 64</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Job creation; • The development of our natural resources, • Improving the conditions of the population because this will create new sources of income and will therefore increase their purchasing power and their living conditions, • The project will contribute to the visibility of our region, because they will be products "made in Casamance" which will be sold in Senegal and in the world. 	<p>Risks and threats</p> <ul style="list-style-type: none"> • The question of land that is sacred in Casamance. I hope that the municipality will make all the necessary arrangements to impose the forcible allocation of land to the Agropole. Raise awareness, work in consensus with the population to show them the interest this project portends; • The slump due to the lack of outlets. Make sure you find the right markets first; • Ensure that the community, the

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		<p>population can identify themselves in this project firstly through the workforce and investments (schools, health posts, ambulance) that corporate social responsibility should do.</p> <ul style="list-style-type: none"> • The payment of taxes for the municipality. • Find markets upstream for the marketing of finished products.
<p>Fiacre Coly Chair of Divisional Council Tel. : 775571082</p>	<p>Expectations</p> <ul style="list-style-type: none"> • What outcomes? <p>Concerns</p> <ul style="list-style-type: none"> • Ownership of the project by the population • Project viability • We create institutions we do not use • Investments must be adapted to our realities and not the contrary 	<p>Recommendations</p> <ul style="list-style-type: none"> • Adapt to the needs of population • Set up projects proposed by the population • Include the parts at the grassroots • Development must be bottom-up
<p>Ibrahima DIEDHIOU, Mayor of Adéane Tel : 77 564 54 99</p>	<ul style="list-style-type: none"> • What needs to be done first is to prepare the communities, inform them and raise awareness about the arrival of this industry and to welcome foreigners who will come to seek employment with different behaviours; • For the two promising sectors (mango and cashew), producers must be helped to organise themselves to set up cooperatives to store products and manufacturers will sign supply contracts with them; • The other aspect is the impact of industries on the environment, so communities must be prepared to take care with regard to this situation and the management of natural resources, that the establishment of the Agropole is not a hindrance or a threat to land speculation because it is agribusiness that will arrive with briefcases of money. These are some aspects that I wanted to share with you. • But the most important thing is that the population will come out of precariousness to reach at a more stable level; • Enable the municipality to have financial 	<ul style="list-style-type: none"> • The lack of communication and awareness of the communities, it would be good each time if necessary, for people to be at the same level of information, we the beneficiaries but also State services and also state branches which are at regional level; • The other risk that can contribute to slowing down the implementation of the project is in relation to those affected; it is necessary to proceed to the compensation of these people and possibly to find them replacement land so that they can continue their activities. <p>Recommendations</p> <ul style="list-style-type: none"> • Ensure that the community and the population can identify with this project first through the workforce and investments (schools, health posts, ambulance) that corporate social responsibility should take care of. • The payment of taxes to the municipality. The Agropole will participate in the development of the

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>resources and benefits in relation to social responsibility;</p> <ul style="list-style-type: none"> We who have contributed in making a land base available to the project, in return that we become stakeholders, members of the board of directors or even chairman of the board of directors and that we are shareholders in relation to the accomplishment of this project. <p>Potential risks or threats:</p> <ul style="list-style-type: none"> The non-appropriation of the project by the communities: can constitute an obstacle to the realization of the project; Security: but since it is the state that carries out the project and is doing it in a conflict zone, it will make all the necessary arrangements for security measures. And during the rehabilitation of the RN6, there was no robbery, that reassures us. Source of prostitution and the sale of narcotics and drugs; 	<p>municipality of Adéane and Casamance;</p> <ul style="list-style-type: none"> Find markets upstream for the marketing of finished products; Today, the flagship recommendation is to make all the necessary arrangements for the effective start of the work of the Agropole because the project has raised a lot of hope and the communities are impatient to see the start of work; Another recommendation is the contribution of the State in improving basic social infrastructure, setting up a community radio to better disseminate information on the project; Also set up a gendarmerie post at the level of the Agropole to reinforce security; Encourage the local workforce by recruiting them; That the Green Fund can regularly support the direct and indirect impacts of the project; The municipality be raised to a marine protected area (MPA), therefore establishing a collaboration between the Green Fund and the MPA to jointly identify income-generating projects; Organize a CLD to present the project with its new facts (FVC) and allow communities to know and take ownership of the project.
<p>Djibril SANE, Chief, Baghagha Village, Adéane Municipality</p>	<p>This innovative project will really reduce rural exodus and illegal immigration. Instead of the young people going to Europe, Gambia, Dakar, etc., the project will allow them to work in their localities here in Casamance.</p> <p>Expectations</p> <ul style="list-style-type: none"> The implementation of the project as quickly as possible; The development of the natural region of Casamance; The development of basic social infrastructure 	<p>Concerns</p> <ul style="list-style-type: none"> Security because the choice of the site for the implementation of the project was wanted by many other localities in the district, so ill-intentioned people can create scenes and take advantage of the situation of the insecurity that we faced in the area. <p>Potential risks and threats</p> <ul style="list-style-type: none"> Insecurity. Every year, the village is attacked by criminals. Each time they are here, we face 10 to 15 attacks, Economically, Baghagha is the most

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	<p>especially for health and education;</p> <ul style="list-style-type: none"> The creation of jobs. May the highest quota of job offers go to the people of Baghagha. 	<p>developed village in the district of Niaguiss.</p> <ul style="list-style-type: none"> Importation of diseases with the arrival of foreigners; Destruction of flora and non-wood forest products (néré, maad, toll, etc.) which take time to regenerate. <p>Recommendations</p> <ul style="list-style-type: none"> Let the State do everything for the success of the project. The State has the power and resources to make it happen. It just has to do everything not to let it fail; Promote the extension of the village into lots, that is to say, give us space to accommodate foreigners who will come because currently there is no more habitable space in the village; Increase electrical capacity and access to water. We have a water tower, but it is not working. We do not have the means to repair it. Electricity is also not sufficient.
<p>Joachim Coly</p> <p>1st Assistant Mayor of Bignona Municipality in charge of development issues of the council</p> <p>Tel : 77 441 45 73</p>	<p>Better organisation of the mango sector in particular</p> <p>Expectations</p> <ul style="list-style-type: none"> Real socio-economic impacts Creating jobs, especially for women and young people. 	<p>Concerns</p> <ul style="list-style-type: none"> Banna banna, people are used to selling their product to the banna - banna who come down and buy all the products even before production. This is a real threat. White fly in relation to mango poses a real threat. Fortunately, ISRA is fighting to find a solution to the white fly. <p>Recommendations</p> <ul style="list-style-type: none"> To fight for the project to see the light of day; The State should be able to convince donors more to finance this project, Conduct discussions on the project

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		<ul style="list-style-type: none"> We must help with organisation, provide training for the various actors, all stakeholders
Simon SAMBOU Secretary General of the Chamber of Crafts and Skilled Trades Ziguinchor Region Tel. : 77 645 34 43	Opinion on the proposed sites I have no problem regarding Adéane; the main thing is to make the collection points work because the head office itself is not more important than the collection points. The main issue is that the products arrive at the head office level. The more collection points for these products, there more fluidity in the provision of raw materials and the closer they will be to producers.	Concerns: <ul style="list-style-type: none"> Clearing of 50 hectares in Adéane Recommendations <ul style="list-style-type: none"> At the local level, create a framework for consultation where the stakeholders can meet each time the need arises and discuss; From a socio-economic point of view, support communities by setting up basic community infrastructure; Support producers Socially, give priority of jobs to families whose land has been affected by the project.
Bassamba DIEDHIOU Chamber of Commerce and Industry of Ziguinchor Te. : 77 551 06 56	Expectations on the Agropole Sud <ul style="list-style-type: none"> The idea of a project must not remain on paper; Creating jobs for young people; The involvement of all stakeholders; An increase in income and in the production in the various sectors 	Potential risks or threats of the implementation of the project <ul style="list-style-type: none"> Arrival of people from other regions, Pressure on land (risk of overexploitation of land), No consultation mechanisms, An expropriation of the holders of cultivable land, Recommendations <ul style="list-style-type: none"> Set up steering committees bringing together all the stakeholders to take into consideration the decisions of each actor, the expectations of the population and the management of conflicts Think now about the operation and management of the Agropole; Quickly commence constructions,

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ZIGUINCHOR REGIONAL TECHNICAL SERVICES		
Khadim Niass Head of DREEC Tel : 77 632 74 80	<p>Expectations</p> <p>The taking into account of the environmental dimension by the project. At this level, as they did by putting forward the environmental impact assessment, this study can be implemented; it is not just a question of carrying out a study and putting it in the drawers. There will be an environmental and social management framework plan and this framework plan will be budgeted. The amount provided for this environmental framework plan must be made available to the technical services concerned so that they can do so and all that is a negative impact identified through environmental monitoring and surveillance, that the measures that are proposed can be implemented. This is where my expectations are</p>	<p>Recommendations</p> <ul style="list-style-type: none"> • Make funds available to support the environmental and social management framework plan; • Establish procedures to facilitate the disbursement of these funds; • Accompany the technical services with regard to institutional support and capacity building for stakeholders (technical services, territorial command, local actors, etc.) • Collect the opinions and expectations of all local stakeholders. And from that moment, seeing the direction that has been given, does it deserve to be maintained or not, or confined to the expectations of local stakeholders; • Ensure that the ESMFP that will result from this study is very clear and allow follow-up by integrating all the necessary tools; • Describe the procedure that will render it possible to make the environmental monitoring selection; • Provide the necessary funds for carrying out additional studies (ESIA, AEI) and implementing the ESMPs resulting from these studies; • Also have reference situations (in relation to the sectors that are chosen in terms of land use so that we can assess land use in terms of clearing compared to these two sectors) or recommend them in order to be able to assess the environmental and social impact of this Agropole positively or negatively.
Ahmadou Tidiane Barry Assistant Dreec 776515143	<p>Perception</p> <ul style="list-style-type: none"> • A project to enhance the agricultural potential of the area; 	<p>Contribution to the reduction of emissions</p> <ul style="list-style-type: none"> • Use less polluting technologies; • For agriculture use suitable seeds, varieties and fertilisers.

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	<p>Expectations</p> <ul style="list-style-type: none"> Strategic environmental analysis for the Agropole; Impact assessment for each project to be implemented <p>Concerns</p> <ul style="list-style-type: none"> Take land into account because it is a sensitive zone; Are the technologies used appropriate; Prioritize the local workforce 	<p>Recommendations</p> <ul style="list-style-type: none"> Use clean and adapted technologies Favour the local workforce
<p>Patherne Diatta</p> <p>Regional Director CRAZ/ISRA</p> <p>774512388</p>	<p>Perception</p> <ul style="list-style-type: none"> This is a large-scale project but we should change the paradigm to build grassroots projects <p>Expectations</p> <ul style="list-style-type: none"> Preservation of the environment Development including future generations Control the production of the targeted sectors Conservation of plant genetic heritage <p>Concerns</p> <ul style="list-style-type: none"> Lack of control over production (quantity and quality) First satisfy national demand The project should be used for development as mentioned in its presentation 	<p>Contribution in the reduction of emissions</p> <ul style="list-style-type: none"> Conservation of plant genetic diversity <p>Recommendations</p> <ul style="list-style-type: none"> Strengthen technical structures Avoid consulting public structures too late, as they are only consulted for guidance
<p>Donacien KANFANY,</p> <p>Land Registry</p> <p>Tel. : 77 630 00 70</p>	<p>It is a project that portends several opportunities for the region in terms of job creation and economic growth. It will help boost the economy of Casamance</p>	<p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Meet the expectations of the population, because there is tension between the villages of Adéane and Baghagha for the location of the site.
<p>Mamadou GOUDIABY</p> <p>Service Head, IREF</p>	<ul style="list-style-type: none"> With the PPDC which installed a platform in Bignona, the bases have already been launched With the Agropole, all non-timber forest products (maad, ditax, toll, etc.) will be valued 	<p>Potential risks or threats to the establishment and implementation of the project</p> <ul style="list-style-type: none"> The availability of land in relation to the 500 hectares, because 500 hectares developed is equal to a risk of

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<p>Tel. : 77 646 56 12</p>	<p>which will lead to forest protection</p> <ul style="list-style-type: none"> • Job creation • The development of value chains for non-wood products • Fight against poverty and unemployment, undernourishment and malnutrition. 	<p>deforestation, degradation of fauna and flora,</p> <ul style="list-style-type: none"> • Destruction of pasture areas; • Risk of water erosion from destruction of vegetation; • Focusing only on mango and cashew may promote monoculture <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Develop livestock corridors; • Involve all state services; • Build structures to reduce the flow of rainwater to the river and in the affected areas (arable parts of fields); • Diversify crops to avoid the monoculture of mango and cashew; • Support the Water Resources and Forestry service for the permanent production of good quality cashew seedlings; it is also the only service that produces cashew seedlings and gives them free to the population; • Introduce taxes on the collection of nuts • Force business operators to support production
<p>Babacar Dione</p> <p>Regional Inspector of Water Resources and Forestry (2020)</p> <p>775643701</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Review the status of the site because the first proposal was in the classified forest and it was requested to relocate <p>Concerns</p> <ul style="list-style-type: none"> • Take into consideration the legislative and regulatory provisions of the Forestry Code since it is in a wooded area • The risk of ending up with monospecific plantations • It would be better to strengthen what already exists and not create new ones • For new plantations, the question would be 	<p>Contribution in the reduction of emissions</p> <ul style="list-style-type: none"> • Use less polluting technologies • Build low pollution modules • Make compensations • Use solar energy <p>Recommendations</p> <ul style="list-style-type: none"> • Strengthen collaboration with all technical services that will intervene • Help build the capacity of the forest service to better take charge of reforestation and planting • Work well with communities and technical services to identify areas to

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	<p>where to plant</p> <ul style="list-style-type: none"> • Think carefully about water drainage because there is the MPA and the mangrove ecosystem • Treat water before it is released into nature • Have quality plants/plantations that are up to standar 	<p>be reforested</p> <ul style="list-style-type: none"> • Strengthen production • Improve varieties • Set up a seed bank • Set up sustainability mechanisms so that after the project, stakeholders can continue • Respect the principles of sustainable development to preserve flora, fauna, water...
<p>Cheikh NIANG, Service Head, Regional Planning Service</p> <p>Tel. : 77 046 57 91</p>	<ul style="list-style-type: none"> • Promotion of flagship products of each zone. • Socio-economic development of the region • The development of the shrimp sector 	<ul style="list-style-type: none"> • Poor management of polluted and hot wastewater,; which risks destroying the aquatic environment; • The facilities located on the left bank, that is to say towards the houses, which would be bad in relation to cohabitation with the living environment, the nuisance, the heat; here too the problem would be more acute. <p>Recommendations</p> <ul style="list-style-type: none"> • Ensure that the physico-chemical parameters of the water body do not change because of the water process of these future companies; • Integrate fishing, because it occupies the first economic segment, in terms of the income it provides to those who practice it. • Speed up the implementation of the project because it raises a lot of hope among producers in the three regions with approved prices. • Carry out the project which will contribute to creating wealth, economic development and the consolidation of peace; • Develop security measures
<p>El hadj Oumar Dioum</p> <p>Deputy Service Head for Regional Planning</p> <p>774198312</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Boost the local economy • Modernise agriculture • Reduce the unemployment rate 	<p>Recommendations</p> <ul style="list-style-type: none"> • Connect agricultural producers and processors • Inform and involve the population • Have synergy on decisions and actions

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	<p>Concerns</p> <ul style="list-style-type: none"> • Attainment of objectives • Constraints of logistics 	
<p>Baboucar DIEME, Head of Division, Regional Hydraulic Division</p> <p>Tel. : 77 654 46 10</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Job creation • To enjoy our products (juices, jams, etc.) • Add value to all the fruits (maad, toll, orange) and honey. Don't limit yourself to mango and cashew nut • Take into consideration the small processing units that were created under PADEC and which no longer function. • Indicate water needs • Have the data to better understand the impacts <p>Concerns</p> <ul style="list-style-type: none"> • Dislocation of families due to land disputes over cashew nuts • Monoculture/cashew nut • Decrease in other activities after the campaign • Unsustainable employment • Oriented jobs 	<p>Potential risks or threats to the establishment and implementation of the project</p> <ul style="list-style-type: none"> • The land aspect with the release of the space to host the project in Adéane. The population must be well compensated to avoid any frustration • Security due to proximity with Guinea Bissau, Guinea Conakry, Mali given the organised crime that rages around these borders • The large cashew producers are located in the area where the plant will be installed. What mechanism will be put in place for the purchase of productions? <p>Recommendations</p> <ul style="list-style-type: none"> • Put in place a good awareness and communication strategy towards the populations so that they take ownership of the project and understand that the project reinforces them in their activities and helps them to better equip themselves to be able to produce better and supply the factory • Set up a good compensation policy • The private sector must organise itself • The state must facilitate the access of population to this project • The analysis of value chains must be done well • Control the production of the various sectors targeted and in general the speculations of the region • Have raw materials available
<p>Dr. Evariste BASSENE, Head of</p>	<ul style="list-style-type: none"> • The Agropole Sud is the economic form that will allow the various activities of local 	<p>Potential risks or threats:</p>

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<p>the Regional Service for Livestock and Animal Production</p> <p>Tel. : 77 371 34 74</p>	<p>businesses in Casamance to work in clear synergy.</p> <ul style="list-style-type: none"> • It is a technical and logistics service platform where sectors such as cashew, mango and other sectors will be organised for better economic development. • Good choice of Adéane with, however, the difficulty of having the base of the 250 hectares • Involvement of technical services. (Environment, Water Resources and Forests, Land Registry, etc.) so that there is no inconsistency in the implementation and that each public service can give its opinion on the area that concerns it and direct the benefits • Opportunity for agricultural producers • No waiting since we don't know if the breeding is concerned • Poor management of the project 	<ul style="list-style-type: none"> • Risks of encroachment on forest areas or on dwellings which would require compensation by trying to find 250 ha for the Agropole in Adéane • Risks of respiratory diseases with the production of dust from the work of the companies • Destruction of the plant cover, with risks of imbalance in the fauna and flora which will have repercussions on the habitat. <p>Recommendations</p> <ul style="list-style-type: none"> • Carry out an environmental impact assessment. • Carry out an epidemiological investigation, • Organise the sector and the stakeholders so that they become professionals. • The local level should be the level of production (decisions are made at the local level) and the central level should be the level of validation. And all the competent services can support them through a multidisciplinary committee to find solutions to any problem; • Make an inventory of the present to identify already existing transformation units and above all which do not work in order to avoid installing already existing units at the platform level; • Identify all the actors who work in these sectors for good product traceability. Join forces and regulate the mango and cashew sector. • In future, develop the export of meat and honey. Currently, Senegal exports thousands of tons to Ghana • The private sector must organise itself • The State must facilitate access of the population to this project • The analysis of value chains must be done properly

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Abdoulaye BADJI, Service Head, Regional Service for Town Planning Tel : 77 370 03 27</p>	<ul style="list-style-type: none"> • A good project that will help promote rotting mangoes and create jobs • Job creation 	<ul style="list-style-type: none"> • Control the production of the various sectors targeted and in general the speculations of the region • Have raw materials available <p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The functionality of the Agropole throughout the year because the mango and cashew nut are limited to one period while the factories have to operate 12 months out of 12. • The need to set up an industrial unit in Casamance to take into consideration all the products that ripen by quarter to set up several processing units (lemon, maad, citrus, palm oil, etc.). Several units close due to shortage • Risk of degradation of production roads by regular truck traffic; • Risk of pollution from toxic products <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Think about the indigenous population, that is to say, favour expertise and qualified local labour • Redo the roads for a better circulation of products and people • Minimise toxic products • Build health centres to deal with the risks of pollution • Inform and involve the population concerned on time. Carry out wide sensitisation
<p>Baba AIDARA, Service Head, Regional Service of Mines and Geology Tel. : 77 556 35 30</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Creation of a lot of jobs • Increase in income • Establishment of an approved price for mango and cashew nut • Absorption of the production of mangoes and cashew nuts; • A reduction in poverty, 	<p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Involve the population from start to finish • Take into consideration all value chains

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	<ul style="list-style-type: none"> Stabilisation of desertification with mango and cashew plantations 	
Sanoussy FOFANA , Service Head, Regional Service for Community Development Tel. : 77 624 73 79	<p>Expectations</p> <ul style="list-style-type: none"> Creation of many jobs especially for women and young people; The blooming of the entire natural region of Casamance. Exploitation, processing and marketing of our local products; Improvement of the conditions of families in relation to this production; Contribution to food self-sufficiency; Reduction of illegal immigration, Increase in the added value of products such as cashew nuts. Creation of value chains 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> The long-term land problem will arise especially for production with the high demand for raw materials which will lead to a scramble for land, and impacts on forests classified as sacred forests. The expropriation of land by multinational agricultural companies. The concern is the purchase of land by those who have the means to the detriment of the natives with their small farms <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Create a Link, a synergy between small processing units and the Agropole; That the Agropole Sud should be the best of the three Agropoles that will be built in Senegal; Sensitise the population on the project and the national domain; Use the land judiciously, taking into account the sacred forests.
Bakaru Sidy Ndiaye Regional Director of Community Development	<p>Perception</p> <ul style="list-style-type: none"> Large-scale project in the area <p>Expectations</p> <ul style="list-style-type: none"> Develop the industrial fabric Deconcentrate the industrial fabric Have a positive socioeconomic impact Reduce the unemployment rate Reduce poverty Integrate socio-cultural realities 	<p>Concerns</p> <ul style="list-style-type: none"> Peace and security <p>Recommendations</p> <ul style="list-style-type: none"> Start the project

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	<ul style="list-style-type: none"> Meeting social demand in terms of job creation and locally processed products Facilitate the return of the population displaced by the war 	
<p>Alassane SOW, Service Head Regional Sanitation Service</p> <p>Tel. :Not given</p>	<p>Expectations from the Agropole Sud</p> <ul style="list-style-type: none"> Boost development, especially the processing of local products, which in turn will eradicate poverty in rural areas. Possibility for producers to sell their products to manufacturers, which will have repercussions for the region; Set up socio-economic infrastructure (schools, health posts, markets, etc.) 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Risk of land expropriation for the installation of modules and the need to compensate rightful claimants Security risk experienced by the region, especially in the locality where the central module will be installed; Air pollution linked to the use of machines. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Involve all the stakeholders (leaders, politicians, customary, religious, grassroots actors) to bring the project to the grassroots. Respect the administrative procedure, from the strategic environmental assessment to the public hearing; As much as possible, avoid the impacts from an environmental and social point of view; Use alternative resources (solar for drying, wind power).
<p>Ousmane KA, Service Head, Regional Service of Commerce</p> <p>Tel. : 77 165 13 64</p>	<ul style="list-style-type: none"> Good project and an opportunity for Casamance. Incentive to production and processing, and boost the economy of Casamance. Creating jobs for young people Involvement of all stakeholders, An increase in the income and production of 	<ul style="list-style-type: none"> Arrival of population from other regions, Pressure on the land (risk of overexploitation of land); Lack of consultation mechanisms An expropriation of the holders of cultivable land. <p>Recommendations</p>

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	the various sectors	<ul style="list-style-type: none"> Set up steering committees bringing together all the stakeholders to take into consideration the decisions of each actor, the expectations of the population and the management of conflicts.
Marie Louise FAYE, Head, Service Regional Tourism Service Tel. : 77 539 87 95	<p>Expectations:</p> <ul style="list-style-type: none"> Think about women's groups in relation to their place at the Agropole level, do not put them out of work because they are the ones who are most active in economic activities (processing, sales, market gardening, etc.) The development of the region and the creation of jobs. 	<p>The risks are minimal:</p> <ul style="list-style-type: none"> Security needs to be reinforced The land aspect, in particular the risk of land expropriation; we have to think of the families which feed from the land. We must not take everything and leave others stranded. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Make sure everyone wins, Involve all stakeholders
Charles Iamine Diabone Coordinator Casamance Tourism Board 774068899	<p>Perception</p> <ul style="list-style-type: none"> A good project for the region <p>Expectations</p> <ul style="list-style-type: none"> Have products and develop a tourist area to serve as a place of attraction to tourists Reduce youth unemployment rate in the region Access to funding <p>Concerns</p> <ul style="list-style-type: none"> Poor project management More pollution of nature 	<p>Recommendations</p> <ul style="list-style-type: none"> Train young people in agricultural activities Support the structuring and organisation of producers Create more cooperatives to bring together producers
Famara NIASSY, Service Head, Regional Fisheries Service Tel. : 77 712 11 35	<p>My assessment is that the project is welcome since it is, if I understood correctly, to promote the flagship products of each zone. In the south, the priorities are mainly focused on two crops that are cashew and mango, even if in the future, we will have other products alongside</p> <p>But my wish was the introduction of fishery products, especially shrimps.</p> <p>A good project because it promotes many agricultural sectors</p> <p>Expectations</p>	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Poor management of polluted and hot wastewater which risks destroying the aquatic environment; An imbalance of the existing, of the life of the local people with the arrival of foreigners (risk of small conflicts, incompatibility of mores), the development of promiscuity, other activities (sale of alcohol, hard drugs, prostitution) non safety of people with

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • Future sectors that will boost the first retained be fishery products which will play their part in order to have fishery products in quantity and accessible; • The development of the shrimp sector • Creation, economic development and consolidation of peace • Increase production • Create jobs • Increase the financial resources of producers • Promote the sectors <p>Concerns</p> <ul style="list-style-type: none"> • No concerns 	<p>the intensity of transport;</p> <ul style="list-style-type: none"> • Strong gas and smoke emissions, pollution, heat from cooking which will have a negative effect on the elderly and children and on the vegetation. • Explosion of boilers. It will take a lot of cooling water, where will we find all this water (river, borehole?) <p>Recommendations</p> <ul style="list-style-type: none"> • Ensure that the physico-chemical parameters of the water body do not change because of the water process of these future companies; • Integrate fishing, because it occupies the first economic segment, from the point of view of the income it provides to those who practice it; • Speed up the implementation of the project because it raises a lot of hope among producers in the three regions with approved prices • .Prepare safety measures; • Respect the cultures and customs of local communities • Respect environmental standards • Avoid pollution : atmosphere, water, soil
<p>Enie Joel COLY, Labour Inspector, Regional Labour Inspectorate and Social Security</p> <p>Tel. : 77 551 55 36</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Job opportunities for young people and women that will enable them to earn an income; • Fight against poverty in general; • Will boost the economy; • Possibility of population living off the production of their labour. 	<p>The risks lie in the use of chemicals for processing and the conditions (wearing of helmets, gloves, etc.)</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Avoid importing workers, that is to say, local recruitments should be encouraged, especially for low-skilled jobs; • Encourage promoters to comply with labour laws, to make the necessary declarations for their employees; • Involve the inspection service more in order to provide our expertise and recommendations in terms of health and safety at work; • Put more emphasis on social than environmental issues (developing the

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<p>health aspect, educating surrounding localities);</p> <ul style="list-style-type: none"> Involve all stakeholders at each step of the process.
<p>Malick Ndour Labour Inspectorate 774243259</p>	<p>Perception</p> <ul style="list-style-type: none"> We haven't been visited so far, but our perception is that it is a project that can boost development and create jobs <p>Expectations</p> <ul style="list-style-type: none"> Opening statement Favour the local workforce Communicate job offers Draw up employment contracts Respect the health and safety conditions <p>Concerns</p> <ul style="list-style-type: none"> Refer any dispute to the labour inspectorate 	<p>Recommendations</p> <ul style="list-style-type: none"> Communicate with companies and subcontractors during the works Communicate with all stakeholders in the project
<p>Jean Eude CARDOZ, Service Head, Regional Local Development Support Service Tel. : 77 455 57 30</p>	<p>Expectations</p> <ul style="list-style-type: none"> Priority should be given to the population in terms of jobs; Consideration of the environmental issue through a serious impact assessment and the financing of the ESMP; Compensation for people affected by the Agropole Guarantee of the sustainability of existing EIGs through support; Boost the economy as a whole (job creation, new services, e.g creation of a packaging factory), possibility of contracting small processing units with the Agropole. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> The land issue to be negotiated even if the land belongs to the national domain, we always come up against customary law Security in Casamance: we are in a situation of neither peace nor war. We must consolidate peace; Pollution, nuisance, deforestation that can damage flora and fauna. Risk of accidents before and after the installation of the Agropole (coming and going of trucks), diseases with the arrival of people from various backgrounds and risk of conflicts <p>Recommendations</p> <ul style="list-style-type: none"> Collaborate with the University of Ziguinchor to train students and develop training areas for their integration into the Agropole; Carry out careful environmental and social impact assessments; Provide adequate compensation to the population affected by the project.

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Casimir A. SAMBOU, Director, Regional Directorate of Rural Development, Tel. : 77 577 50 08</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Help transform our economy, create added value from processed products (mango and cashew); • Creation of jobs and wealth; • Creation of infrastructure (roads, constructions, etc.); • The Agropole must not be competition for existing processing units, but it must play a rather complementary role and allow women processors to succeed. • Reduction in crop loss, • Encouraging the creation and establishment of new fruit orchards, professionalisation of stakeholders in the sector • Contribution to peace in Casamance 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Phagocytosis of processors who are already there, especially women's groups which are professionalising, trained by ITA and who earn their living through their small units; • The installation of a competition which risks eliminating the weak to bring about the emergence of the Agropole <p>Recommendations</p> <ul style="list-style-type: none"> • Collect the ideas of each actor; • Make a positive discrimination for the local population in terms of employment; • Avoid thinking from Dakar; you have to listen to the people at the grassroots. • Experts must avoid designing from above and coming to serve the population. • Involve the local population more
<p>Boubacar Badji Deputy Service Head DRDR 774394985</p>	<p>Perception</p> <ul style="list-style-type: none"> • Project with great potential which can be a pillar of development <p>Expectations</p> <ul style="list-style-type: none"> • Export and processing • Development of modern farms • Reforestation of zones and replanting old farms • Preserving the environment • Developing the industrial and infrastructural park • Allow households to expand and modernise their orchards <p>Concerns</p> <ul style="list-style-type: none"> • Impacts on land tenure because it is a sacred issue in the area • Impacts on the immediate environment • Socio-cultural aspect must be taken into account 	<p>Contribution in the reduction of emissions:</p> <ul style="list-style-type: none"> • Take into consideration the factors of climate change • Modern orchard/plantation responding to agro-ecology • Implementation of mitigation measures • Use modern and less polluting infrastructure <p>Recommendations</p> <ul style="list-style-type: none"> • Establish retention and containment of salt water and rainwater • Inclusive project involving all existing structures • Set up opening mechanisms to open up beyond the two targeted sectors • Supply the local market first • Processing the cashew apple • An implementation of the project based on justice and equity

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • Priority to the local workforce • Impacts on the population • Availability of raw material for small units processing local products • Problem of land salinisation arises in the area where the project is located 	<ul style="list-style-type: none"> • Properly share the economic benefits
Siaka GOUDIABY, Education Inspector Inspectorate of Education	<p>Expectations</p> <ul style="list-style-type: none"> • The presence of a qualified workforce, actors (students, potential learners) who will be in the Agropole, • Make the vocational training centres that are supposed to train future employees of the Agropole more functional; • Expand the reception capacity of the centres, equip them and strengthen the educational infrastructure, • Reinforce the infrastructural park, because they are very dilapidated centres. For Adéane, it was a former American camp, so no amenities • The training of trainers from these centres in sectors which are in line with the Agropole, in particular the processing and conservation of fruits and vegetables and cereals. <p>You need qualified personnel for the Agropole</p>	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The availability of land • Deforestation linked to the development of targeted sites; • The availability of qualified staff: this is why I mentioned vocational training, • Lack of Funding: How are orchard owners going to cultivate if they don't have funding, Are they going to cultivate? Hence an absence of raw materials. So, we must include this data. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Set up vocational training centres that will provide the workforce and qualified personnel. • Sensitise the elite from this territory and the population for the availability of land and for community sharing of the project.
Oumar Ndiaye Head of BFPA/ Inspectorate of Education 775410027	<p>Perception</p> <ul style="list-style-type: none"> • In principle, nice development initiative <p>Expectations</p> <ul style="list-style-type: none"> • Create jobs for young people • Train and support young people on entrepreneurship • Train farmers • Create added value <p>Concerns</p>	<p>Recommendations</p> <ul style="list-style-type: none"> • Promote communication, involvement • Promote the value chain approach • Give priority to the local workforce • Establish a connection between producers, small processing units and the Agropole

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • There is no participatory and inclusive management • Lack of information and awareness 	
<p>Abdou Salam KANE</p> <p>Director of Operations and Sales</p> <p>COSAMA</p>	<ul style="list-style-type: none"> • Boost the region's economy • Promote industrialisation • Develop infrastructure • Open up the region and constitute a sub-regional hub • Create jobs and increase the standard of living of the population. 	<p>Risks or threats</p> <p>The instability and precarious security linked to the rebellion could constitute threats or risks for potential partners and donors interested in such a project.</p> <p>Recommendation</p> <ul style="list-style-type: none"> • An attractive legal and fiscal environment • Focus on infrastructure • Guarantee peace and stability to overcome the psychosis of insecurity by better selling the Casamance destination
<p>Commander Gora SARR</p> <p>National FIRE Fighting Brigade of Ziguinchor (GIS 4)</p>		<p>Risks or threats</p> <ul style="list-style-type: none"> • Technological and occupational risks related to operations and related activities. <p>Recommendations</p> <ul style="list-style-type: none"> • Make the sites accessible to fire apparatus (machine and ladder tracks); • Smoke extraction from warehouses and work rooms with a lodgings if necessary in accordance with technical instruction No. 246; • Install and provide fire-fighting means: extinguishers, fire hydrants in sufficient number and well distributed in relation to the defended risk; • Set up measures to facilitate the action of firefighters such as the posting of plans • Ensure arrangement in relation to the storage of hazardous products (retention basin); • Ensure submission of the construction file with safety instructions and plans to

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<p>the firefighters for study and advice;</p> <ul style="list-style-type: none"> Set up operating instructions (to avoid handling errors) and safety (what to do in the event of a disaster).
Guillaume A. Coly Company Commander National Fire Fighting Brigade/ 41st CIS Tel. : 775291438	<p>Expectations</p> <ul style="list-style-type: none"> Have water reserves available Fire extinguishers <p>Concerns</p> <ul style="list-style-type: none"> Classification according to the products used Legal nature of the site Installations according to what type of materials Analysis of variant Hazard study 	<p>Contribution to the reduction of emissions</p> <ul style="list-style-type: none"> Less pollution Less hydrocarbons <p>Recommendations</p> <ul style="list-style-type: none"> Water reserve Availability of extinguishers Fire hydrant Prevention plan
Mamadou Moustapha Niang Regional Service Head of ANAM Tel. : 77 649 88 05 Ziguinchor	<p>Expectations</p> <ul style="list-style-type: none"> Start this project, That the activities should materialise, We should be able to feel this project. That the mango and cashew sectors can create added value; that ships can dock at the port of Ziguinchor and take away these products, these goods ready for transport to other ports. A good opportunity for Casamance Connection between Agropole and Aort 	<p>Recommendations</p> <ul style="list-style-type: none"> Get down to it, try to start the project; Make the project a reality; Create workshops at the regional level to make the project known. Ensure that this project is appropriated by the economic operators of the region Create a favourable road network Train young people in port professions Include the population in the different stages and processes of the project
Donacien Kanfany Service Head for Lands 776300070	<p>Perception</p> <ul style="list-style-type: none"> We heard about this project and it is a great initiative for the area <p>Expectations</p> <ul style="list-style-type: none"> Develop the region Boost the economy of Casamance Have a positive impact on Casamance youth 	<p>Recommendations</p> <ul style="list-style-type: none"> Running the project well Regular follow-up Involve the population and local stakeholders
Mrs. Sounkarou Camara	<p>Perception</p>	<p>Recommendations</p>

