

Annex A

Chinguetti Project SIA Terms of Reference

Woodside Mauritania Pty. Ltd.

**Chinguetti Development
Project: Social Impact
Assessment**
Terms of Reference for SIA

May 2005

Reference: 0024310

For and on behalf of Environmental
Resources Management Australia Pty Ltd

Approved by: Keryn James



Signed:

Position: Project Director

Date: 20 May 2005

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INTRODUCTION

Woodside Mauritania Pty. Ltd. (Woodside) has commissioned Environmental Resources Management Australia Pty Ltd (ERM) to conduct a Social Impact Assessment (SIA) for the Chinguetti project (the Project) in Mauritania.

This document was reviewed by stakeholders in a draft format during a series of workshops in Nouakchott, Mauritania, and Dakar, Senegal during March 2005. A report on the mission will be published in May 2005.

A Terms of Reference Development Report has been prepared that outlines the basis for the scope of the ToR. The ToR Development Report document is available to stakeholders by contacting Woodside.

2.1**PROJECT DESCRIPTION**

A summary project description has been provided to stakeholders in the Chinguetti Development SIA Information Pack. Additional copies are available on request to Woodside.

A detailed project description has been published in the Project's Environmental Impact Statement (EIS) and is also available on Woodside's website at www.woodside.com.au.

2.2**SOCIAL IMPACT ASSESSMENT AND SUSTAINABILITY**

The SIA is one of a number of initiatives being undertaken by Woodside to enhance the contribution of its operations to the development of Mauritania. Other significant activities include:

- providing capacity building in Environmental Impact Assessment (EIA);
- local procurement, employment and oil industry capacity building (at including requirements under the terms of the Production Sharing Contract);
- providing leadership in oil spill emergency response capability planning in Mauritania and Senegal including developing the capacity of Government authorities to respond to any oil spill incidents in the busy shipping lanes off these coastlines; and
- corporate social investment projects including an investment by Woodside (in excess of AUD\$1m in 2005) in Groupe Projet de Chinguetti (GPC), which will ensure GPC personnel have access to training providers and are prepared for the commencement of first oil production in 2006.

SIA is a systematic process to examine potential socio-economic impacts of a project with the objectives of reducing negative impacts on local communities and wider society and optimising potential benefits. The process is strongly enhanced by the participation of those most likely to be impacted and other stakeholders (ie those affected by, or who are able to affect, the project).

3.1**OBJECTIVES**

The SIA for the Chinguetti Development Project is proposed to be undertaken in accordance with 'best-practice' approaches on similar projects in the oil and gas industry and adhering to guidelines published by International Finance Corporation (IFC) and others. The applicable standards are set out in the Terms of Reference Development Report.

It is intended that the SIA will:

- identify and characterise potential social and economic issues, including transboundary issues, and risks related to project activities;
- involve potentially Project Affected People and stakeholders in identification and assessment of opportunities and risks (through mechanisms identified in a published Public Consultation and Disclosure Plan);
- indicate ways in which potential adverse social and economic impacts can be avoided, minimized or mitigated;
- assess risk and how this can be managed;
- indicate ways in which the Project can contribute to sustainable development;
- communicate specific Woodside commitments and establish responsibilities;
- formulate a social management and monitoring plan which is likely to be integrated with the Project's environmental management plan and will include an unambiguous chain of responsibilities within the Project; and
- assess government and Operator capacities to manage the Project's social and economic issues and proposing measures to reinforce these capabilities.

3.2**OVERVIEW OF PROCESS**

The Chinguetti Development Project SIA will be the first SIA for the oil industry in Mauritania.

The Project is regulated by the Ministry of Oil and Energy under the terms of the Production Sharing Contract. The Ministry has authority oversight of the SIA. It is expected the following process will occur:

- Draft ToR are reviewed by Government and stakeholders;
- ToR finalised by SIA consultants;
- preparation of Draft Social Impact Assessment (including stakeholder participation) by consultants;
- Government and stakeholders invited to comment on the Draft SIA;
- preparation of final SIA by consultants; and
- preparation of detailed social management and sustainable development plans.

3.3

SCOPING CONSULTATION

Since September 2004, ERM has been scoping the SIA. From November 25 to December 13, 2004, a team of ERM and Woodside personnel visited Senegal and Mauritania to engage with stakeholders, collect data and identify the main issues likely to be associated with the Project.

Details of this consultation and earlier consultations during the Project's Environmental Impact Assessment (EIA) are provided in the Project's Public Consultation and Disclosure Plan available from Woodside upon request.

As the Project is almost all offshore, no planned resettlement will take place. Onshore activities are limited to the port, airport, accommodation/offices and waste management facilities. In the FSPO's surroundings, proposed exclusion zones are unlikely to have significant impacts on industrial fishing and will be via the Fisheries Interaction Management Plan that is being developed in parallel with the SIA.

The SIA work will take into account the entire territory of Mauritania to study the consequences of the Project on the country's economy, the effects of increased public sector revenues and spending, and on overall social conditions. This analysis will attempt to define and provide measures to detect cultural impacts. The economic impacts on other countries in the region will not be assessed.

In Nouakchott, the focus will be on communities neighbouring the existing waste management facility and the port and those with the most disadvantaged residents.

Another area of interest is the coastal areas in Mauritania, particular those located in the Parc National du Diawling, and the northern settlements in Senegal on the coastline from Dakar to St Louis.

The SIA will consider impacts from the planning, construction, operation and decommissioning phases of the Project.

ERM has been commissioned to carry out the assessment and will be responsible for the SIA. ERM will collaborate with *Office National des Statistiques* (ONS - National Office of Statistics) and Tenmiya (a Mauritanian Non-Government Organisation) to undertake baseline data collection. In Senegal, ERM will work with *Ecole Nationale D'Economie Appliquee* (ENEA). Local consultants will be paid for by Woodside and directed by ERM.

4.3 SCOPING

The Terms of Reference comprise eight tasks:

4.3.1 Task 1: Description of the Proposed Project

The consultant will concisely describe and map the Project, its location and the general layout of facilities. Information on construction activities, procurement plans and timescales, facilities and services, operation and maintenance activities will be included. Employment and training components of the Project will be described and the legislative context for conduct of the SIA will be summarised. This description will be based on Woodside's reports (including EIS), schemes and maps, as well as interviews with relevant Woodside staff.

4.3.2

Task 2: Description of the Baseline Social Environment

The consultant will collect, collate and present baseline information on the social, economic and health characteristics of the pre-Project situation of the targeted areas. This task involves compiling existing documentation and data (Annex A), consultation, and quantitative and qualitative surveys.

Data Gaps

Table 4.1 summarises the statistical information and data currently available and identifies gaps in data required for the baseline (ie. the probable future without the Project). Data gaps required for the baseline are shaded in grey. More detailed information of the Project area (includes Nouadhibou, Parc National du Banc d'Arguin (PNBA), Parc National du Diawling (PND) and the villages north and south of Nouakchott) will be collected where available to provide an accurate account of the current socio-economic status of Project affected areas. A mission during May/June 2005 will verify the data gathered with key stakeholders and civil society groups. The mission will establish household surveys in the affected regions, if required, to collect information critical to the accurate assessment of Project risks and identification of appropriate mitigation measures.

Table 4.1 Summary Status of Data Collection

- A - Available
- L - Limited information is available
- TBD - More detailed information is needed
- NA - Not available

Data	National	Nouakchott	Coastal Villages
▪ Demographics	A	L	L
▪ Ethnicity, Religion, Language, World Heritage sites	A	A	TBD
▪ Religious and Cultural sites	A	A	TBD
▪ Employment and Livelihood	A	NA	TBD
▪ Land Use / Ownership	A	L	NA
▪ Economic indicators - macro and micro	A	NA	NA
▪ Infrastructure, Roads and Communication	A	A	NA
▪ Social Services	A	L	NA
▪ Legal Requirement and Framework	L	TBD	NA
▪ Stakeholder consultation Requirement / Policy	L	TBD	NA

The baseline will focus on the identified vulnerable social groups.

Key Components for Inclusion in Baseline Profile

The description of the baseline in Mauritania will include factors shown in Table 4.2.

Table 4.2 Factors for Inclusion in Baseline Profile

Economic	Social
<ul style="list-style-type: none"> • GDP and regional economic output • Sector output • Employment • Wage levels • Exports/imports • Govt fiscal position • National and regional debt • Tax rates/disposable incomes • Cost curve position of iron ore industry • Foreign ownership • Opportunities for sustainable development 	<ul style="list-style-type: none"> • Health • Education levels • Income source dependency • Expenditure/resource use patterns • Employment / barriers to employment • Skills • Family and demographic structures • Ethnicity/cultural characteristics • Community networks • Access to basic services (potable water, energy, transport) • Land/wealth ownership patterns • Culturally significant sites • Opportunities to reduce poverty
Political context	
<ul style="list-style-type: none"> • Institutional arrangements • Customary decision-making structures • Conflict resolution mechanisms • Social mapping 	

Surveys

Qualitative surveys will be conducted among the fishing communities of the coastal villages in Mauritania and Senegal. The primary focus of these surveys will be to verify existing data for these communities in relation to livelihoods and socio-economic conditions including the degree of dependence of livelihoods on fishing.

Local consultants teams have proven experience in undertaking social and economic surveys and contain an economist, a sociologist, a statistician, and researchers. *Office National des Statistiques* (ONS) will validate the methodology, questionnaires and results of any quantitative work. ERM will provide training and support to the local consultant team through in-country visits.

This work will verify and complement existing data and studies compiled by the consultants teams in Mauritania and Senegal. Data to be collected through surveys will include:

- inventory of income generating activities;
- structure of revenues of the communities and within households, including a distinction between fishery related income and other income;
- rate of population working in non-fishing sector;

- inventory of social infrastructure;
- education (literacy, schooling) and health coverage; and
- access to potable water.

The baseline in Nouakchott will be based on existing statistics and data that ONS and the Communauté Urbaine de Nouakchott (CUN) will provide. Qualitative surveys will be undertaken on the urban poor, ethnic minorities and women of Nouakchott. They will be carried out by local consultants under ERM's supervision and in collaboration with the (ONS – National Office of Statistics).

Qualitative work will also be undertaken with the business community in Nouakchott and managers in the export sectors to assess skills and resources available for development of oil related industries.

4.3.3 Task 3: Legislative and Regulatory Framework

The consultant will document the pertinent regulations and standards governing SIA nationally and internationally, including relevant World Bank Safeguard Policies and IFC Guidelines. The consultant will also document the relevant international and regional (ie. West African) agreements.

4.3.4 Task 4: Determination of the Potential Impacts of the Project

The determination of potential social impacts involves consultation to test expert evaluation. It will encompass identification and prioritization (characterisation, prediction of magnitude and evaluation of significance) of negative impacts and identification of sustainable development opportunities that might bring about changes in the baseline socio-economic conditions discussed in *Task 2*.

Task 4.1: Determination of Potential Impacts

The determination of potential impacts will pursue the following steps:

- description of the impact (nature and extent);
- stakeholders likely to be affected by the impact and their perceptions of the impact; and
- assessment of the significance of the impact based on quantitative data, stakeholder feedback and experience of other projects and in other locations in Mauritania.

This approach will take into account indirect and cumulative impacts. Analysis will separate routine from non-routine (eg. oil spill) impacts.

Routine Impacts

The consultant's assessment of routine impacts will involve the following issues:

Social:

- employment/family standards of living;
- skills development;
- regulator capacity building;
- migration movements within and to Mauritania and induced impacts, in particular on poverty and health;
- impact on urban poverty in Nouakchott;
- inequality and impoverishment;
- tourism; and
- internal political stability and human rights.

Health:

It is expected that health issues could emerge indirectly from migrations due to the Project. Indirect impacts would include: potential increase in diseases, especially AIDS and Sexually Transmittable Diseases (STD), malaria and water-borne diseases.

Economic:

- Micro Impacts – impacts that will occur in the vicinity of installations and affected communities:
 - disruption to existing livelihoods (eg. fisheries) – actual, potential and perceived, in Mauritania and northern Senegal;
 - direct, indirect and induced employment creation;
 - changes in the labour market;
 - local procurement; and
 - localised inflation.
- Macro Impacts - impact that will primarily be experienced at the national level.
 - national level procurement;
 - local procurement by workforce;

- contribution to government revenues;
- government procurement;
- value added of the Project;
- contribution to GDP and exports; and
- any possible distortions and adverse effects on other sectors of the economy.

Non-Routine Impacts

Assessment of non-routine impacts will focus on the remote possibility of a major oil spill from the Project.

- social vulnerability of coastal villages both in Mauritania and Northern Senegal, especially in the Parc National du Diawling;
- consequences of marine pollution on livelihoods and health; and
- Mauritania's relationship with Senegal due to existence of the Project and perceived oil spill risk to northern Senegalese coastlines.

Task 4.2: Identification of Sustainable Development Opportunities

This task aims to identify possibilities of turning social issues into opportunities to contribute to sustainable development. These may include capacity building, government training, support to community initiatives to cope with and adjust to the Project's potential impacts, and some procurement opportunities and technology transfer. Other potential areas for such opportunities include waste management and pollution prevention.

Following the completion of the detailed description and characterisation of impacts and opportunities, consultation with stakeholders will enable them to provide feedback and may provide additional information to correct or confirm the analysis of social impacts and opportunities.

4.3.5 *Task 5: Public Consultation Process*

During the SIA, the consultant will:

- consult with Project Affected People to enable data verification and data collection;
- consult with relevant government departments, local administrations, social and environmental NGOs, IGOs and professional organisations;
- provide opportunity for identified stakeholders to raise issues and concerns pertaining to the Project; and
- gather recommendations from stakeholders on mitigation measures.

This task will be carried out according to the Public Consultation and Disclosure Plan (PCDP) developed in parallel with these ToR. Significant input opportunities are: publication of the Draft ToR, publication of the Public Consultation and Disclosure Plan and publication of the Draft SIA. Consultation will include workshops and allow time to receive feedback from stakeholders at each step of the SIA. A timeline is contained in the PCDP, which is available upon request from Woodside.

4.3.6 *Task 6: Measures to Mitigate Negative Impacts and Develop Opportunities*

The consultant will identify potential negative impacts. An assessment of potential mitigation measures will be provided. This will necessarily involve consultation with relevant key stakeholders, including the Government of Mauritania and fishing communities. Such consultation is critical to ensuring identified mitigation measures are culturally and contextually appropriate. Woodside will be a party to these discussions and will make commitments on what it sees as its responsibilities (which will include responsibility for the strategies, practices and conduct of its key contractors).

4.3.7 *Task 7: Development of Social and Environmental Management Plan*

Monitoring is an important component of the proposed Social and Environmental Management Plan.

Monitoring will allow the Project to know when impacts are deviating from those predicted and provide a basis for remedial action to be taken by the appropriate parties. The effectiveness of mitigation strategies and investments can be judged through monitoring.

Best practice SIA and management of potential impacts includes monitoring and control of impacts with a social management system integrated with environmental management systems to streamline administration and reduce costs. Therefore, the current intention is to develop an integrated Social and Environmental Management Plan. The monitoring of this plan will include selection of key performance indicators for Woodside commitments suitable for public reporting.

Also, the management plan will delineate responsibilities, capabilities and needs for training, as well as timeframes for the implementation of the specified management and monitoring measures.

Consultation with Woodside and the Government of Mauritania will be undertaken on a draft plan before finalising the document.

4.3.8

Task 8: Presentation of Social Assessment Report

Following the completion of the Social and Environmental Management Plan, the consultant will prepare a Draft Social Impact Assessment presenting the Project, baseline environment, socio-economic impacts, report opportunities and management plan. This draft document will be available for comments by key stakeholders, following review by Woodside and the Mauritanian Government. The final report will then integrate this feedback.

The report will be structured as follows:

- Executive Summary;
- Table of Contents;
- Lists of Figures, Tables, Appendices, Acronyms and Abbreviations;
- Description of the Project;
- Social Safeguard Issues;
- Legislative and Regulatory Framework;
- Baseline Data;
- Description of Impacts and Significance;
- Social and Environmental Management Plan;
- Monitoring Policy/KPIs;
- List of References; and
- Appendices.

The timeline proposed for the SIA is summarised in *Table 5.1*

Table 5.1 *Key Dates in the Chinguetti SIA*

Stakeholder Deliverables	Timing
Draft Terms of Reference	March 2005
Terms of Reference Development Report	March 2005
Draft Public Consultation and Disclosure Plan	March 2005
Public Consultation and Disclosure Plan – 1 st Version	March 2005
Final Terms of Reference	April 2005
Draft Social Impact Assessment	August 2005
Social and Environmental Management Plan	August 2005
Final Social Impact Assessment	Tbc 2005*

* The timing of Final Social Impact Assessment will depend in part, on the review needs of the Government of Mauritania.

SKILL REQUIREMENTS OF CONSULTANT TEAM

Position	Tasks	Knowledge, skills, experience
Project Director	Oversees conduct of the project and manages program, budget and client interface. Reviews of outputs and signs off on all deliverables.	10 + years experience in social and environmental impact assessments, including infrastructure resource-oriented projects. Solid experience in working with multidisciplinary and international teams. Experience of working in Mauritania.
Project Manager	Manages day-to-day conduct of project, co-ordinates project team and study program, manages research and consultation, co-ordinates preparation of deliverables. Responsible for client interaction.	10 + years experience in community projects and corporate social investment programs. Solid experience strategic advice, social risk assessment, stakeholder consultation and external communications. Experience in managing multi-disciplinary projects and with transnational project teams.
Lead Economist and Technical Director	Advises on required research; contributes to assessment of project influence and issues; reviews economic sections of SIA.	5+ years experience of economic and financial appraisals of resource developments and energy projects. Knowledge of a wide range of economic and environmental economic impact assessment techniques.
Economist	Identifies data source requirements, conducts the economic impact assessment research (desktop and in-country) and reviews economic data to produce assessment of project influence and issues. Conducts necessary consultations in Mauritania and summarises outcomes. Prepares economic components of report.	Experience in macro economics and economic assessments, public policy issues and environmental economics. Experience working in Mauritania.
Lead Social Scientist	Directs social research; reviews draft reports.	5+ years experience in the integration of social and environmental issues into business operations. Experience of working at the level of identifying issues (through SIA, stakeholder consultation). Experience working in Mauritania.

Position	Tasks	Knowledge, skills, experience
Social expert	Identifies social issues and data source requirements; conducts the social impact assessment research (desktop and in-country); and reviews social data to produce assessment of project influence; conducts in-country consultations and summarises outcomes; manages in-country survey; prepares social and political components of reports.	Experience in social policy interpretation, social analysis, community mobilization, community and participatory analysis, and local capacity building and development. Experience working in Mauritania.
Lead Health Expert and Technical Director	Advises on required research; contributes to assessment of project influence and issues; reviews health aspects of reports.	5+ years experience in social and health impact, socio-economic risk assessments and development of social investment programmes. Experience in oil and gas projects and working in developing countries.
Health Expert	Identifies data source requirements; conducts the health impact assessment research (desktop and in-country); and reviews health and social data to produce assessment of Project influence; prepares health components of reports.	Experience in health impact assessment and community-based public health development projects. Experience working in developing countries.
Researcher	Refines Project description, compiles, reviews and assesses existing secondary data, prepares draft of PCDP, writes up consultation outcomes, assessment of Project influence and issues, and draft report.	Experience in community programs promoting sustainable development. Experience in planning, environmental management, health and community development. Experience in interpretation of statistics.
Local Economist (<i>Chef de Mission</i>)	Oversees conduct of the survey and manages local team, budget and client interface. Reviews and signs off on all local deliverables. Prepares economic components of survey report.	5 years + experience analysing micro-economic data in local communities. Strong knowledge of living conditions of coastal Mauritania.
Local Sociologist	Advises on data source requirement, sampling and questionnaire design.	5 year + experience in socio-economic and environmental impact assessment in public and private sectors. Sound knowledge of ethnic group and vulnerable groups. Knowledge of the coastal villages.
Local Health Specialist	Advises on data source requirement, assists in designing questionnaires, collects health data.	3 years + experience in public health programs and impact assessments. Knowledge of the coastal villages.
Local Statistician	Develops indicators and designs surveys.	5 year + experience conducting and designing surveys, including sampling; experience in developing poverty monitoring indicators.
Local Researchers	Conducts households and communities survey.	2 year + experience conducting surveys; knowledge of the living conditions of the coastal villages. Working knowledge of dialects.
Local Technical Assistant	Oversees data entry.	Proficiency in statistical software and data entry matrix. 3+ years experience.

Annex B

Project Description

Annex B

Project Description

Introduction

Chapter 2 of the Social Impact Assessment (SIA) describes the location of the Chinguetti Oil Field in location to Mauritania and Senegal. This annex provides supplementary project description information, including a comprehensive outline of the production sharing contract, other oil field developments in Mauritania and offshore project infrastructure.

Commercial Arrangements

Production Sharing Contract

The Production Sharing Contract (PSC) Area B Deepwater (PSCB) became effective on 21 July 1999 and sets the commercial framework for the development of the Chinguetti field. The PSC is a contract between the Chinguetti Project Joint Venture (JV), which is the organisation responsible for developing and operating the Project, and the Government of Mauritania. The Mauritanian Government has established a government-owned and operated company, Groupe Projet Chinguetti (GPC)⁽¹⁾, to manage the Government's 12% equity share in the Project. Parties to the PSC are shown in *Table B.1*.

Table B.1 **PSC Parties**

Public Sector PSC parties	Private Sector PSC parties
Ministry of Energy and Petroleum GPC	Chinguetti Development Project (JV) JV participants: <ul style="list-style-type: none">• Woodside Group• Hardman Group• BG Group• Premier Oil Group• Roc Oil Group

Woodside is the Operator of the Project on behalf of the JV participants. Woodside is Australia's largest publicly traded oil and gas exploration and production company with a market capitalisation of more than A\$22 billion (at August 2005). It operates more than 75 joint ventures on behalf of 39 participants in Australia, Africa and the USA.

⁽¹⁾ The Government of Mauritania is in the process of establishing a State-owned entity, the Société Mauritanienne des Hydrocarbures (SMH), to represent its interests in the emerging hydrocarbon sector.

The company sells liquefied natural gas, natural gas, crude oil, condensate and liquid petroleum gas around the world. With proved plus probable reserves of more than 1.3 billion barrels of oil equivalent, Woodside produces nearly 60 million barrels of oil equivalent a year. The company was formed in 1954 and has its headquarters in Perth, Western Australia. It has more than 2,800 staff.

PSC Terms – Local Content & Skilling for Oil Industry Development

The PSCB seeks to optimise employment and skills development of Mauritanian nationals and requires a plan for recruitment and training to be submitted for Government approval. Additionally, the PSCB requires the JV to provide oil industry training to Government staff or pay a minimum sum to the Department of Hydrocarbons to the value of US\$300,000 per year for the life of the Project. Preference is given to Mauritanian companies during procurement and work packages greater than US\$250,000 must be subject to full tender.

PSC Terms – Sources of Revenue

Project revenues are received by Treasury and via GPC. Each has a number of revenue sources.

Government

- Royalties in the form of a share of 'Profit oil' (broadly, proceeds of oil sales after development and exploration costs have been recovered from sales of 'Cost oil');
- Production bonus;
- Exploration fees;
- Company tax;
- Income tax;
- Real estate taxes; and
- Training payments (Article 12.2 of PSCB).

GPC

- Cost oil (cost recovery of share of capital expenditure);
- Profit oil; and
- Signing-on bonus from Stirling Energy ⁽²⁾.

Decisions relating to spending of revenue flows are the exclusive sovereign right of the Government of Mauritania. Government can choose how revenues are split

⁽²⁾ Stirling funding GPC to exercise its option to purchase 12% equity in the Project in exchange for a 60% share of future oil revenues

between Treasury and GPC and the PSC places no demands on the national budget appropriation process.

PSC – Other Oil Fields

A series of PSCs exist to guide development of oil fields in Mauritania (both offshore and onshore) – each with the potential to contribute towards cumulative impacts. The most evaluated discovery is the Tiof field which is considered to be at least two years from production of first oil.

The disclosed status of more advanced oil projects is summarised in *Table B.2*.

Table B.2 Mauritanian Oil Fields Under Development

Project Name	Operator	Location	Current Status
Tiof Oil Field	Woodside	PSC Area B Block 4 (25km north of Chinguetti field)	Discovered in 2002. Further appraisal and development studies ongoing.
Banda Gas / Oil Field	Woodside	PSC Area B Block 4 (15km east of Chinguetti field)	Discovered in 2003. Appraisal studies ongoing.
Pelican Gas / Condensate Field	Dana Petroleum	PSC Block 7 (150km north of Chinguetti oilfield)	Discovered in late 2003. Appraisal studies ongoing.
Tevet Oil Field	Woodside	PSC Area B Block 4 (10km east of Chinguetti)	Discovered in October 2004. Exploration and appraisal studies ongoing.

A map showing the oil fields under development in Mauritania is presented in *Figure B.1* (overleaf).

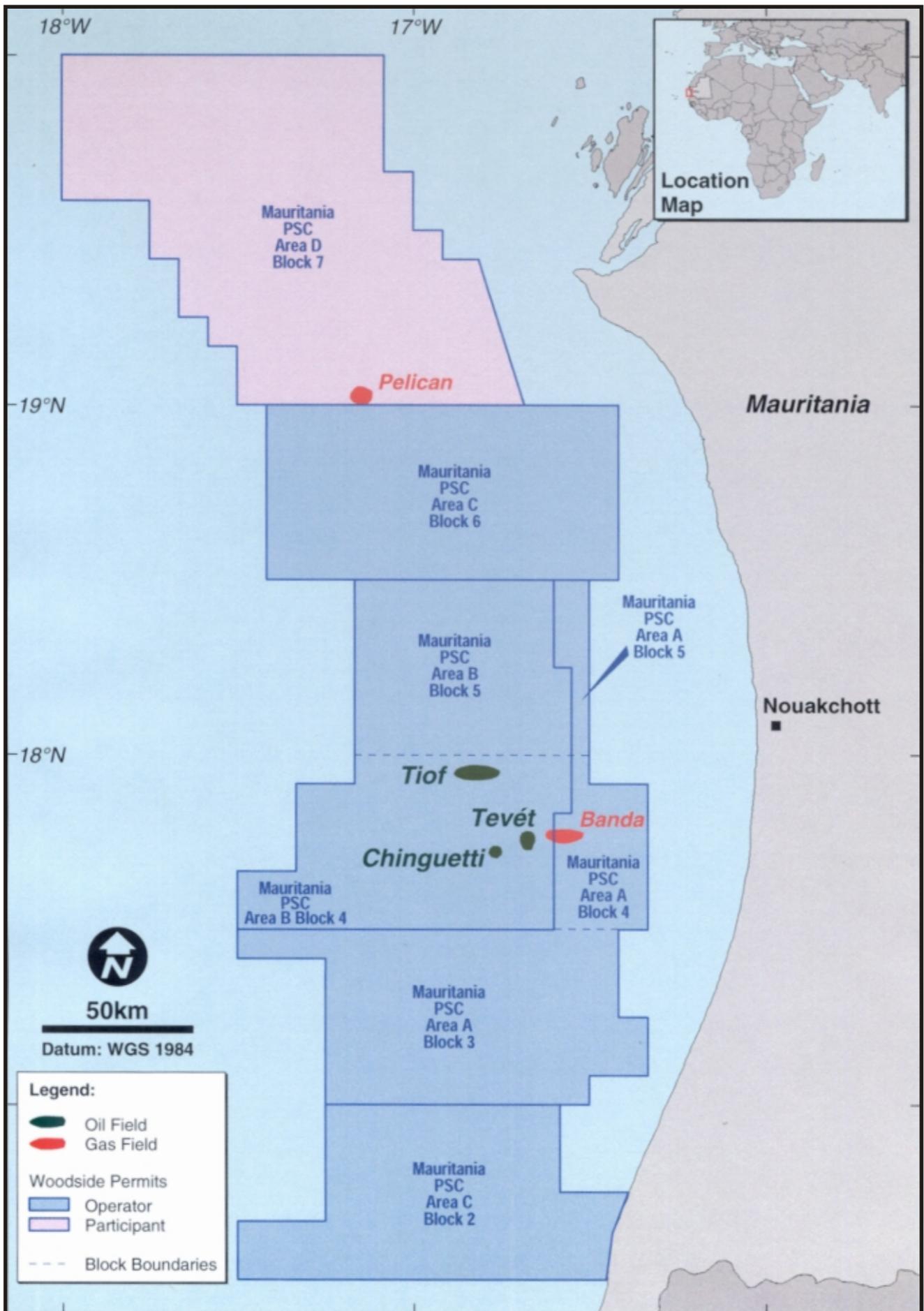


Figure B.1 Mauritanian Oil Fields Under Development

Project Infrastructure

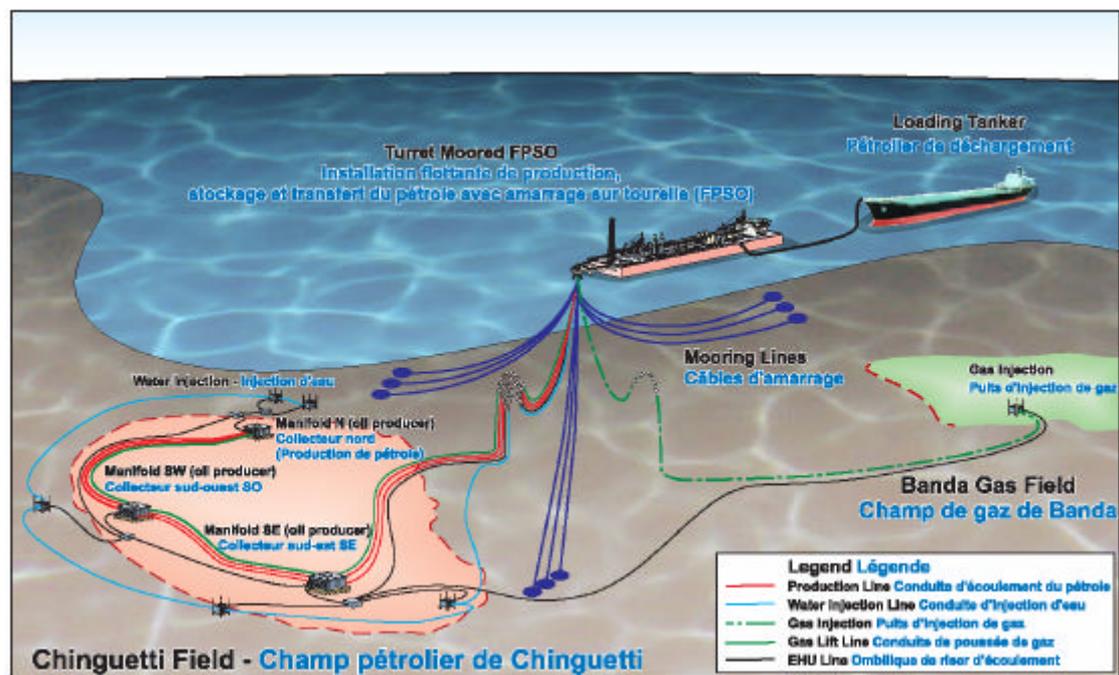
Offshore Components

The major elements of the Project are:

- six oil production wells drilled from three drilling centres/manifolds;
- five water injection wells to maintain pressure;
- one gas injection well, located approximately 15 km outside the field in the Banda gas field;
- associated flowlines and risers; and
- a single Floating Production Storage and Offtake (FPSO) facility receiving oil from the production wells, and returning gas from the oil reservoir to the gas injection well.

Figure B.2 shows a conceptual layout of the Project, including wells and other sub-sea equipment.

Figure B.2 Conceptual Layout of the Project (not to scale)



The FPSO facility design includes the placement of equipment on the seabed. The significance of this equipment is that it is incompatible with trawler fishing in the immediate production area. Produced formation water, once separated from the oil and treated to achieve the permitted discharge standard, will be discharged from the FPSO overboard.

The FPSO will be permanently moored at the field and oil stored aboard will be offloaded to trading tankers for export, with an expected 28 offloading operations per year. The FPSO has a production capacity of 75,000 barrels per day and will be capable of storing 1.6 million barrels of oil. *Figure B.3* shows a typical FPSO facility and offloading operation, similar to the facilities that will be in place for the Project.

Figure B.3 *Typical FPSO Facility and Offloading Operation*



The Project life is expected to be 8 to 10 years. However, this may be extended in the event of successful nearby discoveries or sustained higher oil prices. For the purpose of this study, a field life of 10 to 15 years has been assumed.

The decommissioning phase will aim to return the area to, as near as practicable, original conditions. The decommissioning of the FPSO will be relatively simple, involving disconnection from moorings and removal from site. A detailed decommissioning and abandonment plan will be prepared and submitted to relevant authorities before decommissioning commences, including decisions related to abandonment of sub-sea equipment.

A detailed description of offshore elements of the Project is published in the Project's EIS and is available on Woodside's website at www.woodside.com.

Annex C

Impact Assessment Methodology

Annex C

Detailed Methodology for Assessment of Impacts

Introduction

This annex provides supplementary information describing the methodology referred to in Chapter 3 of the Draft Social Impact Assessment (SIA) Report. This section describes the impact assessment methodology, the criteria for significance evaluation and explains the four steps involved in evaluating impacts.

Assessment Methodology

Assessment of impacts is essentially an objective exercise to determine what could potentially happen to society as a consequence of the Project. Each potential impact is categorised according to various parameters that assist in the process of impact assessment and classification.

The types of impacts and terminology used in this assessment are shown in *Table C.1*.

Table C.1 *Impact Assessment Terminology*

Term	Definition
<i>Grouping of Impact</i>	
Routine Impact	Occur as a result of expected common or regular Project activities
Cumulative Impact	Occur where more than one aspect of this Project, or other projects, act together to cause an impact greater than either single aspect.
Non-routine Impact	Occur as a result of exceptional events not expected to occur (in this case oil spills from the Chinguetti Project)
<i>Impact Type</i>	
Direct Impact	<ul style="list-style-type: none">the 'first round' change clearly caused by the Project to the socio-economic structure (eg. employment opportunities, increased level of income for Project employees)
Indirect Impact	<ul style="list-style-type: none">the secondary impacts that are caused by human response to the change caused by the direct impact (eg. hiring workers to create products being bought by the Project)
Induced Impact	<ul style="list-style-type: none">third level impacts caused by a change in the Project environment (eg. employment opportunities created by the increased disposable income of workers hired by the Project or its suppliers)
<i>Impact Nature</i>	
Negative Impact	An impact that is considered to represent an adverse change from the baseline, or introduces a new undesirable factor
Positive Impact	An impact that is considered to represent an improvement on the baseline or introduces a new desirable factor
<i>Consideration Factors</i>	
Duration	<ul style="list-style-type: none">Low: < 2 yearsMedium: 2 – 10 yearsHigh: > 10 years
Scope	<ul style="list-style-type: none">Low: Less than 200 householdsMedium: >200 <10,000 householdsHigh: >10,000 households

Term	Definition
Manageability (cost / complexity)	<ul style="list-style-type: none"> • Low (-): low cost / complexity • Low (+): high complexity • High (-): high cost / complexity • High (+): very effective and at a low cost
Ability to adapt	<ul style="list-style-type: none"> • Low (-): Affected people can easily adapt • Low (+): Potential beneficiaries have difficulty adapting • High (-): Affected people have difficulty adapting • High (+): Potential beneficiaries can easily adapt
<i>Severity (if impact is negative): determined through a qualitative combination of consideration factors (duration, scope, manageability and ability to adapt)</i>	
Low	<p>Ideally, a short-term, easily managed impact affecting a small number of households that will be able to adapt to the changes in livelihood with relative ease</p> <p>Or, an equivalent qualitative judgement on the combination of duration, scope, manageability and ability to adapt</p>
Medium	<p>Ideally, a medium term impact that effects a large part of or full settlement. People will be able to adapt but only if supported at some cost to the Project / government</p> <p>Or, an equivalent qualitative judgement on the combination of duration, scope, manageability and ability to adapt</p>
High	<p>Ideally, an irreversible, long term impact on a national or trans-national scale, impact only manageable at a very high cost to the Project/government as those affected will not be able to maintain their pre-impact livelihood</p> <p>Or, an equivalent qualitative judgement on the combination of duration, scope, manageability and ability to adapt</p>
<i>Desirability (if impact is positive): determined through a combination of consideration factors (duration, scope, manageability and ability to adapt)</i>	
Low	<p>Ideally, a short-term impact, affecting a small number of households, multiple stakeholder interaction required, potential beneficiaries likely to have substantial capital or influential social networks</p> <p>Or, an equivalent qualitative judgement on the combination of duration, scope, manageability and ability to adapt</p>
Medium	<p>Ideally, a medium-term impact available to a large part of or whole settlement. Realisation of potential benefits comes at a cost to the Project / government, potential beneficiaries would require to invest time or capital in order to realise the opportunity</p> <p>Or, an equivalent qualitative judgement on the combination of duration, scope, manageability and ability to adapt</p>
High	<p>Ideally, a long-term national and trans-national benefit, realised without additional cost to the Project / government, potential beneficiaries not required to sacrifice anything to realise the opportunity</p> <p>Or, an equivalent qualitative judgement on the combination of duration, scope, manageability and ability to adapt</p>
<i>Impact Likelihood</i>	
Low	It is more likely that the impact will not occur, than it will occur
Medium	It is more likely that the impact will occur, than to not occur
High	The impact has already occurred or it is guaranteed to occur
<i>Impact Significance (of residual impact after mitigation is applied)</i>	
Negligible	<ul style="list-style-type: none"> • Magnitude of change comparable to existing economy / society
Minor	<ul style="list-style-type: none"> • Detectable but not significant
Moderate	<ul style="list-style-type: none"> • Significant, amenable to mitigation, should be mitigated (if negative impact) • Significant, of material importance to society / economy (if positive impact)
Major	<ul style="list-style-type: none"> • Significant, mitigation remains critical (if negative impact) • Of major significance, will have a long lasting beneficial impact to society / economy

A decision making flow chart for the assessment and final classification of residual impacts is shown in *Figure C.1* (overleaf).

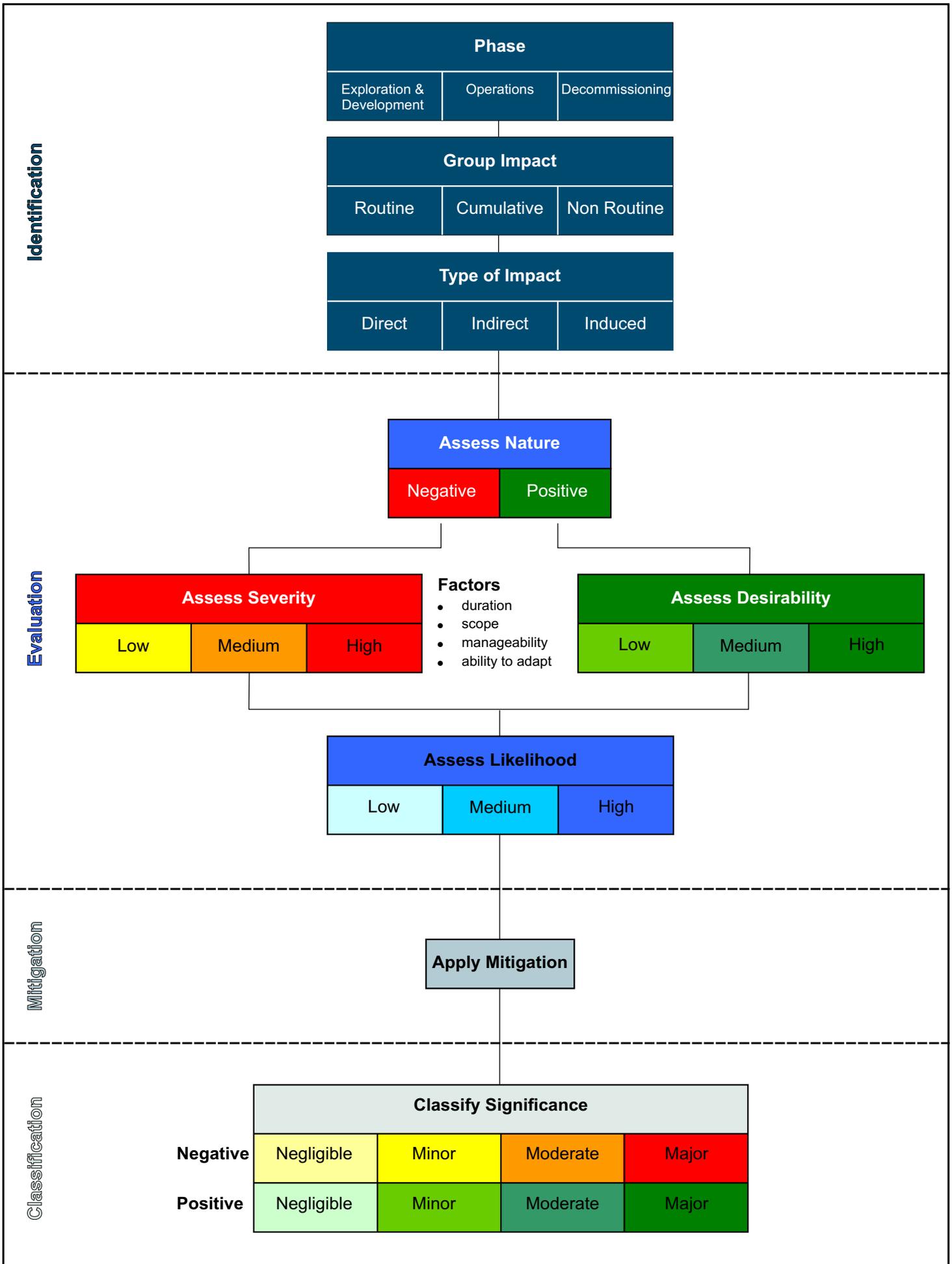
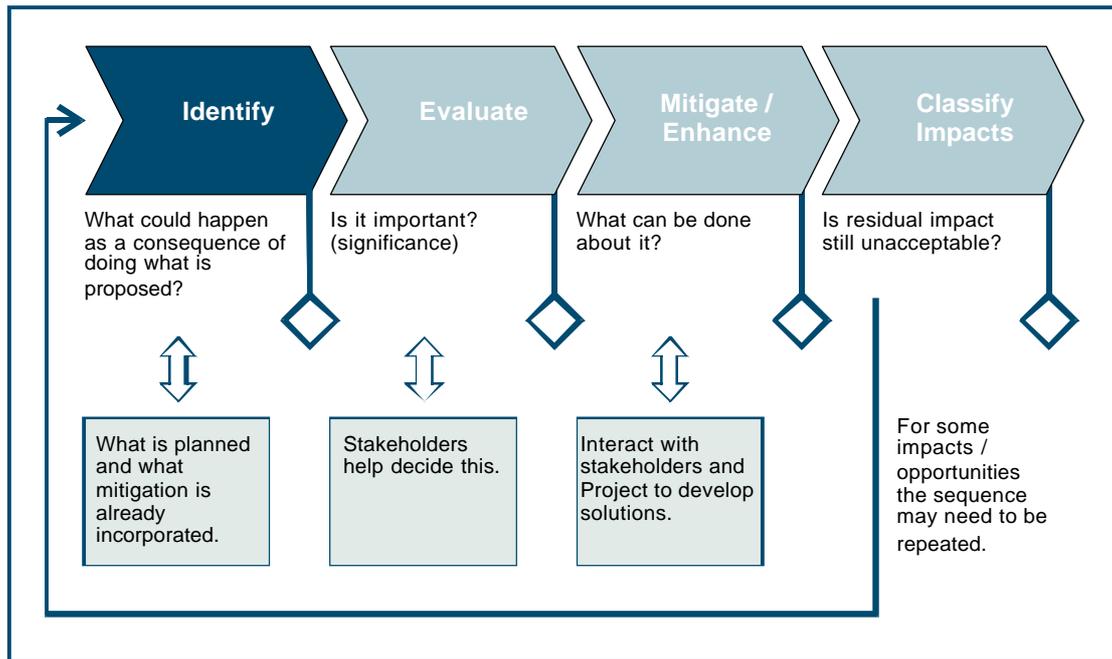


Figure C.1 Impact Assessment Decision Making Flow Chart

Impact Assessment Step 1: Impact Identification



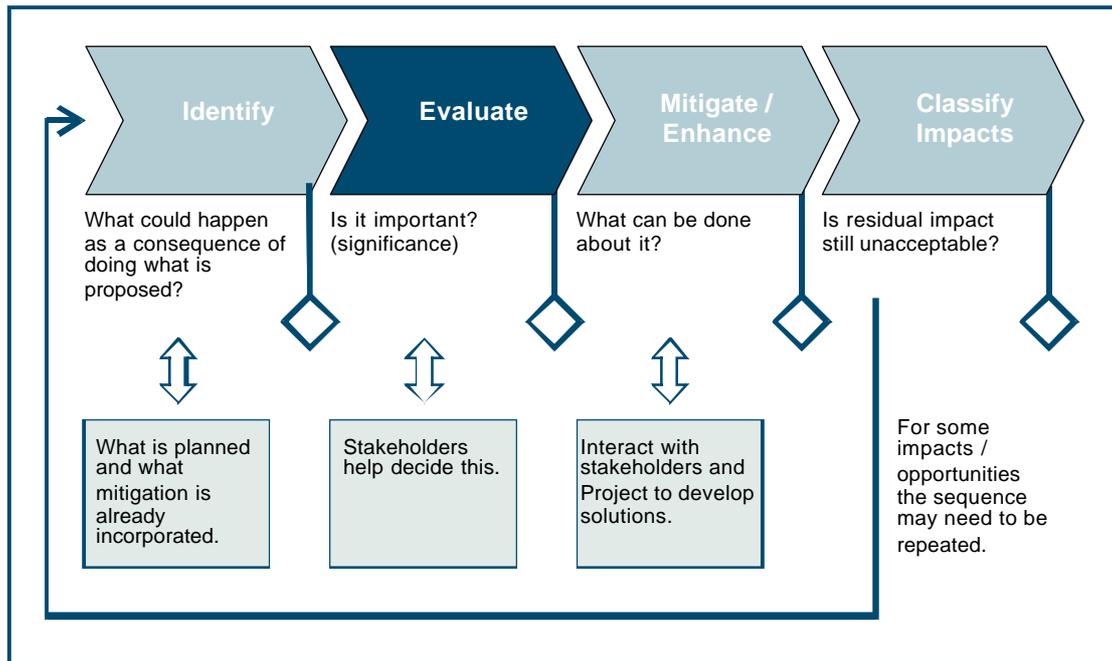
Much of the impact identification was done as part of site visits and consultation and interviews undertaken for scoping and baseline data collection.

Impacts are identified by systematic analysis of the Project by its phases – in this case: exploration and development (completed or in progress), operation and decommissioning.

Case studies from the literature of impacts elsewhere were useful to interpret the Project context. Semi-structured interviews were conducted with several stakeholders to allow ‘triangulation’ to better define any specific issues and validate reasoning of cause and effect.

The limitation of this analysis relates to data reliability and to uncertainties around the Project. Particularly significant uncertainty relates to the interaction of the national Government as regulator, JV participant, manager of macroeconomic policy and arbiter of public spending priorities.

Impact Assessment Step 2: Impact Evaluation

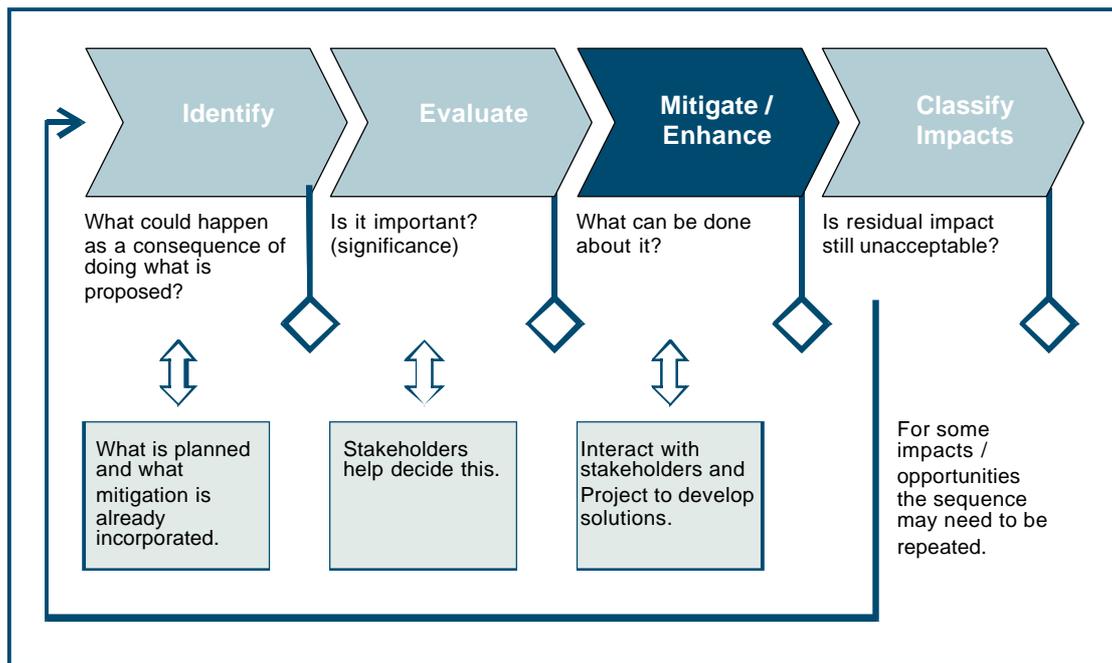


The impact evaluation process involved preparation of matrices that allowed systematic documentation and assessment of Project aspects, impacts and consequences and Project Affected Peoples (PAPs) likely to be affected. A preliminary assessment of the significance of these impacts was then made. The relative significance of the impact was attributed based on research, interviews with PAPs and other stakeholders, and qualitative analysis.

Limits to the analysis relate to the availability and reliability of data and to the complexity associated with assessing and predicting social change, community values and development.

Where impacts could be predicted with a meaningful level of certainty, they were considered in terms of the outcome (positive or negative) and magnitude of the change. Specifically, significance of impacts was evaluated relatively using three severity (negative impacts)/desirability (positive impacts) criteria and three levels of impact likelihood. These terms are defined in *Table C.1*.

Impact Assessment Step 3: Impact Mitigation / Enhancement



A mitigation strategy was identified for each impact to either minimise the potential negative impacts or optimise the potential positive impacts. For negative impacts, sequential approach to mitigation is to:

- (1) avoid Project activity;
- (2) create barriers to reduce the threat of the impact; and
- (3) create barriers to prevent escalation of the effects of the impact.

For positive impacts, it is possible to implement enhancement mechanisms to ensure the relative benefits to the Project are maximised.

The strategies are based on current or proposed Woodside activities, case studies, impact assessment literature, best-practice and consultation with stakeholders.

The greatest areas of uncertainty exist around the role of the Government in managing social impacts. It is important to note that Woodside and the other Joint Venture (JV) partners do not seek to replace the role of Government or identified “Other Stakeholders”.

Subsequent uncertainties involve the participation of PAPs in JV initiatives and in particular, strategies which rely on the effectiveness of new partnerships involving the JV and governments, private sector organisations, non-government organisations and community representatives. The level of commitment, effectiveness of strategic choices, capability of participants and availability of resources will influence the ultimate degree of success achieved by the Project in managing the social impacts.

Consultation During Impact Identification, Evaluation And Mitigation

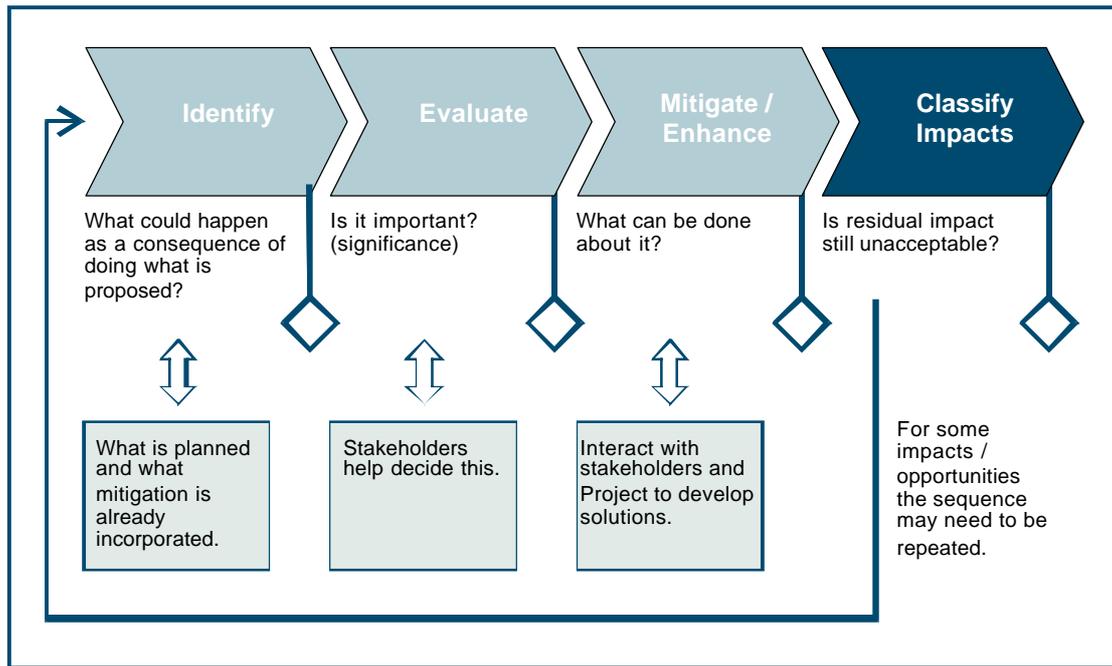
The in-country components of the impact identification, evaluation and mitigation phases included:

- *28 May to 9 June 2005.* The purpose of this consultation was primarily to complete the baseline SIA data. Activities included small group meetings (89 in total), as well as some village meetings with the Chief of the Village and advisory councils. In several locations, groups considered potentially vulnerable (women, urban poor) were consulted separately.
- *12 July to 23 July 2005.* This round of stakeholder engagement was used to verify the baseline data gathered and consult with stakeholders on the impact assessment for the Chinguetti Project.

Discussions were held during the July 2005 mission regarding the preliminary evaluation of some of the identified impacts. However, as the evaluation criteria were not yet finalised at that time, the discussions were of a more general nature, based only on the intuitive feel from the participants regarding the impacts. Testing of the strategies had been planned for workshops originally scheduled in August, 2005.

Given the postponement of these workshops due to in-country political events, testing and endorsement of the strategies with Mauritanian and international stakeholders will occur in December 2005 and January 2006.

Impact Assessment Step 4: Classification of Residual Impacts



The overall significance of the foreseeable residual impacts following mitigation was classified in accordance with *Tables C.2, C.3 and C.4*. Separate criteria have been developed for positive social impacts, negative social impacts and health impacts.

Separate evaluation criteria are used to assess the significance of impacts that will arise in the event of an oil spill. The criteria are explained in *Section 5.10*.

Evaluation of the relative acceptability of residual impacts will benefit from the input of stakeholders.

Table C.2 Criteria for Evaluation of Significance – SEVERITY (Negative Social Impacts)

Factors				Significance Assessment			
Duration	Extent	Manageability	Ability to adapt	Severity	Low likelihood	Medium likelihood	High likelihood
The impact to livelihood will be short-term	Small number of households	(High) The impact to livelihood can be easily managed to an acceptable degree, without significant cost to the project / government	(High) Those affected will be able to adapt to the changes to livelihood with relative ease, and maintain pre-impact livelihood	Low severity	Negligible	Minor	Minor
The impact to livelihood will be medium-term	Large part of / full settlement	(Medium) The impact to livelihood can be managed, but only with some cost to the project / government	(Medium) Those affected will be able to adapt to changes, with some difficulty, and maintain pre-impact livelihood, but only with a degree of support	Medium severity	Minor	Moderate	Moderate
The impact to livelihood will be long-term / irreversible	National / Trans-national	(Low) The impact to livelihood cannot be managed, or only at a high cost to the project / government	(Low) Those affected will not be able to adapt to changes and continue to maintain pre-impact livelihood	High severity	Moderate	Major	Major

Table C.3 Criteria for Evaluation of Significance – DESIRABILITY (Positive Social Impacts)

Factors				Significance Assessment			
Duration	Scope	Manageability	Ability to adapt	Desirability	Low likelihood	Medium likelihood	High likelihood
The impact to livelihood will be short-term	Small number of households	(Low) Realisation of the opportunity requires complex interaction of multiple stakeholders	(Low) To realise the opportunity, the potential beneficiaries need to have substantial capital (> 3 months household salary) or influential social networks or extensive job training	Low desirability	Negligible	Minor	Minor
The impact to livelihood will be medium-term	Large part of / full settlement	(Medium) The opportunity can be achieved, but only with some cost to the Project / government	(Medium) Potential beneficiaries would need time or capital equal to between 1 – 3 months household income	Medium desirability	Minor	Moderate	Moderate
The impact to livelihood will be long-term / irreversible	National / Trans-national	(High) The impact to livelihood requires no management by the Project or requires management that adds no cost to the Project / government	(High) Potential beneficiaries would realise the opportunity without noticeable sacrifice	High desirability	Moderate	Major	Major

Table C.4 Criteria for Evaluation of Significance – Health Related Impacts

Element	Factors				Significance Assessment			
Health outcome	Duration & Frequency	Extent	Manageability	Sensitivity	Severity / Benefit	Low likelihood	Medium likelihood	High likelihood
Event resulting in annoyance, minor injuries or illness that do not require hospitalisation.	The impact to health will be short-term. Frequency of impact will be low	Small – limited Individual /household	(High) The impact to health can be easily managed to an acceptable degree.	(High) Those affected will be able to adapt to health impacts with relative ease, and maintain pre-impact levels of health	Low severity	Negligible	Minor	Minor
Event resulting in moderate injuries or illness which may require hospitalisation.	The impact on health will be medium-term Frequency of impact medium or intermittent	Medium – localised Small number of households	(Medium) The impact to health can be managed at cost to the project / government	(Medium) Those affected will be able to adapt to health impacts, with some difficulty, and maintain pre-impact levels of health, but only with a degree of support	Medium severity	Minor	Moderate	Moderate
Catastrophic event resulting in loss of life, severe injuries or chronic illness requiring hospitalisation.	The impact on health will be long-term/ irreversible The frequency of impact will be constant	Impact extends beyond the site (regional, national or international)	(Low) The impact to health cannot be managed.	(Low) Those affected will not be able to adapt to health impacts and continue to maintain pre-impact health levels	High severity	Moderate	Major	Major

Annex D

**D.1 Baseline Profile: National
(Mauritania)**

**D.2 Baseline Profile: Region
of Nouakchott**

**D.3 Baseline Profile: Coastal
Settlements Between
Nouadhibou and Dakar**

Annex D1

Baseline Profile: National

Introduction to the Baseline

The three distinct geographic components of the baseline are contained in three separate annexes for ease of reference.

Table D1.1 *Baseline Content Summary*

	<i>National (Annex D1)</i>	<i>Nouakchott (Annex D2)</i>	<i>Coastal Communities including Senegal (Annex D3)</i>
Geographical and demography	✓	✓	✓
Political context	✓		
Administrative arrangements	✓	✓	✓
Economy:	✓		
- Performance	✓		
- GDP	✓		
- Economic Structure	✓		
- Economic Sectors	✓	✓	✓
- Banking	✓		
- Inflation and Exchange Rates	✓	✓	
- Employment	✓	✓	✓
- Investment and Savings	✓		
- External Sector	✓		✓
- Public Finances	✓		
Infrastructure	✓	✓	✓
Poverty	✓	✓	
Health System and Conditions	✓	✓	✓
Education	✓	✓	✓
Housing and Land Markets		✓	

Baseline Research

Following the development of a preliminary SIA baseline using secondary data, a gap analysis was completed to identify the basis of a scope of work for sub-consultants in Mauritania and Senegal. In Mauritania the baseline was compiled jointly by the ONS and Tenmiya, a not-for-profit consultancy. In Senegal, the baseline was compiled by the Department of Statistics and Demography from the National School of Applied Economics. Additional stakeholder consultation was conducted between 28 May and 9 June 2005 to collect outstanding data, obtain stakeholder input and confirm interpretation of apparent inconsistencies in data as shown in *Table D1.2*. This round of consultation filled in the majority of gaps in the baseline data.

Table D1.2 Summary of Data-Gathering During May/June 2005 Research Mission

Data Requirement	Target Consultee	Approach
COASTAL SETTLEMENTS – MAURITANIA & SENEGAL		
Demographics (including cultural characteristics and health data)	Statistical agency Local authorities*	Sub-consultancy Interview
	Village leaders**	Group interviews
	Representatives of vulnerable groups	Interviews
Cultural significant and historically important sites	Village leaders	Group interviews
	Local authorities	Interviews
Social service provision	Statistical agency Local authorities	Interviews
	Village leaders	Group interviews
Employment and Livelihoods	Village leaders	Group interviews
Infrastructure, Roads and Communication	Chef de Village Local authorities Statistical agency	Interviews
Land Use /Ownership	Chef de Village Local authorities	Interviews
NOUAKCHOTT		
Demographics	Statistical agency Local authorities	Interviews
	Representatives of vulnerable people including elected officials	Individual and Group interviews
Social service provision	Statistical agency Local authorities	Interviews
	NGOs working with poor	Interviews
Economic indicators	Statistical agency Local authorities	Interviews
	Local businesses	Interviews with business representatives or group interviews
Employment and Livelihoods	Statistical agency Local authorities	Interviews
	Urban poor	Group interviews
Infrastructure, Roads and Communication	Local authorities Port Authority	Interviews
Land Use /Ownership (Port Area)	Local authorities Port Authority	Interviews
NATIONAL		
Demographics	Statistical agency	Interviews
	Representatives of vulnerable people including elected officials	Individual & group interviews
Social service provision	Providing and planning authorities	Interviews
	NGOs	Interviews
Economic indicators	Statistical agency MEAD, Central Bank, Min of Finance World Bank, IMF, EU	Interviews
	Peak businesses groups	Interviews
	Statistical agency	Interviews
Employment	Statistical agency	Interviews

* Local authorities include: *Préfets, Mayors, regional offices of the Ministries, National Parks.*

** Village leaders include: *Chef de Village, main advisors and cooperative representatives/specific group representatives (eg. women groups -smoking fish, handicrafts)*

Limitations and Qualifications

It is important to acknowledge that the planning and development phases of the Project have already commenced and therefore it is potentially difficult to distinguish between the baseline prior to exploration and the current conditions. Where it is believed that this has the potential to be a significant factor in the assessment, this has been clearly noted.

The limitations of data availability restrict the quantitative nature of the subsequent assessment and are most acute for the national cultural context, the nature of the Nouakchott economy, the basic socio-demographics for coastal areas, and artisanal coastal fishing activity. Specific limitations are noted throughout the baseline. A complicating factor in evaluating data validity was the significant change the country is undergoing as a result of recent droughts, the effects of radical macro-economic policy settings, and other projects including the new Dakar-Nouadhibou section of the main north-south road.

Geographical and Demographic Overview

Geography

The Islamic Republic of Mauritania is located in western Africa, bordering the Atlantic Ocean between Western Sahara and Senegal. It covers a surface area of 1.03 million km² and has 1,016 km of coastline. Mauritania borders four other African countries: Western Sahara; Algeria; Mali and Senegal (refer *Figure D1.1*).

Figure D1.1 Map of Mauritania



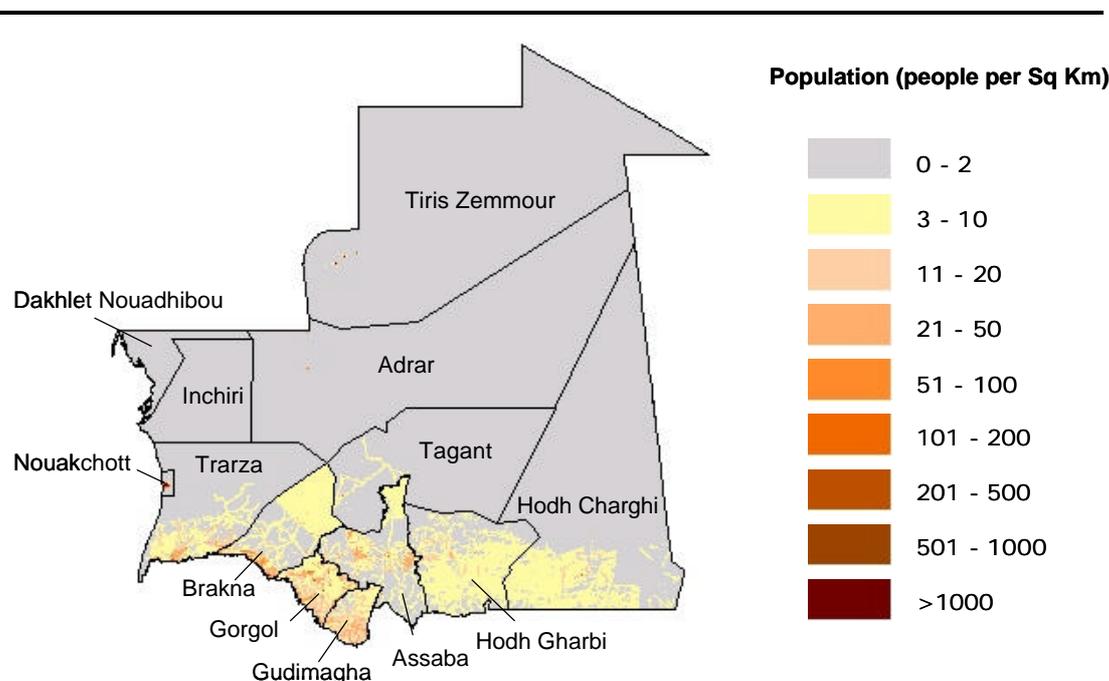
Source: FAO Country Profile

A desert climate characterizes Mauritania. Ninety percent of the territory is desert and only 0.48% is arable land with approximately 490 km² of irrigated land⁽¹⁾ (the rest is composed of mountains and some pasturelands). The average rainfall is less than 300 mm per year. The rainy season is highly varied and occurs over four months between June and September. It is mainly restricted to the southern region of Mauritania, near the Senegal River delta⁽²⁾. In the early 1970's, between 1984 and 1985 and 1991 to 1992, Mauritania was subjected to periods of intensive drought, which continues to affect the country and agricultural livelihoods of its people.

Population Characteristics

Mauritania is sparsely populated with a total population of about 2.9 million and an average density of 2.8 people per km² (refer *Figure D1.2*).⁽³⁾ The urban population has greatly increased since the 1960s with about 47% living in urban areas in 2005 compared with 9.1% in 1965⁽⁴⁾.

Figure D1.2 Population Density by Wilaya (Administrative Units)



Source: FAO Country Profiles; and Islamic Republic of Mauritania, PRSP, December 2000. Penn World Tables Dataset.

(1) Arab Net - Profile of Mauritania, http://www.arab.net/mauritania/ma_climate.htm

(2) Portail de la République Islamique de Mauritanie <http://www.mauritania.mr/fr/index.php>

(3) ONS

(4) République Islamique de Mauritanie, Ministère des Affaires Economiques et Office National de la Statistique - Annuaire Statistique 2001. ONS-Tenmiya. Baseline Indicators Report, 2005

Nouakchott is the largest population centre with roughly one quarter of the national population living in the capital city ⁽⁵⁾. A small nomadic population representing about 4.8% of total the population ⁽⁶⁾ still exists.

Mauritania has a young and constantly growing population with an average population growth rate of 2.4% per year between 1997 and 2003⁽⁷⁾. The age structure of Mauritania is sustained by high fertility rates (about six children born to every woman), a low average life expectancy and high infant mortality. In 2000, women made up just over half the population of Mauritania (50.5%), which has remained relatively constant since 1980. The life expectancy for women is 52 years, compared with 49 years for men⁽⁸⁾.

