

**REPUBLIC OF THE GAMBIA**

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**Results for Education Achievement and Development Project (READ)**

**Environmental and Social Management Framework (ESMF)**

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**FINAL REPORT (REVISED VERSION)**

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

|          |  |
|----------|--|
| AIDS     | Acquired Immune Deficiency Syndrome                                    |
| BDO      | Biochemical Oxygen Demand  |
| COD      | Chemical Oxygen Demand   |
| EA       | Environmental Assessment   |
| ECD      | Early Childhood Development  |
| EFA      | Education For All  |
| EFP      | Environment Focal Point  |
| EIA      | Environmental Impact Assessment  |
| EMP      | Environmental Management Plan  |
| ESSC     | Environmental and Social Screening Checklist                           |
| ESMF     | Environmental and Social Management Framework                          |
| GAMWORKS | Gambia Agency for Public Works   |
| GEAP     | Gambia Environment Action Plan   |
| GPE      | Global Partnership for Education                                       |
| HIV      | Human Immunodeficiency Virus   |
| HTC      | Higher Teachers Certificate  |
| ICT      | Information Communication Technology                                   |
| ICT-CFT  | ICT-Competency Framework for Teachers                                  |
| IDA      | International Development Association                                  |
| LACA     | Land Acquisition and Compensation Act                                  |
| LBS      | Lower Basic School   |
| MoBSE    | Ministry of Basic and Secondary Education                              |
| MOHERST  | Ministry of Higher Education, Research, Science and Technology         |
| NEA      | National Environment Agency  |
| NEMA     | National Environment Management Act                                    |
| NEMAC    | National Environmental Management Council                              |
| NEMP     | National Environmental Management Programme                            |
| NGO      | Non-Governmental Organization  |
| OP       | Operational Policy   |
| PAP      | Project Affected Persons   |
| PTC      | Primary Teacher Certificate  |
| PCU      | Projects Coordination Unit (Ministry of Basic and Secondary Education) |
| RAP      | Resettlement Action Plan   |
| READ     | Results for Education Achievement and Development Project              |
| RPF      | Resettlement Policy Framework  |
| SSS      | Senior Secondary School  |
| STI      | Science and Technology Innovation                                      |
| TAC      | Technical Advisory Committee   |
| TANGO    | The Association of Non-Governmental Organisations                      |
| TEP      | Third Education Project  |
| TOR      | Terms of Reference   |

|     |                               |
|-----|-------------------------------|
| UBS | Upper Basic School            |
| VDC | Village Development Committee |
| WB  | World Bank                    |

## EXECUTIVE SUMMARY

### BACKGROUND

The Government of the Republic of Gambia through the Ministry of Basic & Secondary Education is preparing The Results for Education Achievement and Development (READ) project aimed at increasing access to basic education including early childhood development and improving the quality of teaching and learning as well as strengthening the education system of the Gambia.

### PROJECT COMPONENTS

**Increase Access to Basic Education in hard to reach Areas:** The purpose of this component is to enhance enrolment at the basic level by increasing access to Early Childhood Education, and the universalization of basic education.

**Improving Quality of Teaching and Learning:** This component aims at improving quality of teaching and learning including developing the foundational skills such as reading in lower grades, reforming the pre-service teacher training program, strengthening current teachers' competencies in pedagogical and content knowledge, improving teacher practices

**Technical and Institutional Support:** This component aims at developing a strong communication strategy, institutional support and capacity building

**Strengthening the Education System:** This component is tasked with ensuring that effective and efficient delivery of education services is achieved.

### OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Although the potential negative environmental and social impacts of the READ Project activities are considered to be generally minimal, potentially significant localized impacts may occur, thus requiring appropriate mitigation measures. In order to ensure that the potential negative impacts are addressed at this stage of project development this Environmental and Social Management Framework (ESMF) is being prepared. The objective of this ESMF is to provide an environmental and social screening process for the future implementation of the infrastructure subprojects of the READ Project. It sets out the principles, rules, guidelines and procedures to assess the environmental and social impacts and proposes measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts.

The ESMF was prepared taking account of the relevant national environmental policies and regulations, notably the National Environment Management Act 1994, the Environmental Impact Assessment Guidelines (1999) and the Environmental Impact Assessment Procedures (1999) and the World Bank safeguard policy, instruments particularly OP 4.01.

An audit exercise of the earlier Education projects has identified a number of environmentally unsound practices in the completed infrastructure and services and has provided recommendations to redress the conditions in conformity with NEMA and World Bank policies.

### **METHODOLOGY USED TO PREPARE THE ESMF**

The general approach consisted of the review of relevant background documents (both print and electronic) and consultations with the various stakeholders. The stakeholders included policy makers, potential project beneficiaries, Non-Governmental Organisations as well as private contractors.

### **THE SCREENING PROCESS**

For the screening process each administrative region shall set up a Regional Environmental Focal Point (REFP) with membership consisting of the Regional Director, the Regional Environment Officer, a representative of the Local Government Authority and a representative of the local community where the infrastructure is to be located. The Construction Monitor shall serve as the secretary to the Focal Point. Other persons may be co-opted if their expertise is considered necessary.

Once a particular infrastructure subproject of the READ is known the Regional Directorate in the region where the investment is to take place shall arrange to have the subproject screened by his office in consultation with the local community. The Construction monitor attached to the Office shall complete the Environmental and Social Screening Form (ESSF) to determine the likely negative environmental and social impacts and the mitigation measures to be put in place.

The completed screening form shall be presented to the REFP for categorisation. The results could be:

- (a) No environmental work will be required;
- (b) The implementation of simple mitigation measures will suffice; or
- (c) A separate Environmental Impact Assessment (EIA) will be required

The completed forms from the REFP are forwarded to the PCU for review and approval. Where an EIA is required the NEA will be contacted for their consideration and approval. The EIA will be conducted in accordance with the national environmental legislation and the World Bank Safeguard Policy OP4.01

### **ENVIRONMENTAL AND SOCIAL IMPACTS**

Under this project physical environmental impacts will result mainly from the construction of infrastructure and the related services such water and sanitation and activities such as small scale agricultural production.

These environmental and social impacts occur prior to, during, and after construction of the main educational infrastructure and the associated services such as water and sanitation.

The main concerns prior to construction are:

- land acquisition resulting in relocation of persons or loss of land and related assets or access to services, alienation engendering morbidity or distress to cite only these,

- loss of vegetation, soil erosion, dislocation of natural waterways or drainage systems or the destruction of natural habitats for various fauna, displacement of indigenous people and destruction of protected sites prior to construction.
- The generation of all manner of solid and liquid wastes, increased dust and noise pollution during construction and notably the use of toxic and other hazardous materials,
- Failure to restore the sites to at least their previous condition in respect to vegetation cover and protection by fences from unwanted encroachment.

With regards to the land acquisition issue, specifically on resettlement and its consequences, is dealt with in a separate Resettlement Policy Framework (RPF) document that incorporates the existing Gambia Government and World Bank prescriptions on the measures to be taken by the project to avoid the negative social impacts or to redress these impacts where unavoidable.

### **Institutional Responsibilities in the Screening Process**

| <b>Stages</b>  | <b>Responsibilities</b>  |
|--|--|
| <b>1. Screening of infrastructural subprojects at each of the sites using the Environmental and Social Screening Form (Annex 1)</b>                      | Regional Directorate (Construction Monitors) with the support of the Regional Environment Focal Points       |
| <b>2. Assigning the appropriate Environmental Categories (A, B, or C)</b>  | Regional Environment Focal Points  |
| <b>3. Implementing simple mitigation measures (Annex 2),</b>   | Contractors  |
| <b>4. Review and Approval</b>  |  |
| <b>4.1 Approval of (i) the screening results ; (ii) the assigned environmental category; and (iii) recommendations of the Environmental Focal Points</b> | PCU  |
| <b>4.2 Approval of Recommendation for EIA</b>  | National Environmental Agency (NEA)  |
| <b>4.2 Selection of the consultant(s) in cases where EIA is required.</b>  | The Project Coordination Unit in consultation with NEA.  |
| <b>4.3 Execution of the EIA</b>  | Authorized Consultants   |
| <b>4.4 Approval of EIA Report</b>  | NEA  |
| <b>5. Public consultations and disclosure</b>  | Regional Directorates and the PCU.   |
| <b>6. Monitoring</b>   | Regional Directorates, the PCU and NEA.  |
| <b>7. Environmental and Social Indicators</b>  | The Regional Directorates in each region will ensure that the environmental and social monitoring indicators |



|  |   |
|--|---|
|  | listed in the ESMF are included and adhered to in all education project construction/rehabilitation activities. |
|--|---|

## **Environmental Management Plan (EMP)**

An Environmental Management Plan (EMP) outlines the specific measures that will avoid, mitigate or compensate for anticipated negative environmental effects of a proposed project. It helps to ensure the efficient environmental management of the Project. The management plan will include the following:

- (a) the relevant project activities,
- (b) the potential negative environmental and social impacts,
- (c) the proposed mitigation measures,
- (d) those who will be responsible for implementing the mitigation measures,
- (e) those who will monitor the implementation of the mitigation measures,
- (f) the frequency of the afore-mentioned measures,
- (g) capacity building needs and
- (h) the cost estimates for these activities.

The EMP will be included in Education Project Implementation Manual, with costs.

## **Capacity building**

Capacity for environmental management and monitoring will be required at the national and regional levels. It is therefore important that the project organises workshops and seminars to provide basic training on screening, EA and EIA for the staff at PCU/MoBSE, the environment focal points, regional directorates and the PCU construction monitors in order to sustain the environmental and social management process over the foreseeable future.

## **INSTITUTIONS RESPONSIBLE FOR MANAGEMENT AND MONITORING**

Following consultations, the consultant felt that the planning and construction units of the PCU and the regional directorates are the key institutions to manage and monitor the measures put in place to avoid the adverse effects that could emanate from this education sector project:

### **National Regional Coordination/Supervision**

- At the national level the PCU will coordinate and supervise the Regional Directorates and it will be supported in this role by the NEA based on the MoU to be signed between MoBSE and NEA.
- In each region, the Environmental Focal Point will be responsible for completing the environmental and social screening lists (Annex 1); the environmental and social checklists (Annex 2); and determining the environmental category of the screened activity to be able to identify and mitigate the potential environmental and social impacts of construction and rehabilitation activities. As required, he/will receive environmental training to be able to carry out this task.
- The Environmental Focal Point will ensure that the supervision and overseeing of the implementation of mitigation measures are adhered to by the private contractors.

**Implementation**

- Individual consultants or consultancy firms will be responsible for carrying out the EIA studies;
- The private contractors are responsible for the implementation of the mitigation measures as indicated in the Environmental Guidelines for Contractors (Annex 4).

**Monitoring**

- At regional level

The Regional Directors, the construction monitors and their cluster monitors will, in a consistent manner report to the PCU any deviation on the norms set out in the environmental and social management plan.

- At national level,

NEA will supervise the implementation of these environmental measures.

## **ACKNOWLEDGEMENTS**

The preparation of this Report is the result of consultations and collaboration with many people, working for different institutions. Acknowledgement is given to all who made it possible to come up with the Report as presented here.

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Mr. Addison Gomez – Quantity Surveyor, Project Coordination Unit & Environment Focal Point

Mr. Abdoulie Sowe – Financial Controller, Project Coordination Unit

for their valuable support throughout the assignment.

## **I. INTRODUCTION**

### **1.1 Background**

The Government of the Gambia has recently developed a Medium term Strategic Plan for the Education Sector (2013-2018). The priority components of the Strategic Plan are: (i) access to and equity within basic and secondary education through classroom construction and rehabilitation, gender equity initiatives, special needs education, and conditional cash transfers; (ii) quality of teaching and learning through the adequate supply of trained teachers, early grade literacy programme, and national language programme, monitoring and supervision; and (iii) sector management through the strengthened operational policy formulation, financial management, and ICT.

To support the implementation of the Plan the World Bank together with the Government of the Gambia have developed the Results for Education Achievement and Development Project (READ). Although the Project would largely concentrate on lower basic and secondary education, some critical support would also be provided to higher education to assist in the implementation of the higher education policy, such as the setup of an independent quality assurance and accreditation board and implementation of a national Science and Technology Innovation(STI) policy. The total project funding is US\$26.9 million.

According to the World Bank project classification the READ Project is a Category B project with respect to potential environmental and social impacts. This means that it does not potentially have major adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats. The likely impacts would be site-specific; few if any of them would be irreversible; and in most cases mitigation measures can be designed to address the situation. Even though no major adverse environmental impacts are foreseen during the implementation, the Project triggers the World Bank Safeguard instruments notably 4.01 Environmental Assessment- because the Project includes a school construction component which could generate negative environmental and social impacts.

However, at this stage of project preparation, the scope, scale, locations and number of sub-projects have not been fully defined and as a result only an Environmental and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) can be prepared to evaluate the potential environmental and social impacts of the proposed project and identify ways of preventing, minimizing, mitigating, or compensating for adverse impacts that could arise during project implementation.

## **1.2 Project Description**

The proposed development objectives of the READ Project are:

- i. To increase access to ECD and basic education in remote areas;
- ii. Improve quality of teaching and learning in lower basic schools; and
- iii. Strengthen education systems.

## **1.3 Project Components**

The Project comprises of four components: Components 1 to 3 will be executed through a traditional Investment Project Financing (IPF) approach and Component 4 will be carried out through a results-based approach. Each component comprises of several sub-components.

### **Component 1: Increase Access to Basic Education in hard to reach Areas**

The purpose of this component is to enhance enrolment at the basic level by increasing access to Early Childhood Education, and the universalization of basic education.

### **Component 2: Improving Quality of Teaching and Learning**

This component aims at improving quality of teaching and learning including developing the foundational skills such as reading in lower grades, reforming the pre-service teacher training program, strengthening current teachers' competencies in pedagogical and content knowledge, improving teacher practices

### **Component 3: Technical and Institutional Support**

This component aims at developing a strong communication strategy, institutional support and capacity building

### **Component 4: Strengthening the Education System**

This component is tasked with ensuring that effective and efficient delivery of education services is achieved.

## **1.4 Project Sub-components likely to Trigger Negative Environmental and Social Impacts**

Although the project has many sub-components it is the construction subcomponents (class rooms and sheds) under component 1 that are likely to trigger negative environmental and social impacts. According to the Project 17 percent (339 communities) of communities in the country do not have a lower basic school within 3 kilometers. In this context, READ will finance the

building of 40 multi-grade schools (80 classrooms) in remote areas to capture out-of-school children into school. Each school will comprise 2 classrooms, a water point, and furniture (desks and chairs). In addition, READ will also support the construction of 40 sheds through the Baby Friendly Community Initiative (BFCI) and community based Early Childhood Development (ECD) program.

## **1.5 Scope**

The objective of the assignment is to prepare an Environmental and Social Management Framework (ESMF) for the READ project that will define an environmental and social screening process for the identification, assessment and mitigation of potential negative environmental and social impacts related to the implementation of the READ Project and define an environmental management plan for any potential adverse environmental impacts that may be identified as a result of the screening process. The detail terms of reference for the study are attached as Annex 11.

## **1.6 Methodology used to prepare the ESMF**

The general approach consisted of the review of relevant background documents (both print and electronic) and consultations with the various stakeholders. The stakeholders included policy makers, potential project beneficiaries, Non-Government Organisations as well as private contractors. The list of persons contacted is attached as Annex 10.

## **1.7 Project Sites and the Biophysical and Socioeconomic Environment**

The geographical spread of the project sites is country wide covering all the six educational regions. The biophysical environment as well as the socioeconomic characteristics of the country can be described as follows:

### **Geography**

The Gambia lies between 13.79° and 16.82° West longitude and entirely within 13° North latitude. It has an estimated area of 11,300 km<sup>2</sup> and is bounded by Senegal to the North, South and East and by the Atlantic Ocean to the West. The country is widest at its westerly end towards the ocean, narrowing to about half this width at its eastern tip, 480 km inland. The country is bisected by the River Gambia that originates from the Fouta Djallon highlands, forming the North and South banks. Banjul is the administrative centre and capital situated on an island on the southern bank at the mouth of the river. The country has seven administrative regions namely: North Bank Region, Lower River Region, Central River Region, Upper River Region, West Coast Region, Banjul City Council and the Kanifing Municipal Council.

## **Climate**

The country has a Sudano-Sahelian type of climate characterized by a long dry season from October to early June and a short rainy season from mid-June to early October. Annual average rainfall ranges from 850mm to 1,200 mm and average temperatures range from 18 to 33°C. Relative humidity is around 68% along the coast and 41% inland during the dry season and generally over 70% throughout the country during the wet season.

The coastal areas of the country experience relatively lower temperatures. Recent (2004 – 2008) average maximum monthly temperatures in The Gambia range from 31°C in Banjul and as high as 41°C in Janjangbureh in May 2008 with mean minimum monthly temperatures as low as 11.3°C in Kerewan in January 2008.

The wind direction is predominantly north to north-easterly between November and April which co-incidentally is the dry season characterised by dry Harmattan winds from the Sahara desert. It is the moist south westerly wind from the Gulf of Guinea from June to September that brings along the rains. The wind direction is west to northerly for most of the rest of the year.

## **Vegetation**

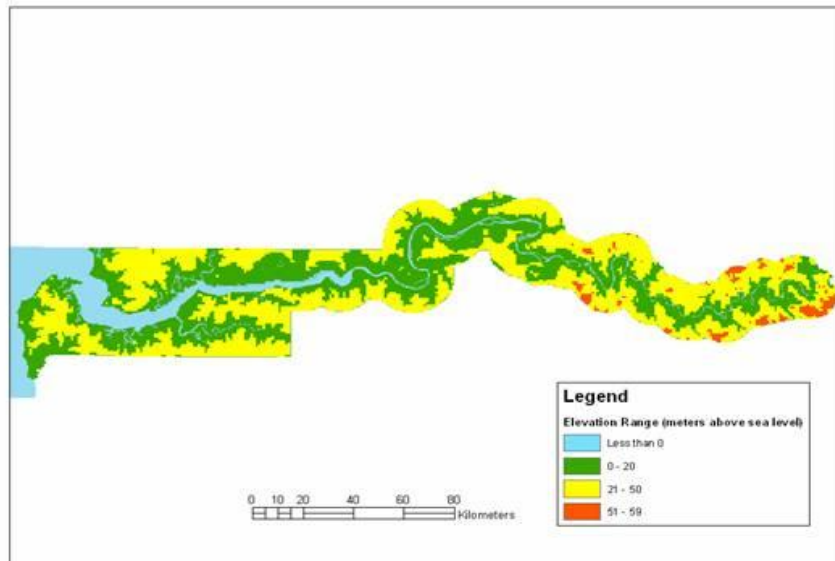
The Gambia's vegetation is dominated by Savannah woodland. The Guinea Savannah, characterized by broad-leaved trees, is dominant in the west of the country. The Guinea Savannah thins into the Sudan Savannah, characterized by shrubs and grasslands, and moving east of the country. Gallery forests and mangroves dominate the coastline vegetation, with the latter extending inland to the saline limit of the estuary.

## **Landforms**

The geomorphology of The Gambia is characterised by the River Gambia and its floodplains, river banks and wetlands. As the River Gambia enters the Gambia from Senegal it cuts through the ancient sand and sandstone plateau leaving narrow to wide floodplains on either of its banks. The valley, particularly in the central and western parts of the country, makes up about 39% (or 4,048k m) of the total land area of The Gambia. The floodplains (and mangrove swamps in the western half of the country) are home to a rich and diverse flora and fauna including hippos and is home to one of the richest diversity in bird species anywhere in the world. The flood plains are also important areas for rice cultivation.

The highest points in The Gambia (50 – 60 m above sea level) are in the eastern part of the country. These are found in the generally unproductive, low flattop lateritic sandstone plateau that sandwich the river in the east of The Gambia. They occupy less than 4% of the total land area of The Gambia (Figure 1).

**Figure 1: Elevation map of the Gambia.**



Source: United States National Aeronautics and Space Agency, NASA Shuttle Radar Topographic Mapping (SRTM) data.