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Bureau Head at DPV</p> <p>775219143</p>	<ul style="list-style-type: none"> • A good project to develop the processing of Casamance fruits <p>Expectations</p> <ul style="list-style-type: none"> • Widen the scope of intervention • Intervene in other sectors beyond mango and cashew nut • Fruit fly control • Integrated pest management throughout the sub-region <p>Concerns:</p> <ul style="list-style-type: none"> • Infection of trees and orchards due to lack of maintenance • The fruit fly is always present • Improve varieties to meet processing needs • Give priority to local varieties when planting fruit because they are more resistant and resistant improved varieties 	<ul style="list-style-type: none"> • Raise public awareness on the importance of the Agropole • Raise awareness about the maintenance of mango and cashew plantations • Raise awareness about tree pruning • Processing nuts and apples • Advocate systematic maintenance of orchards • Review the planting method • Wondering about the sums invested by Indians

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ASSANE SECK UNIVERSITY OF ZIGUINCHOR

<p>Prof. Alassane Diatta</p> <p>Vice Rector in charge of Research, Cooperation and Professional life</p> <p>776457130</p>	<p>Expectations</p> <ul style="list-style-type: none"> • A major project that could solve a lot of problems <p>Expectations</p> <ul style="list-style-type: none"> • Create a space where the university can put its know-how to use • Participate in activities through our qualified staff • Supporting women's EIG • Collaborate with the incubator/training space of the university <p>Concerns</p> <ul style="list-style-type: none"> • Involve the university in development because it is rare for projects to do so 	<p>Contribution to the reduction of emissions</p> <ul style="list-style-type: none"> • The techniques and technologies used must have the least possible impact <p>Recommendations</p> <ul style="list-style-type: none"> • Present the project to academia • Offer services to populations • Support the rural world
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AGENCIES, PROJECTS AND PROGRAMMES OF ZIGUINCHOR REGION

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Boubacar SONKO, Director</p> <p>Assane Makhoudia NDOYE, In charge of Monitoring and Evaluation, National Development Agency (ARD)</p>	<p>Perception</p> <ul style="list-style-type: none"> • A good project that could solve the problems of the value chains <p>Expectations</p> <ul style="list-style-type: none"> • The involvement of local entrepreneurs and investors and the adoption of technologies that are within their reach (not a hyper-technology, hyper-industrialized, hyper-resource project that excludes the population). • With regard to the development of agricultural sectors, that the Agropole can allow the population to be better organised and to benefit from these value chains, from production to marketing • Support for the resumption of other sectors that are there apart from mango and cashew nuts, such as the rice sector (parboiling rice, etc.), the fisheries sector; • Technology transfer and respect for environmental standards; • Arrangements are made so that the population can benefit from the outcome of the project in relation to their loss of land; • That the project can create sustainable jobs for the populations and allow the development of other infrastructure, especially access to production zones. • Job creation • Increase people's income • Fight against poverty 	<p>Likely risk or threat</p> <ul style="list-style-type: none"> • The major risk is the resumption of conflict, even if there is a lull, the conflict is still there; • The lack of information of the population who can cause problems. • The land risk: the land issue is a risk with the number of hectares of land that will be used. Whatever the status of the land title • .The risk of social stability which may prevent the financing of the project • Export logistics, as it is not known whether riverboats can access the port of Ziguinchor. • Normally the refrigerated boats should be able to come, because if they cannot get in, it's going to be a bit complicated. It will have to be transported to Dakar from tonnage boats and then put in riverboats. This increases the charges a bit. • We have targeted two mango and cashew sectors. It would be necessary to ensure the correct supply at the level of these sectors 12 months out of 12 to properly supply the processing units • The renewal of plant material which is a big problem and the lack of care in orchards that is felt in productivity ; • Support for research, especially through ISRA, Assane Seck University (the Agro-Forestry Department), the Agricultural High School of Bignona, ISEP, etc. • Environmental and social issues including deforestation for the installation of modules, • Land for the installation of the central module in Adéane • Negative impact on the environment <p>Recommendations</p> <ul style="list-style-type: none"> • Involve and share with the population; • Avoid the Agropole hindering agro-

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<p>pastoral activities</p> <ul style="list-style-type: none"> • Achieve a good ESMP that allows the population to meet together, especially in terms of benefits; • Ensure that the easement of the site does not impact the areas of displaced villages which can be sources of difficulties
<p>Ibrahima BADIANE, Zonal Director, ANCAR BMZ Tel. : 77 572 70 64</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Creation of added value of primary sector products at the local level and creation of ecosystems allowing to connect all the links of the value chain and to draw up the identified needs. • A good idea. • New type of project for the country • Decisive role in the development of fruit value chains, trade in these products, job creation and improvement of the income of stakeholders in fruit value chains • Have a positive impact on the region's economy • Create a good living environment 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> • Insecurity (armed conflict linked to rebel groups); • Non-compliance with the commitments of donors and the State; • Deforestation on the site during the establishment of the Agropole; • Occupation of cultivable land; • Negative impact on the environment <p>Recommendations</p> <ul style="list-style-type: none"> • Implement the identified mitigation measures pay the expenses to rightful claimants; • Minimize the risks ; • Reforest to compensate; • Carry out a prior study; • Train the population on new technologies, trade and support them in structuring and organising themselves.
<p>Moussa DIEDHIOU, Service Head, National Agency for Agriculture Tel. : 775578758</p>	<p>Perception</p> <ul style="list-style-type: none"> • Very good initiative that would regenerate the economy of the region; <p>Expectations</p> <ul style="list-style-type: none"> • The development of aquaculture; • The development of income-generating activities; • The generation of income that will contribute to the establishment of basic social and socio-economic infrastructure; • Equipment for storing and preserving 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Pressure on land which can be a source of conflict; • High overexploitation of wood resources and products of all kinds (agricultural and fishery); • Poor management of waste from the Agropole; • Insecurity: area weakened by the ongoing conflict (acts of banditry in certain localities) • Climate change which risks slowing

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>products;</p> <ul style="list-style-type: none"> Introduce fish products of an aquaculture nature. <p>Concerns</p> <ul style="list-style-type: none"> Involve all local stakeholders, technical services and professional organisations 	<p>down fruit production;</p> <ul style="list-style-type: none"> The advent of fruit diseases (attack of white flies) which may affect the quality of the fruit, leading to a decrease in the quantity of raw materials. <p>Recommendations</p> <ul style="list-style-type: none"> Involve all social strata, all stakeholders (administrative authorities, local authorities and the population) from the start of development until the implementation of the Agropole, and target the beneficiaries; Set up recycling and treatment facilities for water and waste from the operation and processing of the Agropole to reduce pollution of aquatic environments; Have a directory (census) of orchards, farms, real production fields to assess their production capacity to see if the structure would be able to absorb the production capacity of the latter; Speed up the start of the Agropole Facilitate access to the localities which polarise the project; Reforest and protect nature; Ensure the involvement of the population.
<p>Yousseuf SIDIBE</p> <p>South Zone Regional Head, National Agency for Youth Employment</p> <p>Tel. : 77 542 32 75</p>	<p>Perception</p> <ul style="list-style-type: none"> Project is an opportunity to solve the unemployment problem in the region <p>Expectations on the Agropole Sud</p> <ul style="list-style-type: none"> Boost the economy of Casamance; Promote the agricultural sectors in the region, give added value to our products from production to marketing; Full use of production, especially for cashew nuts, that is to say enhancement of the entire chain; The development of the specialties of each locality (Sédhiou, Kolda and Ziguinchor); The creation of jobs for young people and 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Land issues The land problem linked to the establishment of the Agropole; Inaccessibility of production sites; Insufficient security at the production sites; Poor management of the Agropole; Hostility from the population; <p>Recommendations</p> <ul style="list-style-type: none"> Involve the population through awareness raising through committees set up for this purpose;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>women (let the population feel the presence of the Agropole) and put a definitive end to the crisis and establish lasting peace.</p> <ul style="list-style-type: none"> • Train young people and women • Also make it an incubation centre • Increase agricultural production • Make the products a label of Casamance • Lighten the work of producers • Mechanise work • Attract investors • Bring more resources to local authorities 	<ul style="list-style-type: none"> • Set up a groups involving all stakeholders; • Involve the population; • Favour the local workforce; • Open up the area where the Agropole is located; • Involve all the communities of Casamance ; • Train and sensitise the local population on the management and maintenance of plantations
<p>Alassane AW, Assistant Service Head, National Agency for Statistics and Demography Tel. : 77 208 50 09</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Solve the problems of employment of young people, women who are active in cashew and mango; • Develop the region. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Security: without peace, nothing can be done, and the lack of dialogue or communication between actors; • Compliance with standards in the treatment of products and good management of atmospheric emissions ; <p>Recommendations</p> <ul style="list-style-type: none"> • Establish sincere dialogue and an inclusive approach of all stakeholders (technical services, territorial command, local authorities and the population, women's associations, etc.) to avoid certain risks.
<p>Jean Rodrigue Malou Service Head/ANSD</p>	<p>Perception</p> <ul style="list-style-type: none"> • Excellent project if well implemented <p>Expectations</p> <ul style="list-style-type: none"> • Contribute to the development of the population • Develop the potential of Casamance <p>Concerns</p> <ul style="list-style-type: none"> • Poor management of the project • Lack of involvement and information of the local population 	<p>Recommendations</p> <ul style="list-style-type: none"> • Involve the population and local stakeholders
<p>Youssouph BADJI,</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Bring structural changes to agriculture in 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • If it is foreigners who take more

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Coordinator, Casamance Development Pole Project</p> <p>Tel. : 77 358 70 65</p>	<p>Casamance through the development of processing.</p> <ul style="list-style-type: none"> • Sale of fresh local products by putting in place mechanisms that will facilitate their distribution first on the national territory and allow the population to get used to commercial practices and better appreciate the original products of Casamance. • Opportunities for emigrants (executives) who are in Europe, in the USA (establishment of exchange platforms between diaspora associations from Casamance) to return to Casamance; • Ensure that households really benefit from this project to make the most of the facilities; • That the State support this upstream workers' development by improving health and educational conditions. Let us have a rather special consideration for women and young people. Stabilisation of farmers' income for the proper education of children; • That the Agropole can benefit from the training of young people, students who have graduated from Assane Seck University and from the various training schools; • Set up training cycles (quality specialists, company apprenticeship, etc.), laboratories that give these young people a springboard to access the Agropole through very practical applications; • Environmental and waste management by setting up a series of measures to prevent the river from being polluted; this is also a great challenge, having a clean operation, transferring clean technologies to avoid that those who live from the river are not negatively impacted. 	<p>advantage of the opportunities of the project, this can be a source of frustration;</p> <ul style="list-style-type: none"> • Insufficient cultivable land in Casamance. If there is no return on investments (land donated by the population), we can expect very negative reactions from the population. • Environmental and social impacts (deforestation with risk of loss of certain century-old species such as the cotton tree, certain deviations linked to cohabitation between the rich and the poor) <p>Recommendations</p> <ul style="list-style-type: none"> • Work with local administrations, above all, to help them find the right niches to succeed in the project and in environmental management. • Set up a foundation whose purpose is to support the education of girls and the training of women, people living with a disability by offering scholarships; • Promote studies in the sciences to train technicians, doctors, midwives, etc. • Ensure that the foundation makes it possible to reduce taxation and can be beneficial to all social strata (young people, women, purchase of equipment, etc.)

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PRODUCER ORGANISATIONS OF ZIGUINCHOR REGION

<p>Abdou Hadji BADJI, Chair, Regional for Framework of Consultation Rural People</p> <p>Tel. : 77 657 55 20</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Make the production of family farms more profitable and make the agricultural profession attractive with its conditions in the rain-fed area. • Help to produce in quality and quantity for a healthy and diversified diet; • Provide a Casamance label product with all the nutritional qualities sought in both products; 	<p>Recommendations</p> <ul style="list-style-type: none"> • Human, financial and material resources be mobilized for the realization of the project • May the Agropole become reality
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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • The culmination of investments in the Agropole, including the projects of the actors; • Project contributes to peace and reconciliation of hearts, creating jobs for young people and women; • Significant reduction in production losses for both products and the development of other economic activities around mango and cashew; 	
<p>Babacar SEYDI, President of the Cooperative of EIG of Ziguinchor region IAMS / SOCAAS</p> <p>Tel. : 77 658 51 47</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Zero rotten mango in Casamance and maximum quantity of cashews and apples processed • For other expectations refer to the PSE BOS 	<p>Risks and threats</p> <ul style="list-style-type: none"> • Slowness (administrative procedures) in implementation at State level; • Environmental impacts: pollution, increased waste, • Deforestation due to increase in farms and housing, overfishing <p>Recommendations</p> <ul style="list-style-type: none"> • Bring together all the stakeholders; • Respect the recommendations already made at the BOS level
<p>Ousmane SAMBOU, Programme Director– Tel. : 77 570 32 33 et Issa Karim SANE, Marketing and Sales Director - Tel. : 77 905 42 84 - CASADEV</p>	<p>Expectations</p> <ul style="list-style-type: none"> • A real impact, so that the population feels the presence of the project. Have a participatory approach, so that it is a project that literally changes the lives of the Casamance people (producers, processors, distributors, consumers, etc.). Let all these links feel the project; • Creation of a framework that will bring together all the stakeholders; • Increase in production in the mango and cashew sectors; • Bringing added value and creating jobs; • Positive social impacts: job creation, drifts with the rush of populations, foreigners, promiscuity; • The implementation of the project. Let this not be a utopian project; • With the Agropole, we will have a good organisation that will make it possible to make viable orchards and picking fields of mango and cashew nut in the wild. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The disappearance of local processing units with the establishment of the central unit; • The total and disorganised export of raw products; • Unfair competition between small processing units and the Agropole. <p>Recommendations</p> <ul style="list-style-type: none"> • Unite all processing units with the Agropole; • Set up a structure specifically dedicated to the Agropole for any information and suggestions on the project; • Raise awareness through radio and the media, • For production, involve State agricultural structures more in order to have good quality raw materials;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<ul style="list-style-type: none"> • Reduce formalities during administrative procedures; • Carry out the environmental and social assessment at the local level (Adéane); • Facilitate access to the Agropole by setting up an adequate transport line.
Philippe DIEDHIOU, President, UJCRA – Tel. : 77 641 92 81	<p>Expectations</p> <ul style="list-style-type: none"> • Make our communities have a sense of belonging; • An increase in income; • A strengthening of the social fabric. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The lack of communication on the general interest of the Agropole can create frustration between villages over the choice of the location. • The stakeholders not being prepared to welcome the project; • Deforestation and the need to set up a reforestation plan (nurseries); • Risk of debauchery, prostitution, importation of disease, dropping out of school because there is a shortfall on the other side. <p>Recommendations:</p> <ul style="list-style-type: none"> • The project be carried out as quickly as possible; • Put in place a consultation framework in which the stakeholders or the municipality must be part; • Put in place a mechanism so that the population accepts the project (recruit motivators from the municipality for the awareness campaigns)
Focus group in Baghagha village which houses the central module of the Agropole (about one hundred persons of all categories)	<p>"The Agropole will be the first industry to be installed in the village. It's a great hope for us. It will help resolve the issue of youth employment and curb rural exodus and illegal immigration".</p> <p>"The population is informed of the location of the Agropole Sud in the village and is ready to welcome it. Several information and sharing meetings were held prior to this. Our last meeting brought together more than 300 people. Several questions concerning our levels of information, our expectations and our fears were discussed. In the municipality of Adéane, even a child is informed of the Agropole Sud project. For us, this project gives rise to hope: the creation of jobs especially for young people and the development of Casamance".</p> <p>"For the moment, we find it hard to believe in the implementation of the project. You have seen the</p>	<p>Potential risks and threats</p> <ul style="list-style-type: none"> • Work given to foreigners; • The impact on the lives of young people in the village, changes in morals, debauchery of young girls and boys with the arrival of foreigners; • Management of waste and pollutants that will have an impact on the river and our fields. • The security of the population in relation to the arrival of foreigners where bandits can mix; • Compensation for landowners

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>presence of all the young people; it is because they have hope that the Agropole Sud will reduce the unemployment rate. Therefore, the project will be a source of hope for young people.</p> <p>Expectations</p> <ul style="list-style-type: none"> • Drop in the unemployment rate; • An improvement in the living environment of the population of the municipality with the construction of access roads, educational and health infrastructure, increase in electrical capacity; • The establishment of lasting peace throughout Casamance, stability in all the villages. The new jobs will have an impact on the establishment of peace; • The construction of vocational training centres to support and encourage the qualification of young people in order to constitute a skilled workforce for the Agropole; • Appropriation of the project through the multiple information sessions; • The construction of roads, feeder roads, access routes to production areas (contribution of a notable); • Added value to the sectors, and revival of agriculture in Casamance; 	<ul style="list-style-type: none"> • Failure to carry out the project which would be a source of frustration <p>Recommendations:</p> <ul style="list-style-type: none"> • That the project be carried out as quickly as possible; • Take into consideration the security aspect in all senses; • That the Agropole can support youth activities (ASC, AGR, etc.) and develop sport (football, basketball, etc.); • Build a vocational training centre in the factory to train the population on agricultural trades and on exploitation techniques of agricultural products; • Finding niches and markets for processed products; • Train, supervise, support producers on the planting of good quality productive varieties, especially for mango, and to cultivate in large areas in order to allow for the availability of good quality raw material; • Strengthen the health aspect in the municipality. With the arrival of foreigners (Africans, Europeans, etc.), Baghagha does not have a good health post. If we are to host the project, we must have a hospital equipped with good equipment to take care of people's health; • If the industry sets up, it can integrate and develop other sectors based on citrus fruits or other crops such as grapes, avocado, apple, etc. • Set an approved price for cashew and mango products; • Most people have their fields fallow. Support the local population to exploit the land through bank loan facilities or establish operating partnerships with investors; • Enable women to easily access and market processed products.
Djibril Abdou SAGNA	<p>SANE, Aziz and</p> <p>Expectations</p> <ul style="list-style-type: none"> • Job creation for all social strata; 	<ul style="list-style-type: none"> • The water supply network is insufficient;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Lamine SANE</p> <p>Village Chief and notables in Baghagha village</p>	<ul style="list-style-type: none"> Reducing rural exodus and immigration; The security of our localities which will allow us to resume breeding livestock seriously affected by the Casamance conflict; Poverty eradication and development of health structures (a health centre with necessary equipment), educational and sports and leisure facilities; The development of arboricultural perimeters by error; most of the areas of these perimeters is untapped; Improving market gardening and tree production by organising and building the capacity of producers; <p>Concerns</p> <ul style="list-style-type: none"> Importation of diseases with new arrivals (AIDS, STIs, other diseases); The availability of land because the subdivided area of the village is totally occupied. If the project is to be housed, an extension must be made to meet the housing needs; The poor condition of the access roads to the village and the production roads; The coverage of the internet and telephone network is relatively weak, as is electricity; only a small part of the village is electrified. <p>Expectations</p>	<ul style="list-style-type: none"> The border with Guinea Bissau is porous, so we need good security to face possible attacks. Security is essential; Leaving the young people of the village stranded when recruiting staff and local labour. With equal competence, give priority to the locals, no need to look elsewhere to avoid frustration. <p>Recommendations</p> <ul style="list-style-type: none"> Activate the implementation of the project so as not to make the affected population wait too long; Secure the project area and the locality to avoid the risk of sabotage; Associate and involve local authorities (village chief, mayor, officials, notable, etc.) at each stage of the process to facilitate the flow of information and avoid frustration; Communicate, raise awareness to make people understand the objectives of the project; Organise producers and women's organisations; Declassify at least 60 hectares of classified forest to allow PAPs to have other cultivable areas Listen to the people, seek advice from local authorities.
SEDHIOU REGION		
LOCAL AND ADMINISTRATIVE AUTHORITIES AND CHAMBERS OF CRAFTS AND SKILLED TRADES OF THE SEDHIOU REGION DE		
<p>Abib Léon NDIAYE</p> <p>Governor of Sédhiou Region</p>	<p>A favourable project that should make it possible to:</p> <ul style="list-style-type: none"> enhance the agricultural, fishery and pastoral potential of the region; create of a value chain; create jobs; strengthen the action capacity of SMEs; Good territorial distribution of investments. <p>Expectations</p>	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Low involvement and mobilisation of territorial stakeholders; Communication deficit between central and decentralised levels; Failure to respect stakeholder commitments. <p>Recommendations</p> <ul style="list-style-type: none"> Ensure the mobilisation and

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • Promotion of the agricultural potential of the southern zone by creating a value chain; • Development of the secondary sector: industrialisation; • Building the action capacity of SMEs; • The fight against unemployment and precariousness by creating jobs; • Strengthening the competitiveness and attractiveness of regions. 	<p>involvement of territorial stakeholders at all stages of the project ;</p> <ul style="list-style-type: none"> • Ensure compliance with commitments by the various project stakeholders; • Be rigorous in the choice of companies to carry out the works: logistical, financial and technical capacity in particular; • Ensure transparency in the management of the project; • Fair representation of stakeholder families in the steering bodies of the project
<p>Maurice L. DIONE Administrative Assistant (AA) and Modou GUEYE Development Assistant (DA)</p> <p>Sédhiou Governor's Office</p>	<p>Expectations</p> <ul style="list-style-type: none"> • That the project be carried out as soon as possible and that it is beneficial for the whole region, • Improving the living conditions of the population economically; food security, in short eradicate poverty and underemployment. But we are convinced that people will work in the Agropole; • The Green Fund supports the concerns of environmental protection, the safeguarding of resources and sustainable development. That everything planned in terms of environmental protection or the regeneration of plant species be implemented; • With regard to forest management, the local population must be given an important place in management through an upstream, iterative and inclusive participatory approach (awareness raising, communication, etc.). <p>Concerns</p> <ul style="list-style-type: none"> • The main fear is not to see the implementation of the project; • The risk of producing in Casamance and selling it elsewhere, that is to say exporting all processed products. The local market must also be supplied, beyond allowing residents to work, also enabling them to benefit from processed products before exporting abroad 	<ul style="list-style-type: none"> • The other fear is that the workers of the Agropole would come exclusively from outside, we must take into consideration the local workforce, • Deforestation of forests (excessive cutting, bush fires, etc.). the establishment of community forests could help preserve this and regenerate protected species; • The misuse of pesticides can have consequences on the fauna, flora and atmosphere; the project must take into consideration the mitigation measures necessary to limit the effects. <p>Recommendations</p> <ul style="list-style-type: none"> • As soon as possible, finalise the design reports, all that is preparatory to the implementation of the project; • Involve stakeholders more, collect their opinions and also make them understand that this project is there for all of Casamance; • Once again, show our availability and support of this project; • Focus on local jobs and local consumption of processed products.
<p>Ibrahima FALL, Prefect, Prefecture of Sédhiou – Tel. : 77 529 05 82</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The development of sectors (cashew and mango) especially for cashew. 	<p>Risks and threats</p> <ul style="list-style-type: none"> • Lack of ownership of the project by the population;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • A significant economic and social impact on the population, a whole value chain to be supervised, from the producer to the national and international market, allowing each stakeholder to benefit from it; • Support and accompaniment for producer organisations in terms of organisation and training ; • Added value to agricultural production, especially rice milling, which must be a sector to be supported. The Agropole must help consolidate performance in all sectors. 	<ul style="list-style-type: none"> • Inaccessibility of the Sédhiou region; • Technical constraints: organisation of sectors, our ability to penetrate national and international markets; • A lack of technical support from the State. <p>Recommendations</p> <ul style="list-style-type: none"> • Share the difficulties at each stage, level of the process, make sharing meetings sequential at the level of the departments (CDD); • Create secondary platforms at the district level to facilitate the collection of productions; • Create a waste treatment unit that can be reused within the framework of the Agropole.
Ibrahima FALL, Prefet, Prefecture of Sédhiou – Tel. : 77 529 05 82	<p>Expectations</p> <ul style="list-style-type: none"> • Diligent realization of the infrastructure of the Agropole; • Capacity building for stakeholders, of productivity and production, but also strengthening the quality and labeling of products to face competition; • Better organisation of producers through the different sectors because there is an organisational deficit, better make their structures formal to expect international openness. Reflect on the types of organisations that will be able to support the project and allow these actors to better benefit from this project; • For it to have a positive social impact through the improvement of living conditions because current production only provides for the survival of producers; the project must support them in management, in farm business management; • A consolidation of the commitments of the Green Fund. 	<p>Concerns</p> <ul style="list-style-type: none"> • The first concern is the delay in the start of the project and non-compliance with the administrative procedures for the construction of these infrastructure, the release of the rights-of-way with good involvement of the technical services concerned; • Low involvement of the population. When the study is validated, it will be necessary to hold public meetings that will allow future beneficiaries to take ownership of the project and reduce their worries; <p>Recommendations</p> <ul style="list-style-type: none"> • Give importance to the phase of awareness, information, communication through public meetings; • Better involvement of administrative stakeholders, often we do not have any feedback on the results of studies. • Operate the lines of communication at all times to the administrative authorities; • Do not forget the social aspect and that the social dimension must be taken into account, that is to say within the

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<p>framework of corporate social responsibility (CSR); plan social actions towards the surrounding populations;</p> <ul style="list-style-type: none"> • Reassure producers and safeguard their interests.
<p>Aliou DIALLO, 2nd Vice President of the Sédhiou Departmental Council – Tel. : 77 540 11 08</p> <p>And</p> <p>Boubacar BA, Secretary General of the Sédhiou Departmental Council – Tel. : 77 575 46 30</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Involve grassroots institutions such as local authorities and clearly defining their missions; • Establish regulatory texts that will define the roles of each actor (departmental councils, municipalities, decentralised technical services, the population, partners); • Easily sell all the products (fruits, agricultural, forestry products, etc.) from community centres, aquaculture centres 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The non-involvement of structures, local authorities, the population; The lack of an environmental and social impact assessment that will satisfy the population with regard to the impacts of pollution (movement of trucks); • Discouragement of producers if road development measures are not taken; • Import of labour: as long as the labour force and the required expertise exist locally, it should be taken advantage of. • Pollution (dust, noise, chemicals, etc.) which may cause disease; • Change of morals. <p>Recommendations for the project's success</p> <ul style="list-style-type: none"> • Advocate the participatory approach, involve all actors, from decentralised authorities to deconcentrated authorities, where the roles of each actor are well defined; • Compensate and pay damages to the population that will be affected by the Agropole (agricultural land, houses); • Think about how the Agropole could benefit the departmental council in terms of financial benefits; • Respect the customs and cultures of the local people
<p>Aliou DIALLO 2nd Vice-President and Babou SANE Official in charge of Decentralised Cooperation and Development</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The involvement of the population, even the actors concerned about the success of this project; • Relaunch the activities of the hangar and harmonise them with those of the Agropole; • Restore our forests, the mangroves; 	<p>Recommendations</p> <ul style="list-style-type: none"> • Involve the departmental council in the different programmes of the project from start to finish, because today we have the local development office; so, this office must be involved all issues related to the development of the locality to take our concerns into account;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • Think about the management of rainwater and wastewater (pipeline); • With the Green Fund, we hope that the projects registered within the framework of PACASEN will find solutions to allow our population to flourish; • Job creation which can curb illegal immigration; • See the possibility of our producers to be able to sell and transform products quickly <p>Indeed, everything that will be produced in the region will be able to find a buyer through the Agropole (platforms and regional module).</p> <p>Concerns</p> <ul style="list-style-type: none"> • The non-involvement of the departmental council because the council is a territory and all the interventions of international organisations or NGOs, projects and programmes that intervene in the department must see the material involvement of the departmental council; • The local workforce is not taken into account; • Failure to identify key players and areas with high production. 	<ul style="list-style-type: none"> • Ensure the use of young people in the local workforce and possibly whether there is any recruiting the local expertise should be given priority; • Build the capacity of stakeholders; • With the support of the Green Fund, identify the adaptable area that can house the game reserve; • Reforest mangroves along the river coast by organising reforestation campaigns; • Better manage bush fires; • Emphasize hygiene issues to ward off certain diseases and take care so that the installation of the project does not affect the population; • Finally, we recommend the environmental and social impact assessment before the installation of the different project units.
<p>Ousseynou DIAGNE</p> <p>Secretary General of the Chamber of Commerce, Agriculture and Industry</p>	<p>Expectations</p> <ul style="list-style-type: none"> • So hat producers should be able to transform their products, already produce quality products, process them properly, respect international standards in terms of drying and packaging to be able to export them; • Develop the value chains of the various sectors and promote products at the regional level, this will increase the income of producers; • Open up production areas and strengthen socio-economic infrastructure; • Recruit local staff, looking elsewhere may not be the case in Sédhiou, but first of all we must give preference to nationals of the region; • Develop organic agriculture with the Green Fund. <p>Concerns</p> <ul style="list-style-type: none"> • The geographical position of the Samine platform which is a bit far from the regional 	<ul style="list-style-type: none"> • The insufficient technical capacity of producer;, they must be well trained in good agricultural practices and informed about what awaits them in this Agropole. <p>Recommendations</p> <ul style="list-style-type: none"> • Involve all the stakeholders in the choices for the next steps; • Assist and supervise mango and cashew producers more. As you know, Sédhiou region produces 70% of cashew nuts in Casamance, so we must have the largest batch of supervision; • Build social and health infrastructure (infirmaries, health posts); • Build roads to open certain production areas.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	module unless a ferry can be installed in Diattacounda so that Samine can bring its produce to Sédhiou. Everything must be done to find a solution for this situation;	
Abdoulaye COLY , 1st Assistant Mayor, Sédhiou Municipality – Tel. : 77 518 88 62	<p>Expectations</p> <ul style="list-style-type: none"> • The reinforcement of satellite units that are places of pre-treatment. • Capacity building of actors in the field of transformation, especially women; 	<p>Likely problems and risks</p> <ul style="list-style-type: none"> • Pollution and nuisances; • Risks of shortage of raw materials given the seasonality of the production of the two sectors selected; • The delicate land issue, especially to find sufficient areas without encroaching on existing forests or orchards. <p>Recommendations</p> <ul style="list-style-type: none"> • Communicate more about the Agropole, especially towards the population; • Support producers in their activities (planters, market gardeners, etc.); • Favour the local workforce in the activities of the Agropole.
Mansour BADIANE Municipal Secretary Médina Wandifa Municipality	<p>Expectations</p> <ul style="list-style-type: none"> • First, the rapid completion of the project because it has been a long time since we deliberated on the space of the platform, so we must make the chosen space viable as quickly as possible. • In general, we expect this project to promote agricultural and fruit products in the area. But also their contribution to development. • On the social level, we expect an improvement in living conditions by facilitating the practice of income-generating activities for the population. • On the environmental level, taking into account the environmental impact by highlighting the practice of corporate social responsibility. 	<p>Concerns</p> <ul style="list-style-type: none"> • Failure to carry out the project; • Impoverishment of arable land; • Possible deforestation, but this risk can be mitigated by the creation of community forests provided for under the Green Fund; • Negative influence on the young generation through practices contrary to our customs and cultures. <p>Recommendation</p> <ul style="list-style-type: none"> • Collaboration through the inclusive participation of all relevant stakeholders from start to finish; • Do everything to quickly complete the project.
REGIONAL TECHNICAL SERVICES OF SEDHIOU		
Assane DIOP , Regional Division of the Environment and Classified	<p>Expectations</p> <ul style="list-style-type: none"> • The provision of resources to carry out environmental monitoring (logistical and 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Climate risk: Climate change;

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
Establishments – Tel. : 77 650 01 83	<p>institutional support, monitoring equipment, capacity building, etc.);</p> <ul style="list-style-type: none"> • The development of the Sédhiou region through the creation of jobs and support measures (health, education, etc.); • The involvement of all stakeholders in the implementation of this project. 	<ul style="list-style-type: none"> • Diseases caused by fruit fly and insect attacks which can affect production (poor yield) <p>Recommendations</p> <ul style="list-style-type: none"> • Get closer to the technical services and involve them closely in the project; • Ensure compliance with environmental standards and regulations in general; • The roles and responsibilities of institutional stakeholders should be clearly identified as part of this study.
<p>Cheikh FAYE, Education Inspector, Education Inspectorate</p> <p>Sédhiou – Tel. : 77 236 30 48</p>	<p>Expectations on the Agropole Sud</p> <ul style="list-style-type: none"> • Close collaboration in the identification of training needs, and their support; • A real involvement of the Ministry of Vocational Training so that industries can find on-site vocational training schools capable of providing a qualified workforce; • A dynamic and fruitful partnership that will allow learners in training to do internships in industries to be sufficiently imbued with the realities of business and the practice of trades; • Recruitment of graduates from our training centres; • Welcoming general education students to enable them to discover the world of work; • This type of collaboration will allow a better acceptability of companies by the community, a guarantee of success in their productions. 	<p>Risks and threats</p> <ul style="list-style-type: none"> • The lack of qualified local labour is a risk that must be managed upon commencement ; • Depletion or break in the production chains of the raw material; • Lack of ownership and acceptability of the project: due to the non-involvement of communities; • Lack of electricity: having stable and sufficient electricity and NICTs. Water is already available on the site. • The degradation of the physical environment with pollution from waste; • Negative aspect: industrialisation always rhymes with an influx of people who are different in their beliefs, education, values and references. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Put all the prerequisites in place: properly carry out environmental and social impact assessments; • Set up a support system for entrepreneurship and training; • Find markets for products from the Agropole.
<p>Papa Diogomaye DIOUF, Division Head, Protection of Forests – Tel. : 77 362 53 98 et Hamady DIA,</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The success of the project especially in the production of plants and the processing of products; 	<p>Potential risks or threats to the establishment and implementation of the project</p> <ul style="list-style-type: none"> • Insecurity, it is true that there has been a lull in the area for ten years;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Division Head Reforestation – Tel. :</p> <p>Regional Inspectorate of Water and Forestry</p>	<ul style="list-style-type: none"> Improving household income and the socioeconomic conditions of the populations of Casamance; Conducting an inclusive environmental impact study will allow us to better identify certain difficulties in order to take adequate mitigation measures. 	<ul style="list-style-type: none"> Climate change, bush fires; Salinisation of land and the phenomenon of silting up of valleys; Disappearance of forests following regular clearing on logging sites, even if clearing is supervised by the Water Resources and Forestry Department; Attack by insects, flies. We must provide for the fight, the treatment against this scourge; Remoteness of certain production areas that are inaccessible especially during the rainy season. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Involve all the stakeholders (the population, technical services, administrative authorities and local authorities) who are concerned with the project; Involve the technical services more; Reforest, plan, develop road infrastructure; Develop marketing strategies to make the product "made in Casamance" visible
<p>Ismaila NIANG</p> <p>Inspector of Water Resources and Forests</p>	<p>Expectations</p> <ul style="list-style-type: none"> Capacity building of producers, thorough training to develop other niches and create an economy of scale; Processing of tree products; Develop renewable energy that will help improve conditions and facilitate transformation at the local level; Take into consideration aspects of soil fertilisation. In the area we are faced with problems of gully, soil conservation, silting, etc., and this requires works to defend and conserve water and the soil. <p>Concerns</p> <ul style="list-style-type: none"> Poor communication at the start of the project can lead to a misunderstanding of the project's objectives and skew the continuation of the activities planned within the framework of the 	<p>Recommendations</p> <ul style="list-style-type: none"> Conduct good communication at the level of the various CBOs, the population at the local level, the local authorities and all social strata; Engage the stakeholders of the administration to ensure proper ownership of the project; Renew the plantations and choose more productive species, for example the Costa Rican specie for cashew nuts, but also maintain and respect the spacings of 5m and between the lines of 20m, which will make it possible to diversify by carrying out other speculations during the rainy season at the level of these plantations; Rely on local materials necessary for good environmental performance. for fertilization, use composting systems,