Immigration

Last year, an estimated total of 72,000 people immigrated to Mauritania, 47% of whom moved to Nouakchott, 29% to Dakhlet Nouadhibou⁽⁹⁾ and nearly 10% to Trarza (refer *Table D1.3*).

Table D1.3 Distribution of Immigrants per Region (Wilaya) in 2004

Wilaya	Immigrants	%
Nouakchott	34,338	47.2%
Dakhlet Nouadhibou	21,000	28.9%
Trarza	7,000	9.6%
Hodh Echarghi	3,500	4.8%
Guidimagha	3,000	4.1%
Gorgol	1,500	2.1%
Hodh El Garbi	698	1.0%
Lassaba	630	0.9%
Adrar	345	0.5%
Tiriss Zemour	338	0.5%
Brakna	310	0.4%
Tagant	15	0.0%
Inchiri	4	0.0%
TOTAL	72,678	100%

Source: Ministère de l'Intérieur des Postes et Télécommunications, Direction Générale de la Sûreté Nationale, Direction de la Surveillance du Territoire, 2005 (Unpublished)

(5) Rapport d'évaluation social, Projet de Développement rural et communautaire, Ministère du Développement Rural et de l'Environnement, Avril 2003. ONS-Tenmiya. Baseline Indicators Report, 2005

(6) <http://www.africa-onweb.com/pays/mauritanie/>

(7) World Bank Database – Mauritania at a Glance, as of 09/15/04 ; MAED-ONS, Bureau Central du Recensement – Population des Communes RGPH 2000

(8) Source:

<http://devdata.worldbank.org/genderstats/genderRpt.asp?rpt=profile&cty=MRT,Mauritania&hm=home3>

(9) Ministère de l'Intérieur des Postes et Télécommunications, Direction Générale de la Sûreté Nationale, Direction de la Surveillance du Territoire (DST) , August 2005.

Ethnic Groups, Language and Religion

The Northern region of Mauritania is the home of the nomadic Arabic-speaking (Hassaniya) Maurs. Though culturally homogeneous, the Maurs are divided among numerous tribal groups and are distinguished as white (Beydane) or black (Haratine). In the southern regions, there are three main ethnic groups of Black Africans: Halpulaar, the Wolof, and the Soninke.

The society is highly stratified and organised around families, casts and tribes. Hassanyian Arabic is the official language of Mauritania. French is widely acceptable and used in business settings, especially among international agencies and NGOs, but Arabic is preferred. Other languages also spoken in Mauritania are Pulaar, Soninke and Wolof. Islam is the official religion, and is the only religion permitted by the State.

Political Context And Administrative Structure

Political History

Mauritania has been a land of intermingling populations and possesses a dual Arabic and African inheritance. It fell under France's control in 1814 and became a separate French colony in 1920. In 1960, Mauritania gained independence and a Muslim state was created under the leadership of President Makhtar Ould Daddah. The military unseated Ould Daddah in 1978 and began ruling the country. In 1984 Col. Maouiya Ould Sidi Ahmed Taya took power after a political coup and dominated Mauritanian politics for 20 years.

On 3 August 2005, a military junta, lead by Col. Ely Ould Mohamed Vall, seized power, while President Taya was abroad. A Military Council for Justice and Democracy was formed and stated that *"The armed forces have decided to put an end to the totalitarian rule and take over power, and we promise to rule transparently and democratically."* The Council said that it intends to rule the country for a maximum of two years and believe this is necessary to restore democracy.

On 7 August 2005, the President of the Military Council appointed Sidy Mohamed Ould Boubacar, as new Prime Minister, and under him, a new government. The new Prime Minister had previously served as Prime Minister under the Presidency of M. Ould Taya between 1992 and 1996, and was the Mauritanian Ambassador to France.

Mauritania has developed strong ties with North Africa through the Arab-Maghreb Union and with Europe through the Mediterranean Basin Initiative. Mauritania withdrew from the Economic Community of West African States (ECOWAS) in 2000.

Government, Legal and Political Structure

Until recently, Mauritania was governed as a Republic. The 1991 constitution established the separation of powers and resembles French constitutional law. The President, elected by universal franchise, has the supreme executive authority and

appoints the Prime Minister, who defines the policy of the government, under the authority of the President of the Republic. A bicameral Parliament is to have a legislative authority. It is composed of the National Assembly directly elected by the population (with 81 deputies) and the Senate (with 54 members) that represent territorial districts and is elected by elected representatives. Independence of the judiciary is guaranteed with the judicial branch placed under the authority of the *Supreme Council of Magistrature*.

There are other consultative institutions within the Republic that offer their opinions and strategic advice to the President: namely, the High Islamic Council and the Social and Economic Council. The High Islamic Council meets at the request of the President to discuss concerns over specific political matters which the President requests their assistance. The Social and Economic Council provide advice on social and economic issues of proposed decree, ordinances to the Parliament or the President, but the Parliament holds ultimate responsibility for ratification of any law or decree.

Majori opposition parties have been Rassemblement des Forces Démocratiques (RFP) led by Ahmed Ould Daddah, Union de Forces de Progrès (UFP), led by Mohamed Ould Maouloud and Front Populaire, as well as l'Alliance populaire progressiste (APP) led by Messaoud Ould Boulkheir, former President of Action pour le Changement (AC) which was banned in 2002.

Administrative Units

A centralized State, the Republic of Mauritania is composed of 13 regions, called *Wilaya*. Regions are further divided into 53 districts, called *Moughataa or Préfecture*. The Wilayas are headed by a Wali (governor) and the Moughataas by a Hakem (Préfet) appointed by the State.

Since the end of the 1980s, the government has undertaken a decentralisation policy with the creation of municipalities called *Communes*. There are 216 Communes, 53 of which are urban communes. Each village is attached to one commune. Villages on the coast (Imraguen and southern Mauritania) are headed by a leader, the *Chef de village*, whom is designated by community concensus. In the Maurs' villages (inland) of former nomads, villages are headed by the tribe leader, the *Chef de tribu*.

The Commune's population elects municipal councillors for a five year-term and in turn they elect the Mayor. Mayors and the Councils are in charge of the municipal budget and the development of the villages fitting within the territory of the municipality. The Mayors and the Councils work closely with the heads of villages.

Communes have financial autonomy and some responsibilities for delivery of municipal infrastructures and services, including primary education and basic

health, and urban planning, but have very limited responsibility on land⁽¹⁰⁾ (Ordonnance 87-289 20 Oct. 1987). *Box D1.1* summarises the main areas of competence held by Municipalities.

Communes' revenues rely heavily on state transfers (eg. development programs, grants, regional funds) and have limited capacity to fully carry out their responsibilities.

Box D1.1 Summary of Key Municipal Responsibilities

Key Municipal Responsibilities
<ul style="list-style-type: none"> • Local roadway system • Drinking water supply • Street lighting • Urban transport • Fire fighting • Hygiene • Management of domestic wastes • Public spaces: gardens, parks, marketplaces • Urban planing • Assistance to the poor

Source: Ordonnance 87.289 dated of 20 October 1987 instituting the Communes

The baseline for the SIA has been prepared at different levels: national, Nouakchott and coastal communities. The national baseline covers the entire territory of Mauritania which includes 216 municipalities and provides macro-level analysis. The Nouakchott baseline covers the city of Nouakchott and the local baseline includes 16 coastal municipalities (refer *Table D1.4*).

Table D1.4 Municipalities Covered in SIA

Wilaya	Moughataa	Communes
Nouadhibou	Nouadhibou	Nouadhibou Mamghar
Nouakchott	Teyarett Ksar Tevragh Zeina Toujounine Sebkha El Mina Dar Naïm Arafat Riaydh	Teyarett Ksar Tevragh Zeina Toujounine Sebkha El Mina Dar Naïm Arafat Riaydh
Trarza	Keur Macen Mederdra Oquad Naga	Keurmacen N'Diago M'Balal Tiguent El Ariye

Source: ONS

(10) Partenariat pour le développement Municipal http://www.pdm-net.org/Newsite/french/decentralisation/mauritanie/situation_actuelle.htm

National Economy

Economic Performance

Since 1992, the Government of the Islamic Republic of Mauritania has pursued a series of macroeconomic and structural reforms that have stimulated sustained economic growth, stabilised public finances and reduced the role of the state in the economy. *Box D1.2* below gives a summary of these reforms. In 2003 to 2004, progress in structural reforms was partially disrupted as result of a severe drought and an attempted coup in 2003. This distorted the usually relatively good macroeconomic management with major fiscal, monetary, and exchange rate management weaknesses surfacing.

Box D1.2 A Summary of Ten Years of Macroeconomic and Structural Reforms

1993 to 1997

- Fisheries: The fishing marketing board and sectoral public enterprises were privatised. A license system for industrial fishing was implemented. Fishing activities opened up to foreign operators. A system of territorial rights for artisanal fisheries was implemented.
- Mining: Société Nationale Industrielle et Minière (SNIM) was successfully restructured.
- Banking: All commercial banks were privatised. A new banking law was enacted. A market for treasury bills was created. Regulation of savings and loan associations was adopted, as was a framework for micro-finance. The foundation for stronger banking sector supervision was established.
- Public Enterprises: All public enterprises, except for SNIM, were liquidated or privatised; subsidies, tax exemptions and cross-debts were eliminated.
- Private Sector: Measures to promote private sector development in banking, foreign exchange, tariffs, pricing, and marketing were put in place. The Government of Mauritania withdrew from all commercial and industrial activities; state monopolies were abolished; the Chamber of Commerce was reinvigorated; and regulation pertaining to the creation of economic interest groups (EIGs) was adopted.

1998 to 2002

- Governance: The National Audit Office was strengthened. A new procurement code was adopted. The tax directorate was reorganized and the customs administration was strengthened. An expenditure clearing law was adopted. The Government began publishing quarterly reports tracking poverty-related expenditures.
- Rural: Achievements in the rural sector included full liberalisation of pricing and marketing; privatising of rice mills land tenure reform implemented and monitored in the Trarza region and in the entire middle and upper Senegal River Valley; strengthening of a cooperative credit system; privatising of veterinary services; and adoption of a livestock development code.
- Energy: The electricity company (SOMELEC) was in the process of being privatised.
- Mining: The mining sector opened to private investment. A new mining code was adopted.
- Telecommunications: Telecommunications and postal services laws were adopted. Postal and telecom activities separated. Competition was introduced in telecom services and the state operator was privatised.
- Fiscal: Tariff, VAT, and direct taxation reform was implemented; a new investment code was adopted; MTEFs for health and education infrastructure and urban sectors were prepared; a new budget nomenclature was implemented; and computerisation of the entire expenditure chain was initiated.

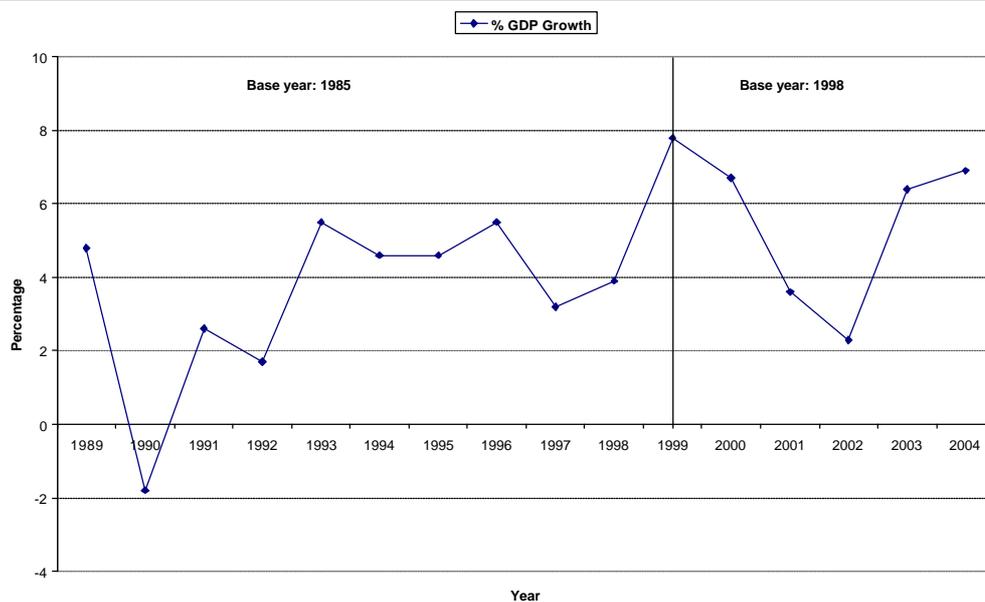
Adapted from the World Bank Country Economic Memorandum, 2004.

Growth in Gross Domestic Product

Figure D1.3 presents the percentage of real GDP growth between 1989 and 2004⁽¹¹⁾. The effect of reforms on growth is clear: on average, real GDP growth has increased from an average of 0.8% during the period 1990 to 1992 to an average of 4.5% for the period 1993 to 1998. Between the years 1999 and 2004, using 1998 as the new base year, average growth in real GDP has been around 5.6%.

GDP growth peaked at 7.8% in 1999, partly as a result of good performance in the manufacturing and construction sectors.

Figure D1.3 Mauritania: Percentage Real GDP Growth, 1989 to 2004



Source: *Islamic Republic of Mauritania: Statistical Appendix, IMF 2003; IMF Country Data 2005; and World Bank. 2004. "Project Performance Assessment Report No. 29615.*

In 2001 and 2002, real GDP growth slowed to 3.6% and 2.3% respectively due to a decline in output in the mining sector as a result of reduced demand for iron ore in Europe. This was compounded by a substantial decline in agricultural output owing to the effects of a severe drought which caused a state of famine in the southern agricultural regions. Despite these factors, growth still managed to be positive as the decline in mining and agriculture were offset by the boom in construction, transport and telecommunication and services sectors.

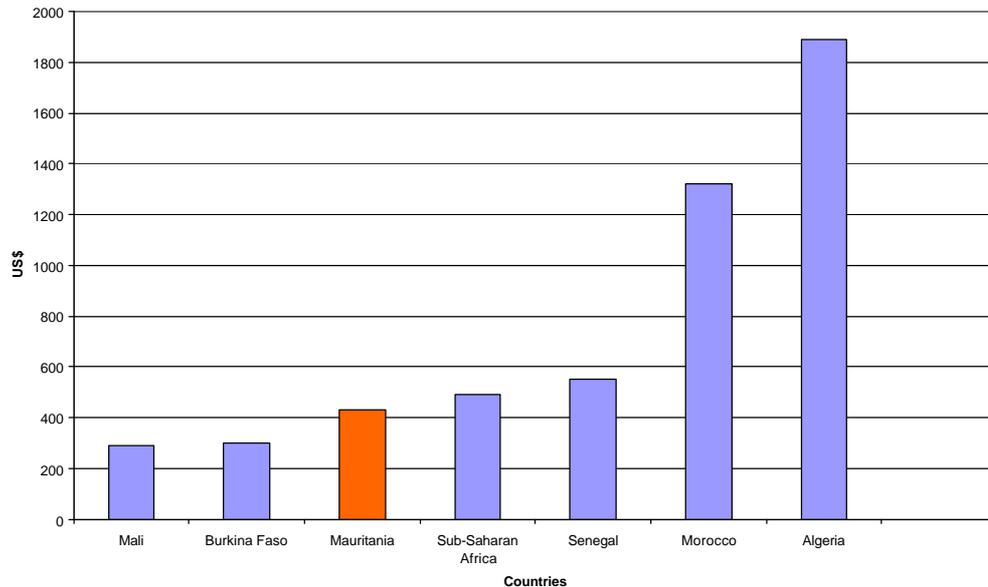
Real GDP growth has rebounded in 2003 and 2004 as a result of the increased Government spending (on food, to alleviate the shortages caused by the drought,

(11) Figures for the years to 1998 are at constant 1985 prices, whereas figures from 1998 are at 1998 constant prices. IMF data, released for public consumption in 2003, only goes up to 2002. An update has been drafted but not yet released by the Mauritanian Government. In the draft compilation, the data has been revised substantially, taking into account a new base year, 1998. In addition there has been an attempt to value the large informal sector and include it as part of the national accounts.

and on security) and stronger growth in the construction and manufacturing sectors in 2004. Real GDP grew at a rate of over 6% per year.

Figure D1.4 compares per capita income for Mauritania in relation to its neighbours. Mauritania's per capita income is below the average for sub-Saharan Africa.

Figure D1.4 Gross National Income (GNI) Per Capita Income (Atlas Method)



Source: World Development Report 2005

Whilst the volatility of growth has decreased, the economy retains many structural weaknesses, particularly a high (albeit declining) dependence on natural resources. This makes it highly vulnerable to exogenous shocks such as variation in rainfall patterns, locust invasions, fluctuations in commodity prices, changes in demand for its products on the world markets and the exhaustion of natural resources.

Table D1.5 depicts the growth of output by sector, between 1998 and 2004.

It is clear from the table that the largest and most consistent increases in output have come from the construction and public works and the transport and telecommunication sectors.

Growth from the services and manufacturing sectors has also been mostly strong. It is clear that the drivers of growth for the economy in the past few years have been the services and manufacturing sectors. This indicates that the economy is gradually diversifying from a restricted natural resource base.

Table D1.5 Mauritania: Rate of Growth in Output by Sector, 1999 to 2004

Sector	1999	2000	2001	2002	2003	2004
Rural Sector	3.0%	-0.5%	-3.8%	-3.3%	6.5%	-3.3%
Agriculture	2.3%	-12.2%	12.2%	-19.4%	29.9%	-27.8%
Livestock	3.2%	3.7%	-1.2%	1.0%	1.5%	3.5%
Mining	-5.7%	3.3%	-10.5%	-7.5%	6.3%	3.4%
Manufacturing	26.7%	18.5%	-3.5%	-1.7%	3.3%	19.9%
Fishing	16.5%	8.8%	12.1%	-3.7%	-8.2%	4.6%
Other manufacturing	32.3%	-8.7%	-13.4%	0.1%	7.1%	9.2%
Construction and public works	17.5%	25.4%	20.8%	14.6%	15.1%	16.2%
Transports and telecommunications	-1.2%	20.1%	13.8%	29.5%	4.8%	6.9%
Commerce, restaurants, hotels	-1.4%	3.8%	7.4%	2.0%	5.2%	4.8%
Services	8.0%	5.6%	24.8%	5.4%	6.5%	5.1%
Public Administration	12.6%	5.3%	5.5%	5.1%	5.0%	4.0%

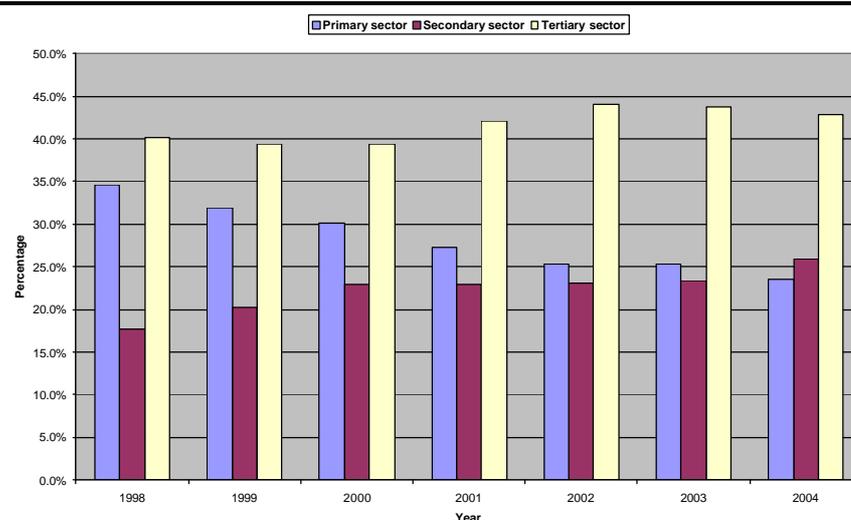
Source: IMF 2003 Islamic Republic of Mauritania: Statistical Appendix.

Structure of the Mauritanian Economy

Overview

Over the past few years, the tertiary sector (consisting of commerce, transport and communications, public administration and other services) has increased in importance to the Mauritanian economy. As Figure D1.5 shows, the sector now accounts for 42.9% of GDP in 2004. The increase in the share of overall output has been driven by expansion in the transport and communications and construction sub-sectors, helped by the ongoing privatisations and the on-going construction boom.

Figure D1.5 Mauritania: Percentage Share of GDP by Primary, Secondary and Tertiary Sectors, 1998 to 2004



Source: Islamic Republic of Mauritania: Statistical Appendix. IMF 2005 (unpublished)

The primary sector (consisting of agriculture, livestock and mining⁽¹²⁾) has seen its share of GDP gradually decline from 34.6% to 23.5%, between 1998 and 2004. This has been mainly a due to adverse climatic conditions (droughts) that have affected crops and livestock in the main agricultural regions in the south and the east of the county.

The share from the mining sector has also fallen from 14.4% in 1998 to 9.2% in 2004. This has been due to fall in world iron ore prices in 1999 that reduced production and decreased the value of iron exports for Mauritania. Production volumes fell from 11.4 million tonnes in 1998 to 10.5 million tonnes in 2002 and the unit price per metric ton also fell from \$19 in 1998 to \$17.6 in 2002. Société Nationale Industrielle et Minière (SNIM), the national mining company currently has substantial Chinese contracts and expects production and shipments to increase. However, SNIM is constrained by the current production capacity of around 13 million tonnes per year. The Port of Nouadhibou is currently undergoing a €50 million modernisation program that involves the enlarging of quays, improvement of services, competitiveness and hygiene. This is expected to ease demands on the port's capacity resulting from increased production and shipments of iron ore.

The share of GDP of the secondary sector (consisting of fishing, manufacturing and construction) has increased from 17.7% in 1998 to 25.9% in 2004. However, this hides sub-sectoral variations: both the fishing and construction sub-sectors have increased their share over this period, whereas the share from manufacturing has fallen slightly.

While the Government of Mauritania has acknowledged the need for a diversified economy and has made efforts towards this; the levels of diversification are still extremely low. The next section of the baseline looks at the different sub-sectors that are important to the Mauritanian economy.

Table D1.6 presents the share of GDP between 1998 to 2004, by sub-sectors.

(12) Fishing has no longer been classified as a primary sector in the revised output data. It now wholly comes under the manufacturing sector and therefore the secondary sector

Table D1.6 Mauritania: Percentage Share of GDP by Sub-Sector, 1998 to 2004

Sector	Sub-sector	1998	1999	2000	2001	2004	2003	2004
Primary Sector	Agriculture	5.4%	5.1%	4.2%	3.6%	2.8%	3.4%	2.3%
	Livestock	14.8%	14.2%	13.8%	13.2%	13.0%	12.4%	12.0%
	Mining	14.4%	12.6%	12.2%	10.6%	9.5%	9.5%	9.2%
Secondary Sector	Fishing	4.5%	4.9%	8.0%	8.3%	7.8%	7.3%	8.9%
	Other Manufacturing	8.2%	10.0%	8.6%	7.2%	7.0%	7.1%	7.2%
	Construction and public works	5.0%	5.4%	6.4%	7.5%	8.3%	9.0%	9.8%
Tertiary Sector	Commerce and other services	12.3%	11.3%	11.0%	11.4%	11.3%	11.2%	11.0%
	Transport and communications	4.4%	4.0%	4.6%	5.0%	6.3%	6.2%	6.2%
	Other services	8.2%	8.2%	8.1%	9.8%	10.1%	10.1%	9.9%
	Public Administration	15.2%	15.9%	15.7%	15.9%	16.4%	16.2%	15.7%

Source: Islamic Republic of Mauritania: Statistical Appendix. IMF 2005 (unpublished)

Agriculture and Livestock

Although climatic conditions in Mauritania are erratic and only 1% of the land can sustain crops, the agriculture and livestock sector is very important for employment, income generation and poverty reduction. Droughts in 2001 and 2002 reduced crop yields drastically, contributing to the overall decline in share of output from the agricultural sector.

In 2004, harvests have been subject to attack by locusts and in addition rainfall has been scarce resulting in food shortages during the second and third quarters of 2005. To cover shortfalls in the food supply as a result of such adverse conditions, Mauritania imports nearly half of its food requirements (including food aid).

The livestock sub-sector is the most important in the primary sector, accounting for over 84% of the sector GDP and 12% of overall output in 2004. Most of the livestock herding and breeding activities take place in rural areas, concentrated in the central and western regions and around the capital Nouakchott.

Fishing

The fisheries sector has increased in importance to the Mauritanian economy: its share of GDP has increased from 4.5% in 1998 to nearly 9% in 2004, in part as a result of increases in fish prices. In addition, fishing exports consisted of 43.4% of total exports in 2002. Between the periods of 1998 and 2002, the sector has contributed on average nearly 30% to the Government's revenues.

Box D1.3 The Fishing Sector in Mauritania

The fishing sector in Mauritania is divided into three sub-sectors:

- Industrial fishing: Industrial fishing is defined as any commercial fishing activity that does not correspond to the above definitions.
- Artisanal fishing: artisanal fishing is defined as any fishing activity that is carried out on foot or with undecked vessels, motorised or not, of a total length of not more than 14 metres, and operating with hand fishing equipment, with the exception of sliding purse seine nets.
- Coastal fishing: Coastal fishing is defined as any commercial fishing activity that is carried out with motorised undecked vessels of a total length comprised between 14 and 26 meters, or with decked vessels of length not greater than 26 meters, and are not fitted with any freezing, trawling or dragnet equipment.

Source: Law N° 2000-025 on the Fishery Code and implementing Decree N° 2002-073

Overall, around 36,000 Mauritians directly depend on fishing for their livelihoods. In addition, it indirectly supports the livelihoods (traders, fish merchants etc.) of another 10,000 people.

Table D1.7 provides details on the employment directly generated by the fishing activity.

Table D1.7 Employment Estimates in the Artisanal and Industrial Fishing Sector in 2001 and 2005

	Nouadhibou	Northern Region (PNBA + Cap Timiris)	Nouakchott	Southern Region (including migrating fishermen)	Total (2001) ^a	Estimates (2005) ^b
Industrial fishery Crews	3,600				3,600	4,017
Export firms and packaging plants	1,200		1,400		2,600	6,000 (including other onshore jobs)
Artisanal fishermen	3,900	700	3,300	4,200*	12,100	26,000
Processing /fishmonger	4,300	250	2,040	90	6,680	
Other jobs** : industrial and artisanal fisheries	2,400	20	930	10	3,360	Included in 6,000 above)
Total direct employment	15,400	970	7,670	4,300	28,340	36,017

* 4,000 "migrating" fishermen, ie. foreign fishermen

** include services and inputs to fisheries (transport, equipment etc)

Note: the differences in data are not necessarily explained by the growth of employment in the fishing sector, but also by differences in methodologies; ie. most of the fishery experts interviewed estimated employment in fisheries to amount around 30,000 – 35,000 people.

^a Source: Survey CNROP/JICA 2001, in Plan Directeur d'Aménagement du Littoral Mauritanien

^b Source : FNP

Industrial fisheries

In 2004, industrial fishing accounted for by far the largest share of fish catch in Mauritania with nearly 90% (or nearly 800,000 tonnes) of the total landing while the

remaining 10% came from artisanal fishing⁽¹³⁾. This represented a substantial increase in catch over the previous year.

Since 1994, the Government of Mauritania has opened the fisheries sector to foreign investment and foreign owned fleet operations. An agreement was signed with the European Union (EU) in 1996, and re-negotiated in 2001 that introduced access fees and production sharing agreements for surface catches (to benefit the national and local fishing fleets). This has enabled the Government of Mauritania to earn €430 million over five years to 2006, in return for allowing EU fishing vessels increased access to its territorial waters. Vessel fees and licenses have generated an additional €10m per year on average. These royalties are intended to be used to develop the national fisheries sector and to be spent on social initiatives, as stated in the Poverty Reduction Strategy Paper (PRSP). A special account was set up with the *Banque Centrale de Mauritanie* (BCM), to receive a share of the royalties, for this purpose.

Box D1.4 Allocation of Fishing Rights in Mauritania

Mauritania has two systems of fishing rights:

The licensing system - this composes of free licences within a framework of agreements and free licences outside any agreements. The main trade-offs of these are:

- A transfer of fees to the Mauritanian Treasury paid in foreign currency;
- Hiring of a certain number of Mauritanian sailors, depending on the size of the vessel and/or total number of crew, in order to facilitate the transfer of knowledge; and
- Vessels having a free licence do not have to submit to trans-loading requirements at the harbour as their catch is directly exported without customs formalities.

Chartering - This relates almost exclusively to the fleet of vessels that fish for small pelagics. Foreign ships are hired by Mauritanian operators and 80% of the proceeds go to the owner of the vessel, 20% of the proceeds go to the Mauritanian chartering company.

The Government of Mauritania has rationalised the number of vessels in its national fishing fleet, and increased the number of jobs in the industrial fleet to take advantage of the production sharing terms of the agreement. Currently, the industrial fleet employs around 4,000 people, composed of 2,165 in the national fleet, 1,036 in the pelagic fleet (foreign) and 816 workers in the EU fleet. The private sector has also invested heavily in the fisheries industry in Mauritania, especially in the value adding fish processing activities. An additional 6,000 people are employed in processing plants and other onshore fishing related jobs⁽¹⁴⁾.

In 2004 foreign owned fleets (mainly from the EU and Russia) made up to nearly 60% of the total fleet operating in the Mauritanian waters, (refer *Table D1.8*).

(13) MEPM, Direction de l'Aménagement des Ressources Halieutiques, Service des Etudes et Statistiques, April 2005.

(14) IMROP-FNP, Interview with General Secretary of Fédération National de Pêche, July 2005. Other estimates provided by local experts of the fishing sector are similar to these numbers

The national fleet focuses on demersal fisheries, in particular octopus, which has a high commercial value. However, only foreign vessels with large production, processing, freezing and conservation capacities fish for pelagic species.

Most of the fish caught by foreign owned fleets does not land in Mauritania. Instead, it is directly shipped to Europe, and is therefore not included in Mauritania fish exports. Value adding fish processing activities apply to less than 10% of the catch.

Table D1.8 Mauritania: Composition of Industrial Fleets, 2000 to 2004

Type	2000	2001	2002	2003	2004
Demersal fisheries	149	158	170	170	182
Mauritanian fleet	100	103	115	109	132
Foreign fleet	49	55	55	61	50
Pelagic fisheries	54	53	69	70	40
Mauritanian fleet	0	0	0	0	0
Foreign fleet	54	53	69	70	40
Other fisheries	131	133	142	165	159
Mauritanian Fleet	13	18	17	28	25
Foreign Fleet	118	115	125	137	134
Total fisheries	334	344	381	405	381
Mauritanian Fleet	113	121	132	137	157
Foreign Fleet	221	223	249	268	224

Source: MEPM, Direction de l'Aménagement des Ressources Halieutiques, Service des Etudes et Statistiques, April 2005

Notes: Demersal fish are those that dwell at or near the bottom of the body of water

Pelagic fish are those that live in open oceans rather than adjacent to land

Sector output is vulnerable to changes in fish stocks. Aside from the guaranteed yearly access fee paid by the EU, revenue from the fisheries sector depends not only on the quantity of the catch, but also on the price that it commands on the world markets. The lack of adequate infrastructure for unloading and processing (in 2002, there were less than 70 EU approved processing plants⁽¹⁵⁾) is a major impediment to the development of domestic value-adding processing activities and maintain a reliance on foreign fishing fleets.

Artisanal Fishing

The artisanal fishing sub-sector has significantly grown from production originally devoted to self-consumption to increased commercialisation. The government seeks to further encourage the development of this sector by adopting the Fishery Code and its implementation through a 2002 Decree that promotes artisanal fishing and created the Directorate for Artisanal Fishing in 2004.

The 2001 Poverty Reduction Strategy Paper (PRSP) also stated the importance of artisanal fishing: "Taking into account the possibilities that it [artisanal fishery] offers in terms of job creation and food safety, in particular for the poor populations, but also of generation of receipts in currencies, artisanal and coastal fishing is of a great priority." Analysis and action planning for the artisanal fisheries are under discussion in the

(15) CMAP 2005 and PDALM

preparation of the new PRSP. However adequate measurement of the contribution of this sub-sector to the economy is still lacking.

Mining

Although the share of the mining sector in the national output has fallen from 14.8% in 1998 to 9.3% in 2004, it remains one of the most important sectors of the economy. Exports from the mining sector at 55.6% in 2002 make up the largest share of total exports. In addition, the mining sector is the largest formal (as opposed to informal) employer outside the public sector, with a workforce of around 7,500 persons.

The production of iron ore dominates the sector with most of the output produced by SNIM has the capacity to increase production however, the poor state of repair of Nouadhibou Port limits exports. In addition, value of iron ore exported is dependent on world prices and is therefore susceptible to fluctuations.

The possibility of producing other minerals has increased with significant exploration investments made and mining rights recently purchased.

Manufacturing

The share of GDP from the manufacturing sector has increased from 12.7% in 1998 to a high of 16.1% in 2004⁽¹⁶⁾. Manufacturing is concentrated around the capital, Nouakchott and the port city, Nouadhibou. The majority of the manufacturing activities consist of food and fish processing. Other manufacturing activities include chemicals and plastics, construction materials and paper and packaging. A scarcity of skilled labour, poor infrastructure, lack of credit for activities other than fishing and a small domestic market limit the prospects of foreign investments. Most of the recent increase in manufacturing activities has been by local Mauritanian investors.

Banking System

The banking and financial system in Mauritania is regulated by the Banque Central du Mauritania (BCM). It has under gone several rounds of restructuring, with the aim of mobilising and recycling savings for investment purposes. The Government of Mauritania has divested its shareholding in all but one commercial bank. Liberalisation of the sector has introduced competition with the establishment of new commercial banks using private capital. Credit to the private sector has also increased from 11% in 1997 to 1998 to nearly 20% during 1999 to 2001. Other changes that have been implemented include:

- The removal of the requirement to surrender export receipts;
- Reduction of discretionary action by the BCM on foreign exchange markets; and
- Removal of the requirements to remit foreign exchange.

(16) In the new definition of sectors, manufacturing here refers to fishing (processing) and other manufacturing activities

Despite these changes and others, the sector still remains highly oligopolistic in nature and has a high degree of non-performing loans concentrated in a few problem sectors. The sector is also hampered by the high percentage of the commercial banking sector's deposit base being made up of Government funds, with few incentives to attract private deposits. In addition, the cost of obtaining credit is very high and access difficult.

Inflation and Exchange Rates

Inflation

Until 2002, despite the devaluations of the Mauritanian ouguiya (UM) and removal of price controls, inflation was kept in check through a tight monetary policy that has reduced the expansion of money supply. As *Figure D1.6* shows, increases in the Consumer Price Index (CPI) have stood at less than 5%, except for 1998 when it reached 8% (as a result of a 30% rise in clothing prices). Based on new figures released recently, the CPI inflation remained at around 5.5% on average, in 2003. However in 2004, it increased to about 10.4% by year-end, reflecting the delayed effect of the fiscal and monetary expansions as a result of the expenses incurred by programs to alleviate the drought and those related to security concerns and upward adjustments in the retail prices of petroleum products. Inflation is expected to continue to increase in 2005 to around 15%.

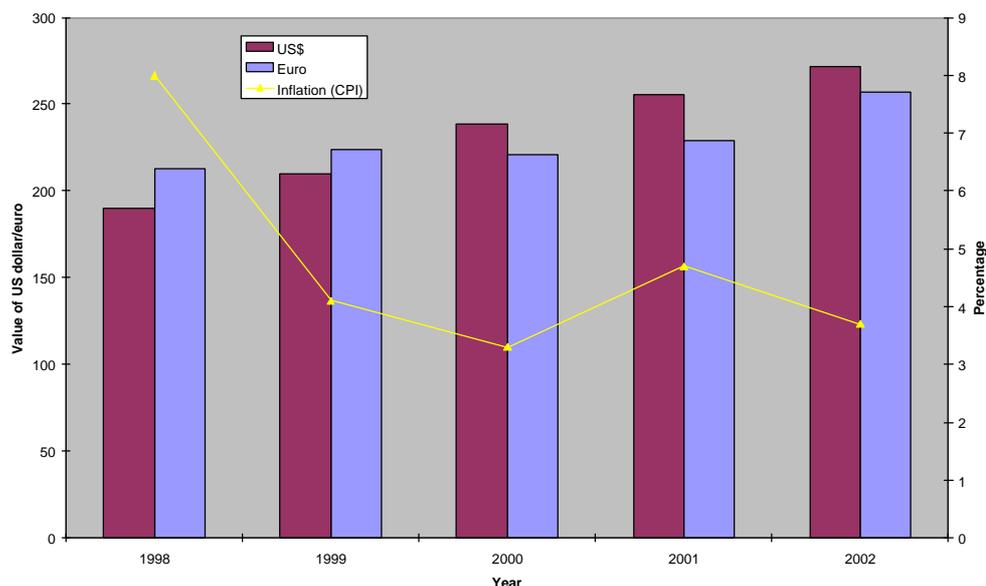
Exchange Rate

The reforms introduced under the guidance of the International Monetary Fund (IMF) have resulted in removal of exchange controls and the value of the Ouguiya is now nominally determined by the market (it is still subject to periodic interventions by the BCM). Since 1993, the Ouguiya has fallen against the dollar, as a result of devaluations or depreciation of the currency (refer *Figure D1.6*). In recent years it has stabilised around 260 UM to US\$1. The value of the Ouguiya against the euro has also fallen in recent years, partly as a result of the weakness of the US dollar against the euro.

In addition to the official currency markets, there also exists a parallel black market. The parallel market premium over the official exchange rate increased in 2003 and peaked at above 20% in May 2004 ⁽¹⁷⁾.

(17) IMF Release, 2005

Figure D1.6 Mauritania: Inflation and Exchange Rates (US dollar and euro), 1998 to 2002



Source: EIU: Mauritania Country Report, 2004 and Islamic Republic of Mauritania: Statistical Appendix. IMF 2003

Employment

Data on employment in Mauritania is not collected on a routine basis. The most up-to-date and readily available information comes from the 2000 population census and therefore supports, at best, only a rough estimate employment data.

The Mauritanian labour market has two distinctive features:

- employment is dominated by the informal sector and agriculture (concentrated along the Senegal River and in the regional centres of Rosso and Kaedi); and
- the mismatch between the skills of those entering the labour market and those required for the available opportunities.

The 2000 census (Enquete Permanente Sur Les Conditions De Vie Des Menages En Mauritanie (EPCV), 2000) in Mauritania shows an active population of 774,413 persons, of whom 626,705 were identified as being employed (in some form of economic activity) and 144,708, or 18.6%, were unemployed. Eighty-three percent of the unemployed were workers looking for their first job. Of the people employed, 46% were working in the agricultural/ livestock sector, 17% in commerce, 15% in government service, 9% in the fishing sectors, 5% in the industrial sector and 8% in the transport and/ or communications sector, 24% in the informal sector and 64% in the rural sector¹⁸.

¹⁸ (Tenmiya/ONS Economic Baseline for Chinguetti Project, 2005).

Investment and Savings

Investment as a share of GDP increased from an average of 18.6% over the period 1995 to 1998 to an average of 24% over 1999 to 2002¹⁹. These increases came from a rise in public investment that accompanied the implementation of the PRSP, ongoing expansion in mining capacity, and a large influx of foreign direct investment in the recently liberalised telecommunications industry. Much of this investment was equalled by rising domestic savings. Gross domestic savings rose from 17% of GDP during 1995 to 1998 to an average of 26% over 1999 to 2002²⁰.

The External Sector

Trade

The majority of Mauritania's exports consist of two commodities: iron ore and fish. These accounted for nearly 99% of the total value of exports in 2002, estimated at US\$330.3 million, with fisheries accounting for US\$143.5 million and iron ore for US\$183.8 million (refer *Table D1.9*). About 80% of exports go to industrial countries: exports of iron ore mainly to European countries, whereas fish exports go to Asia and the former Soviet Bloc. Despite the stated intentions of the Government of Mauritania, there has been very little export diversification to date to reduce the dependency of exports on the two primary commodities.

Mauritania is heavily dependent on imports for most of its internal needs, given its erratic climatic conditions, a narrow production base and low levels of industrialisation. In 2001, petroleum products represented about 25% of total imports, followed by food at around 16.5% and construction materials at 9%. Imports of oil related machinery and equipment started appearing in the balance of payments accounts from 1999 onwards. In 2001, they consisted just over 4% of total imports. The rest of the imports consisted of other transport, equipment and basic manufactures.

It is clear from *Table D1.9* that the dependence on two primary commodities for exports exposes the Mauritanian economy to both price fluctuations and changes in demand for its products on world markets. This has resulted in large fluctuations in export revenues earned and when combined with the volatility of petroleum prices on the imports side, translates into frequent changes in the country's external trade balance.

Payments related to leasing of oil platforms during the oil exploration stages accounted for nearly US\$88m of the total debits in the current account. These were offset by the direct foreign investment of nearly US\$110m in 2002, brought in by the oil companies for the purpose of exploration activities.

¹⁹ (Tenmiya/ONS Economic Baseline for Chinguetti Project, 2005)

²⁰ (Tenmiya/ONS Economic Baseline for Chinguetti Project, 2005).

Table D1.9 Mauritania: Trade (Exports and Imports, millions of US \$), 1998 to 2002

Trade	1998	1999	2000	2001	2002
Total Exports	359.7	333.1	344.7	338.6	330.3
Exports: Fish	140.6	154.8	149.1	156.9	143.5
Exports: Iron ore	217	177.1	194.1	178.5	183.8
Exports: Other	2.1	1.2	1.5	3.2	3
Total Imports	357.9	310.5	336.2	372.3	418
Imports: Petroleum products	49.5	61	99.4	94.5	107.6
Imports: Oil related machinery and equipment	0	2.9	6.7	15.6	22
Imports: Other (food stuff, basic manufactures)	308.4	246.6	230.1	262.2	288.4
Trade balance	1.8	22.6	8.5	-33.7	-87.7

Source: *Islamic Republic of Mauritania: Statistical Appendix. IMF 2003*

The current account deficit (excluding official transfers) reduced from an average of 18.4% over the period 1991 to 1994 to an average of 6.9%, between 1999 to 2002. Including grants, the external current account balance recorded a large surplus in 2002, largely due to the late receipt of EU fishing license payments (for 2001 and 2002). In 2004, the current account deficit (excluding oil and other foreign direct investment related imports) rose in 2003 and 2004 to around 16% of GDP for the two years. This reflects the large increases in Government imports in 2003 and 2004, related to the drought (food requirements) and increases in international petroleum prices in 2004.

Gross official reserves stood at US\$400m as of the end of 2002. This represented 8.7 months of imports of goods and non-factor services. In 2003 and 2004, as a result of the extra-budgetary spending and the large increases in Government imports, the reserves were driven down substantially.

Official Development Assistance

Net Official Development Assistance (ODA) consisting of grants and concessional loans has increased from US\$118.9m in 1998 to US\$305.7 million in 2002. When the first PRSP was developed, the total cost of implementing the programs was estimated a US\$475m. A large part of this cost is expected to be covered by ODA funds and funds released via the Highly Indebted Poor Countries (HIPC) debt relief initiative. In addition, the ODA funds flowing into economy have been important in maintaining the balance of payments.

Debt

Mauritania's total external debt stands at US\$2.31b in 2002, equivalent to 241.6% of GDP, after peaking in 1999. The majority of the debt is public or publicly guaranteed long-term debt. In the years leading up to Mauritania's completion point under the IMF-WB HIPC debt relief initiative in June 2002, total debt servicing levels have fallen substantially. In 1998 they stood at US\$110m, falling to US\$64m in 2002.

Therefore, debt service ratios (as a percentage of exports of goods) after debt relief have been reduced from 23.7% in 1998 to of 19.4% in 2002.

Under the enhanced HIPC Initiative Mauritania's total debt service relief will amount to approximately US\$1.1b over time. As a result, the net present value of Mauritania's total external debt has been cut by nearly 50%, providing a good basis for long-term debt sustainability.

Resources freed up by debt relief, under the HIPC Initiative are being allocated to fund key poverty reduction programs, as set out in Mauritania's PRSP.

Public Finances

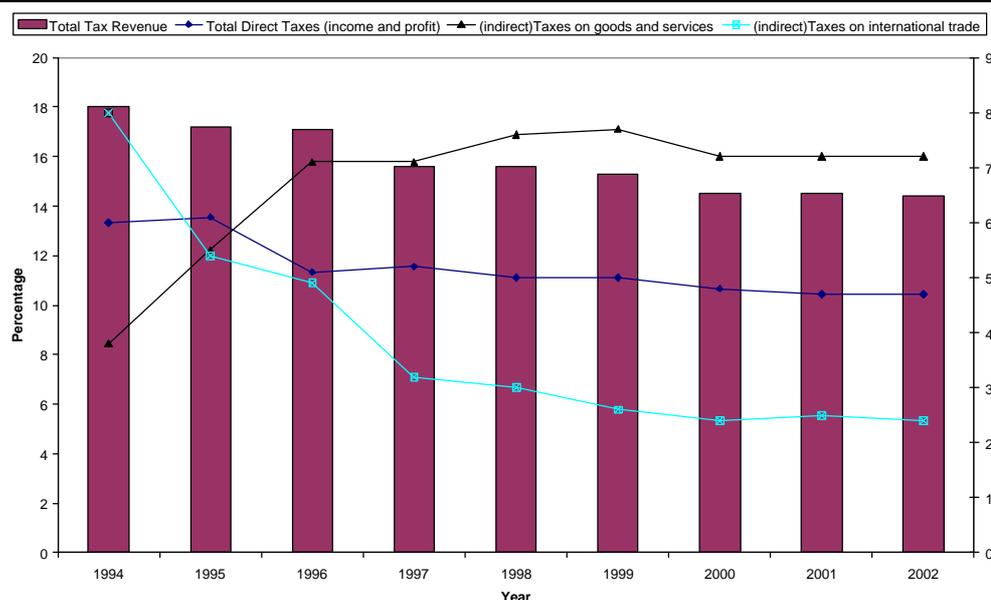
Budgetary Revenues

The Government of Mauritania has implemented substantial fiscal reforms to improve revenue performance, diversify and simplify the tax system and broaden the tax base. This has helped strengthen Mauritania's public finances.

As *Figure D1.7* shows, fiscal pressure (tax revenue as percentage of GDP) has gradually declined from around 18% in 1994 to 14.3% in 2002. Direct taxes (on income and profits) have also marginally declined from 5.8% of GDP to 4.5%, as a result of the reduction in rates of the corporate income tax.

So far, the biggest adjustments from the tax reforms come from the indirect tax system. The percentage of tax revenues from international trade taxes has declined substantially, as a result of tariff reforms undertaken in the 1990's. This fall has been compensated by the introduction in 1995 of a tax on goods and services (VAT), replacing several indirect taxes. The tax on goods and services as a percentage of GDP has increased from 3.7% to 7.2%.

Figure D1.7 Mauritania: Tax Revenues as a Percentage of GDP, 1994 to 2002



Source: World Bank, 2004 "Mauritania: Country Economic Memorandum"

Non-tax revenues have increased from just 4.9% in 1994 to 23.1% in 2002. This is primarily as a result of EU fish royalties. Mauritania signed a framework agreement with the EU in 1996 and renewed in 2001 that replaced deep sea port licenses with access fees. The EU agreement is to be re-negotiated in 2006.

Table D1.10 presents key items of public finances from 1994 to 2002, as a percentage of GDP⁽²¹⁾.

Table D1.10 Mauritania: Public Finance (millions of US \$), 1994 to 2002

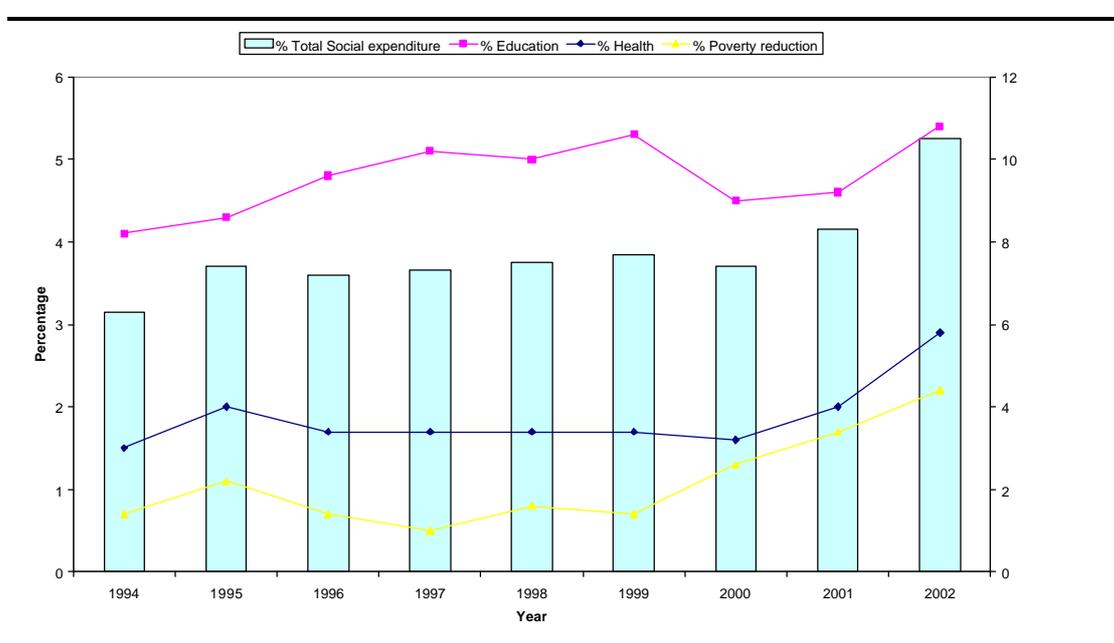
Budgetary Item	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total Revenue	23.3	24.1	29.2	26.4	26.4	26.8	25.3	20.6	37.5
Tax Revenue	18	17.2	17.1	15.6	15.6	15.3	14.5	14.5	14.4
Non-tax Revenue	4.9	6.6	11.9	10.6	10.6	11.3	10.7	6.1	23.1
Total Expenditure	27.7	24.8	24	22.7	24.8	25.3	30.3	26.2	31.4
Current Expenditure	18	17.8	17.1	16.6	17.3	17.9	17.7	16.9	19.5
Capital expenditure	9.1	6.8	6.7	5.8	7.3	7.4	12.6	9.3	11.9
Balance -Surplus/ Deficit	-4.4	-0.7	5.2	3.7	1.6	1.5	-5	-5.6	6.1

(21) Total revenues and non-tax revenue figures are distorted for 2001 and 2002 by the late payment of the EU fishing royalties.

Budgetary Expenditures

Overall public expenditures have increased to 31.4% of GDP in 2002. A large part of this increase comes from capital expenditures as a result of financing infrastructure programs and cash advances to Mauritel to improve its finances before privatisation. Current expenditures have risen relatively slowly, with a fall in military spending to 2002. *Figure D1.8* shows allocations to social sectors (health, education and water and sanitation and poverty reduction programs) have increased from an average of around 7% to 8.3% and 10.5% for 2001 and 2002, respectively. When the total social expenditures are separated by sectors, a similar trend can be seen. This is as a result of these social sectors being identified as priority sectors in the first PRSP finalised in 2000.

Figure D1.8 Mauritania: Social Spending on Education, Health and Poverty Reduction Programs as a Percentage of GDP, 1994 to 2002



Source: World Bank. 2004 "Mauritania: Country Economic Memorandum" and World Bank. 2004 "Project Performance Assessment Report No. 29615".

Budgetary Balance

As a result of improved control of public expenditure and domestic revenue collection, a budget deficit in 1994 and 1995 was converted into a surplus in the years to 2000. In 2000, the deficit returned as a expenditure increased. The deficit further deteriorated to 5.5% of GDP in 2001 due to the late payment of the 2001 fish license. When the payment was made in 2002, this resulted in the fiscal surplus of 6.2%.

In 2003 and 2004, the Government of Mauritania implemented an emergency plan to alleviate the effects of the acute 2002 drought and for other security-related expenditures. These were financed in part through extra-budgetary spending by

expanding the monetary supply (effectively printing money) and a drawdown of official foreign reserves. This has resulted in a large fiscal deficit of around 30% and 20% of annual GDP for 2003 and 2004 respectively.

National Infrastructure

Roads: There are four major roads, each of which links important cities in Mauritania, and about 5,140 km of unimproved tracks. A new road linking Nouakchott to Nouadhibou, the second most important city of the country is nearly completed.

Railroads: The unique 650 km railroad of standard single-track line links the Zouérât mines with the port at Nouadhibou and serves essentially to export iron ore.

Ports: Ports handle a significant portion of Mauritania's exports and imports. The biggest port in Mauritania, the Port Autonome de Nouakchott (PANPA) has a capacity estimated at 1.5 million tonnes per year, processing more than 90% of Mauritania's imports. Nouakchott port is an import port representing approximately 96.4% of all annual traffic. The second important port centre is Nouadhibou, which has four port terminals, in particular for iron ore and fishing exports. The ore terminal has undertaken a €50 million modernisation plan to enlarge the quays and improve services. The new facility should be in operation mid-2009 and bring the port's capacity to 25 million tonnes per year.

Airports: Mauritania has two major airports at Nouakchott and Nouadhibou, that handle most commercial aircrafts. A new airport is proposed to be constructed about 20 km north of Nouakchott. It will be built and completely financed by Chinese firms for a total of about US\$160 million.

Telecommunications: Telecommunications are mostly present in big cities, especially Nouakchott, which accounts for 68% of telephone subscribers²². Some Internet cafes have opened in Nouakchott and other cities over the last few years. Some coastal villages are equipped with a central public telephone, while others rely on the use of radio to communicate²³. Mauritel, remains the monopoly provider of fixed-line services. The mobile sector is developing. In 2000, the firm *Mauritano-Tunisienne des Télécommunications* (Mattel) and the *Société Mauritanienne de Télécommunications Mobiles* (Mauritel Mobiles) were granted Global Standard for Mobile (GSM) licences for US\$28m each²⁴. GSM networks cover mainly Nouakchott, Nouadhibou and the main city of each Wilaya.

Electricity: Access to electricity has slowly increased from 7.3% of households having access to electricity in 1988 to 18.8% in 2000. This figure hides large disparities between major urban centres, such as Nouadhibou and Nouakchott with

⁽²²⁾ ONS – Annuaire statistique, 2001 based on O.P.T.'s database

⁽²³⁾ ERM field visits November-December 2004

⁽²⁴⁾ Autorité de Régulation de Mauritanie. *Réforme des Télécommunications en Mauritanie*. Mars 2000

electricity access rates of 77.6% and 40.9% respectively, and rural areas, such as Trarza where the rate of access is only 7.8%⁽²⁵⁾. Also, the EPCV 2000 reports that 0.65% to 1.91% of households in rural areas use electricity as a primary source of energy for lighting, whereas this rate is 36.1% in Nouakchott and 49.2% in other towns (including Nouadhibou).

Figure D1.9 Map of Transport Infrastructure in Mauritania



Source: EIU. Country Profile 2002 and Africa Map.Inc 2002

Water: The key issues in relation to water resources relate to access and management, as well as water quality. Recent investments in the water sector (by the Government) have improved the urban supply and services, particularly in Nouakchott and Nouadhibou, as well as in the rural areas where coverage is poor.

(25) ONS-Tenniya. Baseline Compilation Report. 2005 (see Annex D)

Thus, nationally, access to drinking water has significantly increased from 10.8% to 40.7% in 2000 (37% according to Ministry of Health and Social Affairs (MSAS)). Water availability is a major concern as resources are depleting. Further large-scale investment is required to strengthen and extend the safe water supply system. One such project being undertaken presently aims to supply Nouakchott with water from the Senegal River under the Aftout-Es-Saheli project, which will be financed by the OPEC Fund for International Development under a BOT (Build-Operate-Transfer) arrangement.

Wastewater and sanitation: Sanitation is limited in the country. Nationally, access to sanitation system (ie. latrines, toilets with flush connected to septic tanks or sewers) was 38% of households, but only 19.6% in rural areas, against 65.9% in Nouakchott and 63% in other urban centres⁽²⁶⁾. Moreover, the access rate in poor urban neighbourhoods was estimated at 10%⁽²⁷⁾ in 2000. In 2000, 33% of the population had access to sanitation.

Solid wastes: According to EPCV 2000, only 12% of domestic wastes are collected, 85.3% are “thrown” and 2.7% are either buried or burnt/incinerated. In rural areas, collection is quasi non existent, with more than 95% of domestic wastes just “thrown”.

Poverty

Definition of Poverty

In this section absolute poverty is defined as ‘the cost of the minimum necessities needed to sustain human life’ United Nations Development Program (UNDP). According to the World Bank people earning less than US\$1 per day are considered to be well below the poverty line. Relative poverty is defined as ‘the minimum economic, social, political and cultural goods needed to maintain an acceptable way of life in a particular society⁽²⁸⁾. *Human Development Index:* Based on the 2004 UNDP Human Development Index (HDI)⁽²⁹⁾, Mauritania ranks 152 out of 177 countries. Compared with neighbouring countries of Mali (174), Senegal (157) and Morocco (125), it appears to have had some development in recent years as seen in *Figure D1.10*.

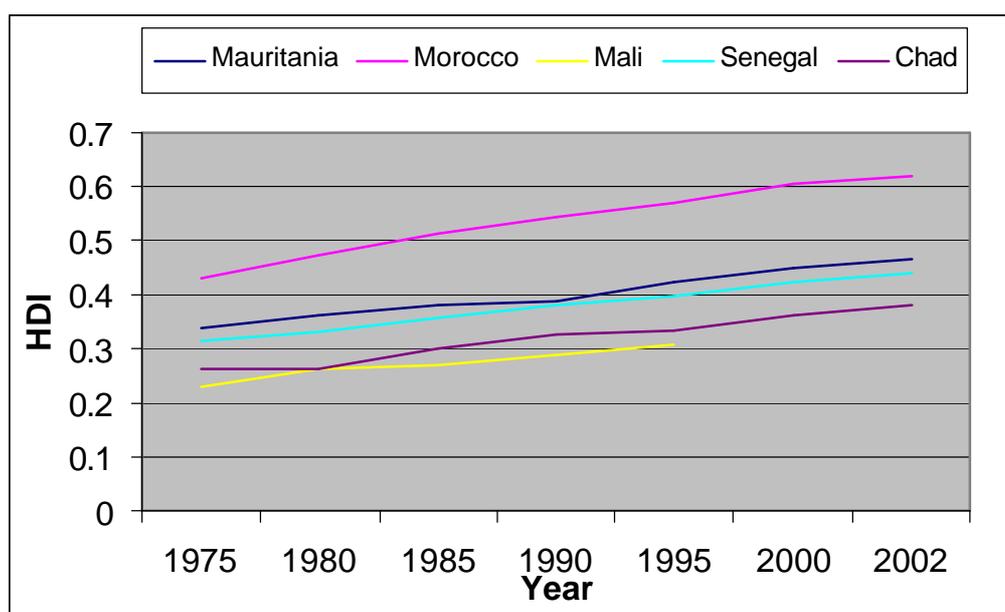
⁽²⁶⁾ ONS-MAED. Mauritania’s Poverty Profile 2000. EPCV 2000. April 2002.

⁽²⁷⁾ RIM. Rapport sur la mise en oeuvre du Cadre Stratégique de Lutte contre la Pauvreté (CSLP) en 2003. July 2004.

⁽²⁸⁾ UNDP

⁽²⁹⁾ A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living.

Figure D1.10 Human Development Index Evolution from 1975 to 2002



Source: UNDP Human Development Index Trends Data

According to WB sources the incidence of poverty fell from 56.6% to 46.3% between 1990 and 2000. This reduction has been attributed to sustained growth since 1992, a steady public spending towards social sectors (refer *Figure D1.8*) and poverty reduction programs.

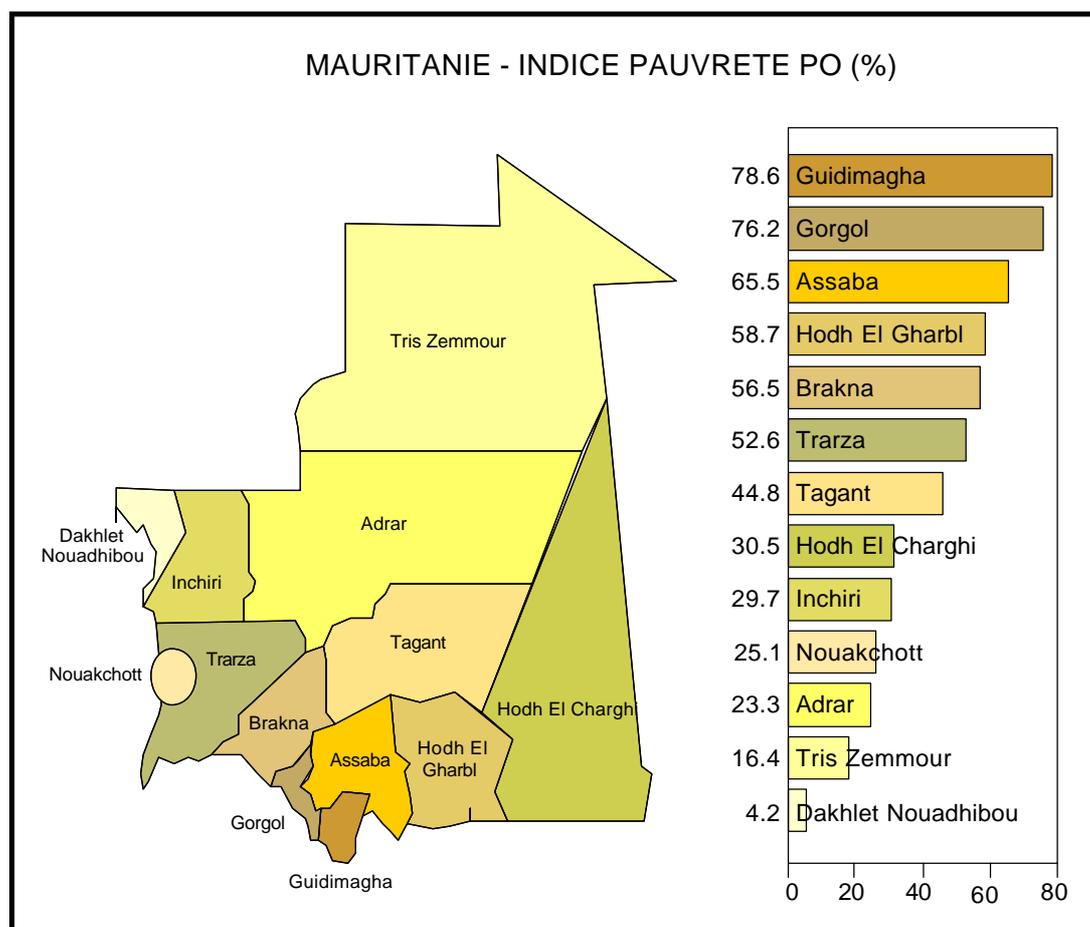
Data varies quite considerably in terms of poverty rating, for example; the 2003 World Resources Institute (WRI) states 57% of the population were poor (ie. below the national poverty line) with 29% surviving on less than \$1US per day⁽³⁰⁾ whereas the 2000 EPCV⁽³¹⁾ report suggests a figure of 46%. This may be due to the high migration levels skewing the data, in addition to different collection techniques.

Poverty in Mauritania has historically been unequally distributed, with higher levels in the rural areas in the south. As is evident in *Figure D1.11*, the poorest regions are located in the south close to the Senegal River valley, in particular in the Wilayas of Guidimagha and Gorgol. In the Wilaya of Trarza the rate of poverty is higher than 50%, in the Wilaya of Nouakchott the rate ranges between 20% and 30%. In Nouadhibou the rate of poverty is less than 4.2%; this is mainly related to the existence of the mining and fishing industries, the key economic activities of the country which support a large percentage of the Dakhlet-Nouadhibou population.

⁽³⁰⁾ Earth Trends Country Profiles: The World Resources Institute, 2003. found online at http://earthtrends.wri.org/pdf_library/country_profiles/Eco_cou_478.pdf

⁽³¹⁾ The permanent investigation into the living conditions of households 2000 report

Figure D1.11 Incidence of Poverty Per Administrative Unit (Wilaya)



Source: MAED-ONS. Poverty Profile 2000

There are many factors contributing to Mauritania's poverty situation:

- its size and low population density, causing communications to be very difficult;
- climate and droughts;
- rising levels of birth rates, household sizes, single parent/women headed households;
- illiteracy;
- increased migration of the population towards Nouakchott;
- a fragile institutional framework; and
- emerging civil society.

Rural Poverty

In general, poverty is higher in the rural areas where 48% of the national population live (53% of the working population mainly agriculture and livestock). Seventy percent of the rural population is estimated to be poor, ie. earning less than US\$1 per day. The southern areas of Hodhs and Guidimagha (refer *Figure D1.11*) have a rate

of poverty of around 80% and higher⁽³²⁾. Lack of development in the agricultural sector contributes to the case of rural poverty. In addition, as discussed in Section 4.1, factors such as limited water availability, limited land access, lack of social infrastructure and inadequate training all contribute to the high poverty levels.

Urban Poverty

Severe droughts, locust infestations and the harsh living conditions in rural areas have initiated large scale urban migration during the past decade, in particular to Nouakchott and Nouadhibou.

This has put significant pressure on the existing infrastructure and services. In 2000 the incidence of poverty was nearly two times lower in Nouakchott (20.6% of the population) than in other cities (37.8%)⁽³³⁾. This figure is rising rapidly due to the immigration of poor people to Nouakchott where approximately 1 person in 5 is living below the poverty threshold. Employment opportunities are very limited, with urban planning becoming a huge problem and many of the population living in substandard, overcrowded accommodation in informal settlements.

Disparities in Wealth

The increasing disparities between the rich and the poor in Mauritania are becoming more evident. Figures from 2003 suggest the richest 20% of the population earn 44.1% of total income and the poorest 20% earn 6.4%)⁽³⁴⁾. Mauritania is currently 37th on the distribution of income scale (the Gini coefficient)⁽³⁵⁾. In comparison Morocco rates 39th, Mali 54th and Senegal 54th. Where in the past the Gini Coefficient for Mauritania has decreased, an increase occurred between 1996 and 2000, with the rich profiting from growth and an increasing number of poor ending up in a state of absolute poverty. Widespread malnutrition and the high infant mortality rate reflect this level of poverty.

Table D1.11 outlines the poverty reduction target figures according to Mauritania's 2000 Poverty Reduction Strategy. Comparing the figures for 1996, 1998 and 2000, poverty levels appear to have decreased.

⁽³²⁾ World Food Program, Country Strategy Outline, 2002

⁽³³⁾ 2000 Mauritania PRSP

⁽³⁴⁾ Earth Trends Mauritania Country Profile – Economic Indicators, the World Resources Institute (WRI) 2003.

⁽³⁵⁾ This economic indicator explains income distribution and inequality on a scale of 100; 0=perfect equality and 100= perfect inequality.

Table D1.11 Poverty Reduction Target Figures

Priority objectives and performance indicators	Reference Situation				Target Figures		
	Date	Value	Date	Value	2004	2010	2015
Number of poor (in thousands)	1996	1,175	2000	1,161	1,141	860	706
Incidence of poverty (%)	1996	50.0	2000	46.3	41.3	27.1	19.7
Incidence of absolute poverty (%)	1996	32.6	2000	31.4	26.9	13.2	6.6
Gini coefficient *	1996	38.0	2000	39.0	39.0	36.7	35.6
Life expectancy at birth (years)	1998	54	1998	54.06	56.0	59.0	62.0
Infant mortality rate (per 1,000)	1998	105	2000	87.0	80.0	75.0	72.0
Rate of malnutrition among children < 5 years	1999	23	2000	32.0	20.0	15.0	13.0
Proportion of households connected to water system	1998	35	1997	35.0	45.0	54.0	60.0
Price per m ³ of water (USD)	1997	1.03	1997	1.03	1.03	1.07	1.10

* The Gini coefficient, which is measured for expenses, should not experience significant evolution, as the consumption patterns of Mauritians do not change very much from one income level to the next.

