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« Gouvernance, politiques de gestion des ressources marines et réduction de la pauvreté dans l'Ecorégion Marine Ouest Africaine (WAMER) »

Report on the assessment of sectoral policies, institutional problems and solutions in coastal marine resources and marine protected areas

Case Study of Gambia

Draft

Asberr Natoumbi MENDY and Papa Gora NDIAYE

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Summary

This report assesses sectoral policy objectives, institutional and legislative challenges impacting on the conservation and sustainable management of marine and coastal resources including marine protected areas in the Gambia. Three public institutions were identified and they are: Fisheries Department, National Environment Agency and Department of Parks and Wildlife Management. The policy objectives are adequately formulated for conservation and natural resources management but the realization of targeted goals are constrained by human, technical and financial resources. The lack of inter and intra coordination of sectoral activities with regards management of the environment and natural resources has constrained the ability of the sectors to achieve the targeted goal; this can also result in duplication of activities and wastage of funds. This, therefore the need to establish a multi-sectoral technical working group or team with appropriate mandate to advice on matters relating to policy objectives harmonization, coordination and implementation, monitoring and assessment of environment variation and status of marine and coastal resources. A well-trained critical mass, adequate budgetary resource and appropriate institutions and legislation is imperative for the conservation and sustainable use of the marine and coastal resources.

Key words: marine resources, policy, objectives, coherence, challenges.

Abbreviations and Acronyms

DOF	Department of Fisheries
DPWM	Department of Parks and Wildlife Management
EIS	Environmental Information System
ERP	Economic Recovery Programme
FAC	Fisheries Advisory Committee
FAO	Food and Agriculture Organization of the United Nations
FD	Fisheries Department
GEAP	Gambia Environment Action Plan
GTZ	German Technical Cooperation
ICAM	Integrated Coastal Area Management
NEA	National Environment Agency
NEMA	National Environmental Management Act
NEMC	National Environmental Management Council
NGO	Non-Governmental Organization
PSD	Programme for Sustainable Development
UNDP	United Nations Development Programme
USAID	United States Aid for International Development
WWF	World Wide Fund for Nature

INTRODUCTION

The Gambia is a sub-tropical coastal country in West Africa. It has a coastline of about 80 km long, and 25 km of this lie in the bay-shaped mouth of the Gambia River (an estuary) and the rest facing the Atlantic Ocean, Figure 1. Its continental shelf area is about 4000 Km². The estuarine areas have a dense mangrove forest (67,000 hectares, FAO/UNEP, 1996); provide breeding and nursery grounds for important commercial marine fish species, shrimps and other valuable aquatic organisms. The Gambia is very rich in terms of biological diversity. It has several coastal and marine habitats of high ecological importance; the Toll point to cape creek (Camaloo comer), Oyster creek mangrove swamp, etc.



Figure 1: The map of the Republic of The Gambia

As a result of the serious drought spells of the mid 1970's and 1980's, agricultural production and animal husbandry has declined causing an intense rural-urban drift of youth looking for gainful jobs in the coastal areas. The coastal areas are heavily populated and increasingly exerting pressure on finite natural resources; in particular the exploitation of coastal and marine resources for both subsistence and other economic advantages. In the Gambia, economic activities in the coastal zone are dominated by fisheries, tourism, housing, industry, agriculture and mining.

The rich marine waters enhanced by the influx of nutrients from the Gambia River, the fisheries potentials of which were revealed in the UNDP/FAO joint of fisheries resource potential off the waters within the jurisdiction of the Gambia conducted in 1964/65. This led to the establishment of fisheries planning, development and management structures and institutions including Fisheries Policy 2007, Fisheries Act 2007 and Fisheries Regulations 2008.

Important to note is the call for action to address environmental and natural resources management issues by The Banjul Declaration in 1977 which resulted in the establishment of a

Department of State Environment Unit in 1982 to coordinate environmental matters and monitor the impact of various projects and to provide advice to Government and Non-Governmental Organisations (NGO). The enactment of the National Environmental Management Act (NEMA) by Government in 1987 and the establishment of the National Environmental Management Council (NEMC) chaired by The President provided both the legal framework for environmental planning, management and decision-making. The Gambia is signatory to and has ratified several conventions resting on environmental and natural resources conservation and protection. The Gambia Environment Action Plan (GEAP), the main policy document for the environment and natural resources management.

The other important Government institution that directly participates in the management of marine and coastal resources including marine protected areas is the Department of Parks and Wildlife. The main policy document guiding its activities is the Biodiversity and Wildlife Act 2003.

Coherence of policies of sectors participating in conservation and management of marine and coastal resources including marine protected areas is imperative. This is due to the characteristics of the coastal areas: the most heavily populated and rich fisheries resources, vast tourism area and other opportunities for gainful economic activities. The economic activities in the coastal zone including marine are dominated by fisheries, tourism, housing, industry, agriculture and mining. The task is to examine the existing policies impacting the conservation and sustainable management of environmental and natural resources.