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>Agropole Sud;</p> <ul style="list-style-type: none"> • Failure to involve the real stakeholders (administration) in the implementation of the project, which can pose a problem of ownership of the project; • The aging mango and cashew plantations which are very poorly maintained, which means that they are not farms but wild plantations that are used only for picking. With the respect to planting standards, we could increase yield levels to the extent that 46% of producers in rural areas deal in cashew nuts. 	<p>for pest control, there are local materials that can be used;</p> <ul style="list-style-type: none"> • Develop water savings with the solar watering kit.
<p>Omar MBENGUE, Regional Director Department of Rural Development – Tel. : 77 417 90 52 (2019 et 2020)</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The Agropole as a factor of connection between Casamance and the rest of the country and the infrastructure will allow the rapid distribution of products. • With the infrastructure of the Agropole, the possibility of processing cashew nuts on site which can not only stabilise prices and reduce risks, but also bring added value to our producers • Strengthening energy availability, which is a priority especially in the department of Goudomp, which talks about transformation, must have sufficient energy. The feasibility document had made proposals but the idea of integrating solar would increase the availability of energy; • Development of irrigation for the various sectors (rice, bananas, cashew nuts, mangoes); • Take into consideration the aspects of limiting salinity and silting up valleys. If salinisation is not curbed, anything we do is going to run into difficulties because it is progressing at such a rapid pace. In addition, if we include rainfall disturbances, weather-related water losses and deforestation, our project may have long-term problems; • Make sure that solar energy can meet all of our energy needs within the framework of this Agropole; • Strengthen the level of income for women and young people through a system of marketing agricultural products to enable issues of health, education, etc. to be settled downstream. • The mechanisation of agriculture which can have consequences on soils 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Climatic hazards; • The non-appropriation of the project by the populations and the isolation of the production areas; • Pests (fruit fly) and fruit diseases; • Noise and atmospheric pollution due to the activities of the Agropole; • The increase in areas can impact the habitats, can create conflicts because there will be pressure on the land; • The lack of harmony between the Agropole and the technical services. Harmony must be established between the Agropole coordination team and the technical services so that there is good collaboration, more efficiency and effectiveness in the implementation. I think that was the idea of setting up a task force to relieve certain responsibilities at the level of technical services; • During the implementation of projects, a flaw is often found at the level of implementation, it will be necessary for it to have a very close follow-up and that the philosophy of the Agropole is respected at the time of implementation to reach the objectives. <p>Recommendations</p> <ul style="list-style-type: none"> • To best share the objectives, the concept and functioning of the Agropole with the decentralised technical services, but also the population;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>Concerns</p> <ul style="list-style-type: none"> The first risk is in relation to the delay in the implementation of the project. It is almost two years since we are working on this issue; it is true that COVID has slowed down the level of investments. The observation is that there are new projects that should connect to the Agropole but these projects are taking place while the Agropole which was the flagship project has not yet started its activities. This delay can discourage the population 	<ul style="list-style-type: none"> Take all necessary steps to preserve forests and manage conflicts; Establish synergy between the different technical services; Address the issues of salinisation and silting up in the area through the development of dams, structures and irrigation; Find outlets or marketing channels for processed products; Develop crop protection to deal with diseases, develop the organic pesticide system. We must strengthen services or set up industries that allow the manufacture of bio-pesticides; Set up a micro-project financing system to support stakeholders through the Green Fund; Develop access roads to open up areas that are difficult to access and improve the collection of produce with transport equipment.
<p>Sana SAGNA</p> <p>Departmental Service of Rural Development</p>	<p>Expectations</p> <ul style="list-style-type: none"> Through the Agropole, we will be able to develop the different sectors in two directions; we can increase our production and our productivity, increase our sown areas but also organise the sectors. When the Agropole is set up, the organisational circuits will be smooth, producers will be forced to organise themselves, in this sense agriculture will derive all its benefits from the Agropole; Improve the quality of bananas to be able to compete with imported bananas; Add value to agricultural products (cashew, mango, fonio, etc.): The fulfilment of the population of Casamance. <p>Concerns</p> <ul style="list-style-type: none"> The first risk is land speculation. Everyone today is positioned to have arable land and these are deliberations that are going on in all directions and sometimes with overlaps. This is where our fears lie, but also the conflicts between farmers and herders for lack of space 	<ul style="list-style-type: none"> The breaking up of plots in the valleys. To develop the rice sector and increase production, we will have to think about land consolidation, but with land consolidation there is a risk of social tension <p>Recommendations</p> <ul style="list-style-type: none"> Take charge of all the negative social impacts and risks mentioned in the implementation of the project; Make a good choice of contractors for the construction of infrastructure; Raise awareness and strengthen the technical capacity of our producers on group dynamism and climate risk management; Support producers to organise themselves by sector. We have umbrella organisations but producers are not well represented.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Amadou Mamadou THIAM – Service Head, Regional Development Support Service Local – Tel. : 77 566 44 35</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The construction of the Marsassoum bridge, which blocks the entire development process of the region; • The servicing of the access roads to these sites, the question of the road for the regional site and the departmental sites; • The creation of equipped training centers in the Agropole because producers need to be build their capacity; • The promotion of research on fruit tree diseases and on the development of the mango and cashew sectors (improvement of varieties, productivity and production); • The establishment of large-scale processing units for mango 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Technical aspects: diseases, unproductive varieties that take up a lot of space; • The salinisation of the land: there is the intrusion of the salty tongue which kills many plants and has an impact on production; • No land is available for the creation of new orchards; • Women's access to land; • The management of the Agropole: Sédhiou must be part of this governance; • The risk of accident <p>Recommendations</p> <ul style="list-style-type: none"> • Solve the problem of remoteness because there is no point in establishing the Agropole while obscuring the problem of being enclaved, this is the bottleneck of Casamance; • Solve the problem of electrification of regional and departmental sites; • Create a link between existing training centres and those to be created, because we do not have training centres in Bounkiling or Goudomp.

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Zoubairou DICKO, Service Head, Regional Department of Town Planning and Housing – Tel. : 77 100 00 47 (2019 et 2020)</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Providing people who need it with a place to live, suddenly this will contribute to the urban development of certain areas. • It will be necessary to organise the activity areas, the residential areas, all of this within a harmonious living environment; • The project should be executed so that things go quickly and as there is a demand for land, it is necessary that choices are made very early and moves made to secure the land more especially for the regional module of Sédhiou. Here the perimeter of the five (05 hectares) was deliberated on in an area where there is very strong pressure because it is the only area where we can still find land. People are slow to come forward to secure the site; • Job creation. We must raise awareness and encourage young people to work; • The inclusion of women in the project because in Sédhiou, the women are very industrious 	<ul style="list-style-type: none"> • Good integration between the activities of the Agropole and those of town planning/housing. Indeed, the service has the urban pole project in Diendé and a ZAC implantation project which is not too far from the project area towards Bambaly. <p>Concerns</p> <ul style="list-style-type: none"> • The preservation of forest resources, but perhaps our fears can be alleviated with the contribution of the Green Climate Fund <p>Recommendations</p> <ul style="list-style-type: none"> • Make the sites accessible; • Build good road infrastructure for the collection of production and their transport and marketing; • Secure the sites already chosen; • Sensitise, raise awareness among the population to integrate and take ownership of the project; • Take advantage of the Agropole to get rid of the poverty label; • Support the population for constructions more suited to the climate context of Casamance.
<p>Charles Waly BASSE –Service Head – Regional Service for Planning – Tel. : 77 551 12 88</p>	<p>Expectations on the Agropole Sud</p> <ul style="list-style-type: none"> • That the implementation of the project goes smoothly, that this communication approach is maintained ; • Positive benefits for the population; • Strengthening territorial development. <p>Risks and threats</p> <ul style="list-style-type: none"> • The land issue related to the installation of the modules; • Lack of communication; • The difficulty of collecting produce due to the region's remoteness; • Delays in carrying out the project 	<ul style="list-style-type: none"> • Safety risks at the time of construction in terms of dust, debris, those who work there are within occupational safety standards <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Ensure the cleanliness of sites, put in place a solid and liquid waste management system, establish a reforestation plan, protect the vegetative space; • Create supportive socio-economic structures through the construction of health centres, closure of schools, markets for better ones; • Make arrangements for good appropriation of the project both at the level of leaders (mayors) and the population.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
Boubacar DIALLO Deputy Service Head at the Regional Planning Service	Expectations <ul style="list-style-type: none"> • The processing of agricultural products because the actors who intervene in the different sectors have difficulties in the production, storage, processing and marketing of their local products; • The integration of young people into the professional environment; • The creation of wealth that will allow the population to improve their living conditions and to deal with health and education issues at the same time; • Preserve and conserve the environmental framework. 	Concerns <ul style="list-style-type: none"> • The delay in starting project activities; • Degradation of the environment in the context of the operation of industrial processing units (gas emission). Recommendations <ul style="list-style-type: none"> • Make all means available to the Agropole for the proper functioning of the project; • Good involvement of the population through good awareness and good communication on the project; • Strengthen the capacity of producers and organise them better; • Promote a green economy through the project.
Dahamed AIDARA , Service Head, Regional Division of Hydraulic – Tel. : 77 709 44 21	Expectations <ul style="list-style-type: none"> • The organisation and empowerment of the actors concerned; • Make a good choice of seeds; • Construction of the Témento bridge. 	Potential risks or threats <ul style="list-style-type: none"> • Industrial waste management; • Securing the environment and protecting populations; • The preservation of spaces for pasture. Recommendations <ul style="list-style-type: none"> • Raise awareness for the establishment of the Agropole; • Make the right choice of seeds, and open up areas for the sale of products; • Carry out the necessary consultations to find a consensus on the choice of sites at the departmental level; • Help the structures responsible for the management of boreholes, build their capacity, make a request for social connections at the level of each village and distant villages.
Mouhamadou FALL Head, Regional Hydraulic Division	Expectations <ul style="list-style-type: none"> • The production of water resources and these agricultural projects are large consumers of water resources. So, these are projects that interest us, that we must be able to follow closely; 	<ul style="list-style-type: none"> • Lack of ownership of the project by the population for lack of good communication; • Conflicts of interest that can impact on the proper functioning of the project, we must try to take into consideration the sociological aspect of the localities

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> Take into consideration certain hydraulic structures (boreholes) in the area, dewatering equipment which can break down at any time; Harmonisation of activities; The creation of permanent jobs for young people; To boost production and bring wealth to the population; Let the Green Fund make a splash for other sectors, especially water supply. <p>Concerns</p> <ul style="list-style-type: none"> Inadequate staff for the upkeep and maintenance of equipment and this can affect the sustainability of the project; 	<p>Recommendations</p> <ul style="list-style-type: none"> Communicate a lot during all phases of the project. It is an integrated project and information should be shared across all technical services; Pay attention to the choice and quality of the equipment compared to the equipment we master in Senegal. We must not import equipment that our technicians do not master, this will cause problems in maintenance.
<p>Dr. Abdou SANE</p> <p>Regional Service Head of Fisheries and Animal Resources</p>	<p>Expectations</p> <ul style="list-style-type: none"> That the project can achieve its objectives; Integrate all the components of the livestock sectors: milk, meat, poultry, etc.; Involve the technical services throughout the process, also taking into account the design, implementation, monitoring and supervision; That the livestock service be involved in capacity building, training of actors; Strengthen human resources, that is to say, put Agropole focal points who could help the implementation of project activities in a specific way; Support stakeholders in the livestock sub-sector to develop value chains; Establishment of training centres for the empowerment of actors and set up research systems (laboratories) that could support the value chains in analysis, control, quality, etc. Support actors in their organisations; Organise livestock stakeholders in the collection of dung but develop livestock that could supply these biodigesters. In this context, we must supervise these breeders, educate them, involve them from start to finish. <p>Recommendations</p> <ul style="list-style-type: none"> Concerning livestock, there are no livestock 	<ul style="list-style-type: none"> Land could be a source of blockage, if this land is not defined efficiently, which means that deliberating and securing the spaces selected; Insecurity too, if security is not the order of the day, this can pose some problems for the development of the Agropole; The unavailability of funds for the implementation of project activities. <p>Recommendations</p> <ul style="list-style-type: none"> Take the population into account, involve them, let them know about the project, especially in the areas where the project infrastructure is located; Demarcate and deliberate for the land to secure the selected sites; Develop grazing areas that will be separate from agricultural areas to avoid conflicts; Supporting professional organisations to structure themselves is fundamental; without structuring, we cannot develop a sector; We must create roads to access certain production areas; Develop livestock farms and collection centers;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>routes;</p> <ul style="list-style-type: none"> • The delay in the general implementation of these projects; • In terms of livestock development, absence of boundaries between livestock areas and production areas which can cause conflicts; • The misuse of pesticides which can be a source of disease spread. This could reduce the productivity rate of livestock; • Lack of communication with executives and the diaspora; 	<ul style="list-style-type: none"> • Develop training modules and involve technical services, each as far as it is concerned; • Do a good monitoring and evaluation of the project; • Set up focal points for the Agropole in each sector, equip them so that they can accomplish their missions; • Take into consideration senior staff and the diaspora through awareness raising and good communication
<p>Malick SENE</p> <p>Regional Service Head for Fisheries and Surveillance</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The valuation of raw materials for agricultural products; • Take into consideration fish producers; • Develop agriculture integrated with aquaculture; • Increase production, because before thinking about processing, the raw material must be available. Also support producers in terms of inputs, logistics, basic social infrastructure and energy. <p>Concerns</p> <ul style="list-style-type: none"> • Working directly with the stakeholders without necessarily involving the technical services; • Misuse of project objectives, especially in relation to the provision of financial resources; 	<ul style="list-style-type: none"> • Sociology: Mentally, people tend to think that everything has to come from the state. To do this, we must prioritise the stakeholders who have achieved results. <p>Recommendations</p> <ul style="list-style-type: none"> • Involve all stakeholders, we must not neglect any sector; • Think of women because they occupy an important part in the fishing sector; • Support the technical services with logistics and means of travel so that they can properly monitor the implementation of the project; • Carefully study the location of the sites; often you can have an infrastructure in an inaccessible area. In this sense, it is necessary to strengthen the access roads in the production areas;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> The problem of land availability due to customary rights; 	<ul style="list-style-type: none"> Develop the ecosystem approach, everywhere there will be an infrastructure, we must try to integrate agriculture, livestock and fishing at the same time as energy.
Mouhamadou Sansonna DIALLO , Labour Inspector – Regional Inspectorate of Labour and Social Security– Tel. : 77 290 78 79	<p>Expectations</p> <ul style="list-style-type: none"> This is a project with strong manpower potential that will allow thousands of young people to work; The development of fruit, agricultural and producers' production. From the collection phase to the finished product, let the producer benefit 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Failure to implement the project; Biological and chemical risks <p>Recommendations</p> <ul style="list-style-type: none"> Ensure that workers are in good condition, and promote the local workforce; Take charge of environmental risks from the project design stage and ensure that the ecosystem is not damaged (focus on the preservation and protection of the environment); Strengthen training so that producers can benefit from the project
Emmanuel DIATTA , Service Head, Regional Service for Sanitation in Sédhiou – Tel. : 77 538 61 94 (2019 et 2020)	<p>Expectations</p> <ul style="list-style-type: none"> Promotion of technologies using excreta (urine) as biofertilisers to boost agricultural production as energy sources in the field of agriculture; For Kolda, check the facilities (mini faecal sludge treatment plant) or companies nearby that may disrupt the peace of mind, the installation and the calm of the people who will intervene in the project area at the CRZ level; With regard to biogas, we must raise very strong awareness so that the population can have it and continue to use bio-digesters because what is restrictive with livestock effluents is the collection of fresh cow dung because it is more productive; Make tests or orientations so that the population can realise that they were using chemical fertiliser but maybe with the biogas that will be done, there will always be bio-fertilisers that could be used at the plantations; Put the means of transport and transformation of productions on site; Support for the population affected by the project. <p>Concerns</p>	<p>Potential risks and threats</p> <ul style="list-style-type: none"> The dependence of agriculture on rain; The acceptability of the project and land issues related to the installation of the modules; Total export of processed products; Sale of processed products <p>Recommendations</p> <ul style="list-style-type: none"> Implement a communication plan to inform and raise awareness of all stakeholders through all possible channels (radio, TV, etc.); Organise exchange visits to localities in Senegal, Africa or elsewhere to draw inspiration from their successful experiences in Agropole; Share, restore around a regional CRD, the various studies that have been carried out there so far; Proceed with good planning; in projects of this magnitude, you should not allow yourself to be led blindly and ensure good monitoring of activities as they go

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Mady DANFAKHA, Economics Survey Commissioner, Service Head – Regional Service of Commerce – Tel. : 77 613 83 50</p>	<ul style="list-style-type: none"> • With poor rainfall, water control is needed at the facilities; • Insect and other attacks, preventive locust control mechanisms must be put in place; • The safety of production areas with the straying of cattle; • The remoteness of certain production areas; • Non-consideration of the local workforce. <p>Expectations</p> <ul style="list-style-type: none"> • The implementation of the project as quickly as possible • The creation of jobs and the reduction of unemployment; • The transformation of local products for more added value of these products; • The infrastructural development of these regions 	<p>along with the planning;</p> <ul style="list-style-type: none"> • Think as much as possible about the local workforce, a project must benefit the community, therefore favour and encourage young people to work through the development of activities; • Ensure a mid-term evaluation if necessary and a final evaluation; • It is necessary to build from the achievements at the end of the project cycle, to build between the departments and between the regions. It is important to return to the population the assessment of what has been done as activities and identify the areas of sustainability. <p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The effective non-involvement of the population. <p>Recommendations on the success of the project</p> <ul style="list-style-type: none"> • Involve all stakeholders in all phases of the project; • In each sector, look into the legal texts that govern the sector (agriculture, trade, etc.
<p>Mamadou DIOUF, Service Head, Regional Service for Community Development– Tel. :</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Good knowledge of organisations; • Training in administrative and financial management of producer organisations; 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The inaccessibility of the region; • Security: measures must be taken for lasting peace.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
77 538 50 07	<ul style="list-style-type: none"> Promote businesses. A complete opening up of Casamance; No rotting of fruits; A profit for women who are the central link in the processing of fruits and vegetables 	<p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Promote products; The Agropole is a project that will boost endogenous development; Put in place mechanisms that will have a real impact on the lives of the population, especially women.
Abdou SANE , Service Head – Regional Service for Livestock and animal Productions -	<p>Expectations</p> <ul style="list-style-type: none"> Integration of the different sectors and the involvement of stakeholders in these sectors. The creation of Motivation Centres for the Modernisation of Livestock (CIMEL) to boost production, but also the establishment of a regional laboratory for quality control of food of animal origin (DAOA). Equipment adapted to industrialisation that allows the transformation of DAOA on site; Establishment of a memorandum of understanding within the framework of the supervision and training of stakeholders. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> The lack of deliberation regarding the sites to be granted <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Strengthen dialogue with the MFDC for a lasting peace (State); Continue to involve all stakeholders in all implementation processes; Consider introducing channels for the livestock component for the second phase Provide permanent capacity building mechanisms for the stakeholders of the different sectors; Propose the construction of a bridge between Bambali and Diattacounda for the long term, but also provide a boat for the short term for this section. Provide mechanisms for the treatment of wastewater and solid waste; Request deliberations for all selected sites.
Abdoulaye FAYE , Service Head, Regional Service of Mines and Geology – Tel. : 77 908 05 40	<p>Expectations from the Agropole Sud</p> <ul style="list-style-type: none"> A success of the project, a commitment from local and administrative authorities; The creation of jobs and the development of the region; An increase in income; 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Risks to the health of population with the massive influx of people looking for work. <p>Recommendations</p> <ul style="list-style-type: none"> Set up a maintenance programme of the premises; Rehabilitate borrow sites for the preservation of the environment; Make a good awareness and communication for a good appropriation of the project by the

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		population.
Cheikh Tidiane SOCE Regional service Head for Youth Affairs	<p>Expectations</p> <ul style="list-style-type: none"> An involvement of the youth service, in fact, it is a service that is represented at the level of the territories. We believe that youth services can be a good means of conveying information, especially with frank juveniles; Training of young people in new professions to enable them have qualifications in the professions targeted by the Agropole. Beyond this qualification, it will be necessary to support young people in terms of financing first but also in terms of support/advice. In this sense, it will be necessary to facilitate the conditions of access to financing and to advise them to avoid the misuse of objectives; That the project be inclusive and that all strata of the population feel the positive outcomes of the project, especially young people. The employment of young people with a qualification. When an industry is set up, that young people with a qualification be favoured, that the minimum local content is respected, with equal qualification or with equal competence that the inhabitants of the soil are favoured in the jobs; That industries or private individuals who are going to settle in the area can play their role of corporate social responsibility (CSR), that they participate in improving the education of young people and children of the population; In the youth sector, we carry out many environmental conservation activities including reforestation, bay protection and cleaning activities. What we expect from the project is support for the proper performance of these activities (equipment and materials). 	<p>Concerns</p> <ul style="list-style-type: none"> Poor involvement of all stakeholders (technical services, population, young people, etc.); The construction of infrastructure especially roads not taken into account; The risks of loss of the juvenile population especially girls, it is necessary to think of awareness sessions on STIs, HIV, early pregnancy; The risk that the project may also generate in the juvenile population is that some young people may abandon studies or activities to become agricultural workers. <p>Recommendations</p> <ul style="list-style-type: none"> Involve all stakeholders (local population, administrative and local authorities, technical services); Communicating well on the project will also require good communication of information through technical services; Respect the implementation deadlines for infrastructure; Carry out training for targets, young people, women, craftsmen; Make as priority the construction of road infrastructure to facilitate access to production areas; Organise and finance green projects for young people for better protection of the environment.
AGENCIES, PROJECTS AND PROGRAMMES OF SEDHIOU REGION		
Ibrahima DIOUF Regional Service of Statistics and Demography (SRDS) de Sédhiou Duty: Assistant to the Head of SRDS of Sédhiou	<p>Expectations</p> <ul style="list-style-type: none"> Develop employment at the local level. There is also the fact that people do not want to invest in the Sédhiou region. It is called a repulsive region because, when you look at migration and emigration, people who leave the region of Sédhiou compared to the people who come there, you see that the balance is 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Preservation of the forest; The adequacy between the training provided at the local level and the needs of the Agropole; The security risk linked to a massive influx of migrants looking for work.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
(2019 and 2020)	<p>completely negative, that means that there are many more departures than arrivals.</p> <ul style="list-style-type: none"> • The creation of jobs, everyone expects that there will be jobs especially at the level of the indigenous population so that we can r the young people there. So we must support the development of other hubs to create more jobs; • The development of value chains through territorial marketing by labeling Agropole products. This will allow us to advertise the area and encourage investors to come and invest in other sectors such as tourism, transport, etc.; • This is an important project that can have a spillover effect on other sectors, so we expect other sectors to be positively impacted by the Agropole project; • We are a service that collects data, ANDS has the ambition to calculate the Gross Domestic Product (GDP) in each region, that is to say all the wealth that is created in a locality during a given time. This allows us to calculate the economic growth rate of the country and try to see which are the most dynamic sectors which drive the growth of this or that region. Thus, we will be able to follow the impact of the implementation of the Agropole on the wealth of the region and especially the creation of added value of agricultural products. 	<p>Concerns</p> <ul style="list-style-type: none"> • Not giving employment to locals; • The land aspect, we know that land is a real problem in Senegal. We must take the necessary measures; arm ourselves with all the guarantees necessary to secure this land because if there are problems with the land, the project may not succeed. <p>Recommendations</p> <ul style="list-style-type: none"> • Involve local stakeholders throughout the process of setting up the Agropole; • Promote positive discrimination for employment with regard to the young people of Sédhiou; • Make use of training schools in the Sédhiou region; • Associate technical services because technical services have two advantages: the advantage of having the necessary knowledge and the advantage of knowing the socio-cultural situation of the area; • Involve local authorities and population through youth associations, women's groups or any association, especially in areas where regional modules and platforms will be established ; • Give employment to locals.
Amadou BALDE , Regional Coordinator – PAPSEN – 77 632 39 85	<p>Expectations</p> <ul style="list-style-type: none"> • Contribute to having a visible impact to especially retain young people (girls and boys) and ensure that agriculture interests them, • Harmonisation and the search for synergy in the interventions of the Agropole with other projects and programmes (PPDC, PAPSEN / PAIS, PAPEJ, PRODAC, ANIDA, etc.). 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The preservation of the environment; • The preservation of the interests of small local producers; • The salinisation of water and land, <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Harmonise and promote synergy between the different actors and project/programmes.
Samba Moussa BALDE – Development Consultant and Focal Point	<p>Expectations</p> <ul style="list-style-type: none"> • Improving the production, processing and marketing of Casamance products. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The powerful involvement of the state, that's what I'm afraid of; for me the approach must be inclusive.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>PADESS</p> <p>Support Programme to the Economic Development of Senegal in the region of Sédhiou – Tel. : 77 418 16 08</p>	<ul style="list-style-type: none"> • The project carried by the stakeholders themselves because whenever the State invests in such economic development activity, there are always problems. • A synergy of actions, of intervention between the various actors of projects and programmes in the region 	<ul style="list-style-type: none"> • The lack of synergy between the different stakeholders; • The heavy presence of foreigners (Indians) in the cashew sector ; • The problem of mango quality. <p>Recommendations</p> <ul style="list-style-type: none"> • Organise cashew stakeholders and support them in organising themselves
<p>Nfally BADJI</p> <p>Director of the Regional Development Agency (ARD)</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The creation of employment for young people and the development of important resources for local populations; • That the ARD service should be more involved in the whole process. Indeed, in relation to our support and monitoring role, if we are not involved in this process, we do not see how we can support this project for the good of the communities; • At the end of the project, there should be an improvement in production and that conditions are created for the sale of these productions. I believe that the project is going in this direction through the different platforms that will be set up. <p>Concerns</p> <ul style="list-style-type: none"> • The likely risks are the disappointment one might have if the project is not executed or what is planned does not happen. It is necessary to communicate well on the project to avoid possible disappointments, to go beyond speeches and to take action. If there are difficulties in taking action, share them with the different actors who can help overcome the difficulties because we know that it is an interesting project, a project proposed by the Head of State but above all a project of the communities. 	<p>Recommendations</p> <ul style="list-style-type: none"> • Communicate well with the stakeholders for a good implementation of the programme. Avoid air pockets, moments of trial and error, do not take long to react; • We must move towards the restoration of ecosystems, especially the mangrove ecosystem. Beyond what the project will be able to do, we believe that if the Agropole Sud succeeds today in supporting the territorial stakeholders in restoring the mangrove ecosystems, it will have succeeded a great deal beside what it wants to do in terms of production and processing of tree products. This will allow the development of another sector, that of oyster farming; • Develop agroforestry at the regional level because it is an extremely important element in the development of a country.
<p>Médoune SAMB</p> <p>National Agency of Aquaculture (ANA)</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Integrate aquaculture and fisheries in this project; • Support people living with a disability to develop activities related to the Agropole; <p>Concerns</p> <ul style="list-style-type: none"> • My concern is the failure to take into 	<p>Recommendations</p> <ul style="list-style-type: none"> • Include aquaculture in project activities, set up integrated aquaculture farms at the level of irrigated areas; • Get closer to the women who exploit the mangroves; • Support the rehabilitation of non-functional farms

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	consideration the aquaculture sector in the sectors targeted by the project. Aquaculture occupies an important place in the PSE, it is one of the 27 flagship projects and the 7 priority sectors and bear in mind the importance of this region in terms of aquaculture potential	
ORGANISATIONS OF SEDHIOU REGION PRODUCERS		
Moussa MANDIANG , Central Manager-Agriculture Cooperative of Diendé (COOPAD) Sédhiou – Tel. : 77 362 98 36	Expectations <ul style="list-style-type: none"> Consolidation of what already exists, what has been achieved because we at the Diendé cooperative already have existing ones. It has two bodies such as the board of directors, the supervisory board; we also have a savings and loans scheme which is the financial arm of the cooperative. It is located within the agricultural cooperative of Diendé, at least to resolve all financing problems or concerns of refinancing and sustainability of activities. 	Potential risks or threats: <ul style="list-style-type: none"> Risks and threats: leaving local stakeholders stranded can constitute a risk for the success of the Agropole project, hence the need for the inclusion of all stakeholders; Deforestation and even bush fires which destroy our forests and the people who are there to clear, given the climate change which is there which haunts the sleep of all producers; The inaccessibility of certain production zones. Recommendations <ul style="list-style-type: none"> Provide the actors with locomotion tools (van, tractor) especially during the rainy season to collect products; Develop road infrastructure; Establish good communication with stakeholders in the region
Cheikh Ahmed Tidiane NDIAYE - President of Cashew nut Producers of Marssasoum - EIG of producers of cashew of Marssasoum Sédhiou – Tel. : 77 506 64 55	Expectations <ul style="list-style-type: none"> Support for producers in collecting cashew nuts, storage and sale of products; Have a good selection of cashew seeds. 	Potential risks or threats: <ul style="list-style-type: none"> Decrease in cashew production: for the plant to work, you need enough seeds, otherwise there will be a problem; The proper functioning of transformation EIGs ; Recommendations <ul style="list-style-type: none"> Support producers in Casamance (training); Involve all stakeholders in the process
Babacar DIENG , President – Tel. : 77 706 26 97 and EI Hadji Malick LY – Tel. : 77 341 53 38 -	Expectations <ul style="list-style-type: none"> Training and capacity building on the transformation of our productions into animal feed; 	Potential risks or threats: <ul style="list-style-type: none"> Lack of security on the land; Lack of partners for the marketing of

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>URCOMS</p> <p>Regional Union of Corn Farmers (URCOMS) of Sédhiou</p> <p>Duty : President of URCOMS and Business Operator URCOMS</p>	<ul style="list-style-type: none"> • Development of infrastructure (storage warehouses) • The Agropole must enable us to increase and improve our production capacity 	<p>production;</p> <ul style="list-style-type: none"> • Lack of communication which can lead to a poor perception of the project's objectives, hence the non-appropriation of the project by the population. • Fruit diseases, white fly attack, which have a real impact on mango and cashew production. <p>Recommendations</p> <ul style="list-style-type: none"> • Ensure good governance of the Agropole; • Identify marketing points; • Identify the real stakeholders in the field (producers, traders, processors. Do not just do office work; • Support for producers in all areas (seeds, fertilisers, equipment, etc.) for good quality production; • The project should be implemented under good conditions.
<p>Abdoulaye SOUANE</p> <p>Institution : ASSOLUCER Djirédji, Office Manager ASSOLUCER in Sédhiou</p> <p>Tel. : 77 273 73 90</p>	<p>Expectations on the Agropole Sud</p> <ul style="list-style-type: none"> • Financial autonomy through the establishment of platforms that will allow products to be grouped and easily sold at an acceptable price. • Food self-sufficiency; • Support for organisations (EIG, cooperative) to become unions, good organisations in order to be able to join national federations. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> • Disappearance of existing organisations; • Remoteness of production sites; • Deforestation. <p>Recommendations</p> <ul style="list-style-type: none"> • Get closer to producer organisations so that they can give their opinion on the Agropole. • Involve all stakeholders in the process, • Rely on the already existing mini platforms created by the PPDC and the departmental agricultural farm of Marssassoum and use the spaces already developed such as the SEFA of Sédhiou instead of going to develop in the forests
<p>Diamanty SOUANE</p> <p>Sandiéry Cooperative Society</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Retain young people on their land; Increase wealth at the local level resulting in improved health conditions and education; 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The drop in rains due to climate change, which has an impact on production;

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<p>(SOCOSANDINIER Y)</p> <p>Duty: President of SOCOSANDINIER Y</p> <p>Tel. : 77 327 29 09</p>	<ul style="list-style-type: none"> Improve relationships in relationships between men and women. 	<ul style="list-style-type: none"> Absence of water control; Presence of predators; The extension of plantation fields which leads to deforestation. <p>Recommendations</p> <ul style="list-style-type: none"> Share information throughout the process; Advise and support EIG, cooperatives to better guide our integration into the Agropole.
<p>Ndiaye SYLLA</p> <p>Institution : Cooperative of the Land « FANKANTA » of Marssassoum</p> <p>Chairman Cooperative Board« FANKANTA »</p> <p>Tel. : 77 645 38 14</p>	<p>Expectations</p> <ul style="list-style-type: none"> Identify all the cooperatives and business operators who are operational there. Make operational those that are not; The Agropole will allow, as a cooperative, to be ambitious. It would be our gateway; The Agropole will be a facilitator in securing funding and securing funding and selling our productions; Retain children and fight against illegal migration by creating jobs; The Agropole will serve as levers to train women on transformation and literacy. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Lack of communication of stakeholders; Non-identification of actors. <p>Recommendations</p> <ul style="list-style-type: none"> Develop communication around the Agropole because most of the people in Casamance do not know the Agropole; Organise forums, open house meetings, information and training seminars to make the population better understand the Agropole project.
<p>Mafouze AÏDARA</p> <p>President of the Mango Innovation Platform of Sédhiou</p>	<p>Expectations</p> <ul style="list-style-type: none"> Change our daily lives positively by improving our living conditions, Have an approved selling price and support from the association in means of distributing production at the national level; Open up certain production zones; Financial autonomy and the equipment to solve our problems; Promote mango production; The Green Fund will have to support us especially for the fencing of our perimeters, water control and small equipment to fight against pests and nematodes in the subsoil. <p>Concerns</p> <ul style="list-style-type: none"> Not taking into consideration the concerns of 	<ul style="list-style-type: none"> Regarding production, our concern is the presence of fruit flies and certainly, we will have to work with the DPV and ISRA. Conflicts between farmers and herders because most of them are not secure. We need to move towards modernising our orchards and forget about farmhouse orchards because we are moving towards industrialisation. <p>Recommendations</p> <ul style="list-style-type: none"> Put the mango stakeholders on the front line because without production there will be no processing, export or consumption; Support producers in the fight against subsoil nematodes and pest insects; Facilitate access to water with the development of irrigation systems; Ensure that the Senegalese can