Between the valley and the sandstone plateau is the dissected ferruginous plateau with sandy hills. These are gently rolling hills which rise to a maximum height of 20 metres near the coast in Cape St. Mary. The natural vegetation of this dissected plateau is grassland and shrubs in the east and present day remnants of multi-layered tropical forest in the south west of The Gambia. Groundnut, millet and sorghum are main crops cultivated in this region.

## **Drainage**

The natural drainage in The Gambia is highly dependent on the river Gambia. As the River enters the Gambian territory it flows generally along an east-west axis, emptying west in the Atlantic Ocean. The major tributaries of The Gambia include the Sandougou, Nianija, Sofaniama, Bao and Bintangbolongs. Similar to the main river, a large portion of these catchments also overlie within neighbouring Senegal. Runoff generated from these catchments is however insignificant due to low gradients and permeable soils. Imperfectly drained depressions, inactive streams, and drainage channels further inhibit the runoff process.

## **Water resources**

Fresh water is abundantly available throughout the country with supplies from two major sand aquifers, an upper or shallow aquifer at 10 m to 120m, and a deep one at depths of 250m to 450m as well as from the River Gambia which represents about 20 percent of the country's surface area and runs the entire length of the country.



The main source of drinking water is the shallow aquifer. In general, the water quality of this aquifer is good, with pH around 5 to 6. It is recharged by lateral flow, and rainfall, hence the through flow is sensitive to rainfall.

## Land Cover and Land Use

### Forest Cover

It is estimated that 4,730 km<sup>2</sup> or about 46% of The Gambia's land area is forest cover with woodlands accounting for 10%, the remainder consists of savanna woodlands and the mangroves (about 0.5 million hectares) that are found along the Gambia River (Department of Forestry, 1997). There are 66 forest parks covering a total area of 34,029 ha with 25,000 ha under community management. The 1995 -2005 Forestry Policy sought to reserve, maintain and develop 30% of the country's total land area into forest and ensure that the local communities manage 75% of this forest area, but unfortunately, only 12% of this target was achieved.

The extent of decline in forest cover is captured in table 2 which indicates a present day vegetation cover that is characterised by secondary woodland with more tree and shrub savanna. In general, closed and open woodland forest has been reducing at an annual percentage rate of 3.1 due to forest degradation and conversion into agricultural land in recent years while fallow areas decreased by almost 4.4 per cent per year. It should be noted that there was not much change in shrub savannah between 1993 and 1998. Teusan (1999) reported an increase in total forest area from 1998, at time of declining groundnut production areas.

**Table 1: Declining Forest Cover in The Gambia from 1946 to 2005**

| Forest categories      | 1946 | 1968 | 1980 | 1993 | 1998 | Est. 2005 | Projected. 2015 |
|------------------------|------|------|------|------|------|-----------|-----------------|
| Closed woodland (%)    | 60.1 | 8.0  | 1.3  | 1.1  | 0.7  | 1.5       | 2.8             |
| Open woodland (%)      | 13.3 | 17.6 | 10.7 | 7.8  | 6.2  | 12.0      | 12.2            |
| Savannah (%)           | 7.8  | 31.7 | 24.8 | 31.8 | 34.6 | 31.5      | 25.0            |
| Total forest cover (%) | 81.2 | 57.3 | 36.8 | 40.7 | 41.5 | 45.0      | 40.0            |

Sources: NAD-Gambia: *Action Plan on Forest and Wildlife Management (1999)*, FAO-Gambia: *Forest Resources and Plantations (1999)*.

The relatively constant condition in the tree and shrub savannah already mentioned is perhaps due to the continuous expansion of tree and shrub savanna land use type since 1968. In all, the 0,6 m<sup>3</sup>/ha/year increment for timber and fire wood species indicates availability of negligible sustainable harvestable timber in the forest.

### Mangrove Forests

The mangrove forests in The Gambia are located in the coastal area and inland to the extent of the saline intrusion up the river. Four major species of mangrove forests exist in the area such as *Avicennia africana*, *Laguncularia racemosa*, *Rhizophora racemosa* and *Rhizophora mangle*. The mangrove ecosystem has remained stable over the years although clear signs exist of a slow decline in the *Rhizophora* species either through increased acidification of the soils, viral or bacterial infections. They are also threatened by the clearing of swamps for rice cultivation in the rural areas or the cutting down of mangroves for oyster harvesting and as fuel wood.

## Biodiversity and Wetlands

Around 20% of The Gambia's total land area is wetlands with mangrove forest occupying 6.4%, while 7.8% is uncultivated swamps and 3.2% used for cultivating rice and for horticulture. Agriculture is increasing the pressure on the wetlands through conversion and degradation and conflict with wildlife, notably the hippo.

Rare species of breeding birds, such as the white-backed night heron, the fin-foot herons, and pels fishing owl are common in the wetlands. A number of Palaearctic migratory birds osprey and terns frequent the country's wetlands as wintering grounds. In addition, the wetlands, in particular the mangroves are important habitat or feeding/breeding grounds for mammals such as the rare West Africa manatee, the clawless Otter and the Sitatunga antelope. The country's fishing industry is almost certainly dependent on an expansive, biologically diverse and dynamic wetlands ecosystem. Bird-watching tourists and eco-tourists are now visiting The Gambia in increasing numbers because of its rich wetland biology.

However, the unsustainable use and continuous degradation is threatening the wetlands.

Government has been cognizant of the country's rich biological heritage and its importance and has established 7 national parks and nature reserves (see **Table 2** below) some of which have been designated Ramsar Sites because of their international importance. In addition it has designated 66 forest parks.

**Table 2: National Parks and Nature Reserves in The Gambia**

|   | Name                         | Date of Gazette | Location           | Area (Ha) |
|---|------------------------------|-----------------|--------------------|-----------|
| 1 | Abuko Nature Reserve         | 1968            | WD                 | 105       |
| 2 | River Gambia National Park   | 1976            | CRD                | 589       |
| 3 | Niumi National Park          | 1986            | NBD                | 4,940     |
| 4 | Kiang West National Park     | 1987            | LRD                | 11,526    |
| 5 | Tanji Coastal Park           | 1993            | WD                 | 612       |
| 6 | BaoBolon Wetland Reserve     | Not yet         | NBD                | 22,000    |
| 7 | Tanbi Wetlands National Park |                 | Banjul, KMC and WR | 6,000     |

|  |                   |  |  |               |
|--|-------------------|--|--|---------------|
|  | <b>TOTAL AREA</b> |  |  | <b>39,772</b> |
|--|-------------------|--|--|---------------|

Source: Department of Parks and Wildlife Management

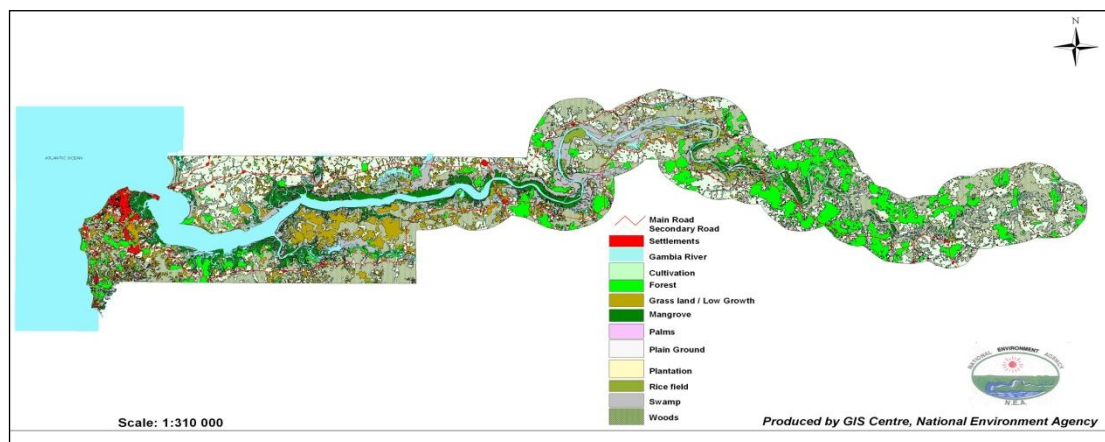
The Ramsar sites include:

- a) *BaoBolong* Wetland Reserve(Ramsar site no. 860 of 16/09/96)
- b) Niumi National Park (Ramsar site no. 1840 of 13/10/08)
- c) Tanbi Wetland Complex. (Ramsar Site no. 1GM002 of 02/02/07)

## Agriculture

As much as 6,500 km<sup>2</sup> or 65% of The Gambia's total land area is arable land with an estimated 75% of its population depending on it for their livelihood. Due to the predominance of subsistence agriculture, about 83% of the cultivated lands are less than 5 ha in area (Table 3.8). Most of arable farmland over 5 ha is orchards and commercial gardens and they accounted for 313,265 ha in 2004 which was a slight increase on the previous years 284,764 ha. (DOP 2004). Compared to the sub-region and even the rest of the world the arable land is relatively scarce in The Gambia with 158 ha of cropland<sup>1</sup> available per 1,000 persons (274 for Sub-Saharan Africa and 251 globally).

**Figure 2: Land use/ land cover map of The Gambia**



Agricultural biodiversity encompasses agro-ecosystems, domesticated plant and animal species soil, micro-organisms, pollinators, pests, wild relatives of domesticated crops and animals (land races), as well as plant and animal genetic materials – including traditional varieties, cultivars, hybrids and different types of germplasm. The major crops in The Gambia are summarised in Table 5. Cattle, sheep, goats, horses, donkey constitute the livestock in the country

<sup>1</sup> Defined by the WRI as arable and permanent agricultural land

## **Livestock**

Conditions in The Gambia greatly favour livestock production which is exclusively traditional although there is some intensive and semi-intensive commercial poultry farming in the peri-urban areas. Semi-intensive sheep fattening schemes are also popular. Cattle are managed in herds (average herd size is about 55 heads) tethered overnight to pegs in holding grounds. They are herded during the day to avoid damage to field crops and vegetables.

## **Socio –Economy**

The Gambian economy is still recovering from the severe drought of 2011. In 2012, real growth in gross domestic production (GDP) is estimated to have been just over 5 percent, driven by a strong performance in tourism and a partial rebound in agriculture. However, with crop production still well below normal, the balance of payments has remained weakened and the Gambian dalasi has continued to face depreciation pressures. The Central Bank of The Gambia acted to tighten monetary policy, which has helped to stem the rate of depreciation. Despite current tensions surrounding the exchange rate, The Gambia's economic outlook is generally positive, as long as the authorities implement prudent policies. Real GDP growth is expected to rise to about 8-9 percent a year during 2013-14, driven by a projected continuation of the recovery in agriculture. Although inflation has picked up during 2013, it is projected to stabilize at around 5 percent a year by 2014<sup>2</sup>.

Developments in the financial and tourism sectors have also been significant, leading to greater contributions of these sectors to economic growth and development. The deepening financial reforms by the Central Bank, increase in the number of banks from 7 (Seven) to 10 (Ten), the establishment of a Credit Reference Bureau have all strengthened the financial sector, for more meaningful contribution in economic development.

Public finance management is continually strengthened, and the positive impact of the establishment of the Gambia Revenue Authority on revenue mobilization is apparent.

In the September 2007 country performance assessments of The Gambia, the Republic of Guinea, Sierra Leone, Ghana and Nigeria against the macro-economic convergence criteria set for introducing a Common Currency (the ECO) in the West African Region indicated that The Gambia has met all the four (4) primary criteria, and three (3) secondary criteria were also met in 2006.

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<sup>2</sup>IMF Mission Report 2013

Government has invested massively on infrastructure such as roads, resolved the problem of electricity supply in most parts of the country, built schools, hospitals and health centres, etc. The investments in the social sector of health and education have substantially improved the human capital of The Gambia, while the investments for infrastructural development provide a more conducive environment for growth.

Government has approved the PAGE 2012-2015, as the main policy document for the period 2012 – 2015, and is working towards the realization of both the Millennium Development Goals and Vision 2020 through a series of five-year development plans. The PAGE's main thrust is mainly to improve – inter alia- employment levels, per capita income, social services, gender equity and The Gambia's economic competitiveness.

The industrial activities in the services sector have grown over the past years. Telecommunications, hotels and restaurants registered growth rates of 25 percent and 18 percent respectively.

Demography and other socio-economic indicators are summarized in Table 3 below.

**Table 3: Population Growth in The Gambia Over the Years**

| Year | Population |         |         | Growth Rate<br>(% per annum) |
|------|------------|---------|---------|------------------------------|
|      | Both Sexes | Male    | Female  |                              |
| 1901 | 90,404     | -       | -       | -                            |
| 1911 | 146,101    | 73,793  | 72,309  | 4.9                          |
| 1921 | 210,611    | 111,020 | 99,591  | 3.7                          |
| 1931 | 199,520    | 104,894 | 94,626  | -0.5                         |
| 1951 | 279,686    | -       | -       | 1.7                          |
| 1963 | 315,486    | 160,849 | 154,637 | 1.0                          |
| 1973 | 493,499    | 250,386 | 243,113 | 4.6                          |
| 1983 | 687,817    | 342,134 | 345,683 | 3.4                          |
| 1993 | 1,038,145  | 519,950 | 518,195 | 4.2                          |
| 2003 | 1,360,681  | 670,841 | 689,840 | 2.8                          |

|                                 |  |
|---------------------------------|--|
| Human Development Index ranking | 155 <sup>th</sup> (out of 177 countries in 2004) |
| Population:                     | 1,776,103 (2013 est.)                            |
| Annual Population growth rate % | 3.4% (1975 – 2002)<br>2.2% (2002 – 2015)         |
| Population density              | 133 persons/sq. km                               |
| Infant mortality rate           | 72.02 deaths/1,000 live births<br>55.64 years    |

|                          |   |
|--------------------------|---|
| Life expectancy at birth | 5.38 children born/woman  |
| Total fertility rate     |   |
| Ethnic groups            | Mandinka 42%,<br>Fula 18%,<br>Wolof 16%,<br>Jola 10%,<br>Serahuli 9%,<br>Other 4% |
| Religions                | Muslim 90%,<br>Christian 9%,<br>Indigenous beliefs 1%                             |

*Source: Gambia Bureau of Statistics*

## **Land Tenure and Property Rights**

Property rights and land tenure provide equal incentives to all groups for improved land management. The State Lands Act of 1990 and the Land Acquisition and Compensation Act, 1990, seek to improve land management in the Greater Banjul Area and parts of West coast Region where the pressure on land is very high. The State Lands Act designates lands in Banjul, the Kanifing Municipality, Kombo South, Kombo Central and Kombo North as state lands to be administered by the State rather than the district authority.

## **II. OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)**

### **2.1. The Objective of the ESMF**

Development projects can have major negative environmental and social impacts which need to be identified and addressed early on in the project to avoid costly remedial measures. Some of the social and environmental issues that could arise include:

- Resettlement of people and impacts on their livelihoods;
- Effects on the lives and livelihoods of Indigenous Peoples;
- Impacts during construction on the neighborhood and natural resources; and
- Impact during operation such as release of emissions, soil erosion, wastes/rejects and noise generation on the neighborhood and the environment

To address these social and environmental issues, in cases where Bank funding is involved, an environmental assessment has to be carried out to determine the likely negative environment and social impacts and to devise measures to prevent, minimize or mitigate these negative impacts. The relevant Safeguard Instruments have been developed for this purpose and they include OP 4.01, Environmental Assessment, which serves as an umbrella tool to address environmental and social issues during the EA process. The others include policy specific requirements as contained in OP 4.10, Indigenous Peoples; OP 4.11, Physical Cultural resources; and OP 4.12, Involuntary Resettlement. By applying these safeguard instruments many of the negative impacts could be avoided or minimized.

Although the potential negative environmental and social impacts of the READ Project activities are considered to be generally minimal, potentially significant localized impacts may occur, thus requiring appropriate mitigation measures. In order to ensure that the potential negative impacts are addressed at this stage of project development an Environmental and Social Management Framework (ESMF) is being prepared. The objective of this ESMF is to provide an environmental and social screening process for the future implementation of the infrastructure subprojects of the READ Project. It sets out the principles, rules, guidelines and procedures to assess the environmental and social impacts and proposes measures and plans to reduce mitigate and/or offset adverse impacts and enhance positive impacts. The ESMF includes an Environmental Management Plan (EMP) which summarizes institutional arrangements for the implementation of mitigation measures, the monitoring procedure using certain indicators, capacity building needs as well as cost estimates. The EMP will be included in the Project Implementation Manual.

The present ESMF addresses the potential negative environmental impacts such as pollution, waste management, loss of vegetation, soil erosion, soil and groundwater pollution and risks linked to pesticides while the potential social impacts due to land acquisition such as loss of land and/or livelihoods or loss of access to economic assets have been addressed in the Resettlement Policy Framework (RPF) for the Project.

## **2.2. Justification**

When a project consists of a series of sub-projects and the impacts cannot be determined until the project or sub-project details have been identified then the Bank Safeguard instrument OP4.01 requires the preparation of an ESMF to ensure that the project is environmentally and socially sustainable.

EA identifies ways of improving a project environmentally and socially by (in order of priority) preventing, minimizing, mitigating, or compensating for adverse impacts as appropriate for individual subprojects. In addition the EA process ensures that (a) environmental and social

considerations are given adequate weight in project selection, and design decisions; and (b) the review process does not delay project processing.

### **III. POLICY AND LEGAL FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT**

Environmental and social management frameworks are prepared taking account of the relevant national environmental policies and regulations, the international conventions to which The Gambia has subscribed and the World Bank safeguard policy, particularly OP 4.01. Below is a summary of the relevant national policies and laws, relevant international conventions as well as the Bank safeguard instruments.

#### **3.1. National Policy Framework**

##### **a) Gambia's Environmental Action Plan (GEAP)**

The Gambia's Environmental Action Plan provides the overall policy framework for sound environmental management in The Gambia. It seeks to promote and implement sound environmental policy. The GEAP puts special emphasis on environmental management, pollutions and nuisances, and the necessity to safeguard the well-being of the populations. Within this broad policy framework national legislations have been passed to support improved environmental management.

##### **b) The Programme for Accelerated Growth and Employment- PAGE (2012-2015)**

The PAGE (2012-2015) provides the macroeconomic development framework for the socioeconomic development of the Gambia with the overall objective of significantly increasing the welfare of The Gambia's population through accelerated and sustained economic growth and employment. The average economic growth rate is expected to reach 11.5 per cent and the incidence of poverty is expected to decrease by 15 percentage points during the plan period.

These overall objectives will be achieved through five pillars. Each pillar has elaborated priority actions to execute the Government's strategy. The five pillars are:

- i. Accelerating and sustaining economic growth
- ii. Improving and modernizing infrastructure
- iii. Strengthening human capital stock to enhance employment opportunities
- iv. Improving governance and fighting corruption
- v. Reinforcing social cohesion and cross cutting interventions

##### **c) Decentralisation Policy**

The other major policy is decentralisation which seeks to transfer responsibility and resources to the regions in an effort to generate greater participation of the local communities in the development process and to make Government actions more responsive to local needs.



The Ministry of Basic and Secondary Education has been implementing such a policy. The Regional Education Directorates that have been set up provide an important opportunity for greater interaction with the local communities in the implementation of the Government policies in the Education Sector. In the implementation of the READ Project's infrastructural investments they will be required to play an important role in the implementation of the ESMF and the RPF.

At a more general level there is the decentralisation of the local government structures which gives some of the environment management issues at local level to the local government authorities. These structures together with those at village level, the Village and Ward Development Committees will be expected to be involved in the screening process as well as some of the other aspects of the implementation of the EMP such as monitoring with the required capacity.

### **3.2. Legal Frameworks**

#### **International Conventions**

The Gambia is a signatory to most of the Multilateral Environmental Agreements (MEAs). These include the Basel and Bamako Conventions which aim at controlling the movement and disposal of hazardous and toxic wastes. The Bamako Convention highlights similar concerns specific to Africa. It completely rules out the exportation of hazardous wastes from the developed countries into developing or under-developed States.

The other conventions include the Convention for Cooperation in the Protection of the Marine and Coastal Environment of the West and Central African region which aims at protecting the marine environment and coastal and freshwater resources in the region. As regards atmospheric and waterways pollution, the Gambia has ratified the London Convention and all its protocols on the prevention of pollution of waterways as it has done with the protocol concerning cooperation in combating emergency pollution cases.