1. Assessment of fisheries sector policy for sustainable management of the resources and marine protected areas

1.1. Fisheries sector policy

The fisheries policy objectives are linked to some high value national development objectives such as: increased food self-sufficiency and security; a healthy population and enhanced employment opportunities for nationals; increased revenue generation and foreign exchange earnings; and the attainment of national social and economic development. The fisheries sector policy objectives have basically remained unchanged over the years but the strategies for their realization are being continually amended (and some discarded) to reflect the changing situations in fisheries at the national, sub-regional, regional and global levels.

Conservation and management of marine and coastal fisheries resources are guided by the policy objectives which had evolved over the years. Since the of Fisheries Department in the late 1960s led by the first fisheries development policies; policies intended to facilitate the development of a fisheries sector evolved over the course of two national 5-year development plans (1975 to 1980 and 1980 to 1985) when the Government defined development objectives for the fisheries sector as a guide to public sector interventions. The broad objectives were reviewed as part of the Economic Recovery Programmes (ERP) of (1985–1989) and the

successor Programme for Sustainable Development (PSD) of the 1990's. The policy objectives were further revised in 1994 following the formulation of a Strategic Plan for the Fisheries Sector of The Gambia. The plan was the proposed management system for the planned period 1994/1995 - 2004. The Strategic Plan is based on the knowledge that the fisheries sector has enormous potential and could make a significant contribution to the socio-economic development of The Gambia; as long as there is judicious management, rational and sustainable production methods and efficient utilization of existing, perceived to be abundant, fish stocks. The current policy objectives contained in the first (ever written) Fisheries Policy Document (2008), stipulated as adopted by the Government of The Gambia are as follows:

- To effect a rational and long-term utilization of the marine and inland fisheries resources;
- To use fish as a means of improving nutritional standards of the population;
- To increase employment opportunities in the sector;
- To increase the net foreign exchange earnings;
- To increase and expand the participation of Gambians in the fisheries sector ;
- To develop aquaculture; and,
- To improve the institutional capacity and legal framework for the management of the fisheries sector.

The Government adopted the above policy objectives in recognition that responsible fisheries management is essential for the sustained development of the fisheries sector and its economic gains as well as the welfare of its stakeholders. In realizing the set objectives the Government of the Gambia through the Ministry responsible for fisheries and its technical department should be guided by the following:

- ✓ National Fisheries Planning for economic development to be based on principles of responsible fisheries and sustainable livelihoods.
- ✓ Maintenance and enhancement of fisheries ecosystem, to conserve the variety and richness of the marine and fresh water resources.
- ✓ Conservation and enhancement of the quality of natural heritage of the country including wildlife, wetlands, biotic diversity, river, estuary, and beaches.
- ✓ Cooperating with international organizations for global protection of the marine and fresh water ecosystems.
- ✓ Training facilities and research in fisheries matters including studies pertaining to socio-economic, cultural and legal aspects and to provide adequately trained professionals and technical capacity.

- ✓ Improvement of access to financial resources by promoting the review of financial and micro-finance policies/regulations to take into account the special characteristics of fisheries.

Actions implementing the policy objectives

The Fisheries Policy 2007 urges Government to adopt practices that recognize that responsible fisheries management is essential for the sustained development of the Fisheries Sector and its economic benefits as well as the welfare of its stakeholders. Subsequently, the high value objectives stipulated in the policy were legislated in the Fisheries Act 2007 and Fisheries Regulations 2008 for implementation. The activities slated for the conservation and management of fisheries resources are centred on three areas, namely; Conservation and Sustainable Resource use, Collective decision-making and global responsibility (participation in sub-regional and international management forums). These are explained in the following legislations.

The Fisheries Act 2007 clearly stipulates management framework for fisheries resources of The Gambia; the implementation of fisheries legislation rests on the Minister responsible for fisheries and the Director of fisheries advised by a Fisheries Advisory Committee comprising of all stakeholders. The following Articles of the present Act provides for the conservation and rational and sustainable use of resources.

Article 11 (1) of Part III- Fisheries conservation, management and development of the Fisheries Act 2007 makes provision for the Director to prepare and keep under continual review plans for the management and development of fisheries and aquaculture. In doing so, he should consult with stakeholders and fisheries authorities in the region. Also in Part III, Article 11 (3), it is spelt out what the said plan should contain. For example, the Director should identify each Fishery and Special Management Area and indicate their present state of exploitation.

In Article 13 (1) The Minister responsible for fisheries may, in consultation with the Committee, in the interest of conservation, management and sustainable utilization of fisheries resources by Notice published in the Gazette, declare any area of the fisheries waters and corresponding subjacent areas, including marine protected areas or reserves established under any other laws, to be a Special Management Area for purposes of community-based fisheries management, application of certain conservation and management measures, artisanal or subsistence fishing operations or for any combination of the foregoing purposes or other specified purpose.

Also in Article 15 (1) of the 2007 Fisheries Act, the Minister may, in particular where there is a need to take immediate conservation and management action, by Notice in the Gazette – (a) establish open or closed seasons for any specified area, for any fish stock and any period of time; (b) regulate the taking, from any area, of fish that are less or greater than a specified size, weight or dimension; (c) regulate the taking of fish from any area:

- by a specified method, gear, equipment or instrument;
- by a specified class of persons;
- by a specified class of vessels;

(d) regulate the landing, sale, display or offering for sale, transporting, receiving or possession of fish.