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>producers who must be at the centre, in the first place because we cannot speak of processing without production. The production must be improved in quality and quantity;</p> <ul style="list-style-type: none"> The worry we have is that most of the time, it is external people (civil servants) who come to draw our road map when they do not understand our problems. I think the best thing is if they let us disclose our problems to them and they will accompany us in that direction; 	<p>consume products from the Agropole, especially that the selling prices are affordable;</p> <ul style="list-style-type: none"> Compensate people affected by the project and in collaboration with municipalities, find other spaces for them to continue their agricultural activities.
ADMINISTRATIVE, LOCAL AUTHORITIES AND TRADE CHAMBERS OF THE KOLDA REGION		
<p>Ousmane KANE Governor of Kolda Region</p>	<p>Expectations</p> <ul style="list-style-type: none"> That the objectives of the project be achieved; Develop a real industrial fabric in the Kolda region; Develop the value chains of the various sectors that will impact on the promotion of employment and the enhancement of agricultural products; The Green Climate Fund will enable the Agropole to achieve its objectives, it will further diversify the offer while ensuring compliance with environmental standards. <p>Concerns</p> <ul style="list-style-type: none"> That the stakeholders are not involved in the process. For the moment, we welcome the salutary approach of the project; Poor management of environmental impacts. But the environmental impact assessment will take these aspects into account in a preventive and proactive manner; 	<ul style="list-style-type: none"> Concerning land, there is no risk because the choice of land was made in a consensual manner, respecting the procedures. I think there will be good buy-in with affected populations. <p>Recommendations</p> <ul style="list-style-type: none"> Ensure the availability of information at the territorial level; Adopt a participatory and inclusive approach that will allow the concerns of the various stakeholders to be taken care of; Empowerment of territorial actors which is in line with territorialisation as defined by the government; For the Green Fund, adopt an approach that will take charge of environmental concerns; Seize new opportunities offered to the population.
<p>Maurice Latyre DIONE Governor's Assistant in charge of the Development of Kolda Tel. : 77 529 06 11</p>	<p>Expectations on the Agropole Sud</p> <ul style="list-style-type: none"> The creation of jobs in production, processing, transport, etc.; Contribute in improving the economic situation with the creation of jobs which will improve the living conditions of beneficiaries; Improvement of the nutritional situation if a large part of the products is marketed locally. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Decision-making at the central level without considering the local level; A bad sector;; Failure to take the environmental dimension into account; Favouring the employment of foreigners; Health situation, considering the influx of workers into the area. <p>Recommendations</p>

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<ul style="list-style-type: none"> • Involve all stakeholders and at all levels; • Communicate well about the project; • Ensure that a good part of the production is marketed locally; • If there are jobs, think of the youth; • Ensure that whatever will be used as a product does not adversely affect the environment.
<p>Ibrahima DIAO</p> <p>Secretary General of the Kolda Municipality</p> <p>Tel : 77 645 61 34</p>	<p>Expectations</p> <ul style="list-style-type: none"> • The creation of jobs and wealth; • The involvement of stakeholders in the choice of sites; • For each region, use the potential to transform finished products; • The induced effects of industrialisation which will have the effect of changing the status of the municipality; • The creation of wealth; • Great empowerment of men; • Modernisation of agriculture and livestock sectors; • The integration of the sustainability dimension, that is to say work on sustainability so that tomorrow the population can have the technique of transfer of skills necessary to ensure the follow-up to the great benefit of the population because the State cannot continue to set up projects that are not sustainable; • See the start of the project as quickly as possible because one thing is to announce the project, another thing is to see its effectiveness. Projects have a lifespan, and in general, when a project is over five (5) years, three (3) years are devoted to studies and the project will last only two years. <p>Concerns</p> <ul style="list-style-type: none"> • Preserving forests is essential; • The side effects of the products that will be used in the transformation work on nature, on the environment. Interventions are welcome but must be supervised and obey 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Consequence on the environment like any industrial exploitation; • issue of peace which is a determining aspect in the functioning of the Agropole; • The centralisation of activities towards Ziguinchor. Since independence, everything has been concentrated in Ziguinchor to the detriment of other regions. <p>Recommendations</p> <ul style="list-style-type: none"> • The state must take all the necessary measures to successfully implement the project; • Strict compliance with environmental standards; • Take charge of the issue of peace; • Ensure that the population is involved upstream and downstream of the entire process of establishing and operating the Agropole; • Take into consideration the cross-road, sub-regional, cross-border city aspect of Kolda to better support marketing opportunities; • It will also be necessary to organise all the actors in the sectors with the establishment of federations so that they are interlocutors for the state. Don't be in a rush; • Involve the local and territorial administration in monitoring works and activities;

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	<p>environmental standards;</p> <ul style="list-style-type: none"> The land allocated to the Agropole must return to the population at the end of the project. It should never be used by third parties to privatize them. This is what creates problems in general in the project intervention areas. 	<ul style="list-style-type: none"> How to get the population to be interested in this project. The strong recommendation is better involvement of the population upstream; Taking into account the environmental dimension to mitigate the side effects of all interventions; Post management of the project is important to think about and ensure that the land occupied by the project is redistributed to the population at the end of the project; Easing financing, modulating rates so that they are sustainable for beneficiaries.
<p>Amadou DIAO</p> <p>Mayor of the Kolinto Municipality (Médina Fouta) Yoro</p>	<p>Expectations</p> <ul style="list-style-type: none"> Increase the income of the population and improve their standards of living; Add value to agricultural products through processing; Modernise agricultural equipment; Job creation for young people and women. <p>Concern</p> <ul style="list-style-type: none"> Our only fear is that the project will not be carried out because since then the land granted to the platform has been there; no one is using it, and many people think that this project will no longer be carried out. 	<p>Recommendations</p> <ul style="list-style-type: none"> Facilitate access to water; Work in close collaboration with the municipality for support and advice and work in the interest of the municipality; Always communicate on the entire project process; Carry out the project as quickly as possible, because the wait has lasted since last year that the municipality deliberated on the land space for the platform
<p>Mactar DIOP</p> <p>Prefect of Kolda</p> <p>Tel. : 77 529 05 67</p>	<p>Expectations</p> <ul style="list-style-type: none"> Opening up of the area in terms of job opportunities ; Enhancing the efficiency of the energy grid that the Senegalese government is setting up as there is a 225 KW line from Kédougou to Ziguinchor. The main expectation is the rapid completion of the project. 	<p>Potential risks or threats :</p> <ul style="list-style-type: none"> Land problem, because if there are real deadlocks on the site, compensation should be envisaged; What the investment will immediately cause the surrounding population to lose (land, assets, activities, etc.); <p>Recommendations</p> <ul style="list-style-type: none"> Becoming aware of the fact that this is a project meant for the population in terms of job creation and the installation of production units; Working within the framework of the

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		<p>administrative authority to make it clear that the Agropole does not belong to a municipality, but to a department;</p> <p>The monitoring system must be real, i.e. there must be real involvement of the technical services in Agropole's activities.</p>
<p>Georges Gabriel DIARRA</p> <p>Sub-Prefect of Ndorna</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Reduce the unemployment rate through job creation ; • Enhance the value of production through conservation, drying and packaging; • The Green Climate Fund should consolidate the objectives of the project. The more funding there is, the more reliable and sustainable the project will be. <p>Concerns</p> <ul style="list-style-type: none"> • Lack of follow-up in the implementation of the project. If there is a good follow-up, the project will be sustainable; • Disregard for the local workforce; • Lack of positive impacts on the population. The populations need to feel a change in their living standards through this project. 	<p>Recommendations</p> <ul style="list-style-type: none"> • Ensure the effective start of the project; • Ensure a good follow-up of the project and choose people who are up to the task and serious in their work; • Raise awareness among the population to ensure that the project is properly and inclusively owned; • Reforestation of bare forest areas.
<p>Alsainy BA</p> <p>1st Deputy Vice-President of the Departmental Council</p>	<p>Perception</p> <p>The Green Climate Fund, which has been added to the programme, is of vital importance for development, because the environment deserves special attention. We believe that this fund will try to provide material and financial support to enable farmers achieve their goals.</p> <p>Expectation</p> <ul style="list-style-type: none"> • The organisation of young people and women to better integrate the Agropole; • Job creation for young people; • Adding value to tree products through processing ; <p>The expansion of reforestation while diversifying the different productions and ensure that the prices to be set up could meet the expectations of any citizen.</p>	<p>Recommendations</p> <ul style="list-style-type: none"> • Work in an inclusive manner with all stakeholders ; • Support the empowerment of producers, • The Green Fund is necessary for the restoration and reforestation of our environment which is completely deteriorated; • Involving all the populations will enable us to make the project more successful, although I have no fears about the project's guidelines; • Wish the immediate start of the project in its active phase.
<p>Moussa BOIRO</p> <p>Secretary General of Kolda</p>	<p>Expectations on the Agropole Sud</p> <ul style="list-style-type: none"> • This project should be implemented as quickly as possible, and implementation should begin, 	<p>Potential risks or threats :</p> <ul style="list-style-type: none"> • Prejudice. Young people see the project as women's issue or that of

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<p>Departmental Council</p> <p>Tel. : 77 550 49 98</p>	<p>accompanied by a pedagogical approach to ensure that it is not just another project that feeds the project officials more than the local population;</p> <ul style="list-style-type: none"> • The strengthening of decentralisation and the fight against youth emigration by developing local transformation units; • The very rapid development of other value chains ; • This agro-industry should enable Kolda Department to step up its infrastructure. 	<p>politicians and are left behind;</p> <ul style="list-style-type: none"> • The lack of infrastructural support; • When considering the development of cashew nut, it is an agro-forestry activity that eliminates other activities, hence there is a risk of deforestation and the introduction of another monoculture. • Failure to create a link between research and vocational training centres. <p>Recommendations</p> <ul style="list-style-type: none"> • Involve the elected representatives beforehand, initiate them and stimulate their interest in these projects for a better appropriation; • Develop the partnership between border territories so that what is set up here is not fought at a distance of 25 km. For example, if you set up here, you don't involve the Chinese or the Guinean Bissau people who are in Salékingni, they will set up a market for cashew nut products by influencing prices. • Ensure that the projects of now are not the disasters of the future (forest destruction); • Develop communication and transport infrastructure (rail, airport); • Develop online sales through the universities' digital open spaces (DOS).
<p>Samsoudine DRAME</p> <p>Secretary General of the Chamber of Crafts and Skilled Trades of the Kolda Region</p> <p>Tel. : 77 445 55 19</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Raising the economic level, especially in the southern regions; • open up production areas; • Empower the people who will work in the Agropole, especially the handicraft sector which concerns us most. 	<p>Risks or threats</p> <ul style="list-style-type: none"> • Insecurity in the region; • Deforestation linked to the implementation of modules. <p>Recommendations</p> <ul style="list-style-type: none"> • A better involvement of actors at the grassroots level, all strata and all development actors at the regional level are involved; • Strengthen the capacity of the various actors, especially craftsmen, to give them the best chances of integrating the Agropole.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
Gagnado DIALLO Business Assistant at the Kolda Chamber of Commerce Tel. : 77 358 09 28	Expectations <ul style="list-style-type: none"> • A good organisation of the actors ; • Provide space in Agropole for those who have the entrepreneurial spirit, who have the means to be able to integrate the Agropole, to encourage them to come and invest; • Facilitate credit to producers with very low interest rates to enable them to invest more; • The Agropole should set up a system that allows for the storage of a larger part of the production, which large and small industries can absorb afterwards; • Include the dairy sector to absorb the overproduction of cow's milk in winter, especially through conservation. 	Potential risks or threats <ul style="list-style-type: none"> • The land issue related to the implementation of the modules ; • Failure to mobilise and lack of communication; • A rejection of foreign investors, hence the risk of conflicts. So be careful that people understand that everyone is given the chance to participate. • Lack of communication between the different actors ; • Lack of raw materials ; • The flow of products. Recommendations <ul style="list-style-type: none"> • Design and implement a good communication programme towards the population and the different actors; • Set up a system to ensure that raw materials are available all year round. • The products processed in the Agropole should be accessible to local populations,
Mamadou BALDE Mayor of Sallé Coly Salle Municipality	Expectations <ul style="list-style-type: none"> • Effective implementation of the project ; • Construction the production tracks; • The installation of a water tower so that the surrounding villages can be served because the water table in the wells is deep (35 m) and dewatering is an enormous burden for the women in these localities; • Support in the field of education, health and hydraulics; • Regreening of the municipality with fruit trees from the Green Climate Fund 	Concerns <ul style="list-style-type: none"> • Failure to implement the Project Recommendations <ul style="list-style-type: none"> • The rapid completion of the project so that people know that we are fully determined to execute the project; • Involve all the actors and work well with the municipality.
REGIONAL TECHNICAL SERVICES OF KOLDA		
Amadou Pauline DIAGNE Head of the Regional Division of the Environment and	Expectations <ul style="list-style-type: none"> • The environmental feasibility study should be properly carried out on the basis of the ToRs; • Promotion of local products; 	Potential risks or threats : In my personal opinion, we need to know the installations (equipment, materials) that will be put in place at site. An exhaustive description of the different facilities is needed to be able to

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<p>Classified Establishments of DREEC Kolda</p> <p>Tel. : 77 556 56 32</p>	<ul style="list-style-type: none"> An analysis of the variants, an exhaustive description of the different components is necessary to make a good choice of technologies, in terms of social, economic and environmental feasibility. Carry out a multi-criteria analysis to make justified choices. 	<p>assess the risks and threats.</p> <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Take into consideration environmental aspects (basic environmental conditions, etc.); Carry out environmental monitoring on the basis of a good description of the strategic environmental monitoring strategy ; Make financial resources available for environmental monitoring; Compliance by companies with the environmental clauses included in the TF;
<p>Malick Sidibé - Head of Department - Regional Planning Directorate</p> <p>Tel. : 77 554 44 81</p>	<p>Expectations</p> <ul style="list-style-type: none"> Provide a lot of jobs for young people; Develop agriculture; Boost the economy ; Bringing dynamism to the private sector. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Social conflicts with the population because the departmental sites will be built around a few villages. Remoteness of certain production sites; <p>Recommendations</p> <ul style="list-style-type: none"> Ensure a good choice of site on a consensual and inclusive basis ; Promote women in recruitment and support;
<p>Pierre Moundor MADIOUNE - Head of Department</p> <p>Kolda Regional Trade Service</p> <p>Tel. :</p>	<p>Expectations</p> <p>A true catalyst for the economic and social development of the natural region of Casamance.</p> <p>The Diaobé market is more of a commercial hub coupled with a sub-regional integration framework.</p> <p>The sons and daughters of Casamance find the right conditions for job creation so that, finally, youth unemployment in particular is no longer a pretext for emigration.</p>	<p>Potential risks or threats</p> <ul style="list-style-type: none"> The implementation of the project could be a source of conflicts related to land occupation. The project can also be seen as a means of exploiting the forest and mining resources of the southern territories for the benefit of third parties. Deforestation and source of social conflicts. <p>Recommendations</p> <ul style="list-style-type: none"> Involve young people in the workforce. Open up to religious and customary leaders ; Be objective in the choice of project sites;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Chérif Younouss DIEDHIOU Head of the Regional Trade Service</p>	<p>Perception</p> <p>The Agropole provides a multifaceted offer ranging from the improvement of technical capacity, the reinforcement of storage warehouses, the improvement of the supply of consumer products in terms of quantity and quality, the regeneration of forest resources and the improvement of electricity supply.</p> <p>Expectations</p> <ul style="list-style-type: none"> • The fight against desertification ; • Job creation for young people and women; • The contribution to the improvement of living conditions and the well-being of populations with a considerable economic and social impact (education, health, social welfare, etc.). <p>Concerns</p> <ul style="list-style-type: none"> • Conflict in project management i.e. the project is managed and operated by outsiders to the detriment of indigenous people and lack of transparency ; • Conflicts related to land occupation. 	<ul style="list-style-type: none"> • Correct, as far as possible, the economic imbalance that exists between regions. <p>Possible contributions of the Service to the Agropole</p> <ul style="list-style-type: none"> • Provide a partnership to project promoter regarding price information and verification of transaction instruments to ensure that they are fair. • To assist processors of food and feed products in obtaining authorisation for the manufacture and sale of food and feed products, commonly known as FRA authorisation; • Controlling the quality of the products (food safety) that will be offered to consumers. <p>Recommendations</p> <ul style="list-style-type: none"> • A better involvement of the beneficiaries through a good awareness and communication around the project; • Dialogue with all stakeholders, especially local and administrative authorities; • Introduce more transparency in the management of the project.
<p>Massar GAYE - Labour Inspector - Service Head - Regional Labour and Social Security Inspectorate (IRTSS) of Kolda Tel. : 77 231 65 39</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Participate in the socio-economic development of Casamance ; • Fight against unemployment in the area • Develop the potential of the area; 	<p>Potential risks and threats</p> <ul style="list-style-type: none"> • Deterioration of the overall environment of the region, as agro-industry does not generally associate with environment, ecology, etc. • Considering only the economic aspects and neglecting the social aspects; • Land issue: forced expropriation, dumping of waste in the fields, etc. <p>Recommendations</p> <ul style="list-style-type: none"> • Involve labour inspection in order to carry out its monitoring work on enterprises; • Involve all stakeholders as it is an excellent way to pull these areas out of poverty and even out of their isolation;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<ul style="list-style-type: none"> The project should be subject to mature reflection. There is no need to rush because there are many aspects to be taken into account.
Babacar SY Kolda Regional Inspector of Labour and Social Security	<p>Expectations</p> <ul style="list-style-type: none"> Boost the economy; Reduce the informal in favour of the formal as when structures will be set up, there will be intermediate jobs. My expectation is to do everything possible to ensure that maximum of the informal sector is enrolled in the formal sector so as to enable young people run their own businesses or join companies knowing that they will have an IPRES, benefits from the social security fund and IPM. It is in this area that I see the project, doing everything to ensure that social care is provided; <p>Concerns</p> <ul style="list-style-type: none"> A lack of continuity in the actions of already existing projects.; As for installations, building sites, machines, there are social risks (accidents at work, occupational diseases, etc.). All this is part of the life of a company, now it is up to the service to ensure that these risks are mitigated. 	<p>Recommendations</p> <ul style="list-style-type: none"> Approach the labour inspectorate with regard to staff management, everything relating to human resources, social presence inspections to enable them to operate smoothly; Ensure that the labour law, hygiene, health and safety at work are respected; Reflect on the sociological factor of the man of the South, rely on sociological and psychological aspects to encourage young people to return to the farming. . There are some cultural barriers which say that a man should not grow tomatoes or rice, a man should grow groundnuts or millet. We must do everything we can to change this mindset by raising awareness.
Mamadou GOUDIABY - Education Inspector - Education Inspectorate of Kolda Tel. : 77 231 86 50	<p>Expectations</p> <ul style="list-style-type: none"> A strong involvement to avoid the problem of land occupation; A good cooperation relationship with Guinea-Bissau, which is a great cashew nut producer; An opportunity for young people through agricultural employment; Promoting agricultural employment and attracting young people through the value added to products deriving from the Agropole; Oiling production, processing and marketing will allow added value and development of the natural Casamance 	<p>Potential risks or threats :</p> <ul style="list-style-type: none"> Climatic constraints. Such a significant project cannot be developed by depending on climatic constraints (water control); Attacks on mangoes (insects, fruit flies); Lasting peace in Casamance. <p>Recommendations</p> <ul style="list-style-type: none"> Continued involvement of the community as a whole by trying to bring the right information, to collect and adequately address the concerns of all for the good implementation of the project; Take into consideration the sustainability of the project; Carefully consider the creation of a technical high school in the regions of

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Amadou BA - Assistant Service Head</p> <p>Regional Inspectorate for Water Resources and Forestry</p> <p>2019</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Contribute to improving the living conditions of the population as well as the organisation, but also to developing the locality; • Ensure that the environmental dimension is taken into account in these systems because the transformation of a product requires a lot of waste; • Address the issue of the mango fly (short cycle varieties for example); • Organising cashew nut harvesting is very difficult and everyone wants to get involved. The sector must be well organised so that the real actors benefit from it. 	<p>Ziguinchor and Sédhiou in a view to contribute to the development of the Agropole (qualified personnel).</p> <p>Potential risks or threats</p> <ul style="list-style-type: none"> • Lack of raw materials especially with mango where the fly is proliferating at an extraordinary speed; • Climate change: rainfall has changed a lot, so there may be a reduction in harvests; • Lack of reliable data on the selected sectors; • Land issue; • Destruction of forest resources with the pretext of the lack of jobs, especially in the Medina Yoro Foula Department; • Organisation of actors involved in the sector in order to be able to supply the Agropole; • Intermediaries who only increase the burden on producers; <p>Recommendations</p> <ul style="list-style-type: none"> • Set up strategies that will make it possible to have reliable data on these sectors; • Involve the Water Resources and Forestry Service in the decision-making bodies; • Ensure that the factory to be set up is not close to the houses; • Improve waste management; • Ensure that the impact of the use of forest areas is reduced in favour of infrastructure; • As concerns the cashew nut sector, support producers in using varieties adapted to the climatic conditions of Casamance.
<p>Mamadou GOUDIABY</p> <p>Regional Inspector in charge of Water</p>	<p>Expectations</p> <ul style="list-style-type: none"> • First of all, the diversification of varieties; • Avoid the use of pesticides as much as 	<ul style="list-style-type: none"> • Develop intensive agriculture to avoid nibbling on classified forests; • Use agroforestry practices: I believe that agroforestry should help to combat

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Resources and Forestry</p>	<p>possible for in Casamance the soil is still quite rich and organic products are the most sought-after at the moment;</p> <ul style="list-style-type: none"> Involve the Water Resources and Forestry Service for we are aware of the agroforestry technology that needs to be put in place in order to have the right production (the distances between the lines and between two trees); Support from the Water Resources and Forestry and Agriculture Services for the acquisition of good quality seeds. There was the PASA project in Sokone, which had set up an experimental system to see which of the Mozambican, Brazilian, Costa Rican and Beninese varieties produced more nuts. The plant material must be supervised and worked on. So far, we are waiting for the Consolidated Investment Budget (BCI) to support us in the production of seedlings that we will give to the producers free of charge; Create yield squares to obtain statistics on production through DAPSA; Land tenure at the local level is a problem because of the urban front which is advancing with the population explosion on one side and the agricultural front on the other side: beyond cashew nut and mango plantations, there are people who practice shifting cultivation. We therefore expect support enabling farmers to engage in intensive agriculture for food and market garden production; We expect the local authorities to draw up land use and allocation plans (POAS) for each area (forestry, agriculture). Forestry is associated with livestock farming because during the rainy season, the forest is a refuge area for livestock. In addition, degraded and bare forests can be compensated with cashew trees; 	<p>desertification and yield losses at the plot level;</p> <ul style="list-style-type: none"> With drip irrigation, which will be initiated by the Green Fund, production will be permanent and this will help farmers to better maintain their plantations. <p>Concerns</p> <ul style="list-style-type: none"> Monoculture means that we will not put everything into cashew and mango trees. We have to diversify with citrus; The lack of training for farmers. We need to train the producers and retrain the technicians because today, technology is developing very rapidly. A well-trained agent must be able to better supervise the farmers and training farmers using the local language with imagery has more impact. It is also necessary to organise study trips and create marketing networks; Difficult access to land. Land must be secured through proper deliberations and subdivisions. <p>Recommendations</p> <ul style="list-style-type: none"> Combine all services. Unfortunately, the Water Resources and Forestry Service is in the background, even though it is the only service with state-owned nurseries and farmers apply for seedlings at the service level. This year we have eight (8) nurseries. The service must be involved in decision making and in monitoring-evaluation in order to provide better guidance; Make an inventory of the trees to be felled; Support the retraining of Water Resources and Forestry agents.
<p>Mamadou GOUDIABY Education Inspector</p>	<p>Expectations</p> <ul style="list-style-type: none"> The Ministry of Vocational Training must be at the heart of the system in order to better understand all the issues related to the Agropole and to provide, through training, the human resources that will make it possible tomorrow to achieve the objectives through record production in the different compartments that are expected from this 	<p>Recommendations</p> <ul style="list-style-type: none"> Continue the consultation process, evaluate it and take into consideration the various observations made not only by the population but also by the heads of technical services and keep on with this participatory approach allowing all segments of society to take ownership of this project, which is a major project

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>Agropole;</p> <ul style="list-style-type: none"> Broad communication and appropriation of this Agropole are necessary to ensure a massive support from the population. This involvement will lead to the success of the project. Young people must be better informed about the possibilities offered by the Agropole to combat the scourges linked to immigration. <p>Concerns</p> <ul style="list-style-type: none"> Land management: there are enormous difficulties in managing land properly because we need to go beyond traditional production, i.e. move towards new production methods based not on individual and very limited plots of land, but on hectares of land; Training: does the Kolda region already have sectors? We can't wait for the Agropole to set up to create these sectors, we need to take action now to create sectors that will prepare young people to take over as producers and to work in these Agropole. 	<p>that could succeed and boost the rural world;</p> <ul style="list-style-type: none"> Take into consideration concerns related to the environment, and as soon as we embark on these important projects that can disrupt what has existed until now, I think it would be very unfortunate not to take the environment into account. As such, the advent of this Green Climate Fund will make it possible to measure the negative consequences and mitigate them. It is also important to acknowledge the work done by the other partners who are supporting the State of Senegal in the creation of these Agropoles; Ensure that all the departments are involved in everything that will be done: a very balanced inclusive approach is needed. It will enable the communities settled in the different regions of Casamance to benefit from this project through a fairly transparent approach that does not create favouritism in relation to any other region. I believe that the Casamance cluster dimension could help to make this a success.
<p>Moustapha THIAM - Service Head - Regional Hydraulics Division</p> <p>Tel.: not provided</p>	<p>Expectations</p> <ul style="list-style-type: none"> A good involvement of the actors, because the mango and cashew nut activity plays an important role in the region of Kolda. There are many actors who intervene in these sectors; Support for actors in marketing products; The development of the cashew nut and mango value chains; The improvement of the living conditions of the Region's poor population. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Risks of waste being discharged into nature. This could lead to the contamination of wells used by the populations. Risks of contamination of water points through the use of pesticides as most wells are traditional wells. <p>Recommendations</p> <ul style="list-style-type: none"> Treat the discharges, if any, in order to avoid pollution of the water tables, especially during the rainy season with water runoff; Involve all the actors of this sector and train them, especially for marketing. Involve the Hydraulics Service in the entire project implementation process; Control and treat pesticide discharges, to avoid the contamination of water tables, especially during the rainy season with water runoff.

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Dr. Mohamed Moustapha SARR - Service Head - Regional Service for Livestock and Animal Production</p> <p>Tel.: 77 150 67 80</p>	<p>Expectations</p> <ul style="list-style-type: none"> It is important that the livestock sector finds its own way in the second phase in order to boost the sector (sheep farms); Job creation, wealth creation and increased income, etc.; A strong impact on the economy of Kolda region; The Agropole will be a demonstration centre aimed at showing that it is possible to have processing industries with new technology; The construction of water points (pastoral ponds, boreholes etc...) because climate change is causing an increase in the need for water for livestock and the drying up of some water points earlier than expected; Organisation of awareness-raising and information workshops for livestock farmers on the contribution of cattle to greenhouse gas emissions, focusing on other types of livestock farming (poultry, sheep, goats, pigs, etc.) in order to reduce greenhouse gas emissions; Develop forage production (marafalfa, cowpea etc.) as natural pasture is strongly impacted by climate change both quantitatively and qualitatively; 	<ul style="list-style-type: none"> Reinforce the monitoring of animal and zoonotic diseases (diseases that are transmitted from animals to humans and vice versa, for example, bovine tuberculosis, brucellosis, anthrax, etc.). Many experts state that emerging diseases such as Coronavirus, Ebola etc. which are of animal origin could be linked to climate change. <p>Potential risks or threats</p> <ul style="list-style-type: none"> Environmental and cultural risks; The non-involvement of producers: as is often said, "If you do something for me without me, you do it against me". Emphasis is placed on agriculture at the risk of forgetting the livestock sector (dairy farming, meat production etc.). <p>Recommendations</p> <ul style="list-style-type: none"> Involve all actors; Build on what already exists to take the best steps in the right direction instead of starting all over again; Carry out a good environmental impact assessment; Adopt an inclusive approach by involving all actors;
<p>Ismaila NDIAYE</p> <p>Regional Inspector in charge of Fisheries and Monitoring</p>	<p>Expectations</p> <ul style="list-style-type: none"> First of all, value what already exists: the actors (fishermen, farmers, stockbreeders, etc.) make great efforts, but this is still embryonic; Organise the potential sectors and develop them by increasing production and productivity, then value them through transformation; Seek viable markets around the world for marketing in order to sustainably support our producers through the provision of profits; Take better account of environmental aspects with the support of the Green Climate Fund; Improve control, consideration for and protection of our forests and the environment 	<p>Recommendations</p> <ul style="list-style-type: none"> Avoid that producers' profits be captured by intermediaries. Put the farmer at the centre of the activity; Make sure that the environment is strengthened. The Agropole must complement the environment, conserve the soil, the forest and the flora. This requires putting in place safeguards; Try to develop aquaculture through the rehabilitation of existing ponds by reprofiling and stocking them and set up management committees that are polarised by the surrounding villages; Receive a feedback, i.e. share reports in order to know if all our observations and recommendations have been

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>in general;</p> <ul style="list-style-type: none"> Develop activities that will be adapted to climate change. <p>Concerns</p> <ul style="list-style-type: none"> Avoid intermediaries in the sale of tree and agricultural products, as is the case for the groundnut sector where all the profits are captured by intermediaries to the detriment of the farmers. It is necessary to take into consideration the diagnoses already carried out on the other sectors; Environmental aspects not taken into account. From the beginning, systems that take these aspects into account must be integrated into the design and procedures. To this end, it is necessary to focus on awareness raising and communication. This will enable us to label our products upstream. 	<p>taken into account. I welcome the approach of the Agropole because from the beginning, everything has been done in collaboration with the technical services. We reiterate our commitment to support this State project;</p> <ul style="list-style-type: none"> Finally, speed up the implementation process of the project because the populations have been waiting since then.
<p>Georges Armand DEGUENONVO</p> <p>Institution: Youth Regional Service of Kolda</p> <p>Function: Inspector, Head of Service (2019)</p>	<p>Expectations</p> <ul style="list-style-type: none"> The creation of jobs in the different value chains chosen: Production (orchards and fields), maintenance of production, skilled labour at harvest, in processing and marketing units and, if necessary, semi-processing and transformation of production; The implementation of a synergy likely to lay the foundations for the qualification of young people in the region through vocational training centres and tailor-made training courses combining practical work and weekly stays in companies; Implementation of a marketing system providing access to commercial markets and export for both sectors. 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Insufficient fruit production; Lack of skilled labour; Lack of accompanying fiscal measures or the status of the production zone is not favourable to business; Lack of networking between the Agropoles Sud (of the different modules) to ensure the fluidity of interventions. <p>Recommendations</p> <ul style="list-style-type: none"> Set up an incentive system, even fiscal, to attract investors for the processing of products into several marketed products (juice, drinks, jam, etc.); Set up new productive varieties of mango; Ensure the employability of young people, i.e. young people with a qualification that corresponds to the needs of Agropole Sud and facilitate their integration; Set up a structure that will promote products from Agropole Sud through tourist and economic areas.
<p>Moussa DIALLO</p>	<p>Expectations</p>	<p>Concerns</p>

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Head of the Regional Youth Service</p>	<ul style="list-style-type: none"> We strongly hope that the Agropole will provide employment opportunities for a large number of youths; The activities (works) should be carried out as expeditiously as possible because there is a substantial number of youth who want to be integrated and work, although it is true that we are in a period of a pandemic which has interrupted a number of activities; The technical services should be involved because they are important branches of the ministries and have a look at what is being done at the regional level. They have a lot of information on their various sectors. These services could be very useful in terms of guidance and counselling so that the objectives set at the Agropole level can be achieved. The regional and departmental committees could also be useful in the implementation of this project; With the Green Climate Fund, the Agropole can create green jobs and in this regard solve problems related to plastic waste management; Intensify the set-up of nurseries that can be beneficial to all those involved in reforestation and the restoration of biodiversity. Biodiversity is disappearing in the region of Kolda, especially in the division ("department") of Medina Yoro Foulah. Therefore, if a policy geared towards restoring biodiversity and creating green jobs is included in the project's objectives, it will benefit the region and in turn address the problems of climate change, which have become global issues. 	<ul style="list-style-type: none"> Respect territorial equity at the level of the three departments of the Kolda region because most often, many activities are centred in the regional capital and the other departments are neglected. <p>Recommendations</p> <ul style="list-style-type: none"> Involve the various sectors concerned for a good implementation of the project; Set up an information and communication system so that the populations can grasp the content of the project and be able to position themselves and see the role they could play or the place they could occupy at the level of the Agropole; Implement a good information system for the youth and movements through community radio stations or directly with the technical services at the regional and divisional levels; Do not forget the youth. Unemployment and training are challenges facing the youth. If the Agropole Sud could solve a great share of these challenges, that would be very important and a source of satisfaction for our service; With regard to access to land, it is important to work with the local administrative authorities (prefects, sub-prefects) as well as the local decentralised authorities (mayors, presidents of departmental councils, youth and women's movement) and advocate for women's and youth access to plots of land.
<p>Mamadou Cissé – Service Head - Regional Mines and Geology Service Tel.: 77,540 31 40</p>	<p>Expectations</p> <ul style="list-style-type: none"> The project will reduce employment; It will reduce the rotting of mango, of which there are huge losses every year; It will promote the consumption of local products 	<p>Potential risks or threats</p> <ul style="list-style-type: none"> Lack of communication by focussing on regional authorities. <p>Recommendations</p> <ul style="list-style-type: none"> Give priority to the needs of the indigenous peoples
<p>Ismaila NDIAYE – Service Head - Regional Fisheries and Surveillance Service of Kolda</p>	<p>Expectations</p> <ul style="list-style-type: none"> Promote the region's agricultural products and the organisation of the sector, especially socio-professional organisations; 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> The production and management of industrial waste ;

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<p>Tel.: 77,159 92 18</p>	<ul style="list-style-type: none"> • Improve production and processed products; • Improve the conditions of producers (value agricultural work) 	<ul style="list-style-type: none"> • The expansion of orchards, which can lead to the destruction of forests for farming; • Risks of abandoning other crops (groundnuts, millet, maize, etc.) in preference to mangoes and cashew nuts; • The misuse of chemical products (fertilisers, pesticides) to boost production which can destroy nature; • The use of hydrocarbons by the Agropole, which can have harmful effects on nature; • The recognition of aspects related to the social welfare of the Agropole's workers (social security, health security). <p>Recommendations</p> <ul style="list-style-type: none"> • Avoid privatising the Agropole because this may harm the producer; • Immediately demarcate spaces for the production of these crops (cashew nuts and mangoes) so they do not spread; • Include more research
<p>Pape Jénine DIATTA - Service Head - Kolda Regional Service for Community Development Tel.: 77,807 64 54</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Increase of the added value that it could bring; • Create jobs; • Involve devolved services in management, supervision and monitoring activities. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The expansion of orchards resulting in social conflicts and deforestation. • The availability of raw materials throughout the year due to the seasonal nature of cashew nut and mango production. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Involve devolved services in the management; • With respect to the specificities of our regions, it is important that the most promising sectors be taken into account as quickly as possible. • The project should enable producers, especially women producers, to attend the various fairs and the products should be presented each year.
<p>Abiboulaye SIDIBÉ –</p>	<p>Expectations</p>	<p>Potential risks or threats</p>