The Gambia has signed and ratified the UN Framework Convention on Climate Change (UNFCCC) which aims to regulate levels of greenhouse gases in the atmosphere and avoid climate change that impedes sustainable development; the Ramsar Convention aimed at stopping the encroachment on and loss of wetlands; the UN Convention to Combat Desertification particularly in Africa; and the UN Convention on Biological Diversity.

#### **National Environmental Legislations and Guidelines**

The relevant national legislations and guidelines with respect to environmental management are summarised below:

##### **1) National Environment Management Act 1994**

The objective of this law is to provide the legal basis for the correct use and a viable management of the environment and its components, in order to establish a system of sustainable development in The Gambia.

The Act recommends that the Government establishes environmental quality standards in order to ensure the sustainable use of the nation's resources. The Act also addresses issues relating to environmental pollution and environmental quality standards. This law forbids storage or disposal of toxic pollutant products on the ground, underground, on water bodies and in the atmosphere. It also recommends that the Government establishes environmental quality standards in order to ensure the sustainable use of the Nation's resources.

With particular reference to EIA, Article 22 of the Act requires environmental impact assessment for projects and programmes that could potentially have negative effects on the environment or public health.

For purposes of carrying out an EIA the NEA has formulated guidelines and procedures- the Environmental Impact Assessment Guidelines (1999) and the Environmental Impact Assessment Procedures (1999)- which provide details for conducting an EIA. These include checklists and screen forms; the assessment report format as well as the approval procedures.

## **2) EIA Regulations and Procedure**

According to the Environmental Impact Assessment Guidelines (1999) and the Environmental Impact Assessment Procedures (1999) all development projects likely to have negative environmental and social impacts will have to go through an EIA to determine their potential environmental impact. The EIA procedure involves the following:

### **Screening Process**

The objective of the project screening is to decide on the nature and extent of the environmental assessment needed for the project. It determines which activities are likely to have negative environmental and social impacts; determines the appropriate mitigation measures for activities with adverse impacts; incorporates mitigation measures into the project as appropriate; reviews and approves the project's proposals; monitors environmental parameters during the implementation of activities.

The screening process is designed to determine which projects require a full EIA process. Screening is done with the aid of EIA Screening Forms. The screening process ensures objectivity and transparency.

### **Screening Form**

A standardised project brief is submitted by a developer using the Screening Form. The Screening Form (Annex 1) requires that the developer provide information inter-alia on the following:

- Developer;
- Contact points;
- Location and size of the site/facility;
- Inputs required (utilities and raw materials);
- Products and by-products (finished products and wastes);
- Methods of waste disposal;
- Anticipated environmental impacts.

General information is required at this first stage. If in-depth analysis has already been done, results should be indicated on the screening form. If however, only preliminary analysis/surveys have been done, this will in general suffice for the screening form.

### **Project Classification**

Based on information obtained from the screening form, a systematic review of the information is completed by the Agency to determine whether an environmental impact study needs to be conducted. Evaluation criteria have been established which provide a general guide for determining whether or not a full EIA is required. This ensures a fair and consistent review of all proposed projects at this screening stage, based on the information provided by the project proponent. As a result of this screening, the project is classified in the following manner:

- **Class A:** Full Environmental Impact Assessment Required – If the Agency, either based on the screening form or after additional information has been provided, has sufficient reason to believe that the project will cause a significant negative impact on the environment, it will require that an environmental impact assessment be made in accordance with the provisions made below.
- **Class B:** Additional Information Necessary – In cases where doubts remain as to the significance of potential impacts on the environment, further information is required. Projects rated as Class B will be required to provide additional information prior to the Agency making a decision on classification. In this case, the Agency will give the project proponent, in writing, a clear indication of the information that needs to be provided. The Executive Director reserves the right to determine what additional information is required. After additional information has been provided, the Agency will reassess the proposed project and will determine if it falls into Class A or C.
- **Class C:** No Full Environmental Impact Assessment required – A project may be categorised as Class C if it is determined that the proposed project will have no significant or adverse

impact on the environment. The Executive Director may grant environmental approval to the project without further analysis.

In cases where it is obvious that a project will not be in line with the laws of The Gambia, the Executive Director may reject a project without any obligation to carry out an EIA.

### **Consultations with relevant government Ministries and Members of the Public**

The Agency, upon receiving a project brief consults the lead sectoral department. It invites public comments on statements of project intent submitted to it especially from those most likely to be affected by a proposed project. It is only subsequent to these two consultations that the Agency is required to invite interested organs of the State to comment on both the statement and the comments made there-on. A public enquiry is the final form of consultation.

A part of the public consultative process the Statement or its summary is published in local papers: (i) requesting members of the public to forward to the Agency any comments they may have and (ii) inviting the public to study and comment on the Statement which will be available at the Agency, the lead sectoral Department and the Offices of the Governor of the affected Region. After the receipt of the public comments on a Statement the Agency, the developer, and the Technical Advisory Group on EIA and interest groups hold consultative meetings with the communities.

### **3) The Public Health Act 1990**

The Public Health Act was enacted to make provision for public and environmental health-connected matters. This Act empowers the Secretary of State to formulate regulations regarding the collection, removal and disposal of sanitary waste and other noxious waste. The Act also mandates the Director of Health Services who also heads the Department of Public Health Services to abate nuisances and to remove or correct any condition that may be injurious to public health. It empowers public health officers to monitor environmental and public health regulations.

### **4) Hazardous Chemicals and Pesticides Control and Management Act 1994**

To regulate the use of hazardous chemicals and pesticides, the Hazardous Chemicals and Pesticides Control & Management Act was enacted in Parliament in April 1994 making it compulsory to register all hazardous chemicals and pesticides sold and used in the Gambia. This regulatory framework replaced the 1983 Pesticides Management Act and made the provision for the establishment of Hazardous Chemical and Pesticide Management Board (HCPMB), a regulatory body responsible for the registration, licensing and management of all hazardous chemicals & pesticides.

### **5) The Hazardous Chemicals Regulations 1996**

The Hazardous Chemicals Regulations (1996) supports Part B of the Hazardous Chemicals and Pesticides Management Act 1994. It provides for the registration of and applicants for the importation and use of hazardous chemicals, their labelling, packaging and safe storage, as well as the sale, handling and licensing of importers and storage facilities.

#### **6) The Environmental Quality Standards Regulations**

The Environmental Quality Standards Regulations established an Environmental Quality Standards Board with the primary responsibility of proposing environmental quality standards to the National Environmental Management Council and to periodically review the standards. The standards set by this law apply to ambient air, saline waters, surface fresh waters and groundwater.

#### **7) The Environmental Discharge (Permitting) Regulations**

The Environmental Discharge (Permitting) Regulations requires the registration of processes with the potential to pollute. The NEA may refuse to issue permits to these processes to discharge their wastes if their potential to pollute could exceed the limits of the Environmental Quality Standards.

#### **8) Biodiversity and Wildlife Act (2002)**

The Wildlife and Biodiversity Act of 2003 provides for the Department of Parks and Wildlife Management to declare and manage national parks, reserves and local sanctuaries, as well as Ramsar sites for the purpose of preserving the country's biodiversity. It also allows for the participation of 'local people' in biodiversity management for the purpose of ensuring their sustainable use.

#### **9) Forestry Act (1997)**

The Forestry Act entrusts forest with the Minister responsible for forestry and have provision for the process of reserving or de-reserving forest land. The Act prescribes management techniques and prohibited acts in the forests. The penalties for the infringing on the provisions of the Act are also stated.

#### **10) The National Water Management Bill (2001)**

The Department of Water Resources has prepared a new National Water Management Bill as prelude to the enactment of a Water Resources Management Act that will provide for the management and rational utilization of water in The Gambia. Other provisions of the Bill include the creation of a National Water Resources Council that will:

- Formulate the overall water resources policy for The Gambia;
- Ensure the rational and sustainable use of water resources of The Gambia; The Bill further mandates the DWR to licence the abstraction of water;
- Have power to make drought orders, prohibit the disturbance of groundwater;
- Manage and control of water quality;

- Designate water quality protection zones;
- Prepare codes of good agricultural practices;
- Develop of rural water supply;
- Prohibit the discharge of any effluent from a sewage treatment works or any trade effluent into controlled waters.

### **3.3 Overview of the World Bank's Safeguard Policies**

The World Bank has ten safeguard policies which are designed to help ensure that projects proposed for Bank financing are environmentally and socially sustainable. These operational policies include:

- OP 4.01 Environmental Assessment;
- OP 4.04 Natural Habitats ;
- OP 4.09 Pest Management ;
- OP 4.11 Physical Cultural Resources;
- OP 4.12 Involuntary Resettlement;
- OP 4.10 Indigenous People;
- OP 4.36 Forests;
- OP 4.37 Safety of Dams;
- OP 7.50 Projects on International Waterways ;
- OP 7.60 Projects in Disputed Areas.

Of these operational policies, OP 4.01 is the “umbrella” policy as the environmental screening results will determine which of the afore-mentioned safeguard policies are likely to be triggered, in addition to OP 4.01

Based on the experiences of the implementation of the last project, the Third Education Project, the most likely or relevant policies in the case of the READ Project are OP 4.01 Environmental Assessment and OP 4.12 Involuntary Resettlement. As indicated above, the latter has already been addressed in the RPF.

#### **a) OP 4.01 Environmental Assessment:**

The Bank's Safeguard policy OP4.01 requires that all Bank-financed operations are screened for potential environmental and social impacts, and that the required environmental work should be carried out on the basis of the screening results. The screening process must meet the following performance standards:

- i. Integrated assessment to identify the social and environmental impacts, risks, and opportunities of projects. It is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. EA takes into account the natural environment (air, water, and land); human health and

safety; social aspects (involuntary resettlement, indigenous peoples, and cultural property); and trans-boundary and global environmental aspects.

- ii. Effective community engagement through disclosure of project related information and consultation with local communities on matters that directly affect them; and
- iii. The project owners' management of social and environmental performance throughout the life of the project

The screening results can fall into any three of the following environmental categories:

- Category A (significant negative impacts) requiring a separate environmental impact assessment (EIA);
- Category B (impacts less significant than those of Category A) and which can be mitigated effectively by the application of simple mitigation measures by qualified staff; and
- Category C (no significant environmental impacts) and hence, no additional environmental work required.

In addition to these safeguards the Bank also has the Disclosure Policy BP 17.50 which requires that all safeguard documents are disclosed in the respective countries and at the Bank's Info shop prior to appraisal.

The Infrastructure component of the READ project is likely to trigger some of these operational policies notably OP4.01 and OP4.12.

Annex 5 summarizes these safeguard policies.

#### **b) OP 4.12 Involuntary Resettlement:**

The objective of this operational policy is to:

- (i) avoid or minimize involuntary resettlement where feasible and explore all viable alternative project designs and location,
- ii) assist displaced persons in improving their former living standards, income earning capacity, and production levels, or at least in restoring them;
- (iii) encourage community participation in planning and implementing resettlement, and
- (iv) provide assistance to affected people regardless of the legality of land tenure (encroachers and squatters included).

The policy does not only cover physical relocation, but:

- (i) relocation causing loss of land and or loss of shelter;
- (ii) loss of assets or access to assets; and

- (iii) loss of income sources or means of livelihood, whether or not there is relocation of affected persons.

This policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. In the event of land acquisition, the READ Project will implement the provisions of the Resettlement Policy Framework (RPF) which has been prepared as a separate document.

### **3.4 Comparative Analysis of Gambian Laws with World Bank Safeguard Policy OP4.12**

In many respects the Bank safeguards and the Gambian legislations have many points in common there are, however, a few important areas of difference. In comparison, the assessment form of existing projects at the level of the NEA seem rather brief and even incomplete in the procedures for project classification but also in terms of the conditions for the execution of the related environmental assessments.

According to Gambia Environmental law, specific investment activities require EIAs, whereas there are no clear EIA requirements for activities of a smaller scale, but which might have negative localized impacts that would require appropriate mitigation as in the case of the READ Project. For this reason this project will use the environmental and social screening process outlined in the ESMF. This process will allow the PCU to identify, assess and mitigate potential negative environmental and social impacts at the conception and planning of building and rehabilitation activities, and, if necessary, carry out separate EIAs should the screening results indicate the need for such.

### **3.5 Institutional Framework for the Environmental Management**

Although several public institutions have responsibility in managing the environment in The Gambia the National Environment Agency is the lead agency responsible for environment policy formulation and coordination of all environment related activities. Established in 1994 through the National Environment Management Act (NEMA) 1994, the NEA has the responsibility to implement the GEAP and oversee the EIA. The Act provides for the establishment of the National Environmental Management Council (NEMC) which oversees environmental policies, environmental standards, guidelines and regulations proposed by the NEA and the Technical Advisory Committee (TAC).

#### **a. National Environmental Management Council (NEMAC)**

The National Environmental Management Council (NEMAC), the Governing Council of the NEA was established under the National Environmental Management Act. The NEMAC is chaired by the President of The Republic, and brings together Ministers from all key Government Ministries whose activities may impact the environment and whose mandate include monitoring developments relating to the environment. As the highest national decision-making organ on the environment the Council considers and approves environmental policies and regulations proposed by the NEA, and sets the terms and conditions of service of the staff of the Agency.



## **b. National Environment Agency (NEA)**

The National Environment Agency was established by an Act of Parliament in 1993. Broadly the Agency is the principal body responsible for the management of the environment and co-ordinates all activities of the Government in this field. In doing so, it is responsible for liaison with all Government and external agencies, NGOs, interest groups and the general public. The responsibilities of the NEA are: to review and develop policies and sustainable environment inter-sectoral development plans; promote sectoral legislation; co-ordinate policy implementation; promote public awareness.

The NEA is also responsible for regulating Environmental Impact Assessment (EIA) procedures in The Gambia.

As indicated above, all projects likely to have significant environmental impacts are obliged by the NEMA to carry out an EIA prior to authorisation. According to the legislation it is NEA's role to coordinate, assess, control and evaluate the utilization of the natural resources of the country, and in doing so, to promote their preservation and rational use. It also coordinates and promotes the mainstream environmental considerations in planning and socio-economic development.

In the environmental management of this education project, the NEA will be responsible for giving the final approval of environmental assessments and oversee the monitoring of the proposed mitigation measures to ensure compliance with Gambia's environmental protection legislation and the World Bank Safeguards.

## **c. Technical Advisory Committee (TAC)**

The Technical Advisory Committee (TAC) is an advisory body to the NEA consisting of fifteen members whose expertise reflects the various fields of environment management. The TAC advises the NEA on any issue which may be referred to it, and in particular, it reviews the achievements of the NEA, reviews and advises on any environmental impact assessment of major projects, and reviews environmental plans, environmental standards, guidelines and regulations relating to NEMA. The executive Director of the NEA is the Chairperson of the TAC.

## **d. Working Groups**

To address the diverse aspects and issues relating to the environment the NEA has established, within the Agency, eight working groups, that help to improve inter agency collaboration and coordination. The Working Groups have been established in the following areas:

- Agriculture and Natural Resources,
- Environmental Information Systems ,
- Chemicals and Pesticides Management Board ,
- Environmental Education and Communication ,

- Coastal and Marine Environment ,
- Environmental Impact Assessment ,
- Environmental Legislation , and
- Environmental Quality ,

The working groups are composed of representatives from Government Institutions, Non-Government Organisations, and the Private Sector addressing aspects and issues of the environment. Membership depends on the vocation and mandate of the institution.

#### **e. Non-Governmental Organisations (NGO)**

In addition to Government efforts there are a number of NGOs that have signed a memorandum of understanding with Government and are actively involved in environmental projects throughout the country. The coordination of both international and local Non-Governmental Organisations is carried out jointly by The Association of Non-Governmental Organisations (TANGO), and the Non-Governmental Organisation Affairs Agency (NAA).

## **IV. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS OF THE READ PROJECT**

The infrastructural works of the READ Project will generate environmental and social impacts which could be either positive or negative. Below are some of the impacts likely to arise as a result of the READ Project.

### **4.1 Environmental Impacts of the Proposed READ Project Activities**

#### **a. Positive Environmental Impacts**

- Construction and rehabilitation of water and sanitation facilities can probably create the most significant positive impacts on the student community and populations of the satellite communities through the easy access to facilities that improve the quality of life. Students will have proper hygienic toilets to use instead of the bush;
- The provision of school wells will help support gardening which could be centres for generating interest in nature which could indirectly support conservation.

- Some of the communities lack potable water supply the water supply points in the schools would make water available for the local community which can greatly improve the quality of life;
- Schools and homes are places that can be used for environmental education and awareness programmes, consequently, the schools can play a very important in environmental education and in the process contribute to the protection and conservation of fauna and flora.

#### **b. Negative environmental impacts**

The adverse environmental impacts of the project will mainly come from construction activities related to the construction works and related services prior to, during, and after the construction activities. Some of these issues came up during the environmental and social audit of the last project, the Third Education Project include:

- Proper construction of toilets with proper ventilation pipes to prevent bad odour from filtering into the backyard and the living rooms of staff quarters especially in the evenings and at night; provision of chimneys for the kitchens to reduce air pollution in side staff quarters, etc.
- Poor management of the removal of both solid and liquid waste that may be generated by the contractor during and following (after the facility has become operational) construction. The manual for contractors contained in **Annex 4** adequately addresses these issues as well as dust and noise abatement measures during the works.
- Failure to design proper drainage systems for the water supply points which can result in water logging at the well sites and standpipes.
- The construction of all education infrastructures will be a major source of soil degradation due to excavation for building materials, creating burrow pits which if not filled after construction will provide the ideal breeding grounds for the *schistosomias* snail and the *anopheles* mosquito. The excavations themselves could serve to dislocate water courses or natural drainage systems.
- The use of pesticides to kill pests such as snakes, rodents and bats on a wider scale could also have adverse effects on biodiversity, soils and surface and groundwater; finally
- Excessive use of synthetic chemicals (NPK fertilizer) in the vegetable garden could contribute to soil salinity; while some pesticides can have adverse effects on the micro-organisms that have important roles in the restoration of soils,

Some of the these impacts indicated above depend mainly on the scope and scale of the works, on the rolling stock to be mobilized, the surface area needs and the surface area availability as well as the supply needs.

However, the associated mitigating measures of all the environmental impacts should be embodied in the designs and contractual obligations of all contractors.

A summary of the major concerns that could arise before, during and after construction of the infrastructural facilities of the READ Project and the mitigation measure designed to eliminate or attenuate these adverse effects are given in the tables below.