Poverty Reduction Strategy Program (PRSP) (2001 to 2004 extended to 2005)

Mauritania prepared its first PRSP in December 2000 based on a participatory approach involving all stakeholders⁽³⁶⁾ in the country's development. The poverty reduction strategy is built upon four main themes:

1. Accelerating economic growth to improve the economy's competitiveness;
2. Developing human resources and access to social infrastructures;
3. Developing growth potential and productivity of the poor; and
4. Promoting institutional development and good governance.

Five priority areas under the PRSP for 2001 to 2004 have been highlighted:

- Rural development;
- Urban development of settlements located on the outskirts of large cities and towns such as Nouakchott, Nouadhibou and Rosso;
- Education;
- Health; and
- Water supply.

Under the enhanced HIPC Initiative, Mauritania became the first new country to qualify for debt relief and was among the first four countries to complete a full PRSP (2000).

(36) Government, civil service, local representatives, civil society, the private sector and a donor committee

Health Baseline

Overview

According to the Mauritanian PRSP, the health sector has attracted a considerable amount of investment from the Government of Mauritania with assistance from international donors. This has resulted in a substantial expansion of health care coverage in Mauritania, from 30% in 1990 to 70% in 1998⁽³⁷⁾. Funding for the health sector as a percentage of GDP increased from 1.6% in 2000 to 2.9% in 2002 (refer *Table D1.8*).

Progress has also been made on the basic survival indicators. Life expectancy at birth has increased from 43.4 years for the period 1970 to 1975 to 52.5 years for the period 2000 to 2005. Between 1970 and 2002, the Infant Mortality Rate dropped from 150 to 120 per 1,000 live births and the under five mortality rate dropped from 250 to 183 per 1,000 live births (UNDP Human Development Report (HDR), 2004). However, these still remain high, relative to the sub-Saharan Africa average of 108 in 2002. In addition, the rates are probably even higher among poorer income groups due to under reporting in rural areas. The most common causes of death among children are diarrhoeal diseases, malaria and acute respiratory infections. The Maternal Mortality Rate remains high, at 747 per 100,000 live births in 2000. This is mainly as a result of complications at birth and infections and linked to poor access to health care during and after birth. *Table D1.12* summarises the national data for Mauritania's key health indicators.

Table D1.12 Key National Health Indicators and Diseases⁽³⁸⁾

Key Indicators	2003 Statistics (%)
	National
Rate of maternal deaths	1.35
Rate of Still birth	2.72
Rate of morbidity due to malaria	4.27
Rate of respiratory illness	19.17
Rate of Diarrhoea	7.06
Rate of intestinal parasites	3.67
Rate of TB	0.06
Rate of conjunctivitis	3.67
Rate of Schistosomiasis	3.67
Rate of HIV	0.07

Source : *Annuaire des Statistiques Sanitaires Annee 2003, MSAS*

Leading Cause of Diseases

The leading causes of morbidity in Mauritania include malaria, respiratory illnesses and diarrhoea. Other important health issues include conjunctivitis, tuberculosis and HIV/AIDS.

(37) Medical cover within a 10 km radius

(38) *Annuaire des Statistiques Sanitaires Annee 2003, Ministere de la Sante et des Affaires Sociales*

- Malaria prevalence is high - the rate of morbidity due to malaria was estimated at 4.27% in 2003. However, this figure was likely to have been overstated as a result of Mauritanian flu which is often being misdiagnosed as malaria. The risk of contracting malaria varies by region and season, with a high risk in areas near the Senegal River and low or no risk in semi-desert and desert areas. Annual data suggests 250,000 cases on average reported nationally; this positions malaria third reasons, after acute respiratory infections and diarrhoeal diseases. In the Southern and South-eastern Wilayas malaria is the first cause of mortality and morbidity.
- Respiratory diseases are the second most common cause of illnesses in Mauritania. These include bronchitis, common cold and influenza and are likely to be caused by dust, humidity and sudden changes in temperature from night to day. The rates of respiratory infections are higher for children under the age of 5 years than the national average.
- As result of poor public hygiene and lack of adequate sanitation facilities, diarrhoeal diseases are very common, especially among children. It is estimated that approximately 18% of children suffer from one or more episode of diarrhoea in a period of 15 days, with prevalence particularly high for children under the age of 23 months.
- Mauritania has a high prevalence of Tuberculosis. In 2002, there were 437 reported cases per 100,000.
- HIV/AIDS prevalence rates are currently low, compared to other Sub-Saharan countries. 2001 data estimates approximately 10,000 cases or a prevalence rate of 0.6. However, the actual rate may be higher due to factors such as under reporting, prostitution, a high rate of divorce and remarriage. The Government has established a national program providing testing, treatment, free condoms, awareness and education etc. Testing can be undertaken at the national hospital in Nouakchott and a treatment clinic has been established by the French Red Cross.

Malnutrition

Mauritania suffers from frequent droughts and high levels of poverty. As a result, the incidence of malnutrition in Mauritania is high. The 2001 Mauritania Demographic and Health Survey estimates that nearly 35% of children under the age of 5 suffer from chronic malnutrition (stunting) and nearly 13% suffer from acute malnutrition (wasting). In addition, around 42% of children weigh less than 2,500 grams at birth. Other nutritional problems include iodine and vitamin deficiencies and anaemia amongst pregnant women.

Health Care System

Health Care Policy

The Government's public health policy aims to guarantee all citizens access to preventive medicine and high quality health care. This includes providing each village of over 1,500 inhabitants with a health post, each district over 10,000 inhabitants with a category B health centre, each moughataa over 20,000 inhabitants with a category A health centre and each moughataa of over 40,000 inhabitants with a moughataa hospital by 2015.

Structure of Health System

The Mauritanian health system is organised along a three tiered hierarchical structure where the central government is responsible for the provision of health services at the Moughataa, Wilaya and National levels. Currently, all primary, referral health care facilities are concentrated in the capital Nouakchott, regional hospitals are located in almost all the Wilayas and health centres and posts are located in the Moughataas. The structure consists of:

Level 1: At the national level MSAS is responsible for the design and implementation of the health policy and oversees the following amenities:

- National Hospital complex (CHN);
- Neuropsychiatry Center (CNP);
- National Center of Hygiene (CNH);
- National Center of Orthopedics and Medical Rehabilitation (CNORF);
- Hospital Sheik Zayed de Nouakchott;
- Centre National de Transfusion Sanguine (CNTS); and
- Military Hospital of Nouakchott.

In addition, there are two schools that train medical personnel: the National School of Public Health (ENSP); and the National Institute of Medical Specialties (INSM). An abundance of medical outlets and pharmacies exist (over 150). The average occupancy rate for the national hospitals is 39%, although capacity varies considerably.

Level 2: At the regional or Wilaya level, the Regional Director of Medical Socio-Promotion (DRPSS) under the direct authority of the "Wali" (governor) manages the regional hospitals. There are currently 10 regional hospitals, 1 in each Wilaya except Tiris Zemmour, Nouakchott and Inchiri.

Level 3: At the department or Moughataa level, a doctor is responsible for the medical district (Health Centre and Health Post, etc.) Each health post is managed by a nurse and located in rural communities (394 in total). Health centres are located in the larger, more urban communities. There are approximately 70 health centres in total,

including 21 type A (serving a moughataa of over 20,000 inhabitants) and 49 type B centres (serving a district over 10,000 inhabitants)⁽⁴⁰⁾.

In addition to health care services provided by the Government, many Mauritanian's of different ethnic and social backgrounds use traditional healers. In recent years, health care provision by private clinics has increased mainly in the cities. In 2000 it was reported that nationally 44% of households had access to hospitals/health centres, 69% in urban areas and 27% in rural areas⁽⁴¹⁾. The Government has established a cost recovery system at the health posts/centres with the average cost of treatment approximately 175 UM. However, some treatments are free including vaccinations. The free vaccination policy has resulted in high rates of vaccination for Bacillus Calmette-Guerin (BCG) and Polio. If a family is still unable to pay for the cost of treatment immediately, they may be allowed to pay in instalments.

Health Care limitations

Despite the progress made in the health sector, the system still faces many challenges that constrain its ability to address the major public health issues listed above. A lack of human resources, especially in rural areas, is a major factor that affects the level and quality of service provision. In 2003 there were 16 nurses, 5 doctors, 0.4 surgeons and 1 dentist per for every 100,000 people⁽⁴²⁾. Efforts at increasing and retaining the number of staff have been limited due to the low salaries and other incentives such as good working conditions and adequate equipment. Most of the qualified staff prefer to work in Nouakchott or Nouadhibou, therefore expertise is poorly distributed in the regions. In addition, training facilities are limited. Most of the doctors are trained overseas in France, China, Russia and other countries in Africa, where they obtain good qualifications. However, due to the relatively low salaries paid in Mauritania, many tend to remain overseas rather than return to practice in Mauritania.

Due to the scarcity of qualified staff at the health posts, they are often not able to offer an adequate level of health services to the population. The health posts/centres are not geographically evenly distributed, the location being highly dependent on socio-political factors. Many rural communities in Mauritania are widely dispersed, isolated and therefore difficult to reach.

This has made provision of health services difficult. In addition, insufficient means of transportation and communication render patient referral, maintenance, supervision, and all logistic activities expensive and difficult to carry out. This also affects the regular distribution system of medical supplies to the health posts around the country. Nationally, according to World Health Organisation (WHO) 2003 figures, access to drugs ranges between 50% and 79% of the population.

⁽⁴⁰⁾ MSAS, Plan Strategique de developpement des ressources humaines, May 2004

⁽⁴¹⁾ Profil de la Pauvrete en Mauritanie, Ministere des Affaires Economiques et du Developpement, Office National de la Statistique, Avril 2002

⁽⁴²⁾ MSAS, June 2004 – recalculated ERM

Quality control of medical supplies is a major concern. The majority of medicines are imported and distributed to hospitals, clinics and chemists by a central system. However, there is no legal requirement that ensures people purchase their medicines from this facility as the medicine only needs to be registered prior to use.

Hence, a drugs black market is rapidly growing, with many supplies of poor quality being smuggled across the borders and via the ports. They can be purchased easily, and can even be found in hospitals and clinics. A new quality control laboratory is about to be opened in Nouakchott. This may help address the problem. In terms of facilities for the poor, free access to doctors is provided but no free medicine is supplied as such however in extreme cases treatment will be undertaken and a reasonable payment system set up.

Education

Primary and Secondary Education

Since 1991, Mauritania has made good progress in developing basic education and education for females⁽⁴³⁾.

According to the PRSP, the education sector has attracted more than 5% of the GDP in 2002, a 20% increase since 2000. Literacy rates (based on the population over age 15 and over who can read and write) for both men and women are on the rise with a national average of 57% in 2000⁽⁴⁴⁾ (males 63% and females 52%). However, rates in the rural areas are much lower, with a national average of 44% (males 50% and females 38%)⁽⁴⁵⁾.

Although enrolment rates are increasing, primary school participation rates are much higher than secondary rates. *Figure D1.12* and *Figure D1.13* depict the evolution of enrolment in primary and secondary education since 1994. Enrolment rates for females are roughly equal at the primary level (in 2003 219,581 males and 214,600 females) and gradually improving at the secondary level. Most have been schooled in Arabic, but many are unable to complete secondary exams as they cannot speak or read French or English. Most are only taught French three hours per week.

⁽⁴³⁾ UNICEF. *Enfants et Femmes de Mauritanie*. April 2004.

⁽⁴⁴⁾ EDSM 2000/1 and EPCV 2000

⁽⁴⁵⁾ *ibid*

Figure D1.12 Primary School Enrolments for Males and Females (1994 to 2003)⁽⁴⁶⁾

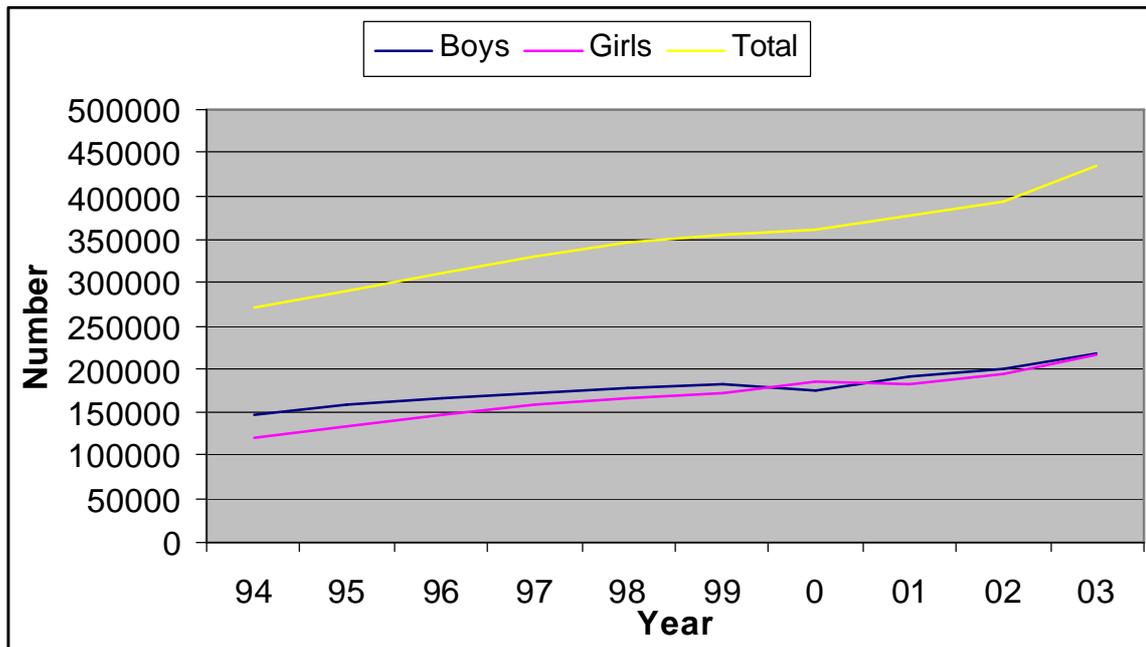
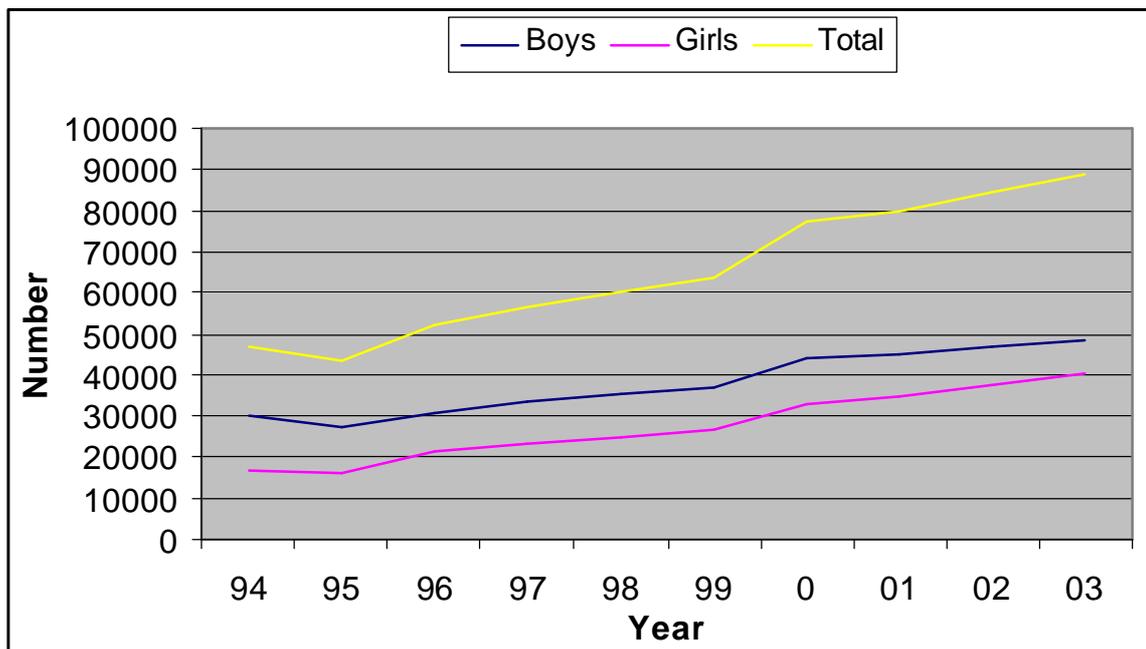


Figure D1.13 Secondary School Enrolments for Males and Females (1994 to 2003)⁽⁴⁷⁾



One of the key limitations surrounds the number of qualified teachers despite the numbers doubling for both primary and secondary schools from 1994 to 2003⁽⁴⁸⁾.

⁽⁴⁶⁾ Data provided by Ministry of Education, 2005

⁽⁴⁷⁾ Ibid

Primary schools in particular are greatly understaffed. In 2002 to 2003, the ratio pupils per teacher was of 41 in primary education and 26 in secondary education⁽⁴⁹⁾.

Higher Education System

According to the World Bank, the civil service remains the largest employer of university graduates but recruitment is now limited to replacement. A 2001 study looked at the civil service and a sample of 40% of businesses in the formal sector and estimated annual intake about 600. The university and institutions of higher education (IHEs) produce about 1,100 qualified graduates per year. Despite this surplus, jobs go unfilled because of the poor fit between skill/knowledge profiles and job requirements. Nouakchott accounts for 25% of all employment⁵⁰.

The World Bank notes that higher education's share of the budget declined from 22.6% to 11% between 1990 and 2002⁵⁰. UNESCO also reports that the number of students registered in higher education declined by 2.4%, from 11,112 students to 10,844 between 2000 and 2003. Government restructuring following the coup on 3 August 2005 resulted in the Ministry of Education being divided into two ministries: Ministry of Education (primary and secondary education) and the Ministry of Higher Education and Research. Higher education is mostly financed by public funds, i.e. the State.

The higher education system in Mauritania is made up of:

- University of Nouakchott, which has three 'Schools':
 - *La Faculté des Sciences et de la Technologie*: technology studies (bachelor and master equivalent) and some short vocational-oriented courses;
 - *La Faculté des Lettres et des Sciences Humaines*: Studies in Humanities (bachelors); and
 - *La Faculté des Sciences Juridiques et Economiques*: legal and economic degrees (four year programs).
- Nine specialised technical institutes, i.e. Institutions of Higher Education (IHEs). The largest of which are:
 - Higher Teacher Training School (*Ecole Normale Supérieure* - ENS);
 - National Administration School (*Ecole Nationale d'Administration* -ENA);

⁽⁴⁸⁾ In 1994 the number of teachers at the primary level was 5,224 and at the secondary 1,777. In 2003, the numbers had grown to 10,652 and 3,167- Data source as above.

⁽⁴⁹⁾ Ministry of Education statistics in UNICEF.*Enfants et Femmes de Mauritanie*. April 2004 and in ONS-Tenmyia Baseline Indicators Report, 2005.

⁵⁰ World Bank. Higher Education Project in Mauritania (Project Information Document - PID), April 2004.

- Higher Technical Education Center (Centre Supérieur d'Enseignement Technique-CSET);
- National Maritime and Fisheries Training School (Ecole Nationale d'Enseignement Maritime et des Pêches – ENEMP; in Nouadhibou); and
- National Institute for Medical Studies (Institut National des Spécialités Médicales - INSM).

The university, the ENS and CSET are the responsibility of the Ministry of Education while the others are under the authority of their respective ministries⁵⁰.

Total student enrolment at Nouakchott University was 8,338 for the year 2004 to 2005 as shown in *Table D1.13* and *Table D1.14*. One quarter of these students are female.

Table D1.13 University Enrolment in 2004 to 2005

	Total	Male	Female
Law & Economics	5,156 (62%)	3,866	1,290
Humanities	2,184 (26%)	1,565	619
Science & Technology	998 (12%)	828	170
Total	8,338	6259	2,079

Table D1.14 Technical Institutes Under the MoE's Authority (2004 to 2005)

	Total	Male	Female
ENS	329	273	56
CSET	101	90	11

Of approximately 400 professors in Mauritania, 80% work at Nouakchott University.

The Higher Technical Education Centre trains approximately 100 students per year who tend to become semi-skilled workers in the fields of mechanical engineering, car mechanics, industrial engineering (maintenance), electrical engineering, and accounting and administration. About 10% are female⁵¹. Most of the degrees are two-year programs; one program last four years. The completion rate has increased

⁵¹ Ministry of Education, Direction de la Recherche Scientifique et des Affaires Académiques, 2005

over the last twenty years, reaching about 90%. Programs vary every year and not all subjects are offered each year. Accounting and administration-related programs ceased to be taught at the Centre in 2000⁵².

Overall, higher education suffers from poor quality and lack of relevance to employability. This is due to out-dated content and a lack of adequate equipment and facilities (ie. deteriorated buildings, very few computers and laboratories and rudimentary libraries).

However, some initiatives for improving the levels of education are emerging. There is one distance learning program located in a one-room centre at the University of Nouakchott and linked to the Université de Laval (Canada) which offers a small, select group of students (including 30% females) a Bachelor of Science degree course in information technology. Facilities include state-of-the art computer technology and software, with high-speed internet, as well as voice and videoconferencing that permits live interaction with the Laval faculty.

Vocational Training

The government plans to increase enrolments in science, technology and in shorter, vocationally-oriented courses (“filières professionnalisantes” FPs) which reflect public and private sector needs, including re-training and skill upgrading. There are plans to allocate further places for FP course. Courses in the academic year 2003/2004 included: computer skills for managers; geology/mining; water and the environment; maintenance of electronics and automation systems; quality control of food products; language training for business; and the development of arid zones. Most graduates find employment.

The French cooperation agency has financed two programs of €1.5 million and €1.67 million to help restructure and modernise the higher education system with a focus on the University of Nouakchott. Four-year scientific professional programs are now offered in the fields of food industry-quality control, water and wastewater, geology (with SNIM support) and electro-techniques and computers. The second phase is promoting French and bilingual teaching. The University of Nouakchott is planning to develop more professional programs, including those focused on the oil sector, in 2006 to 2007.

Mauritians Abroad

In 2004 and 2005, 2,374 Mauritanian students studied abroad in 25 countries including France, Tunisia and Morocco. Of the students who studied abroad in during this time, 217 were female.

⁵² Centre Supérieur d'Enseignement Technique (CSET), Direction des Etudes. Synthèse des Résultats Scolaires (depuis sa création). 1981–2006.

Continuing Education

There are few opportunities to continue education in a technical or high school environment. The *Institut National de Promotion de la Formation Technique et Professionnelle* (INAP-FTP) was recently created under the authority of the Education Ministry and the Ministry of Labour and Public Works. INAP supports 20 technical schools and training centres. Its mission is to identify training needs, match supply and demand for training requirements, increase research on evolution of employment and training and provide technical support to training centres and high schools.

Approximately 18 to 20 private institutions provide different forms of training. INAP sometimes works with these groups if it is part of a grant that has been supplied to a private group.

INAP has undertaken surveys to identify skill areas that require increased resources and training. Results show that information technology, accounting and engineering needs increased resources and training opportunities are key areas of focus.

Annex D

**D.1 Baseline Profile: National
(Mauritania)**

**D.2 Baseline Profile: Region
of Nouakchott**

**D.3 Baseline Profile: Coastal
Settlements Between
Nouadhibou and Dakar**

Annex D2

Baseline Profile: Region of Nouakchott

Administrative Structure

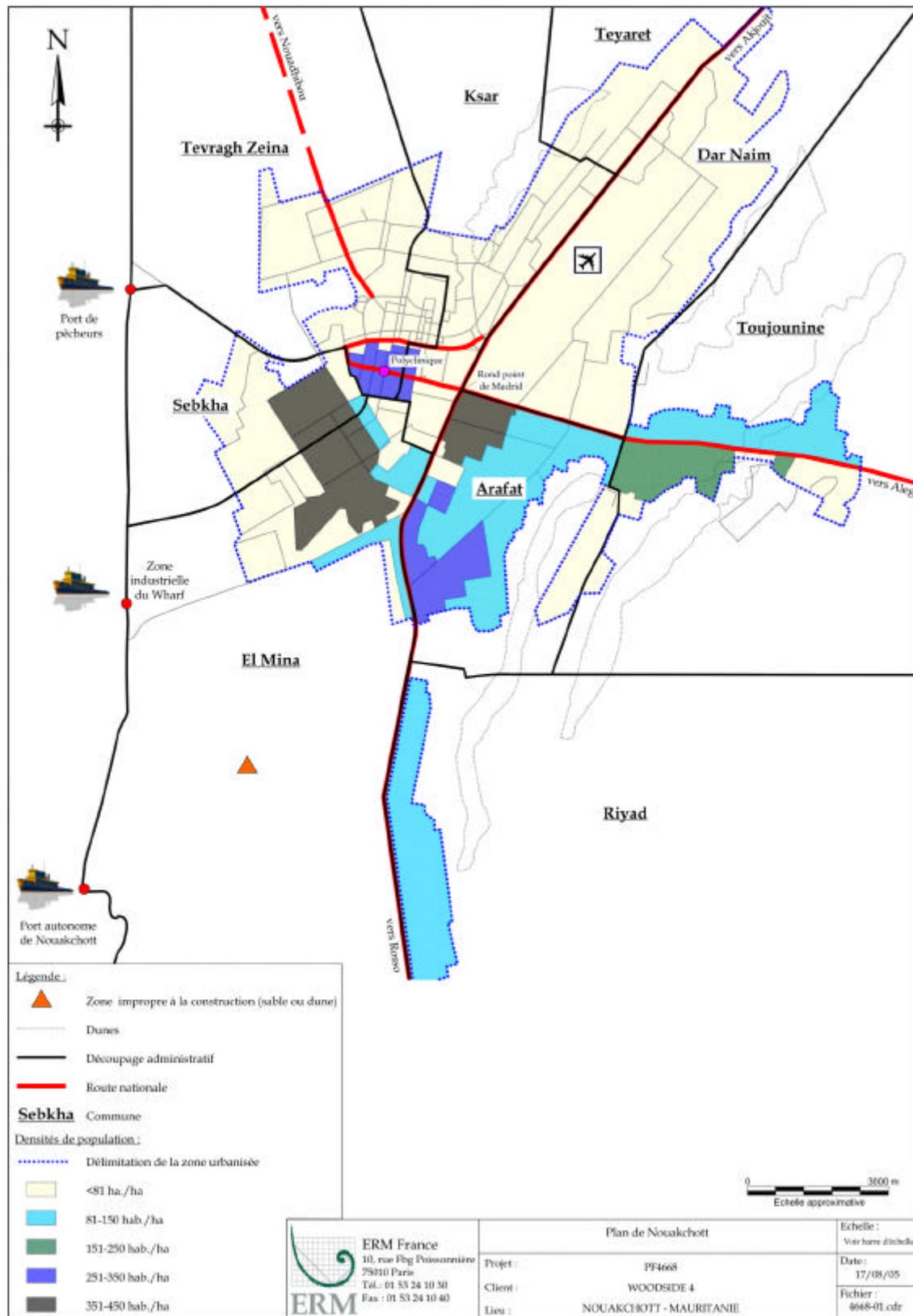
The Communauté Urbaine de Nouakchott

Created in June 2001, the *Communauté Urbaine de Nouakchott* (CUN), is composed of nine municipalities or *communes* including Tévragh Zeina, Ksar, Teyaret, Dar Naïm, Toujounine, Arafat, Riadh, El Mina and Sebkha (refer *Figure D2.1*). The CUN undertakes some of the municipal tasks on behalf of the nine *communes* to maintain coherence especially in relation to urban policy and environmental protection. At the time this baseline was prepared (August 2005) the CUN shared urban planning and land management powers with the Ministry of Equipment, Ministry of Interior, Ministry of Finance, and the newly created *Agence de Développement Urbain* (Local Development Agency).

The CUN is directed by a Council composed of 36 delegates from the member *communes*, including all nine mayors. The number of delegates per commune varies according to its population size⁽¹⁾.

¹ Choplin, Armelle. Etude des rapports ville-Etat: le cas de Nouakchott – Mauritanie. Prodig. 2003.

Figure D2.1 City of Nouakchott and Key Infrastructure



Budget of the CUN

As shown in *Table D2.1*, the CUN's provisional budgets were 3,700 million Ouguiya (UM) in 2003 but less than half of its budget was actually implemented⁽²⁾. The CUN's budget is much larger than the individual budget of the nine municipalities; for instance in 2004, CUN's budget was about 15 times bigger than that of Sebkhā (approximately 207 million UM)⁽³⁾.

Table D2.1 Summary of CUN Budget in 2003 to 2004 (in Millions UM)

Budget Component	Planned: 2003	Implemented: October 2003	Planned: 2004
Operating	983,4	689,1	753,2
Equipment	2708,3	811,8	2306,6
Total	3691,7	1500,9	3059,8

Source : CUN Budget, 2004

The sources of CUN's finances include property tax and local fees, for example unloaded tonnage, but these sources are limited to about 20% of total revenues. The budget relies heavily on institutional (e.g. Program Habitat Africa) and international multilaterals (World Bank and *Agence Française de Développement* (AFD)), as well as grants from the State. In 2003 these sources accounted for nearly 70% of total CUN revenues.

CUN's major expenditures are dedicated to improving the road network and improving housing supply. In 2003, nearly 50% of the budget was spent on road and housing investments and about 12% was used to pay staff salaries and benefits.

Demography

Over the past 50 years the population of Nouakchott has increased substantially from 2,000 inhabitants in 1965 to nearly 600,000 inhabitants in 2000. In 2000, approximately 22% of the total population and more than half of the urban population (about 58%) lived in Nouakchott.

The most recent ONS projections estimate Nouakchott's population at 743,000 inhabitants in 2005.

Since independence in 1960 until the end of the 1980s, the population growth rate was between 10% and 25% per year, as shown in *Table D2.2*. This was much higher than the national average of 2.9% between 1977 and 1988⁽⁴⁾. This growth has been

(2) CUN's Budget, 2004.

(3) Sebkhā's Budgets 2004 and 2005

(4) ONS-Tenmiya. Baseline Compilation Report, 2005 and ERM calculation. Growth rate is defined here as the rate of the total increase of the population per year and does not differentiate between the factors (eg variations of fertility rate, of mortality and natality rates, migrations etc.).

mainly due to historical immigration of rural populations from the interior of the country during severe droughts in the 1970s and 1980s. Since 2000, the growth rate has been in the order of 5.9% per annum.

Table D2.2 Population Growth in Nouakchott 1955 to 2005

	Estimations		1977	RGPH*		Projections
	1955	1965		1988	2000	2005
Population	2,000	10,000	134,700	393,325	558,195	743,511
Increase per year (%)	17.5%		24.2%	10.2%	5.9%	

Source: ONS (*Recensement Général de la Population et de l'Habitat (RGPH) et Baseline Indicators Report, 2005) and SDAU (Note: SDAU estimates the population in Nouakchott at about 612,000 in 2000)

Urbanisation

Since Independence, Nouakchott has grown from the small historic centre of Ksar to cover an area of 38,581 hectares in 2005. This continual and rapid augmentation of the population has engendered an uncontrolled spatial expansion though the construction of illegal settlements (called *Kebba* or *Gazra*). These unplanned settlements are principally located on the fringes of the city in communes such as El Mina, Toujounine, Arafat and Dar Naïm (refer *Figure D2.2*).

It is estimated that 16% of the population (approximately 100,000 people) were living in informal settlements in 2000 (ONS and Urban Development and Planning Framework, Schéma de développement et d'aménagement urbain (SDAU)). The EPCV, 2000⁽⁵⁾ (Survey on Households' Living Conditions) reported that 20.7% of the population were living in their home by appropriation⁽⁶⁾.

As a consequence of this spatial expansion, the percentage of built-up areas (*zones urbanisées*) in Nouakchott is relatively low at an average of 18% across all communes (refer *Table D2.3*).

(5) MAED, CDHLCPI, and ONS. *Enquête Permanente sur les Conditions de Vie des Ménages (EPCV) 2000*. April 2002

(6) There are four main dwelling occupancy status quoted in the Mauritania Poverty Profile Report; ownership, tenant, appropriation and free housing. Appropriation is the term used to describe households who erect houses without planning permits.

Table D2.3 Urbanisation Levels in Communes, 2005

Moughataa	Total Surface area (ha)	Constructed surface area (ha)	% of constructed areas
Teyaret	2500	556	22
Ksar	3300	612	19
Tevragh Zeina	2966	1067	36
Toujounine	7434	874	12
Sebkha	1386	546	39
El Mina	9023	718	8
Dar Naïm	2647	1059	40
Arafat	1224	1014	83
Riyad	8101	460	6
Total	38581	6906	18

Source : Schéma Directeur d'Aménagement Urbain de Nouakchott (SDAU). URBAPLAN, 2003

At present, Arafat is the only commune that is densely urbanised at 83%. It is also central and has a high population density. The rates of urbanisation in the other eight communes are lower than 40% and in several areas of El Mina and Riyadh, is below 10%. The geographic elongation of the capital has raised significant challenges in terms of planning, infrastructure delivery and services development⁽⁷⁾.

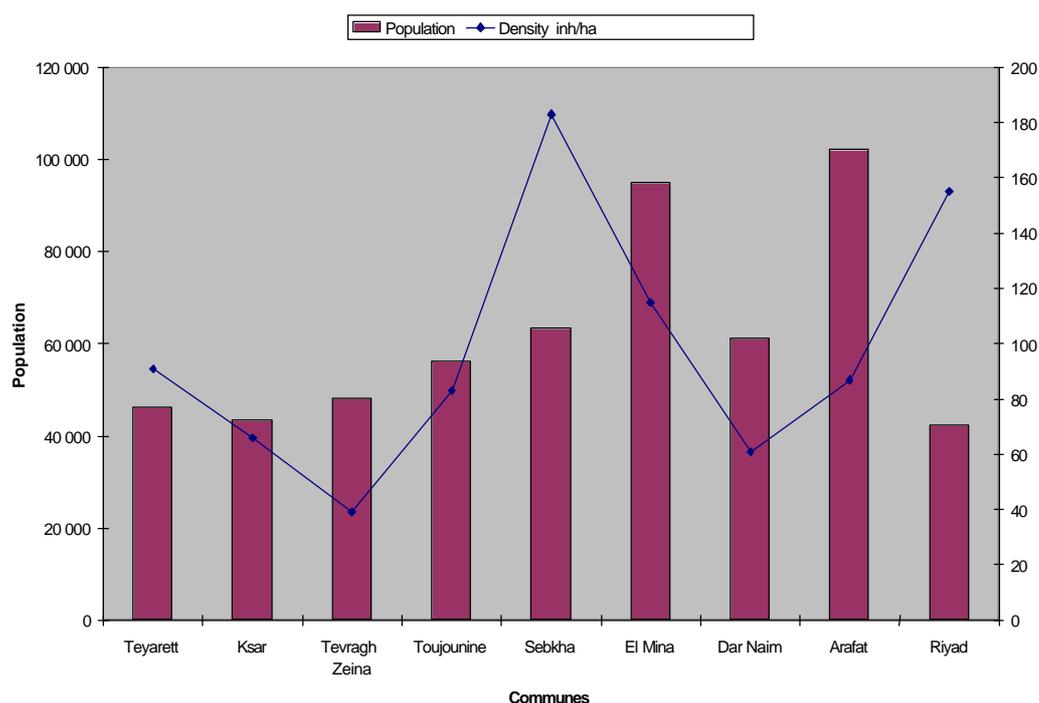
Similarly, this urbanisation process has contributed to maintaining a low overall population density in Nouakchott, an average of 89 inhabitants per hectare in the early 2000s. However, this figure conceals the wide disparities in the population over the nine communes of Nouakchott.

In poorer areas such as El Mina, Sebkha and Arafat, and in the wealthier neighbourhoods of Tevragh Zeina there are approximately 400 inhabitants per hectare⁽⁸⁾ (refer Figure D2.2).

⁽⁷⁾ Schéma Directeur d'Aménagement Urbain de Nouakchott (SDAU). URBAPLAN, 2003.

⁽⁸⁾ SDAU

Figure D2.2 Population Distribution and Density, 2000⁽⁹⁾



Source: Schéma Directeur d'Aménagement Urbain de Nouakchott (SDAU). URBAPLAN, 2003

The sudden urbanisation of Nouakchott has contributed significantly to infrastructure delivery and maintenance issues such as waste management, sanitation, water and housing. Urbanisation has also generated great disparities in living conditions between the different communes.

Infrastructure, Services and Living Conditions

Housing

The majority of the population live in concrete houses, however nearly one quarter of the population live in substandard dwellings (barracks or huts). Most of the substandard dwellings are located in the poor suburban areas with 10% of the population living in one apartment or room. Compared to the rest of the country where most of the population own their dwelling (in most Wilayas more than 90% are owners of their home)⁽¹⁰⁾, only 40% of families in Nouakchott own their home; 32% rent and 21% occupy their homes by appropriation.

Table D2.4 shows basic data on housing conditions in Nouakchott based on the EPCV 2000 as reported in the Poverty Profile 2000⁽¹¹⁾.

⁽⁹⁾ ONS and the Schéma Directeur d'Aménagement Urbain de Nouakchott (SDAU). URBAPLAN, 2003.

⁽¹⁰⁾ EPCV2000

⁽¹¹⁾ MAED-ONS. Poverty Profile 2000. April 2002

Table D2.4 Housing Conditions in Nouakchott (2000)

Indicators	%	Indicators	%
Dwelling type		Energy at home	
Concrete houses	63.9	Electricity access (network)	36.1
Barracks or Huts	24.5	Candles	60.3
Dwelling Status		Wood/coal for cooking	52.8
Ownership	40.0	Gas for cooking	47.1
Rental	32.2	Waste	
Appropriation	20.7	Collected	28.6
Water access		Thrown out	69.9
Network (home or shared)	19.8	Sanitation system at home	
Water merchants	75.8	Latrines with septic tanks	59.8
		No toilet or use of buckets	32.6

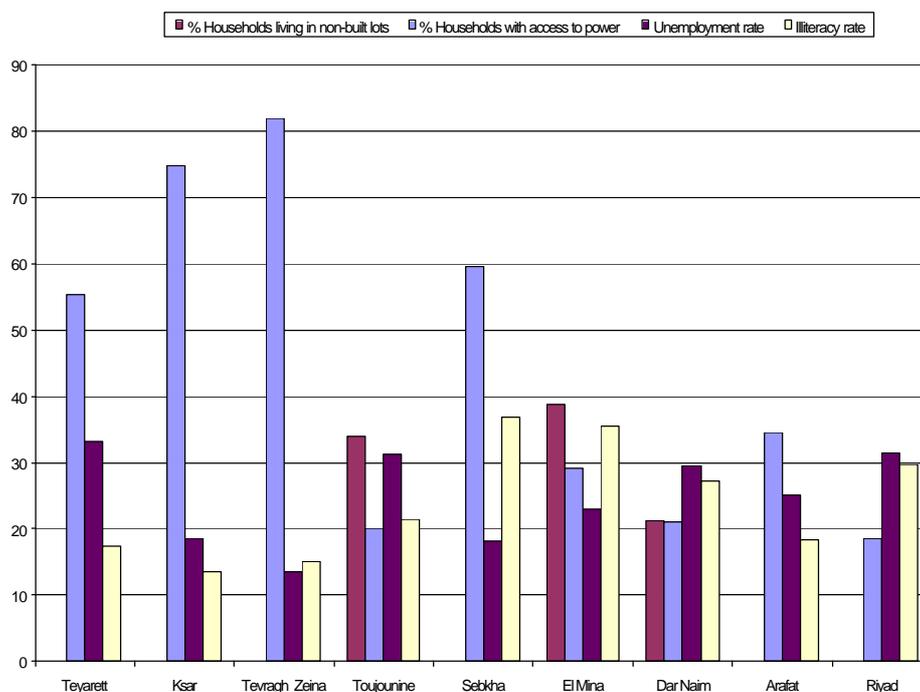
Source : EPCV2000

Electricity

According to ONS, the rate of access to electricity in 2000 was 40.9% of the population in Nouakchott according to ONS. This is twice as high as the national level (18%) and more than 20 times higher than in rural areas (1.5%).

This figure does however conceal disparities. For example, in the communes of Ksar and Tevragh Zeina the electricity access rates are 7% and 82% respectively, whereas in Toujounine, Dar Naïm and Riyad the rates are approximately 20% or less (refer Figure D2.3).

Figure D2.3 Access to Basic Services in CUN Communes



Source: ONS, 2000

Drinking Water

Water availability is a key issue in Nouakchott. The 462km of potable water network does not cover the entire city and some neighbourhoods are left unserved. Only 20,000 consumers were registered with National Water Utilities (*The Société Nationale des Eaux* (SNDE)) in 2000 (SDAU) and only 19% of households were connected to the piped network. Assuming the 20,000 registered consumers (*abonnés*) supply 6 or 7 people (their households and some neighbours), it is estimated that about 120,000 to 140,000 people have access to piped potable water at home. This equates to approximately 20% to 25% of the total population of Nouakchott. However, water piped supply is not reliable and water is often cut off, in which case households have to purchase potable water from others.

The rest of the population purchases its water from donkey cart merchants who access supply at the water fountains, especially in the poor suburban areas where very few people are connected to the piped network (SDAU, 2005). In 2000, about 75% of households in Nouakchott were supplied with water by a water merchant (EPCV, 2000). The approximate price of water from the water fountain in 2005 is 400 UM per 200 litres.

Sanitation and Waste

The EPCV 2000 estimated that about 66% of Nouakchott households had access to a sanitation system (sewers, septic tanks, latrines) in 2000. Of these only 6% had modern toilets. Nouakchott has a collection system for domestic wastewater and an operating treatment plant. It should be noted, however, that when it rains the manholes often overflow resulting in sewage flowing along the roads.

In 2000, only one third of the capital's domestic waste was collected for formal disposal (EPCV, 2000). Waste collection falls under the responsibility of each commune, however there is negligible infrastructure available to deal with this issue. The French NGO, Groupe de Recherche et d'Echanges Technologiques (GRET), is working with the Government to establish a waste management system in some of the communes of Nouakchott. In addition, the World Bank is financing the development of a landfill located 25 km outside of Nouakchott.

Transportation and Traffic

Nouakchott has almost 300km of sealed roads.

Transportation is an issue for the majority of the inhabitants of Nouakchott as the bus services are limited mainly to the sealed roads. Roughly 10 to 15 bus lines connect the city centre (*Polyclinique*), intra and inter urban bus stations, the Wharf, the Port Autonome (also called the Port de l'Amitié (PANPA)) and the fishing port.

Over recent years street lighting and the installation of traffic lights in the centre have improved traffic conditions in the centre. This has also resulted in an increase in

traffic volumes⁽¹²⁾. There has been a significant increase in the total number of car licence registrations at an average of 24% since 2001⁽¹³⁾. The increase in vehicles has contributed to an escalation in traffic accidents. In 2005, there were approximately 60 plus accidents per day in Nouakchott. Approximately 35 of these resulted in damaged to vehicles. Roughly 10 to 12 people per day are injured in traffic accidents and there are 5 to 7 fatalities per day including pedestrians⁽¹⁴⁾.

Ports

There are three ports in Nouakchott: the artisanal fishing port; the Wharf (an ageing infrastructure where the activity is reduced to gas and gasoline unloading); and the PANPA. The PANPA is a major hub for the country (activities at PANPA are described below in Section 5.8.2).

Airports

Nouakchott has one airport that handles air freight, and commercial, national and international flights. It is located in the centre of the city. A new airport will be constructed about 20 km north of Nouakchott. It will be built and financed by Chinese firms for a total of US\$160 million.

Police and Security Issues

There is very little documentation on crime levels in Nouakchott. According to the National Security office⁽¹⁵⁾, crime rates have not increased in Nouakchott. Nevertheless, some of the expatriate population feel that burglaries have increased.

Poverty and Access to Basic Services

Figure D2.3 demonstrates the unequal distribution of services and infrastructure, as well as the differences in employment and literacy. The communes of Toujounine, El Mina and Dar Naïm appear to be particularly vulnerable to immigration with a high percentage of informal settlements. Arafat and Riyadh also have a high percentage of unemployment and illiteracy.

Health

A summary of indicators is presented in *Table D2.5*.

(12) Based on in-country missions observations

(13) Estimates DNET

(14) Woodside HSE Award Entry Form, Mauritania Road Traffic Accident Prevention, 2005

(15) Interview with Colonel Ely Ould Mohamed Vall on July 21st 2005

Table D2.5 Key Nouakchott Health Indicators

Key Indicators	2003 Statistics per Wilaya (%)	
	Nouakchott	National
Rate of maternal deaths	1.67	1.35
Rate of Still birth	2.11	2.72
Rate of morbidity due to malaria	2.81	4.27
Rate of respiratory illness	24.99	19.17
Rate of Diarrhoea	10.09	7.06
Rate of intestinal parasites	4.95	3.67
Rate of tuberculosis (TB)	0.22	0.06
Rate of conjunctivitis	4.95	3.67
Rate of Schistosomiasis	4.95	3.67
Rate of HIV	0.18	0.07

Source : *Annuaire des Statistiques Sanitaires Année 2003, Ministère de la Santé et des Affaires Sociales*

Overcrowded conditions, poor hygiene, inadequate infrastructure (water, sanitation and waste) and lack of healthcare treatment exacerbate health issues, especially digestion-related diseases. The incidence of diarrhoea in Nouakchott is 1.4 times than the national average).

As shown in *Table D2.5*, HIV and TB rates are significantly higher than the national average at 2.6 and 3.6 times respectively.

- **Tuberculosis.** The prevalence of tuberculosis is particularly high in the winter with very humid days and cold nights, which translates into overcrowding of the national hospital during this period⁽¹⁶⁾. TB is a national concern and the Government has set up a national program offering free vaccinations.
- **HIVAIDS/STDs.** HIV/AIDS is currently not a significant issue in Nouakchott. It is estimated that there are roughly 300 cases⁽¹⁷⁾. However, this figure is probably an underestimate as it does not include those who have not been tested. Lack of testing is partially a result of the lack of awareness of the issue.

The demand for prostitution has risen. A recent study of 40 prostitutes in Nouakchott carried out by an NGO showed that 13 of the sample were HIV positive. The study also identified that the majority of the survey participants did not use condoms regularly, citing a lack of access, money or ignorance of the potential dangers of unprotected sex.

Malnutrition

As a result of rises in prices, especially of food products, combined with increasing poverty levels in Nouakchott, malnutrition levels have risen. In addition, the limited access to vitamins has led to severe deficiencies, particularly amongst young

⁽¹⁶⁾ According to hospital staff the TB department at the national hospital; GRET visit, Nouakchott National Hospital, June 2005.

⁽¹⁷⁾ MSAS & Comité National de Lutte contre le SIDA, Mise au point sur la situation épidémiologique de l'infection VIH en Mauritanie, 2004.

children. Recent data from MSAS suggests that the communes in most affected by lack of child malnutrition are Dar Naïm (4,557 new cases), Arafat (1,320 new cases) and El Mina (2,555 new cases). The NGO, Caritas, has set up a program to help Nouakchott's population to pass through the food shortage of the 2005 rainy season⁽¹⁸⁾.

Health Structures and Human Resources

With one policlinic and three national hospitals, Nouakchott has most of the qualified and specialised health staff (refer *Table D2.6*). The rate of geographic accessibility in Nouakchott is 63.80% compared to a national figure of 63.05%.

Table D2.6 Health Structures and Human Resources in Nouakchott

Indicator	National	Nouakchott	% of National
	Number (2003 to 2004) ⁽¹⁹⁾	Number (2005) ⁽²⁰⁾	
Structures			
Health Post	394	21	5
Health Centre	70	15	24.6
Polyclinic	1	1	100
Regional Hospital	8	0	0
Regional Hospital Centres	2	0	0
National Hospital Centres	3	3	100
Geographic accessibility	%	%	
	63.05%	63.8%	
Human resources	Per 10,000 inhabitants	Per 10,000 inhabitants	
Doctor per 10,000 inhabitants ⁽²¹⁾	1.4	0.24	
Nurse per 10,000 inhabitants	5.8	3.10	
Midwife per 10,000 inhabitants	0.85	1.26	

Source: ONS-Tenmiya Baseline Compilation Report, 2005

(18) Caritas, June 2005 see <http://www.secours-catholique.asso.fr/>

(19) Direction de la Médecine Hospitalière, Direction de la Protection Sanitaire, Direction des Ressources Humaines, Evaluation du plan directeur de la santé CREDES, 2004 & Système National d'Information Sanitaire, MSAS, Plan Stratégique de développement des ressources humaines, May 2004

(20) Plan d'action de la DRPSS de Nouakchott, avril 2005

(21) Sans prendre en considération le secteur privé et hospitalier

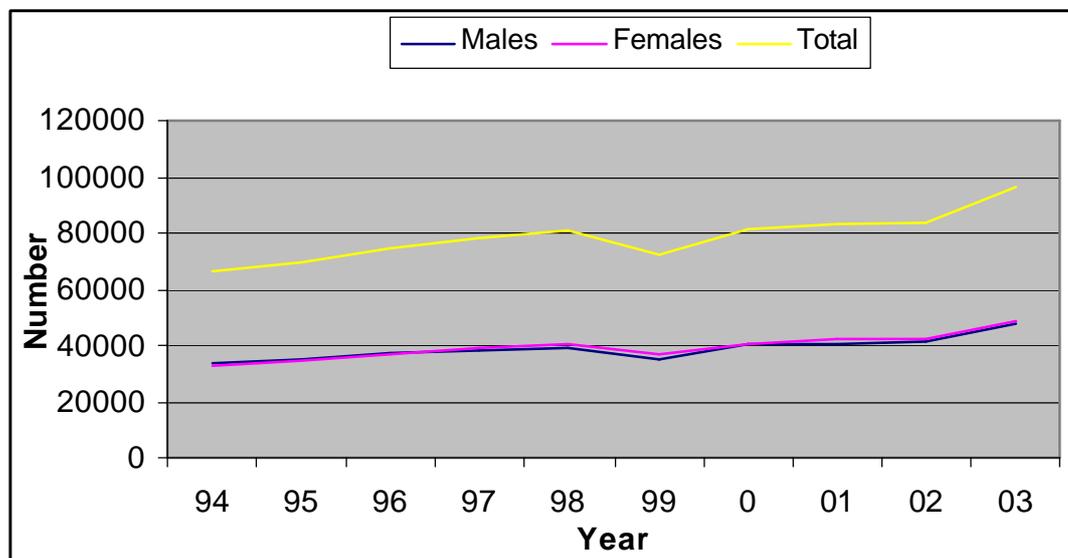
There are also nine private clinics with services, including rooms and equipment, and supplies guaranteed to be of a higher standard, but the prices of treatment can be up to three times higher. For example, delivery of a baby in a private clinic can cost over 120,000UM whereas in the military hospital, the cost is around 60,000UM and in a public hospital, only 5,000UM⁽²²⁾.

Doctors working in the private clinics also work in the public hospitals and clinics. Due to the higher salaries, most prefer to carry out their private clinic work hence contributing to the massive human resources problem in the public health sector.

Education

In Nouakchott the majority of students attend primary school. In 2000 31.9% of the population in Nouakchott had primary education⁽²³⁾ and 20.7% had secondary education but very few attend university or other higher education facilities. Only 4.8% of the population in Nouakchott has a university level education. Literacy rates in Nouakchott in 2000, based on the population aged 15 and over who can read and write, for both men and women were much higher than the national average of 77.3% (males 82.8% and females 71.7%)⁽²⁴⁾. Although enrolment rates are increasing, primary rates are still much higher than secondary rates. *Figure D2.4* and *Figure D2.5* show the evolution of enrolments in primary and secondary schools since 1994.

Figure D2.4 Primary School Enrolment Rates for Males and Females⁽²⁵⁾



Source: Ministry of Education

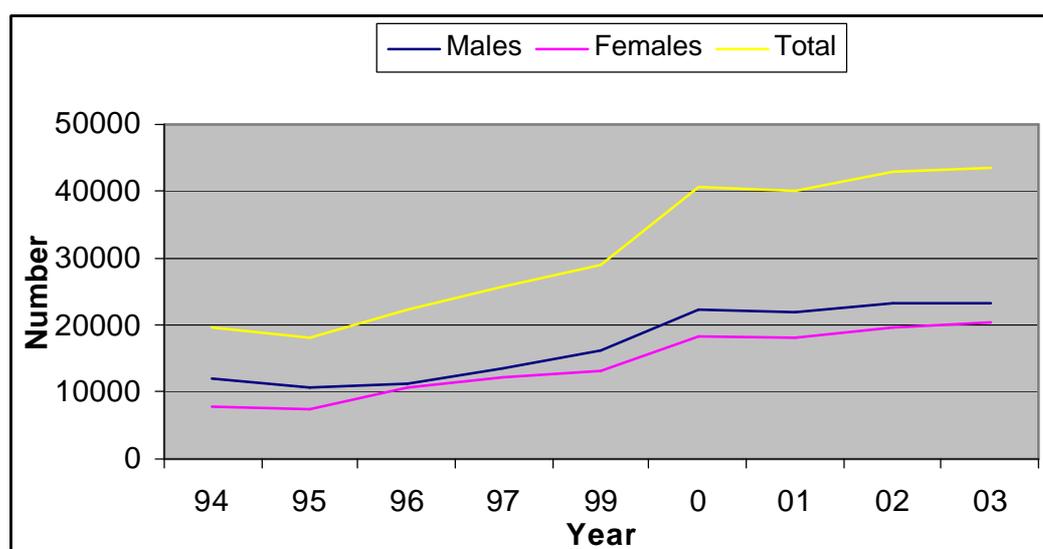
⁽²²⁾ Medicina del Mundo, July 2005

⁽²³⁾ ONS-Tenmiya. Baseline Indicators Report, 2005

⁽²⁴⁾ EDSM 2000/1 and EPCV 2000

⁽²⁵⁾ Data provided by Ministry of Education, 2005

Figure D2.5 Secondary School Enrolment Rates for Males and Females⁽²⁶⁾



Source: Ministry of Education

In 2002 to 2003, the number of pupils per teacher in primary education was 37 which was slightly lower than the national ratio of 41. The ratio of pupils per teacher in secondary education was 31 which is higher than the national ratio of 26⁽²⁷⁾. As the enrolment rate and population have increased from 2000 to 2003, the ratio of public schools per 1,000 inhabitants has decreased from 0.25 in 2001 to 2002 to 0.22 in 2002 to 2003⁽²⁸⁾. This data highlights the existing pressures on education infrastructure in Nouakchott, which are likely to grow with increased population growth.

Land and Housing Markets

The Office of National Statistics (ONS)'s housing price index does not show a significant increase between 2000 and 2004. However, high quality house and land prices have greatly increased over the last five years with the cost of middle-priced houses also greatly increasing.

Table D2.7 and Table D2.8 illustrate the broadly estimated growth of house and land prices (in UM) over the last five years. This estimate is based on discussions with local real estate agents operating in the sector and is a very rough estimate only. Prices are given for medium-class houses and lands in the areas of Arafat, Sebkhah and Teyarett and for high quality houses in the commune of Tevragh Zeina.

⁽²⁶⁾ Data provided by Ministry of Education, 2005

⁽²⁷⁾ Ministry of Education statistics in UNICEF. *Enfants et Femmes de Mauritanie*. April 2004 and in ONS-Tenmiya Baseline Indicators Report, 2005

⁽²⁸⁾ ONS-Tenmiya Baseline Compilation Report, 2005

Table D2.7 Growth of the Housing Market in Nouakchott (UM)

Years	Medium-class Houses		High Quality Houses	
	Sale/Buying	Monthly Rental	Sale/Buying	Monthly Rental
2000 to 2002	6 to 12 million	35 to- 60K	18 to 30 million	100 to 150K
2003 to 2005	13 to 17 million	80 to 150K	40 to 100s million	150K to 1 million
Annual Growth rate	7% to 17%	18% to 20%	17% to 28%	8% to 46%+

Table D2.8 Growth of the Land Market in Nouakchott (UM)

Years	Medium-class Land Sale/Buying	High-class Land Sale/Buying
2000 to 2002	4 to 8 million	5 to 8 million
2003 to 2005	8 to 12 million	10 to 100s million
Annual Growth rate	8% to 15%	15% to 66%

Source: Individual interviews (refer to text)

Land and house prices in poorer areas have increased but land speculation is not a recent phenomenon. The SDAU estimates that prices have increased by 20% to 30% each year during the mid-1990s.

Land tenure in Nouakchott is complex with a multiplicity of authorities including several Ministries, Walis, Mayors, in charge of land planning and allocation. In addition, the legal and institutional framework related to land tenure is quite weak. These two factors have created an environment conducive to land speculation and contributed to the city's expansion. There are two key issues surrounding land tenure in Nouakchott.

1. Vast plots (*zones de lotissements*) which are allocated but undeveloped. These are located next to spread out urbanised areas, some of which have been informally and illegally occupied. In theory when a plot is allocated, it must be developed within five years. In practice, the recipient considers this temporary allocation as definitive.
2. Plots that are allocated by the administration are assigned for a very low price, well below market prices. Where people have received land they receive a "letter of attribution" and are then required to pay a fee to the *Direction des Domaines*, after which they receive a temporary occupancy deed (not a property deed). Beneficiaries of land have five years in which to develop their land parcels; if they don't develop the parcels theoretically return to the *Direction des Domaines*. However, some land recipients are selling the 'letter of attribution' which is illegal. Hence, the successive recipients earn the difference between the market and administrative prices. This does however have the effect of increasing the land prices over time. For instance, a plot of 150 m² sold for 30,000 to 40,000 UM in 1999 can be sold at ten times this price today.

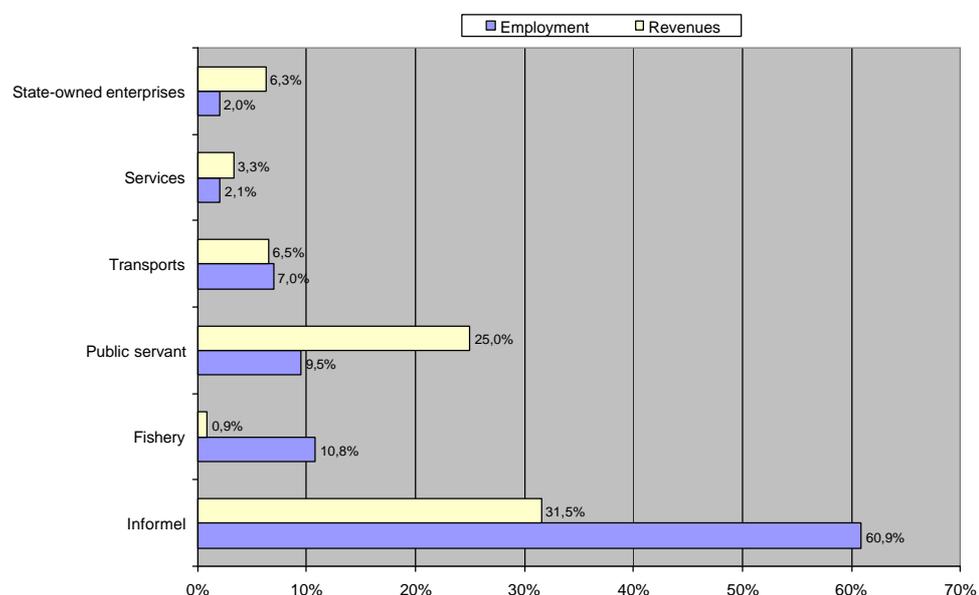
Economy

Employment and Major Economic Activities

Nouakchott serves as the political, administrative and economic seat of the country. Similar to the national level, data on employment for Nouakchott is not collected on a routine basis. The most up to date and readily available information for Nouakchott is provided in the 2000 population census and an ETASCO-AMEXTIPE's 2000 study⁽²⁹⁾. These support, at best, only a rough estimate employment data.

About one quarter of Nouakchott's population is employed, either in the formal or informal sector and about one quarter is unemployed. ONS data indicates that the non-working population is estimated to be 56%.

Figure D2.6 Major Employment Sectors and Wage Distribution in Nouakchott in 2000



Source: ETASCO-AMEXTIPE's 2000 in *Schéma Directeur d'Aménagement Urbain de Nouakchott (SDAU) Urbaplan, 2003*

According to the ETASCO-AMEXTIPE's 2000 study, the main employment sectors are:

- the informal sector (61% of total employed);
- public sector (ie. public service and state-owned enterprise; *fonction publique and entreprises publiques*) (12% of total employed); and
- fishing (11% of total employed).

⁽²⁹⁾ As reported in the *Schéma Directeur d'Aménagement Urbain de Nouakchott (SDAU) Urbaplan, 2003*.

The highest salaries can be found in the energy, international cooperation and finance sectors, as depicted in *Figure D2.6*.

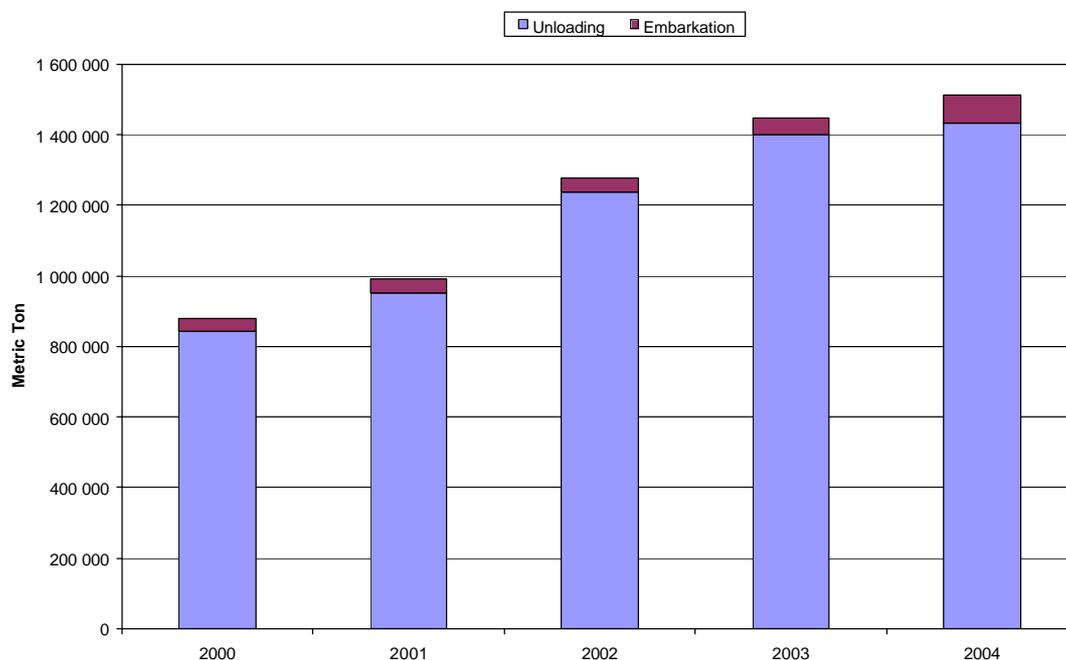
Economic activities are concentrated in the old neighbourhoods in the capital centre, where the administration, government, university, businesses headquarters and markets are located. Trade and retailing activities are relatively embryonic in the peripheral districts, which mostly serve as “dormitory quarters”.

Port Autonome de Nouakchott

The Port Autonome de Nouakchott (PANPA) handles 90% of Mauritanian imports and 30% of exports. It employs about 3,000 people⁽³⁰⁾. From 2000 to 2003, the Port’s traffic significantly increased by 18.3% per year on average creating an overall increase from 879,848 tonnes to 1,447,401 tonnes. Between 2003 and 2004, port traffic grew by 4.5% and tonnage handled at the port reached 1,512,303 tonnes (refer *Figure D2.7*).

Growth in the Port’s traffic was mainly due to increases in food imports. Food products account for slightly less than 50% of the total tonnage. With 1.5 million tonnes transiting through PANPA, there are plans to build a new berth to manage this new level of traffic. It is noted however, that occupancy rates at the port fluctuate considerably.

Figure D2.7 Traffic Growth at the Port Autonome de Nouakchott (2000 to 2004)



Source: Port Autonome de Nouakchott, 2005

(30) PDALM

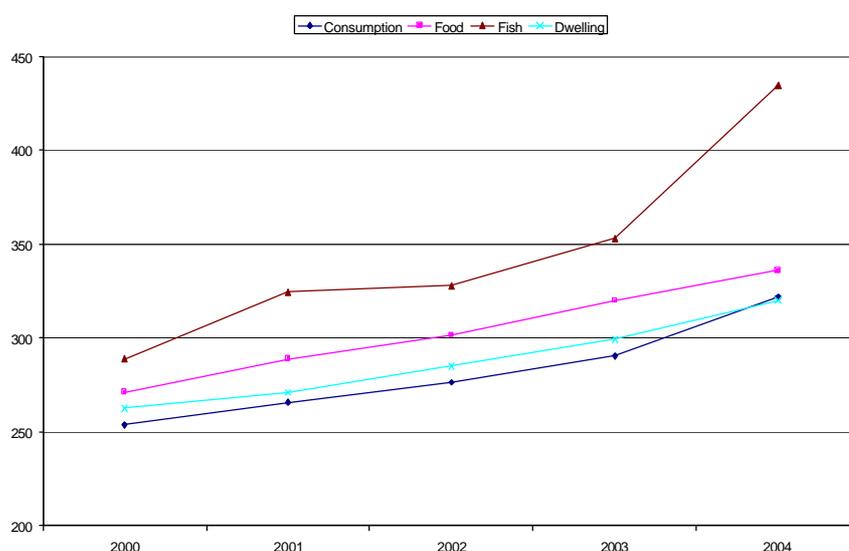
Inflation and Impacts on the Vulnerable Groups of Nouakchott

Consumer Price Index

The consumer price index for Nouakchott shows a steady average growth of between 3% and 5% from 2000 to 2003 as shown in *Figure D2.8*.

In 2004 the inflation rate increased to 10.4% with housing and food price indices rising to 7% and 5% respectively and the fish price index increasing by 23%. In 2005, the rate of inflation is expected to increase even more substantially to 14%⁽³¹⁾.

Figure D2.8 *Price Index in Nouakchott, 2000 to 2004*



Source: ONS-Tenmiya Baseline Compilation Report, 2005

The price increase of new houses in poor areas (*Kebbe* and *Gazras*) over the last five years is mainly due to a significant increase in the prices of construction materials which are imported. Thus, a basic house unit, comprised of one room, latrines and fence, and built as part of the social housing in the GRET program, cost about 800,000 UM in 2005, against 120,000 UM in 1999, 160,000 in 2000 and 210,000 in 2003⁽³²⁾.

Staple Food

Food prices have also increased significantly. *Table D2.9* provides some rough indication of the price changes for a range of food items and is based on discussions with several local stakeholders⁽³³⁾. Their answers were consistent and suggest significant increases.

(31) MAED

(32) Interview with Samassa Nalla, GRET's Acting Director, July 2005.

(33) Data from Toujounine focus group meeting and Dar Naïm women focus group meeting, July 2005

Table D2.9 Example of basic food prices in Nouakchott in 2005 and 2004 (UM)

	This year	Last year
Meat (beef) *	1200 /kg	900/kg
Meat (lamb) *	1400 /kg	1000/kg
Wheat flour	120/kg	120/kg
Rice	150 to 200 (bag)	120
Sardinella *	100 /piece	30 to 60/ piece
Water *	300 to 500 /drum of 200 litres	200 / drum

Source: Group meeting in Dar Naïm and Toujounine

Remarks : The products listed in the table are specific products, Food CPI is calculated on a basket of products, and some such as rice and wheat flour do not augment much, therefore we might find lower rate for the Food CPI than the increase rate for water for instance.