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Director – Regional Directorate for Rural Development</p> <p>Tel.:</p>	<ul style="list-style-type: none"> Improvement in the productivity of the mango and cashew nut sectors; Greater professionalisation of the players in these sectors; Creation of added value (for the mango and cashew nut sectors) and sustainable employment. 	<ul style="list-style-type: none"> Promote the private sector at the expense of family farming; Risk of preferring heavy investments to the detriment of small investments; Risks related to the great number of stakeholders, hence the need for good coordination; Risks related to hazards and climate change that may adversely affect agricultural production. <p>Recommendations</p> <ul style="list-style-type: none"> Promote an inclusive and participatory approach for all stakeholders at all stages of the project; Lay emphasis on water control and thus reduce the random variability of agricultural production; Increase the professional competence of the players in the agricultural sector.
<p>Brahima Mamadou BA</p> <p>Director - Regional Directorate for Rural Development (DRDR)</p>	<p>Expectations</p> <ul style="list-style-type: none"> An improvement in the production and productivity of the targeted agricultural sectors. This will have an impact on the income of the population; Professionalisation of the players in the said sectors; Creation of added value and sustainable employment; A better consideration of environmental management with the use of low-carbon energy technologies. <p>Concerns</p> <ul style="list-style-type: none"> Consideration of the preoccupations of all the players in the so-called sectors targeted by the Agropole; Poor visibility of stakeholders, especially in the cashew nut sector; it will be necessary to avoid focusing more on the private sector to the detriment of family farms; A disruption in the rural sociology of the stakeholders. The sociological aspects of the community must be properly taken into account in the use of the land. 	<p>Recommendations</p> <ul style="list-style-type: none"> Use the inclusive and participatory approach of all stakeholders at all stages of the implementation of Agropole Sud; Involve the beneficiaries from start to finish so that they can take ownership of the project; Promote natural resources

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
Abdou NDOUR Service Head Regional Service of Urban Planning and Housing (DRUH) of Kolda Tel.: 77,642 56 61	<p>Expectations</p> <ul style="list-style-type: none"> • Create jobs; • Increase the added value of products; • Boost agroforestry, which is very under-exploited, and develop youth employment because industrialisation inevitably implies a need for labour. <p>Concerns</p> <ul style="list-style-type: none"> • Involve the populations so that they take ownership of the project. This can only be done with good communication and information about the project. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • The populations fail to take ownership of the project <p>Recommendations</p> <ul style="list-style-type: none"> • Implement a communication and awareness programme; • Work with services that can provide a significant contribution. <p>Recommendations</p> <ul style="list-style-type: none"> • Good communication and awareness-raising around the project by involving all stakeholders; • Work with services that can provide a significant contribution from the beginning to the end of the process.
Amine GUEYE National Aquaculture Agency	<p>Perception</p> <ul style="list-style-type: none"> • A great asset of major importance for development. <p>Expectations</p> <ul style="list-style-type: none"> • Development of fish-farming areas around tree and market gardening areas, which would be of major importance and would increase yields because the water used to raise fish can be used to irrigate plants. 	<p>Concerns</p> <ul style="list-style-type: none"> • Failure to involve the population; • The land issue. <p>Recommendations</p> <ul style="list-style-type: none"> • Good communication between the project and stakeholders; • Inclusion of the fish farming component with the support of the FVC
Mar SECK Service Head - Regional Service for Local Development (SRADL)	<p>Expectations</p> <ul style="list-style-type: none"> • Draw inspiration from the development of projects that have already existed with the participation of all the sectors and players in the region for an inclusive and controlled emergence; • Continue consultations and establish a good communication plan on the project. <p>Concerns</p> <ul style="list-style-type: none"> • Failure to meet project implementation deadlines; 	<p>The land issue: although the land belongs to the State and is managed by the local authorities, there are people who use it for their livelihood. The procedures for compensating people affected by the project must be respected.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Implementation deadlines and procedures in force must be respected; • All stakeholders, especially the communities, must be involved throughout the process; • All the recommendations from the sectors must be taken into account.
Head of the Regional Office	<p>Perception</p> <ul style="list-style-type: none"> • This project is timely as there is enormous potential in the Kolda region. The problem that people encounter is the lack of a 	<p>Concerns</p> <ul style="list-style-type: none"> • My concern with the project is the land. The boundaries of the various sites selected must be formally delimited

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>structure that will support them;</p> <ul style="list-style-type: none"> With the Green Climate Fund, the project will have autonomous energy because there is potential for renewable energies, especially solar energy, considering that in Casamance, Kolda beats all records for heat. <p>Expectations</p> <ul style="list-style-type: none"> Involvement of the local population; Employment for the youth; The tree products that are lost should be processed and developed. 	<p>and the cadastral survey office must be involved because for a while, this was every investor's problem. At some point, the boundaries of estates were unknown. Now with the E-Card, this is no longer the case. We can safeguard this aspect. The Land Survey Office should be involved in the demarcation of these areas.</p> <ul style="list-style-type: none"> The lack of upkeep and maintenance of production infrastructure. <p>Recommendations</p> <ul style="list-style-type: none"> Involve the local population and technical services in the whole process.
<p>Cheikh NDIAYE</p> <p>Head of the Regional Planning Service</p>	<p>Expectations</p> <ul style="list-style-type: none"> First, the implementation of the project; For such a large-scale project, it is important that all stakeholders be involved in the process; The population should take ownership of the project's achievements so that it is not a money-wasted investment. <p>Concerns</p> <ul style="list-style-type: none"> The potential risk is the land which is a very sensitive issue with respect to customary law. If the State wants to set up a project, it must necessarily compensate those affected by the project. The PAP should be involved and the terms of compensation must be transparent. The transparent management of the project and the setting up of a steering committee around the governor and the technical services that have a better command of the region than anyone else. With regard to the sectors, there is a concern about the lack of involvement of local actors. In this regard, the actors need to be structured, as they are often informal. It should be noted that men and women are a little disorganised, especially during the periods when wild fruit is collected. It would be good within the framework of the Agropole if these women were organised for local development; 	<ul style="list-style-type: none"> For the storage of the products, the necessary arrangements must be made, especially with regard to ventilation, to avoid some losses; There is an electricity deficit in some municipalities. However, with the green fund that is going to develop renewable energy, this will bring relief to the municipalities because electricity is expensive. <p>Recommendations</p> <ul style="list-style-type: none"> Firstly communication, it is important to communicate and discuss with the actors concerned. Carry out focus group discussions with the population so that they accept and take ownership of the project; As concerns the land issue, it is necessary to adopt a participatory approach, discuss with landowners and explain the measures taken; Secure the project's sites and conduct pre-project studies; Our environment is polluted. With the Green Fund, pollution will be addressed, especially with renewable energies and forest regeneration.
AGENCIES, PROJECTS AND PROGRAMMES OF THE KOLDA REGION		

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Serigne Abdou GUEYE</p> <p>Branch Head</p> <p>Contracts Regulatory Agency (ARM) of Kolda</p> <p>Tel. : 77 517 61 55</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Developing local quality rice farming; • The creation of jobs; 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Imported products, • Fruit diseases and insect attacks (white fly) <p>Recommendations</p> <ul style="list-style-type: none"> • Finance the producers; • Carry out the project quickly.
<p>Amine GUEYE</p> <p>Service Head</p> <p>National Aquaculture Agency (ANA) of Kolda</p> <p>Tel.: 77468 83 92</p>	<p>Expectations regarding the Agropole Sud</p> <ul style="list-style-type: none"> • The project should first benefit the producer. Generally, they come to develop the area and those most concerned, the local population, does not benefit from it; • Investments and incentives from the Agropole to the aquaculture sector to support fish farming promoters. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Land salinity. Salt water is advancing, especially in the Sédhiou region. <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Mostly raise awareness so that there is no frustration among the population; • One day include aquaculture into the Agropole.
<p>Abdoul ANNE</p> <p>Director</p> <p>Regional Development Agency (ARD) of Kolda</p> <p>Tel. : 77,515 29 51</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Promote productions and the federation of processors; • Expand the range of sectors at the level of the Agropole; • Control the white flies and fusarium in the mango sector; • Take into consideration the production that comes from Guinea Bissau or vice versa depending on the products used here and there; • Improve the local economy; • Better utilise cashew nuts through processing; • Enhance the promising sectors through value chains to support the economic development of this region. In order to do so, local actors, local authorities, the private sector and producer organisations should be involved, but they need support, synergy and co-production; • Guarantee sustainability in the operation, to set up processing, utilisation and marketing 	<p>Potential risks or threats :</p> <ul style="list-style-type: none"> • Lack of ownership among local actors, the private sector ; • Implementation of the modules in conflict areas; • Spread of the mango fruit fly; • Sub-regional competition. <p>Concerns</p> <ul style="list-style-type: none"> • Failure to take account of the territorial approach; • Weak air and land transport systems: the landlocked situation of the region hinders its ability to be competitively productive and to reach the major markets (Touba, Dakar, etc.). • The study of the project has dragged on for too long (2 years now) and there is no communication, perhaps just one or two meetings. The intervention strategy needs to be changed. Those in charge of a territorial activity should come to the areas concerned and communicate on the project at the local level so that the local actors

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>systems that will go through the green economy carpet;</p> <ul style="list-style-type: none"> • support the producers at the organisational and technological levels through environmentally friendly technologies that can be used to promote, process, preserve and store the different local products or by-products; • Build the capacity of actors so that they can sell products that can compete at the national and international levels. Develop the Casamance product label. 	<p>(producers' organisation, stockbreeders' organisation, population concerned, etc.) can take ownership of the process.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Involve all the actors; • Reflect on the inclusion of other promising sectors (honey, milk, rice); • Discuss extensively with the actors to create a synergy between the various stakeholders in the southern zone; • Bring producers together, organise them, train them and label the products; • Support local authorities through the Green Climate Fund for the preservation of forests in the south. Access to green funds for producers must be simplified;
<p>Yoro BA</p> <p>Manager</p> <p>Mutual fund of Senegal (CMS) of Kolda</p> <p>Function: CMS Kolda</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Sign a partnership agreement with the mutual fund; • Help the producers ensure good productions; • Sensitise the population on the importance of value chains; • Expansion of the business portfolio of our institution; • Facilitate the refunding of loans to producers through the disposal of products and avoid conservation problems. 	<p>Potential risks or threats :</p> <ul style="list-style-type: none"> • Failure to reimburse loans; • Investors fluttering around in all financial institutions. <p>Recommendations</p> <ul style="list-style-type: none"> • Sign agreements with financial institutions; • Ensure good communication on the project; • Choose the investors wisely; • Ensure a permanent follow-up of the project's activities and conduct regular assessments.
<p>Sagar Ndiaye</p> <p>Branch Manager</p> <p>National Agricultural Credit Fund of Senegal (CNCAS) of Kolda</p> <p>Tel. : 77 333 24 20</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Increase of the added value in favour of the population; • Target the actors well 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • A wrong targeting of actors to finance <p>Recommendations</p> <ul style="list-style-type: none"> • Communicate with the populations well in order for them to understand the importance of carrying out the project in their areas; • Consider the importance of the project and not take into consideration the

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<p>various rivalries between areas while choosing the sites supposed to host the modules;</p> <ul style="list-style-type: none"> Beware concerning the targets and make sure politics is not brought in the project
<p>Ibrahima Solo KONTA</p> <p>Coordinator of the National Agricultural Insertion and Development Agency (ANIDA) for the South</p> <p>Tel. : 278 89 55</p>	<p>Expectations</p> <ul style="list-style-type: none"> Complementarity with ANIDA which introduced fruit agriculture in its farms; Boost mango and cashew nut production; Boost the economy of the region 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Risks of shortage of raw materials; Phytosanitary constraints <p>Recommendations</p> <ul style="list-style-type: none"> Sensitise the producers well, especially as concerns the planting of improved varieties (Ket, kent, etc.); State financing of the fight against illnesses via the Directorate for Plant Protection (DPV) to carry out researches on fusariosis; Provide support to producers, especially as concerns training.
<p>Thierno Ibrahima</p> <p>Deputy Service Head</p> <p>Regional Service of Statistics and Demography (SRDS) of Kolda</p> <p>Tel. : 77 303 05 69</p>	<p>Expectations</p> <ul style="list-style-type: none"> The project should fully contribute to the economic development of the region; The project should also benefit the population of the region, by having an inclusive approach as advocated in the Senegal Emergence Plan (PSE). The project should help re-boost the economy of the region and generate employment. Promote intensive mango cultivation. Facilitate the marketing of agricultural products, therefore boost agricultural production and create jobs at the same time. <p>Concerns</p> <ul style="list-style-type: none"> Phytosanitary constraint: fusariosis which transform bunches of flowers into vegetative clusters; the mango blossoms but does not produce. The annual production of mango in Ziguinchor is much more than the one of Kolda because of the climate 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> Disposal of the productions and of processed products ; Non consideration of the environmental dimension and public health; <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> Work with vocational training centres in order to have qualified local manpower; Give the statistics service all what concerns data collection, studies, data production; Closely involve technical services according to their respective domains; Provide support to producers as concerns training; Implement a programme to fight against fusariosis in relation with DPV

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ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
Younouss CAMARA Director of the Zoo-technical Research Centre (CRZ) and Mamadou Ousseynou LY , researcher in CRZ	<p>Expectations</p> <ul style="list-style-type: none"> • Be able to take advantage of these environmental and agricultural potentialities in the South regions. And we support them by teaching them some skills and technologies; • There should be technology innovations that shall serve the population and that could imply research to be able to produce improved products meant for the population. Since the Agropole will be hosted in ISRA, we will be actors but also beneficiaries of this Agropole Sud: actors by intervening actively in the production of knowledge but also in the production or regeneration of the vegetation and forest cover or material which is getting old; • The preservation of forests, but a preservation based on the existing elements. We should first be aware of the existing potential in terms of forestry species present in the forests in order to move to the scaling up and know the species which are given the priority by the population (forest, fruit species) and which bring more profit to them; • Job creation through exploitation of forest species; • Put at the disposal of the centre well equipped laboratories and vehicles to better study the species and meet the objectives concerning forests, reforestation, and domestication, etc.; • Provide support for the development of stations intended for the production of plants and acclimatisation at the level of CRZ. 	<p>Concerns</p> <ul style="list-style-type: none"> • Low acceptance by the population of the new agro-industrial practices. The worry is that these new industrial practices strike out our traditional familial agriculture. To reduce these risks, one should first carry out some investigations, analyse the perception of farmers concerning the Agropole; • A lack of coordination from the beginning at the level of the stakeholders, both for decision makers and for permanent structures; • The poor management of the project and of community forests by stakeholders. <p>Recommendations</p> <ul style="list-style-type: none"> • Share information between the different stakeholders. All these stakeholders shall be at the same level in the collegial management; that involves the producer, the manufacturer, the trader, the researcher and the technician. Set up a platform bringing together all these actors; • Carry out a good coordination and a good communication on the project; • Integrate the animal component in the forest in order not to conceal the fact that the South area is also an agro-pastoral area where the animal also plays a key role in the resources management; • Clearly define the limits of the interventions of stakeholders in their actions to avoid overlap in interventions; • Carry out studies on speculation illnesses (for example mango fusariosis) and insect pests; • Involve research as from the beginning of the implementation of the project.
ORGANISATIONS OF PRODUCERS OF KOLDA REGION		
Mamadou Mansour SENE	Expectations	Recommendations

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
<p>Chairperson of the Regional Council for a Dialogue among Rural Authorities (CRCR) Kolda</p>	<ul style="list-style-type: none"> • Develop very strong organisations which would focus on the resources of the region; • Create family farms throughout the improvement of the production and productivity; • Improve the environment through forest regeneration; • Facilitate access to renewable energy with the Green Climate Fund. <p>Concerns</p> <ul style="list-style-type: none"> • Delay in the implementation of the project; we have been talking of it since a few years now, we even held meetings at the high level but up to now we do not notice any progress towards beginning of its implementation. That is a project which brings out much hope but the more people wait for its implementation, the more they demobilise. The fear is that the project is not executed; • Failure to choose or work with the real production players 	<ul style="list-style-type: none"> • One should dare go deep into the project, raise awareness from the grassroots, get each village involved through women, youths and the elderly organisations, etc.; • Accelerate the implementation of the project because producers have their hope in it; • Find and get in touch with real actors; • Put land at the disposal of actors. Secure the land by enabling each one to access a plot, even if it is only a small piece, in order to carry out their own activities on it.
<p>Abdourahim DIALLO</p> <p>Chairperson, Regional Framework of Dialogue among Cashew nuts Producers (CRCPA) / Kolda</p>	<p>Your expectations concerning the Agropole Sud</p> <ul style="list-style-type: none"> • Creation of favourable conditions for the production, collection, transformation and marketing; • Putting in place of necessary infrastructure in order to strengthen the equipment of local producers and manufacturers; • At the level of the organisation, help the various sectors to develop and organise well in a bid to become autonomous. 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Hasty and not inclusive choices of sites supposed to host the modules which results in a non-acceptance by actors; • The lack of information and training to actors may lead to a failure. • Bad farming practices and wrong choices as concerns farming technologies; • Lack of transparency which calls for good governance. • Climate conditions and insecurity. <p>Recommendations</p> <ul style="list-style-type: none"> • Make a good choice of the site by respecting the environmental standards, and develop and create farms around the site (living hedge and windbreak); • Set up a system for the collection and processing of waste or garbage; • Assistance in the health of population;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
		<ul style="list-style-type: none"> • Provide support to local and regional authorities in the implementation of their opening-up plan and for their socio-economic infrastructure (feeder and crossing roads, education and health); • Put in place the Agropole infrastructure in an equitable way in the various regions that make up the South area, following the specificities of each region.
<p>Famara KOÏTA</p> <p>Chairperson</p> <p>EIG NANGUE FOULADOU MANGUE Kolda (an economic interest group)</p> <p>77,659 53 58</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Provide support for training and organisation of manufacturers for them to integrate the Agropole; • More profit for everybody; • Consideration of those already having their units and with the ambition to co Our expectations in this project are ntinue (do not let them in the roads) 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Availability of the raw material as compared to the quantities produced each year; • Attack of the fruit fly on mangoes which has an impact on the production; • Non-involvement of the various stakeholders <p>Recommendations for the success of the project</p> <ul style="list-style-type: none"> • Place everybody on an equal footing. Strengthen weak people; • Visit existing local units and consider working with them so the central module in Ziguinchor can function normally; • Do everything to improve on the production of mangoes for a continuous and regular supply of transformation units.
<p>Mamadou CAMARA, President</p> <p>Tel. : 77 422 85 83</p> <p>Boubacar CAMARA Manager</p> <p>Tel. : 78 338 40 57</p> <p>EIG Camaracounda involved in the processing of cashew nuts)</p>	<p>Expectations</p> <p>Our expectations in this project are</p> <ul style="list-style-type: none"> • Increase of job opportunities for youths especially; • That local actors (producers, manufacturers, etc.) enjoy the positive effects of the Agropole; • Favour and support local actors already available and active in the sector before looking for new actors or other entrepreneurs not experienced in the sector; • Support local transformation units (electric shelling machine, working capital for the purchase of more raw materials) in order to 	<p>Potential risks or threats:</p> <ul style="list-style-type: none"> • Lack of dialogue and of implication of all actors in the decision making process; • Taking decisions or positions not in favour of the implementation of the project; • Deviation from the project objectives because many projects, structures, NGOs, etc., have been here but farmers are still facing their difficulties; • Absence of motivation of actors (producers, manufacturers, traders, etc.), because if those actors do not see an interest in the project, they will

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<p>enable us create more jobs at the local level and increase our productions.</p> <ul style="list-style-type: none"> • Increase of the agricultural revenue; we hope it will not function like the other structures (ONCAD, SONACOS, SODIFITEX) where products are manufactured and exported at the expense of beneficiaries benefiting almost nothing from there; • Develop the value chain of the sectors and the products label in order to face competition with international markets; • Put at disposal the production and transformation material, and packaging respecting sanitary and environmental standards to the benefit of any actor of the cashew nuts sector; • Increase production through irrigation systems; • Environmental preservation and safeguarding of the biodiversity is of prime importance; • Increase the employability of youths through the setting up of agro-industrial factories to process milk, cashew nuts, mangoes and other sectors, in order to reduce rural exodus and immigration; • Start with the grassroots, local actors, support and strengthen them before developing other objectives. 	<p>not own it;</p> <ul style="list-style-type: none"> • Lack of experts mastering the cashew nut sector. In Senegal, in vocational training universities, there is no division dedicated to the study of the cashew nut field, that is, from the production to the transformation. So, if engineers who do not master the sector are invited at the expense of local actors who already have some skills in the domain, this may negatively impact on the results of the project; • Remoteness of production areas and the poor condition of feeder roads, especially in the department of Médina Yoro Foulah. <p>Recommendations</p> <ul style="list-style-type: none"> • Discuss with all the actors about all what is going to be done at the level of the Agropole, that is, from producers to manufacturers, and not leaving out collectors, traders, transporters, etc. • Finance and support first of all actors already active in the sector, that is, direct actors instead of financing new actors; • Improve progressively the cashew nuts varieties already present, because they are old plantations with varieties with low production; • Do everything in order to rapidly execute the project to avoid demotivating actors; • Consider the real actors of the sector, take them into account during the whole process; • Support the producers and manufacturers (production techniques, approved price, financing, etc.); • Involve youths and women in the project.
<p>Moussa SABALY</p> <p>Chairperson of the Mango sector Platform of Kolda</p>	<p>Expectations</p> <ul style="list-style-type: none"> • Provide support for the fight against the fruit fly and illnesses because there is no convergence of actors in that fight; • Resolve the issue of loss of productions; 	<ul style="list-style-type: none"> • Insufficiency of transport means from production places to storage places; • Presence of fruit diseases such as fusariosis and the fruit fly. Despite State efforts through the DPV and partners, these vectors are still present in the farms;

ACTORS	PERCEPTIONS AND EXPECTATIONS	CONCERNS AND RECOMMENDATIONS
	<ul style="list-style-type: none"> • Provide support to producers for a better organisation, to better structure and manage their organisations; • The prices shall be officially approved; • Create jobs for youths and women through the development of tree and market gardening perimeters; • Reduction of pollution and protection of the environment with the Green Climate Fund. <p>Concerns</p> <ul style="list-style-type: none"> • Inaccessibility of some production areas; • Absence of statistics on mango production. Need to carry out a census of all the production areas, but most of the areas are inaccessible; 	<ul style="list-style-type: none"> • Lack of coordination between producers as concerns fighting actions. <p>Recommendations</p> <ul style="list-style-type: none"> • Inform the beneficiaries on project implementation status; • Promote transparency in the management of the project during its implementation; • Continue to support the producers in adopting good agricultural practices, especially methods of maintenance of orchards; • Also continue the fight against the fruit fly and fruit diseases; • Develop networking between producers and buyers.

A few pictures of the focus group held in Baghagha, the village hosting the central module of the agropole



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ANNEX 4 : LIST OF INSTITUTIONS AND PEOPLE CONSULTED

List of persons and Institutions Consulted In THE ZIGUINCHOR Region

No	FULL NAME	FUNCTION	STRUCTURE/INSTITUTION	CONTACT
1	Babacar NIANG	Development Assistant	Governance	77 529 06 27
2	Ibra FALL	Préfet	Prefecture	77 529 05 92
3	Basamba DIEDHIOU	Secretary general	Ziguinchor Chamber of Commerce, Industry and Agriculture (CCIAZ)	77 551 06 56
4	Donacien KANFANY	Service head	Land registry	77 630 00 70
5	Mamadou GOUDIABY	Service head	Inspectorate of Water and Forestry	77 646 56 12
6	Cheikh NIANG	Service head	Regional Planning Service	77 046 57 91
7	Moussa NDAO	Assistant	Regional Planning Service	77 786 71 44
8	Baboucar DIEME	Service head	Regional Hydraulic Division	77 654 44 10
9	Evariste BASSENE	Service head	Regional Livestock and Animal Production Service	77 371 34 74
10	Abdoulaye BADJI	Service head	Regional Town Planning Service	77 370 03 27
11	Baba AIDARA	Service head	Regional Service of Mines and Geology	77 556 35 30
12	Sanoussy FOFANA	Service head	Regional Service of Community Development	77 624 73 79
13	Ibrahima BADIANE	Area Director	ANCAR BMZ	77 572 70 64
14	Youssouph BADJI	Coordinator	Casamance Development Pole Project	77 358 70 65
15	Moussa DIEDHIOU	Service head	National Agency for Aquaculture	77 557 87 58
16	Alassane SOW	Service head	Regional Sanitation Service	77 575 39 53
17	Ousmane KA	Service head	Regional Trade Service	77 165 13 64
18	Marie Louise FAYE	Service head	Regional Tourism Service	77 539 87 95
19	Youssef SIDIBE	Regional South Zone	National Agency for Youth Employment (ANPEJ)	77 542 32 75 272
20	Famara NIASSY	Service head	Regional Fisheries Service	77 712 11 35
21	Abdou Hadji BADJI	President	Regional consultation framework for rural people (CRCR)	77 657 55 20
22	Boubacar Seydi	President	IAMS/SOCAAS	77 658 41 57
23	Simon SAMBOU	Secretary general	Chamber of Crafts and Trades	77 645 34 43
24	Ousmane SAMBOU	Director of programmes	CASADEV	77 570 32 33
25	Issa Karim SANE	Marketing and Sales Director	CASADEV	77 905 42 84
26	Enie Joël COLY	Regional inspector	Regional Labour and Social Security Inspectorate	77 551 55 36
27	Jean Eude CARDOZ	Service head	Regional support service for local development	77 455 57 30
28	Maurice Ndéné NDIONE	Assistant	Regional support service for local development	77 180 54 23
29	Casimir A SAMBOU	Director	Regional Directorate for Rural Development	77 577 50 08
30	Kadialy GASSAMA	Secretary general	Ziguinchor Departmental Council	77 901 40 64
31	Khadim NIASS	Head of Division	Regional Division of Environment and Classified Establishments	77 632 74 80
32	Alassane AW	Assistant	National Agency of Statistics and Demography	77 208 50 09
33	Ibrahima DIEDHIOU	Mayor	Adéane council	77 564 54 99
34	Philippe DIEDHIOU	President	UJCRA	77 641 92 81
35	Joachim COLY	1st Deputy	Bignona council	77 441 05 73
36	Commandant Mamadou Moustapha NIANG	Service head	ANAM	77 649 88 05
37	Commandant Gorane SARR	Service head	Fire brigade	
38	Abdou Salam KANE	Operations and sales manager	Plant Protection Division	

Institutions and people consulted in the Council of Ziguinchor - 5 - 20 October 2020;

No.	Full name	Function	Structure	Contact
1	Patherne Diatta	Director	CRAZ/ISRA	775412388
2	Malick Ndour	Regional inspector	Labour inspectorate	774243259
3	Guillaume A. Coly	BNSP/41st CIS	Company commander	775291438
4	Baboucar Diémé	Hydraulic	Head of division	776544610
5	Pr Alassane Diatta	Vice-rector	UASZ	776457130
6	Fihcre Coly	President	Departmental Council	775571082
7	Ahmadou T. Barry	Technical assistant	DREEC	776515143
8	Boubacar Dione	Inspector	IREF	775643701
9	Mme Soukarou Camara	Bureau head	DPV	775219143
10	Boubacar Badji	Deputy Service Head	DRDR	774394985
11	Abdoul Aziz Badji	Coordinator	CNCR	776575520
12	Jean Rodrigue Malou	Service head	ANSD	774191322
13	Donacien Kanfany	Service head	Land registry	776300070
14	Charles Iamine Diabone	Coordinator	OTC	774068899
15	Mamadou moustapha Niang	Service head	ANAM	776498805
16	Ibrahima Badiane	Director	ANCAR	775727064
17	Dr. Evariste Bassene	Service head	Breeding	773713474
18	El hadji Oumar Dioum	Deputy service head	SR planning	774198312
19	Assane M. Ndoeye	Head of division S&E	ARD	779515458
20	Oumar Ndiaye	BFPA head	IA/Ziguinchor	775410027
21	Babacar Ndiaye	Préfet	Bignona Prefecture	775290593
22	Moussa Diédhiou	Service head	ANA	775578758
23	Famara Niassy	Service head	SR fisheries	777121735
24	Bakary Sidy Ndiaye	Director	Community development	776152982
25	Youssef Sidibé	Head of south zone branch	ANPEJ	771427544

LIST OF PEOPLE CONSULTED IN BAGHAGHA-ADÉANE, DEPARTMENT OF ZIGUINCHOR

No.	FULL NAME	FUNCTION	CONTACT
1	Djibril SANE	Village chief	77 518 58 81
2	Mamadou SARR	Fisherman	77 903 29 17
3	Abdoulaye MARIO	Farmer	77 405 83 17
4	Aliou DIEDHIOU	Shrimp fisherman	77 944 90 10
5	Adama DIEDHIOU	Welder	77 067 19 43
6	Ousmane P CISSE	Farmer	77 133 31 00
7	Fatou SOUARE	House wife	77 270 81 24
8	Baba SANE	Carpenter	78 630 49 97
9	Lamine SIGHATE	Farmer	77 670 07 29
10	Lamine SANE	Teacher	77 269 69 18
11	Lamine DABO	Community health worker	77 679 69 18
12	Abou DIA	Fisherman	77 329 94 45
13	Thierno CAMARA	Farmer	77 625 69 43
14	Souleymane DIALLO	Fisherman	77 838 63 13
15	Mamadou DIEDHIOU	Farmer	77 202 86 96
16	Samba TOURE	Mechanic	
17	Moussa DABO	Community health worker	77 203 48 30
18	Sidou GAYE	Fisherman	77 527 80 21
19	Mama DIA	Fisherman	77 151 21 88
20	Abdoulaye DIALLO	Farmer	77 634 77 32
21	El Hadji DABO	Farmer	77 191 94 28

No.	FULL NAME	FUNCTION	CONTACT
22	El Hadji M L SANE	Retired teacher	77 150 13 51
23	Younouss BALDE	Farmer	77 036 17 65
24	Amidou DIEDHIOU	Farmer	77 673 17 84
25	Kalidou BA	Custodian	77 012 42 64
26	Aminata MBOUP	GPF	78 213 59 74
27	Mamadou BADJI	Farmer	77 041 45 65
28	Bintou BALDE	GPF	78 213 59 74
29	Sana THIABOU	Farmer	77 242 83 98
30	Ousmane MANKALY	Farmer	77 946 63 82
31	Alassane GAYE	Fisherman	77 159 06 82
32	Youssof SANE	Farmer	77 623 40 89
33	Mamadou Lamine SAGNA	Fisherman	77 275 76 17
34	Ibrahima SARR	Fisherman	78 369 68 04
35	Haby MANE	Farmer	
36	Amy DANFA	Farmer	
37	Abdourahmane SAGNA	Farmer	77 233 17 50
38	Aliou SALL	Teacher	77 904 59 62
39	Ansoumana KONTE	Farmer	78 181 32 21
40	Amadou BARRY	Imam	77 270 20 54
41	Harouna CAMARA	Carpenter	77 625 81 44
42	Dafing SANE	Imam	77 024 11 36
43	Ousmane DIA	PDKP	77 443 18 56
44	Mamadou Amadou LY	Fisherman	
45	Souleymane SARR	Fisherman	77 549 42 69
46	Souleymane SARR	Fisherman	77 271 12 33
47	Seydou LY	Fisherman	77 429 84 62
48	Moussa NIASS	Fisherman	77 054 26 13
49	Moussa SARR	Fisherman	
50	Souleymane CAMARA	Farmer	77 203 20 34
51	Lamine BOIRO	Fisherman	77 395 53 19
52	Abdoulatyf MANDABA	Bricklayer	77 447 14 45
53	Mady SANE	Farmer	77 029 49 15
54	Mamadou DIEDHIOU	Student	77 971 50 01
55	Seydou SARR	Driver	78 527 23 33
56	Sékou MANE	Fish trader	77 022 56 26
57	Omar CISSE	Trader	77 267 12 20
58	Souleymane BADJI	Student	77 986 62 15
59	Lamine MANE	Student	78 499 88 47
60	Boubacar CAMARA	Student	77 032 74 45
61	Bouly DABO	Driver	78 391 36 94
62	Yaya Mané	Baker	77 284 91 62
63	El Hadji DABO	Scrap dealer	77 360 34 89
64	Mamadou Saliou DIALLO	Student	77 010 42 82
65	Ansoumana DABO	Trader	
66	Lansana SANO	Farmer	78 610 17 47
67	Ibrahima FATY	Farmer	78 560 01 97
68	Lansana K SEYDI	Trader	77 736 39 87
69	Lansana KEBE	Farmer	77 678 80 65
70	Ibrahima BA	Baker	77 999 35 48
71	Mamadou Diallo BARRY	Trader	77 040 06 06
72	Boubacar BARRY	Driver	77 716 24 44
73	Ibrahima MANDIANG	Driver	77 229 07 86
74	Mamadou NIANG	Fisherman	78 499 75 22
75	Lamine MANDIANG	Tailor	77 269 58 77
76	Omar SARR	Trader	77 828 54 11

No.	FULL NAME	FUNCTION	CONTACT
77	Cécile Marie DIEME	Trader	77 029 28 08
78	Alfousseyni DAFÉ	Student	77 993 80 14
79	Boubacar MANKALY	Trader	77 068 75 20
80	Abdoulaye BA	Trader	77 019 97 51
81	Ibrahima KA	Teacher	77 504 09 08
82	Alassane DIEDHIOU	Bricklayer	77 085 45 69
83	Lamine SEYDI	Bricklayer	78 229 93 18
84	Amadou DABO	Driver	77 044 16 28
85	Kéba KONTE	Trader	78 016 10 54
86	Mountaga GAYE	Baker	77 066 23 02
87	Lamine SOLY	Teacher	77 878 12 93
88	Souleymane DABO	Teacher	77 611 45 52
89	Yaya MANE	Fisherman	77 713 97 54
90	Mbamba MANKALY	Farmer	77 613 59 18
91	Daro Moussa SARR	Fisherman	
92	Mamadou LY	Fisherman	77 673 27 56
93	Younouss KANE	Photographer	77 265 94 86
94	Mamadou BARRY	Trader	77 323 89 00
95	Lamine TOURE	Farmer	77 064 83 11
96	Bacary MANDIANG	Scrap dealer	78 320 73 09
97	Issa CAMARA	Driver	77 970 11 56
98	Samba DJIBA	Driver	77 011 36 61
99	Sékou DIEDHIOU	Economic operator	78 217 41 65
100	Souleymane SANE	Economic operator	77 431 74 19
101	Pape Abdoulaye BADIANE	Carpenter	77 984 15 02
102	Malang DIEDHIOU	Economic operator	77 036 10 16
103	Mola Yancouba DIEDHIOU	Economic operator	77 066 01 84
104	Omar DIEDHIOU	Fisherman	77 080 74 13
105	Famara DIASSY	Fisherman	78 555 93 07
106	Pape Lamine KONTE	Farmer	77 089 72 08
107	Moussa SALL	Fisherman	78 492 53 79
108	Aliou SARR	Fisherman	77 202 76 39