**Table 4: Adverse Environmental Impacts due to Infrastructure Construction / Rehabilitation**

| Phase                                   | Potential adverse impacts   |
|---|---|
| <b>Prior to and during construction</b> | <ul style="list-style-type: none"> <li>- degradation of storage sites of construction materials and equipment,</li> <li>- loss of vegetation and degradation of soils,</li> <li>- surface water pollution,</li> <li>- deforestation for construction site access,</li> <li>- air pollution due to vehicle rotation, noise, dust etc</li> <li>- soil pollution from motor oil and lubricants,</li> <li>- waste generated by construction work,</li> <li>- pollution resulting in degradation of the living environment,</li> <li>- soil erosion,</li> <li>- loss of natural habitat zones and biodiversity,</li> </ul> |
| <b>After construction</b>               | <ul style="list-style-type: none"> <li>- Unserviceable sanitation facilities and absence of access to water and electricity.</li> <li>- Unrehabilitated quarries and borrow pits (habitats for the malaria vector and bilharzia snail),</li> <li>- Non-restoration of the landscape and regeneration of the vegetation cover</li> <li>- Poor ventilation of toilet facilities.</li> <li>- Poor drainage of the backyard of houses (staff quarters)</li> <li>- Improper/unsatisfactory well covers resulting in water from the wells seeping back into the wells</li> </ul>  |

**Table 5: Adverse Environmental Impacts prior to, during and after Construction /Rehabilitation**

| Specific activities                               | Potential Impacts   |
|---|---|
| <b>Implantation of contractor and works phase</b> | <p><b>Impacts on the biophysical environment</b></p> <ul style="list-style-type: none"> <li>- Deforestation with the opening and the exploitation of the quarries</li> <li>- Risks of bush fires by uncontrolled burning</li> <li>- River sedimentation</li> <li>- Obstruction of drainage patterns</li> <li>- Loss of vegetation when site preparation and quarries opening</li> <li>- Pollution and temporary disruption of river out-flow (by storage of construction materials)</li> <li>- Accidental discharge of oils, of greases,</li> </ul> |

|                  |   |
|------------------|---|
| <b>Operation</b> | <ul style="list-style-type: none"> <li>- Accidents (turns, critical points, etc.)</li> <li>- Flying dust on lateritic roads (crossing villages)</li> <li>- Facilitation of access to the protected natural resources</li> </ul> |
|------------------|---|

**Table 6: Adverse Environmental Impacts of the Water Supply infrastructures**

| <b>Phase</b> | <b>Potential adverse Impacts</b>  |
|--------------|---|
| Construction | <ul style="list-style-type: none"> <li>- emanation of dust</li> <li>- Loss of vegetation (clearings, reticulation systems and piped water connections.</li> <li>- Disruption of the traffic during works, trench digging, and excavations,</li> <li>- Accident risks (unprotected trenches, machinery, etc.)</li> <li>- disruption of the surrounding drainage system</li> </ul>  |
| Operation    | <ul style="list-style-type: none"> <li>- Increase of water use,</li> <li>- over-extraction of the ground water,</li> <li>- Increased competition for the use of natural resources</li> <li>- Increase levels of soil salinity,</li> <li>- proliferation of invading aquatic plants,</li> <li>- development of water related diseases (malaria, bilharzias, etc.)</li> <li>- reduction of arable and pastoral surfaces</li> <li>- increase in the population density around the infrastructures</li> </ul> |

**Table 7: Adverse Environmental Impacts of Socio-Economic Activities e.g., Agricultural Activities**

| <b>Sub-sector</b>  | <b>Potential Adverse Impacts</b>   |
|--|--|
| Fruit trees (e.g Cashew)   | <ul style="list-style-type: none"> <li>- sensitive habitat destruction,</li> <li>- reclamation of wooded zones,</li> <li>- soil erosion, disruption of the water cycle,</li> <li>- loss of grazing land, ,</li> <li>- pollution of underground water tables , rivers, water bodies,</li> <li>- contamination of livestock watering points,</li> <li>- pesticides poisoning,</li> <li>- pesticides residues in the food chain,</li> <li>- use of empty containers to store food or water,</li> <li>- dislocation of non- targeted populations,</li> </ul> |
| Promotion of agricultural activities                             |  |
| Market gardening   |  |
| Nurseries, school orchards and small irrigated market gardening. |  |
| <b>Sub-sector</b>  | <b>Potential Adverse Impacts</b>   |
| Animal Husbandry   | <ul style="list-style-type: none"> <li>- reduction of grazing capacity</li> <li>- tree felling for the establishment of paddocks,</li> <li>- soil erosion</li> <li>- Loss of vegetation around the works (watering points, etc.),</li> <li>- excessive withdrawal of the underground waters.</li> </ul>  |
| <b>Sub-sector</b>  | <b>Potential Adverse Impacts</b>   |
| Fisheries  | <ul style="list-style-type: none"> <li>- stripping of humid zones</li> </ul>   |

|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>- disappearance of grazing lands</li> <li>- change in water flows</li> <li>- competition with other water uses</li> <li>- water pollution (chemicals, etc.)</li> <li>- depletion of local fish populations with the introduction of exotic species</li> <li>- development of water related diseases</li> </ul> |
|--|---|

In order to cope with these adverse impacts, the environmental and social screening process proposed in the ESMF will be conducted to ensure that potential negative impacts are identified and appropriate mitigation measures instituted.

It is recommended that Environmental Guidelines for Contractors (Annex 4) are used to ensure that the constructor's activities are carried out in compliance with the mitigation measures proposed in the ESMF. These guidelines can be written into contractual agreements and form the basis for monitoring compliance

## **4.2 Social Impacts of the Proposed READ Project Activities**

### **a. Positive Social Impacts**

Overall, the READ Project is likely to have a positive impact on the socio-economic development of The Gambia, particularly in the communities where these schools will be located. Some of the positive impacts include:

- The construction of schools will greatly increase the number of pupils into the school system, and will provide access to a category of the population that is already very much disadvantaged;
- The works, (including sanitation and water points) will contribute towards recreating a healthy school environment for pupils and teachers. This will encourage also many more parents to send their children to school as the schools would be nearer to the home and considered more secure;
- For the water supply infrastructure the construction of water supply facilities (bore holes, watering points, wells, etc.) will contribute to improving the availability of water not only to the schools but also to the villages particularly in places affected by water shortage. This will reduce both the time and energy spent by women to go and fetch water. Thus these achievements, will contribute to improving the health situation of the surrounding local communities by making clean water available to them.

- For the agricultural activities that may develop because of the wells could bring about improvements in nutrition of the children by making use of the garden produce in the school feeding programme.

### **b. Negative Adverse Social Impact**

The potential negative social impacts that could arise include the following:

- Absence of a participatory process involving local communities in the preparation of their Educational Regional Development Plan and in the screening of infrastructural subprojects;
- Exclusion of vulnerable groups from participating in and benefiting from project activities, due to stigmatization, harmful cultural practices, acute poverty among vulnerable groups, discrimination etc.
- Land acquisitions/use resulting in involuntary resettlement or loss of land assets and livelihoods.

The environmental and social screening form (Annex 1); the environmental and social checklist (Annex 2); the mitigation measures described in Annex 3 and the environmental guidelines for contractors described in Annex 4 are specifically designed to ensure that adverse social impacts from the READ project are captured at the planning stages and effectively mitigated.

## **V. THE ENVIRONMENTAL AND SOCIAL SCREENING PROCESS**

### **5.1. The Environmental and Social Screening Process**

The sections below illustrate the stages (steps 1-7) of the environmental and social screening process for the READ Project. The purpose of this screening process is to:

- Determine which activities are likely to have negative environmental and social impacts;
- Determine appropriate mitigation measures for activities with adverse impacts;
- Incorporate the mitigation measures into the project as appropriate;
- Review and approve the project's proposals;
- Monitor the environmental parameters during the implementation of activities.

### **5.2. The Screening Steps**

The process of screening can be broken down into the following steps:

#### **Step 1: Screening of the Subproject's Infrastructure and Locations.**

Each administrative region shall set up a Regional Environmental Focal Point with membership consisting of the Regional Director, the Regional Environment Officer, a representative of the Local Government Authority and a representative of the local community where the infrastructure is to be located. The Construction Monitor shall serve as the secretary to the Focal Point. Other persons may be co-opted if their expertise is considered necessary.

Once a particular infrastructure subproject of the READ is known the Regional Directorate in the region where the investment is to take place shall arrange to have the subproject screened by his office in consultation with the local community. The Construction monitor attached to the Office shall complete the Environmental and Social Screening Form (Annex 1) to determine the likely negative environmental and social impacts. The completed screening form should indicate the potential environmental and social impacts, determine their significance and assign the appropriate environmental category. The screening should also propose the appropriate environmental mitigation measures, or recommend the execution of an Environmental Impact Assessment (EIA), if necessary.

To ensure that the screening form is completed correctly in the various project locations, environmental and social training will be provided to the construction monitors and other members of the Environmental Focal Point in each region.

### **Step 2: Assigning the appropriate Environmental Categories**

The assignment of the appropriate environmental category to a particular construction/rehabilitation activity will be based on the information provided in the environmental and social screening form (Annex 1). The Regional Environmental Focal Point shall review the completed screening forms and categorize the construction or rehabilitation activity either as A, B, or C.

- Category A: activities requiring an environmental impact assessment,
- Category B: activities requiring an environmental impact statement or the implementation of simple mitigation measures,
- Category C: activities neither requiring an environmental impact statement nor an environmental impact assessment.

The assignment of the appropriate environmental category will be based on the provisions in OP 4.01 Environmental Assessment. Consistent with this operational policy, most activities under the education project are likely to be categorized as B or C, meaning that their potential adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – are site-specific, few if any of the impacts are irreversible, and can be mitigated readily.



Some schools infrastructure, water and sanitation facilities, fencing and roofing could simply be the subject of a contractor's manual and embodied in their contracts and strictly monitored in this regard. Such projects could well be classified C and allowed to proceed immediately.

### **Step 3: Review and Approval by the PCU**

The completed screening form will be sent to the PCU for review and assessment of the results. The PCU shall review:

- (i) the results and recommendations presented in the environmental and social screening forms,
- (ii) the propose mitigation measures presented in the environmental and social checklists and,
- (iii) the recommendations on whether to conduct an EIAs or not to ensure that all environmental and social impacts have been identified and effective mitigation measures have been proposed and incorporated into the project implementation and costs.

Where the screening results indicate no particular negative impacts or only minor ones simple mitigation measures outlined in the environmental and social checklist (Annex 2) could be applied. These simple measures should be included in the bidding documents and the contractors be made to fully implement those clauses.

In situations where the screening process identifies the need for land acquisition, qualified service providers would prepare a RAP, consistent with OP 4.12.

In cases where the results of the environmental and social screening process indicate that the activities scheduled are more complex and therefore require conducting a separate EIA the PCU shall forward the form to NEA for consideration and approval to conduct an EIA..

### **Step 4: Environmental impact assessment (EIA):**

Once the NEA gives approval based on the recommendations of the PCU a consultant will be recruited to conduct the EIA. The EIA will identify and assess the potential environmental impacts for the planned rehabilitation activities, assess the alternatives solutions and will design the mitigation, management and monitoring measures to be proposed. These measures will be quoted in the Environmental and Social Management Plan (ESMP) that will be prepared as part of the EIA for each activity. The preparation of the EIA and the ESMP will be done in collaboration with the concerned parties, including the people likely to be affected.

The EIA will be prepared in accordance with the national regulations and guidelines as well as the provision of OP 4.01. A draft terms of reference for the preparation of EIA has been provided in Annex 6 which can be adapted as necessary.

The EIA reports will be reviewed in the light of the EFP recommendations prior to approve/rejection by the NEA. If the EIA is approved, the NEA will issue the necessary environmental permit that confirms the EIA has been satisfactorily completed and the project may proceed. A decision is made and a record of the decision explains how environmental issues were taken into consideration.

### **Step 5: Public Consultations and Disclosure:**

Public consultations will also take place during the screening process, and the results will be communicated to the public by the PCU. According to the procedures governing the EIA, public information and participation must be ensured during the scoping period and the preparation of the Environmental Impact Assessment, in collaboration with the competent Government authorities and the concerned community. Public information includes particularly:

- One or several meetings for the presentation of the project with a gathering of local authorities, the communities and concerned organizations;
- The opening of a register at the office of the Regional Governor or Mayor ( in the case of Banjul and Kanifing) where people, organizations and other interest groups can present their views on the project.

Whenever a strong public concern over the proposed project is indicated and impacts are extensive and far-reaching, the PCU is required to organize a public hearing. The results of the public hearing should be taken into account when a decision is taken on whether or not a permit is to be issued.

These consultations should lead to the identification of the main issues and determine how the concerns of all parties will be tackled in the terms of reference for the EIA. The results of the consultations will be included in the EIA report and made available to the public by the PCU, through its EFP.

For the READ project infrastructure activities, the public consultation process will be carried out by the Regional Directorates, in two phases: (i) during the screening and classification of project activities and (ii) during the analysis of environmental and social impacts.

### **Stage 6: Environmental Monitoring and Follow-up**

Environmental monitoring aims at checking the effectiveness and relevance of the implementation of the proposed mitigation measures. Based on Memorandum of Understanding to be signed between the PCU and NEA the Agency will oversee the monitoring programme.

Monitoring will take place during the implementation of the infrastructural subprojects and will consist of both internal and external monitoring.

**- Internal Monitoring**

First, the Construction monitors will be required to provide monthly reports on the implementation of the proposed mitigation measures as contained in the Environmental Management Plan(EMP). These reports will be submitted to the PCU for transmission to the Project Steering Committee and the NEA.

Second, the PCU will compile quarterly reports to the Project Steering Committee, NEA and the World Bank.

**- External Monitoring**

External monitoring will be done by the NEA. NGOs may also be contracted in the external monitoring. The frequency and scope of this monitoring will be determined in the Memorandum of Understanding to be signed between the PCU and NEA.

**Monitoring indicators:**

In order to assess the efficiency of the education project's construction/ rehabilitation activities, it is proposed that the following monitoring indicators be used:

Environmental and social indicators:

- Water quality in schools and surrounding communities meet international standards,
- Safe waste management related to construction works
- Reforestation and land restoration after construction and or rehabilitation,
- Compliance with the Environmental Guidelines for Contractors
- Pest management training received by the students and communities,
- Best practice in the implementation of project activities,
- Equipment for safe medical waste management provided by projects where required.

These monitoring indicators will be included in the READ Project Monitoring Manual.

**Table 8:Institutional Responsibilities in the Screening Process**

| Stages | Responsibilities |
|--------|------------------|
|--------|------------------|

|  |  |
|--|--|
| <b>1. Screening of infrastructural subprojects at each of the sites using the Environmental and Social Screening Form (Annex 1)</b>                      | Regional Directorate (Construction Monitors) with the support of the Regional Environment Focal Points   |
| <b>2. Assigning the appropriate Environmental Categories (A, B, or C)</b>  | Regional Environment Focal Points  |
| <b>3. Implementing simple mitigation measures (Annex 2),</b>   | Contractors  |
| <b>4. Review and Approval</b>  |  |
| <b>4.1 Approval of (i) the screening results ; (ii) the assigned environmental category; and (iii) recommendations of the Environmental Focal Points</b> | PCU  |
| <b>4.2 Approval of Recommendation for EIA</b>  | NEA  |
| <b>4.2 Selection of the consultant(s) in cases where EIA is required.</b>  | The Project Coordination Unit in consultation with NEA.  |
| <b>4.3 Execution of the environmental Impact Assessment (EIA)</b>  | Authorized Consultants   |
| <b>4.4 Approval of environmental Impact Assessment Report</b>  | NEA  |
| <b>5. Public consultations and disclosure</b>  | Regional Directorates and the PCU.   |
| <b>6. Monitoring</b>   | Regional Directorates, the PCU and NEA.  |
| <b>7. Environmental and Social Indicators</b>  | The Regional Directorates in each region will ensure that the environmental and social monitoring indicators listed in the ESMF are included and adhered to in all education project construction/rehabilitation activities. |

## **VI. ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

### **6.1 Environmental Management Plan for the Implementation of the READ Project**

An Environmental Management Plan (EMP) outlines the specific measures that will avoid, mitigate or compensate for anticipated negative environmental effects of a proposed project. It is designed to provide a complete description of the various measures proposed to avoid significant

effects to the environment and provide the framework for monitoring and managing the effectiveness of the various mitigation and compensation measures. The EMP also provides a summary of the anticipated costs for implementing the measures and monitoring the effectiveness of those measures.

In this respect the content of the proposed EMP for the READ Project shall include:

- a. the relevant project activities likely to impact on the environment,
- b. the potential negative environmental and social impacts,
- c. the proposed mitigation measures,
- d. those who will be responsible for implementing the mitigation measures,
- e. those who will monitor the implementation of the mitigation measures;
- f. the frequency of the afore-mentioned measures;
- g. capacity building needs; and
- h. the cost estimates for these activities.

The EMP will be included in project's Implementation manual with the associated costs.

At the time of the implementation of some of the activities of the construction/rehabilitation programme, the potential environmental and social impacts must be clearly identified and a management plan formulated, implemented and the plan's performance monitored before, during and after construction or rehabilitation of the works. The impacts must be avoided or neutralised where possible or mitigated in conformity with Gambia's and World Bank prescriptions.

The EMP is presented in the form of a table below showing the crucial role of mitigation.

**Table 9: Sample EMP presented in the form of a Table**

|          | <b>Potential environmental &amp; social Impact</b>                 | <b>Proposed Mitigation Measures</b>  | <b>Responsibility</b>        |                               | <b>Time line</b> | <b>Estimated Cost</b> |
|----------|--|--|------------------------------|-------------------------------|------------------|-----------------------|
|          |  |  | <b>Implement ation</b>       | <b>Monitoring</b>             |                  |                       |
| <b>1</b> | Potential pollution of the quality of surface and groundwaters     | Install work sites far from waterways<br>Regular collection of work sites refuse towards authorized dumps  | <b>Contractor</b>            | <b>Constructio n Monitors</b> |                  |                       |
| <b>2</b> | Lack of water for sanitation or toilet facilities                  | Ensure the installation of adequate water supply facilities and or water reservoirs with enough capacity   | <b>PCU</b>                   | <b>MoBSE</b>                  |                  |                       |
| <b>3</b> | Soakaways overflowing and contaminating ground and surface waters. | Ensure that pits are located in soil where seepage can percolate<br>Establish and support affordable pump out services                               | <b>Contractor</b>            | <b>Constructio n Monitors</b> |                  |                       |
| <b>4</b> | Use of the lands of displaced people                               | <ul style="list-style-type: none"> <li>Design an action plan for resettlement in case of involuntary relocation of populations as per RPF</li> </ul> | <b>Authorised Consultant</b> | <b>NEA/PCU</b>                |                  |                       |

## **6.2. Institutions Responsible for Implementing and Monitoring the Mitigation Measures**

Roles and responsibilities regarding environmental planning and approval for construction or rehabilitation activities are outlined and summarised below. The main institutions with key roles and responsibilities for environmental and social management are:

### **National Coordination/Supervision**

- At the national level the PCU will coordinate and supervise the Regional Directorates and it will be supported in this role by the NEA based on the MoU to be signed between MoBSE and NEA.
- In each region, the Environmental Focal Point will be responsible for completing the environmental and social screening lists (Annex 1); the environmental and social checklists (Annex 2); and determining the environmental category of the screened activity to be able to identify and mitigate the potential environmental and social impacts of construction and rehabilitation activities..

### **Execution/Implementation**

- Individual consultants or consultancy firms will be responsible for carrying out the EIA studies;
- Private contractors will be responsible for the implementation of the mitigation measures as indicated in the Environmental Guidelines for Contractors (**Annex 4**).

### **Monitoring**

- NEA will have overall responsibility to supervise this exercise and it will be supported by the PCU at the national level. The Construction Monitors shall be responsible at the regional level.

## **6.3 Capacity Building for the Environmental and Social Management of the Project**

### **(a) Training Needs:**

To carry out the responsibilities indicated above will require capacity building of the various stakeholders particularly at the regional level where the first phase of the screening and categorisation takes place. Personnel of the PCU, the Regional Directors and the Construction Monitors as well as the local government authorities will need to be trained to enable them make sound judgments, in particular on the siting of infrastructure, the environmental and social implications of the subproject, the likely impacts(positive or negative) of the site(s) selected and the measures required to eliminate or attenuate the latter.

The PCU Coordinator and Environmental focal point should attend environment related training seminars whilst the NEA will be approached to provide trainings to construction monitors.

**Table 10** below gives an outline of the training that will be required by category of stakeholders.

**Table 10: Outline of Training topics for the Various Categories of Stakeholders**

| Concerned stakeholders  | Topic of the training  |
|---|--|
| EFPs, PCU and Gamworks, Local government and community personnel. | <p>Training in the field of:</p> <ul style="list-style-type: none"> <li>- Environmental assessment (screening and classification of sub-projects; EIA procedures, etc.)</li> <li>- Impacts identification.</li> <li>- Draft terms of reference for environmental assessments.</li> <li>- Selection of simplified mitigation measures in the checklists</li> <li>- Pollution, waste management, hygiene and quality standards</li> <li>- Gambia's national environmental policies, procedures, and legislation</li> <li>- World bank Safeguards Policies</li> <li>- Monitoring the implementation of measures and environmental indicators.</li> <li>- Pest management</li> </ul> |

#### 6.4 Monitoring Plan - Monitoring Indicators

The objective for monitoring is twofold:

(i) to alert project authorities and to provide timely information about the effectiveness of the Environmental and Social Management plan outlined in the ESMF so that changes can be made as required to ensure continuous improvement,

(ii) to make a final evaluation in order to determine whether the mitigation measures have been successful in such a way that the pre- programme environmental and social conditions have been restored, improved upon or worst than before and to determine what further mitigation measures may be required.