In 2005, the increase in food product prices is likely to be higher since inflation is expected to be high.

Annex D

**D.1 Baseline Profile: National
(Mauritania)**

**D.2 Baseline Profile: Region
of Nouakchott**

**D.3 Baseline Profile: Coastal
Settlements Between
Nouadhibou and Dakar**

Annex D3

Baseline Profile : Coastal Settlements Between Nouadhibou and Dakar

Introduction

Extent of Coastal Settlements

The coastal settlements included in the Social Impact Assessment (SIA) have been defined in Chapter 3. They include settlements in northern Mauritania down to the *Cap-Vert Presqu'île* in Senegal (refer *Figure D3.1*).

For the purposes of this baseline a zoning has been established on the basis of the administrative structure of the coastal areas and their socio-economic diversity. Eleven zones have been identified including four in Mauritania and seven in Senegal.

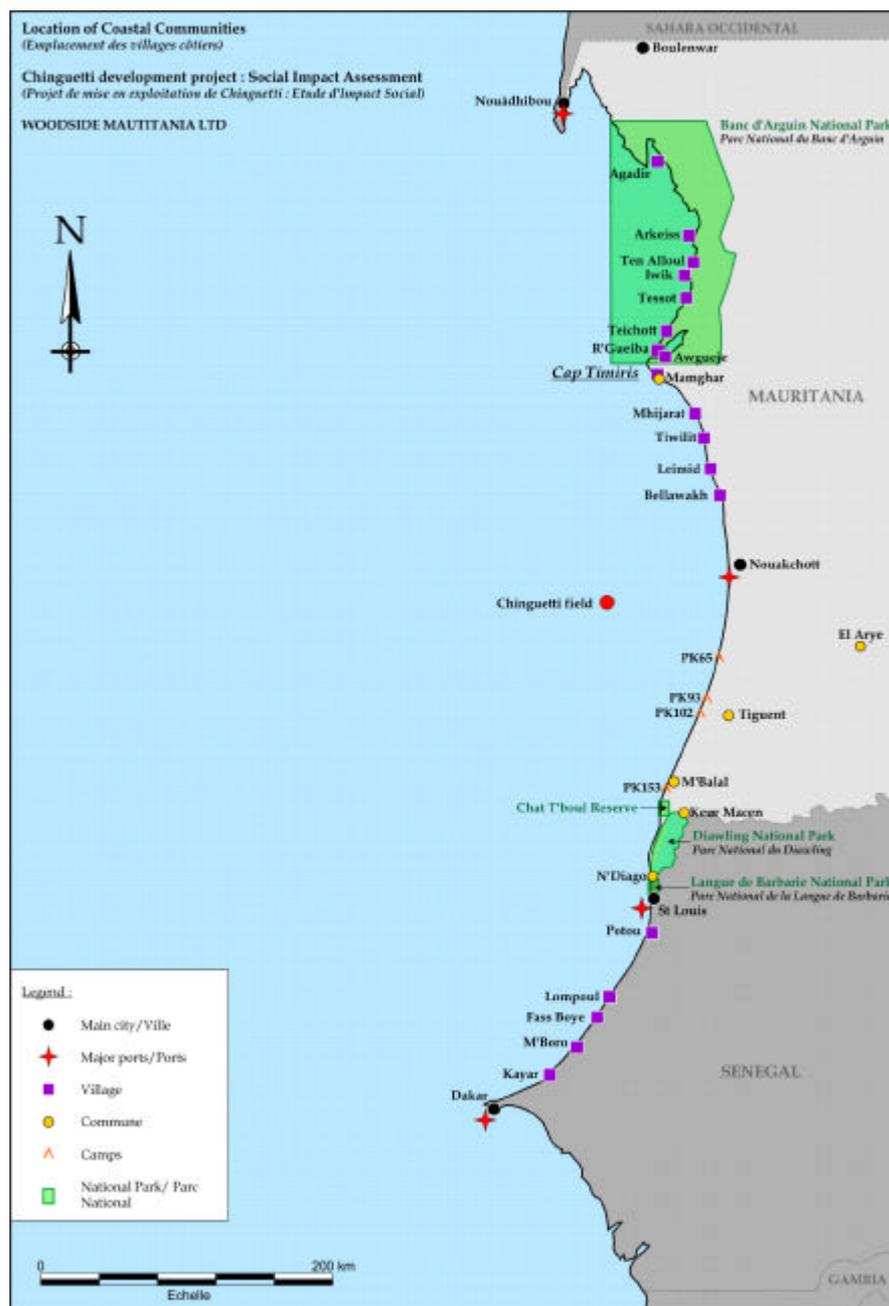
Mauritania

- Nouadhibou;
- The northern region (Imraguen villages) from Parc National Banc D'Arguin (PNBA) to the north of Nouakchott including Bellawakh, Leismid, Tiwilit and Mhijarat;
- Nouakchott; and
- Southern region (fishing camps south of Nouakchott to the Senegalese border, including Parc National du Diawling (PND)'s area of influence.

Senegal

- Saint-Louis;
- Potou;
- Lompoul;
- Fass Boye;
- M'Boro;
- Kayar; and
- Dakar.

Figure D3.1 Location of Coastal Settlements in Relation to Chinguetti Project



The sections below analyses the baseline profile for (i) the Mauritanian coast and (ii) the Senegalese northern coast. *Table D3.1* summarises the features of artisanal fishing for the 12 coastal areas.

Table D3.1 Essential Features of Coastal Communities

	Nouadhibou	PNBA	Cap Trinité	Nouakchott	South (PK & MDjogé)	Total	St Louis	Poku	Lampui	Fras Boye	Micro	Kayr	Dakar	Total	
Fishing sites	Mauritania						Senegal								
Reference year/period	1998 to 2002	1998 to 2002	1998 to 2002	1998 to 2002	1998 to 2002		2003	2004	2004	2004	2004	2004	2003		
Population (RGPH, 2000)	72,337	-1100 to 1600	-900 to 1000	558,195			155,000	700	1,500	3,500	1,135	17,000			
Employed in fishing (average of seasonal)	3,900	400	300	3,300	4,200	12,100	1,850	225	275	1,000	1,050	4,500	16,000	24,900	
Active boats / month (average of seasons)	1,800 ⁽¹⁾	90	400 ⁽²⁾	1,025 ⁽²⁾		Env. 4,000	160	50	50	215	215		2,500		
Fish merchants & processors	4,300	60	160	2,040	90								n/a		
Main fishing gear	Net lines, octopus pot	Nets, lines	Nets, lines, octopus pot	Nets, lines, octopus pot	Nets, lines, octopus pot		purse seine	fixed gillnet	fixed gillnet	fixed net purse seine	fixed net	purse seine	various		
Main fishing seasons	All year	All year	Nov to Jan: April to Jun	All year	April-July										
		Jan to June (meagre)	Feb to Oct (meagre)					April to Sept	April to Sept	June to July	March to June/July	Nov to May	All year		
		August to Jan: (mullet)	Jun to July and Nov to Dec (octopus)		Jun to July and Nov to Dec (octopus)										
Annual catch (tonnes)	49,472	2,300		28,109		79,881	34,500	1,800	1,420	2,270	700	47,700	38,670	127,060	
Estimated commercial value (billions FCFA)	N/A	N/A	N/A	N/A	N/A	N/A	5.3	0.6	0.4	0.7	0.4	7.1	23.4	38.6	

(1) Directeur de la peche artisanale; (2) IMROP 2005

Data Sources and Limitations

Information in this section is based largely on reports prepared for the SIA by local subconsultants in Mauritania and Senegal. The reports include:

- ONS-Tenmiya. *Baseline Indicators Report*, 2005;
- Ecole Nationale D'Economie Appliquee (ENEA)/Department De La Statistique Et De La Demographie (DSD). *Chinguetti Development Project: Socio-economic Baseline in Senegal*, 2005; and
- Ariane Dufour and Chakirou Razaki. *Socio-economic profile of fishing sites on the Northern Coast of Senegal*, 2005.

The reports are available in French only. Additional data was drawn from:

- In-country field missions;
- IMROP-IRD, *Note concernant la production de la pêche artisanale mauritanienne 2002*;
- URBAPLAN. *Plan d'Aménagement du Littoral Mauritanien*, February 2002;
- BSA. *Rapport d'Enquête Socio-économique sur la Zone d'influence du Parc du Diawling*, November 2004;
- PNBA: *Synthèse socio-économique, 2002*; *Rapport de synthèse sur les Saisons Touristiques 2001/2 et 2002/3*; *Etude sur les Modes de Valorisation et l'Amélioration des Circuits de Commercialisation des Produits de la Pêche dans les Villages du Parc National du Banc d'Arguin* (version provisoire), 2004;
- ISTOM – Matthieu Bernardon. *La pêche Imraguen au PNBA: Aspects Socio-économiques d'une pêcherie en mutation*, 1999; and
- Eco-développement. *Plan de Développement de la Commune de Keur Macene*, 2004.

In Mauritania there is no regular and consistent data collection at the local level (ie. municipality) or at the district or department (*Moughataa*) level. In Senegal the level of data collection is greater and therefore secondary data is more reliable.

The following sections rely on statistical data gathered by the National Statistics offices in Mauritania and Senegal, as well as data provided by local authorities in Senegal and primarily the local branches of central ministries (eg. fishery, tourism, health) which are considered to be robust primary sources. In Mauritania, data on local socio-economic conditions has been verified by cross checking information from several reports by specialised experts and research institutes. Differences in methodologies and objectives have created some conflicting data sets. Data conflicts and gaps were resolved based on field observations and expert judgment.

Nevertheless, some of the data provided in this profile should be treated with caution and this is noted in the relevant sections.

Mauritanian Coast

Geography, Administrative and Demographic Overview

The Mauritanian coast is 750 km long⁽¹⁾. There are three Wilayas that have access to the sea; Dakhlet Nouadhibou, Nouakchott, and Trarza, and more precisely within the Moughataa of Nouadhibou, Nouakchott, Ouad Naga, Medherdra and Keur Macen. There are about 80 villages and the two major cities of Nouakchott and Nouadhibou along the Mauritanian coast.

A coastal settlement as defined in this SIA is any place that meets the following criteria:

- Is located within 20 km from the coast;
- has some fishing activities⁽²⁾; and
- has at least one concrete, fixed house.

The villages located further than 20km from the shoreline with negligible fishing or fishing-related activities are not included in the SIA. The identified villages are attached to six communes, namely Mamghar, Keur Macen, N'Diago, M'Balal, Tiguent and El Ariye. *Table D3.2* summarises the administrative units present on the coastline.

Table D3.2 Administrative Units on the Coastline and Their Population

Wilaya	Moughataa	Communes	Population
Nouadhibou	Nouadhibou	Nouadhibou	72,337
		Mamghar	4,151
Nouakchott		9 Communes in CUN	558,195
Trarza	Keur Macen	Keurmacen	6,408
		N'Diago	8,440
		M'Balal	14,129
		Mederdra	12,170
		Ouad Naga	7,496
TOTAL			683,326

Source: ONS- RGPH 2000

⁽¹⁾ The regional planning document for the Mauritanian coast provides a number of 1016 linear km, which takes into account the real shoreline; 754 km is the "official figure" given by most the sources.

⁽²⁾ (ONS Baseline Report) listed more than 175 villages located within 30 km from the coastline. The existence and degree of fishing activities in almost all these villages were assessed based on the declaration of the head of the village. It is to be noted that based on these declarations, as well as observations made during the field-missions, there is no or only negligible fishing activity related to the sea in villages that are located farther than 20 km from the coast. Also in most villages farther than 6 km from the coast, the fishing activity is estimated to be less than 25% of the economic activities.

In 2000 the total population of 125,000 living in the municipalities listed above (excluding Nouadhibou and Nouakchott) accounted for less than 5% of the total Mauritanian population. If the populations of Nouadhibou and Nouakchott are included, this figure increases to 25%.

The communes have limited financial resources. A summary of municipal budgets are presented in *Table D3.3*.

Table D3.3 *Municipal Budgets in 2005*

Commune	Population (RGPH 2000)	Total Budget (million UM)	Operational Budget (million UM)	Equipment Budget (million UM)
Nouadhibou	72,337	1,358	291	1,066
Mamghar	4,151	NA		
Ndiago	8,440	5.953	2.9	3.053
Keur Macene	6,408	4.794	2.5	2.294
Tiguent	12,170	8.349	3.56	4.789
M'Balal	14,129	8.12	3	5.12
El Arie	7,496	5.866	2.726	3.14

Source: Eric Charvet, 2005 ; *except for Nouadhibou: Meeting with the Secretary General of the Municipality of Nouadhibou, 2005 (Exchange rate : 260 OUG = 1 US\$)

The rural population living in the coastal villages about 17,000 people, however this is likely to be underestimated, since data is missing for some of the villages, especially those in the territory of the communes of N'Diago, M'Balal and El Arie.

Economic Activity: Artisanal Fishing

Artisanal fishing is the major economic activity in the coastal regions of Mauritania as shown in the summary of artisanal fishing presented in *Table D3.4*. The main fishing season is from September/October to May, with some variation between northern and southern regions, the types of species fished and the migratory patterns of some species. The fishing season for the southern coastal settlements is from May to July.⁽³⁾

Artisanal fishermen produce an estimated 80,000 tonnes of fish per annum. The fish catch is not evenly distributed along the coastline.

Artisanal fishing includes approximately 130 species of fish. The type of catch varies but includes, in order of importance, mullets, sparidés, sea bream and meagres. Cephalopods (octopus) ranks only sixth in the order of importance, but because of their high commercial value, they contribute significantly to fishing revenues.

⁽³⁾ A detailed table of fishing seasons by species and fishing techniques is presented in the EIS in Chapter 4, *Table 4.29*.

Table D3.4 Summary of Artisanal Fishing

Landing areas	Nouadhibou	Imraguen	Nouakchott	South	
Fishing region	Nouadhibou	PNBA	Cap Timiris-North of Nouakchott	Nouakchott	South (PK+N'Diogo)
Reference year or period	1998 to 2002	1998 to 2002	1998 to 2002	1998 to 2002	1998 to 2002
Population (RGPH 200)	72,337	~1,100 to 1,600	~900 to 1,000	558,195	10,000 to 15,000
Pirogue/boat fleet		110 max			
No. of active boats/month		90 active launches			
No. Fishermen	3,900	400	300	3,300	4,200
No. workers involved in trading and processing (PA + PI)	4,300		250	2,040	90
Fishing techniques/gear	Nets, lines, octopus pot	Nets, lines,	Nets, lines, octopus pot	Nets, lines, octopus pot	Nets, lines, octopus pot
Main fishing seasons	All year	Sept to May Feb to Oct (meagre)	Nov to Jan; Apr to Jun Feb to Oct (meagre) Jun to July & Nov to Dec (octopus)	All year	April to July Jun to July & Nov to Dec (octopus)
Annual catch (tonnes)	49,472	1,663		28,109	

Source: IMROP, PDALM, DPA

Artisanal fishing generally takes place within a 30 to 35 km strip from the shoreline. Unloading sites for artisanal fisheries are authorised by an administrative circular issued by the Ministry of Fisheries and Maritime Economy.

The 2003 circular approved 28 unloading sites, as presented in *Table D3.5*.

Table D3.5 Distribution of Unloading Sites (as of January 2003) for Coastal Settlements Included in SIA

Nouadhibou	Port Artisanal
Northern Region	*Teichott *Ten Aloull *Agadir *Arkeyeiss Awgueje *Iwik *Tessot *Nouamghar (Mamghar) <i>Villages between Cap Timiris and North of Nouakchott</i> *Bellawakh *Emhajratt (Mhijarat) *Tiwilitt *Lemsid (Leimid) Tarfaya Achengue Tanit N'Khaila Tine
Nouakchott	Marché au poisson
Southern Region	PK 28 (Vernana) PK 42 (Jiwa) PK 65 (Legrara) PK 93 (Tinhind) PK 102 PK 140 Mouly N'Diago

Source: MPEM. Circulaire aux Opérateurs du Secteur de la Pêche Artisanale. 29 January 2003

(*) Imraguen villages

Artisanal fishermen in Mauritania use five categories of fishing equipment:

- Purse seine nets;
- Gillnets;
- Line fishing (including trawl lines);
- Octopus pot; and
- Imraguen net.

Mauritanian artisanal fishermen use motorised pirogues with an average crew of about three to four fishermen for gillnets. Only the purse seine nets require 10 to 12

fishermen to be handled. The total artisanal fleet is estimated at nearly 4,000 boats (including Senegalese pirogues)⁽⁴⁾.

In the early 2000s, motorised pirogues cost on average around 2,500,000UM, or 9,000 US\$, including the price of the motor.

Health

Health Outcomes

Table D3.6 summarises the key health indicators in the Wilayas of Trarza and Nouadhibou, compared to national levels.

Table D3.6 Key Coastal Wilaya Health Indicators⁽⁵⁾

Key Indicators	2003 Statistics per Wilaya (%)			
	Trarza	Nouadhibou	Nouakchott	National
Rate of maternal deaths	0.94	0.51	1.67	1.35
Rate of still birth	2.71	2.49	2.11	2.72
Proportional incidence of malaria*	14.64	3.65	2.81	21.09
Rate of respiratory illness	22.55	21.06	24.99	19.17
Rate of diarrhoea	7.76	10.52	10.09	7.06
Rate of intestinal parasites	4.38	3.98	4.95	3.67
Rate of tuberculosis (TB)	0.04	0.14	0.22	0.06
Rate of conjunctivitis	4.38	3.98	4.95	3.67
Rate of Schistosomiasis	4.38	3.98	4.95	3.67
Rate of HIV	0.03	0.23	0.18	0.07

*2004 MSAS Data

Note: Data limitations - the Wilaya of Nouadhibou is mostly composed of the commune of Nouadhibou: 72,337 people live in the commune of a total 79 516 living in Dakhlet Nouadhibou (Wilaya) ; therefore health indicators very much represent those of the commune of NDU. The Wilaya of Trarza covers a territory much larger than the coastal region, hence health values do not fully reflect the situation in villages and give mere indications that must be refined with data (including qualitative data) from coastal villages.

Respiratory Illnesses. As in the rest of the country, respiratory illnesses are a primary concern for coastal communities, especially during winter months. This is a national issue and was confirmed by interviews with villagers.

HIV/AIDS. In Nouadhibou, the prevalence of HIV/AIDS and STDs is the highest of the country (nearly 4 times the national rate). The TB rate is also twice as high in Nouadhibou as it is nationally. As in Nouakchott, in which is also a large city with inadequate water and sanitation infrastructures, the diarrhoea rate is 1.5 times higher in Nouadhibou than the rest of Mauritania.

⁽⁴⁾ MPEM, Direction de l'Aménagement et des Ressources Halieutiques, Service des Etudes et Statistiques, DP, April 2005

⁽⁵⁾ Annuaire des Statistiques Sanitaires - Année 2003, Ministère de la Santé et des Affaires Sociales

Malaria. In Trarza, the proportional incidence of malaria is much higher (4 times) than in northern Wilayas, such as Nouadhibou and Nouakchott, although it is still below the national average. This is due to the high incidence in the Moughataa of Keur Macen which covers the territories near the Senegal River in close proximity of the Diama Dam.

The urban planning document for the Commune of Keur Macen points out that health problems in Keur Macen are strongly related to the construction of Diama Dam⁽⁶⁾. Before the dam's construction in 1981⁽⁷⁾, there were seasonal diseases, such as malaria in the wet season (*hivernage*), and diarrhoea and some other transmittable diseases in the dry season (from May to July). The construction of Diama Dam accentuated the presence of these existing pathologies and created the conditions for the emergence of water-borne diseases, namely: bilharzia (Schistosomiasis), Rift Valley Fever, amoebiasis, and intestinal parasites. The Commune of N'Diago, at the southern end of the coastline, is located very near the Diama Dam and is subject to its influence, including malaria and water-borne diseases and intestinal parasites, due to stagnant water and poor quality of drinking water.

Cholera. There have recently been small outbreaks of cholera in Senegal, and further up along the southern coast of Mauritania⁽⁸⁾.

Malnutrition. The coastal settlements have a restricted diet, consisting mainly of fish. The limited access to vitamins has led to severe deficiencies, particularly in young children. Recent data from MSAS suggests that in the Keur Macene moughataa, 332 new cases were reported and in Dakhlet-Nouadhibou there were 4,348 cases⁽⁹⁾. Data was unavailable for the moughataas of Ouad Nagga and Medherdra.

Other health issues related to poor water and sanitary conditions. The lack of water, sanitation, waste and wastewater treatment all lead to the expected public health concerns including dysentery, skin diseases and eye infections.

Sanitary and hygiene conditions are very poor, with few latrines or drop pits. In addition, there is no waste management system and vermin are a huge problem. Poor hygiene practices tend to exacerbate the already poor health status of the settlements.

⁽⁶⁾ Eco-Développement. Plan de Développement de la Commune de Keur Macene. Préparé pour le Conseil Municipal, le Ministère de l'Intérieur des Postes et Télécommunications, et le Commissariat aux Droits de l'Homme à la Lutte contre la Pauvreté et à l'Insertion. March 2004.

⁽⁷⁾ The Diama dam, which was constructed downstream of the Senegal (around 30 km upstream from the river mouth) for the purpose of avoiding salt water intrusion, and has been operational since 1985. It is closed during the dry season from November to June and is gradually opened because of floods during the rainy season generally around July. (World Commission on Dams – Documents: **Serial No:** env107)

⁽⁹⁾ Annuaire des Statistiques Sanitaires Année 2003

Health Care

Table D3.7 summarises the available health care facilities in the Wilayas of Trarza and Nouadhibou.

Table D3.7 Summary of Health Care Facilities in the Wilayas of Trarza and Nouadhibou

Wilaya	Number of regional hospitals	Number of health centres	Number of health posts
Trarza	1	6	53
Nouadhibou	1	4	10

Source: Plan d'action de la DRPSS du Trarza, avril 2005, Plan d'action de la DRPSS de Nouadhibou, avril 2005 in ONS – Tenmiya. Baseline Indicators Report, 2005

Regional hospitals are located in the “prefecture” in Rosso and in the commune of Nouadhibou. Health centres are located in the main cities of the Wilaya, whereas health posts are scattered throughout the Wilaya.

In Dakhlet Nouadhibou, most health centres are located in the commune of Nouadhibou. There is one health centre in Mamghar and four basic health posts in the other Imraguen villages⁽¹⁰⁾. In the commune of Keur Macen, there is one basic health unit (*unite de santé de base*) and one health centre, as well as two pharmacies (one public, one private)⁽¹¹⁾. In the commune of N'Diago, five health posts can be found in Zire Sebkh, Birette, Ndiago, Gahra and Ebden.

Health System Limitations

The lack of human resources is a severe problem in some of the coastal regions, particularly those far away from a regional and national hospital. If the physician or nurse manning the medical centre is ill or away, the facility is forced to close. This occurs frequently in Mamghar and villagers have to go to the nearest city for medical treatment. In addition, many treatments cannot be undertaken at these basic health posts and many pregnant women have no medical assistance during child birth; as many as 50% of pregnant women in some of the centres⁽¹²⁾.

Although, no data on visitation rates exists, traditional healers or family members are considered to be an alternative to modern health care for villagers. In the villages around PND, it is estimated that 33% of people consult within the family or friends' circle and traditional healers⁽¹³⁾.

Limited transportation is also a major impediment to health care in coastal villages, due to lack of roads and vehicles. In the south, access can be even more difficult during the wet season because of flooding.

⁽¹⁰⁾ These health posts, which consist of one room with some medical equipment, are located respectively in Mhijarat, Lemsid, Tiwilit, Bellawakh, but there is no permanent medical staff.

⁽¹¹⁾ Eco-Développement. Plan de Développement de la Commune de Keur Macene, 2004.

⁽¹²⁾ Keur Macene health centres; Group meetings in coastal villages, December 2004 & June 2005.

⁽¹³⁾ BSA. Rapport d'Enquête Socio-économique sur la Zone d'influence du Parc du Diawling. Novembre 2004

In the health posts, light is powered by solar panels which are often insufficient, resulting in difficulties working at night. Additionally, medicines requiring storage in fridges are often jeopardised due to the inadequate supply of electricity.

Education

Education Outcomes

Education attainment levels vary in the three coastal Wilaya.

In 2000 in the Wilaya of Trarza 32.7% of the population received education at the koranic school (Mahadhra), compared with a national figure of 17.6% and 16.1% in Nouadhibou. The proportion of the population in Trarza achieving secondary and university education is lower than the national levels; 8.3% and 0.9% respectively compared with national levels of 9.3% and 1.6%⁽¹⁴⁾. Nevertheless, the literacy rate in Trarza is higher than the national average, with about two thirds of the population being literate. At the national level slightly more than half the population is literate.

Nouadhibou has high education attainment levels. In 2000, 34.8% of the population in Nouadhibou had primary education, 21.7% had secondary education and 2.7 % received university education. Nouadhibou also has one of highest literacy rates of the country, with about three quarters of the population considered to be literate⁽¹⁵⁾.

In 2001, the percentages of the population in Nouakchott with primary, secondary and university education were 31.9%, 20.7% and 4.8% respectively⁽¹⁶⁾. The literacy rate in Nouakchott is 77.3%⁽¹⁷⁾.

Education Infrastructure

The number of public primary schools is limited in Nouadhibou compared to its large population. Furthermore they are unevenly located within the Wilayas. Thus, most coastal villages in the Wilaya of Nouadhibou do not have any schools and children generally go to school in Nouadhibou or Nouakchott where they stay with relatives. This is the case for all villages in PNBA. In the other Imraguen villages, one teacher teaches all levels to all children, however availability and permanence of teachers appears to be an issue⁽¹⁸⁾.

The Moughataa of Keur Macen has 17 primary schools located in 13 villages. With the exceptions of the municipality of Keur Macen and the community in Dar Essalem, the schools have two classrooms. There are about 1,100 pupils and 28 teachers. There is only one middle school located in the municipality of Keur Macen,

⁽¹⁴⁾ ONS-Tenmiya. Baseline Compilation Report, 2005

⁽¹⁵⁾ Ministry of Education statistics in UNICEF. *Enfants et Femmes de Mauritanie*. April 2004 and in ONS-Tenmiya Baseline Indicators Report, 2005

⁽¹⁶⁾ Ministry of Education statistics in UNICEF. *Enfants et Femmes de Mauritanie*. April 2004 and in ONS-Tenmiya Baseline Indicators Report, 2005

⁽¹⁷⁾ EPCV 2000

⁽¹⁸⁾ Group meetings, June 2005

with 70 pupils and seven professors. There is no high school. In addition to primary schools, Keur Macene has 21 koranic schools in eight villages, with 660 pupils and 17 teachers, as well as nine classrooms for adult literacy with 338 students and nine teachers.

In villages close to PND, some villages have one school and several classrooms, but a limited number of teachers. Moreover, despite an increase in primary schooling, less than one third of the children go to school.

Basic Infrastructure

In addition to the lack of social services, most coastal villages or fishing camps suffer from a lack of basic infrastructure, in particular transportation and water supply. Drinking water scarcity is a major problem for these villages and the absence of concrete roads is a major impediment for the development of the villages.

Drinking water

The communities in PNBA and the other Imraguen villages have to purchase potable water from public or private tanks, mostly from Nouakchott, and are vulnerable to increases in water prices.

In the southern region, especially in the villages around N'Diago (near PND), the situation is critical. The majority of the population fetches water from the surrounding wells, but replenishment of the wells with fresh water is threatened. Since the breach in the Langue de Barbarie, the water does not replenish and the water that does remain is brackish.

The situation in the commune of Keur Macen and the nearby villages is less serious. Tributaries from the Senegal River flow in the territory of the commune, including Aftout, and provide water to the Elwasha basin where the villagers fish and farm. Keur Macene has 41 wells, but 15 are not operational and in others the salinity rate is high. Some villages of the commune do not have any wells and the population fetch water directly from the river, which carries water-borne diseases. The Potable Water Project of Aftout-Es-Saheli that will bring water to Nouakchott should also benefit this commune.

Roads

Most coastal villages are not connected to any tarmac roads. The lack of road infrastructure is a major factor contributing to the isolation of the villages and an impediment for commercial exchanges. It exacerbates the villages' present social and health problems.

In the north, Imraguen communities can travel to Nouakchott and Nouadhibou either via the beach, when the tide is low, or via dirt roads. The new road between Nouakchott and Nouadhibou will pass several tens of kilometres from the villages.

In the south, the major road goes from Nouakchott to Rosso. The villages suffering the most from the absence of tarmac roads are those located in the communes of Keur Macen and N'Diago since it is an area liable to flooding and the dirt roads tend to get muddy and impede further transportation. Several villages can only be accessed by pirogues.

The Municipality of Nouadhibou

Industrial fishing has been already documented in Chapter 3 therefore in this section consideration of Nouadhibou is restricted to the artisanal fishing sector.

Demographic and Social Overview

Located within the Cap Blanc Peninsula, Nouadhibou has a population of approximately 80,000 people⁽¹⁹⁾. Considered as the economic capital of Mauritania, Nouadhibou has the lowest incidence of poverty in Mauritania at 4.2% against a national average of 46.3⁽²⁰⁾. It is a vital centre for mining and fisheries.

Until recently, Nouadhibou has remained relatively isolated from the rest of the country, since there was no road connecting Nouadhibou to the capital. The development of the city has therefore been driven by export operations, particularly iron ore and fisheries. There are four ports in Nouadhibou: a petrochemical terminal used for the Naftal refinery, ore terminal, Autonomous Port (*Port Autonome de Nouadhibou - PAN*) used for commercial fishing, and an artisanal port (*Etablissement du Port de la Baie du Repos - EPBR*)⁽²¹⁾.

Local Economy

The 11 to 12 million tonnes of iron ore that SNIM produces each year are exported. The mining sector generates approximately 2,000 jobs in Nouadhibou⁽²²⁾.

The fishing sector in Nouadhibou employs about eight times more people than mining (approximately 16,000 people), more than half of which are in the artisanal sub-sector. About 20% of the total fish production from industrial and artisanal fishing transits through Nouadhibou's ports. The artisanal port has a capacity of 1,000 to 1,200 pirogues. The port complex, including PAN and EPBR, has more than 20 freezing warehouses (*entrepôts de congélation*).

Artisanal catch in the northern region was nearly 50,000 tonnes between 1998 and 2002 and is very diverse. The main species or groups of species are mullet (14%), Sparidés and sea bream (12%), meagres (11%), Tollo (8%) and octopus (8%).

⁽¹⁹⁾ ONS-Tenmiya. Baseline Indicators Report, 2005

⁽²⁰⁾ MAED, ONS, CDHLCPI. Mauritania's Poverty Profile in 2000. EPCV. April 2002

⁽²¹⁾ MPEM-UICN. Plan Directeur d'Aménagement du Littoral Mauritanien (PDALM), Partie 1 : Diagnostic. RCT & Africonsult, Février 2005.

⁽²²⁾ Interview with SNIM Financial Director and Human Resources Manager, June 2005.

Processing⁽²³⁾. Nouadhibou is one of the two key processing centres and supports about 30 processing firms. The other is at Nouakchott. The city centralises fish catch from the northern region, including Nouadhibou and PNBA. The number of processing plants approved by European Union (EU) standards varies each year, since all plants do not manage to retain the required hygiene and sanitary conditions. In 2005, 25 plants located in Nouadhibou and Nouakchott were approved for exports⁽²⁴⁾.

Northern Region

Demographic and Social Overview

The northern region includes the Imraguen villages inside the PNBA, the Municipality of Mamghar, and the fishing communities between Cape Timiris and Nouakchott.

This portion of the coast, within the Moughataa of Nouadhibou and more precisely within the boundaries of the municipality of Mamghar, covers 13 villages, nine in the PNBA and four located between the south of PNBA and north of Nouakchott (refer *Table D3.8*). Mamghar, located at the entrance of PNBA, is the most populated locality and the administrative centre of the commune.

Table D3.8 *Population of the Northern Villages in 2000*

Commune: Nouamghar	Population
<i>Parc National du Banc d'Arguin</i>	1673
R'gueibe	174
Teichott	183
Ten Aloull	85
Agadir	73
Arkeyeiss	28
Awgueje	27
Iwik	159
Tessot	NA
Nouamghar (Mamghar)	944
<i>Villages between Cape Timiris and North of Nouakchott</i>	929
Bellawakh	323
Emhajratt (Mhijarat)	460
Tiwilitt	63
Lemsid (Leimid)	83
TOTAL	2602

Source: ONS- RGPH 2000 and Baseline Compilation Report, April 2005

An accurate estimate of the population is difficult to make because fishermen move from one village to another according to fish stocks and species migration. Overall, it is estimated that about 2,600 people live in the northern region⁽²⁵⁾ (refer *Table D3.8*).

⁽²³⁾ PDALM

⁽²⁴⁾ Interview with Fishery Expert at the EU, July 2005.

⁽²⁵⁾ ONS-RGPH 2000

The population in PNBA and the villages around Cape Timiris is essentially made up of Imraguen, a people from mixed origins who have lived in the region for generations. Imraguen are known as the *Maur* traditional fishermen. The sea serves as their sole livelihood. Imraguen used to have a very intricate method of fishing that involved cooperation with dolphins. Their fishing methods have evolved since the 1980s and they no longer use this ancestral method. They now largely use motorised pirogues or the traditional boats called 'launches', similar to those employed in the Canary Islands.

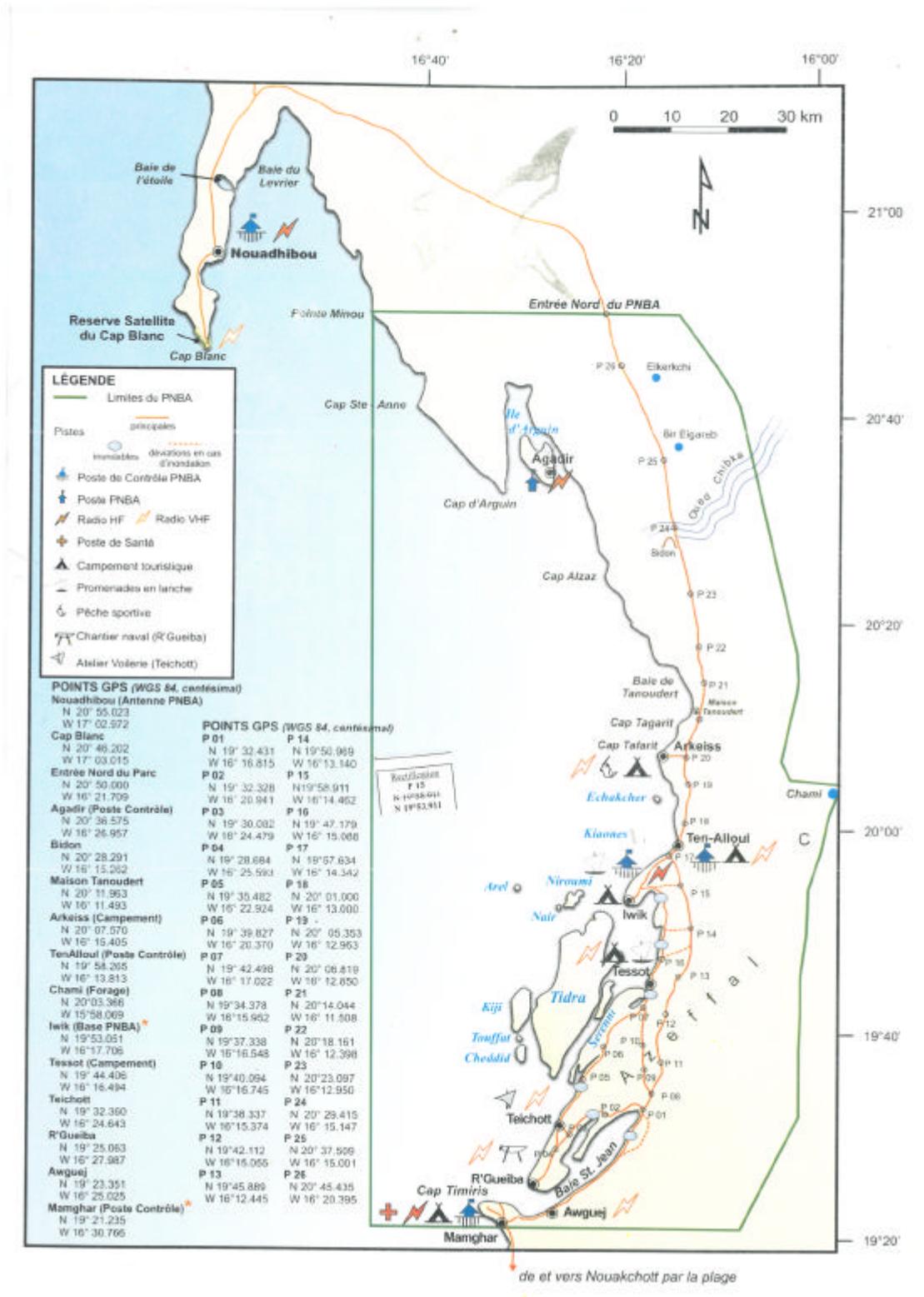
Local Economy

Although they share some common features, the economy of the villages within the PNBA and that of the four other villages outside the PNBA, differ slightly and are therefore presented separately. A map of the PNBA and environs is presented in *Figure D3.2*.

Coastal Communities within the PNBA

Created in 1976, recognised as Ramsar Wetlands site in 1982 and inscribed on the UNESCO World Heritage list in 1989, the PNBA covers an area of 12,000km², about half of which are marine territories. It provides a major single habitat for migratory and nesting water birds, a unique nursery and breeding area for numerous species of fish and has a very high biological productivity. It benefits from significant international financial and technical support through the *Fondation Internationale du Banc d'Arguin (FIBA)*. The coastal communities within the PNBA are shown in *Figure D3.2*.

Figure D3.2 Coastal Communities Inside the PNBA



The main economic activity in PNBA is fishing. However, over the last five years, tourism has emerged as an additional source of income for the communities in PNBA. In some of the Park's villages, some families breed animals particularly

camels and goats, but this activity is limited to subsistence husbandry and is not widespread among villagers.

Nine cooperatives have operated in PNBA, one in each village, with varying degrees of success. Their objectives are to help sell fish, provide basic supplies such as food and clothing, operate tourism activities and provide credit. Their financial resources mainly depend on the success of their income generating activities including fishing and tourism, and some funds are provided by PNBA. Since 2001, the cooperatives have gathered around 550 members. In the past few years, each cooperative has had a vehicle but some of the cars are now unusable. The role and importance of the cooperatives varies from village to village and very much depends on how well they are managed by the villagers.

Imraguen fishing traditions have evolved from self-consumption to artisanal commercial fishing. To avoid overfishing and to meet the Park's conservation goals, regulation has been introduced. Only non-motorised vessels are allowed within the marine boundary of the Park and the number of boats is limited to 110 launches⁽²⁶⁾.

The catch by PNBA fishermen has significantly increased since 1998 and is estimated to have been 2,600 tonnes in 2003 (refer *Table D3.9*).

Table D3.9 Estimated Total Catch in PNBA (in tonnes)

	1998	2001	2002	2003
PNBA Mamghar excl.	1 100	1 861	2 066	2 240
Mamghar	351	449	334	373
Total	1 442	2 310	2 400	2 613

Source: CNROP, 2000, IMROP, 2003a, 2003b, 2004a

The catch is dominated by a small number of species which are, in order of importance, the mullets (28%), rays (22%), sharks (19%) and meagres (17%). Since 2004 an agreement has been reached after several years of talks between the Imraguen and the Parks' management to stop ray and shark fishing because stocks have been depleting.

There are about 400 fishermen in PNBA⁽²⁷⁾ and approximately 90 'launches'. In the peak fishing season, especially for the meagres period in the first quarter of the year, fishermen from outside the Park join the Park's artisanal fleet. In 2003 and 2004, about 200 and 140 people respectively came to PNBA to fish. One *lanche* costs about 1,400,000 UM or 5,000 US\$⁽²⁸⁾.

Due to isolation and limited means of transportation, fishermen are reliant on fishmongers (*mareyeurs*) to sell their catch and to get their supplies. Most of the fishmongers finance fishing equipment and many fishermen are indebted. Debts are

⁽²⁶⁾ PNBA. Etude sur les Modes de Valorisation et l'Amélioration des Circuits de Commercialisation des Produits de la Pêche dans les Villages du Parc National du Banc d'Arguin (version provisoire), 2004.

⁽²⁷⁾ PNBA data and studies by Mauritania 2000-CNROP. Figures are consistent if one considers there are on average 4-5 men per boat.

⁽²⁸⁾ Matthieu Bernardon. *La Pêche Imraguen dans le Parc National du Banc d'Arguin : Aspects Socio-économiques d'une Pêcherie en Mutation*. 1999.

reimbursed with fish catch. As an indication, it was estimated in 1999 to 2000 that the fishmongers' or wholesalers' margins can be as high as 500% on high market-value fish and more than 100% on the mullet⁽²⁹⁾. It was also observed that in the most isolated villages in PNBA, 90% of the fish production units were in debt.

To decrease the degree of dependency upon fishmongers, cooperatives in the villages have taken the role of suppliers for staple food and basic needs and of fish traders. In the villages where the cooperative are most active in fish commercialisation and are less isolated, the debt rate tends to be lower⁽³⁰⁾. An example of this is Mamghar.

In 2001, there were about 60 fishmongers and fish-processors (*transformateurs/trices*) in PNBA⁽³¹⁾ whereas in 2004 only 40 were identified⁽³²⁾.

Tourism is emerging as a significant activity⁽³³⁾. Tourism started to become a substantial activity in 2000 with the creation of tourist camps in several villages. October /November to April is the tourism season with a peak from December to February / March. Tourism generates revenues for the communities and the Park, through three types of activities:

- Park entry and one-day visits;
- Overnight camping; and
- Boat tours (*lanche tour*).

In 2002 to 2003, 2,765 visitors came to the Park through one of the four entrance points at Mamghar, Nouadhibou, Nouakchott and Ten Alloul. These tourists spent a total of nearly 5,500 nights in the park.

Most villages now have tourist activities but the type and level varies greatly. Tourism activity in Iwik has ceased due to management problems, however Arkeiss has tripled its revenues from tourism.

In addition, some villages offer "*lanche tours*" (refer *Box D3.1*). In 2003 the cost of a tour was 18,000 UM, an increase since 2001 when tours cost 15,000 UM. *Lanche tours* also generate some additional income to the *lanche* owners and the guides.

⁽²⁹⁾ Matthieu Bernardon, La Pêche Imraguen dans le Parc National du Banc d'Arguin, Aspects Socio-économiques d'une pêcherie en mutation, Mémoire de l'ISTOM, décembre 1999.

⁽³⁰⁾ Idem

⁽³¹⁾ Survey CNROP/JICA 2001, in Plan Directeur d'Aménagement du Littoral Mauritanien, February 2005.

⁽³²⁾ PNBA. Etude sur les Modes de Valorisation et l'Amélioration des Circuits de Commercialisation des Produits de la Pêche dans les Villages du Parc National du Banc d'Arguin (version provisoire), 2004.

⁽³³⁾ PNBA - Rapport sur le Tourisme, 2003

Box D3.1 **Example of revenues generated by 'lanche tours'**

Lanche tours were offered in Iwik and Tessot in 2001, 2002 and 2003. As an example, in Tessot, 55 tours at 18,000UM shared between the cooperative (1,000UM), owners (14,000) and guide (3,000 UM) have generated about:

- 55,000 UM over three years for the cooperative of Tessot;
- 770,000 UM for the *lanche* owners; and
- 165,000 UM for the guide.

The revenues of the four tourist camps have been surveyed by PNBA's authorities. Total revenues (*lanche* tours excluded) for Mamghar are approximately 5,150,000 UM on average over three seasons. In Iwik and Arkeiss revenues were about 5,500,000 UM between 2000 and 2003. Fifty-eight percent of these revenues are earned in Arkeiss, the most dynamic village in terms of tourist accommodation.

Coastal communities outside the PNBA

The four villages located Cape Timiris and Nouakchott (*Mhijarat, Leismid, Tiwilit and Bellawakh*) are very dependent on fishing for their livelihoods. Unlike the villages in PNBA, they do not have any tourism activities or livestock. These villages do not benefit from the PNBA's assistance, but have received some international donor support and technical and financial assistance. This has included the Japanese cooperation agency and Mauritania 2000, a local NGO that provides micro-credit and assists women to organise fishing processing activities and trading. In Bellawakh, women are in charge of water supply. As in PNBA, the villages have cooperatives that are active in basic food supply and fish commercialisation.

The key difference between the communities inside PNBA and those outside is that those outside generally use motorboats for fishing. There were about 300 fishermen and 190 fishmongers (*mareyeurs*) and fish-processors (*transformateurs/trices*) who lived and operated in these villages in 2001⁽³⁴⁾. As in PNBA, these fishermen are also heavily indebted and dependent on the fishmongers.

A fishing training centre was created in Bellawakh to promote the artisanal fishing sector. But only a small number of trainees are reported to remain in the fishing sector.

Nouakchott

The baseline profile for Nouakchott is detailed in *Annex D2*. Therefore in this section, only artisanal fishing around Nouakchott is considered.

⁽³⁴⁾ Survey CNROP/JICA 2001, in Plan Directeur d'Aménagement du Littoral Mauritanien, February 2005.

Demographic and Social Overview

Nouakchott accounts for nearly 30% of the total workforce in the fishing sector. About 10,000⁽³⁵⁾ people had direct employment in the fishing sector in Nouakchott in 2001. Around 1,400 of these were employed in fish export firms and packaging plants, 8,200 were employed in artisanal fisheries as fishermen, fishmongers and fish-processors and 2,400 are working to produce goods and services supplying fishing operations.

Local Economy

Fish production from Cape Timiris to PND, including Nouakchott, amounts to about 28,000 tonnes per annum, approximately 35% of total artisanal output. The catch is dominated by the mullet (25%) followed by sardinella (13%), Sparides and sea bream (12%), courbine (7%) and octopus (2%).

Nouakchott is the other key centre for fish processing and freezing in Mauritania with about 30 to 40 processing plants. It centralises the fish catch from Cap Timiris to N'Diogo⁽³⁶⁾.

Southern Region

Demographic and Social Overview

On the southern coast, three Moughataa have access to the sea including Keur Macen, Medherdra, and Ouad Naga. The three *communes* of Keur Macen, (Keur Macen, N'Diogo and M'Balal) are included within the scope of the study. In Medherdra, only Tiguent falls within the scope of the study and in Ouad Naga only Al Arie is relevant to the study.

There are about 30 coastal villages in the Moughataa of Keur Macen, 12 in the Moughataa of Medherdra and 23 in the Moughataa of Ouad Naga (refer *Table D3.10*).

⁽³⁵⁾ There are conflicting figures reported in relation to employment : according to the SDAU, 17,000 people work in the fishing sector in Nouakchott.

⁽³⁶⁾ PDALM

Table D3.10 Coastal Villages in the Southern Region⁽³⁷⁾

Moughataa	Communes/ Municipalities	No of villages (located within 30 km)	No of coastal villages	Population	Distance from the coast
Keur Macen	Keur Macene	15	4*	3247	3 to 20km*
	Ndiago	23	23	5431	0 to <10km
	M'Balal	26	3	133	5 to 6km
Medherdra	Tiguent	75	12	259	3 on the coast 9 @ 5 to 16 km
Ouad Naga	El Arie	23	23	4988	6 to 10km
Total				14058	

* one of the villages is located about 30km from the coast but reportedly 50 to 75% of economic activities is related to fishing (based on village leaders' understanding).

Source: ONS-Tenmiya. Baseline Compilation Report, prepared for ERM, 2005.

The Moughataa of Keur Macen includes the PND and its buffer zone which comprises 22 villages and Chat T'boul Natural Reserve.

Box D3.2 provides an overview of the socio-economic conditions of the villages located in the buffer zone of the PND.

Box D3.2 Socio-economic conditions in PND's area of influence: Summary of the 2004 survey's outcomes

<p><i>Demography</i></p> <p>In November 2004, BSA conducted a socio-economic survey in 22 villages in the PND's area of influence. Based on the outcomes of the survey, BSA estimates the population at about 8,000 people in 2004. According to ONS, the population was of 6,734 in 2001 and is estimated at 7,200 in 2004 and 7,300 in 2005, assuming the demographic growth rate from 2000 to date is constant at 2.26%/year (ONS: RGPH 2000). Population is sedentary and there is no migration outside the villages. 4.9 is the average size of households.</p> <p><i>Social conditions</i></p> <p>Households own their house that is made of cement or wood (60%). Housing conditions are basic: no access to electricity, no sanitation facility (80% don't have toilets, 20% use latrines or buckets), and no telecommunication. 60% have a radio. 83% of households use wells to get water. On average the distance to fetch water is 2.7km. The average water consumption is limited to 75 l/day/household.</p> <p>Level of education is very low: almost 30% of heads of households do not have any schooling and are illiterate; less than one third of the children go to school.</p> <p>Health facilities are very limited: 73% of the population is forced to go over 10 km to obtain health services. Among the population that seek health care: 44% of the people consult patrician or a medical personnel in health post or basic unit, 33% consult within the family or friends' circle and traditional healers and 20% in hospital or private clinics. Pregnancy is the cause for consultation in 16% of cases.</p> <p><i>Economy</i></p> <p>37% women are head of household (in periphery of NKT 48.9%); 34% of husbands are not in the house, 58% because of work, 32% for other reasons; about 47% of household receive support from elsewhere (son or another relative).</p> <p>Debt level is quite high: average debt is more than 60,000 UM /household that is 4 times their monthly salary. Debts are mostly due to the shop-keepers (almost 85%).</p> <p>About one fourth of the population in those villages work. About 40% are employed in the rural sector as cooperative workers or independent farmers. For 64% of revenues come from rural product sales (cattle, fish and a little from gardening farming). The average revenue is 12,000 UM/month.</p>
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⁽³⁷⁾ ONS-Tenmiya. Baseline Compilation Report, prepared for ERM, 2005.

Local Economy

The economy of the southern region is diversified and includes livestock breeding, farming including market gardening (*maraîchage*) and fishing. Tourism is very embryonic and is limited to PND. The importance of each activity in the local economy varies and three distinct areas have been identified:

- Communes of Al Aryie and Tiguent;
- Communes of Keur Macen, N'Diago, M'Balal; and
- PND and Chat T'boul Reserve.

Communes of Al Aryie and Tiguent

The main economic activities in Tiguent and Al Arie are livestock breeding and farming but it is also along the coast of these two communes that most of the migrants' camps are located.

Tiguent has 12,170 inhabitants. Livestock farming is its major activity. Along the coast, migrant camps settle during the fishing seasons from April to July and November to December, many of which come from other countries, mainly Sub-Saharan African states and primarily Senegal. It is estimated there were about 4,000 migrant fishermen in 2001.

Between Nouakchott and a location known as PK153 (153km south of Nouakchott, 10 km above the Chat Boul Reserve and PND) it is estimated that there is one operating fishing settlement every 2 to 3 km in the peak fishing season. This means that the total number of camps could reach up to 50 and 75 settlements.

Chartering consists of the hiring of a foreign fleet of pirogues by a Mauritanian operator, on the basis of an allocation of the catch and overheads. The workforce brings equipment with them.

The Spanish Cooperation has attempted to help the municipality develop fishing activities by providing financing of 4 billion UM for a fishing training centre. However, out of the 200 newly trained fishermen, only 50 still operate in the fishing sector.

Communes of Keur Macen, N'Diago, M'Balal in the Moughataa of Keur Macen

In the Moughataa of Keur Macen, economic activities include:

- 60% livestock breeders;
- 30% farmers; and
- 10% fishing (both continental and ocean fishing) and an estimated fishing population of 200.

Most of the livestock farming is done in the Commune of M'Ballal. The municipality also has 194 ha of cultivated land and 317 ha of land to be developed.

In the Commune of Keur Macen, agriculture (farming) is predominant. Keur Macen has 4,212 ha of potentially cultivatable surface areas, out of which 2,845 are developed to produce rice. The estimated rice field area is 3,500ha. Sixty-two (62) cooperatives producing vegetables were also listed. It is estimated that livestock in Keur Macen comprises about 30,000 bovines, 500 camels and more than 10,000 goats. Livestock products, mainly milk, are traded in Rosso. In the Keur Macen municipal strategic plan, the two major activities proposed to be developed are irrigated agriculture and livestock products. Fishing is a marginal activity and is limited to continental fishing. Keur Macen municipal territory does not have direct access to the sea but people can gain access through the water ways is related to the estuarian hydrological system.

The Commune of N'Diogo and the coastal villages attached are located in the periphery of the PND. In these villages around one quarter of the population is involved in fishing and one fifth in market gardening (*maraichage*) as their principal activities. Fishermen perform mostly continental fishing in the basins created by the hydraulic works of Cheyal, Lemer and Lekser from September to February, but they also fish in the open sea⁽³⁸⁾. There are about 10 pirogues in the village of N'Diogo and most men go to Nouakchott or Nouadhibou during the fishing season. Livestock breeding, picking, and retail trade are considered as mostly secondary activities⁽³⁹⁾. Nevertheless, livestock numbers including donkeys, goats, sheep, and cows are estimated at about 28,000 animals.

Fishing is not well developed in this region, and there is no infrastructure to land and sell fish. The Government has not promoted fishing in the region for fear that increased fishing activities would lead to more catch being landed in Saint-Louis, Senegal, which already has a well equipped facility and wider access to markets.

Parc National du Diawling and Chat T'boul Reserve

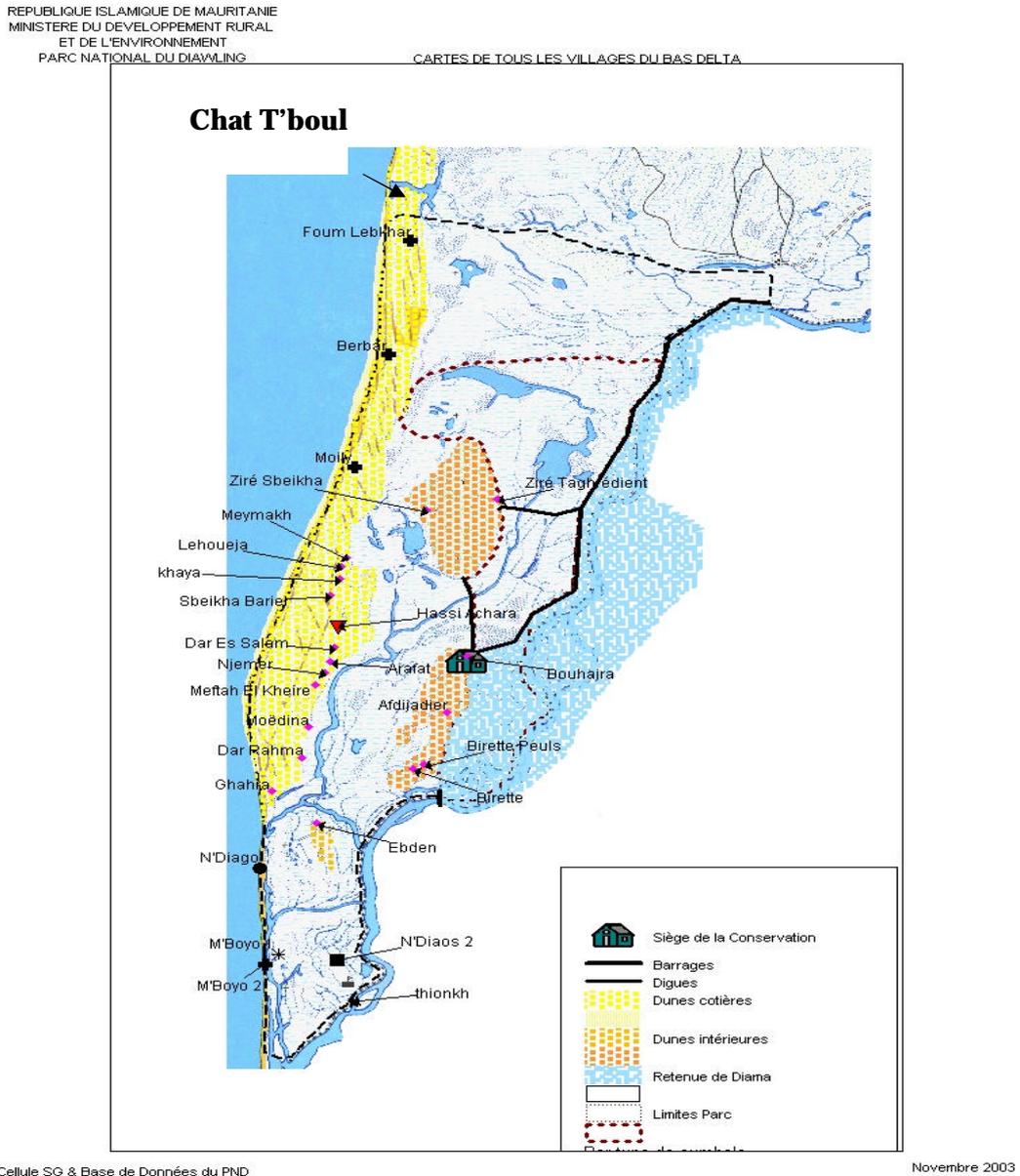
Located in the south of Mauritania in a marsh in the Senegal River delta, the PND covers 16,000 ha and was created in 1993. The main purpose in creating the park was to restore the damaged ecosystem downstream of Diama Dam that has significantly reduced the annual flooding of lands up to Chat T'boul and Aftout basin. North of PND, along the Atlantic coast lies the Chat T'boul Reserve (PK 163), a natural laguna covering 15,000 ha. It was recognised as a RAMSAR site in 2000. There are no villages in PND.

Tourism is limited in PND and surrounding areas due to isolation and lack of infrastructure able to accommodate tourists. Thus, there are only about 600 to 800 visitors each year.

⁽³⁸⁾ Matthieu Bernardon. Suivi de la pêche existante au niveau du PND. IUCN, Mai 2005.

⁽³⁹⁾ Tenmiya. Etude d'évaluation économique du Parc National du Diawling. IUCN, Mai 2004

Figure D3.3 Map of PND, Chat T'boul and the Surrounding Villages



The Senegalese “Grande Cote”

Introduction

This section presents a short national overview of Senegal to put the description of the communities of the “Grande Côte” into the Senegalese context, which differs from Mauritania. The sources of all data quoted below include reports from ENEA and DSD.

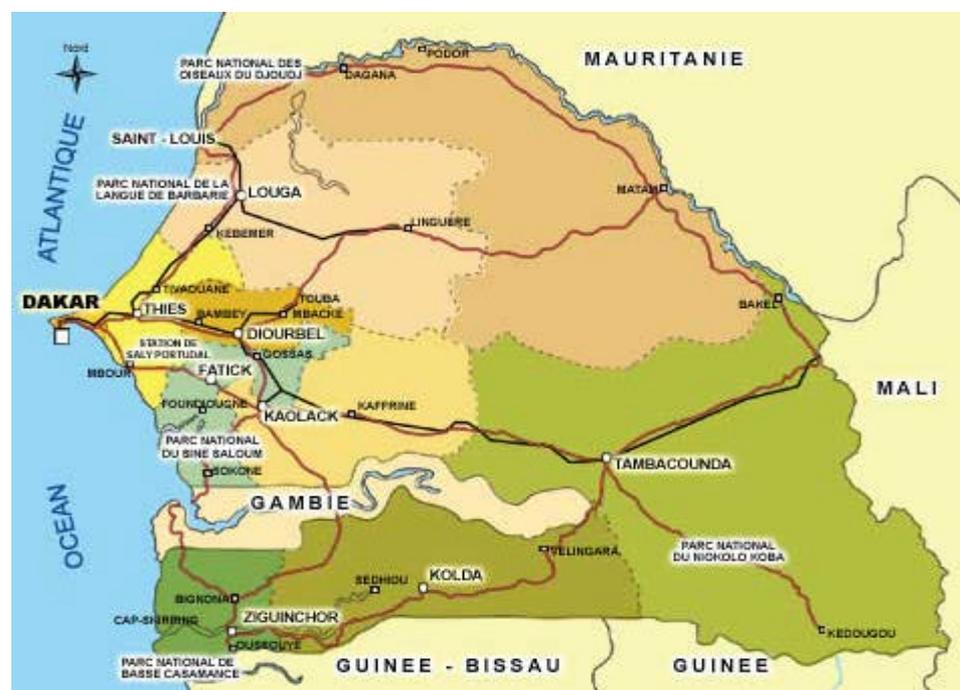
National Overview

Geography, demographic and administrative overview

The Republic of Senegal has a population of 9.8 million spread over 196,000km². It has a common border with Mauritania along the Senegal River. Its coastline is 700 km long. The *Grande Côte* from Dakar to Saint-Louis is approximately 200 km long (refer *Figure D3.4*).

Along the “Grande Côte”, from north to south, the coast includes the regions of Saint-Louis, Louga, Thiès and Dakar respectively (refer *Figure D3.4*). The baseline focuses on three target regions which include Saint-Louis, Louga and Thiès and more specifically on their seven fishing ports: Saint-Louis, Potou, Lompoul, Fass boye, Mboro, Kayar and Dakar.

Figure D3.4 Administrative division of Senegal



Source: DSD/ENEA 2005

The population of Senegal is young with approximately 56% of people aged 20 or less. It is also a very urban population with 41% living in urban areas (refer *Table D3.11*).

Table D3.11 Key National Demographic Indicators

Indicator	Value	Year
Total population, of which:	9,960,000	2002
- Men	4,890,000	2002
- Women	5,070,000	2002
Annual average rate of increase in the population	2,4%	1988 to 2002 between the 2 censuses
Population of less than 20 years	55,6%	ESAM-II, 2002
Numbers total households	1,120,000	2002
Numbers average individuals by household	8,9	2002
Rate of urbanization	41%	2002
Average density	51 inhabitants per km ²	2002
Birth rate	41%	Atlas of Senegal ED 2000
Death rate	13%	Atlas of Senegal ED 2000
Life expectancy to the birth	54 years	
Infant mortality rate	70%	2000
Rate of schooling into elementary	75%	Year scol. 2002/2003
Rate of elimination of illiteracy (15 year + population)	39%	ESAM-II, 2002

Source: *RGPH 2002, DPS, except special mention*

A third of households has access to water at home with at least one inside tap. Slightly over a third of households has electricity at home. A total of 28% of households have access to both water and electricity.

Life expectancy at birth in Senegal was estimated in 2002 by the WHO to be 54.3 years old for men and 57.3 for women. The main cause of morbidity is malaria fever (minor and major), which accounts for 42.6% (44.8% in rural areas) of causes of morbidity. Respiratory and diarrhoeal diseases have nearly become endemic.

The access to healthcare services is, as a whole, difficult. Only 57.4% of the population is less than 30 minutes away from a healthcare facility. This rate is lower in rural areas with only 41% being within 30 minutes of a facility. More than a quarter of patients are located more than 5 km away from a healthcare facility⁽⁴⁰⁾.

Slightly over half the household expenditures is dedicated to food. The main three items cover basic needs (food, housing and clothing) and represent roughly three quarters of household consumption expenditures in both rural (75%) and urban (80%) areas.

The average literacy rate is 39%⁽⁴¹⁾ and has improved from 33% in 1995⁽⁴²⁾.

⁽⁴⁰⁾ ESAM 2

⁽⁴¹⁾ ESAM 2

There are three major ethnic groups in Senegal, Wolof (43%), Pular (24%) and Serer (15%)⁽⁴³⁾. Over the whole country, 94% of the population are Muslims and 4.5% are Christians.

Overview of Senegal National Economy

Over the past few years, the Senegalese economy has experienced an annual growth of around 6% of its GDP. This trend was mainly due to consumption and investment. The tertiary sector is the top contributor to the Senegalese economy (45% of GDP) whereas the primary sector contributes to less than 15% of GDP⁽⁴⁴⁾. GDP per capita was worth US\$466 in 2001 and US\$721 in 2004, which represents an increase of 54.72%⁽⁴⁵⁾. According to World Bank typology Senegal is a “low income” country but not a “very low income” country.

Based on the 2004 Human Development Index (HDI), Senegal ranks 157 out of 177 countries.

According to estimates from the national accounting system the workforce comprised 3.3 million individuals in 2003. Some 54% of the workforce are employed in the agropastoral sector while a further 40% work in the informal sector.

The main Senegalese exports consist of fish products accounting for 164.1 billion cfa francs (FCFA)⁽⁴⁶⁾ in 2003, oil products (109.3 billion FCFA in 2003), phosphates and cotton (18 billion FCFA in 2003) and arachide (48 billion FCFA in 2002 and 25 billion in 2003).

Tourism

Tourism is one of the Senegalese economy's most dynamic sectors. The economic input is estimated to be 100 billion FCFA francs in gross revenues and 70 billion FCFA in net revenues. This sector is the second most important sector as far as export revenues are concerned, behind fishing.

Fishing

Fishing is a vital component of the socio-economic development of Senegal. In 2001, fisheries contributed 32% of export receipts, 8% of GDP for the primary sector and 1.6% of national GDP⁽⁴⁷⁾. Currently fishing contributes 2.5% to the total GDP and the highest share of the export revenues. Today, the fishing sector is facing major difficulties due to a downward trend of halieutic fisheries resources.

⁽⁴²⁾ ESAM I

⁽⁴³⁾ 1988 census

⁽⁴⁴⁾ Source: DPS : national accounts

⁽⁴⁵⁾ Ministry of Economy and Finances

⁽⁴⁶⁾ exchange rate : 1€ = 655 cfa francs

⁽⁴⁷⁾ DPS, 2003

There are two fishing seasons, one with minor catch from June to October and the other one from November to June with higher productivity.

Ocean fishing provides direct and indirect employment for about 600,000 people including 70,000 fishermen. The total amount of fish landed in 2003 was 400,440 tonnes with a commercial value of 185 billion FCFA or €282 million. The contribution of continental fishing was about 50,000 jobs for a total amount of fish landed of 38,000 tonnes.

The Senegalese fishing sector differs significantly from the one in Mauritania with artisanal fishing being the dominant component. In 2003, artisanal fishing represented 86% of the production landed, whereas the Senegalese industrial fleet provided about 10% and foreign industrial vessels 4% (refer *Table D3.12*).

Table D3.12 Evolution of Fish Landing in Maritime Fishing (in thousands of tonnes)

	Years				
	1999	2000	2001	2002	2003
Artisanal Fishery	313.6	338.2	332.6	311.5	385.8
Industrial Fishery, of which :	8.3	53.7	60.4	63.8	58.3
- Senegalese industrial Fishery		41.4	48.2	46.7	41.8
- Foreign Industrial Fishery		12.3	12.2	17.1	16.5
TOTAL	395.0	391.9	392.7	375.3	444.1
Artisanal fishery in share of the catch (%)	79.4	86.3	84.7	83.0	86.9
Total Senegalese Fishery		379,6	380,8	358,2	427,3

Source: DOPM

Regional Overview

The following section gives an overview of the socio-economic characteristics of the seven artisanal fishing ports in Senegal and their degree of dependency on the sea for livelihood maintenance. *Table D3.13* provides an overview of the fishing activities of each community.

Kayar

Kayar municipality is located in the Thiès Région and the Thiès Département. The population was around 17,000 inhabitants in 2004⁽⁴⁸⁾. Added to this local population are some 7,000 individuals who migrate to the area during the fishing campaign between November and June. These are mainly people from Saint-Louis and fishermen from Yoff. They gather in the district called Tente Yoff which is highly populated, but lacking sanitation, sewage and water infrastructure.

⁽⁴⁸⁾ Projections based on the RGPH 2002.

Kayar has had a health post (*poste de santé*), since 2000, and a health cabin (*case de santé*). During winter, some 180 patients are treated everyday in the health post. Both the nearest health center or regional hospital are located in Thiès, some 50 km from Kayar. The other healthcare posts near Kayar are Keur Moussa (17 km) and Diender (15 km).