Article 16 (1) empowers the Minister responsible for fisheries to, by way of Notice in the Gazette, declare any fish as protected which he considers is endangered or which are designated as endangered by international agreement.

The 2008 Regulations translate into action oriented provisions of the articles of the Fisheries Act 2007 for implementation. The regulations stipulated succinctly area, gear, fish size, fish species restriction.

Observations and Remarks

The fisheries sector policy objectives are clearly formulated as evident in the preceding sections; the priorities being conservation and rational and sustainable use of the resources and the use of fish as an element for social and economic development for the benefit of the population. These and other objectives are legislated by an Act of National Assembly, Fisheries Act 2007 and management options and measures regulated in the Fisheries Regulations 2008. Stakeholder participation in the conservation and management of marine and coastal resources are well catered for in the laws; a strong representation in the Fisheries Advisory Committee (FAC) of key stakeholder is a law but the holding meeting of the committee is irregular. The membership of the FAC includes fisheries organizations and NGOs representing the interest of their membership. Despite these positive attributes certain policy incoherencies have featured prominently. Amongst them are:

1. The call for increase national participation and production in fisheries business and issuance of access rights to foreign fishing vessels in the face fully or overexploited stocks;
2. The prevailing open access to fisheries resources enjoyed by the artisanal fishers despite being legislated against;
3. The continuous use of inappropriate fishing gear, landing of juveniles and destruction of natural habitats with impunity;
4. The Gambia Agriculture and Natural Resource policy objectives call for the use of fisheries resources to achieve critical objectives of the poverty reduction strategy; increase fish supplies by 30% based on the assumption that the river resources are underexploited.

1.2.Environment sector policy

The Fisheries Ministry and its Technical Department collaborate and cooperate with institutions partaking in environment, marine and coastal fisheries areas management including marine protected areas; namely, The National Environment Agency (NEA) and the Department Parks and Wildlife Management (DPWM). The Agriculture and Natural Resource sector policy covers all natural resources sectors, including marine and coastal resources sectors. Apart from the WWF participation in this area, there is virtually no other Non-governmental Organization that is recognized for its active participation. The importance attached to the conservation and sustainable management of these resources in these areas has led to the inclusion of fisheries conservation and management objectives in the policy frameworks of cooperating institutions; these are discussed below.

National Environment Agency

The call for action to address environmental and natural resources management issues by The Banjul Declaration in 1977 (below), an Environment Unit under the Ministry of Natural Resources was there established in 1981 to coordinate environmental matters and monitor the impact of various projects and to provide advice to Government and Non-Governmental Organisations. The enactment of the National Environmental Management Act (NEMA) by Government in 1987 and the establishment of the National Environmental Management Council (NEMC) chaired by The President provided both the legal framework for environmental planning, management and decision-making. These arrangements had led to very intensive and highly participatory approach (including Government, Non-Governmental Organizations, Donor Agencies, the private sector, and local communities) in the preparation of the Gambia Environmental Action Plan (GEAP), thus providing a national framework to address environmental and natural resources management concerns. The UNSO/GAM/90/X02 Project and United Nations Development Programme (UNDP) provided additional financial support resulting in the commissioning of two Working Groups on natural resources and social services in 1991.

The Banjul Declaration

"It is a sobering reflection that in a relatively short period of our history most of our larger wildlife species have disappeared together with much of the original forest cover. The survival of the wildlife still remaining with us and the setting aside of protected natural habitats for them is the concern of all of us. It would be tragic if this priceless natural heritage, the product of millions of years of evolution, should be further endangered or lost for want of proper concern. This concern is a duty we owe to ourselves, to our great African heritage and to the world. Thus I solemnly declare that my Government pledges its untiring efforts to conserve for now and posterity as wide a spectrum as possible of our remaining fauna and flora."

The Phase I of the GEAP from 1992 to 2001 adopted in 1992 with the creation of the National Environment Agency (NEA) in 1993, was of pivotal importance in its commitment to a sustainable management of the country's environment and natural resources. The GEAP was now set to improve economic performance and quality of human life and restore, maintain and enhance ecological processes, natural resources, and cultural and natural heritage.

The whole machinery was evaluated in 1996 and a second evaluation and preparation for Phase II was carried out in 2001. The GEAP I remains a viable and functional approach to environmental and natural resources management. The results of the first evaluation have been accepted and are being put into action.

Environment Policy objectives

The ultimate goal of the GEAP I was to ensure sustainable development. Consistent with the Government's commitment to this goal and the set environmental priorities, the policy objectives to provide the operational guidelines for the environmental protection and natural resource management intervention:

- ✓ To conserve and promote the rational use of natural resources for the benefit of the present and future generations ;
- ✓ To protect and improve the health and quality of life of all Gambians through sound environmental management ;
- ✓ To preserve and restore the equilibrium of ecological processes ;
- ✓ To strengthen the institutional framework for the environmental coordination and management at the national, regional and global levels ;
- ✓ To increase the environmental awareness and understanding of the public and bring about effective public participation and community involvement in environmental management
- ✓ To ensure the integration of environmental considerations in all development strategies and related activities ;
- ✓ And, to accelerate the adoption of alternate source of renewable energy.