A number of indicators would be used in order to determine the status of the affected environment as follows:

- Has the pre-project human and natural environmental state been maintained or improved at the education facilities and;
- Has the effectiveness of the ESMF technical assistance, review, approval and monitoring process been adequate to pre-empt and correct negative impacts inherent in certain types of educational infrastructure projects.

| Measures | Actions | Responsible | Costs<br>US\$ |
|----------|---------|-------------|---------------|
|----------|---------|-------------|---------------|



|  |   |   |        |
|--|---|---|--------|
| Institutional measures   | To designate the Environmental Focal Points (EFPs) in all regions (Local government representatives, PCU, NEA, Gamworks Community representatives and appropriate NGOs) to serve as regional actors in the execution of the education activities and notably in the application of the prescriptions of this ESMF and the RPF (see separate document).  | PCU   | 30,000 |
| Technical Measures   | To undertake the regional exercises related to planning, assessment and follow-up, in a systematic manner, of the ESMF and RPF provisions on the Environmental and social components of these, especially prior to, during and after construction or rehabilitation of all the Education Infrastructure funded by the project.  | EFP<br>NEA<br>Gamworks PCU                  |        |
|  |   | The local communities (Council; Wards; VDC) |        |
|  | To undertake Environmental Impact and Resettlement Action Plan Studies  | PCU/Consultants                             |        |
| <b>Sub-Total 1</b>   |   |   |        |
| <b>Training</b> (including local communities)                              | Training in environmental and social management of the projects with follow-up and execution of environmental measures  | PCU/NEA Consultants                         |        |
| <b>IEC Sensitisation</b> (including media campaigns for local communities) | Sensitization on HIV/AIDS<br>Communication and sensitization campaign before, during and after works<br>Sensitization and advocacy on the environmental and social stakes of the projects, good environmental practices, appropriate behaviour in the yards, respect of customs and traditions, of the measures of hygiene and security, the use of the pesticides, respect for the planning norms, |   |        |
| <b>Sub-Total 2</b>   |   |   |        |
| <b>GENERAL TOTAL</b>   |   |   |        |

**Table 11: Environmental Indicators; Loss of vegetation; Land degradation; Compliance with Legislations.**

These indicators must be reviewed in conjunction with:

Environmental Guidelines for Contractors; Pesticides use; Waste management; Maintenance of Facilities (schools infrastructure water and sanitation facilities fences, gates roofs etc.)

Social indicators: Population incomes; number of people provided with environmental training to implement the ESMF; The number of local workers used during of the works

These monitoring indicators will be included in the PCU Project Monitoring Manual.

### **6.5. Budget for the Environmental and Social Management of the Education Project**

An overall budget for the infrastructure components of this project cannot be made as the infrastructures are site-specific and unknown at this time.

The infrastructure and services management costs should be determined for each sub-project and built into the project before, during and after sub-project completion.

The Consultant felt that the EFPs should define the plans with a systematic follow-up plan, notably in the maintenance of the facilities.

**A budget for Institutional support for NEA is as follows:**

#### **Institutional support to the NEA**

##### **A. Personnel Costs**

|  |           |
|--|-----------|
| 6 Inspectors @ D650/day for 10 days per visit for 3 trips/year         | D468,000  |
| 6 Programme Officers @ D650/day for 10 days per visit for 3 trips/year | D 468,000 |
| 3 drivers@ D650/day for 10 days per visit for 3 trips/year             | D 234,00  |

Sub-Total (Personnel) D1,170,000

##### **B. Logistics**

|  |          |
|--|----------|
| Fuel 120L/Vehicle @ D 52.00 for 2 vehicles | D149,760 |
| 3 visits/year for 4 years                  |          |

Sub-Total (Logistics) D149,760

D. NEA Headquarters Backstopping/Contingencies D 100,000

**Total Annual Costs D1,319,760**

**i.e. D33.00 to \$1.00 \$ 39,992.00**

**The Consultant recommends that the project covers these costs phased out over a period of 4 years.**

### **6.6. Recommendations**

**During an audit of an earlier project a number of environmental and social concerns were raised with respect to the water supply facilities, the staff quarters etc it is recommended that these findings be taken into consideration in the design and implementation of the READ project.**

For the contractors they should be required to comply with the environmental guidelines described in Annex 3 and all of the requirements of the EIA and ESMP and shall, in accordance with accepted standards, employ techniques, practices and methods of construction that will ensure compliance with these standards and, in general, minimise environmental damage, control waste, avoid pollution, prevent loss or damage to natural resources, and minimise effects on surrounding landowners, occupants, and the general public.

## VII. ANNEXES

### Annex 1: Environment and Social Screening Checklist (ESSC)

Please type or print clearly, completing this form in its entirety. You may provide additional information on a separate sheet of paper if necessary. Kindly note that Section 22 of the National Environmental Management Act of 1994 requires that the information you are to provide is accurate and it is an offence to give inaccurate information under Section 53 (C) of the same Act.

Use this form/pre-construction checklist for:

- (i) determining the viability of proposed sites for construction of classrooms, toilets, staff quarters and water points
- (ii) assessing the environmental and social impacts of the proposed sub-projects and assigning the appropriate environmental and social categories; and
- (iii) proposing appropriate mitigation measures (Annex 2 )

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School name/Region:

Proposed Location (include map/sketch): (e.g. region, district, etc)

Planned type of activity : (e.g. new construction, rehabilitation, periodic maintenance)

Proposed Date of Works Commencement:

Technical Drawing and Specifications (circle Yes No  
Reviewed : answer):

---

#### 1. Site Selection:

|  |  |
|--|--|
| <b>Physical data:</b>                        | <i>Yes/No answers and bullet lists preferred except where descriptive detail is essential.</i> |
| Site area in ha                              |  |
| Any existing property to transfer to project |  |
| Any plans for new construction               |  |

*Refer to project application for this information.*

## 2. Environmental and Social Impact Identification and Classification:

*When considering the location of a READ investment project, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects. The following table should be used as a reference.*

### IMPACT IDENTIFICATION AND CLASSIFICATION

| Issues  | Site Sensitivity   |  |   |
|---|--|--|---|
|   | Low (C)  | Medium (B)   | High (A)  |
| <b>Natural habitats</b>   | <input type="checkbox"/> No natural habitats present of any kind   | <input type="checkbox"/> No critical natural habitats; other natural habitats occur                                    | <input type="checkbox"/> Critical natural habitats present  |
| <b>Water quality and water resource availability and use</b>          | <input type="checkbox"/> Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues | <input type="checkbox"/> Medium intensity of water use; multiple water users; water quality issues are important       | <input type="checkbox"/> Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important                                     |
| <b>Natural hazards vulnerability, floods, soil stability/ erosion</b> | <input type="checkbox"/> Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks   | <input type="checkbox"/> Medium slopes; some erosion potential; medium risks from volcanic/ seismic/ flood/ hurricanes | <input type="checkbox"/> Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic or flood risks  |
| <b>Cultural property</b>  | <input type="checkbox"/> No known or suspected cultural heritage sites   | <input type="checkbox"/> Suspected cultural heritage sites; known heritage sites in broader area of influence          | <input type="checkbox"/> Known heritage sites in project area   |
| <b>Involuntary resettlement</b>                                       | <input type="checkbox"/> Low population density; dispersed population; legal tenure is well-defined; well-defined water rights   | <input type="checkbox"/> Medium population density; mixed ownership and land tenure; well-defined water rights         | <input type="checkbox"/> High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear water rights |
| <b>Indigenous peoples</b>   | <input type="checkbox"/> No indigenous population  | <input type="checkbox"/> Dispersed and mixed indigenous populations; highly acculturated indigenous populations        | <input type="checkbox"/> Indigenous territories, reserves and/or lands; vulnerable indigenous populations   |

### 3. Assessment of the landscape

| Issues  | Potential for Adverse Impacts |         |         |          |         |
|---|-------------------------------|---------|---------|----------|---------|
|   | None (C)                      | Low (C) | Med (B) | High (H) | Remarks |
| Soil erosion or flooding concerns (e.g., due to highly erodable soils or steep gradients) |                               |         |         |          |         |
| Any new access (roads) construction?  |                               |         |         |          |         |
| Disturbances of streams, footpaths, rural roads?  |                               |         |         |          |         |
| Wet season excavation?  |                               |         |         |          |         |
| Quarry sites or borrow pits?  |                               |         |         |          |         |
| Significant vegetation removal?   |                               |         |         |          |         |
| Wildlife habitats or populations disturbed?   |                               |         |         |          |         |
| Environmentally sensitive areas disturbed?  |                               |         |         |          |         |
| Cultural or religious sites disturbed?  |                               |         |         |          |         |
| Economic or physical resettlement required? Yes/No  |                               |         |         |          |         |
| New settlement pressures created? Yes/No  |                               |         |         |          |         |
| Other (specify):  |                               |         |         |          |         |

| Water supply   | Potential for Adverse Impacts |            |            |             |         |
|--|-------------------------------|------------|------------|-------------|---------|
|  | None<br>(C)                   | Low<br>(C) | Med<br>(B) | High<br>(A) | Remarks |
| Existing water sources supply/yield depletion  |                               |            |            |             |         |
| Existing water users disrupted   |                               |            |            |             |         |
| Downstream water users disrupted   |                               |            |            |             |         |
| Sensitive ecosystems downstream disrupted  |                               |            |            |             |         |
| Salination of soil/Ground water<br>(if unknown check with Department of Water Resources) |                               |            |            |             |         |
| Potential for water contamination/leaching   |                               |            |            |             |         |
| Increased social tensions/conflict over water allocation                                 |                               |            |            |             |         |
| Local incapacity/inexperience to manage facilities                                       |                               |            |            |             |         |
| Other (specify):   |                               |            |            |             |         |

#### 4. Detailed questions:

| <b>1. Preliminary Environmental Information:</b>   | <i>Yes/No</i> | <i>Remarks</i> |
|--|---------------|----------------|
| State the source of information available at this stage. Is there an EIA or other environmental study?                         |               |                |
| Has there been litigation or complaints of any environmental nature directed against the proponent or READ investment project? |               |                |

*Refer to application and/or relevant environmental authority for this information*

| <b>2. Identify type of activities and likely environmental impacts:</b>                                      | <i>Remarks</i> |
|--|----------------|
| What are the likely environmental impacts, opportunities, risks and liabilities associated with the project? |                |

*Refer to ESMF– Impact, Mitigation and Monitoring Guidelines*

| <b>3. Determine environmental screening category:</b>   | <i>Category A, B, or C</i> |
|---|----------------------------|
| After compiling the above, determine which category the READ investment project falls under based on the environmental categories: A, B or C. |                            |

*Refer to ESMF – Screening and Review Process*

| <b>4. Mitigation of Potential Pollution:</b>   | <i>Yes/No/NA</i> | <i>Remarks</i> |
|--|------------------|----------------|
| Does the READ investment project have the potential to pollute the environment, or contravene any environmental laws and regulations?  |                  |                |
| Will the READ project require pesticide use?   |                  |                |
| If so, then the proposal must detail the methodology and equipment incorporated in the design to constrain pollution within the laws and regulations and to address pesticide use, storage and handling. |                  |                |
| Does the design adequately detail mitigating measures?   |                  |                |

*Refer to ESMF– Impact, Mitigation and Monitoring Guidelines*

| <b>5. Environmental Assessment Report or environmental studies required:</b>   | <i>Yes/No/NA</i> | <i>Remarks</i> |
|--|------------------|----------------|
| If Screening identifies environmental issues that require an EIA or a study, does the proposal include the EIA or study?   |                  |                |
| Indicate the scope and time frame of any outstanding environmental study.  |                  |                |
| Required Environmental Monitoring Plan:  |                  |                |
| If the screening identifies environmental issues that require long term or intermittent monitoring (effluent, gaseous discharges, water quality, soil quality, air quality, noise etc), does the proposal detail adequate monitoring requirements? |                  |                |

| <b>6. Public participation/information requirements:</b> | <i>Yes/No/NA</i> | <i>Remarks</i> |
|--|------------------|----------------|
|--|------------------|----------------|



|  |  |  |
|--|--|--|
| Does the proposal require, under national or local laws, the public to be informed, consulted or involved? |  |  |
| Has consultation been completed?   |  |  |
| Indicate the time frame of any outstanding consultation process.   |  |  |

*Refer to relevant legislative acts in The Gambia.*

| <b>7. Land and resettlement:</b>   | <i>Yes/No/NA</i> | <i>Remarks</i> |
|--|------------------|----------------|
| What is the likelihood of land purchase for the READ project?  |                  |                |
| How will the proponent go about land purchase?   |                  |                |
| Will people's livelihoods be affected in any way, therefore requiring some form of compensation?   |                  |                |
| Will people need to be displaced, and therefore require compensation and resettlement assistance?  |                  |                |
| Are the relevant authorities aware of the need for a Resettlement Process, involving a census, valuation, consultation, compensation, evaluation and monitoring? |                  |                |
| What level or type of compensation is planned?   |                  |                |
| Who will monitor actual payments?  |                  |                |

*Refer to the Resettlement Policy Framework.*

## 5. Categorization

**\*Place tick in applicable box**

|  |         |  |
|--|---------|--|
|  | Class A | Full Environmental Impact Assessment Required – If the Agency, either based on the screening form or after additional information has been provided, has sufficient reason to believe that the project will cause a significant negative impact on the environment, it will require that an environmental impact assessment be made in accordance with the provisions made in the ESMF.  |
|  | Class B | Additional Information Necessary – In cases where doubts remain as to the significance of potential impacts on the environment, further information is required. Projects rated as Class B will be required to provide additional information prior to the Agency making a decision on classification. In this case, the Agency will give the project proponent, in writing, a clear indication of the information that needs to be provided. The Executive Director of NEA reserves the right to determine what additional information is required. After additional information has been provided, the Agency will reassess the proposed project and will determine if it falls into Class A or C. |
|  | Class C | No Full Environmental Impact Assessment required – A project may be categorised as Class C if it is determined that the proposed project will have no significant or adverse impact on the environment. The Executive Director may grant environmental approval to the project without further analysis.   |

|  |   |       |
|--|---|-------|
|  | Requires a RAP is to be submitted on date                     | _____ |
|  | Requires an ARAP to be submitted on date                      | _____ |
|  | Requires an census and land inventory to be submitted on date | _____ |
|  | Does not require further environmental or social studies      | _____ |

## 6. Viability of the proposed site for construction of:

The proposed site is viable for the construction of Classrooms/Teachers quarters/Toilets:

☐ Yes

☐ No

The proposed site is viable for the construction of water point

☐ Yes

☐ No

## 7. Testimony

I confirm that the information provided herein is accurate to the best of my knowledge. I will also endeavor to provide additional information and facilitate a site visit if required.

-----  
Signed: Developer

Date:

### For Official Use Only

Reviewed by :

Date :

Classified

A

B

C

Reason for Classification:

Endorsed by MoBSE:

Date :

Approved by NEA:

Date :

## Annex 2: Mitigation Measures List

### General Mitigation Measures

| Potential adverse impacts  | Potential Mitigation measures   |
|--|---|
| <ul style="list-style-type: none"> <li>Visual impact following the disposal of work sites discharge areas into waste dumps</li> <li>Air pollution during the burning of some work site wastes (wheels, papers, etc...)</li> <li>Risks of accidents during works</li> <li>Contamination risk by HIV from the labour force.</li> <li>Disturbance of school and education activities during works</li> <li>Disturbance of the circulation of goods and persons by the engines, the storage of materials (works done in town)</li> <li>Involuntary displacement of populations or economic activities</li> <li>Waste generation during building works</li> <li>Pollution and noise nuisances; degradation of the living environment</li> <li>Non use of local manpower</li> <li>Use of the lands of displaced people</li> <li>Disruption or destruction of sites of cultural, historic or religious importance</li> </ul> <p><u>Exploitation phase</u></p> <ul style="list-style-type: none"> <li>Lack of maintenance measures</li> <li>Lack of support measures (equipment; staff; connection to water and electricity network;)</li> <li>Non operation because the non execution of the works</li> </ul> | <ul style="list-style-type: none"> <li>Regular collection and evacuation of work site refuse towards authorized dumps</li> <li>Involve the Local Communities in the selection of discharge sites</li> <li>Put in place safety measures</li> <li>Conduct an awareness raising campaign for the work sites staff and the users of school infrastructures (schoolboys, teachers, etc.)</li> <li>Conduct awareness raising campaigns on HIV/AIDS</li> <li>Select work periods (avoiding as much as possible periods of classes)</li> <li>Design traffic deviation plans approved by the concerned administrative authorities</li> <li>Make careful and motivated selection of installation sites</li> <li>Conduct an awareness raising campaign before the start of the works</li> <li>Ensure hygiene and security measures are respected in work sites</li> <li>Post signaling systems for the works</li> <li>Hire in priority local man power</li> <li>Ensure the safety rules are complied with during works</li> <li>Include in the project support measures (connection to water and electricity and sanitation facilities</li> <li>Design an action plan for resettlement in case of involuntary relocation of populations as per RPF</li> <li>Avoid to install the facilities in a way that will need resettlement, the displacement of other important land users; or the encroachment on historic, cultural or traditional use areas; refer to the Bank's safeguard policies in Annex 6)</li> </ul> <p><u>Exploitation phase</u></p> <ul style="list-style-type: none"> <li>Closely involve provincial departments in the implementation monitoring</li> <li>Reclaim the quarries and other sites that served as burrow pits..</li> <li>Design a management and maintenance plan of infrastructures</li> <li>Ensure regular monitoring of works</li> </ul> |
| <b>Impacts on the natural environment</b>  |   |
| <ul style="list-style-type: none"> <li>Impacts on protected areas; critical habitats for rare species or of ecologic or domestic importance; and wills areas.</li> </ul>   | <ul style="list-style-type: none"> <li>Avoid excavations of building materials in natural protected areas</li> <li>Careful planning and selection of new installation sites</li> <li>Respect protected areas particularly forests and cultural heritage sites.</li> <li>Refer to the Bank's safeguard policies, Annex 6</li> </ul>  |
| <b>Impacts on water quality</b>  |   |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>Potential pollution of the quality of surface and groundwaters</li> </ul> | <ul style="list-style-type: none"> <li>Install work sites far from waterways</li> <li>Regular collection of work sites refuse towards authorized dumps</li> <li>Protect water resources; discharges of liquid waste at designated outfalls after effluent treatment.</li> </ul> |
|--|---|

### Specific Mitigation Measures for Education Facilities

| PotentialNegative Impacts  | Possible Mitigation measures   |
|--|--|
| <b>Septic tanks</b>  |  |
| Soil and water pollution due to seepage from tanks   | Ensure regular emptying; conduct hygiene education campaign to raise awareness of the health risks of exposed sewage; establish and support affordable pump out services |
| Contamination of water supply sources  | Locate latrine at least 30, but preferably 60m away from well, springs and boreholes   |
| Soakaways overflowing and contaminating ground and surface waters.   | Ensure that pits are located in soil where seepage can percolate<br>Establish and support affordable pump out services   |
| Blocked and overflowing latrines (health risks)  | Establish routine maintenance and cleaning service   |
| Lack of water for sanitation or toilet facilities  | Ensure the installation of adequate water supply facilities and or water reservoirs with enough capacity   |
| Inadequate cleaning and maintenance service, creating unhygienic conditions, and as a result students avoid using them | Establish a system to support the employment of caretakers or use of routine cleaning and maintenance services.  |
| Animals serve as vectors from latrines of flies and rodents carriers of diseases.                                      | Ensure regular cleaning<br>Ensure access pathways to decomposing excrements for flies and rodents are blocked  |
| Students defecating in open areas  | Design, promote and conduct public hygiene awareness campaigns focusing on adverse health impacts arising as a consequence of open defecation and promote latrine use    |