The main diseases recorded in the health post are:

- malaria;
- dysentery/diarrhoea;
- respiratory infections;
- gynaecological infections/sexually transmitted diseases;
- traumas related to maritime activities; and
- some 50 accidents a month are reportedly related to the maritime activity: wounds, fish bites and stings.

Approximately 60% of Kayar households have access to electricity.

There is a major sanitation issue because the water table is close to the surface, and gets easily contaminated.

The municipality has four standard primary schools, representing 12 classes, and six Arabic schools. About 2,000 pupils are schooled in standard primary schools, however there is no high school.

Table D3.13 Summary Table of Artisanal Fishing Activities in the Six Ports on the Northern Coast of Senegal (2004)

Department	Thiès	Tivaouane	Tivaouane	Kébémér	Louga	Saint-Louis
Ports	KAYAR	MBORO/MER	FASS BOYE	LOMPOUL	POTOU	SAINT-LOUIS
Reference year	2004	2004	2004	2004	2004	2003
Pirogue Fleet	400 to 500	135	350			3600
No. of active pirogues /month		130 to 300	150 to 280	66 (50 to 120)	50 (12 to 82)	160 (100 to 215)
Fishing intensity : no. Boats out/month	8 800					
Average no. of fishermen/ month	4000 to 4500	600 to 1500	1000 to 2000	250 to 300	200 to 250	1850 (500 to 2 900)
Fishing methods	Purse seine : 90%	Fixed gillnet (<i>filet dormant</i>)	Fixed gillnet (<i>filet dormant</i>) + purse seine	Fixed gillnet (<i>filet dormant</i>)	Fixed gillnet (<i>filet dormant</i>)	Purse seine + Fixed Gillnets
Fishing season	November / May	March June /July	December/January to June/July	April to September	April to September	
Annual catch (tonnes)	47 700	700	2 270	1 420	1 800	34 500
Estimated commercial value (million Fcfa)	7 150	400	700	415	681	5 300
Unloading docks	3	No	1	Under construction	no	
Processing area/pad <i>Aire de transformation</i>	2	1 (traditional one)	2	1 (traditional one)	1 (traditional one for drying)	
No. of women involved in processing	about 300	about 80 to 100	300	250 to 300	About 270	
Gas stations	7, incl. 4 active	Non	4, only one in service	1	1 but out of service	6

Sources: See Report by Ariane Dufour et Chakirou Razaki. Socio-economic profile of fishing sites on the Northern Coast of Senegal, 2005

Agriculture is the second most important activity after fishing. Approximately 390 ha are cultivated.

Tourism is very limited in Kayar. The coast is beautiful but the sea is treacherous, and therefore unlikely to favour the development of seaside tourism.

Fishing is the main activity and main source of income for the Kayar population. The fishing campaign lasts 6 to 8 months, from November/December to April/May. It involves nearly all the youths in the fishing and the majority of women for fish processing and sale. Traditional processing involves more than 300 women in Kayar.

Fishing in the area benefits from a favourable hydro-climatic influence and the presence of an oceanic trench (1,235m deep) 38 km from Kayar where numerous fish species are concentrated, especially coastal pelagic fish. Data suggests there are 54 different species to be found in the area.

The main species caught in 2004 were round sardinella (45%), Madeiran sardinella (18%), Spanish mackerel (6%), all of which are fish with a low added value.

In 2003 and 2004, annual total production amounted to some 47,000 tonnes (refer *Table D3.14*). This represents some 20% of unloading activities in Thiès and 12% of Senegalese traditional fishing. In 2004, local consumption absorbed 22% of the production and processing accounted for 16% and the rest 60% is traded to national markets.

Kayar has three unloading docks. Two of them are dedicated to unloading small pirogues and the third one is for larger pirogues, mainly those using purse seine nets. Several fishing methods are used in Kayar but the purse seine method represents more than 90% of catches.

Table D3.14 Catch from Artisanal Fishing in Kayar (2002 to 2004)

	2002	2003	2004
Total landed catch (tonnes)	35,191	47,113	47,681
Commercial value (estimations) (billions FCFA)	6.6	9.1	7.2
Artisanal fleet	219+162*	211+205*	237+189*

Source: Service départemental des pêches de Thiès à Kayar * Senegalese + foreign

In the middle of the fishing season, in addition to the 2,000 local fishermen, there are between 2,000 to 2,500 fishermen who come from Saint-Louis. During this season, the fleet is composed of 500 active pirogues, 200 of them for local fishermen. During winter, the fleet decreases to some 300 pirogues (refer *Table D3.13*).

Without any appropriate conservation infrastructure, fish processing plays a major role in the value-adding of the halieutic products. However, the artisanal fishing techniques currently used do not meet the absorption capabilities of the national market.

Fresh fish conditioning is undertaken in Dakar because there is no preservation or conditioning plant in Kayar. Refrigerated trucks therefore leave everyday to Dakar.

M'BORO sur Mer

M'Boro sur Mer is located in the Thiès region, the Tivaouane department, the Méouane district and the rural community of Darou Khoudoss. M'Boro sur Mer is 5 km from the Mboro municipality.

The population of the municipality was about 12,000 inhabitants⁽⁴⁹⁾ in 2004, but only 1,135 inhabitants live in Mboro sur Mer.

The municipality has two health posts. The main diseases are malaria, respiratory diseases, dermatitis. In Mboro, the use of latrines is high; more attention is paid to hygiene and there are less problems related to this issue compared to other villages where fishermen are living in very close quarters.

Some traumas suffered by fishermen at sea can be observed and nearly every month, a body is washed ashore.

Infrastructure in Mboro sur Mer is limited; water is supplied by wells, there is no electricity and there is one school.

Mboro is a market-gardening area and local people participate in both fishing and growing vegetables. Fishing is the predominant activity. There is hardly any tourism activity in the area in spite of genuine assets: a beautiful coast but with treacherous waters. There are several tourist camps in the interior as well as some cottages on the beach.

Seasonal fishermen from Saint-Louis come during the main fishing season between March and June. In Mboro, only encircling gillnets are used.

Mboro is a small fishing production center, mainly due to the lack of appropriate infrastructure; there is no electricity, hence no ice manufacturing plant, and no gas station. However, as a result of new regulations to prevent overfishing in Kayar, some fishermen are moving to other sites like Mboro. Over the past three years, fish landings have increased. In 2004 700 tonnes were unloaded in Mboro for a commercial value of 400 million CFCA (refer *Table D3.15*).

Out of these 700 tonnes, one seventh is used for traditional processing. About 80 to 100 women work in this sector in four joint businesses. The remainder of the fish goes directly to plants in Dakar.

⁽⁴⁹⁾ Source : estimation based on RGPH 2002

Table D3.15 Catch from Artisanal Fishing in Mboro sur mer (2002 to 2004)

	2002	2003	2004
Total landed catch (tonnes)	530	570	700
Commercial value (estimations) (millions FCFA)	340	322	400
Artisanal Fleet	150+50*	120	135+150*

Source: Centre de contrôle des pêches à Mboro *Senegalese + foreign

Fass Boye

Fass Boye is located in the Thiès region, the Tivaouane department, the Méouane district and the rural community of Darou Khoudoss. 3,500 inhabitants live in Fass Boye⁽⁵⁰⁾, and they are largely reliant on fishing for their livelihood.

Fass Boye is currently isolated because of poor road conditions and is not connected to the drinking water network, but it has a healthcare post, access to electricity and phone. Water is provided by wells. The main health issues in Fass Boye are triggered by the sanitation problem. There are many instances of gastroenteritis and diarrhoea in districts where seasonal workers live in close quarters and hygiene management is more difficult.

Fass Boye has a standard primary school with four classes and two Arabic schools.

In 2004, 2,300 tonnes of fish were produced for a commercial value of around 400 millions FCFA (refer *Table D3.16*). Due to the absence of infrastructure, fish cannot be preserved easily. Therefore, a major portion of fish products goes to processing (about 40%). There are two processing areas in the village, employing some 300 women.

Table D3.16 Catch from Artisanal Fishing in Fass Boye (2002 to 2004)

	2004
Total landed catch (tonnes)	2 270
Commercial value (estimations) (millions Fcfa)	400
Artisanal Fleet	150 to 280

Source: Service départemental des pêches de Tivaouane à Fass Boye

LOMPOUL sur Mer

Lompoul sur Mer is located in the Louga region, the Kébémér department, the Ndande district and the rural community of Kab Gaye. 1,500 people live in Lompoul.

Infrastructure in the community is very limited. There is no operational health structure in Lompoul and it must depend on the Kébémér health district for services.

⁵⁰ RGPH 2002

It is not connected to the electrical network but will be in the near future. Lompoul has a primary school with a complete cycle of six classes.

An asphalt road in good condition, built in 2001, now connects Lompoul to the main road and has helped to reduce the village's isolation.

The main economic activity in Lompoul is now fishing, although this is a relatively recent phenomenon. There is some tourism but it is a very minor industry.

In the 1980s there were only a couple of pirogues operating out of Lompoul, however, in recent times this has changed dramatically largely as a result of years of drought, lack of rain and a shortage of agropastoral resources, forcing the population to seek other sources of livelihood. Today, some 90% of the working population works in the fishing sector however local fishermen participate in both fishing and market gardening.

The fishing population in Lompoul is reportedly 400 fishermen⁽⁵¹⁾, but the number of active fishermen every month is more likely to be around 250 to 300. Between 2002 and 2004, annual fish production increased from 1,200 tonnes to 1,600 tonnes. Estimated commercial value varies between 400 and 500 million CFCA (refer *Table D3.17*). Highest production rates are generally reached between April and June.

Table D3.17 Catch from Artisanal Fishing in Lompoul (2002 to 2004)

	2002	2003	2004
Total landed catch (tonnes)	1,196	1,418	1,617
Commercial value (estimations) (millions FCFA)	390	461	480
No. of active pirogues/month	74	60	66

Source: Service régional des pêches de Louga

Given the lack of facilities for preserving fresh fish, most of the catch is directly processed. In 2004 40% of landings were used for traditional processing and less than a quarter were used for industrial processing. One quarter of the catch is locally consumed. Therefore, only a small fraction of the production (around 200 tonnes, or 12% of total landings) is used for fish trading.

The fishing campaign takes place from March to July. The artisanal fishing is expected to grow. For instance, the Japanese Cooperation is financing the construction of a fishing center in Lompoul, which should be operating in July 2006.

(51) d'après service départemental des pêches de Kébémér

POTOU Plage

Potou is located in the Louga region, the Louga department, the Sakal district and the rural community of Léona. The population of the village of Potou is approximately 700 inhabitants⁽⁵²⁾.

Local infrastructure is limited. The health cabin (*case de santé*) is manned by one medical person but is not really operational. In the absence of the power network, the population in the rural community of Léona uses traditional lighting technologies (candle, hurricane lamp, gas lamp) and solar energy. This lack of electrification hampers the development of activities such as fish trading and preservation.

The number of active fishermen varies between 200 and 250 per month, representing approximately 30% of the population. Most fishermen come from Saint-Louis and stay for the majority of the year in Potou (11 months).

Annual production for 2004 was 1,800 tonnes for a commercial value of 680 million FCFA francs (refer *Table D3.18*). Highest production rates were reached between May and July for 2004. Between 2002 and 2004, landings increased by 80%.

Table D3.18 Catch from Artisanal Fishing in Potou (2002 to 2004)

	2002	2003	2004
Total landed catch (tonnes)	1,080	1,469	1,799
Commercial value (estimations) (millions FCFA)	407	533	682
No. of active pirogues/month	74	60	50

Source: Service régional des pêches de Louga

Fish which are traded go to the large urban areas in the interior of the country. In 2004, 47% of the catch went through the hands of women in charge of the processing and 9% was locally consumed. The remainder (790 tonnes) of the production was usually sold directly.

The lack of quay facilities compels most fishermen to unload their pirogues in Saint-Louis, which hampers the development of the activity and dramatically reduces financial incomes.

The poor state of the fleet is also a negative factor for the expansion of the sector and also threatens the life of fishermen out at sea. Collision risk with trawlers not respecting authorised areas is an issue for fishermen in this community.

The tourism industry is currently under-developed in the Louga region. Potou has significant assets with beautiful fine sand beaches. Moreover, there is a major American 12 billion FCFA-project to create a tourist complex complete with a golf

⁽⁵²⁾ Source : PLD de la CR de Léona.

course in this area. To develop this project, an asphalt road must first be built between Potou and Saint-Louis.

Saint-Louis

The most recent population data indicates that 154,555 people live in the municipality of Saint-Louis⁽⁵³⁾, which is located in the Region of Saint-Louis, in the Department of Saint-Louis.

Local Economy

The productive sectors are agriculture, livestock breeding, fisheries, forestry, gum arabic industry and a network of small/medium size enterprises. As a key economic centre, Saint-Louis has a port, one airport and one university.

Two types of fishing are practiced in the area of Saint-Louis. These include maritime fishing on the Atlantic Ocean and continental fishing organized around the Senegal River. Fisheries are essential for the city's economy, since it is a significant source of revenue and an important employment sector. Historically, fishing has been at the heart of the social structure of Saint-Louis. Today, fishermen comprise about 65 % of the working population⁽⁵⁴⁾. Most fishermen live on the *Langu de Barbarie* in the quarter of *Guet Ndar*.

Until the 1989 conflict between Senegal and Mauritanian, Saint-Louis fishermen could freely fish in Mauritanian waters. Since 1989, they have redeployed to the south on the *Grande Côte*. To fish in Mauritania they have to purchase a 75,000 FCFA license fee for a pirogue of no more than 13 metre length, or 150,000 FCFA for a pirogue longer than 13 metres. In 2005, 270 licenses had been granted. In addition Mauritanians can charter Senegalese crew for their pirogues to operate in Mauritania's waters.

The annual total fisheries production in Saint-Louis amounted to approximately 35,000 tonnes in 2002 and 2003 (refer *Table D3.19*) which equals 8% to 10% of the total artisanal catch in Senegal. The commercial value of the production was worth 5.3 billion FCFA. In 2003, nearly two thirds of the catch was devoted to fish trade, 19.7% to the artisanal processing and 14% to local consumption.

Table D3.19 Catch from Artisanal Fishing in Saint-Louis (2002 to 2004)

	2001	2002	2003
Total landed catch (tonnes)	32,752	35,807	34,558
Commercial value (estimations) (billions Fcfa)	6.3	5.9	5.3

Source: *Regional Fishing Authorities in Saint-Louis*

⁽⁵³⁾ RGPH 2002

⁽⁵⁴⁾ Service des pêches.

Tourism in Saint-Louis

Between 1996 and 2003, Saint-Louis developed its tourism infrastructure. The figures for the period 1991 to 2003 highlight real dynamism in the tourist sector. Direct flights from Europe operate all year around. Moreover, Senegalese authorities have recently approved a new tourism project for the northern coast, as part of a World Bank financed Private Investment Promotion Program.

The number of visitors has more than tripled in 12 years from 14,864 in 1991 to 47,464 in 2003. The tourism industry generates direct employment for about 1,200 people.

Saint-Louis has two key natural attractions; the *Djouj National Park* and the *Langue de Barbarie National Park*. The latter, created in 1966, attracts about 4,000 visitors each year. Park entry fees generate 8 million FCFA that contribute to the State budget.

Langue de Barbarie National Park

The breach in the Langue de Barbarie, opened in 2003 to protect Saint-Louis from flooding, is strongly disrupting the local ecosystem of the parks and of the PND area. The Senegal River mouth has been moved upward north by 15km. Beforehand, the river floods would replenish fresh water sources.

In addition, the cut is impacting some species that migrate from the river to the sea and vice versa (eg. shrimp stocks are depleting). The cut has also some effects on fishing and landing methods. Some fishermen are satisfied because they can land their catch on the riverside and sail out to the sea more easily. This has created problems however, since there is no adequate landing infrastructure on the riverside (fish are merely unloaded on the ground) leading to quite significant waste disposal issues.

The park itself is not inhabited, but there around 14 peripheral villages located at less than 5 km of the park, and a total population estimated at 10,000 inhabitants. These communities are highly dependent on fishing in the river or the sea.

Health overview

The health district of Saint-Louis has adequate medical infrastructure including one hospital, one health center, 18 health posts, four maternal health clinics, 31 health cabins (*case de santé*), 13 pharmacies and dispensaries. However, the health facilities in Saint-Louis suffer from a lack of human resources: medical staff are limited to two doctors, 31 nurses or medical auxiliaries, and eight midwives.

Dakar Region

The Dakar Region encompasses the *départements* (councils) of Dakar, Pikine, and Rufisque. Monitoring posts corresponding to landing sites are presented in *Table D3.20*.

Table D3.20 Monitoring Posts Corresponding to Landing Sites

Department	Monitoring posts
DAKAR	Hann
	Soumbédioune
	Yoff- Ngor-Ouakam
PIKINE	Thiaroye
	Pikine
	Pencum Bada Lô
	Mbao
RUFISQUE	Rufisque
	Bargny
	Nianghal

Hann is the biggest landing site for the département of Dakar (shown in *Figure D3.5*), given the better selling conditions it offers. Fishing areas do not necessarily correspond to particular fishing areas. Therefore, it is not always easy to determine the landing share likely to be affected by an oil spill.

In 2003, over the whole Dakar region, there were reportedly 2,500 active pirogues for some 16,000 fishermen. The distribution and type of catch are summarised in *Tables D3.21* and *D3.22*.

Figure D3.5 Hann Landing Site

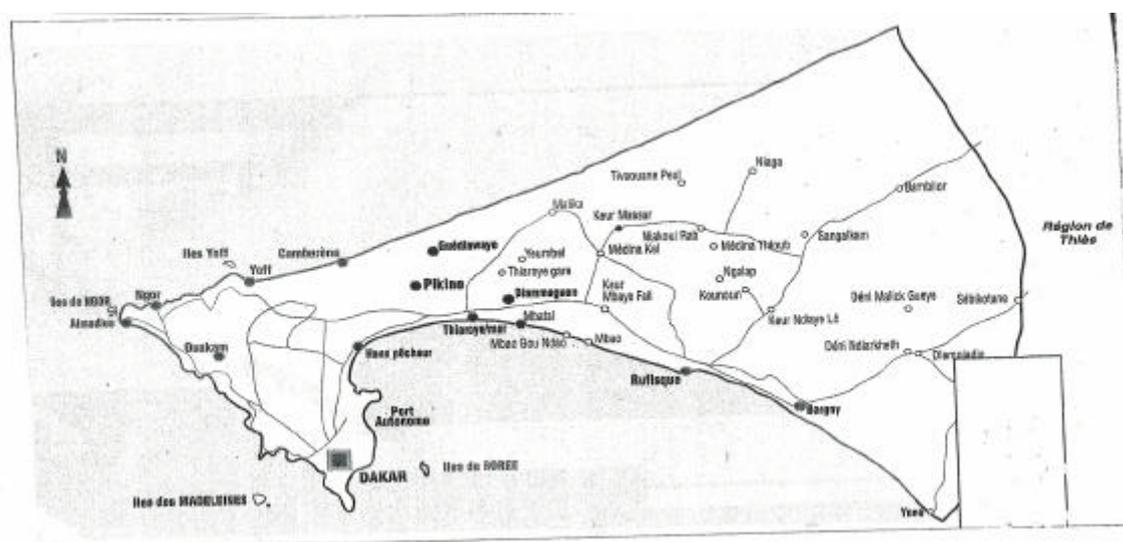


Table D3.21 Distribution of the catch in the Dakar Region according to the type of use (in tons)

Type of use	2002	2003	2004
Local Consumption	14,366	18,439	8,185
Fish Trade	7,538	5,125	15,890
Industrial Processing	12,857	16,809	7,494
Artisanal Processing			7,101
Total of landings	34,761	40,373	38,670
Estimated Commercial Value (billion cfa F)	15.1	20.2	23.4
Total weight in tons from artisanal processing	1,465	2,497	3,180

Source: Department of fisheries (Direction des Pêches Maritimes)

Table D3.22 Distribution of the catch in the Dakar region by département (in tons) for 2004

Type of use	Dakar	Pikine	Rufisque	TOTAL
Local Consumption	4,372	491	3,322	8,185
Fish Trade	11,690	269	3,931	15,890
Industrial Processing	7,385	39	69	7,494
Artisanal Processing	673	358	6,070	7,101
Total of Landings	24,120	1,157	13,393	38,670
Estimated Commercial Value (billion cfa F)	15.4	0.6	7.4	23.4

Source: Department of fisheries (Direction des Pêches Maritimes)

Annex E

Non-Routine Impacts: Catastrophic Oil Spill

Annex E

Oil Spill Event: Impacts on Livelihoods of Coastal Communities

Introduction

The Environmental Impact Statement (EIS) prepared for the Chinguetti Project provides a detailed assessment of the risk of an oil spill from the Project. This assessment has determined that an oil spill is unlikely and would be classified as a non-routine project impact. However, if an oil spill did occur, it would affect areas of the Mauritanian and Senegalese coastline. A Social Impact Assessment (SIA) would not normally consider non-routine impacts however stakeholders have indicated that this is an issue of concern and it has been addressed in this SIA.

The magnitude of the impact will very much depend on:

- the extent to which fish resources are affected;
- the extent to which the community is reliant on those fish resources for food or economic well-being and therefore vulnerable to any change in availability of fish;
- the extent to which other parts of the environmental or economy are affected by an oil spill, for example tourism and water supply; and
- the capacity of the community to deal with the economic, environmental or health changes that may occur.

Mauritania

Nouadhibou

The economy of Nouadhibou is largely reliant on the fishing sector. Nouadhibou represents about 65% of the total Mauritanian artisanal fish catch and provides employment for about 5,000 people in the industrial fishing sector. Nouadhibou will not be directly affected by a catastrophic spill however industrial fishing (most of which is based in Nouadhibou) and fishermen from other affected areas may migrate to Nouadhibou in search of alternative sources of fish or employment in the fishing sector.

Imraguen Villages (From PNBA to North of Nouakchott)

The PNBA has a higher probability of being affected by a catastrophic oil spill in the summer (June to September) season than winter. Such an event could have major long-term effects on fish nursing and breeding areas of major importance in the

PNBA. Income from ecotourism would be affected, with the potential loss of some of the 2,800 annual visitors to PNBA.

Approximately 2,600 people living in Imraguen villages are more exposed to the risks of catastrophic oil spill than Nouadhibou. In most oil spill scenarios, the villages located south of the PNBA, approximately 1,000 people in Bellawakh, Leismid, Tiwilit and Mhijarat are more exposed to oil spills than the 2,600 people living in villages in the PNBA.

The Imraguen communities rely on fishing for their main source of income, aside from some tourism activities in PNBA, and for nutrition. The reduced availability of fish proteins and the consumption of polluted seafood could have effects on health. The limited number of health posts and centres in the northern villages would make such an impact difficult to manage. The Imraguen villages could be impacted indirectly through the migration of fishermen located in the Southern part of Mauritania if that area were subject to an oil spill. However, the Imraguen coastal areas are untouched in the case of an oil spill spoiling the fish resources south of Nouakchott.

Nouakchott

The probability of a catastrophic oil spill in the Nouakchott region is identical to areas further north in summer but higher in winter. A spill would result in both short-term and longer term disruptions to the fishing economy. Short-term availability of fish stocks would be affected, resulting in an instant reduction in fishing revenues and employment. The lack of income would impact most artisanal fishers.

Nouakchott is an important fishing centre with approximately 3,300 fishermen - one quarter of the national artisanal fishermen workforce. The fishing activity in Nouakchott and the southern fishing camps is supported by freezing and processing plants for industrial and artisanal fisheries. In addition to about 3,000 fish merchants (mareyeurs) and workers involved in processing (transformateurs), nearly 1,000 people provide direct services and inputs to fisheries (eg. transport, ice). Moreover, the fishing port north of Nouakchott is one of the few facilities available to the artisanal fishers. It is difficult to estimate the total population involved in fishing activities but it is possible that it is as high as 10,000.

The recent *Regional Planning Report for the Coastline* (PDALM) outlined some potential for tourism development in Nouakchott (eg. beach north of the Fishing Port). Any such facilities could be affected by a catastrophic spill.

The fishing community in Nouakchott has greater access to alternative employment opportunities however their skills and knowledge will relate largely to fishing. There will be some alternative employment opportunities and perhaps a greater degree of social/state support.

Southern Region (South of Nouakchott to the Mauritanian/Senegalese Border)

The Southern region is at highest risk and potential for reliance on fishing-based livelihoods particularly in the winter.

A spill would result in both short-term and longer-term disruptions to the fishing community through loss of fishing opportunities, decline in economic return, damage to fishing equipment and availability of food supply. The probability and implications of oil contamination to wetlands and other important habitats behind the dunes, within the boundaries of the Chat T'Boul reserve, to continental fishing, irrigated agriculture or water supply is not well known to date. It is considered highly improbable.

About 4,200 fishermen, the majority of which (~4,000) are migrant, could be affected and suffer economic losses. In the case of contamination, these foreign fishermen could either move south to Senegal or north to the Banc d'Arguin. A recent socio-economic survey⁽¹⁾ of these villages showed that villagers consume (continental and sea) fish about twice a week. The likelihood of food shortage resulting from an oil spill could be therefore considered less in the PND area than in the PNBA area. In both areas, there are limited supplies of canned foods, but water is expensive and in short supply. Bouts of poor health care have significant implications, given the lack of health services.

Most of the southern region is an agro-pastoral and coastal villages area, with predominantly other sources of livelihoods, such as farming, livestock breeding and market gardening providing food supplies. Fishing activities by the population in the PND area are almost entirely based on continental fishing. Tourism in PND is limited to about 800 visitors a year.

Senegal

While the environmental impacts of similar catastrophic oil spill pollution are similar for Mauritania and Senegal, the Senegalese are more vulnerable because their diet relies to a greater degree on fish. The northern coast of Senegal is considered exposed to contamination risk only in the winter which is the peak fishing season.

Table E.1 shows a summary of fishing related activity in the six identified unloading sites in Senegal. The Grande Côte accounted for about 23% (88,000 tonnes) of the national artisanal catch in 2003. The figures for Dakar include the *départements* of Dakar, Pikine and Rufisque.

Only the unloading site of Yoff (*département* de Dakar) is located on the *Grande Côte*. Approximately 50% of this fish catch is processed, 10 to 25% is consumed by fishing communities and the remainder is sold.

⁽¹⁾ BSA (see baseline)

Table E.1 Summary of artisanal fishing in the “Grande Côte” and the Dakar Region of Senegal in 2004⁽²⁾

Unloading sites	DAKAR REGION	KAYAR	MBORO	FASS BOYE	LOMPOUL	POTOU	SAINT-LOUIS*
Population	919,683 ³	17,000	1,135	3,500	1,500	700	155,000
Active fishermen / month (average)	16,000	2,000 to 25,000	600 to 1500	1000 to 2000	250 to 300	200 to 250	1,850 (500 to 2900)
Annual catch (tonnes)	38,670	47,700	700	2,270	1,420	1,800	34,500
Commercial value (million FCFA)		7,150	400	700	415	681	5,300
Women involved in processing		About 300	80 to 100	300	250 to 300	About 270	

The impact on industrial fishing is difficult to assess because industrial fishing fleets have greater flexibility over where they can fish. The industrial fishing sector accounts for only 10% of the Senegalese landings and therefore the impact is likely to be less severe than on artisanal fishing.

Saint-Louis

Most of the fishing population of Saint-Louis live on the Langue de Barbarie in the heavily populated quarter of *Guet Ndar*. Their food consumption depends heavily of the fish catch as 10 to 25% of the catch is consumed locally. Oil reaching the beaches of the Langue de Barbarie could induce a major health crisis.

As 99% of the active population of Guet Dar and about 60% of the active population of Saint-Louis are fishermen, the whole city will be economically affected in the unlikely event of an oil spill.

An oil spill would seriously affect the eco-tourism diversification of Saint-Louis. The city of Saint-Louis is a tourist attraction due to its location as an island on the Senegal River and its colonial architecture. The Langue de Barberie has a number of tourist hotels and camps and is a major tourism accommodation area for the city. Nature tours are offered in nearby national parks and reserves. In total, the eco-tourism sector is estimated to employ 1,200 jobs.

⁽²⁾ Source: Ariane DUFOUR & Chakirou RAZAKI DSD-ENEA, Senegal - Baseline Report, 2005

⁽³⁾ Source: Gouvernement de la République du Sénégal, Direction de la Prévision et de la Statistique/Division des Enquêtes démographiques et sociales, janvier 2001 – Estimation de la population en 2001. Source: http://www.gouv.sn/senegal/population_chiffres.html

The Senegal River is the main potential pathway for oil at sea to threaten and damage the sensitive, wetland environment inside and upstream of the river mouth in Senegal and Mauritania in the PND. The oil spill risk assessment indicates there is a low probability (in winter) for spilled oil to contact waters in the vicinity of the mouth of the Senegal River. Oil inside the river mouth and upstream would have serious effects on the livelihoods of local people, by disrupting day-to-day activities, water balance, contaminating resources and damaging equipment and vessels.

The man-made breach of the Langu de Barbarie in 2004 has modified the hydrology and the ecology of the estuarine area. Additional spill modelling and risk assessment will take into account the breach in the Langu de Barbarie and its consequences on the flooding regime and consequently drinking water supply and market gardening.

Potou, Fass Boye and Mboro

These three ports have the same risk of environmental contamination in the event of a catastrophic oil spill as Saint-Louis. Fass Boye and Potou are also highly dependent on fish resources, but M'Boro has vegetable gardening as another source of income. About 2,500 fishermen would be affected by an oil spill in these areas.

Lompoul and Kayar

Senegal, Lompoul and Kayar have the highest probability of oiling in case of a major spill.

Kayar is the largest village of the “*Grande Côte*” (the Northern coast) with a population of 17,000, and is a key artisanal fishing centre. The number of fishermen is estimated at 2,500 during the fishing season. It produces approximately 47,700 tonnes of fish per year; 54% of the output on the Northern coast and 12% of artisanal fisheries catch in Senegal. Fishing is the main source of revenues in Kayar. Approximately 22% of the catch is consumed locally and 76% is processed and traded on the national market.

Kayar would experience the most significant impacts if an oil spill were to affect Senegal.

Dakar

For the remainder of the Senegalese northern coast, the risk of oiling in Dakar from an oil spill from the Chinguetti FPSO only exists in winter. The peninsula north of Dakar has a medium probability for large oil spills (100,000 barrels and higher), whereas the area south of the peninsula (already the *Petite Côte*) has a very low probability (close to 0) of being affected.

Total annual fish catch in the Dakar Region is nearly 39,000 tonnes. Overall, the number of fishermen in the Dakar Region is estimated at 16,000 who operate around 2,500 active pirogues.

The northern region of Dakar (iDakar *Département*) produces about 24,000 tonnes of fish annually. This represents about 6% of the total fish output in Senegal. However, since the landing sites do not necessarily correspond to the fishing areas, predicting precisely how many tonnes of fish could be affected by an oil spill on the *Grande Côte* is not possible at this stage and would require further analysis.

The impact of an oil spill in Dakar could be significant for fishermen fishing on the Grande Côte (*Yoff, Ngor Islands up to les Iles de la Madeleine*).

Annex F

Chinguetti Project SIA Public Consultation & Disclosure Plan

Woodside Mauritania Pty. Ltd.

Chinguetti Development
Project: Social Impact
Assessment
*Public Consultation and
Disclosure Plan*

November 2005

Reference: 0024310

For and on behalf of Environmental Resources
Management Australia Pty Ltd

Approved by: Keryn James



Signed:

Position: Project Director

Date: 29 November 2005

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1 INTRODUCTION

1.1 OBJECTIVES

Woodside Mauritania Pty. Ltd. (Woodside) commissioned Environmental Resources Management Australia Pty Ltd (ERM) to conduct a Social Impact Assessment (SIA) for the Chinguetti Project (the Project) in Mauritania, West Africa.

The Ministry of Energy and Petroleum is the Government ministry with responsibility for co-ordination and approval of the SIA. The scope of the assessment is set out in *Chinguetti Development Project SIA - Terms of Reference (ToR)*. This Public Consultation and Disclosure Plan (PCDP) is an annex to the Draft SIA Report.

This updated PCDP documents the nature and timing of consultation on the Project to date and sets out in broad terms the consultation and disclosure required to complete the SIA.

The specific objectives of this PCDP are to:

- involve potential Project Affected People (PAP) and other relevant stakeholders in identification and assessment of Project opportunities and risks;
- involve potential PAP and other relevant stakeholders in finding ways in which potential adverse social and economic impacts can be avoided, minimised or mitigated;
- involve potentially PAP and other relevant stakeholders in the assessment of residual risk, and to secure understanding and commitment to agreed management responsibilities for the issue;
- involve PAP and other relevant stakeholders in finding ways in which the project can contribute to sustainable development;
- communicate specific Company commitments and establish responsibilities; and
- further develop channels of communication between PAPs and other relevant stakeholders and the project operator to address ad hoc issues and opportunities arising from project activities.

1.2 PROJECT DESCRIPTION

Woodside Mauritania Pty. Ltd. and its joint venture participants (Hardman Group companies, BG Group companies, Premier Oil group companies, Roc Oil group companies and the wholly Government of Mauritania-owned

Groupe Projet Chinguetti) are developing the Chinguetti oil field, approximately 80km off the coast of Mauritania.

A summary project description is provided in the Draft SIA Report.

A detailed project description has been published in the Project's Environmental Impact Statement (EIS) and is also available on Woodside's website at www.woodside.com.au.

1.3 MAJOR CHANGES IN THIS UPDATE

Since the last release of the PCDP in March, four new stages of consultation have occurred and have been described in Section 4.

2.1 WOODSIDE ORGANISATIONAL POLICIES

The development of the Chinguetti field and associated management plans, including this PCDP, are guided by Woodside's mission, vision, values and Business Principles and Environmental Standards and Aspirations. These values and principles support a transparent approach to public consultation and disclosure.

Woodside's mission statement is *"to create outstanding growth and shareholder wealth while conforming to our core values"*. Its vision is *"to be a preferred partner of governments, joint venture participants, customer and communities due to our delivery speed, commercial acumen, cost focus, technical capability and values"*.¹

Woodside's values ² are:

- *strong performance;*
- *care and respect;*
- *integrity and trust;*
- *initiative and accountability;*
- *creativity and enterprise ; and*
- *working together.*

Woodside's Business Principles³ of particular relevance to public consultation and disclosure are:

- Principle 7- We are committed to being a force for good through building long term relationships with governments and communities in the countries in which we operate; and
- Principle 8 - We fully, consistently and in a timely manner, disclose material information about the Company and its performance.

Woodside is also a participant in the Extractive Industries Transparency Initiative (EITI). The aim of the EITI is to increase transparency over payments by companies to governments and government-linked entities, as well as transparency over revenues by those host country governments.

¹ Woodside's Mission and Vision can be viewed on the Woodside website <http://www.woodside.com.au/About+Woodside/Corporate+Information/>

² Woodside's Values can be viewed on the Woodside website <http://www.woodside.com.au/About+Woodside/Corporate+Information/>

³ Woodside's Business Principles can be viewed on the Woodside website <http://www.woodside.com.au/About+Woodside/Corporate+Information/>

By implementing EITI Woodside is ensuring:

- revenues from the Chinguetti Project contribute to economic growth and sustainable development in Mauritania;
- payments and revenues from the project remain transparent and accountable ensuring the revenues generated are used in an efficient and equitable manner; and
- Woodside can demonstrate its contribution to the Mauritanian economy.

Woodside's Environmental Standards and Aspirations policy lays a foundation for effective communication and consultation. The Company's aspiration for stakeholder engagement, within this policy, is "*All stakeholders (including Government and community) feel they are adequately engaged and consulted*". The Company's standards for this area are:

1. seek and document stakeholders' views on environmental issues and consider them in our decision making;
2. Stakeholder Management Plan and Communication Plan (in consultation with External Affairs) in place for all business activities (projects, operations) with significant environmental and social risks; and
3. conduct a comprehensive social impact assessment (SIA) for new projects with potential for significant social impact.

2.2

APPLICATION OF THE WOODSIDE VALUES, BUSINESS PRINCIPLES AND ENVIRONMENTAL ASPIRATIONS AND STANDARDS TO THE CHINGUETTI PCDP

Woodside's principles, values and environmental aspirations and standards outline the project operator's commitment to public consultation and disclosure and offers organisational support to the implementation of this PCDP.

The following principles of stakeholder engagement apply in Woodside⁴ and subsequently to the Chinguetti project:

- people have the right to be informed about Woodside activities, development plans, and the right to have a say about them;
- people are entitled to know about, and contribute to, decisions that affect their social and physical environment, their lives, and the communities in which they live;

⁴ Woodside 2003 *Chinguetti Development Project Draft Environmental Impact Statement*.

- Woodside believes that better decisions are made and better outcomes are reached if all stakeholders, at all levels, are involved in the engagement process;
- everybody has a legitimate view, even if Woodside disagrees with it;
- when planning projects, Woodside is committed to involving people early, often and well, to provide timely and accurate information; and
- Woodside believes that an optimal outcome is achieved only through negotiation and compromise.

2.3 MAURITANIAN REGULATIONS AND REQUIREMENTS

The Chinguetti Project SIA will be the first SIA for the oil industry in Mauritania. The Project is regulated by the Ministry of Oil and Energy under the terms of the Production Sharing Contract (PSC) and the Ministry has authority for oversight of the SIA. As in Australia and many other countries, Mauritania has no specific legislation governing social impact assessment consultation and disclosure.

2.4 INTERNATIONAL STANDARDS

This PDCP has been prepared to the standard expected by Woodside and JV participants. It acknowledges the expectations of lenders, customers, key suppliers, national and international stakeholder groups (non-government organisations (NGO) and inter-governmental organisations (IGO) and the international oil and gas community. The collective standards of these groups are seen to be best represented by the World Bank group policies and in particular International Finance Corporation (IFC) approach to public consultation and disclosure as outlined in:

- IFC 1998 Good Practice Manual *Doing Better Business through effective consultation and disclosure*; and
- IFC Guidance Note F *Preparation of a Public Consultation and Disclosure Plan*.

These standards are further complemented by other principles and guidelines such as the Equator Principles and those prepared by the International Association for Impact Assessment or other relevant industry bodies.

The IFC Good Practice Manual *Doing Better Business through effective consultation and disclosure* outlines public consultation and disclosure objectives and tasks for the various stages of project development, from conceptual design through to operation.

The Guidance Note specifies what a PCDP should do:

- “describe local requirements for consultation and disclosure;
- identify key stakeholder groups;
- provide a strategy and timetable for sharing information and consulting with each of these groups during various phases of the project;
- describe resources and responsibilities for implementing the PCDP activities; and
- detail reporting/documentation of consultation and disclosure activities.”⁵

Key considerations for public consultation and disclosure outlined within Guidance Note F are:

- “written and oral communication in languages and readily understandable formats;
- easy accessibility to both written information and to the consultation process by relevant stakeholders;
- use of oral or visual methods to explain information to non-literate people;
- respect of local traditions of discussion, reflection, and decision making;
- care in assuring groups being consulted are representative; and
- clear mechanisms to respond to people’s concerns, suggestions and grievances.”⁶

Due regard to these documents has been undertaken in the development and implementation of this PCDP.

⁵ IFC Guidance Note F Preparation of a Public Consultation and Disclosure Plan.

⁶ IFC Guidance Note F Preparation of a Public Consultation and Disclosure Plan.

3 REVIEW OF PUBLIC CONSULTATION AND DISCLOSURE PRIOR TO SIA

3.1 OVERVIEW OF EIA

The SIA has been preceded by an Environmental Impact Assessment (EIA). Preparation of the Draft EIS involved consultation with stakeholders in Mauritania and some IGOs and NGOs since 2002. The EIA will be implemented through the development of Environmental Management Plans, an *Oil Spill Contingency Plan* and *Fisheries Interaction Management Plan* on which there has been additional consultation in parallel with the SIA.

This section provides a brief overview of the public consultation and disclosure undertaken for the EIA of the Chinguetti project. For detailed information on the consultation and disclosure for the EIA, readers should refer to the EIS and associated documentation. This information can be found on the Woodside project website: www.woodside.com.au or by contacting Woodside's Corporate Affairs Manager in Mauritania: Brendan.Augustin@woodside.com.au

3.2 CONSULTATION FOR EIA

Consultation with stakeholders for the Chinguetti EIA was undertaken throughout EIA scoping as well as the development of the draft and final EIS. The consultation included workshops and stakeholder meetings in Mauritania as well as meetings with organisations and individuals based in Europe. Key events have been:

- stakeholder meetings in Europe April 2003;
- stakeholder workshop in Mauritania June 2003;
- stakeholder meetings in Europe June 2003;
- stakeholder workshop in Mauritania September 2003;
- stakeholder meetings in Europe Nov-Dec 2003;
- stakeholder workshop in Mauritania Nov-Dec 2003;
- stakeholder meeting in Mauritania April-May 2004;
- stakeholder meeting in Mauritania August 2004; and
- stakeholder workshop in Mauritania and Senegal in Nov-Dec 2004.

Key Mauritanian stakeholders consulted during this time included⁷:

- individuals and organisations with specialist knowledge and responsibilities in particular areas (such as Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP) on fisheries; Délégation à la Surveillance des Pêches et au Contrôle en Mer (DSPCM) on vessel management; the World Conservation Union (ICUN) on regional conservation issues; Diawling National Park and Banc d'Arguin National Parks, on specific site details);
- key representatives of major interest groups (such as Fédération Nationale des Pêches (FNP) who represent the fishing sector);
- ministries of government and intergovernmental agencies whose duties relate to oil development, fisheries, environment and sustainable development issues;
- a broad selection of NGOs identified for their role in environment and development by Woodside and by the Ministry of Mines; and
- others who requested to be involved.

Key Europe-based stakeholders consulted during this time, included individuals and organisations:

- who are connected to and support the biodiversity conservation work in Mauritania (and its related social and economic benefits), because of the regional and global significance of the Banc d'Arguin National Park. Also, because of the close association between the Banc d'Arguin National Park, (PNBA), with FIBA (Foundation International du Banc d'Arguin) and a number of other specialists, (some of whom serve on the PNBA Scientific Committee);
- who are connected to the conservation industry and politically active, opinion-forming NGOs serving an aware membership;
- who hold information and/or are active in research and information gathering on the biodiversity (including fisheries), resources; and
- who are influential and active in conservation and environmental standard setting, and in communicating with other interests, such as commercial trawling fleets.

During development of the EIS, a number of key issues of concern to stakeholders were identified and these are summarised in *Box 3.1*.

⁷ Jenny Heap, OHS Consulting for Woodside

Box 3.1**Issues Raised by Stakeholders during EIA**

The EIS identified five key environmental management challenges:

- consequences of potential oil spills;
- long-term effects of Produced Formation Water;
- effects of discharge from drilling;
- interaction with the trawling industry; and
- production of greenhouse gases.

During consultation on these issues, stakeholders raised a number of additional concerns including:

- the need for improved environmental baseline data and monitoring;
- management of a safety exclusion zone around the facility;
- independent assessment of the Environmental Impact Assessment (EIA);
- consideration of potential environmental impacts not covered by the EIA;
- the need to integrate social and environmental assessment and management; and
- the need for an oil industry level assessment of the potential cumulative and transboundary impacts of the oil industry

The draft EIS was disclosed in March 2004 reflecting stakeholder comments received up until 29 February 2004. The EIS was accepted with conditions by the Ministry of Oil and Energy in September 2004. The final EIS was released in March 2005.

4.1 STAKEHOLDER IDENTIFICATION

The initial stakeholder identification process began with a preliminary assessment of potential project issues (based on experience of similar projects internationally). This process complemented the list of stakeholders identified during the EIA, Woodside's in-house knowledge of the country and relations with the Mauritanian government agencies. The assessment resulted in a pre-scoping list used to prepare the November-December 2004 mission.

During the scoping and subsequent missions, meetings with various stakeholders (particularly IGOs representatives and business representatives) assisted the consultants in identifying new stakeholders, not previously listed.

Under IFC guidelines, groups targeted for consultation are defined as either PAP or Other Stakeholders.

Project Affected People and Groups

PAP include those individuals, groups or organisations who themselves could be directly affected by the Project.

The first mission allowed an initial assessment to be made of project activities that may have impacts and therefore established the PAP (see *Table 4.1*).

- **Local business and potential suppliers/contractors** who will be directly impacted both positively and negatively through local procurement and employment - this category includes the Joint-Venture's contractors and suppliers, the port of Nouakchott, and all enterprises that might lose employees/opportunities to the benefit of the oil sector;
- **Industrial and commercial fishing operators** who could suffer from routine direct impacts (such as export competitiveness and fishing exclusion zones) and from non-routine impacts (namely oil spill) - this category includes the local fishing industry, as well as foreign commercial fishing companies; and
- **Vulnerable sub-groups** who are likely to bear more strongly the Project's impacts - these groups comprise the poorer people, including women and their families.

Other Stakeholder Groups

Other Stakeholders are individuals or organisations who, although not directly affected by the Project:

- represent those affected, or
- have regulatory duty in connection with the Project, or
- have an material interest in the Project, or
- have influence over or secondary involvement in the Project.

This group includes:

- **Local Non-Governmental Organisations** involved in fishing communities and in poor suburban areas of Nouakchott that have useful data or insight into the local and national challenges faced by the Project;
- **International Government Organisations** including development banks and bilateral aid agencies to provide advice on issues, process and sustainable development opportunities;
- **Trade, industrial and professional organisations** that represent groups of people affected by the Project – these include employer organisations, chamber of commerce, labour unions, fishing associations or institutes, and petroleum organisations;
- **Financial institutions and banks** that are tracking development of the oil sector in Mauritania - particularly the risk of political instability;
- **Political parties and elected representatives**, including deputies from the coastal regions likely to be affected and Nouakchott; and

- **Other Interest Groups include** media, academics, research organisations and foundations. They can hold specific knowledge and influence/ease the information process.

A list of the stakeholders identified in Mauritania and Senegal, including a complete list of individuals known to represent PAP, is presented in *Annex A*. The Project has established a consultation-tracking database that is being used to log all meetings with stakeholders at national, regional and local level.

Stakeholder Reference Group

A Stakeholder Reference Group (SRG) was established for the project following feedback from stakeholders. *Annex B* provides the list of the reference group members, organisation, name, position and meeting attendance.

Stakeholder Reference Group Meetings

The purpose of the SRG was to respond to stakeholder queries and to provide advice during the conduct of the social impact assessment. The SRG was aimed at increasing local participation and transparency and ensuring all segments of Mauritanian society are represented (government, private sector and civil society). Participation in the SRG was on a voluntary basis. This group was convened and chaired by ERM.

The purpose of the first SRG meeting, held on 14 July, was to test the validity of the existing data gathered, in addition to identifying further details that may have been overlooked during the data interpretation phase and to identify other complimentary data sources.

The purpose of the second SRG meeting, held on 21 July, was to test the validity of the importance of the impacts, to identify the impacts which would not have been considered in the analysis and to supplement the interpretation of these impacts.

The purpose of the third SRG meeting, held on 28 September, was to test further the validity of impact significance and obtain feedback on the mitigation measures.

4.2 CONSULTATION FOR STAGE 1: SCOPING (NOVEMBER AND DECEMBER 2004)

4.2.1 Objective

Scoping for the SIA commenced in September 2004. From November 25 to December 13, 2004, the SIA team visited Senegal and Mauritania to engage with stakeholders, collect data and identify the main issues likely to be associated with the project. This information was then used to develop the Draft Terms of Reference.

4.2.2 Mission Activities

Scoping information sessions on the SIA process were conducted for stakeholder groups in Dakar and Nouadhibou. Small group and one on one interviews were conducted with stakeholders including government representatives in Nouakchott to provide the opportunity to receive published documents and technical reports.

The mission visited the coastal fishing communities of southern Mauritania and northern Senegal. These villages visited were:

- Kayar, Fass Boye and Lompoul in Northern Senegal on 30 November 2004;
- Birette, Ebden, N'Diago and Chat Boul in Parc National du Diawling (PND) on 1 December 2004;
- Arkeiss, Tessot, Teichott and Mamghar in the Parc National du Banc d'Arguin (PNBA) on 6 and 7 December 2004; and
- Mhijarat, Leimid and Bellawakh located north of Nouakchott on 10 December 2004.

Table 4.2 summarises the timeline of community consultations conducted during the SIA scoping mission.

Table 4.2 Summary of Consultation Activities

Groups	Date	Location	Consultation Activity
Multi	29 Nov. 2004	Dakar, Senegal	Introductory Workshop
Multi	5 Dec. 2004	Nouadhibou, Mauritania	Introductory Workshop
Government officials, IGOs representatives, NGOs, Business representatives, Woodside personnel, Research groups, Interest groups.	24 Nov. to 11 Dec. 2004	Nouakchott, Mauritania	One-on-One meetings
Fishing Communities	30 Nov. 2004	Kayar, Fass Boye, Lompoul, Northern Senegal	Village visits and meetings with community leaders
Fishing Communities	1-2 Dec. 2004	Parc National du Diawling, Mauritania	Village visits and meetings with community leaders
Fishing Communities	6-7 Dec. 2004	Parc National du Banc d'Arguin, Mauritania	Village visits and meetings with community leaders
Fishing Communities	10 Dec. 2004	Coastal villages, North of Nouakchott	Village visits and meetings with community leaders

This consultation process helped to identify additional stakeholders that needed to be included in the SIA process and served to better familiarise stakeholders with the SIA process. *Table 4.3* provides a complete list of the stakeholders consulted. It was determined that it would be more effective to defer workshops on the key issues until stakeholders could be provided with more information about the project and the SIA process. An information package was subsequently prepared and issued to stakeholders in January and the workshops were rescheduled for 15 to 22 March 2005.

4.2.3 Stakeholders Consulted

The stakeholder consultation during the scoping phase, which includes the November to December and March in-country missions, focused on the following groups:

- *project participants* – including both decision-makers and individuals that are able to advise on Project issues related to the Chinguetti Development Project;
- *key government decision-makers* – individuals within the Government that have the power to influence decision-making or can provide information to support the Project;
- *key regional and local decision makers and representatives* – including regional and local administrators, traditional leaders, and representative groups/committees; and

- *respected knowledge holders* – including trusted and respected organisations that can participate in the decision-making process, eg. academic and research institutions and NGOs.

Table 4.3 Summary of Stakeholders Consulted

Stakeholder Groups
MAURITANIA
Company & contractors consulted through one-on-one meetings
Woodside staff in Perth
Woodside staff in Mauritania
Shenker
Government consulted through one-on-one meetings
Ministry of Economic Affairs and Development
Ministry of Finance
Ministry of Fisheries and Maritime Economy
Ministry of Labour and Public Works
Ministry of Mines & Industry
Ministry of Environment and Rural Development
Ministry of Health and Social Affairs
Ministry of Interior (Directorate: DATAR)
Commissariat for Human Rights, Poverty Reduction, and Integration
Local government & Special Government Groups consulted through one-on-one meetings
Urban Committee of Nouakchott (CUN)
Human Rights and Poverty Reduction Integration Group (CDHLIP)
Office of National Statistics (ONS)
Parc National du Banc d'Arguin (PNBA)
Parc National du Diawling (PND)
Plan d'Action National pour l'Environnement et le Développement Durable (PANE)
Professional, Research, and Training Organisations/Interests Groups consulted through one-on-one meetings and workshop
National Fishery Federation (FNP)
Mauritanian Institute of Oceanographic Research and Fishery (IMROP)
National Institute for Promotion and Technical and Professional Training (INAP)
Tiviski (business)
Mauritanian National Council of Employers (CNPM)
Groupement National des Associations des Cooperatives Agro-Silvo- Pastorales (GNAP)
Centre Mauritanien d'Analyse des Politiques (CMAP)
International Organisations consulted through one-on-one meetings
World Bank
International Monetary Fund (IMF)
UNDP
WHO
European Commission
World Conservation Union (IUCN)
Agence Française de Développement (phone meeting)
Non-Governmental Organisations through one-on-one meetings and workshop
Tenmyia
Eco-Development
Association des Femmes du Développement (AFD Wiam)

Stakeholder Groups	
NGOs attending Nouadhibou workshop:	
APEAH	PEECO
ASPPE Stop Pollution et Protection	AMESE
Zakia	Terre d'Echange
ONG network	Femmes et Developpement
NIDA lutte contre la pauvrete	APFPE
ASVPH	Ede l'Enfance
New Vision	A.F. Divorces
AEDM	AFEC
AMDS	Lighathur
AVA	Bieliyott
AMPF (Promotion de la Femmes)	AMEELCP
ADID (social)	URHPM
Terre Vivante	AME
New Vision	
Knowledgeable individuals/Other Stakeholder Representatives consulted through one-on-one meetings	
Dr. Melhelm Hannah (Doctor)	
Pr. Cheikh Saad Bouh Kamara (Sociologist and Human Right Activist)	
Fishing Communities consulted through village meetings	
Villages north of Nouakchott	
Villages in PNBA	
Villages in PND	
SENEGAL	
Government consulted through workshop	
Ministry of Environment & Nature Protection	
Ministry of Economy and Finance	
Ministry of Energy and Mines	
Ministry of Marine Economy (Merchant Marine)	
Ministry of Justice	
Special Governments Groups/Public Institutions consulted through workshop	
Direction of National Parks	
CRODT/ISRA (research institutes)	
Centre de Suivi Ecologique (CSE)	
Port Authority of Dakar	
UNAGIEMS	
Civil Society consulted through workshop and village meetings	
International NGOs:	
WWF	
Local NGOs:	
Institut de Recherche pour le Développement (French cooperation)	
FENAGIE	
Professional, Business and Industrial Organisations	
FED	
GIE (Fishing Associations)	
Northern Fishing Villages (Kayar, Fass Boye, Lompoul)	

4.2.4

Resources to Support Scoping

Materials prepared and used to assist in the consultation for the scoping phase included:

- PowerPoint presentation for stakeholder workshops in Dakar and Nouadhibou.

- Visual images of the proposed project, including diagrams and photographs of FPSOs and schematics of the oil field for use in discussions with villagers.
- Translators for use in discussions where required.
- Structured interview discussion guides.

4.2.5 Consultation Outcomes

A summary of issues and recommendations from the November-December 2004 Scoping Mission in-country interviews and consultations in Mauritania and Senegal is available in the *SIA Terms of Reference Development Report*, which is *Annex G* of the Draft SIA Report.

4.3 CONSULTATION FOR STAGE 2: TERMS OF REFERENCE VERIFICATION (MARCH 2005)

4.3.1 Objective

From March 15 2005 to March 24 2005, the SIA team conducted a second in-country mission to Mauritania and Senegal to consult with stakeholders in both countries on the Draft ToR for the SIA.

The purpose of the consultation was to:

- provide information on the Chinguetti Development Project including updates on the Environmental Impact Statement (EIS) and associated management plans;
- provide information on the SIA process and current timeline;
- understand and address any reservations about the SIA process;
- present and discuss the Draft ToR for the SIA;
- ensure that no important assessment issues were missed; and
- implement the commitment to consider stakeholders' views.

4.3.2 Mission Activities

Five workshops were scheduled including a plenary session in Nouakchott which summarised the contribution of all workshops to the development of the Draft ToR. The sessions and groups targeted are summarised in *Table 4.4*.

Table 4.4 **Schedule of Workshops, March 2005 SIA Mission to Mauritania and Senegal**

Groups	Date	Location	Consultation Activity	#
Government	16 March 2005	Nouakchott, Mauritania	Workshop on TOR	58/50*
Civil society (NGOs, IGOs, Union, Media, Prof. Org., Research centers, Embassies)	17 March 2005	Nouakchott, Mauritania	Workshop on TOR	165/12 6
Local Government, Civil society	20 March 2005	Nouadhibou, Mauritania	Follow-up Workshop on TOR	92/74
Government and Civil Society	21 March 2005	Nouakchott, Mauritania	Plenary session on TOR	150
Government and Civil Society	23 March 2005	Dakar, Senegal	Follow-up Workshop on TOR	85 / 39

Number of organisations: invited / participated

A total of about 280 participants attended these workshops. Attendance rates in Nouakchott and Nouadhibou in Mauritania were high (about 80%) despite the relatively late notice, especially in Nouadhibou, and lower in Dakar, Senegal (less than 50%).

It should be noted that although the workshops gathered a wide range on stakeholders from civil society and government, organisations including local authorities, business communities and villages were not well represented.

The list of stakeholders who attended the workshops is available in *Annex C*.

4.3.3 **Resources to Support TOR Verification**

Materials prepared and used to assist in the consultation for the scoping phase included:

- PowerPoint presentation for stakeholder workshops in Nouakchott, Nouadhibou and Dakar.
- Distribution of the SIA Information Package to workshop participants.
- Release of the Draft TORs and draft PCDP.

4.3.4 **Consultation Outcomes**

A detailed list of questions and a summary of comments from the five workshops was made available in the March in-country mission report and were later released to the SRG for comment.

Questions raised during the seminars related to:

- issues associated with the EIA;
- clarification of the SIA methodology including the proposed consultation process;
- scope of issues proposed to be addressed in the SIA; and
- how copies of reports can be obtained.

Comments on the EIA have been taken into account in the development of modules for the Project Environmental Management Plan.

A summary of issues raised during the seminars is available in the *SIA Terms of Reference Development Report*.

4.4 CONSULTATION FOR STAGE 3: BASELINE (MAY AND JUNE 2005)

4.4.1 Objective

Between 28 May 2005 and 9 June 2005, a third in-country mission to Mauritania and Senegal was conducted to consult with stakeholders on the study's baseline.

A Senegalese sub-consultant social scientist was retained for meetings in rural Senegal and Woodside-retained Arabic and French-Arabic translators were deployed for consultations in Nouakchott and elsewhere in Mauritania.

The first objective of the consultation was to gather data to complete the most significant gaps in the socio-economic situation baseline (ie. the recent past and future as if the project did not exist). This required further stakeholder analysis and individual meetings with stakeholders not previously met for additional primary and secondary data collection, within the following groups:

- Woodside Mauritania staff;
- Government ministries and other government agencies;
- Inter-governmental organisations (including World Bank, IMF and EU);
- politicians;
- NGOs;
- labour unions and significant industry associations; and
- private sector interests.

A secondary objective was to continue a dialogue begun with stakeholders on the SIA in particular, in November 2004, and social and environmental management of the project more broadly, which commenced in 2002.

The data required from the consultations is shown in *Table 4.5*.

Table 4.5 *Summary of Consultation Requirements and Approach for Baseline Completion*

Data Requirement	Target Consultee
<i>National Level</i>	
Medium term (budget) expenditure framework	Ministère Affaires Economiques et du Développement
Geographical transfers (state to region)	Ministry of Finances
CPI: qualitative analysis of causes, infrastructure and private investment capacity	Ministère Affaires Economiques et du Développement
Wages by sector and/or region	Ministry of Finances
Employment rates by sector and/or region	Ministry of Finances
Woodside training as a percentage on wage costs and number of employees receiving it; What type of training is it? Is it transferable to other jobs? Do subcontractors get other benefits?	Woodside Energies Limited and subcontractors
Level of education (numbers of graduates by sector and qualifications)	University / technology schools
Potential suppliers local availability and capacity to provide goods and services	Woodside Energy Limited
Qualitative analysis of reasons for migration to Mauritania, including recent patterns and communication mechanisms (e.g. family)	Ministry of Interior, Agency of Urban Development
Functioning of the health system	Ministry of Finance, Ministry of Health
<i>Wilaya / Moughataa</i>	
Migration trends from/out of; reasons for migration	CUN, Ministry of the Interior
Distribution of basic infrastructure/services between Moughataa	Ministry of Finance
Clarification (trends) of key communicable and non communicable diseases	Department of health, Government health officials
Public healthcare programs	Government health officials
Inflation rent trends	CUN, ADU, Woodside Energy Limited, property developers
Distribution of basic services (infrastructure) in the nine municipalities and specific areas near the ports relative to needs	CUN, Ministry of Health
Statistics on social housing provider	CUN, Communes
Violent crime, property crime statistics	CUN

4.4.2 *Mission Activities*

In contrast to previous missions, where large workshops have been the most effective way of imparting information and collecting stakeholder views, this round of consultations involved predominantly a series of small group meetings. The nature of the consultation was more fine-grained questioning and interrogation of data sources.

Eighty-nine meetings were conducted during the mission all along the coast between Dakar to Nouadhibou.

4.4.3 Resources to Support Baseline Development

Materials prepared and used to assist in the consultation for Baseline development included:

- Structured interview discussion guides.
- Extracts from local sub-consultants' preliminary baseline data.

4.4.4 Consultation Outcomes

The mission was able to fill approximately three-quarters of the significant data gaps identified prior to the mission and confirmed data does not and will not exist for nearly all of the remaining gaps. Two significant sources of data were identified but were unavailable. These included the recently completed Office of National Statistics 2004 survey on households' living conditions which was not publicly available at the time of the mission. The other source of data is the 2006 to 2010 Poverty Reduction Strategy Paper (PRSP) and the associated Medium Term Expenditure Framework (MTEF) currently being developed by the Ministry of Economic Affairs and Development (MAED).

Findings deemed to be significant to the SIA are defined as either impacts relevant to eventual management plans or impacts important to improved understanding of the context in which they occur. Further definition of impacts and a summary of contextual findings is outlined below.

Further Definition of Impacts

- **Capacity for macro-economic management.** Key Government economic policy advisors have not yet clearly identified the impacts the exploration campaigns have already had on the economy. Very little analysis has been conducted into the level of revenue to be expected from oil and the potential impacts of various expenditure scenarios.

World Bank and IMF are proposing to undertake in-house analysis of oil revenue management issues but this was not available before the Draft SIA Report was published.

- **Immigration.** Early indications are that immigration within Mauritania may not be as noticeable as immigration of semi-skilled and skilled workers from other countries in the region and returning expatriate Mauritians.

Some stakeholders observed a social risk of economic activity associated with oil development being seen to benefit non-Mauritanian nationals or better-educated Mauritanian at the expense of 'ordinary' Mauritians.

- **Imports.** This round of consultation indicated export income is less susceptible to an appreciating local currency than first thought likely, but that the propensity for imports to flow into Mauritania is probably greater than envisaged before the mission. The key to these impacts will be how the Mauritania Government manages the fiscal, monetary and exchange rate policy. Sectors most at risk are agriculture for domestic consumption (a significant driver of employment and poverty reduction, especially in rural areas) and international tourism (small but high profile).
- **Cumulative impacts.** Impacts arising from the Dakar-Casablanca road and the Senegal River-Nouakchott water supply/agricultural irrigation project will combine with potential impacts of the Chinguetti Project to change the magnitude and perhaps the nature of impacts.

4.5 ***CONSULTATION FOR STAGE 4: VERIFICATION OF BASELINE DATA AND SIGNIFICANCE OF IMPACTS (JULY 2005)***

4.5.1 ***Objective***

Between 11 July 2005 and 21 July 2005, a fourth in-country mission was conducted in Mauritania to consult with stakeholders on the verification of baseline data and impact assessment and to discuss the significance of impacts.

4.5.2 ***Mission Activities***

Consultation for Impact Assessment

In order to complete the impact assessment, meetings were held with key government ministries, local authorities, NGOs, business groups, and IGOs. These meetings were supplemented by two meetings with the Stakeholder Reference Group. The data required from the consultations is shown in *Table 4.6*.

Table 4.6 Summary of Consultation Requirements and Approach for Impacts Assessment

Data Requirement	Target Consultee	Method
National Level		
Woodside employees wage rates compared to alternative employment	Woodside Energies Limited and subcontractors	Group Interviews
Number of government employees related to the project (wages and training)	GPC	Group Interviews
Procurement and other local business trading partners (Approximate % of imports in national and local procurements; total value added; employees expenditure patterns on local goods; needs for goods and services and changing diversity of services)	Woodside	Group Interviews
Woodside fees paid for port activities	Woodside	Group Interviews
Estimated spending multiplier of the activities taxes, royalties and charges paid by Woodside to the Government at national and regional levels	Ministère Affaires Economiques et du Développement, Ministry of Finances	Group Interviews
Total export value of oil and revised (higher) oil prices than January preliminary analysis	Woodside	Group Interviews
Loss of skilled labour (job drain)	Unions, major companies	Group Interviews
Disease, prostitution and drinking habits	NGOs, MAT	Group Interviews
Will new opportunities in oil lead to de-investment in the fishing industry?	ONS, FNP, Peche Artisanale, EU, Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP)	Group Interviews
Corporate social responsibility activities	Woodside	Group Interviews
Nouakchott		
Budget revenues and expense by source/sector, including transfers from State and revenues from fishing and mining activities and expenses on health and education.	CUN	Group Interviews
Growth in new car registrations leading to an increase in distances travelled and traffic accidents	Ministry of Health and the Interior	Group Interviews
Spill/explosion of waste oil storage	Woodside	Group Interviews

4.5.3 Resources to Support Baseline and Impact Assessment Verification

Materials prepared and used to assist in the consultation for Baseline and Impact Assessment verification included:

- Structured interview discussion guides.
- Sub-consultants revised baseline report.
- PowerPoint presentations for the Stakeholder Reference Group meetings.

In addition, for the SRG meetings, each member was provided with:

- Handouts of the PowerPoint presentation of the March Workshop on the Terms of Reference; and
- The March in-country mission report that summarised stakeholders' comments on the TOR.

4.5.4 Consultation Outcomes

Stakeholder Reference Group Comments

Power point presentations of the first draft of the baseline and the identification of the impacts were presented and used as a basis for discussion during the two SRG meetings. The SRG members received copies of the meeting minutes following each of the meetings.

Table 4.7 provides a summary of comments made at the two SRG meetings.