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LIST OF PEOPLE AND INSTITUTIONS CONSULTED IN THE SEDHIOU REGION

No.	FULL NAME	FUNCTION	STRUCTURE/INSTITUTION	CONTACT
1	Ibrahima FALL	Préfet	Prefecture	77 529 05 82
2	Abdoulaye COLY	1st Deputy Mayor	Sédhiou Council	77 518 88 62
3	Siaka GOUDIABY	Academy Inspector	Academy Inspection	77 652 06 06
4	Papa Diogomaye DIOUF	Head of Forest Protection Division	Regional Water and Forestry Inspectorate	77 362 53 98
5	Hamady DIA	Head of Reforestation Division	Regional Water and Forestry Inspectorate	77 232 78 07
6	Aliou DIALLO	2nd Vice-president	Sédhiou Departmental Council	77 540 11 08
7	Boubacar BA	Secretary General	Sédhiou Departmental Council	77 575 46 30
8	Assane DIOP	Head of Division	Regional Division of the Environment and Classified Establishments	77 650 01 83
9	Youssof DIA	Head of Division	Regional Development Agency	77 542 76 50
10	Moussa CAMARA	Monitoring and Evaluation Assistant	Regional Development Agency	77 511 90 49
11	Oumar MBENGUE	Director	Regional Directorate of Rural Development	77 417 90 52
12	Amadou Mamadou THIAM	Service Head	Regional Support Service for Local Development	77 566 44 35
13	Zoubairou DICKO	Service Head	Regional Directorate of Urban	77 100 60 47

No.	FULL NAME	FUNCTION	STRUCTURE/INSTITUTION	CONTACT
			Planning and Housing	
14	Charles Waly BASSE	Service Head	Regional Planning Service	77 551 12 88
15	Boubacar DIALLO	Assistant	Regional Planning Service	77 324 68 18
16	Mouhamadou Sansouna DIALLO	Labour Inspector	Regional Labour and Social Security Inspectorate	77 290 78 79
17	Ablaye FAYE	Service Head	Regional Service of Mines and Geology	77 908 05 40
18	Ibrahima DIOUF	Service Head	Regional Statistical and Demographic Service	77 253 24 13
19	Mamadou DIOUF	Service Head	Regional Service for Community Development	77 538 50 07
20	Sana SAGNA	Service Head	Departmental Service for Rural Development	77 577 99 95
21	Amadou BALDE	Regional coordinator	PAPSEN	77 632 39 85
22	Ousmane DIAWARA	Service Head	Regional Fisheries Service	77 348 75 91
23	Moussa MANDIANG	Central Manager	COOPAD/DIENDE	77 362 98 36
24	Cheikh Ahmeth Tidiane NDIAYE	President	GIE Cashew nut producers	77 506 64 55
25	Boubacar DIENG	President	URCOMS	77 706 26 97
26	El Hadji Malick LY	Economic operator	URCOMS	77 341 53 38
27	Abdoulaye SOUANE	Manager of the Sédhiou branch	ASSOLUCER	77 273 73 90
28	Diamanty SOUANE	Cooperative President	SocoSandinéry	77 327 29 09
29	Ndiaye SYLLA	Board Chair	Fankanta Marsassoum Cooperative	77 645 38 14
30	Samba Moussa BALDE	Focal point	PADESS	77 418 16 08
31	Emmanuel DIATTA	Service Head	Regional Sanitation Service	77 538 61 94
32	Dahamed AIDARA	Head of Division	Regional Hydraulic Division	77 709 44 21
33	Mady DANFAKHA	Service Head	Regional Trade Service	77 613 83 50 ²⁷⁶
34	Cheikh FAYE	Academy Inspector	Sédhiou Academy Inspection	77 236 30 48

LIST OF PEOPLE AND INSTITUTIONS CONSULTED IN THE KOLDA REGION

	FULL NAME	FUNCTION	STRUCTURE/INSTITUTION	CONTACT
1	Maurice Latyre DIONE	Development Assistant	Governance	77 529 06 11
2	Mactar DIOP	Prefet	Kolda Prefecture	77 529 05 67
3	Malick SIDIBE	Service Head	Regional Planning Service	77 554 44 81
4	Ismaïla NDIAYE	Service Head	Regional Fisheries Service	77 159 92 18
5	Amadou Pauline DIAGNE	Head of Division	Regional Division of the Environment and Classified Establishments	77 556 56 32
6	Pape Lénime DIATTA	Service Head	Regional Community Development Service	77 807 64 54
7	Abdou NDOUR	Service Head	Regional Service for Town Planning and Housing	77 642 56 61
8	Mamadou CISSE	Service Head	Regional Service of Mines and Geology	77 540 31 40
9	Mamadou GOUDIABY	Academy Inspector	Kolda Academy Inspection	77 516 86 50
10	Amadou BA	Assistant	Regional Water and Forestry Inspectorate	
11	Moustapha THIAM	Head of Division	Regional Hydraulic Division	
12	Thierno Ibrahima BARRY	Service Head	National Statistics and Demography Agency	77 303 05 69
13	Amine GUEYE	Service Head	National Aquaculture Agency	77 468 83 92
14	Samsoudine DRAME	Secretary General	Chamber of Crafts and Trades	77 445 55 19
15	Massar GAYE	Labour Inspector	Labour Inspection and Social Security	77 231 65 39
16	Ibrahima Solo KONTA	Coordinator	ANIDA	77 278 89 55

	FULL NAME	FUNCTION	STRUCTURE/INSTITUTION	CONTACT
17	Abdoul ANNE	Director	Regional Development Agency	77 515 29 51
18	Doro BA	Manager	Crédit Mutuel du Sénégal	77 605 87 95
19	Sagare NDIAYE	Brnch Manager	CNCAS	77 333 24 90
20	Moussa BOIRO	Secretary General	Kolda Departmental Council	77 550 49 98
21	Serigne Abdou GUEYE	Head of Unit	Contracts Regulation Agency	77 517 61 55
22	Gagnado DIALLO	Assistant to companies	Chamber of Commerce	77 358 09 28
23	Dr. Mouhamed M SARR	Service Head	Regional Livestock and Animal Production Service	77 150 67 80
24	Bourahima DIAW	Secretary General	Kolda Council	77 645 61 34
25	Mamadou CAMARA	Cashew nut processor	GIE cashew nut	77 422 85 83
26	Boubacar CAMARA	Cashew nut processor	GIE Camaracounda	78 338 40 57
27	Famara KOITA	President	GIE Mangue Fantasou	77 659 53 58

List of institutions and people contacted in the Ziguinchor region between 5 and 20 October 2020

No.	Full name	Function	Structure	Contact
1	Patherne Diatta	Director	CRAZ/ISRA	775412388
2	Malick Ndour	Regional Inspector	Labour inspectorate	774243259
3	Guillaume A. Coly	BNSP/41st CIS	Company commander	775291438
4	Baboucar Diémé	Hydraulic	Head of division	776544610
5	Pr Alassane Diatta	Vice-rector	UASZ	776457130
6	Fihcre Coly	President	Departmental Council	775571082
7	Ahmadou T. Barry	Technical assistant	DREEC	776515143
8	Boubacar Dione	Inspector	IREF	775643701
9	Mme Soukarou Camara	Bureau Head	DPV	775219143
10	Boubacar Badji	Deputy Service Head	DRDR	774394985
11	Abdoul Aziz Badji	Coordinator	CNCR	776575520 277
12	Jean Rodrigue Malou	Service Head	ANSD	774191322
13	Donacien Kanfany	Service Head	Land registry	776300070
14	Charles Lamine Diabone	Coordinator	OTC	774068899
15	Mamadou Moustapha Niang	Service Head	ANAM	776498805
16	Ibrahima Badiane	Director	ANCAR	775727064
17	Dr. Evariste Bassene	Service Head	Breeding	773713474
18	El hadji Oumar Dioum	Deputy Service Head	SR planning	774198312
19	Assane M. Ndoye	Head of division S&E	ARD	779515458
20	Oumar Ndiaye	Head BFPA	IA/Ziguinchor	775410027
21	Babacar Ndiaye	Prefet	Bignona Prefecture	775290593
22	Moussa Diédhiou	Service Head	ANA	775578758
23	Famara Niassy	Service Head	SR Fisheries	777121135
24	Bakary Sidy Ndiaye	Director	Community Development	776152982
25	Youssef Sidibé	Head of South zone unit	ANPEJ	771427544

List of institutions and people contacted in the regions of Dakar, Sédiou and Kolda between 5 and 20 October 2020

Full name	Function	Structure	Locality	Contact
Emile Victor COLY	Director	DPV/Dakar	Dakar	77 632 98 97
Mme Waly Binta FALL	Head B.L.C.P/D.LQ	DPV	Dakar	78 186 10 06
Marie Ndao SARR	Head of Chemistry Unit	CERES - Locustox	Dakar	77 565 33 21
Ousmane KANE	Gouvernor	Governance of Kolda	Kolda	77 529 05 05
Caty Sarr Faye	Deputy Prefet	Prefecture	Kolda	77 529 07 90
Cheikh NDIAYE	Service Head	Regional Planning Service (SRP)	Kolda	77 531 56 74

Full name	Function	Structure	Locality	Contact
Amadou Pauline NDIAYE	Service Head	Regional Directorate for the Environment and Classified Establishments	Kolda	77 556 56 32
Ismaila NDIAYE	Service Head	Regional Fisheries Service	Kolda	77 159 92 18
Amine GUEYE	Service Head	National Agency for Aquaculture (ANA)	Kolda	77 468 83 92
Moussa DIALLO	Service Head	Regional Youth Service	Kolda	77 500 55 87
Alphousseyni BA	1st Vice-president	Kolda Departmental Council	Kolda	77 563 04 77
Ibrahima DIAO	Secretary General	Kolda Council	Kolda	77 645 61 34
Babacar DIOUF	Bureau Head	Land Registry Service	Kolda	77 925 08 76
Brahima M. BA	Service Head	Regional Directorate for Rural Development (DRDR)	Kolda	77 545 63 90
Abdoul ANNE	Director	Regional Development Agency (ARD)	Kolda	77 515 29 51
Mamadou Mansour SENE	President CRCR Kolda	Regional Council for Rural Dialogue (CRCR)	Kolda	77 572 10 82
Younous CAMARA	Director CRZ Kolda	Zootechnical Research Centre (CRZ)	Kolda	77 535 91 22
Mamadou Ousseynou LY	Researcher	Zootechnical Research Centre (CRZ)	Kolda	77 216 91 74
Georges Gabriel DIARRA	Deputy Sous-Préfet	Ndorna Sous-Prefecture	Ndorna (Médina Yoro Foulah)	77 529 08 70 278
Mamadou GOUDIABY	Academy inspector	Academy inspection	Kolda	77 516 86 50
Amadou DIAO	Mayor	Koulinto Council	Koulinto (Médina Yoro Foulah)	77 422 16 42
Chérif Younouss Diédhiou	Service Head	Regional Trade Service	Kolda	77 572 43 30
Bounama GNINGUE	Deputy Head	Regional Service for Statistics and Demography (SRSD)	Kolda	
Yaya CAMARA	Secretary General	Chamber of Commerce	Kolda	77 517 18 44
Babacar Sy	Regional Inspector of IRTSS Kolda	Regional Labour and Social Security Inspectorate (IRTSS)	Kolda	77 520 32 90
Abdoulaye FAYE	Service Head	Regional Service of Mines and Geology (SRMG)	Kolda	77 908 05 40
Moussa SABALY	President of the mango sector platform	Platform initiative of the mango sector	Kolda	77 908 05 40
Mamadou CAMARA	President of the cashew nut sector platform and the Camaracounda GIE	Cashew nut platform	Kolda	77 422 85 83
Boubacar CAMARA	Cashew nut processor, GIE Manager	GIE Camaracounda	Kolda	78 338 40 57
Dr Mohamed Moustapha SARR	Service Head	Regional Livestock Service	Kolda	77 150 67 80
Moustapha THIAM	Head of division	Regional Directorate of	Kolda	77 636 83 19

Full name	Function	Structure	Locality	Contact
		Hydraulics		
Mamadou BALDE	Mayor	Saré Coly Sallé council	Saré Coly Sallé (Vélingara)	77 658 91 32
Ibrahima Solo KONTA	Coordinator	ANIDA	Kolda	77 278 89 55
Mar SECK	Service Head	Regional Support Service for Local Development (SRADL)	Kolda	77 715 20 42
Maurice Léon DIONE	Administrative Assistant (AA)	Sédhiou Governance	Sédhiou	77 529 06 20
Modou GUEYE	Development Assistant (AD)	Sédhiou Governance	Sédhiou	77 529 06 21
Ibrahima FALL	Prefet	Sédhiou Prefecture	Sédhiou	77 529 05 82
Emmanuel DIATTA	Service Head	Regional Directorate of Sanitation	Sédhiou	77 538 61 94
Ismaila NIANG	Head of inspection	Regional Water and Forestry Inspectorate	Sédhiou	77 521 30 00
Sana SAGNA	Service Head	Departmental Service of Rural Development (SDDR)	Sédhiou	77 577 99 93
Ousseynou DIAGNE	Secretary General	Chamber of Commerce	Sédhiou	77 658 08 29
Nfaly BADJI	Director of ARDS	Sédhiou Regional Development Agency (ARDS)	Sédhiou	77 645 19 51
Malick SENE	Service Head	Regional Fisheries Service	Sédhiou	77 641 27 84
Mouhamadou FALL	Head of division	Regional Directorate of Hydraulics	Sédhiou	77 362 72 66 ²⁷⁹
Omar MBENGUE	Director of DRDR	Regional Directorate of Rural Development (DRDR)	Sédhiou	77 417 90 52
Zoubairou DICKO	Service Head	Regional Directorate of Town Planning and Housing (DRUH)	Sédhiou	77 100 00 47
Ibrahima DIOUF	Service Head	Regional Service of Statistics and Demography	Sédhiou	77 253 24 13
Kadry BARRO	President of the Chamber of Trades	Sédhiou Chamber of Trades	Sédhiou	77 510 46 60
Balla SAO	Secretary General	Sédhiou Chamber of Trades	Sédhiou	77 548 90 10
Boubacar DIALLO	Deputy Service Head	Regional Planning Service (SRP)	Sédhiou	77 324 68 18
Mafouze AÏDARA	President of mango platform	Sédhiou mango sector platform	Sédhiou	77 511 13 43
Dr Abdou SANE	Service Head	Regional Service for Breeding and Protection of Animals	Sédhiou	77 413 65 95
Méxdoune SAMB	Head of South unit	National Agency of Aquaculture (ANA)	Sédhiou	77 226 06 40
Aliou DIALLO	2nd Vice-president	Departmental Council	Sédhiou	77 540 11 80
Babou SANE	Head of projects	Departmental Council	Sédhiou	77 357 79 02
Cheikh Tidiane SOCE	Service Head	Regional Youth Service	Sédhiou	77 430 13 25
Saliou FAYE	Bureau Head	Land Registry	Sédhiou	77 939 63 75
Babacar BIAYE	Municipal secretary	Sédhiou Council	Sédhiou	77 684 52 51

Full name	Function	Structure	Locality	Contact
Papa Gorgui NDIAYE	Academy Inspector	Academy Inspection	Sédhiou	77 575 23 14
Adama DABO	Regional Monitoring and Evaluation Officer	FIF Kawolor	Sédhiou	77 097 80 90
Mouhamadou Moustapha NDIAYE	Service Head	Regional Trade Service	Sédhiou	77 218 87 95
Khadim DIALLO	Head of division	Regional Directorate for the Environment and Classified Establishments	Sédhiou	77 652 38 60
Mouhamadou S. DIALLO	Regional Inspector	Regional Labour and Social Security Inspectorate (IRTSS)	Sédhiou	77 290 78 79
Samba DIOP	Sédhiou Bureau Head	PROVALE-CV	Sédhiou	77 21951 46
Ibrahima Khalil SAGNA	President of CRCOA	Sédhiou Regional Consultation Framework for Operators of the Cashew nut sector	Sédhiou	77 658 22 39
Mbassa SENE	Prefet	Boukiling Prefecture	Boukiling	77 529 05 84
Baba VILANE	Deputy Prefet	Goudomp Prefecture	Goudomp	77 529 08 06
El hadji Malick Wone	Secretary General	Department council	Boukiling	77 576 10 51
Khady CISSE	Presidente GIE	GIE Fass Diom	Madina Wandifa	77 411 81 48
Mansour BADIANE	Municipal Secretary	Madina Wandifa Council	Madina Wandifa	77 609 77 55
Yaya DIAO	Samine Council	Samine Council	Samine (Goudomp)	77 605 70 55 280
Richard Biram FAYE	Sous-prefet	Niaguiss Sous-prefecture	Niaguiss	77 529 07 64
Djibril SANE	Baghagha village chief	Baghagha Village	Baghagha (Adéane)	77 518 58 81
Abdoul Aziz M. SAGNA	Village Notable	Baghagha Village	Baghagha (Adéane)	77 555 84 79
Lamine SANE	Teacher	Baghagha Village	Baghagha (Adéane)	77 269 69 18
Ibrahima DIEDHIOU	Mayor Adéane council	Adéane Council	Adéane	564 54 99



GRUPE DE LA BANQUE AFRICAINE
DE DÉVELOPPEMENT
AFRICAN DEVELOPMENT BANK GROUP

FEASIBILITY STUDY ON THE ESTABLISHMENT OF AN AGROPOLE IN THE SOUTH REGION OF SENEGAL

TERMS OF REFERENCE TO CONSIDER THE SPECIFIC NEEDS OF THE PROJECT FUNDED BY THE GREEN
CLIMATE FUND IN THE
Strategic Environmental and Social Assessment

September 2020

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1. GENERAL CONTEXT OF THE PROJECT

1.1 PROJECT OBJECTIVE

Senegal's new development policies and strategies are reflected in the Plan Sénégal Emergent (PSE), the highest benchmark of strategic direction and leadership for Senegal's economic policy and industrial development in the short, medium and long term. The PSE aims at an accelerated development of the country in order to make it an emerging country with a cohesive society under the rule of law by 2035. Achieving this ambition requires a balanced development model integrating economic, social and environmental aspects and generating sustainable and inclusive growth, in line with the Sustainable Development Goals (SDGs). To achieve this, the PSE is based on three main strategic pillars: (i) Structural transformation of the economy, (ii) Human capital, social protection and sustainable development, and (iii) Governance, institutions, peace and security.

Aware of Senegal's abundant potential in the agricultural sector and the synergy that this sector has with other branches of the economy, in particular the agri-food industries, as well as its effects on other sectors of activity (transport, trade, etc.), the PSE has identified it among the six (6) priority sectors that should contribute to transform the structure of the Senegalese economy with a view to supporting a strong, sustainable and inclusive growth dynamic.

Furthermore, the PSE has identified among the 27 flagship projects the "integrated agropoles" as a driving force for regional development and industrialisation, especially through the improvement of agricultural added value created at the local level. Within this framework, it plans the establishment of integrated and competitive agropoles focusing on value chains with high development potential such as livestock, fruit and vegetables, fisheries and aquaculture, cereals, oilseeds, etc.

Agropoles will also serve as business incubators offering facilities and services to agro-industry value chains to promote commercial agriculture and enhance the competitiveness of local enterprises and their products in national

and international markets. This will be achieved through a focus on technology mastery, building the technical and managerial capacity of entrepreneurs, the establishment of appropriate public-private partnership (PPP) financial systems, and marketing strategies to respond proactively to consumer demands and requirements.

The purpose of this study is to carry out an additional environmental and social impact study (ESMFP, EIES/ESMP, waste management, pest and pesticide management plan, RAP, etc.) for the establishment of an agropole in the southern zone of Senegal, covering the regions of Ziguinchor, Sédhiou and Kolda.

This study will be based on the work carried out within the framework of the establishment of the South agropole.

1.2 REFERENCE SCENARIO

The agricultural sector is the driving force behind Senegal's development, mobilising around 55% of the Senegalese working population in 2013. In 2014, the agriculture sub-sector grew by 7.8% in volume with a contribution to GDP of 6.9% against 6.8% in 2013. This sector has important assets that enable it to make a significant contribution to food security, create more jobs and generate decent incomes. Senegal has:

- i) a considerable amount of arable land (3.8 million hectares), of which only about two-thirds (2.5 million hectares) is farmed each year;
- ii) a potential of 350,000 hectares of irrigable land, of which only about 37% (130,000) is used;
- iii) considerable surface water resources (Senegal, Gambia and Casamance rivers and groundwater) that are poorly used; and
- iv) favourable geographical and climatic conditions for the development of off-season crops for export markets.

Stockbreeding also remains an important sector of the Senegalese economy due to its contribution to income and job creation. Over the 2010-2014 period, the sector contributed, on average, to the added value of the primary sector for 28.5% and to GDP for 4.3%. Livestock farming is practised by 29.5% of Senegalese households, that is, 476,667 households (RGPHAE, 2013), to whom it offers great opportunities in terms of income, employment and strengthening resilience in the face of various shocks and crises. The place of livestock in rural areas is even more decisive. Indeed, 47% of rural households are involved in livestock production, which provides them with additional protein and other animal-based nutrients (with a consequent impact on nutrition), but also with higher incomes that contribute to covering expenses related to health and education in particular. Stockbreeding also plays an important role in supporting mixed crop-livestock systems.

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Regarding fisheries, Senegal has very favourable ecosystems, which are at the origin of the high productivity of its waters, which means that fish plays a key role in the food and nutritional security of the populations. Per capita consumption is 26kg/year and represents nearly 70% of the nutritional intake of animal proteins. At the macroeconomic level, the sector plays an important role in job creation, wealth creation and foreign exchange earnings. In 2015, fishery products were the leading export with CFAF 194.6 billion, that is, 20.87% of export revenue and contributed 3.2% to GDP.

Despite its assets and considerable potential, Senegal continues to import a quarter of its food, while more than 60% of its assets are engaged in subsistence agriculture, which is highly dependent on rainfall. The import of fruit and vegetables in 2012- 2013 amounted to about 900,000 tonnes in total, costing CFAF 22 billion. The country also remains a net importer of:

- i) meat: 11,491 tonnes in 2014, of which 44% in Tabaski sheep, that is, 377,744 imported sheep; and
- ii) milk: 28,155 tonnes of dairy products (199,315 million litres of milk equivalent) in 2014, including 24,954 tonnes of milk powder (equivalent of 189,650 million litres milk). Milk imports alone cost almost CFAF 53.825 billion in 2011. On the basis of the equivalent price per litre of imported milk in 2011, it would cost nearly 45.660 billion FCFA in 2014.

Furthermore, a large part of the rapidly growing population in rural areas, heavily dependent on livestock, agriculture and fishing, suffers from malnutrition. According to the RCSA1, the results of the national survey conducted by the Executive Secretariat of the National Council for Food Security (SE/CNSA), through its Early Warning System (EWS) in June 2013 reveal that 18.8% of households still suffer from food insecurity (5% severely insecure, that is, 675,000 people, and 13.8% moderately insecure, that is, 1,863,000 people). The majority (81.2% of households) are food-secure, but more than half of these households barely have adequate food consumption without resorting to irreversible coping strategies, but cannot afford certain essential non-food expenditure.

Today, Senegal's challenge is to broaden the scope of the country's agro-halio-pastoral production while promoting export and import substitution activities. The application of modern business practices (market analysis, development of client-oriented business plans and contract-based business transactions) to the agricultural sector is essential to increase competitiveness in these sub-sectors.

1.3 PREPARATORY AND STRUCTURING PHASE

1.3.1 Preparatory phase

It consisted of a comprehensive analysis of agro-industrial value chains in the areas selected by PSE, followed by opportunity studies, which was carried out by a multidisciplinary team of national and international experts, covering the different aspects, namely agro-industry, agro-economics, environment, energy, marketing and commercialisation, and fisheries and aquaculture. The work was organised in three phases to ensure the involvement and ownership of all stakeholders:

Step 1 consisted of a desk study providing an overview of production and demand, markets, economic and integration aspects of the sector, cost and financing issues, development potentials and prospects, as well as development strategies to overcome the many constraints and face the current challenges.

Stage 2 focused on consultations with stakeholders (i) in Dakar, which led to the identification of priority value chains, the strategic vision for the development of Agropoles, the overall design and coverage areas for the establishment of Agropoles, and (ii) in the field (North, Centre and South), which made it possible to confirm the priority value chains, identify the main stakeholders and better define local development conditions.

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A feedback workshop was held on 8 September 2015 to present the preliminary results of the desk study and consultations carried out both in Dakar and in the 3 economic zones of the North (comprising the regions of St Louis, Louga and Matam), the Centre (comprising the regions of Kaolack, Kaffrine, Fatick and Diourbel) and the South (comprising the regions of Ziguinchor, Kolda and Sédhiou).

Step 3 consisted in presenting the draft Agropoles value chain analysis and implementation reports for validation by public and private sector stakeholders, which were then finalised on the basis of the conclusions and recommendations of the participants.

This methodology enabled (i) to ensure the involvement of stakeholders throughout the process of value chain assessment and appropriation of the concept developed for the Agropole, (ii) to complete and confirm the appropriate data collected in the literature reviewed and coming from different stakeholders, and (iii) to take into consideration the elements necessary for the elaboration of each value chain and the analyses integrated into the local production schemes under consideration.

Following these surveys, a value chain report including opportunity studies on assets, production and export potential, constraints and possible pre-established structures for future Agropoles in each region was prepared and presented at a larger workshop with the active participation of representatives from the Ministry of Industry and Mines, the Ministry of Agriculture, the private sector and private sector associations, specialised governmental and financial institutions and agro-experts.

The analysis of value chains reveals the strong potential of multiple agricultural value chains targeted in 3 major economic zones of Senegal for the implementation of agropoles (North, Centre and South). The implementation of overly specialised Agropoles would restrict the choice of value chains and could leave out some real assets and potentials of the targeted regions.

As a result, the decision was to develop a multi-sectoral, modular Agropole concept with a flexible structure that could evolve according to needs towards specialised and multi-dimensional poles.

The stakeholders reached a consensus on the composition of the Agropole, which should be based on:

- a central module consisting of:
 - specialised activities and services relating to administration, commerce, logistics, skills and training, energy, the environment, finance, communications, maintenance and social services;
 - production and service infrastructure that would be progressively developed;
- regional modules (3) to ensure the monitoring and coordination of the agro-industrial activities covered in connection with the activities of the central module and the storage and first processing capacity of the regions covered by Agropole; and
- platforms (5), which will be poles for storage and services to agriculture.

1.3.2 Structuring phase

Following its pre-feasibility studies, the State decided to proceed with a gradual approach to setting up agropoles, starting with the one in the south as a pilot.

In its planning, the South Agropole followed the PSE flagship project structuring method designed by the Operational Monitoring Office of the Plan Sénégal Emergent (BOS), which was inspired by the BFR (Big Fast Result) methodology developed by PEMANDU, the Malaysian counterpart of the BOS.

The core of the BFR methodology is the lab, a strategic workshop which, during 5 weeks of intensive work, brought together all the stakeholders to set the course, define the objectives, pre-identify the priority sectors and the sites to host the industrial platforms, and also to support private sector stakeholders, who are the bearers of industrial projects, in developing their business plan. 284

Following the LAB, technical, socio-economic, financial, legal, organisational, technical feasibility and Strategic Environmental and Social Assessment (SESA) studies were carried out. The SESA obtained the environmental discharge from the Ministry in charge of the Environment..

But in order to better take into consideration environmental aspects, improve climate resilience, strengthen the energy efficiency of agricultural SME-SMIs, develop irrigated agriculture and green industrialisation, a request for additional funding has been submitted to the Green Climate Fund (GCF).

As a result of this request, GCF asked for the SESA to be updated to take into consideration the new activities planned (see Prodoc GFC) and to determine their impact on the environment.

It is in this perspective that this study to update the SESA of the South agropole is being carried out, with additional evaluations taking into consideration these new activities.

2. OBJECTIVE OF THE MISSION AND TASKS TO BE CARRIED OUT

Complete the South Agropole's SESA, taking into consideration the activities planned by the Green Climate Fund (GCF) project.

It would, among other things, have to conduct:

- a strategic environmental social assessment integrating the activities defined in the GCF project (SESA);
- an updated framework plan for managing environmental and social impacts (PCGIES) ;

- a plan for the management of solid waste and effluents generated by the activities of the industrial platform and additional related works integrated into the GCF project, taking into account other provisions;
- a plan for the exploitation and management of water and energy (with recourse to renewable energy) at all levels, taking into consideration the adaptation and mitigation provisions defined with the new activities;
- an updated resettlement policy plan for people whose activities would be affected by the implementation of the various modules and related works (roads, tracks, bridges, etc.); and
- a management plan for pests and vectors (see sample templates).

For all the selected sites and planned activities, the following objectives will be pursued:

- Understand the major environmental and social issues associated with the additional components of the project and define the related environmental and social management strategy;
- Develop in terms of strategies, the methods enabling the project to achieve its goals within the planned time limits and in compliance with environmental and safety standards;
- Clarify roles and responsibilities for managing and monitoring environmental and social concerns related to the project, taking into account the activities included in the GCF project;
- Determine the needs for training, capacity building and other complementary technical assistance for the proper implementation of the results of the updated strategic environmental assessment;
- Organise public consultations on the expected impacts, the measures envisage in the mitigation plans and other required reports, the role of stakeholders, including, those of beneficiaries; and
- Update the amount of funding required to implement the Framework Plan for Environmental and Social Management (ESMFP), the Pest and Vector Management Plan (PGPV) and the Resettlement Policy Framework (CPR).

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Main tasks to be performed

As far as the SESA is concerned, the DEEC specified in a letter dated 17/01/19 the tasks to be performed:

- 1 develop a public consultation component that will make it possible to provide information on the points of view of the various stakeholders involved in the implementation of the project (technical services at central and devolved levels, administrative and local authorities, etc.); in this respect, particular emphasis should be laid on the information and awareness-raising component. Thus, the consultant will have to demonstrate the extent of the consultations that he will have carried out to gather the opinion of the stakeholders concerned on the implementation of the study and on the measures to be taken within the framework of the additional activities included in the project. The consultation plan with the methods/tools used, as well as the list of persons consulted and the verbatim of the consultations should be annexed to the SEA report.
2. identify, assess and measure the magnitude of potential direct and indirect positive and negative impacts and environmental and social risks associated with the additional project activities, according to the different phases of the project. This complementary analysis of potential impacts will focus on the biophysical, socio-economic and cultural environments. The consultant will also highlight the environmental issues specific to the different eco-geographical regions likely to be affected by the additional project components;
- 3 develop a framework plan for monitoring-evaluation of these measures, specifying standard environmental and social indicators for their monitoring-evaluation, as well as the methodology for

their implementation (reference data, accountability, etc.). The complementary monitoring-evaluation programme should also include a specific environmental and social monitoring plan to ensure effective control of environmental and social issues;

- 4 include in the SEA a point relating to the analysis of strategies and alternatives that would enable the project to achieve its goals within the planned deadlines and in compliance with environmental and safety standards. In this analysis, the consultant would have to consider the constraints of the environments concerned.

All options selected would be justified

- 5 analyse national environmental management regulations that may be relevant to the additional project components. The Consultant will also analyse the relevant laws, regulations and standards relating to environmental quality, including the requirements of the international conventions ratified by the country in this field as well as the standards and regulations applicable to the programme and governing environmental quality, protection of sensitive environments, safety, in particular the Environmental Code, the Forestry Code, the Sanitation Code, the Town Planning Code, the Construction Code, the Water Code, the Hygiene Code, etc.;
- 6 consider the policy and institutional framework applicable to the project and clarify both the legislative requirements for environmental management and the requirements relating to industry, aquaculture, livestock farming, agro-industry, logistics, infrastructure, poultry farming, etc. Clarification should be provided on the environmental and social safeguard guidelines of project donors such as UNIDO, AfDB and GCF.

The consultant would identify the main national and local institutions directly or indirectly involved in the implementation of the project related to these climate change components. He will also examine their mandates and capacity with a view to proposing a capacity building programme.

Inform, whenever the level of progress of the project allows it, on the legal status of the sites/areas to be developed and the institutional anchoring of the implementation of each project component as well as the specific components related to climate change;

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7. mainstream gender in the evaluation of the project's impacts and its integration in the elaboration and design of the ESMFP and show how the project contributes to women's resilience;
8. Emphasise, in the definition of the project's potential climate impacts/incidence on:
 - water and wastewater management;
 - waste management and recovery;
 - disaster risk management;
 - the provision and distribution of energy;
 - tax effects for local and regional authorities;
 - climate change mitigation and adaptation;
 - the loss of agricultural activities and income for the population;
 - loss of land for residential use or restriction of property rights;
 - modification of access to local concessions, destruction of existing subdivisions and expropriations;

- the social impacts of the project on the population and its composition, lifestyle, culture and community relations;
- the associated local and regional economic benefits and other economic impacts for people (job creation opportunities, development of related public services, land and property values, etc.) as well as for businesses (products concerned, possible savings, etc.) and local authority revenue;
- etc.

All factors/elements that could lead to a cumulative effect and draw any necessary conclusions or recommendations.

9 In preparing the ESMFP, the consultant shall also suggest complementary actions for the improvement of environmental and social conditions in the project areas.

The consultant shall, in the Environmental and Social Management Strategy (ESMFP), propose specific recommendations to the companies in charge of carrying out the additional works for the protection of the environment, which guidelines taking into account climate change shall be inserted at the level of the technical specifications or tender documents, allowing the respect and protection of the environment during the implementation of the worksite(s). In the ESMFP, the consultant should focus on measures to mitigate the cumulative negative impacts of the programme and measures to accompany and optimise the programme integrating climate change.

10 Describe in the environmental monitoring and surveillance strategy, the process, mechanism and circumstances under which specific environmental assessments will be carried out, if applicable (initial environmental analyses or extended impact studies)

11 Integrate the notion of hazards and risks associated with the additional activities of the priority action programme, into the study.

The conclusions of the SEA should identify the major environmental risks of the complementary programme, the effectiveness of the proposed measures and the benefits of carrying out the programme.

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The consultant must also take into consideration the requirements of the "GREEN CLIMATE FUND" by carrying out the study for the following tasks:

- small-scale agricultural water management;
- setting up drip irrigation distribution systems powered by solar pumps to boost production;
- the installation of post-harvest storage facilities as well as renewable energy-efficient drying, processing and packaging facilities;
- the installation of 2,834 kW of solar energy for the lighting, processing, drying and conditioning of staple food crops;
- the adoption of climate-resilient farming practices, technologies and innovation for smallholder farmers;
- the deployment of low-carbon energy technologies;
- the use of technology and innovation such as minimum tillage, use of drought resistance and improved yielding seeds, crop rotation, integrated nutrient management, mixed cropping, sustainable agroforestry practices, and livestock management, as well as the use of solar irrigation, off-grid solar energy and biogas technologies to improve diversification, value addition, productivity and profitability throughout the agricultural value chain;
- agricultural practices that improve resilience to climate change;

- the creation of forests managed by farming households sustainably, (about 20,000 ha) to generate income from community forests, cashew nuts, mango trees for carbon sequestration; and
- the installation of 3 MW of renewable energy from biogas production or about 6,682.2 m3 of biogas digester to treat livestock manure and produce biogas for heating or electricity production.