## Small-Scale Animal Husbandry

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES   |
|---|---|
| Human Environment   |   |
| <ul style="list-style-type: none"> <li>Human health hazards <ul style="list-style-type: none"> <li><b>Introduction of diseases to humans and contamination of water supplies for human use by animal manures and urine</b></li> <li><b>Pollution and environmental disruption from inappropriate use of agro-chemicals</b></li> </ul> </li> <li>Transformation of indigenous (sometimes communal) tenure systems and organizations</li> </ul>   | <ul style="list-style-type: none"> <li>Collect and store manure for composting and later application to fields</li> <li>Keep manure and urine away from household areas and water bodies</li> <li>Consider using a bio-gas system</li> <li>Provide protective clothes to minimize danger to field workers applying agro-chemicals</li> <li>Avoid overuse of fertilizers</li> <li>Apply herbicides and pesticides at recommended times and doses</li> <li>Consider integrated pest management</li> <li>Comprehensive community participation and attention to rights and needs of all groups</li> </ul>  |
| Soil and Vegetation   |   |
| <ul style="list-style-type: none"> <li>Degradation of vegetation due to <ul style="list-style-type: none"> <li>Too many animals and overgrazing, possibly as a result of stock improvement measures</li> <li>Excess harvesting of fodder and forage resources</li> <li>Decrease in favoured fodder species and increase in inedible weedy species</li> </ul> </li> <li>Increased soil erosion due to <ul style="list-style-type: none"> <li>Clearing and degradation of vegetation</li> <li>Trampling and loosening of soil</li> <li>Animal paths scarring hillsides and triggering erosion, sediment-laden runoff and, possibly, gully formation</li> </ul> </li> <li>Increased rapid runoff due to <ul style="list-style-type: none"> <li>Vegetation clearing</li> <li>Soil compaction diminishing infiltration capacity</li> </ul> </li> <li>Deterioration of soil fertility and physical characteristics due to <ul style="list-style-type: none"> <li>Removal of vegetation</li> <li>Increased erosion</li> <li>Soil compaction</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Limit animal numbers</li> <li>Control length of grazing times and succession of use on particular areas <ul style="list-style-type: none"> <li>Rotational grazing</li> <li>Development of dry-season grazing areas and grazing reserves</li> </ul> </li> <li>Mix animal species to maximize use of vegetation resources</li> <li>Reseed and produce fodder</li> <li>Use cut-and-carry feed from elsewhere</li> <li>Restrict animal access to unstable areas (e.g. by defining and fencing-off critical slopes)</li> <li>Use soil erosion control measures (e.g. reforestation, reseeding of grasses, land preparation, terracing)</li> </ul> |
| Water Points  |   |
| <ul style="list-style-type: none"> <li>Degradation or depletion of vegetation and soil around water points</li> <li>Too much use of surface and groundwater sources results in reductions in surface flow and the water table</li> <li>Lowering of the immediate water table and degradation of local vegetation through</li> </ul>   | <ul style="list-style-type: none"> <li>Place water points strategically to spread the effect</li> <li>Develop many small-capacity water sources</li> <li>Control use of water points (animal numbers and time of year)</li> <li>Fence off permanent water sources when</li> </ul>   |

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| drilling wells and use of boreholes <ul style="list-style-type: none"> <li>Aggravation of the effect of droughts through poor planning, placement, management and control of water points</li> </ul>  | temporary pools and streams are available <ul style="list-style-type: none"> <li>Limit well capacity by choice of technologies (e.g. hand pumps or buckets instead of motor pumps)</li> </ul>  |
| <b>Water Quality</b>  |  |
| <ul style="list-style-type: none"> <li>Increased muddiness of surface water courses due to soil disturbances from grazing and increased soil erosion</li> <li>Contamination of surface and groundwaters -- and negative effects on wildlife, vegetation, crop yields, aquatic ecology and wildlife -- by agro-chemicals used to control pests and diseases</li> <li>Contamination of water supplies from leaching or runoff of animal urine and manures</li> </ul>  | <ul style="list-style-type: none"> <li>Use biological pest controls before chemical controls to reduce adding toxic residues to the environment</li> <li>Choose agro-chemicals that are species-specific, with short active periods and low impact on other plants</li> <li>Choose appropriate spraying measures and timing to minimize water pollution</li> <li>Fence off water bodies from grazing animals</li> </ul>  |
| <b>Wildlife</b>   |  |
| <ul style="list-style-type: none"> <li>Displacement or reduction of wildlife populations by loss of habitat</li> <li>Disruption of migratory stop-over points</li> <li>Competition for food and water resources</li> <li>Increased poaching and killing of wildlife considered as pests or predators to animals, or as human food sources</li> <li>Introduction of diseases to wildlife</li> </ul>  | <ul style="list-style-type: none"> <li>Plan and implement range management strategies (choice of species, animal numbers, grazing areas) that minimize adverse effects on wildlife and avoid excessive competition</li> <li>Rehabilitate degraded areas nearby as wildlife habitat</li> <li>Investigate management of wildlife ranching which will help protect wildlife resources</li> <li>Consider wildlife ranching, tourism and controlled hunting as alternatives to animal production</li> </ul>   |
| <b>Animal Processing</b>  |  |
| <ul style="list-style-type: none"> <li>Degradation of surface waters by effluents with high biochemical oxygen demand (BOD), chemical oxygen demand (COD), and suspended and dissolved solids</li> <li>Introduction of diseases to humans through bacteria in discharge effluent</li> <li>Land degradation through inappropriate disposal of solid wastes on- or off-site</li> <li>Damage to aquatic ecosystem and water supply quality from equipment washing detergents</li> <li>Human health effects within the facility <ul style="list-style-type: none"> <li>Unhygienic work conditions</li> <li>Spread of animal diseases to humans</li> </ul> </li> <li>Attraction of predators and scavengers</li> </ul> | <ul style="list-style-type: none"> <li>Liquid and solid waste disposal or treatment to prevent contamination of water supplies by effluent from tanneries, abattoirs and other animal processing facilities</li> <li>Proper management of animal processing facilities to reduce health impacts <ul style="list-style-type: none"> <li>Institute hygienic work practices</li> <li>Ensure adequate refrigeration</li> <li>Clean machinery</li> <li>Implement an operational health and safety programme</li> <li>Monitor for changes in human health and water quality</li> </ul> </li> </ul> |
| <b>ENVIRONMENTAL STANDARDS</b>  | <b>ENVIRONMENTAL QUALITY INDICATORS</b>  |

| POTENTIAL ENVIRONMENTAL EFFECTS  | MITIGATION MEASURES   |
|--|---|
| <ul style="list-style-type: none"> <li>National environmental standards and controls concerning the use and application of agro-chemicals</li> <li>Alternatively, internationally recognized standards (e.g. World Health Organization)</li> </ul> | <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li>Concentrations of pollutants in air and surface and groundwaters</li> <li>Concentrations of suspended sediments in surface waters</li> <li>Noise levels</li> </ul> <p><b>Environmental Health</b></p> <ul style="list-style-type: none"> <li>Variety and numbers of plant, animal and bird species (degree of biodiversity)</li> <li>Extent of critical habitats</li> </ul> <p><b>Human Wellbeing</b></p> <ul style="list-style-type: none"> <li>Incidence of human and animal illness or disease</li> <li>Poverty levels</li> </ul> |

### Schools Water Supply and Sanitation

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES   |
|---|---|
| <i>Human Environment</i>  |   |
| <ul style="list-style-type: none"> <li>Negative social and economic effects on existing community water management practices and relationships</li> <li>Land use conflicts</li> <li>Conflicting demands on surface or groundwater supplies</li> </ul> | <ul style="list-style-type: none"> <li>Consider water conservation measures instead of or in addition to a new water supply project, for example: <ul style="list-style-type: none"> <li>Upgrade or renovate existing systems (e.g. deepen and clean existing wells, reduce leakage, evaporation and seepage losses)</li> <li>Water recycling and reuse</li> </ul> </li> <li>Avoid locating project works to require: <ul style="list-style-type: none"> <li>Resettlement</li> <li>Displacement of other important land users, or</li> <li>Encroachment on historical, cultural, or traditional use areas</li> </ul> </li> <li>Ensure sufficient community participation and organization for effective planning and management of the water supply system, and for equitable water distribution</li> <li>Develop supply sources: <ul style="list-style-type: none"> <li>Where water quantities are adequate and the project will not conflict with existing</li> </ul> </li> </ul> |

| POTENTIAL ENVIRONMENTAL EFFECTS  | MITIGATION MEASURES   |
|--|---|
|  | <p>human, livestock, wildlife or aquatic water uses, especially during dry seasons</p> <ul style="list-style-type: none"> <li>– So that withdrawals do not exceed “safe yield” from groundwater resources</li> </ul>  |
| <i>Human Health</i>  |   |
| <ul style="list-style-type: none"> <li>• Illness or disease due to: <ul style="list-style-type: none"> <li>– poor source of water quality</li> <li>– contaminants entering water supply system</li> </ul> </li> <li>– contaminated soils from disposal of inadequately treated waste waters</li> <li>– poor maintenance, wrong use, or abandonment of supply or sanitation works</li> <li>• Creating habitats for disease carriers such as mosquitoes and snails, and increasing the occurrence of water-related diseases such as malaria and schistosomiasis (bilharzia)</li> </ul> | <ul style="list-style-type: none"> <li>• Ensure water source is fit for drinking, and make regular testing a part of the project</li> <li>• Assess present and future source / supply contamination risks and minimize them through: <ul style="list-style-type: none"> <li>– Adequate planning, design and installation of water supply <i>and</i> sanitation works</li> <li>– Student and community education, training and capacity building to properly operate and maintain project works, and to improve hygiene attitudes and behaviour</li> </ul> </li> <li>• Ensure planning, design and maintenance of supply, sanitation and wastewater works is appropriate to local: <ul style="list-style-type: none"> <li>– Needs, traditions, culture and desires</li> <li>– Soil and water table conditions</li> </ul> </li> <li>• Assess ecology of disease carriers in the project area</li> <li>• Employ suitable prevention and mitigation measures, including education of Students and local people, e.g.: <ul style="list-style-type: none"> <li>– Good drainage around water supply points</li> <li>– Properly designed and maintained pit latrines</li> </ul> </li> <li>• Monitor disease occurrence and other public health indicators, and take corrective measures as needed (e.g. physical changes to water supply and sanitation works, education, hygiene)</li> </ul> |
| <i>Water Quality</i>   |   |
| <ul style="list-style-type: none"> <li>• Contamination of water source / supply</li> </ul>   | <ul style="list-style-type: none"> <li>• Protect groundwater sources from polluted surface water runoff (i.e. rainwater, spillage around wells, wastewater from latrines or homes) that may enter as drainage from above or as seepage from below</li> <li>• Locate source well away from latrines, septic systems, traditional defecating areas, and animal pens</li> <li>• Protect surface water sources from</li> </ul>  |



| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| <ul style="list-style-type: none"> <li>Groundwater contamination</li> <li>Surface water contamination</li> </ul>            | <p>contamination from:</p> <ul style="list-style-type: none"> <li>Runoff from nearby agricultural areas (e.g. silt, agro-chemicals, animal waste)</li> <li>Other uses such as bathing, laundering, and animal watering</li> <li>Garbage and vegetative debris</li> </ul> <ul style="list-style-type: none"> <li>Maintain source works and pipes to prevent deterioration/damage that could allow entry of contaminants from people, animals, debris, runoff water and soil (especially common around springs, unlined wells and river banks)</li> <li>Ensure adequate design, installation and maintenance of latrines, holding tanks, septic systems and wastewater soak-aways. This is especially important where the water table is high or soils have a high porosity or permeability.</li> <li>Ensure adequate spacing between latrines and soak-aways</li> <li>Locate latrines, septic systems and soak-aways at least 30m from any water body (e.g. streams, rivers, lakes, ponds)</li> </ul> |
| <b><i>Animals and Wildlife</i></b>  |  |
| <ul style="list-style-type: none"> <li>Blocked animal and wildlife movements</li> <li>Animal/wildlife road kills</li> </ul> | <ul style="list-style-type: none"> <li>Avoid fencing across known animal and wildlife movement routes</li> <li>Animal/wildlife crossing warnings, nighttime speed limitations or perhaps closures</li> </ul>   |

## Solid and liquid Waste Management

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| <b>General Measures</b>   |  |
| <ul style="list-style-type: none"> <li>Overall planning and design approaches and measures can address a number of different potential environmental effects</li> </ul>   | <ul style="list-style-type: none"> <li>Determine the volumes of waste materials by category (e.g. organics, hazardous materials, burnables, recyclables, etc.), and design the management system to deal with each waste category separately as required</li> <li>Consider a community awareness program on the importance of a healthy environment and on the principles and values of waste reduction, recovery and recycling to reduce waste disposal requirements and extend the life of disposal site(s)</li> <li>Assess nature and quantity of hazardous wastes, and provide for separate collection and disposal</li> <li>Encourage home composting of organic wastes</li> <li>Where recycling is practicable, have households separate recyclables from other waste <i>before</i> collection</li> <li>Site selection is critical. Locate project site(s) (e.g. landfill, incinerator) with buffer zones from other land uses and water bodies to minimize land and water resource impacts, aesthetic impacts, and health risks</li> <li>Minimize handling of waste, and maximize containment</li> <li>Provide enclosed refuse collection vehicles, or tarpaulin covers for open vehicles</li> <li>Enclose vehicle unloading and refuse sorting (for recovery and recycling) areas, as well as good ventilation and dust suppression</li> </ul> |
| <b>Human Environment</b>  |  |
| <ul style="list-style-type: none"> <li>Displaced land uses</li> <li>Disruption or destruction of sites of cultural, religious or historical importance</li> <li>Human settlements and land uses near landfill, incineration and composting sites               <ul style="list-style-type: none"> <li>Wind-blown garbage, dust and smoke</li> <li>Increased traffic to/from the site</li> <li>Odours</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Involve community in:               <ul style="list-style-type: none"> <li>Locating project site(s) and access route(s)</li> <li>Developing practices and responsibilities for managing project activities and site(s)</li> </ul> </li> <li>Ensure that site layout(s) and management practices, including worker training, are adequate</li> <li>Landfills               <ul style="list-style-type: none"> <li>Spread and compact incoming refuse, and cover with soil, daily</li> <li>Provide for safe ventilation of decomposition gases</li> <li>Prevent access to site by domestic animals and wildlife to avoid spread of disease and contaminants</li> <li>Pave access roads, or use water spraying, to reduce dust</li> </ul> </li> <li>Incinerators               <ul style="list-style-type: none"> <li>Install appropriate, effective incineration</li> </ul> </li> </ul>   |

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| <ul style="list-style-type: none"> <li>Disruption of local incomes derived from sorting, selling and reusing waste</li> </ul>                                       | <p>equipment for complete combustion and control of air pollution</p> <ul style="list-style-type: none"> <li>– Locate away from and downwind of human settlements and sensitive land uses</li> <li>• Design project to provide alternatives for affected individuals and families (e.g. employment in project operation, training for alternate livelihoods)</li> </ul>  |
| <b>Human Health</b>   |  |
| <ul style="list-style-type: none"> <li>Contamination of water sources</li> <li>Creation of stagnant water in project site(s) that breed disease carriers</li> </ul> | <ul style="list-style-type: none"> <li>• See <i>Water Quality</i> below</li> <li>• Assess ecology of disease carriers in project area, and employ suitable mitigation measures (e.g. proper drainage of site(s))</li> </ul>  |
| <b>Terrestrial Environment</b>  |  |
| <ul style="list-style-type: none"> <li>Loss of natural areas, important habitats, biodiversity</li> <li>Soil erosion</li> </ul>                                     | <ul style="list-style-type: none"> <li>• Avoid infringing on: <ul style="list-style-type: none"> <li>– Protected natural sites and wilderness areas</li> <li>– Critical habitats or areas with significant biodiversity (e.g. wetlands)</li> </ul> </li> <li>• During preparation of landfill site <ul style="list-style-type: none"> <li>– Minimize time of exposure of areas cleared, graded or excavated</li> <li>– Stabilize and revegetate disturbed areas</li> <li>– Install adequate surface drainage control measures</li> </ul> </li> <li>• Maintain erosion and surface drainage control measures during operations</li> </ul> |
| <b>Water Quality</b>  | <p>All effluent discharges into water bodies, open land and the physical environment should be subjected to treatment (using settling tanks) to ensure BOD and COD levels, dissolved and suspended solids are at acceptable levels.</p>  |

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| <ul style="list-style-type: none"> <li>Contamination of surface and groundwaters with landfill runoff and leachate</li> </ul> | <ul style="list-style-type: none"> <li>Protect water resources by locating landfills: <ul style="list-style-type: none"> <li>Where the underlying soils are relatively impermeable, and have a high capability for containing chemical contaminants (e.g. clays)</li> <li>So that the bottom of the landfill is above the water table</li> <li>Away and down gradient from surface waters, and groundwater recharge areas or sources, whose use could be affected by contamination -- unless the distance to the receiving water is adequate to dilute and disperse potential contamination</li> </ul> </li> <li>Use a landfill liner (e.g. clay, synthetic) if there is a risk of leachate entering groundwater</li> <li>Collect surface runoff and discharge to safe area</li> <li>Install test well(s) at landfill perimeter, and monitor water quality during operations, for early identification and mitigation of emerging adverse effects</li> </ul> |

### School Forestry

| POTENTIAL ENVIRONMENTAL EFFECTS  | MITIGATION MEASURES   |
|--|---|
| <b>Human Environment</b>   |   |
| <ul style="list-style-type: none"> <li>Displaced human settlements</li> <li>Conflicts over: <ul style="list-style-type: none"> <li>Land tenure and use (legal or illegal)</li> <li>Security of local and traditional livelihoods, and cash income generation</li> </ul> </li> </ul> <p>Disruption of sites of cultural, religious or historical importance</p> | <ul style="list-style-type: none"> <li>Avoid areas that require significant or involuntary resettlement</li> <li>Provide compensation for resettled families and lost livelihood opportunities (e.g. cash, in-kind, employment, training)</li> <li>Avoid existing land use areas that are economically productive or important for subsistence or traditional livelihoods</li> <li>Consider use of already cleared or barren lands for tree planting</li> <li>Consider sites currently used unsustainably (e.g. agriculture, grazing)</li> <li>Account for differing tree product needs between women and men</li> <li>Provide for intercropping, agro-forestry and other measures that will accelerate the flow of benefits to, and support of the school or education facility.</li> <li>Avoid all such sites.</li> </ul> |

| POTENTIAL ENVIRONMENTAL EFFECTS  | MITIGATION MEASURES  |
|--|--|
| <b><i>Terrestrial Environment</i></b>  |  |
| <ul style="list-style-type: none"> <li>• Loss of natural areas, important habitats, biodiversity</li> <li>• Unsustainable forest production</li> </ul> | <ul style="list-style-type: none"> <li>• Avoid infringing on: <ul style="list-style-type: none"> <li>– Protected natural sites, watersheds and wilderness areas</li> <li>– Critical wildlife habitats or areas with significant biodiversity (e.g. wetlands)</li> </ul> </li> <li>• As much as possible, use a variety of multipurpose and fast-growing indigenous tree species to enhance: <ul style="list-style-type: none"> <li>– Effective use of site micro-climates and soil conditions</li> <li>– The diversity and flow of benefits to the education facility.</li> <li>– Soil and water conservation</li> <li>– Resistance to significant outbreaks of disease and pests</li> <li>– Wildlife habitat and species diversity</li> </ul> </li> <li>• Draw upon local cultural knowledge and values in planning and operating the forest</li> <li>• Adapt imported technology (e.g. erosion control, forest management and harvesting) to local conditions, rather than just adopting it.</li> <li>• Use low impact equipment and methods for forest management and harvesting, and minimize skid trail distances</li> <li>• Select sites where the benefits from the new forest can help reduce illegal or unsustainable uses of nearby forests</li> </ul> |