Table 4.7 SRG Meeting 1 and 2 Comments

Issue	SRG Meeting 1 and 2 Stakeholder Comments
Fisheries	<ul style="list-style-type: none"> • A need to verify the data on the number of fishermen in Banc d'Arguin and the villages in the north of Nouakchott. • If the oil development affects industrial fishing, who will compensate Government of Mauritania? • The majority of men living in N'Diago are fishermen working in Nouakchott and Nouadhibou. • Most Senegalese fishermen work in the southern region because of specific fishing techniques. The Mauritanian fishermen fish mainly octopus for exportation. • There is a need to consider compensation scenarios in case of an unexpected impact, e.g. oil spill. A better understanding of the oil revenue in order to decipher loss of fishing revenues etc • It is important to differentiate between the Senegalese fishery sector (related to licenses (unloading in St Louis)) and Senegalese fishermen hired by Mauritarians. • The exportations revenue from industrial fishing does not include the additional revenue of the EU agreement (86 M –100 M €/year).
Debt and poverty	<ul style="list-style-type: none"> • A link between poverty and illiteracy rates has been recognized by the government hence several national programmes have been established to address this issue. After checking the data, the literacy rate is approximately 57% and illiteracy is 43%. • Questions were raised on the impacts of oil revenues on the debt cancellation. The most up-to-date data is available at the Ministry of Finance, <i>Direction de la Dette</i>. The debt should be now around 600-700 millions USD. • Many donors currently provide aid and assistance to Mauritania however there is a fear that with the introduction of oil production to the country, many of these donors may leave. ERM will try to assess this impact. • ERM's baseline lacks of information on gender issues. Will the oil project affect more females or males?
Geographic scope	<ul style="list-style-type: none"> • Why focus only on Trarza, Dakhlet Nouadhibou and Nouakchott? ERM will add a section addressing regional diversity. Need to consider the economic and social conditions and diversity of other regions (vis à vis induced impacts from increased state revenues thanks to oil).
Employment	<ul style="list-style-type: none"> • ERM to provide more accurate data. • Include some information on health and safety of workers • It was acknowledged that the direct employment created is for 1500 people only which includes about 1000 people for the Mauritarians. • There may be a trend for the existing local skilled staff to leave their current jobs, move to Nouakchott and find work with Woodside. However, the fear is this will leave a void concerning skilled workers in other sectors. Hence it is important to focus on training unskilled workers. • Woodside needs to define what specific jobs are available for locals and establish training programmes. • The mining industry has noticed that some qualified (and highly qualified) staff have left to join the petroleum industry. SNIM have increased the minimum salary to 21,000UM/month although this was heavily championed by the union, it is expected SNIM will not do anything further in terms of workers benefits.
Migration	<ul style="list-style-type: none"> • The number of migrants is increasing in NKT; contributing factors include the construction of new roads (Nouakchott and Nouadhibou, Diama Dam and Rosso-no trucks, Rosso to Boghe) as well as the oil production. Another factor explaining this migration is the lack of employment opportunities outside the cities. • It is anticipated that new towns will be established along the new roads, in particular Nouadhibou to Nouakchott. • In Nouakchott alone it is estimated there are 150,000 migrants/people in transit on a permanent basis. Therefore it is difficult to assess the entire population. • Some queries were made about the sources and accuracy of the information. It was suggested to record all the various conflicting information. There are also

Issue	SRG Meeting 1 and 2 Stakeholder Comments
<p>issues with availability of data.</p> <p>Health and education</p>	<ul style="list-style-type: none"> <li>• Office National de la Statistique (ONS) and Ministry of Economic Affairs and Development (MAED) can validate data. <li>• Schools were built by the Ministry of Education but the decentralization legislation has given this responsibility to the commune. <li>• The first private clinic was established in the 1970's not 1988 in Nouakchott.
<p>Nouakchott</p>	<ul style="list-style-type: none"> <li>• A need to differentiate CUN's responsibilities versus the communes' responsibilities. Who is responsible for funding etc. <li>• To measure the increased activities, the oil (gasoline?) consumption could be a good indicator: Spending of the Government has been raised from 40 000 USD to 150 000 USD.
<p>Social investment</p>	<ul style="list-style-type: none"> <li>• Woodside should consider training additional local workers and build new housing for local workers. <li>• Woodside's social investment amount seems very low, less than 1 million USD (according to the ToR). Woodside are now considering it will be increased.
<p>Communication</p>	<ul style="list-style-type: none"> <li>• Woodside should aim to communicate more effectively with the community about the project and its impacts etc. Many people are still unaware of the project and its activities, advertising on phone cards, posters etc. can reach the majority of the population. <li>• It is important to manage the local expectations with regards to oil and its associated wealth etc. <li>• It is important to inform the communities about emergency measures to be taken in case of an accident.
<p>Other comments</p>	<ul style="list-style-type: none"> <li>• Although it is important to establish an accurate baseline it is more important to focus on how the government should distribute the additional revenue from the oil. <li>• It is important to remember before 1960 Senegal and Mauritania were one state hence when referring to one or the other an individual born before 1960 may consider themselves as both. <li>• Need to be realistic about the expected wealth generated by oil production, only 75,000 barrels/day equalling 200-300 million USD/year. <li>• The impacts of the 2 new roads Nouadhibou-NKT and St Louis- Nkt via Keur Macen may have other impacts than the oil project. The cumulative impacts should be carefully checked. <li>• Particular areas of PND etc are of high importance, especially for the reproduction of shrimp and mullets etc hence need to be protected. <li>• Fear of pollution and the environmental consequences in terms of fish and other inhabitants of the ocean (plants etc). <li>• The increasing level of traffic has led to animals being killed on the Diama Dam to Rosso Road; it is necessary to construct safety measures (speed bumps and signs etc).
<p>Accidental hydrocarbon discharge</p>	<p>The development of a plan urgently national, POLMAR, inspired of the OMI, is perceived like a very positive projection, because it guarantees that the government will act in the event of accidental hydrocarbon discharge which would not be caused by the activities of Woodside. Nevertheless, which are the mechanisms and the financing?</p>
<p>Management of Waste</p>	<p>The presence of the storage and the accumulation of waste of drilling and the incineration of certain domestic waste raise concerns in terms of health and environment and raised the question of planning and the solution considered.</p>

Issue	SRG Meeting 1 and 2 Stakeholder Comments
Health	Certain questions of health are directly related on the environment and in particular to the management of waste. More generally, the impacts on health must be integrated into the grid of analysis of the impacts and studied: effects of the migrations, social security, HSE.
Employment and provisioning	It was raised that the risks of social conflicts did not appear in the grid and should be considered, in particular to bind to possible “a perception and brain drain” that only a minority among the easy classes would have access to employment in the oil sector. The need for guaranteeing that the standards relating to the working conditions adequate and are respected and for improving training/education was underlined.
Oil Income	<p>The fact that the share of the contracts and purchases carried out locally which remains in the economy of Mauritanian is relatively small, namely approximately 6 million out of the 33 million spent locally. This was surprising and was discussed at length. The challenge is to check these figures, because an effort of “mauritanisation” of the expenditure at committed summer. The assumptions which were used to draw up these estimates will be revalued and refined.</p> <p>Several comments related to this essential aspect of the study:</p> <ul style="list-style-type: none"> • need for gathering more up to date data and for revaluing the scenario of the incomes returning to the government Mauritanian on the basis of very high price of oil current • concern concerning the bad example of Nigeria (old agricultural country which sank in poverty and does not have any more drinking water) become large oil exporter • need for being more precise and detailed in the analysis of the economic impact of the oil which must be central in the study.
Discontinuance of business	The end of the exploitation will mean job loss, reduction of certain activities, and fall of the public revenue. It is thus necessary to provide and that the government continues to invest in other sectors.
Prospect for the development of the hydrocarbon sector	Will a specific legislation be adopted concerning the oil and gas sector?

4.6 **CONSULTATION FOR STAGE 5: MITIGATION MEASURES**

4.6.1 **Objective**

Between 22 and 29 September 2005, a fifth in-country mission to Mauritania was conducted to consult with the Stakeholder Reference Group and Woodside in-country management, as well as some key stakeholders, on impact mitigation measures.

4.6.2 **Mission Activities**

In order to test the proposed mitigation measures, a third meeting was held with the SRG and a workshop with Woodside's senior management in Mauritania was conducted by ERM. Additional individual meetings were held with representatives of key stakeholders including the PANPA, the Ministry of Education and Ministry of Fisheries and Maritime Economy.

4.6.3 **Resources to Support Mitigation Measures Verification**

Materials prepared and used to assist in the consultation for mitigation measures verification included:

- Extracts from the Draft SIA report.
- PowerPoint presentations for stakeholder reference group meeting and the Woodside's top managers workshop.

4.6.4 **Consultation Outcomes**

Stakeholder Reference Group Comments

Discussion amongst the SRG members occurred following a presentation on the potential draft mitigation measures and management plan framework. Key focus areas were local employment and procurement.

Box 4.1 provides a summary of comments made at the SRG meetings.

The meeting minutes of the third SRG meeting was subsequently sent to members.

Box 4.1: SRG Meeting 3 Comments

The following points were discussed:

- **Oil spill modelling.** EIS outcomes were quickly re-explained including an explanation of the inclusion of Senegal, the fact that the modelling only includes the Chinguetti Project, and the scientific methods used to conduct the modelling.
- **Local employment,** including salaries, intermediaries/contractors and perceptions of inequalities.
- **Procurement** and diversification of operators and contractors. A suggestion was made that Woodside should reach out to the business community and inform them about needs (goods and services) and requirements (criteria, standards, certifications).
- **Training.** Vocational training is one of the ways Woodside can contribute and make a difference.
- How to manage **perceptions** of risks, for example from an oil spill, versus **real risks** which may not be as obvious to most people, for example the challenges of oil revenue management.
- **Communication.** More efforts to better communicate were requested on employment and procurement primarily, with a suggestion that Woodside target the business community and adapt communication modes.
- **Transparency** and EITI. This was welcomed and seen as a critical step towards good governance and stability. Brendan Augustin (Woodside) provided some additional information on the EITI.
- **Role and responsibilities of the civil society.** This includes the unions and the media, in mitigation measures and enhancement strategies.
- **Oil revenues management.** Participants expressed a preference for revenue figures to be expressed in dollars rather than as a percentage. Some expressed the hope the SIA would describe the impacts of different oil price scenarios.
- **Environmental or Emergency funds.** Members raised issues about efficiency, scope (only oil or natural disasters), usefulness if the 'pollueur-payer' principle is applied.
- **Other** comments. Some aspects need to be better taken into consideration in the SIA, for example tourism, other livelihoods besides fish, other projects and discoveries in the extractive industries and gender approach.

5.1 OVERVIEW OF DISCLOSURE AND CONSULTATION COMMITMENTS

The SIA process is described in detail in the *SIA Terms of Reference*. The disclosure and consultation commitment is summarised in *Table 5.1*.

Table 5.1 Key Milestones in Consultation and Disclosure

<i>SIA Process Milestone</i>	<i>Consultation and Disclosure Activities</i>
<i>Scoping Nov 04 – March 05</i>	November-December 2004 in-country mission in Senegal and Mauritania to explain SIA process to assess likely impacts, assess data availability, including village visits and meetings
	Stakeholder workshops in Nouadhibou and Dakar, 29 November and 5 December
<i>Draft Terms of Reference March 05</i>	Stakeholder workshops in Nouakchott, Nouadhibou and Dakar, 15-22 March
<i>Final Terms of Reference May 05</i>	TOR were available upon request Extracts from TOR Development Report were used in consultation activities.
<i>Baseline preparation May – July 05</i>	Extracts from TOR Development Report were used in consultation activities
	Consultation with selected Project Affected People and target Stakeholders
	Stakeholder Reference Group Meeting to confirm findings
<i>Impact assessment July 05</i>	Consultation with selected Project Affected People and target Stakeholders
	Stakeholder Reference Group Meeting to confirm findings
<i>Mitigation / sustainable development opportunities September 05</i>	Stakeholder Reference Group Meeting to confirm findings Woodside Senior Management's Workshop to discuss findings and mitigations measures
<i>Draft Social Impact Assessment December 05</i>	Release of Draft SIA for comments
	Consultation with selected Project Affected People and target Stakeholders on Draft SIA Report
	Stakeholder Reference Group Meeting to confirm findings
	Government considerations/referrals
<i>Preparation of Final SIA</i>	Disclosure of Final SIA
<i>Social and Environmental Management Plan February 05</i>	Workshops and interviews to provide advice on partnership opportunities and acceptability of detailed mitigation.
	Workshops to finalise management plans

5.2

KEY ACTIVITIES TO COMPLETION

Public Comment on Draft SIA Report: 1 December 2005 to 10 February 2006

Consultation on SIA findings will be conducted during the public comment period. Meetings with national stakeholders and international NGOs and workshops in Nouakchott, Dakar and Nouadhibou will aid this process.

The PCDP was first developed in January 2005 as a tool for reviewing the effectiveness of the SIA consultation strategy. Comments were invited in March 2005. This revision follows the baseline, impact assessment and mitigation measures development phases. The final update of the PCDP will be incorporated in the Final SIA.

5.3

GRIEVANCE MECHANISM

In addition to publishing a summary of stakeholder comments on the effectiveness of the consultation and disclosure program, Woodside has committed to a comment and complaints handling strategy based on Australian Standard AS4269-1995. This standard aims to provide a guide to best practice in complaints handling and will be used in conjunction with the Project stakeholder database. The procedure ensures issues/enquiries are addressed, measures are taken to address the issue where possible, and the communication loop is closed with the person lodging the comment. The procedure involves:

- inquiries and complaints are lodged with the Corporate Affairs Manager – Mauritania (Brendan Augustin) and are logged in the stakeholder database. This involves recording the source of the enquiry or complaint, name and contact details of person making the enquiry or complaint, date of enquiry or complaint, nature of enquiry or complaint, initial response to person making the enquiry or complaint, details of any meetings with the originator, and outcome of the enquiry or complaint and any follow-up actions;
- any issues or complaints requiring immediate action and beyond the authority of the Corporate Affairs Manager are directed to the Country General Manager;
- Woodside verbally responds to enquiries or complaints within 24 hours of the enquiry or the complaint being lodged. The response either addresses the issue raised or informs the person making the enquiry or complaint that follow-up contact will be made when the enquiry or complaint has been investigated. If follow-up on the enquiry or complaint is required, this is conducted within seven days;

- key stakeholders are made aware of the inquiry procedure and contact details are provided; and
- all enquiries and complaints entered into the database are internally audited for resolution annually.

Annex A

List of Stakeholders Involved in the SIA

Annex A Stakeholder Database

List of Organizations Involved in the SIA in Mauritania

Action Famine de l'UVEA	ASPPE
Action pour la Gestion Rationnelle de l'Environnement en Mauritanie	ASPPE Stop Pollution et Protection
ADIG	Ass. Dev. Environnemental et Communication
ADK	Ass. Dev. Durable /Lutte contre la Pauvreté
AFEC	Ass. Espoir pour le Bien-être de la mère et l'enfant
Agence Espagnole de Coopération Espagnole	Ass. pour le redressement de la famille
Agence Française de Développement (AFD)	Ass. pour l'insertion des enfants de la rue
Agence Mauritanienne d'Information	Ass. Protection Environnement maritime
Agir Contre la Pauvreté	Ass. Jbeilyatt pour l'Agriculture
Agir en Faveur de l'Environnement	Assaba Espoir
AHPM	Assemblée Nationale
Aide Son Enfance	Assemblée Nationale, Parti Républicain Démocratique et Social (PRDS)
AJALS	Assemblée Nationale, Rassemblement des Forces Démocratiques (RFD)
ALPD	Assistance femmes chef de ménage et aux filles
AM pour l'Ecologie	Association Action pour le Développement Social en Mauritanie
Ambassade de France	Association d'Aide à l'Insertion et au Développement
Ambassade de la République Fédérale d'Allemagne	Association d'Aide et de Soutien des Nécessiteux et Déshérités
Ambassade des Etats-Unis d'Amérique	Association de Bienfaisance pour les Déshérités du Sahel
Ambassade d'Espagne	Association de Développement Rural et de l'Environnement
Ambassade du Sénégal	Association des Alphabétiseurs
AMDPE (Association Mauritanienne pour la Protection de l'Environnement et le Développement)	Association des Amis de l'Environnement de l'Awkar
AMDS	Association des Amis du sport et de la Culture en Mauritanie
AME	Association des Femmes Africaines face au Sida
AMECEEP	Association des Femmes Chefs de Famille
AMESE	Association des Maires de Mauritanie
AMPFDE	Association des Scouts et Guides de Mauritanie
AMSOEREI	Association Enfant et Développement en Mauritanie
AMSPSSP	
AMV	
ANADELP	
APMM	
ARFPA	
Artère Mauritanie	
ASFED	
ASMEH	

Association Etoile pour le Développement et le Bien-être des Nécessiteux

Association Féminine de Bienveillance pour l'Enfance

Association Féminine de Lutte contre la Pauvreté

Association Féminine pour la Salubrité et l'Hygiène Publique

Association Française des Volontaires du Progrès

Association Internationale des Femmes Francophones

Association Jeunesse Action Développement

Association Mauritanienne de Lutte contre la Lèpre et la Tuberculose

Association Mauritanienne d'Enfance et de Lutte Contre la Pauvreté

Association Mauritanienne des Handicapés Moteurs

Association Mauritanienne pour la Promotion de la Famille

Association Mauritanienne pour la Promotion des Handicapés Mentaux

Association Mauritanienne pour la Protection de l'Enfant

Association Mauritanienne pour la Santé de la Mère et de l'Enfant

Association Mauritanienne pour la Santé et le Développement

Association Mauritanienne pour le Bien-être de la sœur, de l'enfant et de la mère

Association Mauritanienne pour le Développement et la Protection de l'Env.

Association Mauritanienne pour l'Environnement et la Santé de l'Enfant

Association Mauritanienne pour Sauver l'Enfant Handicapé

Association Mauritanienne Sous le Bien-être Enfant et Mère

Association Musicale

Association Nationale des Aveugles de Mauritanie

Association Nationale pour l'Appui à l'Initiative Féminine, la Protection Infantile et Environnementale

Association Nationale pour le Développement et le Secours

Association pour la défense des droits de la femme en Mauritanie

Association pour la Défense des Droits de la Femme et de l'Enfant

Association pour la Formation des Producteurs et le Développement

Association pour la Préservation de l'Environnement en Mauritanie

Association pour la Promotion de la Famille et Protection de l'Environnement

Association pour la Promotion et l'Aide des Enfants

Association pour la Protection de l'Environnement et Action Humanitaire

Association pour la Reconstitution de l'Environnement et du Développement Local

Association pour la Rénovation de el Khoumssan

Association pour la Santé des Femmes et Enfants et pour le Développement

Association pour la Sauvegarde du Patrimoine Historique

Association pour l'aide et soutien de la famille

Association pour le Développement Durable

Association pour le Développement et le Progrès

Association pour le Développement Intégré et Diversifié

Association pour les Femmes et Enfants Déshérités d'Iguidi

Association Santé et Développement des Femmes et Enfants Handicapés

Association Stop Pollution et Protection de l'Environnement

Association Visionnaire Contre l'Analphabétisme

Au Secours de l'Enfance

Au Secours Humanitaire et Environnement

AVA

Awjeft

Banque Mondiale (World Bank)

Bien-être des zones désertiques et arides

Bienfaisance Sans Frontières

Boulouare Avenir

Bureau Mauritanien d'Etudes en Santé Publique

Caisse d'Epargne de Crédit pour le Financement des Activités des Femmes

CARITAS Mauritanie

Campagne Anti-Pauvreté

CDB Habitat

CDHN
 Centre d'Accueil Européen Trust
 Centre de Formation et de Promotion Féminine
 Centre de Santé de Keur Macène
 Centre de Santé d'El Mina
 Centre Mauritanien d'Analyse Politique (CMAP)
 Centre National pour l'Enfance et le Développement
 CHRN
 Clean Beach
 Club des Amis de la Nature et de la Protection de l'Environnement
 Club UNESCO pour l'Environnement
 COMECA
 Comite National de et Lutte contre le SIDA
 Commissariat aux Droits de l'Homme à l'Insertion et à la Lutte Contre la Pauvreté
 Commissariat aux Droits de l'Homme à l'Insertion et à la Lutte Contre la Pauvreté
 Communauté Doulos
 Communauté Urbaine de Nouakchott (CUN)
 Commune de Sebkha
 Confédération Libre des Travailleurs de Mauritanie (CLTM)
 Confédération National du Patronat Mauritanien (CNPM)
 Confédération Générale des Travailleurs Mauritaniens (CGTM)
 Consulat de Belgique
 Coopération Jbeyliat
 Corps de la Paix
 Croissant Rouge Mauritanien
 Délégation Mauritanienne pour l'Environnement et la Lutte contre la Désertification
 Direction Générale de la Sûreté Nationale (Police)
 Eau, Défense de l'Environnement et de la Nature
 Eco-Développement
 Ecole Nationale des Elèves Marins Pêcheurs
 EGBELIATT
 El Hanane
 EL WAFA
 Emel
 ENNIDA
 Environnement et Bien-être
 Espoir
 Espoir
 Espoir 2000
 Espoir et Vie
 Etablissement Portuaire de la Baie du Repos
 Eveil Hebdo
 Faculté des Sciences et Techniques
 Fédération Luthérienne Mondiale (LWF)
 Fédération Mauritanienne des Associations Nationales des Personnes Handicapées Pont Focal/Handicapés
 Fédération Nationale de Pêche
 Femmes Divorcées
 Femmes et Développement
 Fondation Mauritanienne pour la Promotion, la Protection de l'Enfant et la Famille
 Fondation Noura
 Fondation Terre des Hommes
 Fonds des Nations Unies pour la Population / United Nations Population Fund (UNFPA)
 Fonds Monétaire /International Monetary Fund (FMI/IMF)
 Forum National pour la Promotion des Droits de la Femme
 Croix Rouge Française
 Front Populaire Mauritanien
 FSF
 Fundacio Mon-3
 Gendarmerie Nationale
 German Society for Technical Co-operation Mauritania
 Globe pour la protection de l'environnement en Mauritanie
 Groupe de Recherche et de Réalisation pour le Développement Rural dans le Tiers Monde
 Groupe de Recherche et d'Echanges Technologiques (GRET)
 Groupe Parlementaire Chargé de l'Environnement
 Groupement des Associations Agro-sylvo Pastorales (GNAP)
 GTZ- Coopération Allemande au développement
 Haut Commissariat des Nations Unies pour les Réfugiés
 Hôpital National de Nouakchott

IGHATHA
 Info du Nord
 Institut Marième Diallo
 Institut Mauritanien de Recherches
 Océanographiques et de Pêche (IMROP)
 Institut National de Promotion de la
 Formation Technique et Professionnelle
 (INAP)
 Institut National de Recherches en Santé
 Publique (INRSP)
 International Federation for Human Rights
 Journal "Le Patriote"
 Journaliste de la Presse Libre
 Journaliste Nouakchott Info (Directeur)
 Journaliste Presse
 La Tribune
 L'APRESSE
 L'Authentique
 Mairie de Boulanoir
 Mairie de Keur Macène
 Mairie de Mamghar
 Mairie de N'Diago
 Mairie de Nouadhibou
 Mairie de Tiguent
 Mairie de M'Balal
 Marine National
 Mashref SA
 MATEMA
 MATEMAI SA
 Mauritanie 2000
 Médicos del Mundo
 Mer Bleue
 Mer Propre
 Ministère des Affaires Economiques et du
 Développement (MAED)
 Ministère de la Culture, de la Jeunesse et des
 Sports
 Ministère de la Fonction Publique et du
 Travail
 Ministère de la Santé et des Affaires Sociales
 (MSAS)
 Ministère de la Santé et des Affaires Sociales,
 Directions régionales de la protection sanitaire
 Ministère de l'Education Nationale (MEN)
 Ministère de l'Equipement et des Transports
 Ministère de l'Intérieur des Postes et
 Télécommunications (MIPT)

Ministère des Finances
 Ministère des Mines et de l'Industrie (MMI)
 Ministère des Pêches et de l'Economie
 Maritime (MPEM)
 Ministère des Pêches et de l'Economie
 Maritime, Délégation à la Surveillance de la
 Pêche et au Contrôle en Mer (DSPCM)
 Ministère du Développement Rural, de
 l'Hydraulique et de l'Environnement
 (MDRHE)
 Ministère du Développement Rural, de
 l'Hydraulique et de l'Environnement,
 Délégation Régionale de Keur Macene
 Ministère du Pétrole et de l'Energie (MPE)
 Ministère du Pétrole et de l'Energie, Groupe
 Projet Chinguetti (GPC)
 Monde sans Sida
 Moughataa de Keur Macen, Hakem
 Moughataa de Keur Macen, Sous préfecture de
 N'Diago
 Moughataa de Nouadhibou, Hakem
 Moughataa de Nouadhibou, Sous préfecture
 de Mamghar,
 Moujtamaa
 NBEÏKA
 New Vision
 Nida Lutte contre la Pauvreté
 NIDAA
 Nouakchott Info
 NTIC et Citoyenneté
 OASIS Assaba
 Office Mauritanien des Recherches
 Géologiques
 Office National de la Statistique (ONS)
 ONG Nous les Enfants
 ONG Sauvegarde de l'Environnement
 Organisation des Nations Unies pour
 l'Alimentation et l'Agriculture / Food and
 Agriculture Organization (FAO)
 Organisation des Nations Unies pour
 l'Education, la Science et la Culture / United
 Nations Educational Scientific and Cultural
 organisation (UNESCO)
 Organisation Mauritanienne de défense et de
 réhabilitation des filles de la rue
 Organisation Mauritanienne pour
 l'Encadrement et le Développement
 Organisation Mondiale de la Santé /World
 Health Organisation (OMS/WHO)

Organisation National pour la lutte contre la
 Pollution et l'environnement
 Oxfam
 Parc National du Banc d'Arguin (PNBA)
 Parc National du Banc d'Arguin,
 Marine Protected Areas Programme in West
 Africa (FIBA, IUCN, WWF)
 Parc National du Diawling
 Parti pour la Liberté, l'Egalité et la Justice
 Parti Républicain Démocratique et Social
 Patriote
 Peace Corps
 PEECO
 Points Chauds
 Populations et Développement
 Port Autonome de Nouadhibou
 Port Autonome de Nouakchott
 Poste de Santé de N'Diogo
 PRAD
 Programme Alimentaire Mondial / World
 Food Programme (PAM / WFP)
 Programme Commun des Nations Unies sur le
 VIH/SIDA / Joint United Nations Programme
 on HIV/AIDS (ONUSIDA/UNAIDS)
 Programme d'Action Nationale pour
 l'Environnement et le Développement Durable
 (PANE)
 Programme des Nations Unies pour le
 Développement / United Nations
 Development Programme (PNUD/UNDP)
 Protection de l'Environnement et de
 l'Ecosystème
 Radio FM Nouadhibou
 Réseau de l'Environnement
 Réseau des Droits de la Femme et de l'Enfance
 et la Protection de l'Environnement
 Réseau des Journalistes de l'Environnement en
 Mauritanie
 Réseau des ONG de l'Environnement et de la
 Lutte contre la Pauvreté
 Réseau des ONG du Développement Durable
 Rio+10
 Réseau Journaliste pour la Culture
 Réseau journalistes des objectifs 2000
 Réseau Mauritanien pour la Promotion des
 Droits de la Femme
 Réseau ONG NDB
 Réseau UN-NGO-IREN
 Rivo
 SAADA
 Sahel
 Santé Sans Frontières
 Sauvegarde de l'Environnement
 Schenker
 Secours Environnement
 Secrétariat d'Etat Auprès du Premier Ministre
 Chargé des Nouvelles Technologies
 Sénat
 Société Mauritanienne pour la
 Commercialisation du Poisson
 Société Nationale Industrielle et Minière
 (SNIM)
 SOGECO
 Somagaz
 SOS ABER
 SOS Pair Education
 SOS Pairs Educateurs
 SOS Villes Anciennes
 Stop Sida
 Stop-Désert
 Système National d'Information Sanitaire
 (SNIS)
 Tamriguitt
 Teissir
 Tenmiya
 Terre d'Echange
 Terre Verte
 Terre Vivante
 TEYDOUMA (sur l'environnement)
 Tiviski
 Haut Commissariat des Nations Unis pour les
 Réfugiés / The United Nations Agency for
 Refugee (HCR / UNHCR)
 Fonds des Nations Unies pour l'Enfant /
 United Nations Children's Funds (UNICEF)
 Union des femmes entrepreneurs de
 Mauritanie
 Union Européenne / European Union
 Union Mondiale pour la Nature (IUCN)
 Union Mondiale pour la Nature, Programme
 Régionale de Conservation Marine (PRCM)
 Union Régionale des Handicapés Physiques et
 Mentaux
 Université de Nouakchott
 US TV

Wadelbarka Joram et CECFAF
Wali de Dakhlet Nouadhibou
Wali de Nouakchott
Wiam (Association Femmes Développement)
World Vision International
Zakiya

List of Organizations Involved in the SIA in Senegal

Abidjan Convention-Focal Point/Ministère de l'Environnement et du cadre de Vie, Côte d'Ivoire	Groupe des Armateurs et Industriels de la Pêche (GAIPES)
Agence de Presse sénégalaise (APS)	Institut de Recherche pour le Développement (IRD)
Agence Française de Développement (AFD)	Institut de Technologie Alimentaire
Agence Régionale de Développement de Saint-Louis	Institut Sénégalais de Recherches Agricoles (ISRA)
Ambassade de Mauritanie	Journal Le Populaire
Banque Mondiale (World Bank)	Journal Le Quotidien
Centre de Recherches Océanographiques de Dakar-Thiaroye /Centre for Oceanographic Research (CRODT)	Journal Le Soleil
Centre de Suivi Ecologique (CSE)	Journal Sud Quotidien
Chef de Poste de Contrôle des Pêches et de la Surveillance	Journal Walf
Collectif National des pêcheurs artisans (CNPS)	Les Amis de la Nature - Sénégal
Commission Sous Régional de Pêche (CSRP)	Mairie de Kayar
Communauté Rurale de Darou Khoudoss	Mairie de Saint-Louis
Communauté Rurale de Léona	Ministère de l'Economie Maritime
Communauté Rurale de Noto Gouye	Ministère de l'Economie Maritime, Ecole Nationale de Formation Marine
Conseil des ONG d'Appui au Développement (CONGAD)	Ministère de la Jeunesse
Conseil National de Concertation des Ruraux (CNCR)	Ministère de la Justice
Conseil Interprofessionnel de la pêche artisanale au Sénégal (CONIPAS)	Ministère de la Santé Publique/Service National de l'Hygiène
Coopération française	Ministère de l'Agriculture-Direction de l'Agriculture
District sanitaire de Tivouane	Ministère de l'Agriculture- Société d'Aménagement des Eaux du Delta (SAED)
Eaux et forêt de MBoro	Ministère de l'Assainissement-
Ecole Nationale d'Economie Appliquée (ENEA)	Ministère de l'Energie et des Mines-Direction de l'Energie
ENDA - Tiers Monde	Ministère de l'Energie et des Mines-Direction des Mines et de la Géologie (DMG)
Fédération des Groupements d'Intérêt Economique (GIE) des Mareyeurs	Ministère de l'Environnement et de la Protection de la Nature, Direction de l'Environnement et des Etablissements Classés
Fédération des ONG Sénégalaises (FONGS)	Ministère de l'Environnement et de la Protection de la Nature, Direction des Parcs Nationaux
Fédération nationale des femmes transformatrices et des mareyeuses	Ministère de l'Equipeement et des Transports Terrestres-Direction des Transports Publics
Fédération Nationale des Groupements d'Intérêt Economique (GIE) de Pêche (FENAGIE)	Ministère de l'Industrie et de l'Artisanat - Direction de l'Industrie
GIE Transformatrices	Ministère de l'Industrie et de l'Artisanat - Industrie Chimique du Sénégal (ICS)
Gouverneur de Saint-Louis	Ministère de l'Intérieur -Groupeement National des Sapeurs Pompiers
Groupe de Recherche et d'Echanges Technologiques (GRET)	Ministère de l'Intérieur, Défense Civile

Ministère de l'Urbanisme et de
l'Aménagement du Territoire-Direction de
l'Aménagement du Territoire
Ministère du Tourisme et des Transports
Aériens-Direction de la Météorologie Nationale
OCEANIUM
Office National de l'Assainissement (ONAS)
Organisation de la Mise en Valeur du Fleuve
Sénégal (OMVS)
Organisation des Nations Unies pour
l'Education, la Science et la Culture / United
Nations Educational Scientific and Cultural
organisation (UNESCO)
Organisation maritime internationale (OMI) /
International Maritime Organisation (IMO)
OXFAM
Parc National Langue de Barbarie
Parc National des îles de la Madeleine
Port Autonome de Dakar (PAD)
Poste de santé de Kayar
Programme de Gestion Intégrée des
Ecosystèmes Sénégalais (PGIES)
Programme des Nations Unies pour le
Développement (PNUD) / United Nations
Development Programme (UNDP)
Région médicale de Saint-Louis
Région médicale de Thiès
Service départemental des pêches de Kayar
Service départemental des pêches de Saint-
Louis
Service des pêches de MBoro
Service régional de l'environnement de Saint-
Louis
Service régional des pêches de Louga
Service régional des pêches de Saint-Louis
Service régional des pêches de Thiès
Service Régional des Statistiques de Saint-
Louis
Service régional tourisme de Saint-Louis
Service surveillance côtière de Fass Boye
Union Mondiale pour la Nature (IUCN)
Union Nationale des GIE de Mareyeurs du
Sénégal (UNAGIEMS)
Union patronale des mareyeurs et
exportateurs du Sénégal (UPAMES)
Université Cheikh Anta Diop de Dakar,
Laboratoire de Télédétection Appliquée (LTA)
Université Cheikh Anta Diop de Dakar-
Département de Biologie Marine IFAN

Wetlands International, Regional Office
WWF West Africa

Annex B

List of SRG Members and Attendance List

Annex B Stakeholder Reference Group members, organisation, name, position and meeting attendance

#	Organisation	Name, Function	Presence 1st meeting	Presence 2nd meeting	Presence 3rd meeting
1	International Association of the French-speaking Women	Assaita Kane, President	Yes	Apologies	Yes
2	Urban Community of Nouakchott	Sidi Ould Mohammed Ahmed, Secretary-general	Yes	Yes	Apologies
3	Free Confederation of the Workers Mauritians	Eide Ould Atih Allah, Associated Secretary-general	Yes	Yes	Yes
4	Federation of Industries and Mines (FIM)	Mohammed Lafdal Ould Bettah, President	Yes	Yes	Yes
5	National Federation of Fishing	Hamada Ould Ely (repr. Mr. Sadegh)	Yes	Yes	Yes
6	Group Project of Chinguetti	Oumar Ould Bellal, HSE (Health Safety & Environment)	Yes	Yes	Yes
7	Group Project of Chinguetti	Mohammed Yeslem Ahmed, HSE	Yes	Yes	Yes
8	Direction of the Programming and the Studies, Ministry for the Economic affairs and the Development	Abba Ould Ahmed Tolba, Director of the Management of Programming and the Studies	Apologies	Apologies	Apologies
9	National Park of Diawling	Bah O/Moctar Sidi, Director	Yes (partly)	Yes	Yes
10	SNIM (Industrial and Mining National company)	Amar Ould Mohammed Fall, Financial Director,	Apologies	Apologies	Apologies
11	Tiviski, Member the Chamber of Commerce	Nancy Abeiderrehmane	Apologies	Apologies	Yes
12	Woodside	Brendan Augustin	Yes	Yes	Yes
13	International consultant Professor of sociology	Teacher Sheik Saad Bouh Kamara	Apologies	Apologies	Yes
14	National Institute of Research in Public health (INRSP)	Teacher Lo Baidy Boubou, Director of the Public Health	No	Yes	No

Annex C

Workshop Participants

Participants: Workshops on TOR: 16 ,17 & 21 March 2005 - Nouackhott

UPDATED: 21 march 2005

1. Government & Official Bodies					
No.	Acronym / Sigle	Organisation	Contact Person (position)	Invited	Present
1	AN	Assemblée Nationale	Limam Ould Téguidi (Secrétaire Général.)	y	
2	AMM	Association des Maires de Mauritanie	Sow Deina president , Maaloum ould Baha SG	y	y
3	AFDP	Association pour la Formation des Producteurs et le Développement	Mohamed Amou Sidi Aly (Président)	y	y
4	CFPF	Centre de Formation et de Promotion Féminine	M'Barka Fallm/Med (Dir)	y	y
5	CDHLCPI	Commissariat aux Droits de l'Homme à l'Insertion et à la Lutte Contre la Pauvreté	Commissaire aux droits de l'Homme Hamadi ould Meimou	y	y
6	CUN	Commune Urbaine de Nouakchott	Didi Ould Bounaama (Président) Sidi o/ Mohamed Ahmed (SG)	y	y
7	CNPM	Confédération Nationale du Patronat de Mauritanie	Mohamed Ould Bouamatou (Pr) , Seyid ould Abdellahi SG, Alioune Diallo	y	y
8	CGTM /UTM	Confédération Générale des Travailleurs Mauritaniens	Abderrehmane o/Boubou (President) Hadrami ould Boidya (SG)	y	y
9	CRM	Croissant Rouge Mauritanien	Col Ahmed ould Aida	y	
10	MPEM / MM	Directeur de la Marine Marchande	M. Cheikh O. Khaled Dir, Mohamed Lemine ould Ahmed Cherif	y	y
11	MPEM	Direction de la Pêche Artisanale et Cotière DPAC	Dr. Ba Abou Sidi (Directeur) Elemine o/Sid'Mohd	y	y
12	MPEM	Direction de la Pêche Industrielle		y	
13	DT	Direction du Travail	Khaled ould Boubacar	y	y
14	DDS	Director du Developpement social	Moctar o/ Mohamed Yahya	y	y
15	Université Nouakchott	Dr. M.Y. Lafdal (Prof. Assistant de Microbiologie Env. expert/PANE)		y	y
16	Université Nouakchott	Dr. Mohamed Ould Sidiya Ould Khabaz		y	
17	MPEM	DSPCM NDB- Délégation à la Surveillance de la Pêche et au Contrôle en Mer-	Capitaine de Frégate Mohamed Ould Cheikhna Ould Taleb Moctar	y	y
18	MPEM	DSPCM NKC- Délégation à la Surveillance de la Pêche et au Contrôle en Mer-	Ahmed Ould Moulaye	y	
19	MPEM	Elemine ould Sid Ahmed	Directeur Peche Artisanale	y	y
20		expert Maritime	Mohamed o/ Bechir		y
21	FNP (NDB)	Fédération Nationale de Pêche	Mohamed Mahmoud Ould Sadegh (Secrétaire Général)	y	y
22	FNP NDB (Section Artis.)	Fédération Nationale de Pêche (Section Artisanale)	Sid'Ahmed Ould Aboud (Pdt)	y	
23	GPCE	Groupe Parlementaire Chargé de l'Environnement	Cheikh Sidiya Ould Moussa	y	
24	IMROP	Institut Mauritanien de Recherches Océanographiques et des Pêches	Sidi Mohamed Ould Sidina (Directeur IMROP Ndb)	y	
25	INAP-FTP	Institut National de Promotion de la Formation Technique et Professionnelle	Mohamed Melamine Ould Eyih, Sidi Ahmed, Deputy Dir	y	y
26	Maire Mamghar	Maire de Mamghar/ sc PNBA	Ahmed Mereihbe Ould el Kory	y	y
27	Maire N'Diago	Maire de N'Diago	Oumar N'Dieye	y	y
28	Maire Kermacene	Maire Kermacene/Mblal	Ichoudou o/Mohd El Mokhtar	y	y

29	Maire Mblal	Maire M'blal	Ahmed Salem o/Haiba	y	y
30	MaireBoulanoir	MaireBoulanoir	Mohamed ould Dekhane	y	y
31	MCJS	Ministère de la Culture de la Jeunesse et des Sports	Mahfoudh Ould Agatt SG Sidi baba ould Oumar Inspecteur G	y	y
32	MSAS	Ministère de la Santé et des Affaires Sociales	Dir des affaires sociales Dr Abderrehmane o/Jiddou M.Dia conseiller	y	y
33	MSAS	Ministère de la Santé et des Affaires Sociales	M.Idoumou ould Mohamed Vall Dir de la Sante Publique/Protection Sanitaire	y	y
34	MEN	Ministère de l'Education Nationale	(Secrétaire Général)	y	
35	MEN	Ministère de l'Education Nationale	Aly Fall Conseiller du Ministre Ba Samba Hamady Inspecteur de l'Enseignement	y	y
36	MET	Ministère de l'Equipement et des Transports	Mr Hadrami ould Ahmed SG , Ould Haiba Mohamed Hafed	y	y
37	MHE	Ministère de l'Hydraulique et de l'Energie	Yahya o/ Mohamed Waghf (Secrétaire Général)	y	
38	MIPT	Ministère de l'Intérieur des Postes et Télécommunications	Directeur Amenagement Territoire, El Hacem ould Brahim	y	y
39	MAED	Ministère des Affaires Economiques et du Développement	Mochtar ould Mohamed Yahya DDS	y	y
40	MF	Ministère des Finances	Mohamed Cherif (SG)	y	
41	MF	Ministère des Finances	Thiam Diombar, DGA	y	y
42	MMI	Ministère des Mines et de l'Industrie	SG Jimme Diagana	y	y
43	MMI	Ministère des Mines et de l'Industrie	Mohamed Lemine Cherif Dir Hydrocarbons	y	y
44	MMI	Ministère des Mines et de l'Industrie	Mohamed o/ AWA Dir Projet Chinguetti	y	y
45	MMI	Ministère des Mines et de l'Industrie	Mohd Salem ould Mamoune Dir l'Industrie	y	y
46	MMI	Ministère des Mines et de l'Industrie	Wane Abdellahi	y	y
47	MMI	Ministère des Mines et de l'Industrie	Mohamed Yeslem ould Ahmed Projet Chinguetti HSE	y	y
48	MMI	Ministère des Mines et de l'Industrie	El Hadrami Projet Chinguetti HSE		y
49	MMI	Ministère des Mines et de l'Industrie	Oumar ould Bilal Projet Chinguetti HSE		y
50	MMI	Ministère des Mines et de l'Industrie	Dia Ismaela Direction Industry		y
51	MMI	Ministère des Mines et de l'Industrie	Dia Sileye Aly Conseiller		y
52	MMI	Ministère des Mines et de l'Industrie	Sidi mohamed Ould Moustapha Chef Div Technology		y
53	MMI	Ministère des Mines et de l'Industrie	Abdellah ould Sidi Consultant SIGE		y
54	MMI	Ministère des Mines et de l'Industrie	Khadijatou m/Ahmed/o/Doua Consultant SIGE		y
55	MMI	Ministère des Mines et de l'Industrie	Mohamed Lemine ould Moustapha Consultant SIGE		y
56	MMI	Ministère des Mines et de l'Industrie	Ahmed ould Bilal Consultant SIGE		y
57	MMI	Ministère des Mines et de l'Industrie	Mohamed ould Aly Engineer Hydrocarbures		y
58	MMI	Ministère des Mines et de l'Industrie	Abdellahi o/Gague Direction Hydrocarbures		y
59	MMI	Ministère des Mines et de l'Industrie	Khattar ould Tabakh Chef s Env		y
60	MMI	Ministère des Mines et de l'Industrie	El Housseyne ould Ahmed El Hady Expert Eau & Environnement		y
61	MMI	Ministère des Mines et de l'Industrie	Sidi Mohamed El moustepha Direction Technologie		y

62	MDRE	Ministère du Développement Rural et de l'Environnement	Hadrami o/ Bahnein Dir de L'environnement	y	
63	MDRE	Ministère du Développement Rural et de l'Environnement	Limam ould Ahmed(SG) Frederic Marret Technical Adviser	y	
64	MDRE	Ministère du Développement Rural et de l'Environnement	Dir lutte Anti acridienne	y	
65	Université Nouakchott	Mohamed Ould Jiddou (Secrétaire Général) Faculté des Sciences et Techniques	5251168 5297449	y	y
66	ONS	Office National de Statistiques	Mohamed Laghdaf	y	y
67	ONLIPE	Organisation National pour la lutte contre la Pollution et l'environnement	Ahmed Alem ould Amou		y
68	PNBA	Parc National du Banc d'Arguin	Abderrahmane Ould Moine (Directeur)	y	
69	PNBA	Parc National du Banc d'Arguin	Mena o/Mohamed Salem		y
70	PRCM	Parc National du Banc d'Arguin	Ahmed ould Senhoury		y
71	PND	Parc National du Diawling	Bah Ould Moctar Sidi (Directeur) , Amadou Diam Ba Tech Adv	y	y
72	PND	Parc National du Diawling	Abdellahi Magrega	y	y
73	SECF	Secrétariat d'Etat à la Condition Féminine		y	
74	SEPMCNT	Secrétariat d'Etat Auprès du Premier Ministre Chargé des Nouvelles Technologies		y	
75	Sénat	Sénat	Mohamed Ali Ould Dedew (Secrétaire Général)	y	
76	SMCP	Société Mauritanienne pour la Commercialisation du Poisson		y	
77	RIVO		Ad Corten	y	
78	SOMAGAZ		Mohamed Ould Bouceif (Directeur Général)	y	

2. NGOs & IGOs

No.	Acronym / Sigle	Organisation	Contact Person (position)	Invited	Present
79	AFD	Agence Française de Développement	Stephanie Picard	y	y
80	AFVP	Association Française des Volontaires du Progrès	Moussa Bah (Délégué National)	y	
81	AIFF	Association Internationale des Femmes Francophones	Aissata Kane (Présidente)	y	y
82	AMLLT	Association Mauritanienne de Lutte contre la Lèpre et la Tuberculose		y	y
83	BM	Banque Mondiale	François Ranterua (Représentant Résident) Développement Social, Mme Salamata Bal	y	y
84	CARITAS	CARITAS Mauritanie	Jean Meunier (Directeur)	y	
85	Consultant	Consultant Juridique	Herve Gogo	y	
86	Corps de la Paix	Corps de la Paix	Obie Chaw (Directeur)	y	
87	EC	Délégation Commission Européenne	Mr Eric Paquet	y	
88	EC	Délégation Commission Européenne	M. Bruno Gatta, M. Sébastien Copin	y	y
89	EC	Mario Carvajal	Attaché peches	y	y
90	Doulos	Communauté Doulos	Karen Boyle	y	y
91	FAO	Organisation des Nations Unies pour l'Alimentation et l'Agriculture	Sory Ouane (Représentant FAO)	y	
92	FIBA	Parc National du Banc d'Arguin	Mathieu Ducroq (Coordinateur de Projets)	y	
93	FLM	Fédération Luthérienne Mondiale	Mohamed Ould Abby Ould Boulebatt (Coordinateur Programmes)	y	
94	FM-3	Fundacio Mon-3	Ester Vil	y	y
95	FMI	Fonds Monétaire International	Philppe Callier (Représentant Résident)	y	
96	FMI	Fonds Monétaire International	Maaloum Sarra Economiste FMI	y	y
97	FNUAP	Fonds des Nations Unies pour la Population	Mohamed Barakat	y	
98	GRET	Groupe de Recherche et d'Echanges Technologiques	Christophe Hennart (Représentant)	y	
99	GTZ	Agence de Coopération (Allemande)	Ingolf Vereno (Directeur)	y	
100	ECO-PNBA		Kirsten Hegener 'Kellner Emma Theresia GTZ MR'; 'GTZ-Mauretaniens Geppert Rainer'	y	y
101	IFHR	International Federation for Human Rights	Cheikh Saad Bouh Kamara	y	y
102	HCR	Haut Commissariat des Nations Unies pour les Réfugiés	Didier Laye (Chef Mission HCR)	y	
103	MdM	Médicos del Mundo		y	y
104	Noura	Fondation Noura	Chris Leggett Alfred Mbemba	y	y
105	OMS	Organisation Mondiale de la Santé	Mamadou Pathé Diallo (Représentant OMS)	y	
106	OMS	Organisation Mondiale de la Santé	Lemlihould Baba Chief P Health & Env, Dr Kharchi	y	y
107	ONU		Sory Ouane (Directeur)	y	
108	OXFAM	OXFAM		y	

109	PAM	Programme Alimentaire Mondial	Sory Ouane (Représentant)	y	
110	PNUD	Programme des Nations Unies pour le Développement	Cécile Molinier (Représentante Résidente)	y	y
111	PNUD	Programme des Nations Unies pour le Développement	Mouloud N'diaye Thematic leader	y	y
112	PNUD	Programme des Nations Unies pour le Développement	Mohamed Ali Lemrabott, Stratetegic Adv	y	
113	PRCM	Fonds International du Banc d'Arguin/PRCM	Pierre Campredon (Directeur de Programmes)	y	y
114	SNIM	Société Nationale Industrielle et Minière		y	
115	Terre des Hommes	Fondation Terre des Hommes	Elisabeth Penco (Représentante)	y	y
116	Terre Vivante	Terre Vivante	Moulaye Ahmed o/ Abdel Jelil	y	y
117	UICN	Union Mondiale pour la Nature	Charlotte Gobbin	y	y
118	UICN	Union Mondiale pour la Nature	Mohamed Lemine Ould Baba (Coordinateur de Programmes)	y	
119	UICN	Union Mondiale pour la Nature	Abdelatif Cherif	y	y
120	UICN	Union Mondiale pour la Nature	Mathieu Bernardon	y	
121	UNICEF	Fonds des Nations Unies pour l'Enfant	Dr. Souleymane Diallo (Représentant de l'UNICEF)	y	
122	WV	World Vision International	Jean Meunier (Directeur)	y	

3. Local NGOs

No.	Acronym / Sigle	Organisation	Contact Person (position)	Invited	Present
123	AA	Association des Alphabétiseurs	Limam Maleck Ould Mahmoud	y	y
124	AAEA	Association des Amis de l'Environnement de l'Awkar		y	
125	AAID	Association d'Aide à l'Insertion et au Développement	Mamadou Moctar Sarr	y	y
126	AASND	Association d'Aide et de Soutien des Nécessiteux et Déshérités	Zahra Mint Ahmed	y	y
127	ABDS	Association de Bienfaisance pour les desherites du Sahel	Mohamed ould Kerkoub	y	y
128	ACP	Agir Contre la Pauvreté	Mehla Mint Ahmed	y	y
129	ADD	Association pour le Développement Durable	Mohamed Abdellahi Ould Tolba	y	
130	ADDFE	Association pour la Défense des Droits de la Femme et de l'Enfant	Mali Mint Sidi	y	y
131	ADDFM	Association pour la défense des droits de la femme en Mauritanie	Oum el Khairy Kane	y	
132	ADDLCP	Ass Dev Durable /Lutte contre la Pauvrete	Md o/ Hassene		y
133	ADID	Association pour le Développement Intégré et Diversifié	Aichatou Traore President	y	
134	ADK				y
135	ADIG	ADIG	Mohamed Ould B'Neijara	y	
136	ADP	Association pour le Développement et le Progrès	Nagia Mint Ahmed	y	y
137	ADRE	Association de Développement Rural et de l'Environnement	Dah Ould Sidatty	y	
138	ADSM	Association Action pour le Développement Social en Mauritanie	Tambo Camara	y	y
139	AEDBEN	Association Etoile pour le Développement et le Bien-Etre des Necessiteux		y	
140	AEDM	Association Enfants et Développement en Mauritanie	Alioune Ould Issa	y	y
141	AFBE	Association Féminine de Bienveillance pour l'Enfance	Zeinabou Abdoul		y
142	AFCF	Association des Femmes Chefs de Famille	Aminetou m/ el Moctar (Présidente)	y	y
143	AFD/wiam		Dilit Mint Zein	y	y
144	AFE	Agir en Faveur de l'Environnement	Ahmed Vall Ould Boumouzouna (Président)	y	y
145	AFEDI	Association pour les Femmes et Enfants Déshérités d'Iguidi	Fatma Mint Khoubbah Mariam m/Koubah	y	y
146	AFLUPA	Association Féminine de Lutte contre la Pauvreté	Mounina Mint Ammar	y	y
147	AFPD	Association pour la Formation des Producteurs et le Développement	Ahmed Amou Sidi Aly (Pdt)	y	y
148	AIFF	Association Int des Femmes Franco phones	Aissata Kane	y	y
149	AFSHP	Association Féminine pour la Salubrité et l'Hygiène Publique	Vatimetou Mint Sid'Ahmed Abdel Moumine (Cord nat)	y	y
150	AGREEM	Action pour la Gestion Rationnelle de l'Environnement en Mauritanie	Bané mou Twayer (Président)	y	y
151	AHPM		Ousmane Dialate KabaAlioune Sonogho		y
152	AJAD	Association Jeunesse Action Développement	Mohameden Horma Ould Babana	y	y

153	AJALS		Hacen ould Amar Belloul		y
154	AJLA	Ass. Jbeilyatt pour l'Agriculture	Lekweyri Mahmoud		y
155	ALPD		Mohamed Vall o/Issa		y
156	AM	Artère Mauritanie	Housseine Zeine Dr. Oumar Ould Abdellahi	y	y
157	AMBSEM	Association Mauritanienne pour le Bien-être de la soeur, de l'enfant et de la mère	Fatimetou Mint Cheikh	y	y
158	AMDPE	Association Mauritanienne pour le Développement et la Protection de l'Env.	Mohamdi Ould El Hadj Brahim Pr, M.Choudi Lehbib SG	y	y
159	AMDS	AMDS	Ahmed Mahmoud Ould Ahmed (Président)	y	
160	AMELCP	Association Mauritanienne d'Enfance et de Lutte Contre la Pauvreté	Lehoire Ould Khaddaj (Pr) Mohd Mousteva o/ Med Lemine	y	y
161	AMESE	Association Mauritanienne pour l'Environnement et la Santé de l'Enfant	Salem Ould Abdel Mola (Président)	y	
162	AMHM	Association Mauritanienne des Handicapés Moteurs	Lehbouss Ould el Ide	y	y
163	AMPF	Association Mauritanienne pour la Promotion de la Famille	Marième Mint Ahmed Aicha (Pdte)	y	y
164	AMPHM	Association Mauritanienne pour la Promotion des Handicapés Mentaux	Banemmou Ould Lemrabott	y	y
165	AMSD	Association Mauritanienne pour la Santé et le Développement	Aziza Mint Ismail	y	y
166	AMSDFEH	Association Santé et Développement des Femmes et Enfants Handicapés	Aziza m/Meslem	y	y
167	AMSEH	Association Mauritanienne pour Sauver l'Enfant Handicapé	Idrissa Abou Ba (Président)	y	
168	AMSFED	Association pour la Santé des Femmes et Enfants et pour le Développement	Abdel Kader Ould Ahmed (S.G.)	y	y
169	AMSME	Association Mauritanienne pour la Santé de la Mère et de l'Enfant	Zeinabou Mint Taleb Moussa N'Deye Fall	y	y
170	AMSOEREI		Khattar ould Sid Ahmed		y
171	AMSPSSP	AMSPSSP	Deija Haidara	y	y
172	AMV	AMV	Jamal Ould Abad		y
173	ANAIF-PIE	Association Nationale pour l'Appui à l'Initiative Féminine, la Protection Infantile et	Maye Haydy	y	y
174	ANAM	Association Nationale des Aveugles de Mauritanie	Mohamed Salem Ould Bouh	y	y
175	ANADEL		Sid Ahmed o/Bezeid		y
176	ANDS	Association Nationale pour le Développement et le Secours	md Yeslem o/ Choumad		y
177	APEAH	Association pour la Protection de l'Environnement et l'Action Humanitaire	Ahmed Ould Kleib	y	y
178	APEM	Association pour la Préservation de l'Environnement en Mauritanie	Cheikhna Haidara	y	y
179	APFEM	Ass pour le redressement de la famille	Nacerhalla Boukhary		y
180	ARDE	Association pour la Réconstitution de l'Environnement et du Développement Local	Moussa Ould Samba N'diaye	y	
181	ARK	Association pour la Rénovation de el Khoumssan	Ahmed Mohamed Sow	y	
182	ASGM	Association des Scouts et Guides de Mauritanie		y	
183	ASHE	Au Secours Humanitaire et Environnement	Mme Mogueya Ezza Mint Abderrahmane	y	y
184	ASMEH				y
185	ASPOM	Association des Amis du sport et de la Culture en Mauritanie		y	

186	ASPPE	ASPPE Stop Pollution et Protection	Moustapha Ould Lehcen (Président)	y	
187	Assaba	Assaba Espoir	Ahmedou Ould Hammakhattar	y	y
188	BA	Boulenouare Avenir	Asmaa m/M'Bareck		y
189	BIO - RIM	Consultant Environnement	Mohamed Ahmed O. Baba Ahmed		y
190	BSF	Bienfaisance Sans Frontières	Béchir Ould Seyid El Khadi o/ lajor	y	y
191	CANPE	Club des Amis de la Nature et de la Protection de l'Environnement	Mohamed Ould Abderrahmane (Président) Jemila m/ Taya	y	y
192	CB	Clean Beach	Mohamed Mahmoud Ould Dahi (Pdt)	y	y
193	CECFAF	Caisse d'Épargne de Crédit pour le Financement des Activités des Femmes	Mehla Bint El Hadrami El Alaoui (Présidente)	y	
194	Club UNESCO	Club UNESCO pour l'Environnement	Mohammedou El Hadj Ghorbi	y	
195	CJB	Cooperation Jbeyliat	Kory Mahmoud		y
196	CNEDS	Centre National pour l'Enfance et le Développement	Mohamed el Moctar Ould Sidina	y	
197	DM/PELD	Délégation Mauritanienne pour l'Environnement et la Lutte contre la Désertification	Sidi Yaraf Ould Sidi	y	
198	EBE	Environnement et Bien-Etre	Ahmed Salem Ould Vallakhair (SG)	y	y
199	ECO-DEV	Eco-Développement	Sidi Ould Mohamed Lemine (Pdt)	y	
200	EDEN	Eau, Défense de l'Environnement et de la Nature	Jemila Mint Welid (Pdte)	y	
201	El Wafa	EL WAFA	Boudah Ould Bounenna		y
202	NLE	ONG NOUS LES ENFANTS PO BOX: 5786 NKTT-Mauritanie	elhady o ahmed	y	
203	EBE	Environnement et le Bien-etre			y
204	Espoir	Espoir	Fatma Mint Sidi Mohamed	y	
205	Espoir et Vie	Espoir et Vie	Housseyne o/ Sid Ahmed		y
206	ESSAADA	Fondation Mauritanienne pour la Promotion, la Protection de l'Enfant et la Famille	Toutou Mint Ely Salem	y	y
207	Femme-AID	Association pour l'aide et soutien de la famille	Nana o/Abeidina, Soultana m/Md yahya		y
208	FEMANPH	Fédération Mauritanienne des Associations Nationales des Personnes Handicapées Pont	Lehbouss Ould el Ide	y	y
209	FPN		Hamada oud Ely		y
210	FNPDF	Forum National pour la Promotion des Droits de la Femme	Irabiha Mint Abdel Weddoud	y	
211	GLOBE/GPEM	Globe pour la protection de l'environnement en Mauritanie	Mohamed Yahya oud El Eyil	y	y
212	GNAP	Groupement des Associations Agro-sylo Pastorales	El Hacen Ould Taleb	y	
213	Hanane	El Hanane	Aminteou Mint Leweissi	y	y
214	IMD	Institut Marième Diallo	Abdessalam Youssef Diallo	y	y
215	MATEMA	MATEMA	Mohamed Yeslem Ould Ahmed, Mohd Abderrehmane		y
216	MB	Mer Bleue	Cheikh oud Ely, Farida m/habib SG adj	y	y
217	Mer Propre	Mer Propre	Ibrahima Moctar Ba R Ext, Mohamed Abdallahi Ould Dahane	y	y
218	Mauritanie 2000	Mauritanie 2000	Mme Nedwa Mint Moctar Nech	y	y

219	MSS	Monde sans Sida	Md o/Md Vadel		y
220	NTIC & C	NTIC et Citoyenneté	Fatma Mint el Khory	y	
221	New Vision	New Vision	Abou Djibi Dia	y	y
222	Nida	Nida Lutte contre la Pauvreté	Sidi Ould Hamakebir	y	
223	NLE	Nous les Enfants	elhady ahmed	y	y
224	OASIS	OASIS Assaba	Yacoub Ould Abdallahi	y	
225	OMED	Organisation Mauritanienne pour l'Encadrement et le Développement	Mme Mekelthoum Mint Khalifa (Pdte)	y	y
226	ONDFIR	Organisation Mauritanienne de defense et de rehabilitation des filles de la rue	Meghboula		y
227	OSE	ONG Sauvegarde de l'Environnement	Lemhaba Ould Ahmed (Président)	y	y
228	PANE	Programme d'Action Nationale pour l'Environnement et le Développement Durable	Dr. Abdel Kader Ould Mohamed Saleck (Chargé de Programmes)	y	
229	PEECO	Protection de l'Environnement et de l'Ecosystème	Sow Salamata Cheikh (Pdte)	y	
230	POP-DEV	Populations et Développement	Touré Balla Adbou (Pdt)	y	
231	PRAD	PRAD	N'Gaidé Alassane	y	
232	RDFEPE	Réseau des Droits de la Femme et de l'Enfance et la Protection de l'Environnement	Mariam Mint Sidi	y	y
233	Réseau	Réseau ONG NDB	Ahmed Ould Sadigh (Pdt)	y	
234	RE	Reseau de l'Environnement	Mme Camara		
235	RMPDF	Réseau Mauritanien pour la Promotion des Droits de la Femme	Fatema Mint Khou Bah	y	y
236	RODDR	Réseau des ONG du Développement Durable Rio+10	Mohamdi Ould el Hadj Brahim	y	y
237	ROELCP	Réseau des ONG de l'Environnement et de la Lutte contre la Pauvreté	Bannemou Ould Tlayor	y	
238	RUNI	Réseau UN-NGO-IREN	Khadjetou Mint Cheikh	y	
239	SAADA		Md o/ Mokhtar Chighali		y
240	SE	Secours Environnement	Cheikh Ould Bnejara (Pdt)	y	
241	SE	Sauvegarde de l'Environnement	Lemhaba Ould Ahmed	y	y
242	SOS	SOS Pairs Educateurs	Kadiatou Soulaye Thiam , Sy Alassane (Président)	y	y
243	SOS ABER		Isselmou o/Hanefi		y
244	SOS VA	SOS Villes Anciennes	Abdel Moumine Ould Deye	y	y
245	SSF	Santé Sans Frontières	Dr. Ly Ciré (Président)	y	
246	Stop Sida	Stop Sida	Aichetou Mint Lebaye	y	y
247	Stop-Désert	Stop-Désert	Mohamed Salem Ould Loud	y	y
248	SWAA	Association des Femmes Africaines face au Sida	Sana Abbass	y	y
249	TE	Terre d'Echange	Vetène Ould Abdellahi	y	y
250	Tenmiya	Tenmiya	Mohamed Ould Tourad (Directeur)	y	y
251	Terre Verte	Terre Verte	Meni Ould Yahya	y	

252	Terre Vivante	Terre Vivante Ilôt K,162A - BP.1848	Moulaye Ould Abdel Jelil	y	y
253	UMAFEC	Union des femmes entrepreneurs de Mauritanie	Lematt m/ meguiya	y	
254	URHPM	Union Régionale des Handicapés Physiques et Mentaux	Hamadi Samba Sow (Président)	y	y
255	WJC	Wadelbarka Joram et CECFAF	Mehla Mint Hadrami	y	y
256	Zakia	Zakia	Brahim Ould Boidaha	y	

4. Embassies

No.	Country	Organisation	Contact person (position)	Invited	Present
257	Allemagne	Ambassade de la République Fédérale d'Allemagne	Mr Ernst Joachim Doering Ambassador	y	y
258	Espagne	Ambassade d'Espagne	Mr Alejandro Polanc Mata Ambassador of Spain	y	y
259	Espagne	Ambassade d'Espagne	Benito Alvarez (Coordinateur Général Coopération Espagnole)	y	
260	Etats-Unis	Ambassade des Etats-Unis d'Amérique	Joseph le Baron (Ambassadeur)	y	
261	Etats-Unis	Ambassade des Etats-Unis d'Amérique	Ms Katharine Moseley Vice Consu Econ & Comm affairs	y	y
262	France	Ambassade de France	Mr Patrick Nicholoso Ambassador de la Republique Francaise	y	
263	France	Ambassade de France	Antoine Chambord (Conseiller Com.) Mlle Molinier(mission Eco)	y	y
264	Sénégal	Ambassade du Sénégal	Mahmoudou Cheikh Kane Ambassador	y	y

5. Woodside Contractors

No.	Acronym / Sigle	Organisation	Contact Person (position)	Invited	Present
265		Schenker	Karim Azaiz DG Chris Johnson Project Manager	y	

6. Industry Rep Groups

No.	Acronym / Sigle	Organisation	Contact Person (position)	Invited	Present
266	TIVISKI	TIVISKI (camel dairy)	Nancy Abderrahmane	y	y

7. Media

No.	Acronym / Sigle	Organisation/Name	Publication Manager/Contact	Invited	Present
267	RJEM	Reseau des Journalistes de l'Environnement en Mauritanie	Rassoul o/ Khal SG, Hassane Ould Abdellah (Président)	y	y
268		Reseau journalistes des objectifs 2000 pour dev	Ahmedou ould Bettar		y
269	Mensuel	TEYDOUMA (<i>sur l'environnement</i>)	El Hassen Ould Abdallahi	y	y
270	<i>US TV</i>	US TV	Lindsay Bredin Program Coordinator	y	y

Stakeholder List: Local Authorities, NGOs and Other Public Insitutions in Nouadhibou

Follow-up Workshop on TOR - 20 March 2005

Updated: 20 March 2005

No	Sigle/Acronym	Organisation	Contact Person (Position)	Invited	Present
1	ABPAM	ABPAM	Abdel Aziz Malick		
2	ADID	Association pour le Développement Intégré et	Aichetou Traoré (Présidente)	I	
3	AECI	Agence Espagnole de Coopération Espagnole	Sy Oumar	I	
4	AEDM	Association Enfant et Développement en	Mohamed Ould Souvi	I	P
5	AFEC	AFEC	Aissata Ly	I	P
6	Aide Enf.	Aide Son Enfance	Tahiya Mint Najem	I	
7	AMBSEM	Association Mauritanienne Sous le Bien-être	Khadjetou Mint Cheikh (Présidente)		
8	AMBSEM	Association Mauritanienne Sous le Bien-être	Lemneyya Camara	I	P
9	AME	AME	Mohamed Lemine Ould Mohamed (Rep.	I	
10	AMECEEP	AMECEEP	Mohamed El Kewri Ould Khabaz	I	P
11	AMESE	AMESE	Selem Mint Abdel Mola	I	P
12	AMI	Agence Mauritanienne d'Information	Baba Ould Audaa		P
13	AMPE	Association Mauritanienne pour la Protection de	Sidi Ould Ethmane	I	P
14	AMPF	Association Mauritanienne pour la Promotion de la	Oumar Ould Rajel	I	P
15	AMPF	Association Mauritanienne pour la Promotion de la	Brahim Ould Ahmedou	I	
16	AMPFDE	AMPFDE	Thiam Ismaila		P
17	APAE	Association pour la Promotion et l'Aide des	Sidi Ethmane Ould Saika	I	P
18	APC	Anti Pauvreté Campagne	Souleymane Diallo	I	P
19	APEAH	Association pour la Protection de l'Environnement	Ba Djibril	I	P
20	APFPE	Association pour la Promotion de la Famille et	Sidi Mohamed Ould Mohamed Cheikh	I	P
21	APMM	APMM	Mohamed Vall Ould Cheikh	I	P
22	ARFPA	ARFPA	Sidi Med Ould M'Hamd Cheikh (SG)	I	P
23	ASE	Au Secours de l'Enfance	Djibi Diakité	I	P
24	ASGM	Association des Scouts et G. de Mauritanie	Hama Ould Souvi		P
25	ASPPE	Association Stop Pollution et Protection de	Moustapha Ould Lehcen	I	P
26	ASPPE	ASPPE	Sidi Abdallah Ould Mohamed Mahmoud	I	
27	ASVPH	Association pour la Sauvegarde du Patrimoine	Ami Cibbé	I	
28	ASVPH	Association pour la Sauvegarde du Patrimoine	El Hacem Ould Cheikh	I	P
29	AVA	AVA	Moukeltoum Mint Oubed		P
30	AVA	AVA	Moctar Ould Mohamedou	I	P
31	AVCA	Association Visionnaire Contre l'Analphabétisme		I	
32	Awjeft	Awjeft	Fatou Mint Vaida	I	P
33	CAET	Centre d'Accueil Européen Trust	Joel Bussey (Directeur)	I	
34	CARITAS	CARITAS	Cheikh Sidi Mohamed Ould Mai	I	
35	CDBH	CDB Habitat			
36	CDHN	CDHN	Sy Amadou	I	
37	CHRN	CHRN	Ba Samba Alassane		P
38	COMECA	COMECA	Moulaye Ould Jedou	I	P
39	CRM	Croissant Rouge Mauritanien	Ahmedou	I	
40	DRPSS	DRPSS	Boukhary Ould Moctar		P
41	DRSN	Direction Régionale de la Sûreté Nationale	Représentant DRSN	I	P
42	EGBELIATT	EGBELIATT	Mohamed Ould Bilal	I	P
43	Emel	Emel	Aicha Mint Mohamed	I	P
44	ENEMP	Ecole Nationale des Elèves Marins Pêcheurs	Limam Ould Mohamed el Hacine	I	P
45	ENEMP	Ecole Nationale des Elèves Marins Pêcheurs	Elemine Ould Boubacar		P
46	ENEMP	Ecole Nationale des Elèves Marins Pêcheurs	Sidi Mohamed Ould Hamdi Cheikh (Directeur)	I	P
47	ENNIDA	ENNIDA	Sidi Mohamed Ould Hamma Kebir	I	P
48	EPBR	Établissement Portuaire de la Baie du Repos	Abdel Aziz Ould Ethmane		P
49	Espoir	Espoir	Seydi Ould Ameir	I	P
50	Espoir 2000	Espoir 2000	Ahmed Sedigh	I	P
51	Femmes Divorcées	Femmes Divorcées	Dedeya Mint Ahmed	I	P
52	Femmes et Dév.	Femmes et Développement	Binta Youssouf Keita	I	P
53	FNP	Fédération Nationale de Pêche	Sid'Ahmed Ould Abeid (Président)	I	P
54	FNP	Fédération Nationale de Pêche	Mohamed Ould Bilal	I	
55	Gendarmerie	Gendarmerie Nationale	Ahmed Ould Mohamed (Représentant)		P
56	Hakem	Hakem de la Moughataa de Nouadhibou	Hakem de Nouadhibou	I	
57	IMROP	Institut Mauritanien de Recherches	Sidi Mohamed Ould Sidina (Directeur)	I	