Actions for Environment and natural resources management

As early as 1987, the Gambia realized it was confronted with a myriad of problems associated with environmental degradation: salt water intrusion into the fresh water zone of the river system; salt water seepage into the upper aquifer of the freshwater system in the coastal areas; deforestation and desertification; breakdown of urban infrastructure and environmental health facilities; and the loss of natural resources. These propelled the establishment of institutions and strategies culminating in the preparation of GEAP I. The first phase concentrated in addressing specific environmental problems. It established an institutional framework to raise

awareness of the state of affairs and addressed activities that had severely affected the environment; technical assistance was provided by several development partners, including USAID, UNDP, GTZ and the World Bank to work with NEA and assist in the implementation of a package of measures necessary to arrest the escalating environmental problems in the country.

The natural resource management sector programme represented the greater part of the activities undertaken in the first phase of GEAP implementation, primarily because many of the country's most severe environmental problems are the result of the increasing pressure exerted by a growing population on the limited natural resource base. The natural sector policy objectives stipulated in GEAP Phase I include the following:

- Assisting and encouraging producers to adopt improved land and natural resource management practices
- The optimal management of coastal and freshwater resources
- The development of effective government and local community partnerships to ensure rational management of natural resources
- The establishment of procedures for data collection, analysis, and planning for natural resource management
- The development of local area integrated management plans

GEAP Phase II

A second phase of the GEAP was being proposed for implementation in place of GEAP Phase I, it will cover the period 2009 – 2018. The strategy for implementing the GEAP Phase II has two main principles, namely:

- Building on the gains that have been made and overcoming constraints encountered in the implementation of GEAP Phase I
- Identifying and implementing new actions aimed at meeting the emerging challenges brought about by more recent developments.

The proposed GEAP Phase II activities are in the form of advisory services, technical assistance, support grants, training, and ancillary equipment and supplies necessary for the effective implementation of the programme goal and purpose.

The Goal and Purpose

The overall goal of the GEAP Phase II Programme is to ensure sustainable development. This goal will be achieved by developing a fully effective and financially self-sustaining environmental and natural resource management system for The Gambia. The areas of particular interest to the GEAP Phase II Programme include agriculture and livestock, natural

resources, trade and industry, tourism and infrastructure; environmental quality monitoring and waste management; and coastal zone management. Increased adoption of environmentally friendly practices in the economy is being pursued as a viable long-term solution to the problem of achieving sustainable development in The Gambia. Accelerated incorporation of environmental considerations into economic decisions will constitute the ultimate measure of goal achievement under the proposed programme.

The strategy will encompass nine basic themes to develop a fully effective and financially self-sustaining environmental management system for The Gambia over the long term. These themes have been identified as:

- Improving the performance of the policy and institutional framework
- Incorporating environmental considerations into the economic decision-making framework
- Advocacy and sensitization for sustainable development
- Support for decentralization and local government reform for community-based natural resource management and sustainable development planning
- Engaging the private sector and parastatals for sustainable resource use
- Strengthening the regulatory framework and enforcement of the codes
- Sustainable management and protection of the coast and its resources
- Improving the performance of municipal authorities in solid waste management
- Developing a self-sustaining environmental management system for The Gambia

A multi-sectoral Coastal and Marine Environment Working Group was set up at the NEA to advise on matters related to the coastal and marine areas. The Working Group has developed an Integrated Coastal Area Management Plan (ICAM) that outlines all pertinent coastal issues, including a management strategy. It has established a coastal resource database for The Gambia in collaboration with the EIS programme, to assist in the proper and effective management of coastal areas and the rational use of its resources.

Observations and remarks

The GEAP Phases I and II have strategies for conservation and management of marine and coastal resources. The natural resource sector policy objectives of the GEAP are consistent with the fisheries sector strategic objectives for sustainable use of natural resources. Conservation and management of the natural resources is one of the main pillars of the two GEAP programmes; this is evident in the emphasis laid on sustainable use of these resources, participation of stakeholders including local resource users, and formation of multi-sectoral working group on marine and coastal zone management.

2. Assessment of institutions partaking in the management of marine and coastal and marine protected resources

2.1. Institutions partaking in the management of marine and coastal resources

The Fisheries Department (FD) and National Environment Agency (NEA) and to some extent, Forestry Department (DoF) are public institutions that are expected to provide services to the marine and coastal resource sector in various forms and ways – regulatory, advisory, technical, advocacy, marketing and financial. Such services will be crucial to the efforts and overall objective of the sector to transform itself to a sustainable source of social and economic gains.

These institutions are technical arms of the Ministry of Fisheries and Water Resources and the Ministry of Forestry and Natural Resources respectively. The review of their mandates and legislations showed that there is no clear definition of roles and responsibilities and negligible effective and efficient coordination in providing support to the natural resource sector and its clients. This situation has resulted in duplication of efforts, inadequate provision of many of these services in quantity and quality and low productivity among most institutions providing required support services to the marine and coastal sector. All these shortcomings have contributed to the overall declining performance of the sector.

These public sector institutions are the major source through which essential services to the sector are provided. However, with declining to inadequate budgetary allocations of Government Departments, the FD, NEA and DoF ability to provide efficient services have reduced significantly. Some services such as research, monitoring, control and surveillance (MCS), extension and other managerial services have suffered from lack of adequate funding. Also important is the deficiency in the critical human capital for the execution and implementation of programmes and effective management of the resources. The constraints will be discussed in later sections of this report.