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| <ul style="list-style-type: none"> <li>Soil erosion</li> </ul>  | <ul style="list-style-type: none"> <li>If a heavy reliance on cash crops is anticipated, ensure that a thorough market analysis is carried out during project planning</li> <li>Avoid areas of fragile or unstable soils/slopes</li> <li>Avoid any project activities within 20-40 metres of streams, ponds, etc. unless they are for rehabilitation and conservation of the riparian zones</li> <li>Leave existing grass/shrub cover on lands that are very steep or have shallow soils</li> <li>Use techniques such as bunding to strengthen control of surface water flows and erosion, and enhance infiltration</li> <li>Harvest trees in small, unconnected blocks to minimize exposed soils and enhance opportunities for natural regeneration from adjacent forest</li> <li>Road and track development (also see <i>Rural Roads</i> resources sheet): <ul style="list-style-type: none"> <li>Construct during the dry season</li> <li>Keep gradients low but sufficient for natural drainage</li> <li>Locate as far away from water bodies as possible</li> <li>Leave vegetated strips along roadsides, and reseed disturbed areas</li> <li>Coordinate development schedule with overall plan for forest development and operation</li> </ul> </li> </ul> |
| <b><i>Water Quantity and Quality</i></b>  |  |
| <ul style="list-style-type: none"> <li>Reductions in down-slope water supplies</li> <li>Pollution of groundwater, and of surface waters and habitats</li> </ul> | <ul style="list-style-type: none"> <li>Avoid watercourses</li> <li>Retain existing tree and grass/shrub cover, and harvest selectively, sustainably and carefully, where down-slope water supply is a critical concern</li> <li>Avoid overusing fertilizers, herbicides and pesticides</li> <li>Avoid any use near water bodies</li> </ul>   |

### Small-Scale School Agriculture

| POTENTIAL ENVIRONMENTAL EFFECTS   | MITIGATION MEASURES  |
|---|--|
| <b><i>Human Environment</i></b>   |  |
| <ul style="list-style-type: none"> <li>Land use conflicts</li> <li>Water supply conflicts: <ul style="list-style-type: none"> <li>Social and economic disruptions to existing community water management practices and relationships</li> <li>Conflicting demands on surface or groundwater supplies</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Avoid project sites that require: <ul style="list-style-type: none"> <li>Resettlement</li> <li>Displacement of other important land uses, or</li> <li>Encroachment on historical, cultural, or traditional use areas</li> </ul> </li> <li>Encourage use of existing depressions, hollows and ditches</li> <li>Limit areas converted to ponds</li> <li>Good pond design, construction and maintenance to avoid premature abandonment and digging of new ponds</li> <li>Ensure adequate community participation in the planning and operation of the project</li> <li>Site ponds to avoid disrupting existing/traditional uses of water (e.g. drinking, washing, animal watering)</li> <li>Develop ponds with other activities to combine water uses (e.g. pond water used for irrigation of crops)</li> <li>Develop supply sources: <ul style="list-style-type: none"> <li>Where water quantities are adequate and the project will not conflict with existing human, livestock, wildlife or aquatic water uses, especially during dry seasons</li> <li>So that withdrawals do not exceed “safe yield” from groundwater resources</li> </ul> </li> </ul> |
| <b><i>Human Health</i></b>  |  |
| <ul style="list-style-type: none"> <li>Illness or disease due to pollution of water sources from aquaculture wastes</li> <li>Creating habitats for disease carriers such as mosquitoes and snails, and increasing the prevalence of water-related diseases such as malaria and schistosomiasis (bilharzia)</li> </ul>       | <ul style="list-style-type: none"> <li>See <i>Water Quality</i> below</li> <li>Assess ecology of disease carriers in the project area</li> <li>Employ suitable prevention and mitigation measures, including education of local people, e.g.: <ul style="list-style-type: none"> <li>Good surface drainage around project water supply, ponds and drainage works</li> <li>Use fish species that feed on disease carriers</li> </ul> </li> <li>Monitor disease occurrence and public health indicators, and take corrective measures as needed (e.g. change project works, improve maintenance, education, medical)</li> </ul>  |
| <b><i>Terrestrial Environment</i></b>   |  |
| <ul style="list-style-type: none"> <li>Loss of ground cover and erosion at project</li> </ul>   | <ul style="list-style-type: none"> <li>Restrict area cleared for ponds</li> </ul>  |

| POTENTIAL ENVIRONMENTAL EFFECTS  | MITIGATION MEASURES   |
|--|---|
| <p>site</p> <ul style="list-style-type: none"> <li>Depletion of local fuel wood to dry fish</li> </ul>   | <ul style="list-style-type: none"> <li>Construct ponds during dry season</li> <li>Stabilize exposed soil with grasses and other ground cover</li> <li>Ensure good drainage and erosion control around ponds</li> <li>Careful project planning and management to ensure sustainable source of fuel wood</li> <li>Consider the need for a small, complementary forestry project</li> </ul>  |
| <b>Water Quality</b>   |   |
| <ul style="list-style-type: none"> <li>Pollution of surface waters with aquaculture wastes</li> </ul>  | <ul style="list-style-type: none"> <li>Keep fish densities at moderate levels to reduce disease risk and need for antibiotics</li> <li>Pump air through the water to speed up decomposition</li> <li>Release pond water into water body with adequate dilution and dispersal capability</li> <li>Dilute pond water prior to release</li> <li>Time releases with period of high water levels or flows</li> <li>Use shorter retention time of water in ponds – i.e. more frequent exchange and flushing of pond water</li> <li>Consider using pond bottom sludge as agricultural fertilizer if properly decomposed and non-toxic</li> </ul> |
| <b>Aquatic Environments</b>  |   |
| <ul style="list-style-type: none"> <li>Deterioration of water quality from aquaculture discharges causes contamination or decline of aquatic habitats and resident species</li> <li>Loss of wetlands, especially mangrove forests</li> <li>Accidental or deliberate release of aquaculture stock leads to decline in wild species important for local food supply or restocking and improvement of domestic stock</li> </ul> | <ul style="list-style-type: none"> <li>Ensure adequate pollution control</li> <li>Site project well away from wetlands</li> <li>Design project features to prevent disturbing water flows to and from wetlands (e.g. flow regulating works, access road crossings on trestles or pilings)</li> <li>Enhance or protect other nearby wetlands to offset losses at project site</li> <li>Use local, wild species rather than introduced species as seed stock</li> <li>Ensure aquaculture stock is kept healthy</li> </ul>   |
| <b>Effects of the Environment on the Project</b>   |   |
| <ul style="list-style-type: none"> <li>Contamination of aquaculture operations, and deterioration of culture environment, from poor source water quality due to: <ul style="list-style-type: none"> <li>Pollution (e.g. pesticides, heavy metals)</li> <li>Suspended sediments from upstream erosion</li> <li>Nutrients from agricultural run-off and livestock, detergents, sewage</li> </ul> </li> </ul>                   | <ul style="list-style-type: none"> <li>Analysis of source water quality and threats</li> <li>Careful location of the project within the community and watershed</li> </ul>  |



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| <b>Human Environment</b>   |  |  |
| <ul style="list-style-type: none"> <li>Land use conflicts due to odours</li> <li>Water supply conflicts: <ul style="list-style-type: none"> <li>Negative social and economic effects on existing community water management practices and relationships</li> <li>Conflicting demands on surface or groundwater supplies</li> </ul> </li> </ul> |  | <ul style="list-style-type: none"> <li>Follow <i>General Measures</i> above to minimize potential for odours</li> <li>Minimize water use</li> <li>Develop supply sources: <ul style="list-style-type: none"> <li>Where water quantities are adequate and the project will not conflict with existing human, livestock, wildlife or aquatic water uses, especially during dry seasons</li> <li>So that withdrawals do not exceed “safe yield” from groundwater resources</li> </ul> </li> </ul> |
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| <b>Human Environment</b>  |  |  |
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| <b>Water Quality</b>  |  |  |
| <ul style="list-style-type: none"> <li>Degradation of groundwater, streams and rivers from solid and liquid wastes, and consequent</li> <li>Deterioration and contamination of aquatic habitats and resident species from waste discharges</li> </ul> |  | <ul style="list-style-type: none"> <li>Follow <i>General Measures</i> above to minimize water use and solid and liquid wastes</li> <li>Screen waste liquids to remove solids</li> <li>Install grease traps and skim tanks</li> <li>Locate waste disposal sites away from surface and groundwater sources, watercourses, housing and town centres</li> <li>Ensure receiving waters for liquid wastes are able to absorb and naturally decompose the effluent</li> <li>Ensure waste that is stored before transport to treatment facility or landfill cannot leak into the ground</li> </ul> |

### **Annex 3: Environmental Guidelines for Contractors**

The following guidelines should be included in the contractor's agreements:

- Installation of the work site on areas far enough from water points, houses and sensitive areas.
- Sanitary equipment and installations
- Site regulation (what is allowed and not allowed on work sites)
- Compliance with laws, rules and other permits in vigor.
- Hygiene and security on work sites
- Protect neighboring properties
- Ensure the permanence of the traffic and access of neighboring populations during the works to avoid hindrance to traffic
- Protect staff working on work sites
- Soil, surface and groundwater protection: avoid any wastewater discharge, oil spill and discharge of any type of pollutants on soils, in surface or groundwaters, in sewers, drainage ditches or into the sea.
- Protection of the environment against noise: reduce work site noise likely to seriously disturb neighboring people.
- Protect the environment against exhaust fuels and oils
- Protect the environment against dust and other solid residues
- Waste management: install containers to collect the wastes generated next to the areas of activity.
- Degradation/demolition of private properties: inform and raise the awareness of the populations before any activity of degradation of goods. Compensate beneficiaries before any demolition.
- Use a quarry of materials according to the mining code requirements
- Compensation planting in case of deforestation or tree felling
- No waste slash and burn on site
- Speed limitation of work site engines and cars
- Allow the access of Public and emergency services
- Organize the storage of materials on the public highway
- Parking and displacements of machines
- Footbridges and access of neighbors
- Signaling of works
- Respect of cultural sites
- Reclamation of the sites at the end of the works
- Dispose safely of asbestos
- Consider impacts such as noise, dust, and safety concerns on the surrounding population and schedule construction activities accordingly;
- Protect soil surfaces during construction;
- Ensure proper drainage;
- Prevent standing water in open construction pits, quarries or fill areas to avoid potential contamination of the water table and the development of a habitat for disease-carrying insects;
- Select construction materials in a sustainable way, particularly wood;
- Control and clean the construction site daily;
- During construction, control dust by using water or through other means;
- Provide adequate waste disposal and sanitation services at the construction site;
- Dispose of oil and solid waste materials appropriately.
- Preserve natural habitats along streams, steep slopes, and ecologically sensitive areas;
- Develop maintenance and reclamation plans and restore vegetation and habitat.

#### Annex 4: Summary of the World Bank Protection Policies

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| <b>OP 4.01<br/>Environmental<br/>assessment</b> | <p>The objective of the policy is to ensure the projects financed by the Bank are sound and sustainable, and decision making be improved through an appropriate analysis of actions and of their potential environmental impacts. This policy is triggered if a project is likely to have environmental risks and impacts (adverse) on its area of influence. OP 4.01 covers the environmental impacts (nature air, water and land); human health and security; physical cultural resources; as well as transboundary and global environmental problems.</p>   | <p>Depending on the project, and nature of impacts a range of instruments can be used: EIA, environmental audit, hazard or risk assessment and environmental management plan (EMP). When a project is likely to have sectoral or regional impacts, sectoral or regional EA is required. The EIA is the responsibility of the borrower.</p> <p>In the framework of the CDP, an Environmental and Social Management Plan was prepared (ESMF), including an Impact Mitigation Plan; the ESMF will help assess the impacts of future activities if necessary and orient implementation.</p> |
| <b>OP 4.04 Natural<br/>Habitats</b>             | <p>This policy recognizes that the conservation of natural habitats is essential for long-term sustainable development. The Bank, therefore, supports the protection, maintenance, and rehabilitation of natural habitats in its project financing, as well as policy dialogue and analytical work. The Bank supports, and expects the Borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.</p>  | <p>This policy is triggered by any type of project (including any sub project under sectoral investment regime or intermediary funding) that have the potential to cause some important conversion (loss) or degradation of natural habitats, whether directly (by the construction) or indirectly (by human activities triggered by the les project).</p> <p>In the CDP, certain activities that could have adverse impacts on natural habitats will not be funded.</p>  |
| <b>OP 4.36<br/>Forests</b>                      | <p>The objective of this policy is to help borrowers exploit the potential of forests in order to curb poverty in a sustainable manner, efficiently integrate forests in sustainable economic development and protect vital local and global environmental services and forests values. Where forest restoration and plantation are needed in order to achieve these objectives, the Bank helps borrowers in forest restoration activities in order to maintain or develop biodiversity and the operation of ecosystems. The Bank help borrowers in the creation of forest plantations appropriate from the environmental viewpoint and socially beneficial and economically sound in order to help meet the growing forests' needs and services</p> | <p>This policy is triggered each time an investment project financed by the Bank: (i) has the potential to cause health impacts and the quality of forests or the rights and the well being of the people and their dependency level with the interaction with forests; or (ii) aims at bringing some change in the uses of natural forests or plantations.</p> <p>In the CDP, the activities that will adversely affect the quality of the forests or bring in some change in the management will not be financed.</p>   |

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| <b>OP 4.09 Pest Management</b>          | The objective of this policy is to promote the use of biological or environmental control methods and reduce reliance on synthetic chemical pesticides. In Bank-financed agricultural operations, pest populations are normally controlled through Integrated Pest Management (IPM) approaches. In Bank-financed public health projects, the Bank supports controlling pests primarily through environmental methods. The policy further ensures that health and environmental hazards associated with pesticides are minimized. The procurement of pesticides in a Bank-financed project is contingent on an assessment of the nature and degree of associated risk, taking into account the proposed use and the intended user. | <p>The policy is triggered if procurement of pesticides is envisaged (either directly through the project or indirectly through on-lending); if the project may affect pest management in a way that harm could be done, even though the project is not envisaged to procure pesticides. This includes projects that may lead to substantially increased pesticide use and subsequent increase in health and environmental risks; and projects that may maintain or expand present pest management practices that are unsustainable.</p> <p>In the framework of the CDP, the activities requiring the use of pesticides (agricultural activities) could be financed. That is why a Pest and Pesticides Management Plan is prepared separately, as an annex to the present document</p> |
| <b>OP 4.11 Cultural property</b>        | The objective of this policy is the help countries avoid or reduce the adverse impacts of development projects on physical cultural resources. In order to implement such policy, the word “physical cultural resources” means movable and unmovable objects, sites, structures, natural’s aspects of landscapes that have an importance form the archeological, paleontologic, historic, architectural, religious, aesthetic or other. Physical cultural resources could be found in urban or rural areas, as well as both in the open air, under the ground and in the sea also.  | <p>This policy applies to all projects included in category A or B of the Environmental assessment scheduled in OP4.01.</p> <p>With the CDP, activities that are likely to have adverse impacts on cultural property will not be financed.</p>   |
| <b>OP 4.10 Indigenous populations</b>   | The objective of the policy is (i): ensure that the development process encourages full respect of dignity, human rights and cultural features of indigenous people; (ii) ensure they do not suffer from the detrimental effects during the development process; and ensure indigenous people reap economic and social advantages compatible with their culture.  | The policy is triggered when the project affects indigenous people (with the characteristics described in OP 4.10) in the area covered by the project. There are no indigenous people in Gambia. Thus, the CDP is not triggered by this policy.  |
| <b>OP 4.12 Involuntary Resettlement</b> | The objective of this policy is to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs. Furthermore, it intends to assist displaced persons in improving their former living standards; it encourages community participation in planning and implementing resettlement; and to provide   | This policy is triggered not only if physical relocation occurs, but also by any loss of land resulting in: relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood, whether or not the affected people must move to another location.  |

|  |   |  |
|--|---|--|
|  | assistance to affected people, regardless of the legality of title of land.   | Under CDP, a Resettlement Policy Framework (RPF) has been prepared which will serve as guidance for the preparation of a RAP should land acquisition be required.  |
| <b>OP 4.37 Dams security</b>                                   | The objectives of this policy are established as follows: For new dams, ensure the design and supervision are done by experienced and competent professionals; for existing ones, ensure that any dam that can influence the project performance is identified, an assessment of the dam security conducted, and the other required safety measures and corrective measures implemented.  | <p>The policy is triggered when the Bank finances (i) a project involving the building of a big dam (15 m of height or more) or a dam presenting great hazard; and (ii) a project depending on another existing dam. For small dams, general safety measures designed by qualified engineers are appropriate.</p> <p>In the framework of the CDP, no funds will be available for the building or renovation of dams</p>  |
| <b>OP 7.50 Projects implemented on international waterways</b> | <p>The objective of this policy is to operate in such a way as the projects financed by the Bank affecting the international watercourses do not affect: (i) the relationships between the Bank and her borrowers and between States (members or non members of the Bank); and (ii) the international watercourses are used and efficiently protected?</p> <p>The policy applies to the following project types: (a) hydro electric, irrigation, flood control, drainage, water collection, industrial and other projects involving the use or potential pollution of international watercourses, and (b) detailed studies for project design under item (a) above quoted including those carried out by the Bank in her position of implementation agency or else.</p> | <p>This policy is triggered if (a) A river, a channel, lake or any other watercourse located between two states, or a river or a surface river discharging into a river located in one or two states, be they members of the World Bank or not</p> <p>(b) a river branch which is a component of a watercourse described under item (a); recognized to be a necessary communication channel between the ocean and the other states, and any river discharging into these waters and (c) a bay, strait, or channel bound by two states or more or flowing in an unknown state.</p> <p>In the CDP, activities that are likely to have an impact on international waterways will not be financed.</p> |
| <b>OP 7.60 Projects located in contentious zones</b>           | The objective of this policy is to operate in such a way as the problems experienced by projects in contentious areas are tackled as early as possible so that: (a) the relationships between the Bank and member countries are not affected; (b) the relationships between the borrower and neighbors are not affected; and either the Bank or concerned countries do not suffer any damage because of this situation.   | This policy is triggered if the project proposed is located in a «contentious area». In Gambia, there are no contentious zones. So, the CDP is triggered by this policy.   |

## **Annex 5: Draft EA Terms of Reference**

### **Introduction and Context**

This part will be completed at time and will include necessary information related to the context and methodology to carry out the study.

### **Objectives of study**

This section will indicate (i) the objectives and the project activities; (ii) the activities that may cause environmental and social negative impacts and needing adequate mitigation measures.

### **Mission /Tasks**

The consultant should realize the following:

- Describe the des biophysical characteristics of the environment where the project activities will be realized; and underline the main constraints that need to be taken into account at the field preparation, during the implementation and exploitation/maintenance of equipment.
- Assess the potential environmental and social impacts related to project activities and recommend adequate mitigation measures, including costs estimation.
- Assess the need of solid and liquid waste management and suggest recommendation for their safe disposal, including safe disposal of asbestos
- Review political, legal and institutional framework, at national and international level, related to environmental, identify the constraints and suggest recommendations for reinforcement
- Identify responsibilities and actors for the implementation of proposed mitigation measures
- Assess the capacity available to implement the proposed mitigation measures, and suggest recommendation in terms of training and capacity building, and estimate their costs.
- Develop an Environmental Management Plan (EMP) for the project. The EMP should underline (i) the potential environmental and social impacts resulting from project activities (ii) the proposed mitigation measures; (iii) the institutional responsibilities for implementation; (iv) the monitoring indicators; (v) the institutional responsibilities for monitoring and implementation of mitigation measures; (vi) the costs of activities; and (vii) the calendar of implementation.
- Public consultations. The EIA results and the proposed mitigation measures will be discussed with population, NGOs, local administration and other organisations mainly involved by the project activities. Recommendations from this public consultation will be include in the final EIA report.

### **Plan of the EIA Report**

- Cover page
- Table of contents
- List of acronyms
- Executive summary
- Introduction
- Description of project activities
- Description of environment in the project area
- Description of political, legal and institutional framework
- Description of methodology and techniques used in assessment and analyse of project impacts.
- Description of environmental and social impacts for project activities
- Environmental Management Plan (EMP) for the project including the proposed mitigation measures; the institutional responsibilities for implementation; the monitoring indicators; the institutional responsibilities for monitoring and implementation of mitigation; Summarized table for EMP
- Recommendations
- References

- List of persons / institutions meet

**Qualification of the Consultant**

The Consultant will be agreed by the PCU in carrying out EIA studies.