The Resettlement Policy Framework (CPR) document will need to be updated to incorporate the components funded by the GCF on the basis of the following tasks:

1. develop a public consultation component that will enable the provision of information on the opinions of the various stakeholders involved in the project implementation (technical services at central and decentralised levels, administrative and local authorities, etc.);
2. identify, assess and measure the magnitude of potential direct and indirect positive and negative impacts and social risks associated with the additional project activities, according to the different phases of the project;
3. analyse national regulations on the management of the possible social impacts of the activities envisaged under the framework;
4. Mainstream gender into the evaluation of the project's social impacts and its integration in the elaboration and design of the CPR;
5. Emphasise, in the definition of the project's potential climate impacts, on:

water and wastewater management;

- waste management and recovery;
 - disaster risk management;
 - the provision and distribution of energy;
 - tax effects for local and regional authorities ;
 - climate change mitigation and adaptation;
 - the loss of agricultural activities and income for the population;
 - loss of land for residential use or restriction of property rights;
 - modification of access to local concessions, destruction of existing subdivisions and expropriations;
 - the social impacts of the project on the population and its composition, lifestyle, culture and community relations;
6. Etc.

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The Pest and Vector Management Plan (PVMP) to anticipate the potential induced effects of the activities planned within the framework of the Project from the projected funding (AfDB, IDB, GCF, etc.). The approach should comply with national regulations and standards as well as international best practices (including Bank rules and procedures). A model outline of the minimum content of a PVMP is given later in these ToRs.

Requirements

The SESA, the PVMP and the CPR will be structured to take consider:

legal and regulatory requirements of the Government of Senegal, including international environmental and social conventions ratified by the country;

the safeguard policies of financial partners, in particular that relating to the Environmental and Strategic Assessment;

the production, in a format acceptable to the AfDB (Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (CPR), of a Pest and Vector Management Plan (PVMP) and the other TFPs of the project.

3. CONDUCT OF MISSION

The environmental and social assessment is carried out to take into consideration the additional activities financed by the Green Climate Fund. The consultant will work in close collaboration with the national structure in charge of organising the validation of environmental studies and assessments, the Directorate of the Environment and Classified Establishments (DECC) and with the Agropole Project Implementation Unit.

The select technical committee of the agropole project will give its opinion on the deliverables produced by the Consultant before official submission to the DEEC.

An inter-ministerial technical monitoring committee will be set up by the DEEC and will be responsible for analysing and validating the reports and documents produced.

Methodology

For each of the sites, the methodological approach used will be based on the concept of a multi-stream and modular approach, in consultation with all the actors and partners concerned by the project and with the support of the administrative and local authorities. The study should be conducted in a participatory manner on the basis of consultations with the various partners in order to provide broad information on the project, promote a common understanding of the issues and encourage discussions on the advantages and disadvantages of the work at environmental and social levels.

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The work plan will be articulated around the following thrusts:

analysis of project documents and other strategic and planning documents at national and local level;

visits to the sites and their surroundings and technical analysis of the receiving environment (topography, pedology, hydrography, etc.), in order to assess the environmental, socio-economic and cultural issues of the project area;

surveys of the population and other beneficiary target groups (communities along the route) to collect their opinions, concerns, expectations and fears regarding additional project activities;

meetings with the institutional actors mainly concerned by the project, especially at central, provincial and local level;

information analysis and report writing.

The consultant will produce a Resettlement Policy Framework (CPR) for the populations affected by the establishment of Agropole.

The following work scheme is proposed for the sites:

Description of project:

For each site, describe the project and its geographical, ecological, social, economic and temporal context in a synthetic way, using as far as possible, maps at an appropriate scale, taking into account the climate change dimension. The description of the project will include the technical characteristics of the additional development to be carried out, the materials, and material and human resources required on site, facilities and services, installation, works and operation activities, etc., which will provide a better understanding of the related environmental and social impacts, as well as the mitigation measures that will be proposed.

Applicable legal and institutional frameworks:

The study will be carried out in accordance with the Safeguard Policies of the African Development Bank, the laws and regulations of Senegal and the international environmental conventions ratified by the country. The consultant will identify the main relevant instruments and will describe/analyse in particular the provisions of these instruments directly related to the project, which govern the quality of the environment, health, safety, protection of sensitive areas and endangered species, land use, etc. The consultant will also identify and analyse the provisions of these instruments that are directly related to the project. This analysis will provide a better understanding of the extent to which the project complies with these provisions and, where appropriate, the scope of the mitigation measures to be proposed to comply with them.

Analysis of project host environment:

For each of the sites, an analysis of the existing conditions (preliminary project) of the environment of the project areas will be carried out in order to better identify the negative and positive, direct and indirect or cumulative impacts that the construction of the infrastructure could have on the environment of the areas concerned.

Physical environment: the description of the physical environment will cover, inter alia, (i) soil types and their sensitivity to erosion; (ii) relief; (iii) hydrography, climate and meteorology, which will be related in particular to the sensitivity of soils to erosion and project-related dust generation; surface waters and their vulnerability to pollution by discharges of pollutants during works and sedimentation by solid transport due to poor road drainage, poor management and rehabilitation of borrow pits, etc. the vulnerability of the physical environment to climate change.

Biological environment: the description of the biological environment will consist of a description of the main plant formations encountered, the floristic and faunal biodiversity they contain; rare or endangered species; ecologically important or sensitive habitats, and any other important natural sites; commercially important species; the pressures and threats they face, as well as the current strategic approach to their management so as to assess the need for additional measures to complement or reinforce those already in place or planned, in synergy with the various partners involved.

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Socio-economic and cultural environment: This description will consist of a presentation and analysis of the following socio-economic components: population, community structure; tribal populations; customs, aspirations and attitudes; employment; distribution of income, goods and services; land use; development activities (agricultural, forestry, mining, commercial, etc.); and the social and economic environment.); education; public health (HIV-AIDS and STIs, ARI, road safety, etc.); cultural heritage, etc.; with particular emphasis on those elements that are likely to be affected by the project during the site installation, construction and operation phases.

During the institutional meetings, emphasis will be laid on the collection of local biophysical and socio-economic data (demographic and health statistics, data on basic social services; data on socio-economic activities; etc.).

Identification and assessment of environmental and social impacts

In this part, the study will distinguish between the implementation phase of the works and the commissioning phase of the agropoles. In this second phase, the negative impacts really attributable to the works and the commissioning of the agropoles will be highlighted.

For each of the sites, it will be necessary to identify:

sources of impact (elements or activities, resulting from the project description and additional activities, that would have an impact on the environment, either during construction or during commissioning);

the impact receptors (these elements will be derived from the analysis of the existing conditions of the above physical, biological and socio-economic environments) ;

the most important impacts, positive or negative, direct or indirect, cumulative, in the short, medium and long term. Unavoidable or irreversible impacts and those that can be mitigated will be identified and, to the extent possible, quantified;

realistic and feasible measures to be taken to avoid or mitigate to acceptable levels, and where appropriate compensate for, negative environmental and social impacts, and enhance the positive environmental and social impacts attributable to the project; carry out an assessment of the cost of these measures and the quantitative and qualitative benefits to the project; on this basis the optimal measures will be determined so as to be considered in the technical implementation study;

specific recommendations for contractors carrying out works to preserve the environment, taking into account the issue of climate change and drawing up a schedule of environmental and social clauses to be included in the technical specifications book to enable the implementation of rigorous environmental protection procedures during the implementation of works.

The significance and quality of the available data will be characterised, as well as the extent of the uncertainties involved in determining the impacts, the measures to be taken and their costs and benefits will be indicated.

Methodology:

It will be based on the following evaluation grid:

Impact Significance Evaluation Grid

Intensity	Scope	Duration	Significance
Strong	Regional	Permanent	Strong
		Temporary	Strong
		Momentary	Strong
	Local	Permanent	Strong
		Temporary	Strong
		Momentary	Average
	Occasional	Permanent	Strong
		Temporary	Average
		Momentary	Average
Average	Regional	Permanent	Strong
		Temporary	Strong
		Momentary	Average
	Local	Permanent	Strong
		Temporary	Average
		Momentary	Average
	Occasional	Permanent	Average
		Temporary	Average
		Momentary	Low
Low	Regional	Permanent	Strong
		Temporary	Average
		Momentary	Average
	Local	Permanent	Average
		Temporary	Average
		Momentary	Low
	Occasional	Permanent	Average
		Temporary	Low
		Momentary	Low

Industrial unit:

Particular emphasis will be laid on the following points:

Impacts related to proximity to housing (safety and accident risks) ;

impacts related to noise, air pollution, waste management and other nuisances;

impacts related to the presence of Installations Classified for the Protection of the Environment (ICPE) which must be subject to prior authorisation or declaration; and also to the storage of chemical products.

Evaluation of emissions and sequestration potentials.

Waste production and management:

The following elements will be filled in by the Consultant:

identification of liquid, solid and atmospheric discharges;

assessment of their impact on the population and the environment;

waste production conditions;

Accident risk analysis and emergency measures;

For each of the sites, carry out a risk assessment in order to plan preventive actions by the construction companies, taking into account the priorities.

The analysis will cover the following risks: risk of fire and explosion; risk related to electricity; risk related to heavy vehicles, machinery and tools; risk related to noise; risk related to vibrations; risk related to falling; risk related to manual handling; risk related to collapsing and falling objects; risk related to movement and displacement; etc.

Analysis of Variants

The work will consist of the construction of the agropoles and the development aspects of production. For each of the sites in the regions, the analysis of the variants will therefore focus on comparing the "no project" variant with the one chosen in terms of design and operation with regard to the main positive and negative environmental and social impacts and risks.

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Elaboration of a complementary Environmental and Social Management Framework Plan (ESMFP)

For each of the sites, all of the proposed measures will be translated into an environmental and social management plan (ESMFP). In addition, the latter will include monitoring, capacity building, information and communication measures, as well as institutional arrangements to be implemented during the implementation of the works and the commissioning of the two agropoles. For each of the sites, the ESMFP aims to ensure the correct and timely implementation of the project in accordance with the principles of environmental and social management. The objectives are, among others, to: (i) ensure that project activities are undertaken in compliance with all legal requirements; (ii) ensure that the environmental and social issues of the project are fully understood. It will be necessary to estimate the cost of the entire ESMFP and propose a timetable for its implementation.

The complementary ESMFP will lay particular emphasis on the management of industrial risks linked to the operation of Agropoles and the management of solid, liquid and gaseous waste, taking into account the climate change dimension.

The monitoring plan:

For each of the sites, the monitoring plan will consist of (i) a monitoring programme to verify the effective application of the proposed environmental and social measures (ii) a monitoring programme on the evolution of the environmental components with a view to evaluating the effectiveness of the proposed environmental and social measures with indicators and methods of their appropriate measures taking into account the climate change dimension. The monitoring plan will define the monitoring indicators, the periodicity of monitoring, the monitoring responsibilities and the costs related to the monitoring activities. In addition, environmental monitoring and follow-up reports will have to be planned in the project implementation phase to verify the level of implementation of mitigation measures and assess the effects of the works on the environment. In addition, in the operation phase, a documented environmental and social monitoring plan, which takes into account the priority indicators, will also be drawn up. The costs allocated to the implementation of these plans will be estimated and included in the overall budget of the ESMFP.

Capacity building, information and communication plan:

For each of the sites, assess the capacity of the different actors involved in project implementation, follow-up and monitoring of mitigation measures, identify possible capacity building needs and consequently propose a capacity building, information and communication plan, in order to ensure the effective consideration of environmental and social issues in the implementation of project activities with these additional components sensitive to a climate change trajectory..

Institutional arrangements for implementation and monitoring:

For each of the sites, describe in detail the institutional arrangements (actors and responsibilities) required to implement and monitor the ESMFP during the works and commissioning phases of the roads. This will include a description of the control methods, the specific elements and operations to be controlled, the control reports (responsibilities and addressees), and the arrangements to be made to ensure efficient control which will ensure that appropriate corrective action is taken when required and thus minimise environmental and social impacts.

Public consultations, dissemination and publication of reports

For each of the sites, public consultation will take place throughout the study phase. It will help to assess the social acceptability of the project by the main stakeholders, especially the local population, and to prepare the implementation of a communication plan to avoid possible social conflicts and facilitate acceptance of the project by the population; and as such, particular emphasis shall be laid on the information and awareness-raising component. To this end, the extent of the consultations carried out with a view to obtaining the opinion of all the parties concerned by the project on the measures to be taken must be demonstrated. To this end, the list of people contacted, the minutes and/or records and photos of these consultations must be annexed to the report.

In order to achieve the objectives of public participation in this study, the public consultation is adopted. The methodological tools used for this purpose are the semi-structured interview for individual meetings and the focus group for group meetings.

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In order to hold consultations, the first step would be to (i) provide information and raise awareness, and then (ii) organise the actual meetings.

4. DELIVERABLES

The consultant in charge of the Study will keep to the following timetable:

20 working days after the service order to start services:

Production of the draft reports (ESMFP, CPR and PGPV): the expected result is the production of one report per site. Draft versions of these reports will be prepared for submission to the inter-ministerial technical committee for validation.

5 working days after receipt of the comments of the inter-ministerial technical committee:

Submission of final reports.

With regard to the structure of SESA reports, the Environment and Classified Establishments Division (DEEC) specified in a letter dated 17/01/19 the following structure:

List of Acronyms;

Introduction describing the purpose of SESA, its objectives, principles and methodology;

Description of the programme highlighting the different components, etc.

Analysis of the different alternatives;

Summary and general presentation of the conditions of the natural (physical and biological), human, socio-economic and cultural environment in the programme's intervention areas, highlighting the environmental issues of the intervention area and its socio-environmental sensitivity;

Policy, legal and institutional framework applicable to the programme's activities;

Socio-environmental issues of the project according to the targeted components;

Framework plan for environmental and social management including priority measures to be implemented for the operationalization and functionality of the site;

Monitoring plan including standard indicators, a monitoring calendar and the parties responsible for implementing the programme;

Description of the capacity building, training and technical assistance required for the implementation of the ESMFP. To this effect, the strengths and weaknesses of the institutions involved should be analysed;

Budget for the implementation of the ESMFP;

Etc.

General annexes:

Acronyms and abbreviations;

Authors of the SESA;

Bibliography;

Results of public consultations and opinions expressed, and consultation methodology;

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List of people contacted and consulted;

Draft ToR;

Validated ToRs;

Etc.

Technical annexes:

Environmental selection grid;

Checklist of measures in the construction and operation phase;

Waste management strategy in the construction and operation phase;

Standard Terms of Reference for Complementary EIAs;

Etc.

With regard to the number of copies of SESA reports, the Environment and Classified Establishments Division (DEEC) specified in a letter dated 17/01/19 the following elements:

30 copies of the SEA provisional reports must be submitted, in addition to the digital version (pdf) on electronic media (CD or USB key), for validation by the Inter-ministerial Technical Committee..

The final report, incorporating the comments of the Technical Committee, will be submitted in 15 copies to the DEEC, in addition to the digital version in PDF format.

NB: Final reports in AfDB format (Environmental and Social Management Framework (ESMFP), Resettlement Policy Framework (CPR), Pest and Vector Management Plan (PVMP/V)) must be available 25 working days after the signature of the contract with the Consultancy.

The other elements of the environmental and social impact study will have to be the subject of a proposed timetable and integrated into the report on the launch of activities. These separate reports can refer to the SESA document in order to avoid duplication.

5. EXECUTIVE SUMMARIES (NON-TECHNICAL SUMMARIES)

6. NON-TECHNICAL SUMMARY OF THE ESMFP;

Brief description of project (overall objective, components and main activities) in particular the sub-projects likely to be subject to screening;

Brief description of the major/critical environmental and social issues and risks in the areas where the sub-projects are potentially located;

Legal and institutional framework for environmental and social assessments of the country, including E&S standards of the project sector and land legislation where applicable, and requirements of the Bank's ISS met by the ESMFP ;

Enumeration of generic impacts/risks by type of sub-projects or micro-projects ;

Consultations held (one paragraph on the dates and groups of actors that participated, one paragraph on the proposed measures that were accepted by the Government for inclusion in the project) ;

Environmental and Social Management Framework Plan (in the order of the following points)

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Listing of generic environmental and social management measures (proposed management system and unit, physical activities, capacity building) by type of sub-project or micro-project; - OPTIONAL (otherwise in annex) ;

Environmental and social management procedure for sub-projects, covering the screening to the monitoring/reporting of the sub-project's ESMFP (depending on the type of project and risk) including specific criteria (choice of site, specific exclusion of activities, additional studies, etc.) in accordance with the national administrative procedure and the Bank's review/comment/non-objection complements;

Communication plan/consultation of the public during the life of the project; (IF NECESSARY)

Specific and well-targeted capacity building, including (as appropriate) communication for behaviour change;

Mechanism for managing environmental and social complaints and conflicts of the project (managed mainly by one or other of the safeguard specialists depending on the environmental or social nature of the subject) ;

Enumeration of some main indicators (no more than 5) for the implementation of the ESMFP;

Clear institutional arrangement (see AI and RR below to be finalised) for the implementation of the environmental and social management procedure of the sub-projects (in coherence with the overall institutional framework of the project), including the roles and responsibilities within the implementing entity (Project Coordination Unit) summarised in a summary table which allows the Project Unit Coordinator to know, above all, "who does what, when, how" and which external partner collaborates/participates/provide services to the project (see Table of the E&S management procedure, below to be adapted/finalised) . This section is to be reflected in the Project Implementation Handbook;

Estimated overall budget foreseen for the implementation of all environmental and social measures (in local francs and US dollars, by source of funding) including provisions for compensations;

Conclude by indicating the other documents that complement the ESMFP.

Budget

#	Item	Unit	Unit cost		Total		Financing Source
			Local	US\$	Local	US\$	
1	Preparation of specific instruments (EIA, Environmental Audit)						
2	Capacity building						
3	Implementation of specific ESMPs						
4	Mid-term assessment of ES performance						
5	Pre-closing audit of ES performance						
..							
x	Total						

a. Institutional Arrangement (IA) and Roles and Responsibilities for the Implementation of the ESMFP (to be developed in the main report and summarised in the non-technical summary)

a.1. Institutional arrangements for the implementation of the ESMFP (in integrated coherence with the overall institutional arrangement of the project)

Project Steering Committee:

Project Implementation Unit (PU) :

Agency/Directorate of Environment / Environmental Assessment:

Local authority (mayor, sub-prefect, etc.):

Beneficiary producer associations:

Xxx :

a.2. Roles and responsibilities for the implementation of E&S management measures;

Project Coordinator:

Environmental Protection Specialist:

Social Protection Specialist:

Technical manager of the eligible activity:

Procurement Specialist:

Head of Finance:

Specialist in monitoring-evaluation:

Company:

Work Supervisor:

Local authority (mayor, Sous-prefet, etc.):

b. Table to be adapted/finalized: Procedure for E&S management of sub-projects and responsibilities (focused on the project unit)

N o.	Steps/Activities	Responsible	Support/ Collaboration	Service Provider
1.	Identification of the location/site and main technical characteristics of the sub-project	xxxx	xxxxx	xxxxx
2.	Environmental selection and determination of the type of specific back-up instrument (ESIA, RAP, IPP, E&S Audit, AS, ...)	Environmental and Social Protection Specialists (SSES) of the PU	Beneficiary; Local authority (LA) SSES/PU xxx	
3.	Approval of the categorisation by the EIA entity and the Bank	Project Coordinator	SSES/PU	National Entity in charge of EIAs (EN-EIA) Bank
4.	Preparation of the specific sub-project E&S safeguard instrument (ESIA< PAR, Audit, etc.) in accordance with the			

	national procedure and the Bank's requirements			
	Preparation, approval and publication of ToRs		EN-EIA	Bank
	Carrying out the study including public consultation	SSSES/PU	Procurement Specialist (SPM); EN-EIA ; AL ;	Consultant
	Validation of the document and obtaining the environmental certificate		SPM, AL	EN-EIA, Bank
	Publication of document		Coordinator	Media ; Bank
5.	(i) Inclusion in the tender file (TF) of all the measures of the works phase that can be contracted with the company, for the sub-project; (ii) approval of the company's ESMP	Technical Manager (TM) of the activity	SSSES SPM	
6.	Implementation/implementation of measures not contracted with the construction company	SSSES	SPM ; RT ; Head of Finance (HF) ; AL ; xxxx	Consultant NGO Others
7.	Internal monitoring of the implementation of E&S measures	SSSES	Monitoring and Evaluation Specialist (S-SE) ; HF ; AL ; xxxx	Control Office
	Dissemination of the internal supervisory report	Coordinator	SSSES	
	External monitoring of the implementation of E&S measures	EN-EIA	SSSES	
8.	Capacity building for stakeholders in E&S implementation	SSSES/PU	Other SSSES SPM	Consultants Competent public structures ²⁹⁷
9.	Audit of the implementation of E&S measures	SSSES/PU	Other SSSES ; SPM ; S-SE ; EN-EIA ; AL	Consultants

The Project Implementing Entity (PIU), or any entity participating in the implementation, will not publish any invitation to tender (PU) for an activity subject to an Environmental and Social Impact Assessment (ESIA), without the Environmental and Social Management Plan (ESMP) for the works phase having been inserted, and will not give the order to start the works until the ESMP of the contracted company (ESMP site) has been approved and integrated into the overall works schedule. The roles and responsibilities as described above are integrated in the Project Implementation Manual (PIM).

7. NON-TECHNICAL SUMMARY OF THE RESETTLEMENT POLICY FRAMEWORK (CPR)

The resettlement policy framework should contain at least the following elements:

Brief presentation of the project components including activities that potentially require the acquisition of land. Specify that the areas of potential acquisition are not yet known;

Objective(s) of CPR also incorporating all the requirements of the Bank's SSI, especially when the locations of the acquisitions are not yet known;

Categories and groups of people potentially affected by sub-projects, with clear mention of vulnerable groups where appropriate.

The national system of expropriation for public interest (law, regulations, procedures, institutions involved, means of recourse in the event of disputes, etc.) including land and any other related property. Starting from the provisions

contained in the Constitution, the laws on land, expropriation of real estate, compensation of movable and immovable property, etc.

Gap analysis of the national resettlement system: the Bank's requirements (categories and eligibility, types of rights and assignees, modes of compensation, etc.) which are not reflected and/or are not well or clearly governed by the national system of expropriation, compensation for damages and compensation, especially those who do not hold recognised title to property (illegal occupier, squatter, temporary occupier, tenant, etc.). A summary table with the following columns: (i) Bank requirements; (ii) Relevant national provisions (see Legal texts and articles); (iii) Observation/Decision (complement to the national provision in order to meet the stated objectives of involuntary resettlement (and thus the Bank's requirements).

Summary of consultations carried out during the preparation of the CPR.

Procedure for the preparation of Resettlement Action Plans (RAPs) for investments with localized land acquisitions, including: (i) the eligibility matrix built on the basis of points 2 and 3 above, (ii) the methods for valuing assets and property, etc.

Detailed description of the Complaint Handling Mechanism (CHM) of the Project applicable to, among others, RAPs, focusing on both aspects: (i) the non-judicial component described (with representation of affected persons in the proceedings), including an indication of the maximum peremptory average duration of each stage and a detailed flow chart in the main report; and (ii) the judicial component, including a description of the minimum timeframes, and a detailed flow chart in the report.

Building the capacity of key actors for the implementation of a RAP, in particular the roles and responsibilities within the project implementation entity, and provision of the means (nature, financial) of compensation;

Budget including in particular provisions for: (i) preparation of RAPs; (ii) capacity building; (iii.a) auditing the completeness of the compensation prior to the commencement of work, and where appropriate; (iii.b) full auditing of the completion/performance of the resettlement including livelihood restoration.

Budget

#	Item	Unit	Unit cost		Total		Source of funding
			Local	US\$	Local	US\$	
1	Preparation of RAPs						
2	Capacity building for implementation						
3	Payment of compensations (committees, monitoring, complaints)						
..	Closing audit of RAPs						
..	Compensation for land						
x	Total						

299

8. NON-TECHNICAL SUMMARY OF THE PEST / VECTOR MANAGEMENT PLAN

The executive summary of the ESIA report should contain the following information:

1. Project description

Objectives, components, activities and expected outcomes;

Specific objectives and activities leading to integrated pest management.

2. Current Approaches to Pest Management in the Project Sector in the Country;

Overview of target crops and associated pest problems;

Current approaches to pest management;

Practical experience of integrated management in the country and in the sector of activity.

3. Current issues in the use and management of synthetic chemical pesticides in the country and the project sector;

Pesticide use in the country (volumes, types, registration, supervision, etc.)

Circumstances of pesticide use and product handling skills;

Assessment of risks to the environment, public health and the economy (use known incidents as far as possible)

Controlling the distribution and use of pesticides;

Capacity for management/disposal of obsolete pesticides and polluted packaging ;

4. Policy, legal and institutional framework for integrated pest management (IPM)

Current plant protection/vector control system (policy, institution, etc.)

Analysis of national and local capacity to implement IPM, especially in the project area/sector of intervention;

Promotion of Integrated Pest Management in the context of current pest management practices.

5. Integrated pest management measures (IPMM) in the framework of the project

Relevant activities proposed for the integrated management of pests/vectors (including capacity building for those directly involved in project implementation)

Monitoring, evaluation and reporting on the implementation of the IPMM Action Plan)

Institutional arrangements (focused on the project implementing entity, phytosanitary or vector control services) with emphasis on the local level (actors and partners)

Estimates of implementation costs;

Complaints management mechanism (refer to the project's MGP)

National capacity building (optional)

Budget

300

#	Item	Unit	Unit cost		Total		Source of funding
			Local	US\$	Local	US\$	
1	Raising awareness among beneficiaries						
2	Support for deconcentrated plant protection services						
3	Follow-up on the field						
..							
x	Total						

9. REQUIRED QUALIFICATIONS AND EXPERIENCE OF THE CONSULTANT

The study must be carried out by a consultant or design office approved by the Ministry of the Environment and Sustainable Development. The team must include:

A senior consultant, with the following profile:

Environmental expert, with a minimum level of a Master's Degree, justifying skills in environmental assessment and environmental management. The expert should also have a good command of the operational and procedural requirements of the African Bank in terms of Environmental and Social Impact Assessment.

Have knowledge of environmental standards and regulations in sub-Saharan African countries, and have conducted at least three (03) environmental impact studies of comparable size;

Knowledge of environmental risks associated with agro-industrial projects is desirable;

Have experience in the conduct of at least two (2) similar assignments, with evidence of previous performance to the satisfaction of the beneficiary;

Knowledge of the socio-economic and commercial environment of the intervention site would be an asset.

He may be supported, at his own expense, by an engineer in industrial planning and equipment, a geographer-mapper and an expert in climate change.

Duration, Place of mission

The mission will take place in Senegal for a period of 25 working days.

10. INPUTS PROVIDED BY THE CLIENT

The project will make the documents listed below available to the Consultant. Taken in this order, these documents will constitute reference instruments for the Consultant's mission, namely:

Project documents and preliminary reports prepared by UNIDO

Documents provided by the government: Mission reports, LAB documents, EDF, etc.

République du Sénégal
Un Peuple - Un But - Une Foi

MINISTÈRE DE L'ENVIRONNEMENT
ET DU DÉVELOPPEMENT DURABLE

DIRECTION DE L'ENVIRONNEMENT
ET DES ÉTABLISSEMENTS CLASSÉS

DEEC

N°.....MEDD/DEEC/DEIE

Dakar, le

17 JAN. 2019

**Termes de Référence (TDR) de l'Évaluation Environnementale Stratégique (EES)
du Projet des « Agropoles intégrées », dans le Nord, le Sud et le Centre du Sénégal**

Après examen du document, la Direction de l'Environnement et des Établissements Classés (DEEC) vous demande en sus des observations contenues dans les termes de référence soumis, de mettre l'accent sur les éléments ci-après :

I. Objectifs de l'étude

- Appréhender les enjeux environnementaux et sociaux majeurs associés à chacune des composantes du projet et définir la stratégie de gestion environnementale et sociale y afférente ;
- Développer en termes de stratégies, les méthodes permettant au projet d'atteindre ses buts dans les limites temporelles prévues et en conformité avec les normes environnementales et sécuritaires ;
- Préciser les rôles et responsabilités pour gérer et suivre les préoccupations environnementales et sociales relatives au projet ;
- Déterminer les besoins en formation, renforcement des capacités et autre assistance technique pour la mise en œuvre adéquate des résultats de l'évaluation environnementale stratégique ;
- Fixer le montant du financement à pourvoir pour mettre en œuvre le Plan Cadre de Gestion Environnementale et Sociale (PCGES).

II. Méthodologie

Le consultant devra réaliser les tâches suivantes :

1. Développer un volet consultation publique qui permettra de renseigner sur les points de vue des différentes parties prenantes impliquées, dans la mise en œuvre du projet (services techniques au niveau central et déconcentré, autorités administratives et locales, etc.).

A ce titre, un accent particulier devra être mis sur le volet information et sensibilisation.

X
1

Ainsi, le consultant devra démontrer l'étendue des consultations qu'il aura menées pour recueillir l'avis des acteurs concernées sur la réalisation de l'étude et sur les mesures à prendre.

Le plan de consultation avec les méthodes/outils utilisés, de même que la liste des personnes consultées et les verbatim des consultations devront être annexés au rapport d'EES

2. Identifier, évaluer et mesurer l'ampleur des impacts positifs et négatifs potentiels directs et indirects et les risques environnementaux et sociaux associés au projet, en fonction des différentes phases du projet. Cette analyse des impacts potentiels portera sur les milieux biophysique, socioéconomique et culturel. Aussi, le consultant fera ressortir les problématiques environnementales spécifiques aux différentes régions éco-géographiques susceptibles d'être concernées par le projet.
3. Développer un plan cadre de suivi-évaluation de ces mesures, en spécifiant les indicateurs environnementaux et sociaux types pour leur suivi-évaluation, ainsi que la méthodologie de leur mise en œuvre (données de référence, responsabilité, etc.). Le programme de suivi évaluation devra comporter en outre, un plan spécifique de surveillance environnementale et sociale pour s'assurer du contrôle efficace des questions environnementales et sociales.
4. Inclure dans l'EES, un point relatif à l'analyse des stratégies et alternatives permettant au projet d'atteindre ses buts dans les limites temporelles prévues et en conformité avec les normes environnementales et sécuritaires. Dans cette analyse, le consultant devra tenir compte des contraintes des milieux traversés.

Toutes les options retenues devront être justifiées.

5. Analyser la réglementation nationale en matière de gestion environnementale qui peut être pertinente pour le projet. Le consultant analysera aussi les lois, règlements et normes pertinents y afférents mais aussi la qualité environnementale, y compris les exigences des conventions internationales ratifiées par le pays, en la matière ainsi que les normes et règlements applicables au programme et qui régissent la qualité de l'environnement, la protection des milieux sensibles, la sécurité, notamment le Code de l'Environnement, le Code Forestier, le Code de l'Assainissement, le Code de l'Urbanisme, le Code de la Construction, le Code de l'Eau, le Code de l'Hygiène, etc.
6. Aussi, dans ce cadre politique, juridique et institutionnel applicable au projet, le consultant devra apporter des précisions aussi bien sur les exigences législatives pour la gestion environnementale que sur les exigences relatives au secteur de l'industrie, de l'aquaculture, de l'élevage, de l'agro-industrie, de la logistique, des infrastructures, de l'aviculture, etc. Des précisions devront être apportées sur les directives de sauvegardes environnementales et sociales des bailleurs de fonds du projet comme l'ONUDI.

Le consultant identifiera les principales institutions tant nationales que locales, interpellées directement ou indirectement par la réalisation du projet. Il examinera aussi leurs mandats et leurs capacités en vue de proposer un programme de renforcement de capacités.

2

Renseigner, à chaque fois que le niveau d'avancement du projet le permet, sur le statut juridique des sites/zones devant accueillir des réalisations et l'ancrage institutionnel d'exécution de chaque composante du projet.

7. Prendre en compte la dimension Genre dans l'évaluation des impacts du projet. Il s'assurera que le genre est pris en compte dans le projet et qu'il sera intégré dans l'élaboration et la conception des PCGES.
8. Dans la partie définition des impacts/incidences potentielles du projet, le consultant devra mettre l'accent sur :
 - La gestion des eaux et des eaux usées ;
 - La gestion des déchets et leur valorisation ;
 - La gestion des risques de catastrophe ;
 - La mise à disposition et la distribution d'énergie ;
 - Les effets fiscaux pour les collectivités territoriales ;
 - Les atténuations aux changements climatiques et adaptation à leurs effets ;
 - Les pertes d'activités agricoles et de revenus pour les populations ;
 - Les pertes de terrain à usage d'habitation ou restriction des droits de propriétés ;
 - La modification des accès aux concessions riveraines, la destruction des lotissements existants et expropriation ;
 - Les impacts sociaux du projet sur la population et sa composition, le mode de vie, la culture et les relations communautaires ;
 - Les retombées économiques locales et régionales associées et d'autres impacts économiques pour les populations (possibilités de création d'emploi, développement des services publics connexes, valeurs des terres et des propriétés, etc.) comme pour les entreprises (produits concernés, économies possibles, etc.) et les revenus des collectivités territoriales ;
 - Etc.

Tous les facteurs/éléments pouvant entraîner un effet cumulatif et en tirer toutes les conclusions ou recommandations nécessaires.

9. En préparant les PCGES, le consultant devra également suggérer des actions pour l'amélioration des conditions environnementales et sociale dans les zones d'intervention du projet.

Le consultant devra, dans la stratégie de gestion environnementale et sociale (PCGES), proposer des recommandations spécifiques à l'attention des entreprises chargées de la réalisation de travaux pour la protection de l'environnement, lesquelles directives devront être insérées au niveau du cahier des prescriptions techniques ou dossiers d'appel d'offre, permettant le respect et la protection de l'environnement pendant l'exécution du ou des chantiers.

Dans les PCGES, le consultant devra mettre l'accent sur les mesures d'atténuation des impacts négatifs cumulatifs du programme et les mesures d'accompagnement et d'optimisation de ce programme.

X
3

10. Décrire dans la stratégie de suivi et de surveillance environnementale, le processus, le mécanisme et les circonstances dans lesquelles les évaluations environnementales spécifiques se dérouleront s'il y a lieu (analyses environnementales initiales ou études d'impacts approfondies).
11. Intégrer aussi dans l'étude, la notion de dangers et de risques associés aux activités du programme d'actions prioritaires.

III. Bilan environnemental du projet

Les études doivent présenter une conclusion de l'EES dégageant les risques majeurs du programme sur l'environnement, l'efficacité des mesures proposées et les avantages que procure la réalisation du programme.

IV. Equipe du consultant

L'étude sera conduite par un consultant ou un bureau d'études agréé par le Ministère de l'Environnement et du Développement Durable et l'équipe devra comporter, en plus des experts mentionnés :

- un environnementaliste ayant une bonne expérience dans la conduite des évaluations environnementales (Chef de mission) ;
- un ingénieur en aménagement et équipement industriel ;
- un géographe cartographe ;

V. Rapport

Le rapport d'EES pourra être structuré de la manière suivante :

- Liste des acronymes ;
- Introduction décrivant la finalité de l'EES, ses objectifs, ses principes et la méthodologie suivie ;
- Description du programme mettant en exergue les différentes composantes, etc.
- Analyse des différentes alternatives ;
- Présentation sommaire et générale des conditions du milieu naturel (physique et biologique), du milieu humain, socioéconomique et culturel dans les zones d'intervention du programme, en mettant en exergue **les enjeux environnementaux de la zone d'intervention et sa sensibilité socio-environnementale** ;
- Cadre politique, juridique et institutionnel applicable aux activités du programme ;
- Enjeux socio-environnementaux du projet fonction des composantes ciblées ;
- Plan cadre de gestion environnementale et sociale incluant les mesures prioritaires à mettre en place pour l'opérationnalisation et la fonctionnalité du site ;
- Plan de suivi incluant les indicateurs types, un calendrier de monitoring et les parties responsables de la mise en œuvre du programme ;
- Description du renforcement des capacités, de la formation et de l'assistance technique nécessaire à la mise en œuvre des PCGES. A cet effet, les forces et faiblesses des institutions impliquées devront être analysées ;
- Budget de mise en œuvre des PCGES ;

- Etc.