2.2. Institutions partaking in the management of marine protected areas

In the Gambia, Department of Parks and Wildlife, a technical institution of the Ministry of Forestry, Natural Resources and the Environment in collaboration with the Fisheries Department designate and manage protected areas. The activities of the DPWM are guided by The Biodiversity and Wildlife Act, 2003. The Act states that its provisions shall be carried into effect by the “Director”, which may include the Director of Fisheries if the context so specifies or implies. It establishes an inter-sectoral Committee on Biodiversity and Wildlife, whose membership includes the Director of Fisheries.

The Act provides for the conservation of biodiversity and wildlife, the promotion, regulation and protection of biological resources and the establishment, maintenance and administration of protected areas. The Secretary of State responsible for biodiversity and wildlife may, on the

recommendation of the appropriate Director(s), declare an area to be a protected area for the purposes of biodiversity and wildlife conservation and sustainable use. The Act contains several provisions on the management of such protected areas. In addition, the Act establishes a Biodiversity and Wildlife Fund, which consists, inter alia, of 50 percent of all fees and royalties received under the Act.

In response to the rapid rate of loss of wildlife habitats Government initiated a strategy to set up a system of protected areas and thus a total of six national parks were established. The new policy objective is to increase national parks to 5% of the total land area, and to put emphasis on community conservation and sustainable use of biodiversity among others. Seven biodiversity “hot spots” were identified as requiring special attention. These include: BaoBolon, Niimi National Park, Tanbi Wetland Complex, Tanji/Bijol Reserve, BintangBolong, Kiang West National Park and Abuko Nature Reserve (Personal communication- A. Jallow). These spots are considered biologically rich with ecological functions such as refuge/habitat, spawning and nursery grounds for important fish species, other aquatic animals and avifauna with social and economic value. It should be recognized that Parks and Wildlife Management have management plans for almost all the hot spots. The stabilizing effect of mangroves in most of the complexes is imperative in the maintenance of ecosystem balances.

The Integrated Coastal and Marine Biodiversity Management Project (ICAM), jointly funded by GEF/World Bank and WWF is designed with the primary objective of strengthening coastal and marine protected area system and in-situ conservation of globally significant species and habitats in The Gambia. These include: strengthening of DPWM and training and awareness raising activities targeting local resource users, local government partners, and to a lesser extent, the general public. The project also supports the strengthening of the national conservation system/network and development of participatory conservation area management models.

3. Assessment institutional problems in the management of marine and coastal resources

3.1. Identification et assessment of problems

Generally, the institutions indicated as directly implicated in the conservation and management of marine and coastal resources are constrained by lack of adequate and appropriate human, financial, institutional and technical capacities to effectively and efficiently discharge their functions/mandate. These constraints are as follows:

Institutional constraints

- Weak mechanisms for inter institutional coordination to targeted objectives;
- Weak human capacity and lack of resources to pursue the continuous training of personnel;

- Inadequate budgetary provision limits the capacity of the institutions to carry out research extensively and mobilize extension staff for monitoring, control and surveillance of resource use;
- Inadequate resources, monitoring and enforcement of regulations and implementation of planned programmes and projects on the environment and natural resources.

Technical Constraints

- Inadequate mass of nationals with technical competence for effective management of natural resources;
- The lack of an inbuilt system of monitoring and assessing (M&A) the coordination and implementation of management options;
- Inadequate knowledge of the biology, population dynamics and annual sustainable yields of demersal stocks and riverine resources.

Financial Constraints

- High costs of fuel and energy;
- Inadequate funding for environment and natural resource management

Social Constraints

- Constraints of the civil society to rapidly take up natural resource management functions
- Conflict between conservation and use of resources especially if located in areas where the local people carry out their economic activities for survival
- Difficulties in recruiting, training and retaining Gambians in artisanal fisheries;
- The most vulnerable group in the artisanal sub-sector are women operators (fish processors and vendors) who are yet to be adequately empowered to enhance the effectiveness of their operations;
- Resolution of resource use conflict
- Inadequate sensitization of Gambian youths to dispel the notion that artisanal fishing is a low grade, unrewarding occupation;
- Lack of community participation in enforcement of regulations to prevent and eliminate harmful fishing practices.

3.2. Identification and assessment of solutions

The role of the Fisheries Department and National Environment Agency should largely focus in the areas of policy formulation and monitoring, coordination of all development cooperation activities and programmes in the sector, research and development, knowledge transfer, resource mobilization and other minor roles that will be clearly defined in various Frameworks of policy implementation. The environment and fisheries sectors should collaborate with the view to establishing a Technical Cooperation policy, which will provide comprehensive guidelines on the nature and scope of cooperation in the discharging of their mandates with regards conservation and management of marine and coastal resources. They should work toward decentralizing conservation and management responsibilities either through established formal institutions as area councils or local co-management committees. In addition;