**Duration of Study**

The duration of study will be determined according to the type of activity

**Production of Final Report**

The consultant will produce the final report one (1) week after receiving comments from the PCU

**Supervision of Study**

The consultancy will be supervised by the Environmental Focal Points and the PCU

## **Annex 6: Projects to be Considered for Environmental Impact Assessment**

### **Part A of the Schedule of the National Environment Management Act, 1994**

1. General :
  - a. Any activity out of character with its surrounding.
  - b. Any structure of a scale not in keeping with its surroundings.
  - c. Major changes in land use.
2. Urban Development, including
  - a. Designation of new township, villages and residential areas
  - b. Establishment of industrial estates
  - c. Establishment or expansion of recreational areas
  - d. Establishment or expansion of recreational townships in hilly areas, national parks and game reserves
  - e. Shopping centres and complexes
  - f. Hotels and other tourist facilities.
3. Transportation, including
  - a. All major roads
  - b. All roads in scenic, wooded or hilly areas
  - c. Bridges
  - d. Railway lines
  - e. Airports and airfields
  - f. Pipeline
  - g. Water transport
  - h. Ports and landing sites.
4. Dams, Rivers and Water Resources, including
  - a. Storage dams, barrages and weirs
  - b. River diversions and water transfers between catchments
  - c. Flood-control schemes
  - d. Drilling for the purpose of utilising ground water resources including geothermal energy
5. Arial Spraying
6. Fisheries especially large scale commercial projects.
7. Mining, including quarrying and open-cast extraction of
  - a. Precious metals
  - b. Diamonds
  - c. Metalliferous ores
  - d. Coal
  - e. Phosphates
  - f. Limestone and dolomite
  - g. Stone and slate
  - h. Aggregates, sand, gravel and laterite
  - i. Clay
  - j. Exploration for the production of petroleum in any form
  - k. Off-shore activities.



8. Forestry related activities, including
  - a. Timber harvesting
  - b. Clearance of forest areas
  - c. Reforestations and aforestation
  - d. Establishment of wood plantations
9. Agriculture, including
  - a. Large scale agriculture
  - b. Use of new pesticide
  - c. Introduction of new crops and animals
  - d. Use of fertilizers
10. Processing and manufacturing industries, including
  - a. Mineral processing, reduction of ores and minerals
  - b. Smelting and refining of ores and minerals
  - c. Foundries
  - d. Brick and earthenware manufacture
  - e. Cement works and lime processing
  - f. Glass works
  - g. Fertilizer manufacture or processing
  - h. Explosives plants
  - i. Oil refineries and petro-chemical works
  - j. Tanning and dressing of hides and skins
  - k. Abattoirs and meat-processing plants
  - l. A chemical works and process plants
  - m. Brewing and malting
  - n. Bulk grain processing plants
  - o. Fish processing plants
  - p. Pulp and paper mills
  - q. Food processing plants
  - r. Plants for the manufacture or assembly of motor vehicles
  - s. Plants for the construction or repair of aircraft or railway equipment
  - t. Plants for the manufacturing or processing of rubber
  - u. Plants for the manufacture of tanks, reservoirs and sheet-metal containers
  - v. Plants for the manufacture of groundnut briquettes or other briquettes
  - w. Mechanical workshop
  - x. Cottage industries.
11. Electrical infrastructure, including
  - a. Electricity generation stations
  - b. Electrical transmission lines (high voltage)
  - c. Electrical sub-station
  - d. Pumped-storage schemes.
12. Management of hydrocarbons, including
 

The storage of natural gas and combustible or explosive fuels.
13. Waste Disposal, including,
  - a. Sites for solid waste disposal
  - b. Sites for hazardous waste disposal

- c. Sewage disposal works
- d. Major atmospheric emissions
- e. Offensive odours.

14. Natural Conservations Areas, including,

- a. Creation of national parks, game reserves, and buffer zones
- b. Establishment of wilderness areas
- c. Formulation or modification of forestry management policies
- d. Formulation or modification of water catchment management policies
- e. Policies for management of ecosystem, especially by use of fire
- f. Commercial exploitation of natural fauna and flora
- g. Introduction of alien species of fauna and flora into ecosystem
- h. Establishment of natural heritage areas.

## **Annex 7: Summary of Consultations with Stakeholders**

### **8.1 Meeting with the Projects Coordination Unit (PCU)**

The meeting with the staff of the Project Coordination Unit took place on Monday 8<sup>th</sup> July 2013 and was attended by the Projects Manager, Mr. Sheriff Yunus Hydera, the Construction Manager, Mr. Ebou S. Gaye and the Quantity Surveyor, Mr. Addison Gomez.

During the meeting the Project Manager emphasized the importance of this assignment particularly in the context of the recent audit report. He insisted on the need for the next project to fully comply with the ESMF which means, in the first place, having all subprojects with construction components properly screened for any negative environmental and social impacts. Once the mitigation measures have been identified there must be a management plan in place adequate to ensure that the mitigation measures are implemented.

However to implement the measures envisaged, Mr. Hydera said, will require in- house capacity. He therefore suggested that the ESMF should provide opportunities for training - workshops and short term training even though the Ministry is currently developing an MoU with the NEA to provide overall supervision for the monitoring component. He reaffirmed the Ministry's commitment to forge a closer collaboration with NEA on this issue. Similar collaboration, he said already exists with the Department of Water Resources who supervise the construction of the water supply facilities which he said will continue.

Mr. Gaye in his intervention insisted on the importance of the ESMF as a guide to PCU and the contractors to ensure that the negative environmental and social impacts of the construction works are either avoided or minimised. He suggested that the contractors should be sensitised about these safeguards as many of them are not even aware of their existence. The Construction monitors in the regions should also be trained so that they are able to carry out some of the screening and field monitoring of the construction works.

### **8.2 Meeting with Officials of the National Environment Agency**

The meeting took place at the headquarters of the Agency on Tuesday 9<sup>th</sup> July 2013. The meeting was chaired by the Acting Executive Secretary, Mrs. Ndey Sireh Bakurin, and attended by Mr. Malick Bah, the Environment Impact Assessment Officer, NEA; Mr. Modou Suwareh, Networks Director, NEA.

After the welcome remarks the consultant explained that the mission is about the preparation of an ESMF for the new education project, Results for Education Achievement and Development Project. She welcomed the study and expressed the hope that the Agency will be closely associated with the implementation process. With respect to the project she indicated the need to have projects components properly screened and where negative environmental and social impacts are likely then proper management plans should be developed. She reiterated the very important role that the Agency can play in terms of monitoring and supervising the implementation of the safeguard measures and in this regard expressed the hope that the Ministry and the Agency would be able to conclude the Memorandum of Understanding (MoU) in time for the commencement of the project.

She reaffirmed her Agency's willingness and capacity to fully execute the responsibility of guiding the screening process, and supporting the monitoring programme, particularly since they now have Environment Focal Points in each of the regions. Further support in this regard could be given by the EIA Working Group in the regions. The Acting Executive Director also confirmed the Agency's ability to conduct training workshops on EIA and World Bank safeguard policies.

Mr. Suwareh raised the issue of quarries for construction materials especially in the villages. From past experiences some of these quarries were poorly sited and after the construction works they were left in that state with no effort to rehabilitate them. Some of quarries end up becoming breeding grounds for crocodiles and

other reptiles. Whilst the material requirements for school construction may not be as much as that of road construction he suggested that contractors should be sensitised on this as well as excavating sand in areas very close to natural water ways.

### **8.3 Meeting with GAMWORKS Agency**

The discussions with the Director General of GAMWORKS took place on Monday 8<sup>th</sup> July 2013 at the headquarters of the Agency. The Consultant explained about the preparation of the ESMF for the proposed education Project, READ. The ESMF it was explained will provide the guidelines for proper social and environmental management of the projects. All construction projects will have to be screened for their environmental and social impacts to prevent or minimise the negative impacts. Environmental management plans will be drawn up where mitigation measures have to be put in place. Some of the safeguard measures to be proposed in the ESMF will need to be included in the tender documents.

The Director General welcomed the preparation of the ESMF for the next project. However, he highlighted the need, as in the case of the RPF but more so in this case, for the contractors to be made fully aware of the ESMF and their obligations. He added that they should also be fully informed about the environmental management plans for the subprojects they will be contracted to do. He suggested, as a first step, that all the contractors be invited to a workshop where they will be sensitised on the ESMF and other safeguard policies. Finally, the Director General advised that all the stakeholders be made fully aware of the all the safeguard instruments.

### **8.4 Discussions with the Regional Directorates**

The Consultant had discussions with various officials of the Regional Directorates during the first week of July 2013. In the discussions the officials welcomed the preparation of the ESMF to ensure proper assessment of the potential negative environmental and social impact of the project. As the people on the ground, they said, the regional offices can play an important role since the siting for the construction projects is done by the regional office together with the community. Identifying the likely environmental impact at this early stage will be important and this could best be done by the people on the ground.

However, there is a need for a greater awareness and understanding of the safeguard instruments if the work is to be done properly. The Ministry should organise workshops at regional level to train the staff on the national laws and the World Bank safeguard policies so that the ESMF can be properly implemented.

### **8.5 Consultations with Stay Green Foundation, a local NGO**

Stay Green Foundation is a local environment NGO with its headquarters in Essau in the North Bank Region. The meeting with the Executive Secretary of the Foundation, Mr. Baboucar Mbye took place in his office on Monday 12<sup>th</sup> July 2013. After explaining about the READ project and the ESMF that was being prepared to address the possible environmental and social impacts of the Project, Mr. Mbye welcomed the preparation of such documents because some of the projects leave a lot of damage in their wake and no effort is made to address these environmental damages. He cited the case of quarries which are just left with no effort to plant trees or other vegetation after the extraction. The North Bank region is particularly vulnerable to desertification and such open spaces should be replanted with tree since at the start they had to remove vegetation to access the laterite.

Mr. Mbye said NGOs can play a useful role in the implementation of the ESMF in sensitising the local communities on environmental issues and working with them to monitor some of the measures instituted to prevent or minimise the negative environmental impacts.

## **Annex 8: Bibliography**

- The World Bank Operational Manual Bank Procedures Environmental Assessment BP 4.01 January 1999
- The World Bank Operational Manual Bank Procedures Environmental Assessment BP 4.01 Annex A January 1999
- The World Bank Operational Manual Operational Policies OP 4.01 Environmental Assessment January 1999
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- Drat of the Community Development Project, The Gambia
- State of the Environment – Report – The Gambia

### **Annex 9: List of Persons Contacted**

- 1) Mr.BaboucarBouy, Permanent Secretary, Ministry of Basic Education
- 2) Mr.SherifYunusHydara, Project Manager, Project Coordination Unit
- 3) Mr.Ebou S. Gaye, Project Construction Manager, PCU
- 4) Mr. Addison Gomez, Quantity Surveyor, PCU
- 5) Mrs. Ndey Sireh Bakurin, Acting Executive Director, NEA
- 6) Mr.MomodouSuwareh- Director Networks Coordinator,NEA
- 7) Mr.Malick Bah, Environmental Impact Assessment Officer, NEA
- 8) Mr.Ebrima Cham, General Manager, GAMWORKS
- 9) Mr.DembaJawo- Principal Education Officer, Region 4, MoBSE
- 10) Mr. Musa Bah-Senior Education Officer, Region 4, MoBSE
- 11) Mrs.LaliBaldeh- Education Officer, Region 4, MoBSE
- 12) Mr. M. G. Jallow-Principal Education Officer, Region 6, MoBSE
- 13) Mr.Mr. Alfa Camara- Principal Education Officer, Region 5, MoBSE
- 14) Mr.BabucarSuwareh- Director, Region 2, MoBSE
- 15) Mr. Musa Jassy- Contruction Monitor, Region 1, MoBSE
- 16) Mrs. Anna Burang John Ceesay – Director, Region 1, MoBSE
- 17) Mr.MalaminJatta, Director of Lands and Surveys
- 18) KalilouGitte, Director, Physical Planning and Housing
- 19) Mr. Mohamed Jallow, Director of Planning, MoBSE
- 20) Mr. Baboucar Mbye, Executive Secretary, Stay Green Foundation

## Annex 10: Terms of Reference (TOR)

### I. Project Overview

The Gambia's Country Assistance Strategy specifies that ... "overall economic growth boosted and poverty reduced by (a) achieving a macro-economic balance through fiscal reforms, (b) establishing appropriate public and private sector roles, (c) enhancing productivity of women, (d) reducing fertility and mortality rates, (e) improving the cost-effectiveness of service delivery, and (f) improving project implementation". The national policy framework (Vision 2020 and the PAGE) recognize the strategic importance of the social sectors; education, health and agriculture, in the attainment of the desired objectives.

The Gambian education system has over the years undergone a series of significant configurations, ranging from partial structural reforms to a radical transposition of many of its aspects. These stemmed from attempts aimed at responding to changing needs and circumstances, guided by perspectives and experiences derived from both national and international contexts. Noting that education is change-driven and change-oriented, amidst the research findings that inform practice, the mutation of the system has neither been fortuitous nor dictated by mere natural tendencies. The implication is that the interventions made have transformed the system according to national priorities and visions.

There is an urgent need, at the dawn of the new millennium, to judiciously redirect education in the country according to the dreams and aspirations of the people and to equitably scale up participation rates and performance across groups and regions in order to meet the educational aims, objectives and targets. In consequence, the new Education Policy 2004-2015 focuses on ensuring that the right to quality education for all is upheld and that Education for All, with its ramifications, and the Millennium Development Goals are achieved. The ultimate object of eliminating poverty, enhancing quality living and nurturing a learning society forms the cornerstone of this policy.

To operationalise the Education Policy 2012-2022, the sector is finalizing a Strategic Plan that has been developed through a Sector Wide Approach (SWAp) involving both local stakeholders and development partners; notably the IDA, DFID, AFDB, UNICEF, JICA, to name a few. The Strategic Plan sets the sector's Vision Statement as ... *"By 2015 universal access to relevant and high quality education has been achieved"* with a Mission Statement aiming at:

- Providing access to relevant and high quality basic education for all;
- Providing high quality education services;
- Ensuring gender equity in education;
- Provision of relevant life skills; and
- Promoting the principle of life-long learning.

Against the background of its purpose statement that by 2015 the Ministry of Basic & Secondary Education and its affiliated institutions are providing effective, efficient, relevant and high quality education services to its clients. The new ESSP 2013 – 2022 provides a common platform with a clear strategic direction towards the implementation of the revised education policy for basic and secondary education and the new policy for tertiary and higher education from 2013 and beyond.

The new plan proposes a programmatic shift from programs based mainly on cycles of education (basic education, secondary education, tertiary education, technical vocational education & training, quality assurance and sector management) to a more results-oriented programming with emphasis on implementable interventions within priority areas. The new programs are as follows: Access & Equity, Quality and Relevance, Research & Development, Science, Technology & Innovation and Sector Management. Each of these programs has policy priority areas that are linked to corresponding indicators, outputs and results. All the five programs highlight the priorities of the two education policies.

The IDA and GPE in collaboration with Gambia Government are about to finalise the Implementation of the IDA intervention in the Third Education Sector Programme and the EFA FTI funded project, Which also

coincided with the end of the Education Policy 1988 – 2003. IDA role in the education, as the lead donor is critical both in terms of the planning processes and resource mobilization for programme implementation.

This project, serves as successor to the Third Education Sector Programme and would consolidate on the achievements made thus far and placing particularly emphasis on the policy priority of improving quality of learning outcomes.

## **II. Objective of the Environmental and Social Management Framework (ESMF)**

The objective of this Environmental and Social Management Framework (ESMF) is to provide an environmental and social screening process for future infrastructure investments for which the exact locations are not known prior to appraisal, and for which appropriate mitigation measures might be required. The ESMF is intended to be used as a practical tool during project implementation.

The proposed screening process would be consistent with the Bank's safeguard policy OP 4.01 Environmental Assessment. This policy requires that all Bank-financed operations are screened for potential environmental and social impacts, and that the required environmental work be carried out on the basis of the screening results. Thus, the screening results may indicate that (i) no additional environmental work would be required; (ii) the application of simple mitigation measures by qualified staff would suffice; or (iii) a separate environmental impact assessment (EIA) would be required.

Although the potential environmental and social impacts of the infrastructure investments are expected to be generally minimal, potentially significant localized impacts may occur, thus requiring appropriate mitigation. Potential environmental impacts would be addressed in the context of the Resettlement Policy Framework (RPF). The RPF has been prepared as a separate document and outlines the policies and procedures to be applied in the event of land acquisition under the project.

## **III. Scope of Work**

To develop an Environmental and Social Management Framework (ESMF) the consultants will carry out the following tasks:

- a) Review The Gambia's environmental policies, laws, procedures, regulatory and administrative frameworks to determine which legal requirements are relevant to the infrastructure investments under the project and therefore will have to be incorporated into the ESMF, and make recommendations as appropriate;
- b) Review the Bank's ten Safeguard Policies and (i) determine which of these policies are likely to be integrated as a result of future infrastructure investments under the project; (ii) identify gaps between the Safeguard Policies and the national legislation and make recommendations as to how to implement the relevant safeguard Policies in the context of the ESMF;
- c) Review the bio-physical and socio-economic characteristics of the project area and (i) identify potential environmental and social impacts that might result from future infrastructure investments; (ii) propose appropriate mitigation measures; (iii) outline environmental impact assessment procedures; (iv) establish linkages to the RPF as necessary, and (v) make recommendations regarding the implementation and monitoring of environmental and social mitigation measures in the context of the ESMF as appropriate;
- d) In the light of the available information, develop an environmental and social screening process, including monitoring indicators, for future infrastructure investments under the project, capturing the steps below (and others as appropriate):



1. Screening of physical infrastructure investments
2. Assigning the appropriate environmental categories
3. Carrying out environmental work
4. Review and approval
5. Public consultation and disclosure
6. Monitoring
7. Monitoring indicators

e) In light of the available information, identify areas that would require institutional strengthening for environmental management, including cost estimates and time horizons, to ensure that the requisite capacity exists under the project to implement the ESMF efficiently;

f) In light of the above recommendations, prepare an Environmental Management Plan (EMP) for the entire project; the EMP is to outline the institutional responsibilities, including cost estimates and time horizons for the (i) identification of environmental and social impacts; (ii) preparation and implementation of mitigation measures; (iii) monitoring of the implementation of mitigation measures; (iv) monitoring indicators; and (v) capacity building needs, including related training needs and costs. A summary table should be prepared for ease of reference.

#### **IV. Output**

The consultant(s) will prepare an Environmental and Social Management Framework (ESMF) that will be used by project implementers at the planning stage of physical infrastructure investments. Hence, the ESMF is to be used as a practical tool during project implementation.

#### **V. Reporting**

The ESMF will be written in English and will include the following sections:

- Cover page
- Table of contents
- List of acronyms
- Executive summary
- Introduction
- Project description
- Objectives of the Environmental and Social Management Framework (ESMF)
- Methodology used to prepare the Environmental and Social Management Framework (ESMF)
- Overview of The Gambia's environmental policies, laws, procedures, regulatory and administrative frameworks
- Overview of the World Bank's ten Safeguard Policies
- Environmental impacts due to infrastructure investments
- Social impacts due to infrastructure investments
- The environmental and social screening process:
  - Steps required
  - Annexes
    - Environmental and Social Screening Form (Sample)
    - Environmental and Social Checklist (Sample)
    - Procedures for the construction/rehabilitation of infrastructure investments requiring environmental work

- Summary of the World Bank's Safeguard Policies
- Others, as necessary
- Environmental Management Plan (EMP) for the entire project
  - Proposed infrastructure investments
  - Environmental and social impacts
  - Mitigation measures
  - Institutions responsible for implementing the mitigation measures
  - Institutions responsible for monitoring the implementation of the mitigation measures
  - Timing
  - Costs
  - Monitoring indicators
  - Summary table
- Recommendations
- List of individuals/institutions contacted
- References

## **VI. Staffing of the Consultancy and Duration of Assignment**

The consultancy would require expertise in environmental assessment, environmental management and strengthening of institutional capacity in these areas.

The duration of the assignment would be about five weeks, involving three weeks of field and two weeks writing the Environmental and Social Management Framework (ESMF).

An electronic copy of the ESMF should be made available to the Government of The Gambia and the World Bank by end of June 2013, and the final draft electronic document should be available before appraisal.