→ **Des annexes générales**

- Sigles et abréviations ;
- Auteurs de l'EES ;
- Bibliographie ;
- Résultats des consultations du public et des avis exprimés et méthodologie de la consultation ;
- Liste des personnes contactées et consultées ;
- Projet de TDR ;
- TDR validés ;
- Etc.

→ **Des annexes techniques**

- Grille de sélection environnementale ;
- Check-list des mesures en phase travaux et exploitation ;
- Stratégie de gestion des déchets en phase construction et exploitation ;
- Termes de références type des EIE complémentaires ;
- Etc.

VI. Validation

Le rapport provisoire de l'EES devra être déposé en 30 exemplaires, en plus de sa version numérique (PDF) sur support électronique (CD ou clé USB), en vue de sa validation par le Comité technique interministériel.

Le rapport final, intégrant les observations du Comité technique sera déposé en 15 exemplaires à la DEEC, en plus de la version numérique en format PDF.

NB : Chaque zone géographique devra faire l'objet d'un rapport spécifique

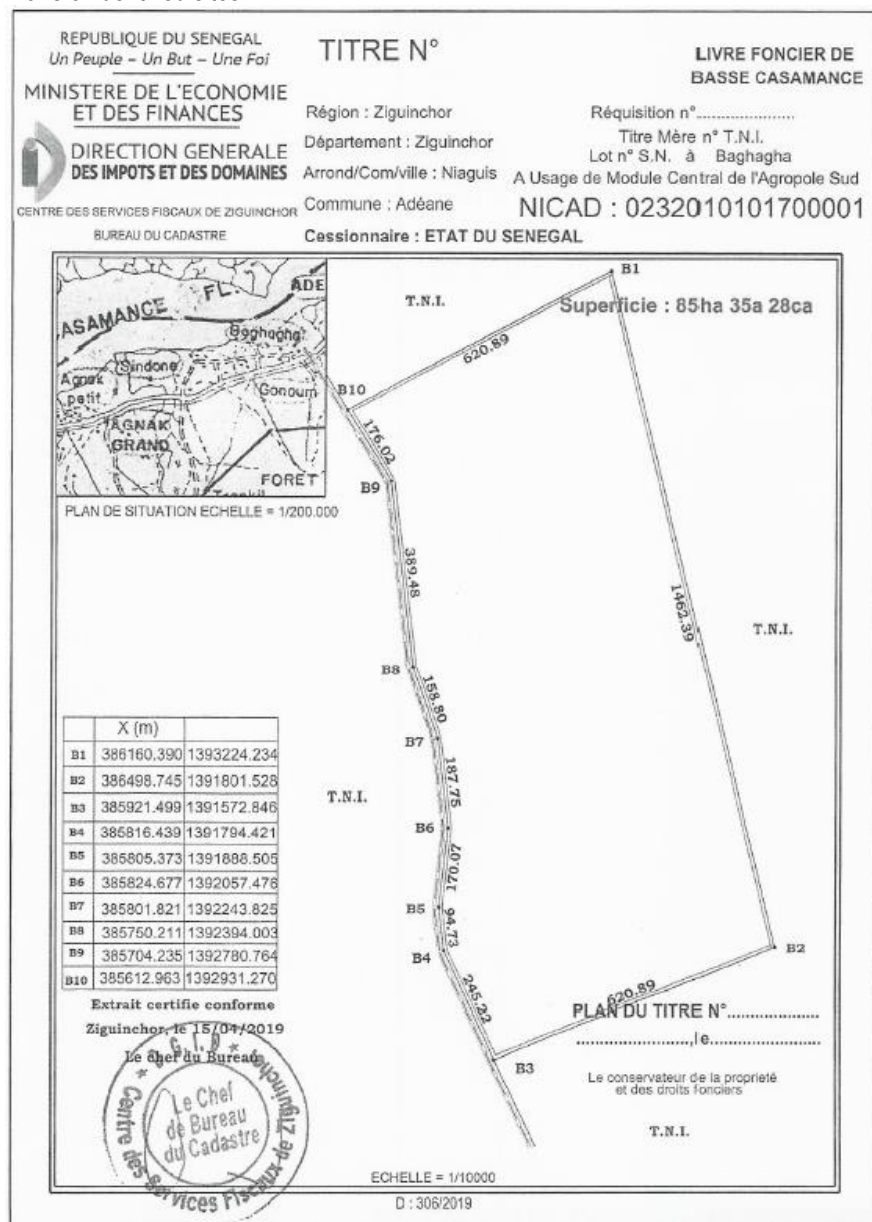
306

X
5



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Plans of identified sites



307



DOSSIER N° - 000220



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RÉPUBLIQUE DU SÉNÉGAL
Un Peuple - Un But - Une Foi

**MINISTÈRE DES FINANCES
ET DU BUDGET**

**DIRECTION GÉNÉRALE
DES IMPÔTS ET DES DOMAINES**

Centre des Services Fiscaux de Kolda
Bureau du Cadastre

TITRE N°

Région de Kolda
Département de Kolda
Commune: Dioulacolon
Quartier: CRZ
Requérant: ETAT DU SENEGAL

LIVRE FONCIER DE
HAUTE CASAMANCE

Réquisition n°.....
Titre Mère n° 253/HC
Lot SN

NICAD :1012010108600001

NORD

Superficie: 10ha 00a 01ca

086

PLAN DE SITUATION ECHELLE = 1 : 20000

vers Ziguinchor ← RN6 → vers Kolda

B1 316.46 B2 316.00 B3 316.46 B4 316.00

Extrait certifié conforme

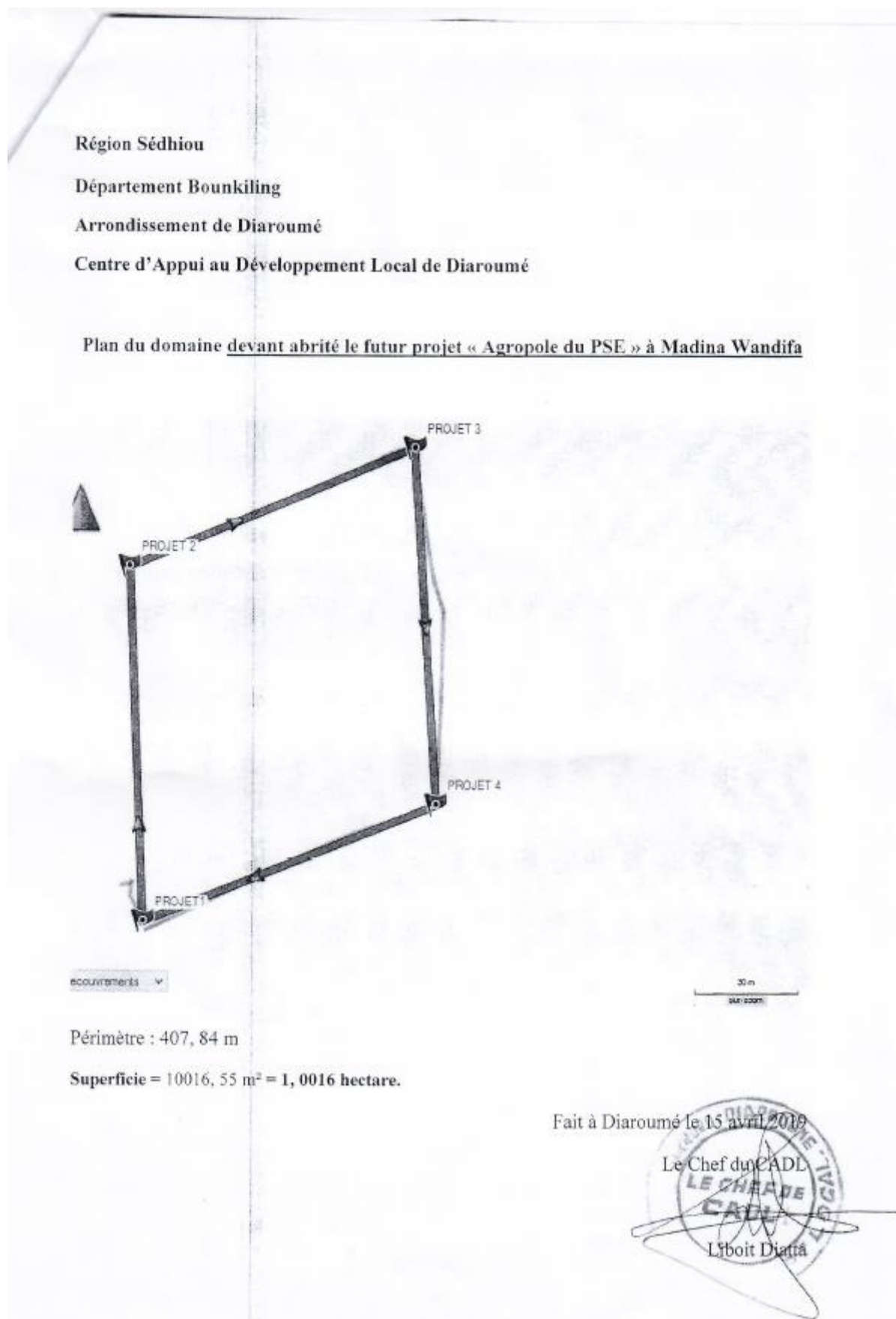
Kolda, le 23 Mai 2019

Le Chef du Bureau
LE CHEF
BUREAU
DU CADASTRE

ECHELLE = 1 : 5000

40%

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ANNEX 7. SCREENING OF ANCHOR SUB-PROJECTS

The sub-project screening form is presented below.

Location of the City / Village Project: _____

Department: _____

Council: _____

Persons responsible for the sub-project _____

Name of contact person _____

Name of Approving Authority _____

Person responsible for filling in this form _____

Full name: _____

Function: _____

Telephone number: _____

Address: _____

Email: _____

Date: _____ Signatures: _____

Part I: Brief presentation of the proposed infrastructure

311

Part B: Identification of environmental and social impacts

ENVIRONMENTAL AND SOCIAL IMPACT IDENTIFICATION SHEET

Environmental and social concerns	Yes	No	Observation
Resources of sector			
Will the Project require large volumes of construction materials from local natural resources (sand, gravel, laterite, water, timber, etc.)?			
Will it require significant clearing			
Biological diversity			
Is the Project likely to cause effects on rare, vulnerable and/or economically, ecologically, or culturally important species			
Are there areas of environmental sensitivity that could be negatively affected by the Project? forest, wetlands (lakes, rivers, seasonal flooding areas)			
Protected areas			
Does the Project area (or its components) include protected areas (for example, national parks, national reserves, protected forest, World Heritage site, etc.)			
If the Project is outside, but at a short distance, from protected areas, could it negatively affect the ecology in the protected area (e.g. interference with birds flying, with mammal migrations)			
Geology and soils			
Are there geologically unstable areas or soils (erosion, landslides, collapse)?			
Are there areas at risk of salinisation?			
Landscapes/Aesthetics			



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Environmental and social concerns	Yes	No	Observation
Would the Project have an adverse effect on the aesthetic value of the landscape?			
Historical, archaeological or cultural sites			
Could the Project change one or more historical, archaeological or cultural sites, or require excavations?			
Loss of assets and others			
Will the Project trigger the temporary or permanent loss of crops, agricultural land, pasture, fruit trees and domestic infrastructure?			
Pollution			
Could the Project cause a high level of noise?			
Is the Project likely to generate solid and liquid waste?			
If so, does the infrastructure have a plan for their collection and disposal			
Is there equipment and infrastructure for their management?			
Could the Project affect the quality of surface water, groundwater, and drinking water sources?			
Is the Project likely to affect the atmosphere (dust, various gases)?			
Way of life			
Can the Project lead to changes in the way of life of the local population?			
Can the Project lead to an increase in social inequalities?			
Can the Project lead to incompatible uses or social conflicts between different users?			
Health and security			
Can the Project induce risks of accidents for workers and the public?			
Can the Project cause health risks to workers and the public?			312
Can the Project lead to an increase in the population of disease vectors?			
Local revenue			
Does the Project allow job creation			
Does the Project promote the increase of agricultural and other productions			
Gender concerns			
Does the project promote the integration of women and other vulnerable groups?			
Does the Project address women's concerns and promote their involvement in decision-making?			

Consultation of the public

Public participation and consultation have been sought?

Yes ____ No ____

If yes, briefly describe the measures that have been taken to this effect.

Part C: Mitigation measures

In view of the Annex, for all "Yes" answers, briefly describe the measures taken to this effect.

Part D: Project classification and environmental work

No environmental work

☐

Simple mitigation measures

☐

Environmental Impact Assessment

☐



ANNEX 8. ENVIRONMENTAL CHECK-LIST

For each proposed activity, fill in the corresponding section of the checklist. The following questions, arranged by project phase, are intended to stimulate consideration of the full range of impacts. To find measures to address these impacts, the mitigation checklist should be consulted. Not all measures apply to all projects and not all possible mitigation measures could be included in these tables.

ENVIRONMENTAL CHECK-LIST

Activities/ Project Component	Questions to be answered	Yes	No	If yes
Selection of site	What are the current uses and activities on the proposed Project site? Who will be relocated?			
	How far away are the neighbouring houses?			
	What types of environment, landscape, flora and fauna are present in the area? Are there species of particular biological, medical, cultural, historical, social or commercial value? If so, could the Project damage them?			
	Is the site itself of particular cultural, archaeological, historical or social importance?			
	Are there water points, wooded areas, hillsides, swamps or other vulnerable sites nearby?			
Planning and design	What are the nature, quantities and sources of building materials? Where do they come from (for example a quarry, a relatively un-deteriorated forest)?			
	Where will the workers sleep?			
	What kind of water supply, sanitation and solid waste disposal facilities are provided for workers?			
	Have the necessary steps been taken to ensure that these services will be provided in an environmentally sound manner?			
Construction and operation phase	Where will the teams of workers come from? Will the construction schedule conflict with the harvest period?			
	How will the materials be transported and stored on site?			
	Are there adequate services for the evacuation of waste during construction sites?			
	Will safety and rescue equipment and materials in the event of an accident be available during the construction and operation phase of the Project?			
	Are there any impacts on the health of the local population and that of the implementation and operating personnel?			
	Are there any visual impacts caused by the work?			
	Are there any odours that may come from the discharge of waste from the Project's activities?			

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ANNEX 9. CHECKLIST OF IMPACTS AND MITIGATION MEASURES;

Mitigation measures are identified to ensure that project objectives are met while preventing and minimizing undesirable environmental impacts. Mitigation measures will be carried out, in principle, by the contractor during the construction phase and by the technical services concerned during the operation phase.

The environmental management plan sets out the potential impacts associated with the various activities that are likely to occur during the construction and operation phases of the project. The checklist describes for each source of impact or for each type of activity, the nature of the impact in question and the mitigation measure to remedy the negative impact.

The proposed measures constitute the basic actions that the managers of the various project components must take into consideration, especially during the implementation of the construction and operation stages. At first glance, they are typical mitigation measures for components/activities with a potential impact on the environment.

Thus, in relation to these impacts, guidelines for reinforcing positive impacts and others for preventing, mitigating and compensating for negative impacts are set out. These general guidelines are formulated taking into account the national regulations in force and the requirements of the donor's safeguard policies.

It is understood that other more specific measures for the various components will be identified in the environmental assessment framework (extended impact study or initial environmental analysis) depending on the issues in question in accordance with the provisions of the environmental law.

A3.1. General Measures to Mitigate Negative Impacts

Some activities or sub-projects will require an environmental and social assessment prior to start-up in accordance with national legal provisions and the operational policies of the donor.

Other technical measures, to be carried out during both the construction and operational phases, are listed in the table below.

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GENERAL MITIGATION MEASURES ON THE IMPLEMENTATION OF ALL SUB-PROJECTS

Measures	Proposed actions
Regulatory and technical measures	Carrying out Environmental and Social Studies for the sub-projects
	Preparation of manuals of procedures and environmental and social guidelines to be included in works contracts
	Setting up a database
Implementation measures	Make a judicious and motivated choice of sites for implantation
	Develop an action plan for resettlement in the event of involuntary population displacement
	Carry out a communication and awareness-raising campaign before the work is carried out
	Ensuring compliance with health and safety measures for worksite installations
	Carry out signage of works
	Employ local labour as a priority
	Ensure that safety rules are observed during work
	Ensure the collection and disposal of waste resulting from works
	Conduct awareness campaigns on STI/HIV/AIDS
	Closely involve local authorities in monitoring implementation
	Rehabilitate quarries and other borrow sites
	Respect for protected species, especially trees



A3.2. Positive impact enhancement measures

The main enhancement measures recommended to improve the performance of the positive impacts of infrastructure operation are:

the use of the labour-intensive approach (HIMO) will have to be more favoured within the framework of project implementation;

the participation of target groups in the evaluation of sub-projects and the operation of facilities;

consideration of groups that may lose income as a result of the Project;

the involvement of local craftsmen in the management of infrastructure and raising awareness on good use and maintenance practices;

the implementation of an education programme for those responsible for the discharge of both liquid and solid waste with a view to avoiding its discharge into nature or water bodies;

raising women's awareness for a better management of infrastructure (transformation units) ;

building the capacity of disadvantaged women to take charge of activities related to their environment.

Awareness-raising campaigns will be conducted among the population on hygiene and sanitation, health, food protection, hand washing with soap and water, infrastructure maintenance, solid waste management, rational use and conservation of water and environmental protection. Awareness-raising sessions will focus mainly on women and children.



ANNEX 10. ENVIRONMENTAL GUIDELINES FOR COMPANIES;

The following directives will be an integral part of company contracts:

Equip the site base with appropriate sanitary equipment and facilities;

Have the necessary authorisations in accordance with the laws and regulations in force;

Ensure compliance with health and safety measures for worksite installations;

Establish site rules (what is allowed and what is not allowed on sites) ;

Protect properties around the job site;

Ensure the continuity of traffic and access for local populations during works;

Install containers to collect the waste produced next to the sectors of activity;

Do not incinerate on site;

Ensure the collection and disposal of waste resulting from works;

Inform and raise the awareness of the population before any activity involving the degradation of private property;

Ensure that the beneficiaries are compensated before any demolition is carried out;

Properly dispose of oils and solid wastes;

Openness and rational career management in compliance with the regulations in force;

Rehabilitation of temporary quarries;

Carry out compensation planting after works, in case of deforestation or tree felling ;

Re-establish relevant and adequate forest cover; avoid slopes, soils prone to erosion;

Prevent clearing and ensure protective measures on protected or rare species or, if necessary, reforestation with specific species;

Adopt a speed limit for construction site machinery and vehicles;

Carry out signage of works;

Ensure that safety rules are observed during work;

Carry out awareness campaigns on STI/HIV/AIDS for workers and local populations;

Carry out a communication and awareness-raising campaign before the work is carried out;

Organise the storage of materials, parking and movement of machinery in such a way as to avoid any inconvenience;

Respecting cultural sites;

Organise site activities taking into consideration nuisances (noise, dust) and the safety of the surrounding population;

Protect the ground during construction and carry out afforestation and stabilisation of fragile surfaces;

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Make a judicious and well-reasoned choice of location (away from water points, homes and sensitive areas) ;

Avoid the stagnation of water in construction pits and quarries, a source of potential contamination of the water table and the development of disease-carrying insects;

Avoid any discharge of waste water, accidental or non-accidental spillage of used oil and spills of pollutants on the ground, in surface or ground water, in sewers, drainage ditches, etc.

Avoid the production of dust as much as possible;

Prioritize local labour.



ANNEX 11. ENVIRONMENTAL AND SOCIAL CLAUSES;

Given that the construction activities of the agropole' infrastructure could have negative impacts on the physical framework and bring occasional inconveniences to neighbouring areas and local residents, it is essential to define and respect rules (including specific prohibitions and measures to be taken for the management of the construction) that will have to be carefully respected by the contractors.

The following information is given as prescriptions to be inserted, subject to possible slight adaptations, in the specific technical clauses of the tender documents for the different types of works to be financed within the framework of the agropole. They must be followed in accordance with national legislation on health, safety and hygiene at work.

Therefore, the works subject to the Environmental Assessment procedure - extended impact study or initial environmental analysis - will be subject, in addition to these requirements, to a more complete analysis and an Environmental and Social Management Plan (ESMP) which will be annexed to the TF.

A5.1. Justification

The objective of this study is to take into consideration the environmental and social dimension in the planning and implementation of the Project through the implementation of an Environmental and Social Management Framework (ESMFP).

Thus, the integration of environmental and social requirements into the TF as recommended in the ESMFP implementation strategy enables the company awarded the contract to assess its environmental responsibility and to take it into account in the planning and implementation of the works. These requirements must be respected, without exception, by the Contractor. To this end, they will be checked during site visit missions.

Similarly, the contractor remains liable for any accidents or environmental damage resulting from this work or from installations related to the construction site.

A5.2. Information and accompanying measures

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The contractor must, in conjunction with the client, strictly ensure that the following guidelines are adhered to:

Conduct a communication and awareness campaign in advance of the work on the work schedule, interruption of services and diversion of traffic, as required;

Limit construction activities during the night. If they are necessary, ensure that night work is carefully planned and that the community is informed so that they can take necessary measures;

Carry out signage of works;

Conduct awareness campaigns on STI/HIV/AIDS for workers and local populations;

Prohibit: (i) cutting trees for any reason outside the approved construction zone; (ii) hunting or capturing local wildlife; (iii) using non-approved toxic products, such as lead paint; (iv) disturbing anything of architectural or historical value;

The community will be notified at least five days in advance of any interruption of service (water, electricity, telephone), through the press (giving preference to community or local radio stations where they exist).

A5.3. Maintenance and waste management

For the duration of the works, the Contractor shall ensure that the whole site and its surroundings are kept clean and that the waste produced is properly managed by taking the following measures:

Follow appropriate procedures for the storage, collection, transport and disposal of hazardous waste. For waste such as used oil, it is essential to collect it and hand it over to approved take-back companies;

Clearly identify and delineate disposal areas and specify which materials can be deposited in each area;



Control the placement of all construction waste (including excavated soil) in approved disposal sites (>300 m from rivers, streams, lakes or wetlands) ;

Place in authorised areas all garbage, metals, used oils and excess materials produced during construction by incorporating recycling systems and material separation;

The Contractor shall take the necessary measures to avoid dispersion by wind or rainwater, for example, before disposal of the waste;

The products from the stripping of earthwork rights-of-way should be stored and possibly reused,

Transport soil in the right-of-way to the site to be backfilled or evacuating it to public dumpsites;

Minimise waste generation during construction and reusing construction waste where possible;

Collect and transfer demolition waste and excavated earth to appropriate municipal sites or controlled dumpsites.

The following steps should be taken for site maintenance:

Identify and delineate areas for maintenance equipment (away from rivers, streams, lakes or wetlands) ;

Ensure that all maintenance activities are carried out within designated maintenance areas;

Never remove oil or pour it on the ground, in watercourses, low areas, cavities in disused quarries.

A5.4. Preventive measures against noise and dust emissions

The Contractor will pay particular attention to limiting possible noise nuisance. He will ensure that the use of noisy machinery is limited to what is strictly necessary and will stop those that are not in use (example, generator). Except in emergencies, noise pollution (machines, vehicles, etc.) in the vicinity of dwellings will be prohibited from 7 p.m. to 8 a.m. as well as at weekends and on public holidays. 320

During the implementation of the work, in order to combat dust and inconvenience, the contractor shall:

limit the speed of construction-related traffic to 24 km/h in the streets within a radius of 200 metres around the construction site and limit the speed of all vehicles on the construction site to 16 km/h;

place dust barriers around construction areas, paying particular attention to areas close to homes, commercial areas and recreational areas;

water excavations, fill material and piled up soil as much as necessary.

A5.5. Storage and use of potentially polluting substances;

In general, the storage and handling of potentially polluting or dangerous substances (oils, fuel) must comply with the following principles:

limit at stored quantities;

organised storage, on a site or according to modalities that do not allow access to a person from outside the worksite;

handling by personnel in charge;

marking the storage site with a sign indicating the nature of the danger.

the storage of liquid chemicals will be done on retention to prevent accidental spills and soil pollution;

the chemicals used must be provided with a safety data sheet (SDS) to be displayed at the storage location.



A5.5.1. Fuels and lubricants

If the contractor uses fuels and lubricants on the construction site, they will be stored in watertight containers on a flat, clean and stable floor. The containers will be insulated from the ground with plastic sheeting or absorbent material (sand or sawdust) to allow the recovery of any accidental spillages.

At the end of the works, the site will be cleared of all traces of by-products.

A5.5.2. Other potentially polluting substances

The use of other potentially polluting substances will be reported to the project manager before use. The company will provide proof of the legal nature of their use and the project manager will notify the competent technical services for authorisation and possible prescription of precautionary instructions.

A5.5.3. Management of accidental pollution

In the event of accidental pollution, the Contractor shall notify the Prime Contractor without delay. Depending on the component of the environment concerned by the pollution, the competent technical services will be notified. The Contractor will take all necessary steps to stop the cause of the problem and to proceed with the treatment of the pollution.

Prescribed precautionary measures must be implemented quickly.

A6.5.4. Guidelines for responding to accidental pollution

In the event of an accidental spill of pollutants, the following measures should be taken:

Prevent the ground from getting contaminated by sprinkling special absorbent products;

If close to a water source (wells, streams, etc.), avoid contamination of the water by means of a blockage, barrage, embankment, as a first step; excavate the polluted soil in the seepage face;

Treat the polluted areas in an environmentally safe manner (landfill, burial, incineration, depending on the nature of the pollution).

A5.6. Protection of natural environments from fire

The use of fire on the site is generally forbidden unless the supervisor expressly authorises it, in accordance with the permissions laid down by the national regulations in force. If this is the case, the Contractor shall respect the following minimum instructions:

Burning must be authorised only during light winds;

Site must be previously cleared over a 20 metres radius;

Fire must be constantly monitored by a qualified person equipped with fire-fighting tools;

If fire spreads, rescue services and the supervisor must be alerted rapidly by any means;

Fire must be completely put out after burning. Covering with soil is forbidden.

A5.7. Conservation of the site's landscape integrity

Vegetation growing off the right-of-way of the facilities, entrances, operating or storage areas should not be damaged in any way. In addition, protective measures should be taken for protected or endangered species.

Felling of trees must be allowed only if authorised by the competent services. The Contractor should carry out compensation planting after works in case of deforestation or felling of trees.



The materials used to work (especially sand and gravel) must be from authorised quarries and sandpits controlled by competent services. In compliance with these provisions, the quarries and borrow sites should imperatively be rehabilitated.

If the site is significantly altered, it may be necessary to rehabilitate the site before leaving it.

The Project should avoid any environmentally sensitive areas (e.g. areas experiencing seasonal floods). All precautions should also be taken to preserve water sources (wells, springs, fountains, ponds, etc.).

A5.8. Social and cultural aspects

For the Project to positively impact the host social environment, the Contractor should:

make sure that the project does not alter historical, archaeological or cultural sites;

consider the concerns raised by women and encourage their involvement in decision-making;

give priority when recruiting unskilled workers to the local population.

The following measures should be taken if objects of cultural or religious value are found during excavations:

Stop work immediately upon discovery of any object that may be of archaeological, historical, palaeontological or other cultural value, report the discovery to the developer and notify the competent authorities;

Protect the objects as much as possible by covering them with plastic covers and, if necessary, take measures to secure the area so that the objects are properly protected;

Resume work only after receiving authorisation from the competent authorities.

A5.9. Opening and development of quarries and borrow pits

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The Contractor should request the authorisations provided for by the laws and regulations in force, including the Mining Code, before opening and operating a new quarry. Before requesting authorisation to open new borrow pits, the pits reserved for maintenance work should be used up.

A5.10. Safety of persons and property

Ensure traffic safety;

Trenches will be surrounded by solid safety barriers if necessary;

Barriers and footbridges will have lights at night;

Provide the required traffic signs and security;

Ensure traffic flow, except where this is absolutely impossible;

Roads will not be simultaneously intersected over more than half of their width;

Trenches along the roads and extending into the road right-of-way will not be opened over a length of more than 200 m;

Protect riparian walls, public road works such as kerbs, bollards, etc., electricity or telephone lines, pipes and cables of all kinds lying on the ground from any damage;

Keep existing cables and existing pipes and installations supplying drinking water or evacuating sewage intact throughout the duration of the work.



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A5.11. Abandonment of facilities upon completion of work

The Contractor should take all the necessary care to restore the site to its original state upon completion of work. The Contractor should take back all his equipment, machinery and materials. He may not leave any equipment or materials on the site or in the surrounding area. Concrete areas are demolished and the demolition waste is stored in a suitable site approved by the engineer. Upon withdrawal, the site's drains are cleaned to prevent accelerated erosion of the site.

Insofar as it is in the interest of the Contracting Authority to take back the fixed facilities for future use, the Administration may ask the Contractor to hand over the facilities subject to demolition without compensation in the event of a withdrawal.

A report should be prepared after the equipment has been removed and the site restored and attached to the report of acceptance of the work.



(Simplified) environmental monitoring grid
Simplified environmental monitoring grid

Reference	Measure recommended by the ESMP	Completion deadline	Enforcement indicator	Problems identified	Official in charge of the measure	Penalty under national law
N1						
N2						
N3						
.....						

Evaluator's remarks: -----

Evaluator's signature (Surname, Name, Date and place:
ESMP Official's signature (Surname, Name, Date and place:



Abbreviated Resettlement Action Plan

Objectives of the Resettlement Plan

Experience has shown that if the resettlement plan is not well organised, it can often result in serious economic, social and environmental problems as: (i) production systems may be disrupted; (ii) people may suffer income reductions or losses; (iii) resettlement may take place in areas that will not be able to accommodate the large numbers of people to be resettled; (iv) community-based structures and social networks may be weakened; (v) kinship groups may be displaced; (vi) cultural identity, traditional authority and mutual support opportunities may be weakened. The Resettlement Plan aims at addressing and mitigating these impoverishment risks in the long term, so as to harmoniously combine programme implementation with social and environmental concerns. The preparation of the resettlement plan should be included in the programmes preparation to make sure that internally displaced persons are resettled in the most appropriate conditions that will enable them to improve their income and living conditions. The general principles contained in the Resettlement Action Plan include the African Development Bank's Operational Safeguard 2: "Involuntary Resettlement: Land Acquisition, Displacement and Compensation".

General principles of the resettlement plan

Analysis of criteria for the Resettlement Action Plan

The strategic environmental assessment recommends that the resettlement action plan should be avoided as much as possible, by studying all conceptualisations and other realistic alternatives for implementing the Agropole project. However, in cases where resettlement is necessary and unavoidable, it is recommended that resettlement activities be planned and implemented in the form of a development programme, which provides internally displaced persons with adequate means to enable them to enjoy the benefits of resettlement. The displaced population should therefore be consulted before the start of operations and be allowed to participate in the planning and implementation of resettlement programmes. The resettlement plan should be based on an analysis of the following elements: (i) programme design alternatives and options to reduce displacement and resettlement; (ii) appropriate measures to reduce, mitigate and compensate for adverse effects that may affect the biophysical and human environments; (iii) provisions made to prepare the resettlement plan; (iv) proposed criteria to determine the eligibility of displaced persons to receive compensation and any other form of resettlement assistance; (v) and finally, the identification of resettlement sites, land-related matters, local resources and basic socio-economic facilities.

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Analysis of the feasibility and implementation of the resettlement plan

The feasibility of the resettlement plan should be carefully studied to make sure that when it is implemented: (i) internally displaced persons should be assisted and supported in their efforts to improve and rebuild their livelihoods and standard of living; (ii) the standard of living after resettlement should be more favourable when compared to the situation in which they started; (iii) compensation to internally displaced persons should be effected at full replacement cost and before the start of operations; (iv) the special needs of the poorest and most vulnerable groups should be fully addressed; (v) the social and economic inclusion of internally displaced persons in the host community should be properly conducted; (vi) the provision of land, infrastructure and other compensation to the affected population should be effective.

The resettlement principles and procedures outlined above should apply to all project components that may result in resettlement, and to any other related activities that may need to be planned for implementation.



ESIA Terms of reference

Introduction and background

This section will be completed at the appropriate time and should provide the necessary information on the background and the methodology used.

Objectives of the study

This section will highlight (i) the objectives and activities of the Project planned under the sub-project, and (ii) identify activities that may have environmental and social impacts and require appropriate mitigation measures.

The Consultant's Terms of Reference

The consultant's assignment will be to: (a) describe the biophysical characteristics of the environment in which the sub-project activities will be carried out, and identify the major constraints that should be taken into account at the time of site preparation, construction and during the installation of equipment and during operation; (b) assess the potential environmental and social impacts due to the Project activities and recommend appropriate mitigation measures including cost estimates; (c) assess the requirements for collection, disposal and infrastructure management of solid and liquid waste and make recommendations; (d) review the respective national environmental policies, legislation, and administrative and institutional frameworks with respect to the donor's safeguard policies, state which of these policies is applicable to the Project activities, identify any shortcomings that may exist and make recommendations to address them as they relate to activities of Agropole (e) identify responsibilities and actors to implement the proposed mitigation measures; (f) assess the available capacity to implement the proposed mitigation measures, and make appropriate recommendations, including training and capacity building needs and their costs; (g) prepare an Environmental and Social Management Plan (ESMP) for the Project. The ESMP must highlight (i) the potential environmental and social impacts resulting from the Project activities and taking into account the mitigation measures listed in the ESMF mitigation check-list; (ii) the proposed mitigation measures; (iii) the institutional responsibilities for implementing the mitigation measures; (iv) the monitoring indicators; (v) the institutional responsibilities for monitoring the implementation of mitigation measures; (vi) cost estimates for all these activities; and (vii) the schedule for implementing the ESMP; (h) Public consultations. The environmental and social impact assessment findings and proposed mitigation measures will be shared with the population, NGOs, local government and the private sector operating in the area where the activity will be carried out. The minutes of this consultation will be included in the report.

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IV. Report Outline

Cover page

Table of contents

List of abbreviations

Executive summary (in English and French if need be)

Introduction

Description of the activities of the proposed sub-project carried out within the framework of the Agropole

Description of the Project implementation site

Description of the policy, institutional and regulatory framework

Methods and techniques used in assessing and analysing the impacts of the proposed Project

Description of the environmental and social impacts of the various proposed Project components



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Project's Environmental and Social Management Plan (ESMP) including measures for mitigating the negative impacts and improving the positive impacts of the proposed Project, implementing actors, monitoring and monitoring indicators as well as the various actors to be involved.

Recommendations

References

List of individuals/ institutions contacted

Summary Table of Environmental Management Plan

V. Consultant's profile

The Consultant must be approved by the Ministry in charge of the Environment to carry out impact studies.

DURATION OF THE STUDY AND SPECIALISATION

The duration of the study will be established depending on the project type.

FINAL REPORT PRODUCTION

The consultant will produce the final report upon receipt of feedback from Agropole and DEEC. The final report should incorporate all the feedback.





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