- Capacity has to be created in the Fisheries Department and the National Environment Agency for research into the dynamics of marine and coastal resources and for effectively monitoring and assessing developments in the sector.
- The Departments of Fisheries, Forestry, and Parks and Wildlife Management and the National Environment Agency need to collaborate closely to protect the marine, coastal and inland natural habitats in order to ensure the existence of permanent spawning grounds for fisheries resources.
- Dialogue and consultation have to be established with other users of the aquatic environment, such as industry that discharges its waste into the waters, to ensure the non-pollution of these environments.
- Capacity must be built at the Community Fisheries Centres to ensure the use of proper fishing methods, processing materials, and handling techniques to reduce waste and create a healthy environment around the centres of the inland fisheries resources and habitats.
- Techniques other than fuel wood burning should be sought for fish smoking and drying in order to reduce the rate of woodland destruction in the vicinity of fishing centres. Alternatively, the centres' management committees should be encouraged to establish woodlots for fuel wood harvesting.

A strengthened decentralized administrative and technical structure with increased organizational transparency and flexibility and sufficient authority at all levels, consistent with a higher degree of accountability and financial discipline based on principles of client-focus, gender-sensitive, demand-driven participatory approaches to conservation and sustainable management of natural resources.

4. Assessment of institutional problems in the management marine protected areas

4.1. Identification and assessment of problems

The strategies defined for the wildlife sector are environmentally sound. Apart from rehabilitating the wildlife habitats and sanctuaries, the establishment of a network of protected and well-developed parks and reserves will significantly contribute to general environmental protection. In addition, the expansion of protected valuable wetlands as a source of livelihood for people and as a habitat for fish and water birds is in line with the provisions of the Ramsar Convention. The resulting increase in the number of wildlife in both cases will also contribute to improving the nutritional status of the Gambian population that use these resources.

However, there are negative aspects as well. The implementation of a strict protected area management system will virtually exclude fishers from the protected areas. Individuals and communities may therefore be denied a source of livelihood which creates fertile ground for conflict. These conflicts and those likely to arise with the planned extension of the protected area network need long-term solutions.

Apart from seeing wildlife (including fish) sanctuaries as a threat to agricultural production, because they are perceived as breeding and refuge for fisheries resource, the fishing communities see the creation of parks and reserves as depriving them of useful fishing areas. Consequently the Department of Parks and Wildlife together with its collaborating institutions, such as forestry and fisheries, are faced with serious bottlenecks in their endeavours to achieve their policy objectives. Unless community acceptance is assured, sustainable wildlife development and habitat protection may be difficult to achieve. Other challenges facing the DPWM include:

- the lack of involvement of the local communities in wildlife management and the sharing of benefits that accrue from this
- the communities viewing protected areas as their properties seized by government
- the destruction of natural habitat such as mangroves and the 'illegal' harvesting of wildlife resources
- the encroachment of fishers into protected areas. These are all issues of conflict, in the light of which the strategic plan to increase the protected areas by 5 per cent of the land area of The Gambia can only make the situation much worse.

4.2. Identification and assessment of solutions

Collaborative ventures with the local populations that will increase the acceptability of the sectoral programmes to the communities and thus ensure their long-term success should be examined. Joint management arrangements and revenue sharing are some of the possible conflict resolution mechanisms that could be employed.

5. Plan of action for addressing problems of institution involved in the management marine and coastal and marine protected areas resources

Subsequent to the assessment of challenges and constraints facing institutions implicated in the conservation and management of the marine and coastal resources including marine protected areas, certain critical issues were identified and solutions proposed for their remedy. These presented in Table 1 below.

Table 1: Proposed programme of work

Activity	Indicator	Institution	Year			
			1	2	3	4
Harmonisation of sectoral policies for natural resources conservation and management policies	Marine and coastal resources policy	FD, NEA, DPWM, Technical Working Group				
Establishment of technical coordination and implementation committee	Formal and Functional WG,	FD, NEA, DPWM, Technical Working Group				
Building of technical capacities in research, monitoring and assessment and management	Well-trained personnel	FD, NEA, DPWM, Technical Working Group				
Decentralization and enforcement institutional capacities for natural resource conservation and management	Local natural resources management structures	FD, NEA, DPWM, Technical Working Group				
Establishment of co-management institutions at local level	Co-management structures	FD, NEA, DPWM, Technical Working Group				
Training of stakeholders and committee members in conservation and management of natural resources	Trained stakeholdersd	FD, NEA, DPWM, Technical Working Group				

6. Conclusion

Sectors with direct stake on the conservation and management of marine and coastal resources including marine protected areas have policy objectives that are mostly linked to some high value national development objectives such as: increased food self-sufficiency and security; a healthy population and increased employment opportunities for nationals; increased revenue generation and foreign exchange earnings; and the attainment of national social and economic development objectives. The policy objectives of the fisheries, environment and parks and wildlife sectors advocate for:

- The conservation, management and promotion of the rational use of natural resources for the benefit of the present and future generations;
- Grass-root participation in the conservation and management of natural resources;
- The rational use of natural resources for the enhancement of social and economic standards of the population;
- And, strengthening of institutional framework for the coordination and management of natural resources at the national, regional and global levels.