58	IMROP	Institut Mauritanien de Recherches	Mohamed Ould Sidi (Tech. Maintenance Elec.)	I	P
59	IMROP	Institut Mauritanien de Recherches	Bowba Mint el Khaless (Chercheur)	I	P
60	IMROP	Institut Mauritanien de Recherches	Fah Ould Mouhamedou (Chercheur)	I	P
61	IMROP	Institut Mauritanien de Recherches	Mohamed Ould Brahim (Chercheur Chimiste)	I	P
62	IMROP	Institut Mauritanien de Recherches	Ahmedou Ould Saleck (Chercheur)	I	P
63	IMROP	Institut Mauritanien de Recherches	Azza Mint Jiddou (Chercheur Sea Mamals)	I	P
64	IMROP	Institut Mauritanien de Recherches	Dr. Niang Amadou (Vétérinaire/PP édu.)	I	
65	IMROP	Institut Mauritanien de Recherches	Thiam Ismaila (Chercheur)	I	P
66	L'APRESSE	L'APRESSE	Ahmed Ould Jiddou	I	
67	L'APRESSE	L'APRESSE	Aichetou Mint Mogueye	I	
68	LIGHATHA	IGHATHA	Mohamed Ould Irkab	I	P
69	Maire Ndb	Maire de Nouadhibou	Mohamed Ould Cherif	I	
70	Mashref	Mashref SA	Mohamed Ould Bechir (EPpert Maritime)	I	
71	MATEMA	MATEMAI SA	Abdel Aziz Ould Mohamed (Administrateur)	I	
72	MATEMA	MATEMA	Chekhraide Ould Mohamed (Inspecteur)	I	P
73	MATEMA	MATEMA	Sidi Ali Ould Bouna (Inspecteur Navigation)	I	
74	MATEMA	MATEMA	Ahmedou Ould Mohamed el Lehcen	I	P
75	MdM	Médicos del Mundo		I	
76	MDRE		Sidi Mohamed		P
77	Mie 2000	Mauritanie 2000	Mariam Mint Dahoud	I	P
78	Mie 2000	Mauritanie 2000	N'Gaidé Hamidou	I	
79	NBEÏKA	NBEÏKA	Sidi Mohamed Ould Mohamed Vall	I	P
80	NBEÏKA	NBEÏKA	Mohamed Vall Ould Beckaye (Coordinateur)	I	
81	New Vision	New Vision	Diop Djibril Bocar (Coordinateur à	I	P
82	New Vision	New Vision	Seyid Ould Mahmoud (membre)	I	P
83	NIDAA	NIDAA	Sidi Mohamed Ould Hama Kebir	I	P
84	Nouakchott Info	Journaliste Nouakchott Info (Directeur)	El Vagha Ould Cheibany	I	P
85	PAN	Port Autonome de Nouadhibou	El Wenane Hamedha	I	P
86	PEECO	PEECO	Sow Salamata Cheikh	I	P
87	Police	Représentant Police	Diop Moussa Aliou	I	
88	Presse	Eveil Hebdo	Eydahi Ould Saleck Ould Weddou	I	P
89	Presse	Journaliste Presse	Sidi Ould Ahmed Ould Khayar	I	
90	Presse	Journaliste de la Presse Libre	Ba Ismail	I	P
91	Presse	Nouakchott Info	Abou Bekrine Ould Mohamed	I	P
92	Presse	La Tribune	Athié Youssouf		P
93	Presse	Points Chauds	Ba Souleymane		P
94	Presse	Patriote	Ba Ismaila	I	P
95	Presse	Nouakchott Info	Elvaghe Ould Mohamed Cheybani	I	P
96	Presse	Info du Nord	Abdellahi Ould Sidi Mohamed	I	P
97	Presse	L'Authentique	Abdellahi Semamr		P
98	Presse	Moujtamaa	Mohamed Sellem Baba	I	P
99	Radio FM	Radio FM Nouadhibo	Addahi Ould Moctar (Directeur)	I	P
100	Sahel	Sahel	Siama	I	
101	SCOUT	SCOUT	Sidi Mohamed Ould Oudaa	I	P
102	SNIM	Société Nationale Industrielle et Minière	Saleck Ould Hamoud (Chef Division)	I	P
103	Terre d'Echange	Terre d'Echange	Khadi Mint Mokhnass	I	P
104	Terre Vivante	Terre Vivante	Camara Mamadou	I	
105	Terre Vivante	Terre Vivante	Ngam Seydou (membre)	I	
106	URHPM	Union Régionale des Handicapés Physiques et	Hamadi Samba Sow	I	
107	Wali Ndb	Wali de Dakhlet Nouadhibou	Mr M'Rabih Rabou O/ Bounene	I	P
108	Zakiya	Zakiya	Cheikh Ould Boidiya	I	P

Participants: Workshop on TOR, 23 March 2005, Dakar

FIRST NAME	LAST NAME	ORGANISATION	JOB TITLE	23 Mar.Wkp	Dakar
				Invited	Participat.
Government					
Gouverneur de St-Louis		Gouvernance de Saint-Louis	Gouverneur	X	-
Ousmane M.	NDIAYE	Mairie de Saint-Louis/Represented by Papa Ibrahima DIOUF	Cons.Tech. 5370198	X	X
Moussa	NDOYE	Mairie de Kayar/Represented by Yéri SECK	Deputy Mayor 9535125	X	X
Mamadou	THIAW	Mairie de Kayar/Pdt Commission Environnement	9535125	X	X
Fatima Dia	TOURE	Direction de l'Environnement et des Etablissements Classés	Director	X	-
Pathé	BALDE	Direction de l'Environnement et des Etablissements Classés		X	X
Elimane	Ba	Direction Environ et Etablissts Classés/Rep.by Ibrahima NDIAYE		X	X
M.Ousmane	Sow	Direction de l'Environnement et des Etablissements Classés		X	X
Ibrahima	Sow	Direction de l'Environnement et des Etablissements Classés	Represent.Dir.Mme Toure	X	X
Babacar	DIOUF	Direction de l'Environnement et des Etablissements Classés		X	X
Gata Souley	Ba	Direction Environ et Etablissts Classés/Rep.by Assy Tall SARRE		X	X
Cheikh	Fofana	Direction de l'Environnement et des Etablissements Classés	Secrétariat NEPAD	X	-
El Boubacar	DIA	Direction de l'Environnement et des Etablissements Classés		X	-
Alpha	COUMBASSA	Direction de l'Environnement et des Etablissements Classés		X	X
Cl Mame Balla	GUEYE	Direction des Parcs Nationaux/Represented by Mme Fatou SAMB	Director	X	X
Cdt.Moustapha	Mbaye	Direction des Parcs Nationaux	Deputy Director	X	-
Mbarach	Diop	Direction des Parcs Nationaux/Represented by Mamadou KONATE	Projet Biodiversité Marine	X	X
Samuel	Diémé	Direction des Parcs Nationaux-Centre de Formation de Dalaba		X	-
Amadou Kh.	DIOP	Ministère de l'Economie Maritime-Ecole Nat'de Formation Marine		X	-
Seydina	CISSE	Ministère de l'Economie Maritime		X	-
Maurice	NDIONE	Ministère de l'Economie Maritime-Dir-tion de la Marine Marchande		X	X
Dr. Omar	LY	Ministère de l'Economie Maritime-Direction de la Pêche Maritime		X	-
Bara	SADY	Port Autonome de Dakar (PAD)/Rep.by El.Maïssa MBAYE	Directeur	X	X
Babacar	Ba	Ministère de l'Economie Maritime-Ecole Nat'de Formation Marine	Capitaine de Corvette	X	-
Amadou	Diop	Ministère de l'Economie Maritime-Ecole Nat'de Formation Marine		X	-
Ousmane	Sall	Ministère de l'Economie Maritime-Ecole Nat'de Formation Marine	Chief	X	-
Abdoulaye	NDIAYE	Civil Defence/Repr.by Capitaine Cheikh Tidiane DIOP	Director	X	X
Lt Cl Adrien	Diene	Ministère de l'Interieur- Civil Defence		X	-
Cdt Adama	SAMBA	Minist.Intérieur-Groupement Nation.des Sapeurs Pompiers/Rep.by Cdt Babacar SECK		X	X
Pape Thierno	NIANG	Ministère de l'Equipement et des Transports Terrestres-Dir.des Transports Publics		X	-
Eugène	FAYE	Ministère de l'Energie et des Mines- 'Direction des Mines et de la Géologie (DMG)		X	-
Aminata Ndoye	TOURE	Ministère de l'Energie et des Mines-Direction de l'Energie		X	-
Ousmane	SANE	Ministère Urbanisme/Direction de l'Aménagement du Territoire		X	X
				30	16

Participants: Workshop on TOR, 23 March 2005, Dakar

Ibrahima	DIEME	Ministère de la Justice		X	-
Papa Ibrahima	DIOUF	Represented Maire de Saint-Louis (Voir Maire de saint-Louis)			
Ahmed	SENE	Direction de la Météorologie Nationale		X	-
Abdou Aziz	DIAGNE	Ministère de l'Assainissement	Conseiller Technique	X	-
Babacar	Ndaw	Ministère de l'Assainissement- Office National de l'Assainissement(ONAS)	Directeur Général de l'ONAS	X	-
Fishery					
Pape	FAYE	UNAGIEMS		X	X
Alassane	SECK	FENAGIE/Fédération Nationale des Groupements d'Intérêt Economique de Pêche		X	X
Samba	NIANG	Fédération GIE Mareyeurs Port Môle 10		X	X
Lamine	NDIAYE	UPAMES-Union Patronale des Mareyeurs et Exportateurs du Sénégal	Président	X	-
Dougoutigui	COULIBALY	GAIPES-Groupement des Amateurs et Industriels de la Pêche		X	-
Gaoussou	GUEYE	CNIPAS-Comité National Interprofessionnel de la Pêche Artisanale au Sénégal		X	X
Research Institutions					
Déthié	NDIAYE	Centre de Suivi Ecologique (CSE)		X	-
Mariama	Barry	Centre for Oceanographic Research (CRODT)/Rep.by Bassirou DIAW	Director	X	X
Jacques	QUENSIERE	Institut de Recherche pour le le Développement (IRD – Ex ORSTOM)		X	X
Pr. Souleye	WADE	Laboratoire de Télédétection Appliquée (LTA)-Université CAD de Dakar	Director	X	-
Amadou	GUIRO	Institut de Technologie Alimentaire	Directeur Général	X	-
Pape	SECK	Institut Sénégalais de Recherches Agricoles/ISRA	Directeur Général	X	-
Ariane	DUFFOUR	ENEA/Ecole Nationale d'Economie Appliquée		X	X
Chakirou	RAZAKI	ENEA/Ecole Nationale d'Economie Appliquée		X	X
IGO/NGO					
Ciré	KANE	Commission Sous Régional de Pêche		X	-
Mme Nassere	KABA	Abidjan Convention-Focal Poin/Ministère de l'Environnement et du cadre de Vie, Côte d'Ivoire		X	-
Dr Etian	N'DAH	Abidjan Convention-Focal Poin/Ministère de l'Environnement et du cadre de Vie, Côte d'Ivoire	Responsable EE	X	-
Paul	Siegel	WWF West Africa Regional Office	Marine Programme Manager	X	-
Cheikh	Diagana	Wetlands International – Regional Office, Dakar		X	-
Pieter	Terpstra	Wetlands International– Regional Office, Dakar	Scientist & Project Manager	X	-
				27	9
Adama	LY	Projet de Gestion Intégrée des Ecosystèmes du sénégal/PGIES		X	-
Jean-Luc	SUPERA	AFD/Agence Française de Développement		X	-
Madani	TALL	World Bank-Dakar/Rep.by Christian DIOU	Resident Representant	X	X
Arona	FALL	UNDP/Environment		X	-
Mme Ndey Isatu	NJIE	UNDP/Capacity 2015 Regional Coordinator & Senior Adviser, Africa		X	-
Mme Lalla Aicha	BEN BARKA	UNESCO/Sites du Patrimoine Mondial	Resident Representant	X	-
El Ali	HAIDAR	OCEANIUM		X	X

Participants: Workshop on TOR, 23 March 2005, Dakar

Jean	GOEPP	OCEANIUM - Dakar		X	-
Pr Abdoulaye	KANE	UICN - Sénégal	Chef de Mission	X	-
Mr Ahmed	SOUMARE	ENDA - Tiers Monde/Rep.by Edouard DIATTA	Secrétaire Exécutif	X	X
Ousmane	PAM	OXFAM-Sénégal	Coordonnateur des programmes	X	-
Boubacar	DIOP	CONGAD-Conseil des ONG d'Appui au Développement/Rep.by Birame DIOUF 8244116		X	X
Ndiougou	SALL	FONGS - Fédération des ONG Sénégalaises	Président	X	-
Mr Alioune DIAGNE	MBOR	Les Amis de la Nature - Sénégal/Rep.by Mamadou DIALLO	Président	X	X
Cécile	BROUTIN	GRET		X	-
Martine	FRANÇOIS	GRET		X	-
Samba	GUEYE	CNCR - Conseil National de Concertation des Ruraux	Président	X	-

Communication

El Hadj Hamidou	KASSE	Journal Le Soleil		X	-
Mouhamed	GUEYE	Journal Le Quotidien		X	X
Mame Aly	KONTE	Journal Sud Quotidien		X	-
Dialigue	FAYE	Journal Le Populaire		X	-

Government of Mauritania

Mohamed	NAH	Ambassade de Mauritanie au Sénégal	Chargé d'Affaires	X	X
EL Hadramy	OULD MED	M'BARECK	Ministère des Mines/GPC	X	X
Mohamed	YESLEM	OULD AHMED	Ministère des Mines/GPC	X	X

ORGANISERS

Augustin	BRENDAN	Woodside/Mauritania	Directeur des Relations Extérieures		X
Mohamed	EI Moctar	O.M.EL HACEN /Woodside Mauritania /	Conseiller		X
Frédérique	WILLARD	ERM France			X
Aude	DELESCLUSE	ERM France			X
Ibrahima	SANOKHO	Consultant			X

29 **14**

86 **39**

45.35

Annex G

Chinguetti Project SIA Terms of Reference Development Report

**TERMS OF REFERENCE DEVELOPMENT
REPORT**

Woodside Mauritania Pty. Ltd.

**Chinguetti Project: Social
Impact Assessment
*Terms of Reference
Development Report***

May 2005

Reference: 0024310

For and on behalf of Environmental
Resources Management Australia Pty Ltd

Approved by: Keryn James

A handwritten signature in black ink that reads "Keryn James". The signature is written in a cursive, flowing style.

Signed:
Position: Project Director
Date: 20 May 2005

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ACRONYMS

AC :	Action pour le Changement
CDHLPI :	Commissariat aux Droits de l'Homme, à la lutte contre la Pauvreté, et à l'Insertion
CUN :	Communauté Urbaine de Nouakchott
EI :	Environmental Impact Assessment
EIS :	Environmental Impact Statement
EMS:	Environmental Management System
ERM:	Environmental Resources Management
ESAP :	Environnemental Social Action Plan
FPSO :	Floating Production Storage and Off take
IFC :	International Finance Corporation
FAO:	Food and Agriculture Organisation
IGO:	International Government Organisation
HIPC	Heavily Indebted Poor Countries
MAED:	Ministère des Affaires Economiques et du Développement
NGO:	Non-Governmental Organisation
OGP:	International Association of Oil and Gas Producers
ONS:	Office National de la Statistique
PANE :	Plan d'Action National pour l'Environnement
PCDP :	Public Consultation and Disclosure Plan
PNBA :	Parc National du Banc d'Arguin
PND :	Parc National du Diawing
PRDS :	Parti Républicain Démocratique et Social
RFP :	Rassemblement des Forces du Progrès
SIA :	Social Impact Assessment
TOR :	Terms of Reference
UFP:	Union des Forces du Progrès

1 INTRODUCTION

1.1 BACKGROUND AND HISTORY

Woodside Mauritania Pty. Ltd. (Woodside) commissioned Environmental Resources Management Australia Pty Ltd (ERM) to conduct a Social Impact Assessment (SIA) for the Chinguetti project (the Project) in Mauritania, West Africa.

The Mauritanian Ministry of Petroleum and Energy is the Government authority with responsibility for co-ordination and approval of the SIA. The scope of the assessment is set out in *Chinguetti Development Project - Terms of Reference* (ToR). This *Chinguetti Development Project - Terms of Reference Development Report* has been prepared to make transparent the thinking that led to those ToR being agreed.

An Environmental Impact Assessment (EIA) of the Project was commenced in 2003, submitted to the Government of Mauritania in February 2004 and was accepted by the Government of Mauritania in September 2004 with a condition requiring a SIA be subsequently undertaken in accordance with relevant international standards and best practice guidelines.

SIA is considered to be international best practice management and is expected by investors, governments, employees and external stakeholders of any significant oil and gas development project. It is a systematic process to examine potential socio-economic impacts of a project and includes the participation of those most likely to be impacted.

The SIA for the Chinguetti Development Project will identify ways in which people and communities in Mauritania and in the coastal communities in northern Senegal, could be affected by the Project. Scoping the ToR commenced in September 2004 and concluded in March 2005 and has included stakeholder engagement and data collection in Mauritania and Senegal through two in-country missions in November-December 2004 and March 2005.

1.2 PURPOSE OF REPORT

The purpose of this report is to document the outcomes of the scoping phase including the process by which the ToR has been developed. Specifically, this report includes:

- a short description of the Project context;
- an assessment of information gaps to be addressed during preparation of the project baseline;

- a summary stakeholder analysis; full details are contained in the Project's Public Consultation and Disclosure Plan (PCDP); and
- a summary of consultation activities conducted during scoping.

1.3 METHODOLOGY

1.3.1 Standards of Reference

The approach to defining the ToR and scoping of the whole SIA adhered to international standards and guidelines.

International safeguard standards have been developed by the World Bank Group and are complemented by other principles and guidelines developed by financial institutions (Equator Principles), professional bodies (International Association for Impact Assessment – IAIA) or industry bodies (International Association of Oil and Gas Producers – OGP). The SIA for the Chinguetti Development Project is proposed to be undertaken in accordance with 'best-practice' approaches on similar projects in the oil and gas industry using *World Bank Best Practice Guide on SIA in Hydrocarbon Operations* as a guide. The other relevant guidelines are:

- International Finance Corporation (IFC) Operational Policy 4.01 Environmental Assessment (IFC, October 1998);
- World Bank (WB) Operational Directive 4.20: Indigenous Peoples (WB, September 1991);
- WB Operational Policy Note (OPN) 11.03, Management of Cultural Property in Bank-Financed Projects (World Bank, September 1986);
- IFC Policy Statement on Forced Labour and Harmful Child Labour (IFC, March 1998);
- IFC Doing Better Business Through Effective Public Consultation: A Good Practice Manual (IFC, 1999);
- IFC Guidance Note on the Preparation of a Public Consultation and Disclosure Plan (IFC, 1998);
- IFC Good Practice Note: Addressing Child Labour in the Workplace and Supply Chain (IFC, June 2002);
- IFC Good Practice Note: Addressing the Social Dimensions of Private Sector Projects (IFC, 2003);
- IFC Guidance Note G: Assessment and Management of Cultural Impacts (IFC, 2003);

- IFC Community Guide: Investing in People, Sustaining Communities Through Improved Business Practice (IFC, 2000);
- International Association for Impact Assessment (IAIA): International Principles for Social Impact Assessment (IAIA, 2003); and
- Inter American Development Bank (IADB): Guidelines for Social Cultural Analysis (IADB, October 2001);
- International Association of Oil and Gas Producers (OGP) Report 6.88/307: Strategic Health Management Principles and Guidelines (OGP, June 2000);
- OGP Report 636/210: Guidelines for the development and Application of Health, Safety and Environmental Management Systems (OGP, July 1994); and
- OGP: Key Questions in Managing Social Issues in Oil and Gas Projects (OGP Report Number 2.85/332, October 2002).

1.3.2 Social Impact Assessment Approach

The overall approach to the SIA will encompass the following steps:

Phase 1 - Scoping

Phase 2 - Baseline

Phase 3 – Analysis of Social Impacts

Phase 4 – Mitigation of Potential Negative Social Impacts

Phase 5 – Identification of Sustainable Development Opportunities

Phase 6 - Impact Management

Phase 7 - Monitoring

Scoping

The primary purpose of scoping was to determine a ToR that will guide the scope, extent and content of the SIA. Scoping involved a review of available secondary data, identifying gaps in the existing baseline information on Mauritania, conducting an analysis of stakeholders, their likely concerns and extent of involvement and undertaking consultation to test and refine the scope of the assessment.

The scoping work set the parameters for analysis and action plans by identifying the Project's influence in terms of project footprint (areas occupied by the Project and likely to be the most impacted), indirect and cumulative impacts, impact duration (transitory, long-term) and transboundary aspects (ie. impacts on Senegal's coastline).

While consultation occurred during preparation of the EIA, some stakeholders expressed concern that limited information on the Project and environmental consequences had previously been conveyed to stakeholders. Therefore, during the November – December 2004 scoping mission and village visits, preliminary information on the Project and the SIA process was provided to stakeholders including fishing communities, government representatives, international government organisations (IGOs) officials, non-government organisations (NGOs), and professional organisations. Meetings and workshops in Nouakchott, Nouadhibou, Dakar and in the coastal villages of Senegal and Mauritania served to raise awareness of Project activities. A Chinguetti Development SIA Information Pack that concisely described the Project and the SIA process was sent to stakeholders in January/February 2005 and distributed in March 2005 to workshop participants to complement the information provided during the first scoping mission.

Initial contacts with stakeholders during the November – December 2004 mission were productive and contributed to identifying issues and requirements for further stages of work. The ToR workshops during the March 2005 mission provided participants with an opportunity to continue the dialogue and provide inputs to refine the scope of the SIA. A Public Consultation and Disclosure Plan (PCDP) was prepared to accompany the ToR, in accordance with the IFC Good Practice Guide on Public Consultation and Disclosure. It will guide consultation throughout the duration of the SIA and beyond. The PCDP is publicly available and was distributed to Mauritanian stakeholders during consultation.

1.4 *STAKEHOLDER REFERENCE GROUP*

A Stakeholder Reference Group (SRG) will be established to provide guidance to ERM on key issues and to assist in impact verification and development of mitigation measures. The PCDP contains details of proposed SRG membership.

1.5 *PROJECT TEAM*

ERM is an international consulting firm and has selected an international multi-disciplinary team with the following skills and expertise:

- expertise in conducting social impact assessment on international projects including the disciplines of health impact assessment and economic impact assessment;
- experience working in Mauritania;
- proximity to key Woodside personnel in Australia and Mauritania;

- ability to speak French;
- knowledge of and experience working with international NGOs and IGOs;
- stakeholder consultation experience;
- experience in primary data collection and survey techniques;
- experience in undertaking social impact assessment in the oil and gas industry; and
- knowledge of the Project.

The SIA team also includes Mauritanian and Senegalese statisticians and social science consultants, particularly for the development of the baseline.

2.1 PROJECT DESCRIPTION

Woodside and its Joint Venture participants are developing an oil field, located 80 km west of the Mauritanian coastline (south west of Nouakchott) at a depth of 800m. Crude oil will be produced thanks to a single Floating Production Storage and Offtake (FPSO) facility of 75,000 barrel-a-day capacity. The project lifeline is expected to be 8 to 15 years, with first oil production in the first half of 2006.

The Project also comprises the operation of a waste management and storage area in south-western Nouakchott that includes an incinerator. Implementation of the Project's waste management plan should see an avoidance of waste generation activities, a reduction in waste generation relative to production, opportunities for reuse and recycling initiatives.

The capital expenditure has been reported as \$680m. The first 15 months of the logistics procurement programme has been estimated to be worth around US\$3-4m per annum¹ spent directly with Mauritanian companies.

A detailed description of offshore elements of the Project is published in the Project's *Environmental Impact Statement* (EIS) and is available on Woodside's website at www.woodside.com.au.

2.2 NATIONAL LEGISLATIVE CONTEXT

The Chinguetti Development Project SIA is the first SIA undertaken for the oil industry in Mauritania.

As in Australia and many other countries, Mauritania has no specific legislation governing SIA. The Project is regulated by the Ministère des Mines et de l'Industrie (Ministry of Mines and Industry) under the terms of the Production Sharing Contract and this agency has authority for oversight of the SIA.

The Government of Mauritania has required that a draft version of the SIA be submitted to them at the end of August 2005. Stakeholders will review the Draft SIA and provide comments to ERM. It is expected that the Minister for Mines and Industry will accept the final SIA in October 2005.

¹ Figure provided by Woodside Energy, Contracting Strategy, April 2004

Mauritania gained independence from France in 1960 becoming a Muslim State under the leadership of President Makhtar Ould Daddah. The current system of governance is based on a separation of powers and resembles the French system; the National Assembly is directly elected by the population and the Senate represents territorial districts and is elected by indirect suffrage. Islam is the official religion and Arabic the official language, although French is widely used in business and Government.

President Taya came to power in 1984 following a political coup. The current constitution, adopted in 1991, allows a multi-party system and more than twenty political parties have been recognised since then, although some opposition leaders have been imprisoned. Mauritania has a centralised State, but has undertaken a decentralisation policy giving the *wilayas* (administrative regions), *moughataa* (districts) and *communes* (municipalities) responsibility for urban infrastructure and services as well as basic social services, primarily education and health.

The country is sparsely populated and characterised by a desert climate and territory. Droughts in the 1970s and 1980s dramatically and permanently altered the agricultural livelihood of its people, leading to a settling of the nomadic population, massive migration from inland to the coastal areas and rapid urbanisation, especially in Nouakchott, the capital city.

Today, Mauritania's economy relies heavily on mining, fishing and international aid. With a GDP/capita of about \$400 US and 69%² the population living below the poverty line (i.e. on less than \$2/day), Mauritania is a very poor country. In February 2000, Mauritania qualified for debt relief under the Heavily Indebted Poor Countries (HIPC) initiative and in December 2001 received strong support from donors. Since then, some results have already been observed; recently Mauritania reduced its external debt by approximately 50%. The implications of the debt relief initiatives outlined during the 2005 G8 summit are not yet fully understood in-country. The Government of Mauritania is now focusing on improving opportunities for foreign direct investment and promoting privatisation.

In 2002, the official unemployment rate in Mauritania was 21%. Despite the lack of arable lands and the migration of many nomads and subsistence farmers to cities, the rural sector employs an estimated 64% of the labour force. Important economic sectors, such as fisheries and the extractive industries, employ only 1.9% and 0.6% of the labour force respectively.

All infrastructure—communication/transport, health and education—are limited in Mauritania. Health services are a particular concern with a lack of

² Earth Trends 2003, Country Profiles Economic Indicators – Mauritania available from <http://earthtrends.wri.org>

modern health facilities in Mauritania. There is one major hospital in Nouakchott and 25 other regional health centres. Of these health centres 15 are maternity clinics and the rate of access to health centres in rural areas is less than 30%. Most of the coastal villages visited during the in-country mission were equipped with a health post and some new equipment, but there is a lack of skilled human resources.

This situation demonstrates the inadequacy of health care infrastructure, which alongside high infant mortality rates, child malnutrition and micronutrient deficiencies indicate major problems for the future health of Mauritians. Four key health issues are malaria, fevers (especially yellow fever), digestive illnesses (including cholera) and respiratory illnesses. In this context, the limited access to potable water in coastal areas, nutrition deficiency in impoverished areas and in-migration into the poorer areas of Nouakchott are all factors that will have significant adverse impacts on health.

Although school is compulsory and free for all, education services are also insufficient, especially in rural areas and coastal villages where access to schooling is virtually impossible and there is often only one teacher to teach all elementary classes. There is only one university located in Nouakchott.

More detailed community profiles form *Annex A*.

Pre-scoping Data Collection

A literature review list was developed to prepare for scoping. Documents include World Bank's basic economic and poverty data, Economic Intelligence Unit country reports 2002-2004, Woodside's draft Environmental Impact Statement (EIS), and some data available via an initial Internet search (WHO, UNDP, etc.). A list of these documents forms *Annex B*. This data allowed a preliminary picture of the socio-economic state of Mauritania to be developed and a list of potential issues and impacts to be drawn up for discussion with relevant stakeholders.

*Scoping Missions***November-December 2004**

Meetings with government officials, and public institutions and donors' representatives, as well as workshops and visits to coastal villages provided the team with a qualitative overview of the overall social—including health—and economic situation in Mauritania, and more precisely in Nouakchott and in the villages along the coast of Mauritania and Senegal from Dakar to Nouadhibou.

March 2005 Mission

Meetings with government officials, civil society organisations and research centres were used to present and discuss the Draft ToR to ensure that no important assessment issue was missed and to implement the commitment to consider stakeholders' views.

Data Gap Analysis for Baseline

The aim of the baseline phase is to develop a detailed social and economic profile for Mauritania and subject parts of Senegal with a focus on the potentially project-affected areas and vulnerable groups. The baseline is critical to the success of SIA because it provides:

- a current state analysis;
- a basis for extrapolation of current situation and development of future scenarios without the Project;
- the basis for identifying likely interactions with the Project and therefore potential impacts;

Heading	Description of Information Required	Nat	Reg
	GDP	x	
	consumption	x	x
	investment - in particular private new capital expenditure & DFI by industry	x	x
	direct contribution by top level industry sector and highest industry classification available for:		x
	commercial fishing industry	x	x
	artisanal fishing activity	x	x
	exploration expenditure	x	x
	mining&extractive	x	x
	mineral production	x	x
	iron ore industry	x	x
	tourism and source nation of short-term visitors	x	x
	construction	x	x
	transport services including ports	x	x
	waste management	x	x
	mean profitability - by industry sector	x	
	total wages paid - by industry sector	x	
	# expatriate workers and wages paid	x	
	capital employed - by sector	x	
	dividends paid - by sector	x	
	interest paid - by sector	x	
	indirect contribution of key industrial sectors (input-output/multiplier analysis)	x	x
	Inflation	x	x
	consumer price index annually since 1980 and quarterly from 1995	x	x
	retail food prices quarterly since 1995	x	x
	price of benchmark fish product	x	x
	cost of dwelling rental/payments	x	x
	producer price index annually since 1980 and quarterly from 1995	x	x
	Proportion of vacant housing stock/developable land; (esp. Nouakchott)	x	x
National Finances	Total Income	x	
	aid	x	
	tax and charges by source (income, VAT, property transation, stamp duty, industry sector)		
	other sources	x	
	public sector enterprise surpluses	x	
	Spending - total and by major program/sectors & region	x	
	Foreign debt	x	
	Interest rate	x	
	Regional government source of income & expenditure summary		x
Business	Patterns in average turnover of businesses	x	x
	Changes in payroll & company tax collection from local businesses	x	x
Labour force	Industry of employed persons by highest level industry sector classification	x	x
	Employment directly in iron ore and oil industries; dependants of these employees; employment in services to iron ore industries	x	x
	Employment directly in fishery industries; dependants of these employees; employment in services to fisheries	x	x
	Profile of workforce - proportion of professional, managerial, skilled, unskilled	x	x
	Unemployment	x	x

Heading	Description of Information Required	Nat	Reg
Income	Median annual income of employed persons	x	x
	male/female/age/geographical variations	x	x
	Mean weekly or monthly earnings (trend since 2000)	x	x
	Mean annual household income	x	x
	distribution of income	x	x
	notable geographical differences	x	x
	Mean annual household expenditure	x	x
	expenditure on food vs. other items	x	x
Education	<i>(Current state, trend since 1990s)</i>	x	x
	literacy	x	x
	percentage of children in full time education	x	x
	current student population by Government/non-Government school	x	x
	highest attainment level	x	x
	education infrastructure (number of schools /1000, universities)	x	x
	number of teachers (/1000)	x	x
	qualifications (e.g. number of graduate by types/topics of degree)	x	x
	reads basic French		
Multimedia access	access to the Internet (e.g. number of people who accessed internet regularly last year, or Nb of school/university with internet access)	x	x
Health	<i>(current state, trend since 1990s)</i>		
Health System	Who is eligible for health care, are there any free benefits, what types of financing exist etc	x	x
	Health spending as a % of GDP	x	x
	How easy is healthcare to access, is there an even distribution geographically?	x	x
	Are there any issues with using the existing healthcare services	x	x
	Physicians per 1000 Population		x
	Nurses per 1000 Population		x
	Median number of years of practice for doctors and nurses	x	x
	Hospital/clinic visits per population per year/month etc	x	x
	Hospital Beds per 1000 Population	x	x
	Average Length of Stay by disease category	x	x
	Immunisation rate / programmes		
	Availability of medical supplies, equipment in hospitals and clinics, in particular in rural areas	x	x
	List of environmental, public health and occupational health legislation, acts etc	x	
	Disease Statistics	Infectious and parasitic diseases TB/Aids/STD's/Hep A,B, C/Malaria	x
Cancer		x	x
Heart and circulatory system		x	x
Respiratory system/dust/pollution related disease			x
Digestive system		x	x
External causes		x	x
Maternal mortality		x	x
Malnutrition (prevalence)		x	x
Public Health	Quality and availability of water supply(surface water, well water; aquifer), incl. Bottled water	x	x
	Population access to safe water and sanitation (%)	x	x
	Wasterwater treatment	x	x

Heading	Description of Information Required	Nat	Reg
	Domestic Waste management	x	x
	Sources of domestic waste	x	x
	Health issues arising from it	x	x
	Food borne diseases due to microbiological contamination	x	x
	Traditional Medicine /Spiritual healing homes	x	x
Occupational health	Occupational health statistics (incidents, occupational diseases)	x	x
	Traffic Management	x	x
	Vacancies for skilled healthworkers (per 100 employees in the sector)	x	x
Pauvreté	UNDP Human Development Index,	x	x
	Human Poverty Index	x	x
Services	<i>(current state, trend since 1990s)</i>	x	x
	Availability in the home (rate)	x	x
	drinking water	x	x
	sewerage	x	x
	electricity	x	x
	telephone	x	x
	property crimes (/1000)	x	x
	more/public order crimes (/1000)	x	x

4.1 STAKEHOLDER IDENTIFICATION PROCESS

As part of the Social Impact Assessment scoping phase, ERM consulted with a selection of relevant stakeholders in Mauritania and Senegal. The stakeholder consultation process of the November-December 2004 mission formed the first stage of a programme of consultation for the SIA. The March mission was the second stage, and discussed the Draft ToR through stakeholder workshops. The full consultation programme is described in more detail in the PCDP. The PCDP will be revised regularly as the Project and SIA is progressed.

The following sections provide a summary of the consultation processes undertaken during the scoping phase.

4.1.1 Preliminary Identification of Stakeholders Pre-Consultation

Prior to the commencement of the November - December 2004 scoping mission, ERM identified the potential range of issues that allowed preliminary identification of *Project Affected Peoples (PAPs)* and *Other Stakeholders Groups*. PAPs are those individuals, groups or organisations who themselves could be directly affected by the Project and those individuals or organisations who, although not directly affected by the Project, represent those affected or have regulatory duty, an interest, influence or secondary involvement in the Project. This analysis was based on experience from previous projects, independent research, as well as discussions with Woodside about views expressed to date and the list of Project stakeholders it has been generating since 2002. The preliminary list is available in *Annex C*.

4.1.2 Further Identification of Stakeholders

Additional stakeholders were researched and consulted during the November – December 2004 and March 2005 missions. Lists of stakeholders consulted for each mission are provided in *Annex C*.

4.2 STAKEHOLDER CONSULTATION APPROACH

4.2.1 Consultation Activities

Preliminary identification of potential issues served as an input to identifying relevant stakeholders to engage during the scoping phase. Not all of the stakeholders that are included in each of these categories could have been consulted during the scoping missions due to their availability and time constraints. The intent was to conduct sufficient consultation to identify the key issues and ensure all stakeholders were identified for inclusion in the SIA process.

Thus, the November - December 2004 and the March 2005 missions focused on consulting with:

- **PAP groups**, especially project participants, authorities (i.e. key government decision-makers, key local decision makers and representatives), and residents of communities (including *chefs de village* and community leaders);
- **Key knowledge holders**, including NGOs, IGOs, research and academic institutions; and
- **Trade and professional organisations**, including in the fishing sector.

Communities were selected based on an assessment of the likely spatial extent of impacts and key stakeholder representatives' input, including Parc National du Diawling, Parc National du Banc d'Arguin, IUCN and Plan d'Action National pour l'Environnement (PANE).

Previously unknown stakeholders were also identified and were included in the consultation programme. Those consulted are listed in the PCDP.

The following sections provide an overview of the methodologies and outcomes of the two missions.

4.2.2 Scoping Consultation: November – December 2004

Objective

This consultation process was undertaken in order to gather information and opinions about the Chinguetti Development Project.

Methodology

Workshops

An introduction to the SIA was presented in the two workshops that took place in Dakar, Senegal and Nouadhibou, Mauritania on November 29 and December 5 respectively.

An information package on the Project and SIA was subsequently prepared and issued to stakeholders in January/February 2005 and the workshops proposed for January were rescheduled for March 2005 to allow time for the Draft ToR to be prepared and issued to stakeholders.

Community Level Consultations

Community level consultations with representatives of PAPs were conducted in three regions of Mauritania and one region in Senegal:

- **Northern Senegal:** Kayar, Fass Boye and Lompoul on 30 November 2004;
- **Parc National du Diawling (PND):** Birette, Ebden, N'Diago, Chat Boul on 1 December 2004;
- **Parc National du Banc d'Arguin (PNBA):** Arkeiss on 6 December 2004 and Tessot, Techott, Mamghar on 7 December 2004; and
- **North of Nouakchott:** Mhijarat, Lemeid and Bellawakh on 10 December 2004.

Prior to commencement of consultation background research on the villages in the National Parks and the coastal communities was carried out to profile these areas. These profiles are available in *Annex A*.

The village visits allowed the team:

- to explain the Project and the SIA process to them and engage in discussions with them on health, infrastructure, livelihoods and other relevant issues,
- to make a quick qualitative assessment of the social situation through a tour of the villages.

Box 4.1 provides the details of the discussion overview in each village.

Woodside provided the following **updates on the Chinguetti Development Project**:

- EIA completed which has shown only risk to certain communities in case of an oil spill;
- Greater risk from existing oil and gas development due to proximity of transport of oil offshore from Senegal and Mauritania;
- Risk from existing Woodside activities is small;
- Woodside propose management planning that will reduce the risk - and therefore their focus in this area include capacity building for oil spill management;
- Woodside recognises that outstanding social issues in the communities exists but Woodside is not solely responsible for conducting infrastructure development; this is the responsibility of the Government;
- Explain that fisheries and oil development coexist throughout the world, namely in Australia, Norway and Canada.

ERM made the following points in the **SIA overview**:

- ERM has been selected to undertake an social and economic impact assessment of the Chinguetti Development Project – this includes consideration of both positive and negative impacts of the Project on the people of Mauritania and Senegal;
- This is only the beginning stage of the study and the first task involves preparing a Terms of Reference for the study. The Terms of Reference will provide a detailed plan for undertaking the SIA and include:
 - Who ERM should consult;
 - What information is needed to collect for the baseline; and
 - What issues need to be considered.
- In order to have a successful SIA, it is important for ERM to understand existing conditions in the communities – in Nouakchott, Nouadhibou and other coastal villages – so that ERM can understand if there will be positive or negative impacts as a result of the Project;
- The purpose of the village consultation is to conduct a preliminary visit, to get a clear understanding of the issues in each community relevant to the Project, to provide villagers with updates on the Project, and to identify key representatives in the community;
- Upon completion of the village visits, ERM will draft a Terms of Reference for the study, which will need to be approved by the Government of Mauritania. Upon acceptance of the ToR, ERM will begin the next stage of work, which will involve:
 - Extensive consultation with all stakeholders and villages in Project area;
 - Collection and analysis of information that will help us understand the social and economic conditions in Mauritania; and
 - Assessment of the impacts of the Project.
- The information collected will be used to prepare a report, which will be shared with stakeholders for comment. Where there are impacts directly related to the Project, ERM will recommend management measures to Woodside. The information may also be used by NGOs and the Government to address existing social issues.

One-on-One Stakeholder Meetings

These meetings were conducted with key ministries, local authorities, included the Communauté Urbaine de Nouakchott (CUN) and National Parks management (PND, PNBA), and representatives of some NGOs, IGOs and professional and research groups. They provided an introduction to the SIA process and allowed stakeholders the opportunity to offer feedback on key issues concerning the Project. One-on-one meetings also gave ERM the opportunity to receive published documents and technical reports that may have not been acquired prior to the scoping phase.

Consultation Outcomes

The consultations highlighted stakeholder opinions about positive effects, concerns about potential negative impacts, and concerns about issues perceived by some participants to be associated with the Project. They also gave an opportunity to stakeholders to raise a number of questions and make recommendations about the SIA process. Below is a summary of these issues and suggestions.

In Mauritania

Impacts and Issues associated with the Project and the SIA

Potential positive effects:

- contribution of oil wealth to economic growth and development through increased GDP, improved exchange rate and deficit reduction; and
- use of oil revenues for poverty reduction and improvement in social infrastructure.

Concerns about potential negative effects:

- oil revenues may not be used for poverty reduction;
- oil revenues will be unequally distributed (including procurement programme to date) with potential to exacerbate social inequality and consequently contribute towards political instability;
- a lack of transparency about revenue flows will be a source of conflict in itself;
- potential impacts on the marine environment will effect viability of fisheries sector that is reliant on the health of the marine environment;
- demand for skilled labour in the context of a largely unskilled workforce will create a 'drain' of skilled employees from other industries, such as mining, to the oil industry;

- migration to Mauritania from other countries and from the inland areas to the coast within Mauritania and Nouakchott will occur in response to perceived economic opportunities (leading to increased pressure on social infrastructure and exacerbation of poverty and health issues);
- increased development will occur at the port areas with implications for neighbouring communities;
- vulnerability of the coastal communities which are largely reliant on the sea for their livelihoods and potential impact of an oil spill; and
- current lack of infrastructure and resources available for education and training of young people and expectation that project may be able to address this in part.

Issues and concerns about the SIA process:

- many stakeholders, in particular those that have not been involved in the EIA process, have little or no knowledge of the project, making it difficult for them to comment on potential impacts or issues;
- some stakeholders, particularly in the NGO and IGO community are unsure about the extent to which the SIA will be conducted independently, notwithstanding the appointment of ERM, particularly given Woodside's presence at many of the scoping meetings;
- communication about the Project by Woodside to external stakeholders has been irregular and sometimes culturally insensitive; and
- there is a range of education and language levels amongst the stakeholder groups and the consultative process needs to ensure that information provided and techniques used is culturally appropriate.

Recommendations for the Project and the SIA

In light of the issues raised regarding the Project, several stakeholders—individuals and IGOs—recommended that Woodside take specific actions:

- extend local procurement;
- develop sustainable development initiatives; and
- develop greater awareness of the cultural context in which they are operating.

PAP and stakeholders confirmed subsequent consultation stages of the SIA should:

- involve municipal governments in the consultation process;
- use local knowledge and personnel during collection of baseline information;
- use visual materials (i.e. photos, maps, diagrams) to support information and interactions with the local populations, especially with village communities;
- develop simplified information materials in Arabic, Wolof and French as required;
- clarify environmental impacts to fishermen in order to calm unfounded worries about effects on fish stocks and the magnitude of pollution due to day-to-day operations;
- describe activities and the opportunities the Project creates for local populations so as to manage expectations and narrow the discussions with stakeholders to identification and assessment of actual and potential impacts; and
- be developed with a conscious awareness of how involvement of Woodside personnel in consultations is perceived by fishing communities (i.e. balance between Woodside commitment to the process and independence of the SIA).

In Senegal

The issues raised regarding the Project's impacts in Senegal were:

- concerns about significant impacts on fishery and coastal villages in northern Senegal (80% of fishery is artisanal fishing);
- Senegal will bear the costs of the severe consequences of any oil spills on its coast and economy, but not share the benefits from oil development;
- need for training and capacity building initiatives on oil spill response and cleanup; and
- potential negative impacts on tourism industry in the coastal areas in the event of an oil spill.

Some stakeholders in the workshop in Dakar expressed some concerns regarding the SIA process:

- the lack of representation from Government of Mauritania during the workshop; and

- scope of SIA to include Cap Vert and more villages south of Cap Vert (assuming potentially affected by any oil spill from Chinguetti field).

The workshop agreed to some recommendations:

- that Government of Senegal request a meeting with Government of Mauritania to discuss Project risks to Senegal, any role to be played by Senegalese authorities in SIA, and possible collaboration to address stakeholder concerns; and
- professional and stakeholder organizations are involved in consultations as well as Government of Senegal.

The Draft ToR (*Annex D*) was prepared following the November – December 2004 mission, so as to respond to emerging stakeholder concerns.

4.2.3 TOR Consultation March 2005

A copy of the analysis used to determine project influence is included in the Draft ToR *Annex D*.

Objectives

The purpose of the mission conducted from 15 March to 24 March 2005 was to:

- provide information on the Chinguetti Development Project: updates on the EIS and associated management plans;
- provide information on the SIA process and current timeline;
- understand and address any reservations about the SIA process; and
- present and discuss the Draft ToR for the SIA:
 - ensure that no important assessment issue had been missed; and
 - demonstrate a commitment to consider stakeholders' views.

Methodology

Five workshops were scheduled including a plenary session in Nouakchott which summarised the outcomes of all the workshops.

The sessions and groups targeted are summarised in *Table 4.1*.

Table 4.1 **Schedule of workshops, March 2005 SIA mission to Mauritania and Senegal**

Groups	Date	Location	Consultation Activity	No. of attendees invited / participated
Government	16 March 2005	Nouakchott, Mauritania	Workshop on TOR	58/50
Civil society (NGOs, IGOs, Union, Media, Prof. Org., Research centres, Embassies)	17 March 2005	Nouakchott, Mauritania	Workshop on TOR	165/126
Local Government, Civil society	20 March 2005	Nouhadibou, Mauritania	Follow-up Workshop on TOR	92/74
Government and Civil Society	21 March 2005	Nouakchott, Mauritania	Plenary session on TOR	150
Government and Civil Society	23 March 2005	Dakar, Senegal	Follow-up Workshop on TOR	85 / 39

A total of about 280 participants attended these workshops. The lists of participants are in *Annex A*. Attendance rates in Nouakchott and Nouhadibou, Mauritania were high (about 80%) despite the relatively late notice, especially in Nouhadibou, and lower in Dakar, Senegal (less than 50%).

Each workshop was conducted according to the following agenda:

1. Presentation of an update on the EIA
2. Presentation of the Social Impact Assessment (approach and summary outcomes of the scoping phase)
3. Q&A

Lunch

1. Presentation of the draft Terms of Reference
2. Q&A

The EIS Summary and the draft PCDP were distributed to all participants at the Plenary Session. The EIS Summary was provided to the audience in Dakar. Full copies of the EIS were offered to stakeholders on request.

Consultation Outcomes

Questions

Questions raised during the seminars related to:

- i) the Environmental Impact Assessment (EIA);
- ii) scope of issues proposed to be addressed in the SIA;
- iii) clarification of the SIA methodology including the proposed consultation process.

Comments on the EIA are to be taken into account in the development of modules for the Project Environmental Management Plan.

The March workshops gathered a wide range of stakeholders from civil society and government. However, it was observed that local authorities and businesses were not well represented. While one representative of the major cities attended the workshops (*Communaute Urbaine* de Nouakchott, Nouadhibou, Kayar, Saint Louis), the village communities were not represented. Subsequent phases of consultation need to additionally target these representatives.

ERM collated and responded to the concerns that emerged through the workshops to ascertain what changes were needed to complete the ToR.

Comments on the scope of social impacts and SIA methodology and ERM's response to these comments are presented in *Table 4.2*.

Table 4.2 Stakeholder Comments and ERM Responses

Issue	Stakeholder Comments	ERM Response
<i>Comments on SIA Scope</i>		
Geographic Scope	<p>A consensus of the workshop was that the ToR should more clearly differentiate between the boundaries of the project’s influence depending upon the nature of the anticipated impact. Some stakeholders expressed the view that distinct geographical boundaries should exist for the assessment of:</p> <ul style="list-style-type: none"> i) coastal villages in the event of a non-routine impact; ii) all of Mauritania and economic impacts; iii) Nouhadibou as a specific area (similar to the proposed treatment of Nouakchott) given its reliance on industrial fishing/processing and the potential for a non-routine impact; and iv) other countries in the sub-region (Guinea Bissau, Morocco, Western Sahara, Mali) and impacts on Mauritania’s relations with these countries. <p>Several stakeholders in Dakar felt it was an error to exclude the Cap Vert (South of Dakar) and the tourist area “la Petite Côte”.</p>	<p>The ToR includes coastal areas between Nouhadibou and Dakar in Senegal. Stakeholders confirm Nouhadibou and the fishing industry seem unlikely to suffer routine impacts from a fisheries exclusion zone around the offshore facility or release of produced formation water. However, the fishing sector would be affected in most oil spill scenarios and therefore should be considered in the SIA along with other coastal communities. Oil spill modelling shows coastal areas south of Cap Vert to be extremely unlikely to be affected in the event of an oil spill from the Chinguetti development.</p> <p>Economic impacts will be assessed at the Mauritanian national level and that will include changes to imports and exports. Attempting to model precise economic changes to neighbouring nations would require so many assumptions that the analysis could not be relied upon. Thus the external sector will be considered but be non-country specific and qualitative in nature. Potential migration from neighbouring countries into Mauritania will also be subject to assessment. However, assessment of likely political relations between nation states is beyond the scope of accepted SIA methodologies.</p>
Changes to National Culture	<p>Several participants expressed concerns about the impact of oil development on Mauritania’s culture and social values. For some, significant change has already taken place and they felt Woodside did not have a good understanding of its cultural influence. Some wished to see the cultural setting and assessment of cultural impacts specifically included in the ToR.</p> <p>Participants at the plenary workshop offered assistance to Woodside with the formation of a reference group to advise on cultural issues in Mauritania. The concept is the group would meet several times during the SIA process between the collection of a baseline and submission of the draft SIA to the Government of Mauritania in August 2005.</p>	<p>Assessment of cultural impacts is implicit in evaluation of change to cultural aspects of the baseline study described in the ToR including: community networks, cultural characteristics of population/ migration, significant cultural sites and traditional decision-making processes. The qualitative consultation work of the baseline study will attempt to better define stakeholders’ views on measurable dimensions of national and regional culture.</p> <p>The baseline will include a brief description of the cultural and institutional context so as to ensure best use of local knowledge. The baseline will also include a description of Woodside’s current policies and practices with regard to managing impacts on the host culture.</p>

Issue	Stakeholder Comments	ERM Response
Speculation in land	Stakeholders were in agreement that localised inflation is being experienced in Nouakchott. In particular, rents are understood to be increasing. Stakeholders expressed the view that the impacts on Nouakchott's poorest residents warranted particular attention.	Housing price inflation is included within the assessment of economic impacts. The geographical focus on Nouakchott municipalities will allow for particularly vulnerable municipalities to be identified and localised impacts to be assessed.
Scope of economic assessment	The number of questions on the economy, employment and revenue indicated poor communication within the Draft ToR on the scope of the economic assessment element of the SIA.	<i>Annex D</i> deals in detail with assessment of project impacts on key macroeconomic indicators including, growth, revenue, inflation and growth in other sectors of the economy (<i>Annex D</i> does not do that, and actually does not make sense see <i>Annex D</i>). "Oil revenues to Government" was added to the key interactions matrix (project aspects and receptors of impacts) in the ToR.
Oil revenues management and transparency	The workshops discussed mechanisms for management of oil revenues and especially issues of poverty reduction, revenue distribution, corruption and inter-generational equity. The majority of participants felt an analysis of oil revenue spending impacts should be within the scope of the assessment and associated management plans developed with mechanisms to bring transparency to expenditure decisions.	The direct economic impacts of the Project will be relatively small compared to the revenue that flows to the Government of Mauritania. The terms of the governing Production Sharing Contract control the release of commercially confidential figures including the revenue distribution formula with the Joint Venture. The revenue that flows to Government will be highly dependent upon the price of oil and production volumes. The impact assessment will indicate a range of possible aggregated revenue scenarios and acknowledge the Government's arrangement with Stirling Energy PLC. The ToR separates macro-economic impacts including impacts from national level procurement and impacts arising from subsequent Government expenditure of oil revenues.
Donor Financing	Some participants within the donor community, wondered how the increase in state income would affect the financing patterns of international and bilateral aid. Donors consider Mauritania a very poor country: Mauritania benefits from the Initiative for Heavily Indebted Poor Countries, through concessional funding by the World Bank's International Development Association, and from grants by the Agence Française de Développement (as PMA – Pays les Moins Avancés). Stakeholders felt the possibility of reduced aid should be assessed within the scope of the SIA.	The possibility of reduced aid will be investigated with aid agencies and the Government of Mauritania during impact assessment consultation. Chinguetti by itself, does not change Mauritania's relative status as a very poor country. The SIA process will consider other envisaged projects and the cumulative impacts arising from these projects including changes to the Government's fiscal position and the balance of payments.

Issue	Stakeholder Comments	ERM Response
<i>Comments on SIA Methodology</i>		
Sustainable development opportunities	Stakeholders recognised that the contemporary SIA process examines opportunities for more sustainable development and assesses positive impacts as well as negative impacts and mitigation. Employment and training were of key interest to stakeholders who believed this aspect should specifically be within the scope of the study. Some stakeholders felt the capacity of regional and local government and NGOs to contribute towards the realisation of opportunities for sustainable development was key to success and should be assessed within the scope of the SIA. Health service provision (and any increased health budgets) was a specific concern.	Sustainable development opportunities will be retained in the ToR. Employment and training will be included the assessment and identification of appropriate opportunities to contribute to sustainable development. Opportunities for local government and NGO capacity building will be explored with stakeholders during the development of management plans.
“After oil?”	At the Nouhadibou workshop and the Nouakchott plenary session in particular, the view was expressed that the assessment should include the period following decommissioning (8-15 years hence). Concerns were raised about short-term growth of petroleum inhibiting the growth of other sectors and a broadening of the economic base. Most significant was the Government’s reliance on oil revenue. Individual scale (employment, income, retraining) issues were also of interest.	The systematic SIA process examines impacts throughout the lifecycle of the project, and thus will include the decommissioning phase. Possible distortions and adverse effects on other sectors of the economy will also be considered as part of the analysis of routine macro-economic impacts.
Independence of SIA study team from Woodside and quality assurance	Several times during the workshops stakeholders questioned Woodside’s choice of ERM to undertake the SIA rather than local consultants. Most concerns related to ERM not being sufficiently independent of Woodside. Participants expressed concerns about a lack of local knowledge and the robustness of ERM scientific methodologies and application to standards.	The process outlined in the ToR commits the study to high levels of transparency. The Public Consultation and Disclosure Plan that supports the ToR has more specific commitments to disclosure and involvement of stakeholders. The ToR indicates ERM will work with local consultants in Senegal and Mauritania which will assist in communicating in culturally appropriate ways and enable the development of a deeper understanding of impacts.
Roles of stakeholders	Some participants felt that the ToR and the PCDP together did not provide enough information on the role expected of each stakeholder group during the study. Suggestions were received that ERM should consult with smaller, homogenous groups, such as businesses, local experts from research institutes or academia, unions, political parties, local authorities and elected representatives.	ERM acknowledges communications for the SIA study need to be ‘fit for purpose’ and tiered in detail according to the level of stakeholder interest.
Detailed methodology and timelines	Some stakeholders regretted the absence of a more detailed task list and detailed discussion of the assessment methodology.	The ToR states impacts will be characterised, the magnitude of impacts predicted and significance evaluated through consultation. The methodology for description and characterisation of the impacts and assessment of magnitude involves targeted consultation to test expert analysis and official data in phase 3 of the SIA. The draft assessment of significance will be made against published, project-specific criteria and again this analysis will be verified through consultation to provide ERM’s final assessment of significance.
Impact assessment and use of case studies	Some participants suggested future consultations should include the	During the analysis of social impacts in phase 3 of the SIA process ERM

Issue	Stakeholder Comments	ERM Response
	provision of case studies showing the positive and negative experiences from other oil producing countries. This would allow stakeholders to better anticipate and describe impacts and begin to consider suitable mitigation and management measures. Case studies proposed were: Nigeria, Botswana, Equatorial Guinea, Timor, Kuwait and Chad.	experts will have the task of identifying potential impacts ahead of consultation with stakeholders and project affected people to establish the reality and significance of impacts. Experience of impacts on oil and gas projects elsewhere will be factored into this analysis. Graphic examples of impacts from elsewhere may be used to enhance communication where they are highly relevant to this case and will not cause unnecessarily alarm among populations.
Information and sensitisation	Many civil society representatives recommended that Woodside develop a communication policy and plan to widely inform the Mauritanian population (especially in villages) about the project, its opportunities and consequences. The advice was to use radio, TV, press and NGOs as intermediaries, in addition to consultation with NGOs, the government sector and village heads. Advice was given on presenting in Hasaniya Arabic during workshops in Mauritania whenever practical.	For future phases of work consultation and public disclosure activities will need to be sensitive to the possibility of raising false expectations of employment and increased wealth or service provision from oil development. For this reason, the richest forms of communication (individual and small group meetings/workshops) will usually be most appropriate. There is a role for mass communication in raising awareness of the SIA process (note the newspaper coverage of the March workshop). It will also be appropriate to use mass media to communicate the relatively small ongoing direct employment opportunities afforded by the Project. The project website will allow stakeholders to help themselves to key documents.
Management plans	In addition to inclusion of areas of Senegal, some stakeholders in Dakar felt the impact assessment process and development of management plans should address the issue of compensation to Senegal and its tourism operators in the unlikely event of an oil spill.	The finite resources for assessment and management planning will focus on the Project's routine impacts. A specific Oil Spill Contingency Plan will set out required actions to deal with pollution and will include a crisis communication plan, logistics plans for the delivery of emergency aid and a framework for determining compensation. These actions are to be owned by the Government of Mauritania and implemented under its authority.

5.1 TOR DEVELOPMENT PROCESS

This document has been produced in support of the ToR for the *Social Impact Assessment of the Chinguetti Development Project* and records the process through which the ToR was developed. The ToR emerged out of a combination of reviews of secondary materials by ERM and stakeholder consultation at national and regional levels. There have been three key stages of analysis:

Preliminary identification of stakeholders and baseline information – The experience of the project team, desk based research and discussions with Woodside were used to develop a list of target stakeholders for consultation.

November-December 2004 Scoping Mission – Gathered information and opinion on the Chinguetti Development Project and advice on further consultation activities.

ERM carried out an assessment of project influence based on the outcomes of this mission. A Project Interaction Matrix was developed to assess the nature of the impacts created by the Development project and highlight those groups most affected by the Project. The Draft ToR (*Annex D*) was prepared following this analysis.

March 2005 Scoping Mission – Updated stakeholders on the progress of the EIS and SIA and presented the Draft TOR to ensure important assessment issues were not missed.

5.2 PROJECT AFFECTED PEOPLES

At the conclusion of the scoping phase the PAPs can be summarised as follows:

- **Authorities** comprising national, regional and local government bodies, of primary political importance to the Project and to the SIA process; these groups include Government of Mauritania, local authorities of Nouakchott (CUN and Mayors of the 9 districts), and Government of Senegal; as well as two decentralized authorities in Trarza and Dakhlet-Nouadhibou.
- **Residents of coastal communities** located on the coast of Mauritania, including two National Parks, and the northern coast of Senegal that would be affected by any oil spill from Chinguetti - this category includes artisanal fishermen in Mauritania and northern Senegal and herders using the natural resources of the Mauritanian coast;

- **Nouakchott's inhabitants** who will be indirectly impacted through induced effects emerging from oil revenue spending, potential immigration, local procurement and employment and sustainable development opportunities; including suburban areas closest to the port and waste management facility and communities where workers are housed;
- **Local business and potential suppliers/contractors** who will be directly impacted both positively and negatively through local procurement and employment - this category includes the Joint-Venture's contractors and suppliers, the port of Nouakchott, and all enterprises that might lose employers/opportunities to the benefit of the oil sector;
- **Industrial and commercial fishing operators** who could suffer from routine direct impacts (such as export competitiveness and fishing exclusion zones) and from non-routine impacts (namely oil spill) - this category includes the local fishing industry, as well as foreign commercial fishing companies; and
- **Vulnerable sub-groups** who have less capacity to absorb the Project's impacts - these groups comprise the poorer people, including women, former slaves and their families, and rural communities.

Other Stakeholder Groups

These groups include the local NGOs, IGOs, trade, industrial, professional and labour organisations, petroleum industry, financial institutions, political parties and elected representatives, and other interest groups (eg. media, research and academic institutions).

A detailed analysis of the groups is contained in the PCDP.

5.3

FINAL TERMS OF REFERENCE

The Final Terms of Reference detail the agreed scope of the Social Impact Assessment. A copy of the final ToR is included in *Annex D*.

Annex A

Community Profile Coastal

Community Profile Coastal
Areas

Community Profile Coastal Areas

The following sections present summary profiles of the coastal and Parks communities. Background research on these communities was required to inform the consultation process. An overview is presented, based on meeting with local officials and data collected during the first scoping field visit. These are qualitative descriptions created for the purposes of scoping and will need to be completed with statistical data collated during the baseline study.

Villages in Parc National du Diawling (PND)

The Parc National du Diawling is a national park in the south of Mauritania in the Senegal River delta. Wetlands are present in the park, but mostly the landscape consists of minimal vegetation near the delta areas and sandy desert landscape in the interior. The national park serves as a migration route for many African and European bird species and therefore is recognised for its rich biodiversity. *Figure 1* provides a geographical overview of the Park.

A tributary to the Senegal River runs north through the park and serves as the main water source for over 20,000 people living in the region and particularly the villages of the lower delta bordering the Senegal River.

Isolation of the villages of the PND further exacerbates their present social and health problems. Villages in PND have limited access to social infrastructure and facilities in neighbouring towns like Rosso. It is difficult to travel to or from the Park without a four-wheel drive vehicle. Access is possible by boat (the pirogue), which transport people to Djama Dam to continue on to Rosso by bush taxi, but this is only when the water level is high enough to cross the marsh.

Figure 1 *Map of villages in Parc National du Diawling*



Source: GIS Research Base of Parc National du Diawling, December 2004.

Parc National du Banc d'Arguin (PNBA)³

PNBA was created in 1976, formally included in the Ramsar List of Wetlands of International Importance in 1982, and inscribed on the UNESCO World Heritage List in 1989.

PNBA is the biggest national park in Western Africa. It covers a 12,000km² area and half of the park is marine environment. As the IUCN reports in 1989, it provides a major single habitat for migratory and nesting water birds, a unique nursery and breeding area for numerous species of fish and has a very high biological productivity. The PNBA contains several endangered species and presents a very contrasting land and seascape due to the combination of austere desert and rich biodiversity of the marine environment. The PNBA also contains Palaeolithic and Neolithic archaeological sites and the traditional activities of the Imraguen community (i.e. fishing) add an important cultural dimension to the zone.

³Parc National du Banc D'Arguin. Brochure de Présentation.

Secrétariat Général du Gouvernement, République Islamique d Mauritanie. Synthèse du Plan d'Aménagement et de Gestion du Parc National du Banc d'Arguin.

UNESCO World Heritage. IUCN Technical Evaluation.

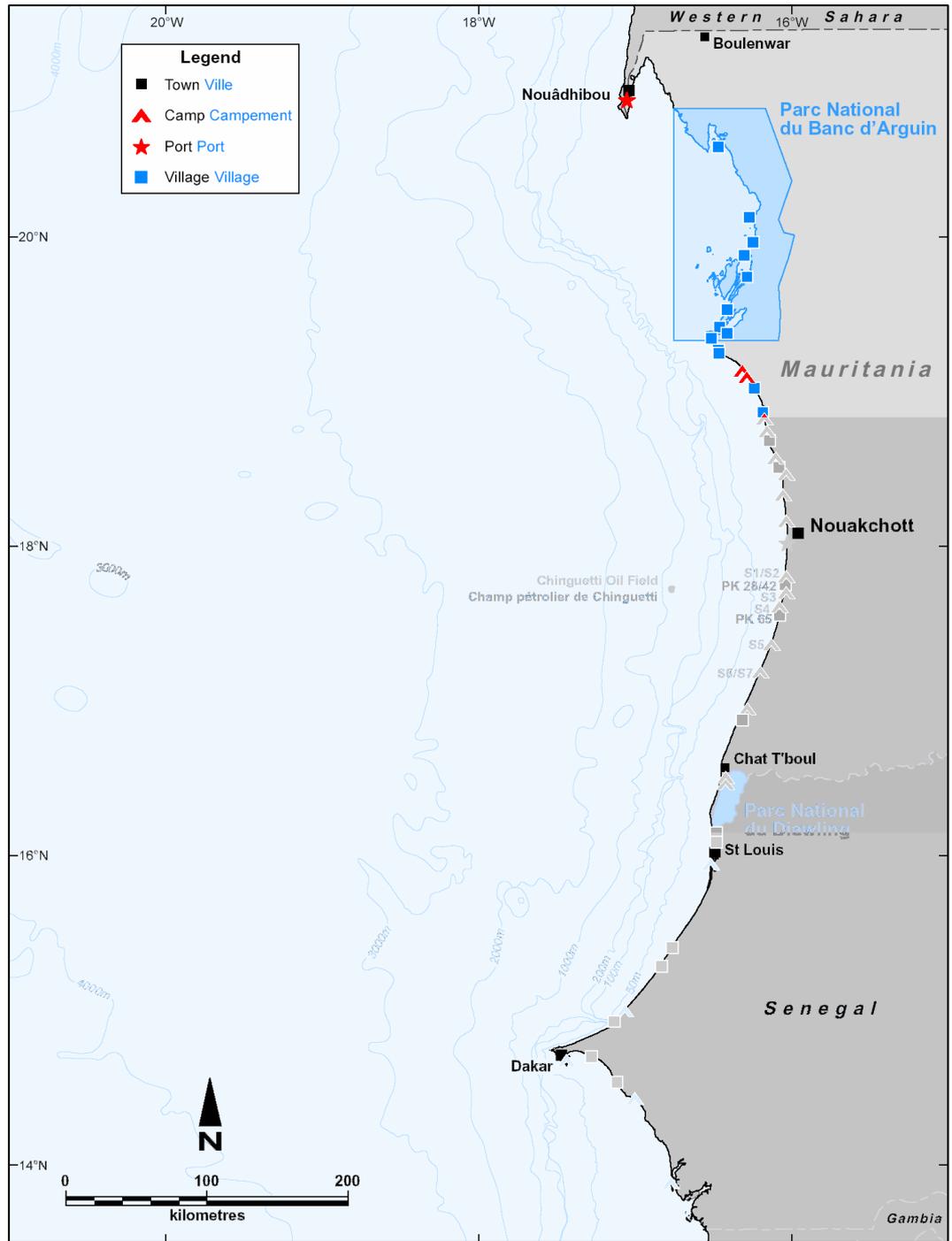
http://whc.unesco.org/archive/advisory_body_evaluation/506.pdf

PNBA's management plan for 2005-2009 (*Plan d'Aménagement et de Gestion du Parc National du Banc d'Arguin*) considers the following external factors are the major risks likely to threaten PNBA:

- Increasing pressure from artisanal and coastal fishing
- "Poaching" by industrial fishing boats
- Oil development and exploration
- Extension of port infrastructures in Nouadhibou
- Construction of the road from Nouakchott to Nouadhibou
- The new international airport project in Jreïda, on the coast, North of Nouakchott

PNBA benefits from large international financial and technical support, including the French and German cooperation, the World Bank, the International Foundation for Banc d'Arguin and UNESCO, as exemplified by the last Roundtable of donors held in November 2004 in Paris.