In addition to the technical, institutional and budgetary constraints, the lack of coordination of actions geared towards conservation and management of marine and coastal resources impedes attainment several goals. It is therefore necessary that these public institutions cooperatively management the resources in question by establishing a technical working group for advice, coordination, harmonization and monitoring and assessment of the environment and natural resources. Capacity building will be key to achieving of any sector goal.

Annexe 1 : Assessment of fisheries sector policy for sustainable management of resources and marine protected areas

Fisheries Sector Policy Documents	Objectives for management and conservation of marine and coastal resources including marine protected areas	Actions for the management and conservation of marine and coastal (including marine protected areas)	Challenges and limitations for sustainable and effective management of resources and marine protected areas	Causes	Solutions
Fisheries Policy 2007	<ul style="list-style-type: none"> • To effect a rational and long-term utilization of the marine and inland fisheries resources; • To use fish as a means of improving nutritional standards of the population; • To increase employment opportunities in the sector; • To increase 	<p>1.Conservation and Sustainable Resource Use (conservation of resources, ecosystem preservation, environmental quality goals)</p> <p>Actions: Education, awareness creation, monitoring, sustainable management, maintenance of quality natural habitats (wetlands, mangroves, etc.) and maintenance of genetic diversity.</p> <p>2.Global Responsibility</p> <p>Cooperate with regional as well as international organizations/institutions in issues of trans-boundary nature with regards conservation and management of natural resources</p>	<p>Institutional constraints</p> <ul style="list-style-type: none"> • Weak mechanisms for inter institutional coordination to targeted objectives; • Weak human capacity and lack of resources to pursue the policy objective for continuous training of Fisheries Department personnel; • Inadequate budgetary provision limits the capacity of the Fisheries Department to carry out research extensively and mobilize extension staff for monitoring, control and surveillance of artisanal operations. • Implementation and 		<ul style="list-style-type: none"> • Institutional cooperation between the different sector partaking in marine and coastal resources management including marine protected areas; • Establishment of a multi-sectoral technical working group with sufficient mandate for its functioning; • Adequate institutional and legal frameworks • Regulations of access to resources (industrial and artisanal) • Capacity building – research into the dynamics of marine and inland fisheries resources and for effectively monitoring and

	<p>the net foreign exchange earnings;</p> <ul style="list-style-type: none"> • To increase and expand the participation of Gambians and Gambian entrepreneur in the fisheries sector ; • To develop aquaculture ; and, • To improve the institutional capacity and legal framework for the management of the fisheries sector; and, • To strengthen institutional 	<p>consistent with international instruments.</p> <p>3. Collective Decision-Making</p> <p>Participatory (all stakeholders) management of fisheries (marine and coastal) through institutionalized co-management structures.</p> <p>Note that the proposed actions are further elaborated in the Fisheries Act 2007 and Fisheries Regulations 2008.</p>	<p>enforcement of regulation of access to resources, fishing method, gear and intensity</p> <p>Technical Constraints</p> <ul style="list-style-type: none"> • Deficiency in technical competence for monitoring and assessment of marine and coastal resources including marine protected areas ties; • Inadequate technical competence to management fishing fleets and shore facilities; • Inadequate knowledge of the biology, population dynamics and annual sustainable yields of demersal stocks and riverine resources. <p>Financial Constraints</p> <ul style="list-style-type: none"> • High costs of fuel and energy; • inadequate access to micro-finance facilities for artisanal operators, and financial services for long term lending; • Prevailing high interest rates 	<p>assessing developments in the sector.</p> <ul style="list-style-type: none"> • The Departments of Fisheries, Forestry, and Parks and Wildlife Management need to collaborate closely to protect inland fisheries environments in order to ensure the existence of permanent spawning grounds for fisheries resources. • Revising licences and other fees to reflect the management cost of fisheries resources • Dialogue and consultation have to be established with other users of the aquatic environment, such as industry that discharges its waste into the waters, to ensure the non-pollution of these environments. • Capacity must be built at the Community Fisheries Centres to ensure the use of proper fishing methods, processing materials, and handling techniques to reduce waste and create a healthy environment around the
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	<p>linkages with other relevant sectors.</p>		<p>at the commercial banks are unfavourable for the development of especially the industrial sub-sector.</p> <p>Social Constraints</p> <ul style="list-style-type: none"> • Lack of community participation in enforcement of regulations to prevent and eliminate harmful fishing practices. 	<p>centres of the inland fisheries resources and habitats.</p> <ul style="list-style-type: none"> • Techniques other than fuel wood burning should be sought for fish smoking and drying in order to reduce the rate of woodland destruction in the vicinity of fishing centres. • Alternatively, the centres' management committees should be encouraged to establish woodlots for fuel wood harvesting. • Address the issues of preparing, funding and implementing GEAP Phase II to cover the period 2009 –2018 <p>Capitalise on the opportunity Local Government Reform Act of 2002 and the Finance and Audit Legislation of 2004 offer to coordinate and implement GEAP Phase II at the grassroots level.</p>
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Annexe 2 :Assessment of environmental sector policy with regards sustainable management of resources and marine protected areas

Environment Sector Policy Document	Objectives for management and conservation of marine and coastal resources including marine protected areas	Actions for the management and conservation of marine and coastal (including marine protected areas)	Challenges and limitations for sustainable and effective management of resources and marine protected areas	Causes	Solutions
	<ul style="list-style-type: none"> • Ensure the long-term rational utilization of the inland fisheries resources • Use fish for improving the nutritional standard of the local population • Increasing Gambian private sector involvement in 	<ul style="list-style-type: none"> • Improving the performance of the policy and institutional framework • Incorporating environmental considerations into the economic decision-making framework • Advocacy and sensitization for sustainable development • Support for 	<ul style="list-style-type: none"> • Lack of sufficient personnel, • Material resources and equipment • Protection of the aquatic environment. • Resolution of resource use conflict • Threat of pollution to spawning sites from industrial and urban waste 		<ul style="list-style-type: none"> • Capacity building – research into the dynamics of marine and inland fisheries resources and for effectively monitoring and assessing developments in the sector. • The Departments of Fisheries, Forestry, and Parks and Wildlife Management need to collaborate closely to protect inland fisheries environments in order to ensure the existence of permanent spawning

	<p>fisheries</p> <ul style="list-style-type: none"> • Increase employment opportunities and foreign exchange earnings. • Assisting and encouraging producers to adopt improved land and natural resource management practices • The optimal management of coastal and freshwater resources • The development of effective government and local community partnerships to ensure rational management of natural resources • The establishment 	<p>decentralization and local government reform for community-based natural resource management and sustainable development planning</p> <ul style="list-style-type: none"> • Engaging the private sector and parastatals for sustainable resource use • Strengthening the regulatory framework and enforcement of the codes • Sustainable management and protection of the coast and its resources • Developing a self-sustaining environmental management system for The Gambia • Environment 	<p>discharge and chemical residues in surface run-offs from agricultural lands is</p> <ul style="list-style-type: none"> • The disappearance of water bodies or ponds as a result of changes in the rainfall pattern also constitutes a threat to inland fisheries. • Inadequate funding for environment and natural resource management • General slowdown and loss of momentum gained in GEAP Phase I. This • Inadequate human, financial and material resources • Inadequate resources, monitoring and 	<p>grounds for fisheries resources.</p> <ul style="list-style-type: none"> • Dialogue and consultation have to be established with other users of the aquatic environment, such as industry that discharges its waste into the waters, to ensure the non-pollution of these environments. • Capacity must be built at the Community Fisheries Centres to ensure the use of proper fishing methods, processing materials, and handling techniques to reduce waste and create a healthy environment around the centres of the inland fisheries resources and habitats. • Techniques other than fuel wood burning should be sought for fish smoking and drying in order to reduce the rate of woodland destruction in the vicinity of fishing
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	<p>of procedures for data collection, analysis, and planning for natural resource management</p> <ul style="list-style-type: none"> • The development of local area integrated management plans 	<p>protection and management</p> <ul style="list-style-type: none"> • Waste and pollution management • Natural habitat conservation and protection • Human and infrastructural capacity building • Protection of territorial areas through surveillance mechanism • Provision of shore facilities • Development of the fishing potential especially of shrimps and crustaceans 	<p>enforcement of regulations and implementation of planned programmes and projects on the environment and natural resources</p> <ul style="list-style-type: none"> • The lack of an inbuilt system of monitoring and assessing (M&A) the coordination and implementation of GEAP Phase I 	<p>centres.</p> <ul style="list-style-type: none"> • Alternatively, the centres' management committees should be encouraged to establish woodlots for fuel wood harvesting. • Address the issues of preparing, funding and implementing GEAP Phase II to cover the period 2009 –2018 • Capitalise on the opportunity Local Government Reform Act of 2002 and the Finance and Audit Legislation of 2004 offer to coordinate and implement GEAP Phase II at the grassroots level.
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ANNEXE 3 :Institutions participating in the marine and coastal resources and marine protected areas

Exact name of institution or organization	Mandate for the management of marine, coastal and marine protected areas resources	Problems arising from the management marine, coastal and marine protected areas resources	Causes	Solutions
Department of Parks and Wildlife	<p>The mandate for the conservation of biodiversity and wildlife, the promotion, regulation and protection of biological resources and the establishment, maintenance and administration of protected areas.</p> <p>The policy objective is : To create a society that sees itself as an integral part of nature, recognizes different life forms, sustainably uses natural resources and maintains for posterity a nurturing and dynamic world rich in biodiversity. Specific objectives include:</p> <ul style="list-style-type: none"> • To foster a shared sense of a society that sees itself as an integral part of nature; • To cultivate a common societal attitude that recognizes the rights of existence 	<p>Constraints of the civil society to rapidly take up natural resource management functions</p> <p>biodiversity/wildlife is located in the rural areas where the local people carry out their economic activities for survival</p>		<p>Conservation strategies should involve the people on whose land most biodiversity is located.</p> <p>The approach adopted in the law for the declaration of protected areas has therefore been changed from the "policing" to a "collaborative management" approach, similar to the Forest Legislation</p>

	<p>of different life forms; and</p> <ul style="list-style-type: none"> • To inculcate a high sense of consideration for posterity in the consumption, utilization, exploitation and management of natural and biological resources" . 			
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ANNEXE 4 :Ranking of problems and identification of remedial action

Ranking of institutional and legislative problems	Causes	Remedial actions