Figure 2 Location of Fishing Communities in Relation to Chinguetti Project



On the southernmost border of Mauritania lies the Senegal River Valley. It is a narrow belt of land north of the Senegal River that extends west and south into the interior of Mauritania and West Africa. Historically, it has served as a basis of agrarian societies due to its fertile soil and abundant vegetation. Before the droughts of the 1960s, 70s and 80s, the river valley extended sixteen to thirty kilometres north of the river into Mauritania. By the late 1980s, desertification pushing from the interior of the country reached the northern banks of the river, substantially shrinking the amount of arable land ⁽⁴⁾.

Today, the southern region of Mauritania, near the Senegal River Valley serves as the agricultural centre of the country. The climate and geographic variables provide a more suitable environment for agriculture. Because rainfall tends to be higher in the south (approximately 400 – 600 mm per annum) and river flooding occurs frequently, small-scale farming and other agricultural practices are among the main livelihoods of the region. The swelling of riverbanks normally occurs in May and June during the heavy rain season and can increase the water table a few metres. Once the flooding recedes, the planting season begins.

Similar to the rest of Mauritania, fishing is the main livelihood for communities in the south, especially those in the coastal villages. Small-scale subsistence farming or *marachage* does provide basic food needs, but its abundance is contingent upon irrigation and access to a replenishable water source. Areas in Mauritania inland from the river valley, most notably the villages within the boundaries of the Parc National du Diawling, do not always have a sufficient water source to support small-scale farming activities. Therefore, fishing remains the main economic activity of the region.

Like the southern region of Mauritania, the coastal communities in northern Senegal rely on fishing for their livelihood. Artisanal fishers represent most of the fishing activity in Senegal (80% with 20% being industrial fishing activities). The opposite is true in Mauritania where industrial/commercial fishing represents the majority of this sector's activity. The area of the northern Atlantic Ocean, off the coast of Senegal and southern Mauritania, contain some of the most important fisheries in the World. The risk of over-fishing was raised by stakeholders during scoping workshops in November – December 2004.

Communities in coastal Senegal depend mainly on artisanal fishing as their source of income and less so on other agricultural livelihoods. Many other economic activities in these communities stem from artisanal fishing, such as the *transformatrice*, or fish-mongers (predominantly women) who purchase, transport, and dry fish for selling on the local market, or export to regional markets. These are substantial activities in many of the communities and this intricate system affords economic benefits to those families involved in

(4) US Library of Congress Country Study - Mauritania

the supply chain as most exchanges among fishermen, fishmongers, and buyers are conducted locally.

A chemical plant near the villages of Fass Boye and Kayar has reportedly released chemical effluents into the sea which have affected the fishery. Because of the pollutants, fishermen no longer fish in that area. These communities are concerned about the effects on fisheries in the unlikely event of an oil spill.

Annex B

Literature Review List

Author	Date	Title of Document
ACP-EU Development Cooperation	2002	The Courier, N° 191 March-April 2002, Financing for Development: Country Report Mauritania
Altapedia Online	2004	Mauritania General Facts including climate
AMEXTIPE (World Bank)	Feb 2001	Evaluation of the Social impact of the Programme Of improvement of the Living conditions In the Peripheral and Spontaneous Districts of Nouakchott
Amnesty International	2002	Amnesty International report 2002: Mauritania
Amnesty International	2002	Mauritania: A future free from slavery?
Bullard,A. Tandia,B	2003	Middle East Report Online July 22, 2003 Images and Realities of Mauritania's Attempted Coup
Central Intelligence Agency	2004	Facts Mauritania inc geography, people, govt, economy, comms, transport
CleanAway		SMART Waste Management Database Info
CleanAway		SMART Data Entry Work Instruction
Davis, S.	2001	Triple Bottom Line: The Social Dimension
Economist Intelligence Unit	2002	Country Profile 2002 The Gambia, Mauritania
Economist Intelligence Unit	2003	Country Report 2003 Senegal, The Gambia, Mauritania
Economist Intelligence Unit	2004	Country Report 2004 Senegal, The Gambia, Mauritania
FAO	Unknown	Nutrition Country Profile Mauritania
IMG	oct-03	Country Report No 03/314, Article IV Consult media release
International Association for Impact Assessment	2003	Impact Assessment and Project Appraisal, volume 21, number 3, September 2003, pages 231–250, Principles and guidelines for social impact assessment in the USA
International Association for Impact Assessment	2003	Special Publication Series No. 2 Social Impact Assessment International Principles
International Finance Corporation	1998	Procedure For Environmental And Social Review Of Projects
International Finance Corporation	2003	Good Practice Note Addressing the Social Dimensions of Private Sector Projects

Author	Date	Title of Document
International Finance Corporation	1998	Procedure for Environmental and Social Review of Projects, Guidance Note F: Guidance for Preparation of a Public Consultation and Disclosure Plan
International Finance Corporation	1998	Doing Better Business Through Effective Public Consultation and Disclosure A Good Practice Manual
International Finance Corporation	2003	Sustainability Fact Sheet 2003
International Labour Organisation (ILO)	2004	National Labour, Social Security and Human Rights Legislation
International Monetary Fund	2003	Poverty and poverty reduction in Mauritania
International Monetary Fund	2002	Islamic Republic of Mauritania: Report on the Observance of Standards and Codes- Fiscal Transparency Mode
International Monetary Fund	2003	Islamic Republic of Mauritania: Sixth Review Under the Poverty Reduction and Growth Facility and Request for Waiver of Performance Criterion- Staff Report News Brief on the Executive Board Discussion; and Statement by the Executive Director for the Islamic Republic of Mauritania
International Monetary Fund	2003	Islamic Republic of Mauritania: 2003 Article Consultation, and Request for a Three Year Arrangement Under Poverty Reduction and Growth Facility- Staff Report; Staff Statement; Public Information Notice and Press Release on the Executive Board Discussion; and Statement by the Executive Director for the Islamic Republic of Mauritania
International Petroleum Industry Environmental Conservation Association & International Association of Oil & Gas Producers	2002	Key Questions in Managing Social Issues in Oil & Gas Projects
Islamic Republic Of Mauritania		Legislation: Central Environment Code
Islamic Republic Of Mauritania		Legislation: Hygiene Code
Islamic Republic Of Mauritania		Law No 2000-45 relating to a Framework Law on Environment
Islamic Republic Of Mauritania	2002	Poverty Reduction Strategy Paper Implementation Report
Islamic Republic Of Mauritania	2001	Assessment Of 1998-2001 Macroeconomic and Structural Reforms & Outlook For The 2002-2004 Period

Author	Date	Title of Document
Islamic Republic Of Mauritania & United Nations Environment and Development Programme	2004	Plan d'Action National pour l'Environnement et le Développement Durable
Islamic republic of Mauritania	July 2004	Report/ratio On the Placement of the Strategic Framework of Fight Against Pauvrette in 2003 (PRSP)
Islamic Republic Of Mauritania & United Nations Environment and Development Programme	2005	Stratégie Nationale de Développement Durable
IUCN (Sidi Aly, Consultant)	June 2003	Evaluation of the Economic Values of the National park of Diawling.
Ministry for the Economic affairs and the Development, National office of the Statistics, Central Office of Census	August 2003	General Census of the Population and the Habitat 2000, Population of the Communes: Age structure and Sex
Ministry for the Economic affairs and the Development, National office of the Statistics	June 2004	Aggregates of the National accounting and Indicators Socio-economic
Ministry for the Economic affairs and the Development, National office of the Statistics	April 2004	Projections Demographic 2001-2015 (UREP)
Multilateral Investment Guarantee Agency	Unknown	Natural Gas Project Social Development Action Plan (SDAP) for Mozambique
National Office of the Statistics	2001	Mauritania in Figures
National office of the Statistics	October 2004	End-of-term report of Economic situation
National office of the Statistics, Ministry for the Economic affairs and the Development, Department of Health and Human services	December 2001	Social survey and of Health: Mauritania, 2000-01.
NationMaster	2004	Mauritania Profile Health

Author	Date	Title of Document
NationMaster	2004	Mauritania Profile Environment
NationMaster	2004	Mauritania Profile Economy
NationMaster	2004	Mauritania Profile Education
Oxfam	déc-02	Major Food Crisis in Mauritania
Smit, P.	2002	Slavery on World Bank projects in Mauritania
U.S Census Bureau	2004	Demographic Data for Mauritania
U.S Department of State	2002	Mauritania Country Reports on Human Rights Practices
US Dept of State	2004	Mauritania Post Report
US Dept of State	2004	Mauritania Human Rights Report
United Nations	2002	Rapport annuel du Coordonnateur Résident Mauritanie 2001
United Nations Development Programme	2003	Human Development Reports 2003: Mauritania
UNDP	June 2004	Forty two years of assistance in Mauritania: an Overall picture.
UNDP	2002	Objectives of the Millenium in Mauritania.
US Dept of State	2004	Mauritania Background Information
US Dept of State	2004	Mauritanian Consular Information Sheet
Woodside Energy Limited	18-nov-02	Environmental Standards and Aspirations
Woodside Energy Limited	mai-04	Waste Management: Incineration and Recycling Study.
Woodside Energy Limited	mai-04	Waste - Scope of Work of Treatment in Nouakchott
Woodside Energy Limited		Woodside Environmental Standards and Aspirations
Woodside Energy Limited		Woodside Waste Management Guidelines
Woodside Energy Limited		The Woodside Group of Companies Health and Safety Policy
Woodside Energy Limited		The Woodside Group of Companies Environmental Policy
Woodside Energy Limited	mars-03	Environmental Impact Statement for the Proposed Chinguetti Development Project : Local Stakeholders Workshop

Author	Date	Title of Document
Woodside Energy Limited	juil-04	Chinguetti Social Impact Assessment Overview
Woodside Energy Limited	mars-03	Environmental Impact Statement for the Proposed Chinguetti Development Project: Overview of Stakeholder Consultation Strategy
Woodside Energy Limited	Unknown	Chinguetti Opportunity Project: The People of Mauritania
Woodside Energy Limited	Unknown	Chinguetti Opportunity Project: A Country of Contrasts
Woodside Energy Limited	Unknown	Chinguetti Opportunity Project: The Banc d'Arguin
Woodside Energy Limited	Unknown	Chinguetti Opportunity Project: The Ancient Town of Chinguetti
Woodside Energy Limited	Unknown	Chinguetti Opportunity Project: Mauritania's Fisher
Woodside Energy Limited	Unknown	Chinguetti Opportunity Project: The Chinguetti Opportunity Project
Woodside Energy Limited	2003	European Stakeholder Dialogue April 7th To 16th 2003 On The Proposed Chinguetti Development Project, Mauritania
Woodside Energy Limited	2003	Chinguetti Development Project Stakeholder Engagement Workshops On Environmental Impact Assessment Nouakchott June 25 & 26 2003
Woodside Energy Limited	2003	Annex 3: Report Back To Stakeholders Woodside Mauritania Ltd Report Back To Stakeholders On The European Stakeholder Dialogue September 15th To 26th 2003 On The Draft Environmental Impact Statement For The Proposed Chinguetti Development Project, Mauritania
Woodside Energy Limited	2004	Chinguetti Development Project Final Draft Environmental Impact Statement
Woodside Energy Limited	2005	Liste des Principales ONGs Nationales de l'Environnement ou ayant un volet environnement
World Bank	2003	Mauritania-Second Mining And Hydrocarbons Sector Capacity Building Project
World Bank	2002	Memorandum Of The President Of The International Development Association To The Executive Directors On A Country Assistance Strategy Of The World Bank Group For The Islamic Republic Of Mauritania
World Bank	2002	World Bank Response to Slavery Petition
World Bank	2004	Mauritania Data Profile

Author	Date	Title of Document
World Bank	2004	Mauritania Social and Economic Data
World Bank	2003	Mauritania Communications and IT
World Bank Urban Development Program	2001	Nouakchott, Nouadhibou and Kaedi Strategic Urban Environmental and Social Assessment Draft Summary Report
World Bank Urban Development Program	2001	Mauritania-Urban Development Program
World Bank Urban Development Program	2001	Project Appraisal Document On A Proposed Credit In The Amount Of Sdr 55.8 Million (Us\$ 70. Million Equivalent) To The Islamic Republic Of Mauritania For An Urban Development Program
	déc-03	Water for Desert Project, Nouakchott, Mauritania. The use of Water Hyacinths to Treat Waste Water.
World Bank, Ministry for the Rural Development and the Environment	April 2003	Project of Rural Development Community, social Evaluation report.
World Health Organisation	2002	Mauritania Core Health Indicators
World Health Organisation	2002	Mauritania Food Prod & Cons, Food Safety Regs and Hygiene
World Health Organisation	2004	List of African Health Ministers
World Health Organisation	2004	Mauritania Hygiene Code

Annex C

Stakeholder Consultation Lists

- Preliminary target stakeholder list
- November – December 2004 Consultation Programme
- March 2005 Consultation Programme

Preliminary List of Stakeholders for SIA Consultation – Prepared November 2004 prior to initial mission

Consultation will occur through one on one meetings, workshops and group meetings. Some stakeholders are not present in Mauritania (largely NGO's) and these will be consulted following the in-country visit. These are largely based in Europe and The United States. The following table provides an outlines of those stakeholders we want to meet for one on one consultation.

Category	Stakeholder Group
Government of Mauritania	Ministry of Mines and Industry
	Ministry of Fisheries and Maritime Economy
	Ministry of Rural Development and Environment
	Ministry of Economic Affairs and Development
	Ministry of Health and Social Affairs
	Ministry of Finance
	Ministry of National Education
	Ministry of Labour and Public Works (Ministere de la Fonction Publique et du Travail)
	Ministere de Hydraulique et Energie
	Office Nationale de la Statistique (Statistics Office)
	Presidents Representative in each city (the Wali)
	Communaute Urbaine Nouakchott (CUN)
	Urban Development Agency (ADU)
Nouakchott Hospital	
Special Government Groups	Parc Nationale de Banc Arguin (PNBA)
	Parc Nationale de Diawling (PND)
	Commissariat aux Droits de l'Homme a la Lutte COntre la Pauvrete at L'Insertion
Industry Representative Groups	Federation Nationale de Peche (FNP)
	Employers Federation (Confederation Generale des Employeurs de Mauritanie (CGEM)
Unions	Union des Travailleurs de Mauritanie (UTM)
	Confederation Generale des Travailleurs Mauritaniens (CGTM)
	Confederation Libre des Travailleurs de Mauritanie (CLTM)
	Federation Libre due Syndicat Professionel des Dockers (Dockworkers Union)
IGO's	World Bank
	International Monetary Fund (IMF)
	United Nations Development Programme (UNDP)
	European Commission (EC)
	World Conservation Union (IUCN)
	World Health Organisation (WHO)
Commission Nationale de l'UNESCO a Nouakchott	

NGO's in Mauritania	Tenmiya
	AMDPE – Mauritanian Association for the Development and Protection of the Environment
	ONG ESPOIR - Hope
	Espoir Sans Frontieres
	ONG GLOBE – Mauritanian Association for the Preservation of the Environment
	ECO – DEV – Eco Development
	ADD – Association Development Durable (Sustainable Development Association)
	Sauvegarde de L'Environnement (Safeguard the Environment)
	PANE – Plan D'Action Nationale d'Environnement (National Action Programme for the Environment and Sustainable Development)
	Agence Francaise de Developpment
	STOP SIDA
	Association de Bienfaisance pour les Desherites du Sahel
	Organisation Mauritanienne pour l'Encadrement at le Developpment
	POP – DEV – Population et Development
	Terre Vivant
	Groupement Nationales des Associations des Cooperatives Agro-Silvo Pastorales en Mauritanie (GNAP)
Mauritanian Red Crescent	
Agir Contre la Parvrete (ACP)	
Research Organisations	GRET – Group for Research and Technology Exchange
	IMROP – Mauritanian Institute for Fisheries and Oceanographic Research
	GTZ – German Society for Technical Co-operation
	Centre Nationale d'Hygiene
	L'Ecole National de Sante Publique
	L'Institut Mauritanien des Spécialités Médicales
Other	SOGECO – Societe Generale de Consignation et d'Enterprises Maritimes
	Schenker – Woodside Contractor
	Dr. Melhelm Hannah
	University of Nouakchott
	Nouakchott Chamber of Commerce
	Mauritanian Association of Religious leaders (oulema)
	TIVISKI
	Commercial Fishing Companies
	Societe Mauritanienne pour la Commercialisation du Poisson (SMCP)
	Societe Indsutrielle de Peche
International NGOs in Mauritania	UNICEF
	Caritas
	World Vision
	Peace Corps
	LWF – Lutheran World Foundation
	Comite internationale de la Croix Rouge (CICR)

	Adventist Development And Relief Agency International (ADRA)
International NGO's	WWF
	Oxfam
	Netherlands Commission for EIA
	UNESCO
	Human Rights Watch
	Amnesty International
	International Federation of Human Rights
	International Red Cross
Government of Senegal	
Research	Institut de Recherche et de Développement (IRD)

NOVEMBER –DECEMBER 2004 – MISSION SUMMARY OF STAKEHOLDER CONSULTATION

Date	Stakeholder Type	Stakeholder Group/ Organisation	Location (City or Village Name)	Forum (meeting/ workshop)	Number of Stakeholders
24/11/04		Woodside Contractor, Schenker	Nouakchott	Meeting	Karim Azaiz, President Director.
24/11/04	NGO	Local NGOs	Nouakchott	Workshop	Dr Abdelkader Ould Mohamed Saleck (PANE); Mr Abdellahi Ould Maaloum, Chief Service Développement Communicataire (PNBA); Monsieur Ahmed Ould Kleib, President ONG (APEAH); Dr Bah Ould Moctar Sidy, Directeur, (PND); Dr Cherif Abdullatif (UICN); Monsieur Lemhabu Ould Ahmed, ONG Sauvegarde de l'Environnement; M Sidi Ould Ahmed Cheine (Tenmiya); Monsieur Hacem Ould Taleb, President (GNAP Mohamed);
24/11/04	Professional Organisation	Federation National de Peche	Nouakchott	Meeting	M Mohamed Mahmoud, General Secretary.
25/11/04	NGO	National Park	Nouakchott	Stakeholder Meeting	Dr Bah O (DB) – Director of Parc National du Diawling; Moctar Sidy (MS) – Director of Parc National du Diawling.
25/11/04	NGO	National Park	Nouakchott	Stakeholder Meeting	Mr Abdullah Ould Maaloum, Chef Service de Développement Communicataire (PNBA)
29/11/04	All types	Séminaire sur les Impacts du Projet de Chinguetti	Hotel Ngor-Diarama, Dakar	Stakeholder Workshop	Ouverture par le Ministère de l'Environnement et de la Protection de la Nature; Présentation Woodside, ERM et OSRL ; Participants : Ministries Industry, Justice, Environment, Navy, Press, Parcs Nationaux, Organisations professionnelles de pêche, Research Institutes, WWF
30/11/04	Local population	Fishermen communities	Kayar, Fass Boye, Lompoul, Senegal	Village Visit	Chef de Village and other representatives; Jeremy Coleman, Jenny Heap and Moctar El Hacem, ERM Team (KJ, CH, Aude Delescluse - AD).
1/12/04	Local Population	Fishermen communities	Birette, Ndiago, Ebden, Parc du Diawling, Mauritania	Village Visit	Dr Moctar Sidy Bah O, Director; Amadou Diam Ba, Technical Advisor.
2/12/04	Local Population	Fishermen communities	Voum Lebhar Reserve de Chatt Boul, Mauritania	Village Visit	Chef de Village; approximately 15 other attendants to village meeting
02/12/04	International Organisation	World Bank	Nouakchott	Meeting	Amadou Oumar BA (Deputy Director, World Bank), Salamata Bal (Social Development Specialist, World Bank),
02/12/04	International Organisation	UNDP	Nouakchott	Meeting	Maouloud N'Diaye,
04/12/04	Business representative	TVISKI	Schenker Restaurant, Nouakchott	Meeting	Nancy Abeiderrahmane, TIVISKI.
04/12/04	Research Institute	Mauritanian Institute for Oceanographic and Fisheries Research	IMROP Headquarters, Nouadhibou	Introductory Meeting	Sidi Mohamed OULD SIDNA, Director of IMROP; other IMROP reps.
5/12/04	All types	Séminaire d'information et de	IMROP,	Stakeholder	92 attendants (see attached sheet)

Date	Stakeholder Type	Stakeholder Group/ Organisation	Location (City or Village Name)	Forum (meeting/ workshop)	Number of Stakeholders
		consultation ; Présentation des activités de Woodside	Headquarters, Nouadhibou	Workshop	
05/12/04	International Organisation	IMF	IMF Office, Central Bank Complex, Nouakchott	Meeting	Hans, Braham Sarra (IMF), Mama Yarie Koita (IMF).
05/12/04	International Organisation	WHO	WHO Office, Nouakchott	Meeting	Lemlih Ould Baba, Chief of Public Health and Environment, WHO
05/12/04	Government	Ministry of Rural Development and Environment	Nouakchott	Meeting	Directeur de 'Environment, El Hadrami Ould Banheine, Frédéric Marret, Technical Adviser
06/12/04	Government	Ministry of Economic Affairs	Nouakchott	Meeting	Mr Mohamed Ould Fourad, Secretary General
06/12/04	Government	Plan d'Action National pour l'Environnement et le Développement Durable	PANE Headquarters, Nouakchott	Meeting	Dr Abdelkader Ould MOHAMED SALEK,
06/12/04	Local NGO	Tenmiya	Tenmiya Office,	Meeting	Director, Tenmiya, Mohamed Ould Farad.
07/12/04	Government	Commissariat Aux Droits de L'Homme de le Lutte et de L'Integration Pauvrete	Commissariat Office, Nouakchott	Meeting	Commissaire – Mr Hamadi Ould Meimou, Adjunct Commissaire, Director of Poverty Reduction – Ely Ould El Hads, Director of Integration – Ahmedou Ould Ely (P:662 0993)
07/12/04	Government	Office of National Statistics	ONS Nouakchott	Meeting	Sidna Ould N'Dah, various ONS officers,
07/12/04	International Organization	IMF	IMF Office, Central Bank Complex, Nouakchott	Follow-up Meeting	Sarra Braham, Ecomonist,
07/12/04	Government	Ministry of Economic Affairs and Development	Ministry of Economic Affairs Development, Nouakchott	Meeting	Mokhtar Ould Mohamed Yakya, Director of Social Development
07/12/04	Operator	Woodside	Woodside office, Nouakchott	Meeting	Yves Delnatte, Operations Manager
07/12/04	Local NGO	Association des Femme du Developpement (NGO)	AFD Office, Nouakchott	Meeting	Dilit Zei'n + 1
07/12/04	Local government/City Hall	Communate Urbane de Nouakchott (CUN)	CUN Office, Nouakchott	Meeting	Secretary General CUN- Sidi Ould Naouloud, Charge de Mission –Cabinet du President de la Commune Urbaine de Nouakchott- Mohamed Abdellatif Ould Sidi, Chef de Service Environmental – Ahmed Jiddou Ould Bobo (P:631 42 89), Directeur de Gestion de Service d'Internet Communautaire (DGSIC) a la Commune Urbaine de Nouakchott – Abdellative Ould Mohamed Aberrahame. Consortium of Mayors Nouakchott

Date	Stakeholder Type	Stakeholder Group/ Organisation	Location (City or Village Name)	Forum (meeting/ workshop)	Number of Stakeholders
08/12/04	International Organisation	WHO	WHO Headquarters, Nouakchott	Follow-up Meeting	Lemlih Ould Baba, Chief of Public Health and Environment; Dr Kharchi and Ms Kelly, Economist
08/12/04	Government	Ministere de la Sante et Affaires Sociales (Ministry of Health and Social Affairs)	Ministry office, Nouakchott	Meeting	Mme Khadjetou Doumbia, Particulier du Ministre; Directeur de Affaires Sociales; M. Dia, Advisor, M Idoumou Ould Mohamed Vall, Directeur de la Sante, Publique/Protection Sanitaire.
08/12/04	Training Institute	Institute National de Promotion de la Formation Technique et Professionnelle (INAP)	INAP Office, Nouakchott	Meeting	Mohamed Melainine Ould Eyih, Omar Ould Bellal, Ministry of Mines
08/12/04	International Organisation	European Commission	Nouakchott	Meeting	Mario Carvajal- Attaché Fishery, Bruno Gotta- Attaché Rural Development, Environment, Hydrology and Food Security
08/12/04	International NGO	International Federation for Human Rights	Woodside Office, Nouakchott	Meeting	Cheickh Saad Bouh Kamara Dr; Sociology, Int'l Consultant. Omar Ould Bellal, Ministry of Mines, Chinguetti Project
09/12/04	International NGO	World Conservation Union (IUCN)	IUCN Office, Nouakchott	Meeting	Programme Regional Conservation Marine – Pierre Campredon, PRCM, Director
09/12/04	Local NGO	ECO Development	Eco-Dev Office, Nouakchott	Meeting	Sidi Ould Mohamed Lemine, Director
09/12/04	International Organisation	UNDP	UNDP Office, Nouakchott	2 nd Meeting	Maouloud N'Dyaie, Thematic Leader Environment; Cécile Molinier, Country Rep./Resident Coordinator
09/12/04	Professional Organisation	Conseil National du Patronat Mauritanien	CNPM Office, Nouakchott	Meeting	Seyid Ould Abdellahi, General Secretary
09/12/04	Government	Ministere de l'Interieur, des Postes et Telcommunication (MIPT)	MIPT Office, Nouakchott	Meeting	Directeur Amenagement Territoire Action Regionale, M. Moctar Ould Hacen
09/12/04	Government/Research Institute	Centre Mauritanien d'Analyse Politique	CMAP Office, Nouakchott	Meeting	Abderrahim DIDI, Macroeconomist CMAP
10/12/04	Local population	Fishermen Communities	Coast, North of Nkt and South of Banc d'Arguin, between NKT and Mhijarat (120 km)	Village visits	Chef de village and village leaders, ERM Team (KJ, AD); Moctar el Hacen, Woodside; Abdellatif Cherif, IUCN.
13/12/04	Bilateral Aid Agency	Agence Française de Développement (AFD – French Aid Agency)	Paris, France	Phone interview	Stéphanie Pichard, Ghargée de mission (Environment), Aude Delescluse, ERM;

Annex D

Draft Terms of Reference

Introduction

Woodside Mauritania Ltd (Woodside) has commissioned Environmental Resources Management Australia Pty Ltd (ERM) to conduct a Social Impact Assessment (SIA) for the Chinguetti project (the Project) in Mauritania.

The purpose of this document is to provide stakeholders with an opportunity to understand the proposed Terms of Reference (ToR). A series of workshops in Nouakchott, Mauritania, and Dakar, Senegal during March 2005 will seek broad agreement on the Terms of Reference to allow this document to be finalised in early April 2005.

A Terms of Reference Development Report has been prepared that outlines the basis for the scope of the ToR. The ToR Development Report document is available to stakeholders by contacting Woodside.

Background

Project Description

A summary project description has been provided to stakeholders in the Chinguetti Development SIA Information Pack. Additional copies are available on request to Woodside.

A detailed project description has been published in the Project's Environmental Impact Statement (EIS) and is also available on Woodside's website at www.woodside.com.au.

Social Impact Assessment and Sustainability

The SIA is one of a number of initiatives being undertaken by Woodside to enhance the contribution of its operations to the development of Mauritania. Other significant activities include:

- providing capacity building in Environmental Impact Assessment (EIA);
- local procurement, employment and oil industry capacity building (at including requirements under the terms of the Production Sharing Contract);
- providing leadership in oil spill emergency response capability planning in Mauritania and Senegal including developing the capacity of Government authorities to respond to any oil spill incidents in the busy shipping lanes off these coastlines; and
- corporate social investment projects including an investment by Woodside (in excess of AUD\$1m in 2005) in Groupe Projet de Chinguetti (GPC), which will ensure GPC personnel have access to training providers and are prepared for the commencement of first oil production in 2006.

SIA is a systematic process to examine potential socio-economic impacts of a project with the objectives of reducing negative impacts on local communities and wider society and optimising potential benefits. The process is strongly enhanced by the participation of those most likely to be impacted and other stakeholders (ie. those affected by, or who are able to affect, the project).

ASSESSMENT OF PROJECT INFLUENCE

Overview

This annex presents ERM's preliminary assessment of the extent of influence of the Chinguetti Development Project and conclusions on the key impacts to be addressed in the SIA and through stakeholder consultation. These were prepared following the November-December 2004 in-country mission and were subsequently reviewed.

Methodology

The assessment of project influence was based on the International Finance Corporation Good Practice Note, "*Addressing the Social Dimensions of Private Sector Projects*", ERM's experience of similar oil projects in other developing countries, and the consultation outcomes. The assessment considers the extent of project influence on the basis of:

- geographic or spatial extent including transboundary impacts; it also distinguishes the project footprint (*zone d'influence directe*) and the project influence's extended area of (*zone d'influence élargie*);
- temporal extent (short or long term impacts); and
- type of impact including direct (routine and non-routine) or cumulative.

Factors considered to determine the extent of influence (during planning, construction, operational and decommissioning phases of the Project) include equity, health, lifestyle and culture, social conflict, employment and labour, cultural property, vulnerable groups, social services / infrastructure, community organisation and local institutions, natural resource management/land use, economy and population.

Preliminary Identification of Issues Pre-Consultation

Prior to the commencement of the November – December scoping mission, ERM identified a potential range of issues, based on the factors and criteria listed above, ERM's experience and discussions with Woodside, namely:

- oil revenues and contribution to economic change;
- use of oil revenues for poverty reduction or other purposes;
- conflict over oil revenues within Mauritania and between the Government's of Senegal and Mauritania;
- conflict between sections of the community as a result of perceptions of equity in relation to oil revenues;

- concern that increased wealth available to existing powerful section of the community could lead to exploitation of potentially vulnerable groups including ethnic minorities, young workers and females;
- exacerbation or improvement of existing socio-economic conditions in Mauritania and Senegal including poverty, education, health, and the condition of women or indigenous people;
- increase in port activities and related impacts;
- employment and procurement opportunities/capacity to take advantage; and
- changes to labour conditions and standards;

Interactions Matrix

The preliminary identification of issues and discussions with stakeholders during the scoping phase were used to develop an impact table and an interactions matrix for the Project.

Table D.1 systematically categorises potential impacts according to:

- project phase (from planning through to decommissioning);
- project activity or source of impact;
- potential socio-economic receptors and area of impact;
- impact description and consequences; and
- implications for vulnerable groups.

Figure D provides a preliminary assessment of the relationship between project activities and identified receptors as well as the nature of the potential related impact (positive, negative, uncertain).

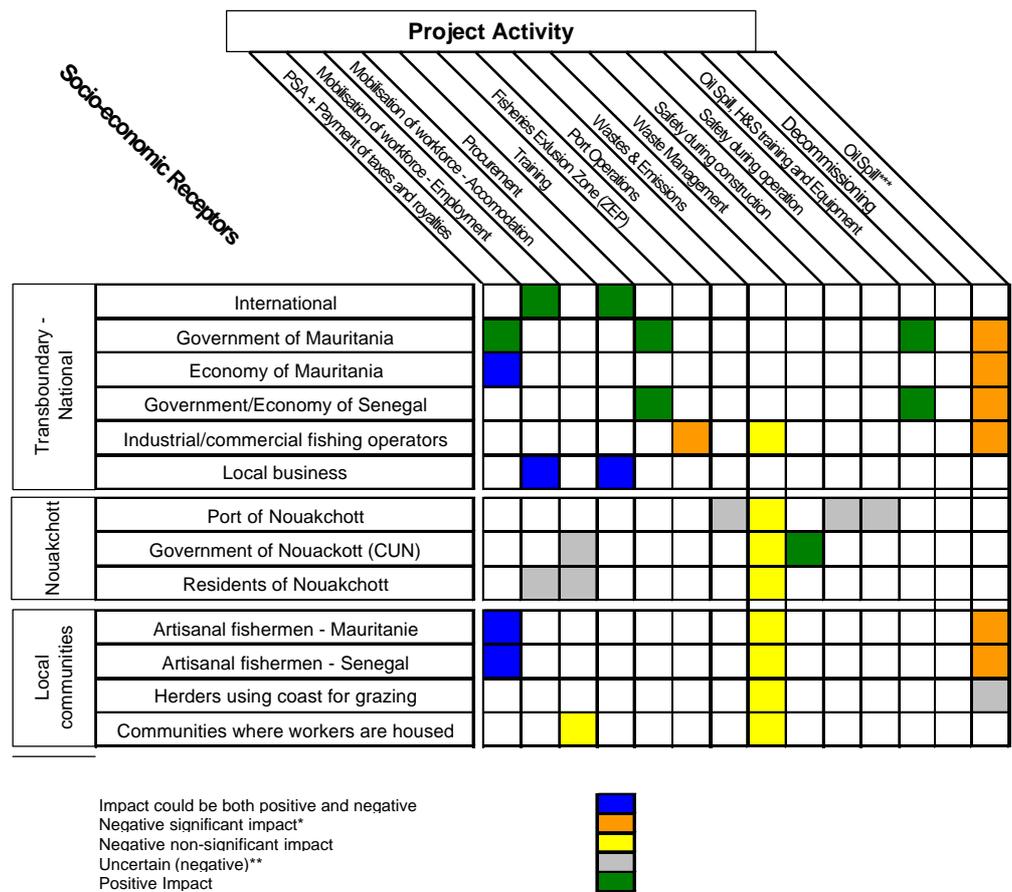
Table D.1 Preliminary Assessment of the Impacts of the Project Activities: Interaction Matrix Key

Project Phase	Project Activity	Area of Influence	Potential Direct Impact	Induced Impacts	Vulnerable Groups Potentially Affected
Exploration/ Construction	Impact Assessments	Senegal-Mauritania	Tensions between Governments of Senegal and Mauritania over spread of project costs and benefits.		
	Employment	Nouakchott, and region	Increased direct employment in Nouakchott.	Loss of skilled labour from other sectors particularly mining and fisheries, immigration, unequal access to employment, increased inequality	Urban poor, black Mauritians
	Procurement from local business	Nouakchott, and region	Increased activity for existing businesses. Increased business service diversity through larger or new (viable) markets. On-spend multiplier effects of initial spend and indirect employment.	Unequal access to business procurement, increased inequality Unequal access to market	Black Mauritians
				Increased immigration and exacerbation of pressure on social infrastructure	Urban poor
	Mobilisation of workforce	Nouakchott Nouakchott Nouakchott	Increase in cost of living. Increase in expatriate skilled workers. Immigration of skilled and unskilled labour.	Impoverishment of the poor Increased knowledge transfer and local spending Increased pressures on poor social infrastructure through additional demands; increased demands for housing; potential increase in HIV/AIDS and Malaria, exacerbation of poverty; increased pressure on limited CUN's budget	Urban poor Urban poor, women and children
	Creation of a waste yard (location to be determined)	Nouakchott	Emissions impacts (noise, odour, dust) on any nearby communities.		Urban poor in communities closest to port area

Project Phase	Project Activity	Area of Influence	Potential Direct Impact	Induced Impacts	Vulnerable Groups Potentially Affected
Operation (Routine)	Production sharing, Payment of taxes and Royalties	Mauritania	Revenue to Government of Mauritania.	Growth; Increase in government expenditures on poverty reduction: health, education, water, infrastructure; Impact on exchange rate, poor oil revenue management, lack of transparency; Increased use of local petroleum, poor allocation of resources, political tensions. Increased retail prices and rents may result from increased Government expenditure,	Urban poor
		Mauritania	Change in the structure of State Income.	Increased diversity of State income;	
		Mauritania	Appreciation of exchange rate, improvement in balance of payments.	Increased dependency on oil resources Reduced competitiveness of exports. Potential vulnerability to fluctuations in the exchange rate.	
	Employment	Nouakchott, and region	Increased direct employment in Nouakchott.	Loss of skilled labour from other sectors particularly mining and fisheries, immigration, unequal access to employment, increased inequality.	Urban poor
	Procurement from local business	Nouakchott, and region	Increased activity for existing businesses. Increased business service diversity through larger or new (viable) markets. On-spend multiplier effects of initial spend and indirect employment.	Unequal access to business procurement, increased inequality.	Black Mauritians
				Unequal access to market.	Black Mauritians
	Mobilisation of workforce	Nouakchott	Increase in cost of living.	Increased immigration and exacerbation of pressure on social infrastructure.	Urban poor, women and children
		Nouakchott	Increase in expatriate skilled workers.	Impoverishment of the poor.	Urban poor
		Nouakchott	Immigration of skilled and unskilled labour.	Increased knowledge transfer and local spending. Increased pressures on poor social infrastructure through additional demands; increased demands for housing; Potential increase in HIV/AIDS and Malaria exacerbation of poverty; increased pressure on limited CUN's budget.	Urban poor, women and children

Project Phase	Project Activity	Area of Influence	Potential Direct Impact	Induced Impacts	Vulnerable Groups Potentially Affected
	Training	Nouakchott	Enhanced skill base in local communities.	Improved economic well-being of communities; Unequal access to training; Potential 'brain drain' from other activities.	
	Port Operations	Port of Nouakchott	Congestion in port operations.	Economic inefficiencies at port..	
	Waste Management	Nouakchott	Improved waste management through recycling and waste collection; Knowledge transfer of waste management expertise.	Improved waste management capacity in Nouakchott.	
	Safety exclusion Zones	Off-shore, vicinity of Chinguetti field (80 km west of Nouakchott)	Emissions Decrease in risk of oil spill through reduced risk of facility damage and tankers/trawling boat collision oil spill.	Reduction of fisheries catch of trawlers who currently fish in these zones.	
	Produced Formation Water Discharge	Off-shore, vicinity of the FSPO within about 2,500m, confined to near surface 6m (80 km west of Nouakchott); Mauritanian Coastline	Possible changes in fish stocks and fish migration routes; Decrease in fish catch.	Decrease fishing income.	Coastal fishing communities
Operation (Non-routine)	Oil Spill	Mauritanian and Senegalese Coastline	Disruption of livelihoods of fishing communities through water pollution and destruction of fish stocks.	Degradation of health conditions; Impoverishment, degradation of socio-economic well being of vulnerable villages, rural exodus.	Coastal fishing communities
Decommissioning	End of Production	Mauritania	Reduction in State revenues.	Decrease in social expenditures and poverty reduction programs.	Urban poor
	Demobilisation of workforce	Nouakchott	Unemployment.		
	Procurement	Nouakchott	Unemployment and reduced local procurement.		

Figure D.1 Project Interactions Matrix – Nature of Impacts



* Level of impact will depend upon mitigation or compensation measures adopted by the project, as yet not defined
 ** Level of impact is uncertain and requires further information and analysis to determine
 *** Contingent on event occurring; if it does impact will be significant

Description of Significant Impacts

Introduction

Classification of impacts

The Project activities and related impacts can be described as routine (common or regular project activities expected to occur) and non-routine (exceptional events not expected to occur). Cumulative impacts occur where more than one aspect of this Project, or other projects, may act together to cause an impact greater than either single aspect.

The impacts can be categorised as follows:

- Routine
 - Impacts associated with increase in state income—thanks to additional revenues from oil exports
 - Impacts associated with oil development operations

- Non-Routine: Oil Spill in Mauritania and Senegal
- Cumulative

Geographic scope

Generally, the geographic scope differentiates between the project footprint and the project influence's extended area. Here, the geographic scope has been defined, according to the preliminary assessment of project influence, the outcomes of the Environmental Impact Assessment and based on the above classification of impacts.

Thus, as the Project is an offshore project with very few onshore activities limited to the port area, airport, accommodation/office and the waste yard, as it could strongly affect the coastal villages livelihoods in case of an oil spill, and as it will generate significant additional revenues, the geographic scope could be defined as follows:

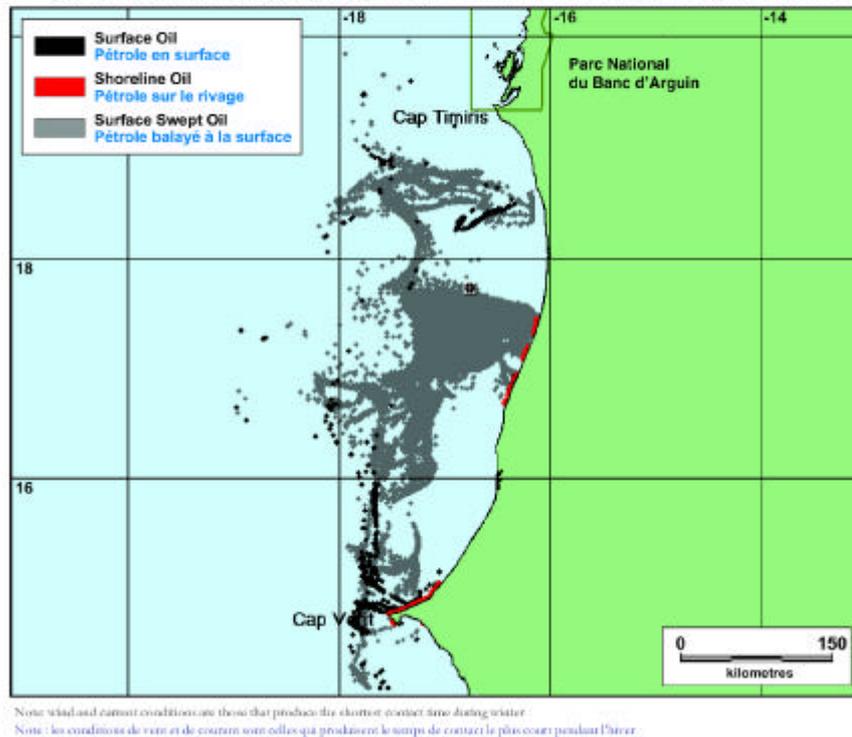
- Project footprint:
 - Coastal villages in Mauritania and Northern Senegal from Dakar to St Louis—related to non-routine impacts of an oil spill;

Note: Oil spill modelling, described in the EIS, served as a basis to draw the physical limits of the areas to be considered in the SIA. The models demonstrate—based on prevailing winds and currents—that areas south of the Chinguetti field as far as Dakar are at risks. Figure D. shows the area modelled to be most at risk in the event of an oil spill from the Chinguetti development.

- Nouakchott and its region—related to routine impacts associated with oil development operations.
- Project extended area of influence: entire economy of Mauritania, hence territory—related to routine impacts associated with increase in state income.

Finally, transboundary impacts are linked to the consequences of an oil spill that would affect Senegal. This risk, however unlikely is the event, might in turn impact the relations between the two countries.

Figure D.2: Simulation of the predicted path and area of shoreline contact for a hypothetical 140,000 barrel release of oil from the Chinguetti field over 14 days



Overview

As said, the Project is an offshore project and there will be very few activities onshore in Nouakchott and suburban areas (port, airport, accommodation/office, waste yard). Offshore, in the area around the floating production storage and offtake (FPSO) facility, the exclusion zones might have some impacts on commercial fishing during operation and will be subjected to the Fisheries Interaction Management Plan that is being developed in parallel with the SIA.

The decommissioning phase of this Project will be relatively minor. The FPSO will be relocated to another project location. The onshore activities will cease but are likely to be replaced or have their infrastructure taken up by other similar activities, for example, vessel supply operations at the port, land to platform transfers from Nouakchott International Airport, office / accommodation in Nouakchott and a waste-storage and treatment facility in the city.

Consequently, the majority of **routine impacts** will be derived from the injection of oil revenue, employment and procurement, the presence of the exclusion zone and the onshore waste and ancillary facilities.

The **key non-routine impacts** would be those arising from an oil spill, with significant negative implications for the industrial and artisanal fishing communities in Mauritania and Senegal and the economies of both countries.

Cumulative impacts would be derived from the effects of the Project combined with other projects or external factors to the Project. This includes the construction of the road to Morocco, the poor socio-economic conditions in Parc du Diawling in part caused by the construction of the Djama Dam and the cut in the Langue de Barbarie, and additional oil developments.

Routine Impacts – Increase In State Income

Increase in Government Revenues Resulting from Oil Development

As the first petroleum project in Mauritania, the Chinguetti Development Project will have a significant impact on the fundamentals of Mauritania's economy. Ultimately it is likely (depending upon Government of Mauritania spending decisions) to cause changes including: increased household disposable incomes, income security/sources of income, the structure of the economy and have implications for new skills development.

Increase in Government income, GDP, exchange rates, exports, and balance of payments over the project period will depend on production levels and costs, oil prices and management of oil revenues and the economy. However, it is clear the impacts of increased revenue to Government will be much larger than the direct economic impact of the Project. The oil and gas information group Rigzone has estimated that oil export will add about US\$100 million to Mauritanian government revenues by 2008, increasing them by a quarter.⁵

The macroeconomic impacts of the Project will, to a large extent, depend on the way in which the **revenues** are spent.

There are a number of ways in which the revenues could be spent and all of these will have different impacts on the Mauritanian economy.

- If oil revenues are spent on programmes such as health, education, housing and roads, then this is likely to *alleviate poverty* and improve prospects for future economic growth. A healthy, skilled workforce is more likely to be able to participate in economic development in the future.
- If revenue is used to retire debt, then this will *reduce the ongoing cost of servicing debt* and free up more money for poverty reduction programmes immediately and in the future.

⁵ <http://www.irinnews.org> 30 November 2004

- On the other hand, if revenues are used to purchase imported consumer goods (and oil revenue flows out of the Country) then there may be few macroeconomic benefits from the Project beyond the enjoyment of these goods.
- A large increase in government spending on wages and other items (such as building materials) over a short period of time may also have **inflationary impacts**

Poverty Reduction / Exacerbation

Sixty-nine percent of the population in Mauritania live below the poverty line (ie. on less than \$2US/day). Its government has outlined its economic and poverty reduction strategy in the *Poverty Reduction Strategic Paper* and set four main goals: improve economic growth; achieve growth in poor sectors; expand human development, access of social services, health and education; and enhance governance and institutions. Oil revenues could significantly help the government to achieve these goals.

There may be some barriers to accelerating spending on poverty reduction programmes in the short term. Firstly, the ability to spend a large amount of new revenue effectively is likely to be limited due to capacity constraints within government administration and human resources on the ground to implement programmes. For instance, a programme to improve health outcomes will involve the building and staffing of new facilities. For programmes to have long-term benefits, the cost of running facilities will have to be consistent with expected future revenues.

⇒ The approach of the social impact assessment would be to outline the potential impacts of revenue scenarios on priorities established in the *Poverty Reduction Strategic Paper* and other policy documents adopted by the government. Other countries' experiences (oil producers or natural resources rich countries), both positive and negative, will also be used to provide some context to the potential benefits that could arise from additional state income from the Project. Possible case studies include Nigeria, Botswana, Equatorial Guinea, Timor, Kuwait, and Chad.

Impact on Exchange Rate

The **exchange rate** could also be impacted by the Project. The extent of the impact will depend on the size of the flows of revenues. As well as impacting on the overall level of the exchange rate, the difference between the market and official rates could be impacted. An appreciating currency should have a downward pressure on local prices paid for imports which may reduce the costs of business inputs such as petroleum but make exporting goods more difficult and other exports (eg. iron ore) less price competitive. With very few local manufacturers, exchange rate volatility due to oil price fluctuations would have implications for the urban poor (not

engaged in subsistence food production) with imports such as food, clothing, fuel and basic medicines.

⇒ The IMF would be a source of information to track changes to the exchange rate and assess the likely impacts of an appreciation of the exchange rate on the local economy.

Routine Impacts – Oil Development Activities

Routine impacts related to oil development include, direct and indirect consequences of oil development from the construction phase to the decommissioning phase.

Increase in Economic Activity

A key macroeconomic impact is expected to be an increase in **economic activity**. This is likely to occur through increased exports, through activities by companies supporting oil production and procurement of local goods and services.

Further rounds of business investment (first in direct supplier businesses and then further back in the supply chain), employee consumption and government spending that result of the initial stimulus of the Project, will 'induce' further economic growth.

⇒ Measuring the contribution of oil exports to GDP will be based on information on oil production (assuming it is published). Indirect economic activity could be assessed based on indirect employment and likely multipliers.

Procurement

Direct effects are likely to be relatively small given the undeveloped national economy. The Mauritanian private sector is unlikely to be able to supply many of the goods and services needed by the Project – especially in exploration and construction phases and even though some contracts were broken down into relatively small work-packages.

Indirect effects from the procurement activities and routine operations of key suppliers, however, (directly related to servicing the Project) are likely to be larger than direct impacts as they will involve higher proportions of unskilled labour and local commodity products.

Yet, combined with business ownership being concentrated in relatively few families, procurement opportunities and economic growth could widen the gap between the most vulnerable urban poor and the richer, powerful segments of the community.

Assessing the distribution of procurement among local providers procurement, while problematic, is also key, as it could increase inequality

and poverty or on the contrary augment the benefits of increased economic activity. Policies on local procurement and monitoring of employment policies in the supply chain will be issues for the management of the Project.

Employment

Direct employment will be limited, since the oil industry is not labour intensive and does not create many jobs, especially during the operation phase.

Indirect employment impacts will be derived from the procurement processes and induced economic activity.

The hierarchical/clan structure extends to government and influences access to jobs, key positions and contracts could further hindering the opportunities of the very poorest residents of Nouakchott that could exist further down in the supply chain.

Moreover, unrealistic expectations of the prospect of employment or business expansion as a result of a direct relationship with the Project could cause a number of impacts: community conflict, widening inequality, migration into Nouakchott, hostility towards new or continuing direct foreign investment, and consequent deterrence of further foreign investment and especially in the oil and gas sector.

Competition for skilled workforce

Higher wages in the petroleum sector and related services have already attracted skilled labour away from other activities. The Project may continue causing a flow of skilled people from middle size industries and universities of Mauritania. In turn, the attraction of skilled workers into the oil sector could disturb the development of the other industries, and adversely impacts exports competitiveness (other than oil).

Human capital and training

The Project is likely to contribute to the development of human capital in Nouakchott. Those employed on the Chinguetti Project are to receive valuable training, and those in indirect industries are also likely to gain new skills. For instance, Woodside in Mauritania and Australia - fulfilling a commitment under the terms of the Production Sharing Contract, is training small groups of engineers. The extent of increase in human capital in other section of the population, e.g. in coastal villages, will mostly depend on the extent of training related to the oil spill contingency plan.

Inflation

Inflation could also result from companies directly and indirectly involved in the oil industry demanding (and potentially pushing up prices for) labour and local goods. Price rises for basics such as housing and food would cause

the greatest impact on the very poor of Nouakchott and, to a lesser extent, across the Country. The effective increase and anticipated increase in the number of workers in Nouakchott—expatriate, skilled and unskilled—have created land speculation trend, which resulted in higher rent prices that have been observed by many Nouakchott residents, including Woodside’s personnel.

⇒ However, since there are likely to be a number of factors impacting on prices (not least Government of Mauritania fiscal and monetary policy) it is unlikely that the social impact assessment would be able to fully isolate the impacts of the Project. Instead, inflation will need to be tracked against project developments and other independent economic events to give an indication of any inflationary impacts of the Project.

Export Competitiveness

As seen above, export competitiveness could be affected in two main ways: the attraction of skilled workers into the oil industry and increase in demands for Ouguiya due to oil exports.

Fisheries Exclusion Zones

The Fisheries Exclusion Zone will be put in place around the FPSO and is aimed at reducing the conflict between oil transport and storage vessels and fishing trawlers. The zones will however reduce the area available to trawlers but is not expected to significantly impact on fish catches or returns, since the planned perimeter around the facility lies within 500m.

Decommissioning

The greatest impact is the risk of the Government’s oil revenue dependency and diminished earning capacity in other segments of the economy. The least politically influential and those with fewest savings are likely to feel these impacts most acutely.

Immigration

Oil development predictably attracts migrants from other regions and neighbouring countries, as they perceive economic opportunities. Transient and permanent increase in the city’s population will raise demands for the already stressed, limited social infrastructures, namely health, education, water and sanitation services. This will impact disproportionately on the very poorest in the city.

In-migration has the potential to exacerbate existing health conditions in Nouakchott and introduce new diseases. Of particular concern is AIDS and malaria (the incidence of which are currently relatively low in Mauritania).

The SIA will need to consider:

- the extent to which oil development contributes to immigration from neighbouring countries to Mauritania and from inland Mauritania to coastal cities. This will need to be balanced against the impact of the construction of the Northern road Senegal-Mauritania-Morocco; and
- the impact of this immigration on health, poverty and crime in terms of risk. This evaluation could be based on scenarios using different forecasts of increased population and correlated pressure on social infrastructure.

This analysis should mostly focus on Nouakchott, as it will be the first target of immigration and is the focus of on-shore activities (albeit limited) and most employment and procurement is taking place here. Also, immigration will need to be assessed against other factors (economic, social, other project developments), as the city continues to attract poor populations from inland areas.

Non-Routine Impacts: Oil Spill

Oil spill is a risk that is present with every oil development. The potential for such an event was assessed in detail in the EIA and oil spill modelling outcomes are documented in the EIS. The EIA concluded that a spill is extremely unlikely and proposed management measures acceptable to the Government of Mauritania.

The consequences of an oil spill are recognised as highly damaging not only to the environment but would have impacts on the population of Mauritania and Senegal and especially the fishing communities. The probability of such an event occurring is so low as to warrant separate consideration and management. The impacts described below relate specifically to modelling of oil movement from the Chinguetti Project. It does not relate to the very significant amount of shipping along this coast that transports petroleum products to and from West African countries and which already present a risk of pollution to the Mauritanian coast.

An oil spill could have significant consequences on fisheries, which in turn would have significant impacts on fishing communities (who rely almost exclusively on the ocean's resources for their livelihood) and on the international fishing industry exporting from Mauritania (especially EU, Russia and China). The Project has the potential to influence all coastal communities from Nouadhibou south to Dakar.

The remoteness of these communities -- due to limited road access and poor telecommunications—remains a significant vulnerability factor. It is a significant impediment to their economic diversification and development, since it very much constrains trade with neighbouring areas and the capital. This isolation contributes to the low access to basic social services, in particular health and education.

Potable water supply is already a critical problem in many coastal villages, especially in the Parc National du Diawling, and has major consequences on the life of these communities (eg. farming, hygiene etc). An oil spill has the potential to disrupt access to potable water supplies.

The Project's direct influence in Senegal is limited to the risk of pollution from an oil spill and the related disruption of livelihoods, ie. fishery and existing coastline tourism. The way in which this risk is addressed by the Governments of Mauritania and Senegal and by Woodside has, in turn, an impact on the relations between both countries.

Cumulative Impacts

The construction of the northern road from Nouakchott to Nouadhibou, hence connecting Senegal to Morocco through Mauritania, is very likely to augment immigration trends. This could have negative consequences on health (ie. increase in STDs and HIV/AIDs, possible increase in incidence of malaria), crime and concentration of poor.

The development of other oil development projects could induce higher impacts than the Chingetti project alone.

Annex H

Case Studies

Annex H

Case Studies

Issue: Economic Volatility and ‘Dutch Disease’

One of the most common problems encountered by oil producing countries is a phenomenon termed as “Dutch Disease”. This occurs when the foreign exchange earnings from oil exports are converted into the local currency, resulting in its appreciation. This will make tradable goods more expensive and therefore less competitive in domestic and international markets. With declining price competitiveness in relation to international prices, the agriculture, manufacturing, fishing and mining sectors in Mauritania may decline leading to an increased dependence on the oil sector and diminish the diversity of the economy.

The results of inappropriate fiscal management can be seen in cases like Gabon. In contrast, the case of Botswana illustrates that good economic performance is certainly possible in a resource rich country. Activities in Angola indicate that lessons have been learned and companies, nations and the development community can work together to maintain a sustainable and diverse economy as the resource sector grows.

Lessons Learned in Gabon

Gabon is cited as one of the major examples of the ‘Dutch Disease’ in Africa as well as an example of the lack of fiscal discipline that can result from an oil boom.

In 1970, before the major oil boom in Gabon, mining accounted for more than 30% of GDP, agriculture accounted for 18% and oil was only about 26%. However, by 1990, the share of agriculture had declined to 7% of GDP, mining had fallen to 5% of GDP, while oil contributed close to half of GDP. This was partly a result of an initial appreciation of the real exchange rate following the discovery of oil. This increased the cost structure of the economy, to the detriment of the development of non-oil exports. As a result, Gabon, which was once self-sufficient in food production, became dependent on imports for over 80% of its food needs, while the manganese and uranium sub-sectors, the main products of the mining sector, have contracted over time.

During the oil boom years, Gabon initiated large expenditure programs. However, during subsequent periods of lower oil prices and lower government revenue, these programs were not cut back or postponed. Instead the Government resorted to external and domestic borrowing to cover the fiscal deficits. As a result, the debt to GDP ratio increased from about 30% in the early 1970s to about 100% during 1998 to 1999. Therefore, as a result of oil revenue volatility and poor fiscal policy, government borrowing increased, resulting in a high debt burden.

Botswana, a success in economic diversification

Despite the importance of the mining sector to the economy in Botswana, it has managed to avoid many of the economic problems associated with export booms through appropriate macroeconomic policies. These were centred around two main objectives, avoidance of external debt and stabilization of growth on one hand, and encouragement of economic diversification on the other.

As mineral revenues made up significant portion of Government revenue, fluctuations in mineral prices would affect government revenue and hence spending. The Government in Botswana maintained strict fiscal control when revenues increased and expenditures were based on longer-term expectations of earnings and revenue. Excess revenues were used to build up foreign exchange reserves which could be drawn on in years when revenue was low.

In addition, diversification was particularly important because employment in the mining sector was limited. The Government created incentives to develop jobs in manufacturing and services. Employment in these non-extractive sectors grew and by 1989, manufacturing accounted for 25% of formal employment and services accounted for 32%. Employment in agriculture represented only 4% of formal employment, however, agriculture accounted for most of the work in the informal sector, which accounts for a large percentage of employment.

Supporting Economic Diversity in Angola

In order to realise greater economic sustainability, Chevron is contributing support to Angola's existing rural population and to the development of home-grown SMEs in parallel to developments in the resource sector.

After research and discussion with key stakeholders, Chevron initiated a major new program, the Angola Partnership Initiative. The mission of the Initiative is to build human capacity with a focus on the development of small and medium-size enterprises. The primary focus areas of the program are:

- strengthening the supply of vocational training;
- expanding the supply of micro-credit;
- introducing business development services; and
- strengthening the enabling environment for social and economic development.

Under the initiative, Chevron has developed formal partnerships with the United States Agency for International Development (USAID) and the United Nations Development Program (UNDP). Together, they established a combined goal to raise US\$50 million to support this initiative. Additional partnerships and alliances are under discussion. Chevron has committed US\$25 million to support this effort.

Two projects already launched under the initiative are a program to support the revitalization of the agriculture sector and the formation of a new micro-credit bank. Both projects focus on job training and creation, and provide technical assistance and financial stimulus for locally owned small and medium enterprises.

The agricultural effort combines immediate hunger relief to the most vulnerable segment of society and longer-term agricultural development through seed multiplication and seed variety experiments. It also supports the creation of some 200 farmer associations. This effort is designed to support approximately 160,000 rural families - representing more than 600,000 individuals - with the goals of increasing food security, decreasing reliance on importation of seed, creating better access to markets and information and, ultimately, increasing rural incomes.

The planned Angola Enterprise Development Bank will provide small loans and other banking services to low-income Angolans and small businesses. The bank intends to fill a need for small-scale credit not currently covered by the commercial banking sector.

Issue: Labour Migration

The Social Impact Assessment (SIA) has identified that whilst the Project causes no direct impact, there has been and will continue to be movement of the population into Nouakchott in search of improved job opportunities.

Migration is a normal element of population growth in most societies. Cornwall and Inder (2004)¹ suggest that urbanisation has long been thought to go hand in hand with industrialisation and development. They suggest that the rural worker is enticed to migrate to urban areas in search of work if their expected urban income exceeds their guaranteed rural wage.

However, despite the arguable benefit of urbanisation, migration and an increasing urban population can lead to a range of negative outcomes:

- Air pollution;
- Congestion;
- Water contamination;
- Pressure in provision of social services such as health, education and aged care;
- Pressure in provision of housing, utilities, sewerage and waste management;
- Increased crime; and
- Labour surplus and the strengthening of the informal sector.

¹ p. 2-4 Katy Cornwell and Brett Inder, 02/2004 *Migration and Unemployment in South Africa: When Motivation Surpasses the Theory*, Working Paper Monash University
<http://www.buseco.monash.edu.au/depts/ebs/pubs/wpapers/2004/wp2-04.pdf>

Experience from the rest of the world indicates that the cumulative impact of the development of an oil industry around Nouakchott and improved road connections will almost certainly add to the influx of people into Nouakchott and that the impacts of migration can be significant and diverse.

Nam Theun 2 Hydroelectric Project

In Laos the Social Impact Assessment for the Nam Theun 2 Hydroelectric Project estimated that the presence of 4,000 workers could attract as many as four times the number of followers, equivalent to approximately 20,000 additional people to the area.

The potential impacts of the influx of workers and the accompanying spontaneous settlement include pressure on land and natural resources, through, for example, hunting, the generation of solid and liquid wastes which could contaminate soil and water affecting fish populations and human health and increased health risks such as HIV/AIDS.

The Head Construction Contractor Environmental Management and Monitoring Plan (HCCEMMP) will outline mitigation measures including bans on hunting and fuel gathering by construction workers, and the implementation of a Project Staff Health Management Program to educate and provide health services to the workforce, alongside appropriate waste management.

Jakarta, Indonesia

In Asia (Hugo 2003)² an important issue has been governance; many of the largest urban areas have administrative and planning boundaries that have little to do with how cities function. This has been a barrier to integrated planning and has meant that city administrators often lack the power and resources to apply appropriate taxation and revenue raising systems, or enforce building codes and environmental standards.

In Jakarta, governance problems and the universal use of leaded petrol, has meant some parts of the city often experience air pollution that exceed the maximum WHO levels. The contamination of aquifers following overuse and sea-water incursion means that it is impossible to draw fresh water from wells over a large part of the city. This context of high water and air pollution has in turn led to an array of serious health problems due to exposure to emissions and infected water, increasing pressure on health services to care for the growing urban population.

Issue: Revenue Management

Oil booms resulting from high oil prices may set off a chain of events that has detrimental effects on the economy. Governments may face high expectations of increased spending on infrastructure projects or on programs of poverty alleviation to absorb the increased revenue. Revenue streams from oil can either finance productive physical and social

² p. 21 Graeme Hugo, 2003 *Urbanisation in Asia: an overview*(prepared for Conference on African Migration in comparative perspective, Johannesburg, South Africa June 2003) University of Adelaide <http://pum.princeton.edu/pumconference/papers/2-Hugo.pdf>

investments or fuel unsustainable consumption booms. Often spending decisions are not based on the duration of the oil price boom and the time horizon during which the oil revenues will be accrued.

Governments often increase spending on capital intensive projects with the aim of transforming the economy. However, this may increase the size of the public sector immensely and exceed the absorptive capacity of the economy, leading to inflation and a reduction in the value of savings.

Often, budgets formed during boom years, when the oil prices are high, have to be substantially cut when price falls. The fall reduces what is available to the government to spend on projects and investments planned in the budget, based on expectations of the high oil prices.

Oil price volatility makes budget planning difficult and the Government needs to take into account a conservative estimate of the oil price so as to have a better match between revenues and expenditures. In addition, as the oil revenues are based on the oil price and production streams, they cannot be treated as a permanent source of income. Therefore, the Government should try to limit the expansion of its spending by smoothing the revenues accrued from oil windfalls over the lifetime of the Project and beyond.

One such instrument that may help in this consumption smoothing process is a revenue stabilization fund (saving during the boom and spending during the bust). However, oil revenue may come to replace more stable sources of government revenues such as taxes on income and goods and services. This distances a government from the demands of accountability and fiscal transparency that come from taxation (taxation with representation).

In the case of oil funds, Governments may recourse to using the money from these funds under political pressure and as such, fund facilities need to be administered carefully with appropriate and transparent oversight mechanisms.

Transparency around revenue management has become a pressure point for companies and governments. The Extractive Industries Transparency Initiative (EITI) with support from an International Secretariat currently based in the UK's Department for International Development (DfID), the World Bank and IMF, international oil and mining companies and NGOs encourages improved governance in resource rich countries through the full publication and verification of company payments and government revenues.

The 'Publish What You Pay' (PWYP) movement, initiated by NGOs such as Global Witness, Save the Children UK, Oxfam and Transparency International, addresses the role of the private sector in the transparency debate. PWYP encourages companies to be transparent about their relationship with governments and continues to push for an International Financial Reporting Standard for the Extractive Industries.

Venezuela provides an example of the results of the lack of an adequate oversight mechanism even where steps were taken to address the potential for economic instability brought by oil and gas exploitation. In Chad the World Bank played a catalytic role in

funding and implementing the development of the Chad-Cameroon pipeline, part of which was supporting the set up of an innovative revenue management plan.

Venezuela: Vulnerability of oil funds without oversight mechanisms

In 1998, in the wake of the Asian financial crisis, the Government in Venezuela set up a stabilisation fund called the Macroeconomic Stabilization Investment Fund. The objective of the fund was to collect and build up fiscal reserves when the oil prices were high and to pay out to the budget when the prices were low, with the intention of preventing oil price volatility from affecting Venezuela's fiscal, exchange rates and monetary balances.

However, a new Government in 1999 drastically increased spending and reduced fiscal constraint. To pay for this, it changed the rules of the fund by increasing government discretion and reducing transfers into the Fund. This has eroded the Fund's ability to function as a stabilisation mechanism and has also demonstrated that despite good intentions, such a Fund cannot ensure responsible revenue management if the Government does not exercise fiscal discipline, sound economic management and implement an open and transparent system that prevents discretionary measures.

Chad: A new paradigm for oil funds?

The Government in Chad is expecting nearly US\$2 billion in revenues (averaging US\$80 million per year) over the 25 year production period of the oil field in the southern part of the country. This would increase Government revenues by 45% to 50% per year.

The World Bank has provided a loan for the construction of the pipeline and has supported the development of an innovative revenue management program. As part of Chad's Revenue Management Plan, all oil royalties and dividends will be deposited with an international financial institution in an offshore sequestered account. A revenue management law was passed in 1998 that specifies how oil revenues will be spent and expenditures monitored. The law broadly specifies that 10% of oil revenues will be put aside for future generations; 80% will go to specific priority sectors, including health, education, and infrastructure; 15% will go to the treasury to finance general expenditures; and 5% will go to finance development programs in the oil production regions.

This program is not without its problems. It appears that only royalties and dividends are subject to the revenue law, which means nearly 45% of the revenues generated will not have to comply with the Law. In addition, the law does not apply to new fields being developed.

There are several layers of oversight including an oversight body, the Collège de Contrôle et de Surveillance des Revenus Pétrolières (Committee of Control and Oversight of Petroleum Revenues). This body has been appointed to monitor and oversee spending and ensure transparency. In addition, the World Bank has appointed an International Advisory Group which has been set up to give advice on revenue management and progress on poverty alleviation. The World Bank's internal ombudsman will also oversee the revenue management.

It is too early to say whether such an innovative model is working. Whilst the plan has several layers of revenue management oversight, there are a several loopholes that need to be addressed. Ultimately, its success depends on the political will to enforce the law and apply sanctions when need be.