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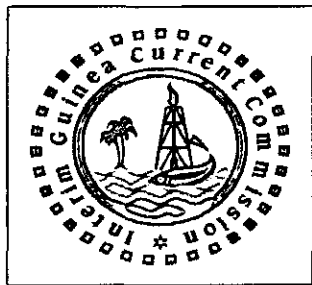
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Interim Guinea Current Commission



**PROJECT NO: GP/RAF/04/004/21.07
A FINAL REPORT**

On

**Development of National Programmes of Action (NPA)
for the Protection of the Marine Environment in the
GCLME Region**

(CONTRACT No. 160011388)

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This Report has not been edited.



United Nations Development Organisation

United Nations Environment Programme

Global Environment Facility

Norwegian Agency for Development Cooperation

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0. Summary

A National Programme for Action (NPA) for the protection of the marine environment from Land Based Activities is a dynamic short, medium and long-term agenda for marine protection. It requires, through strategic planning, the implementation of concrete, targeted and cost-related projects as well as a periodic evaluation to improve performance.

The objectives of this subcontract were to assist the National NPA Working Groups in:

- (i) finalizing and editing their NPAs documents for national adoption,
- (ii) setting up administrative and management structures to support the implementation of NPAs, and
- (iii) Initiating immediate preventive and remedial actions identified in the NPAs.

To succeed in the implementation of these NPAs, the Guinea Current Large Marine Ecosystem Project under the Executive Secretariat of the evolving Interim Guinea Current Commission (IGCC) is encouraging and supporting the countries to set up organizational arrangements including legal, enforcement and financial mechanisms.

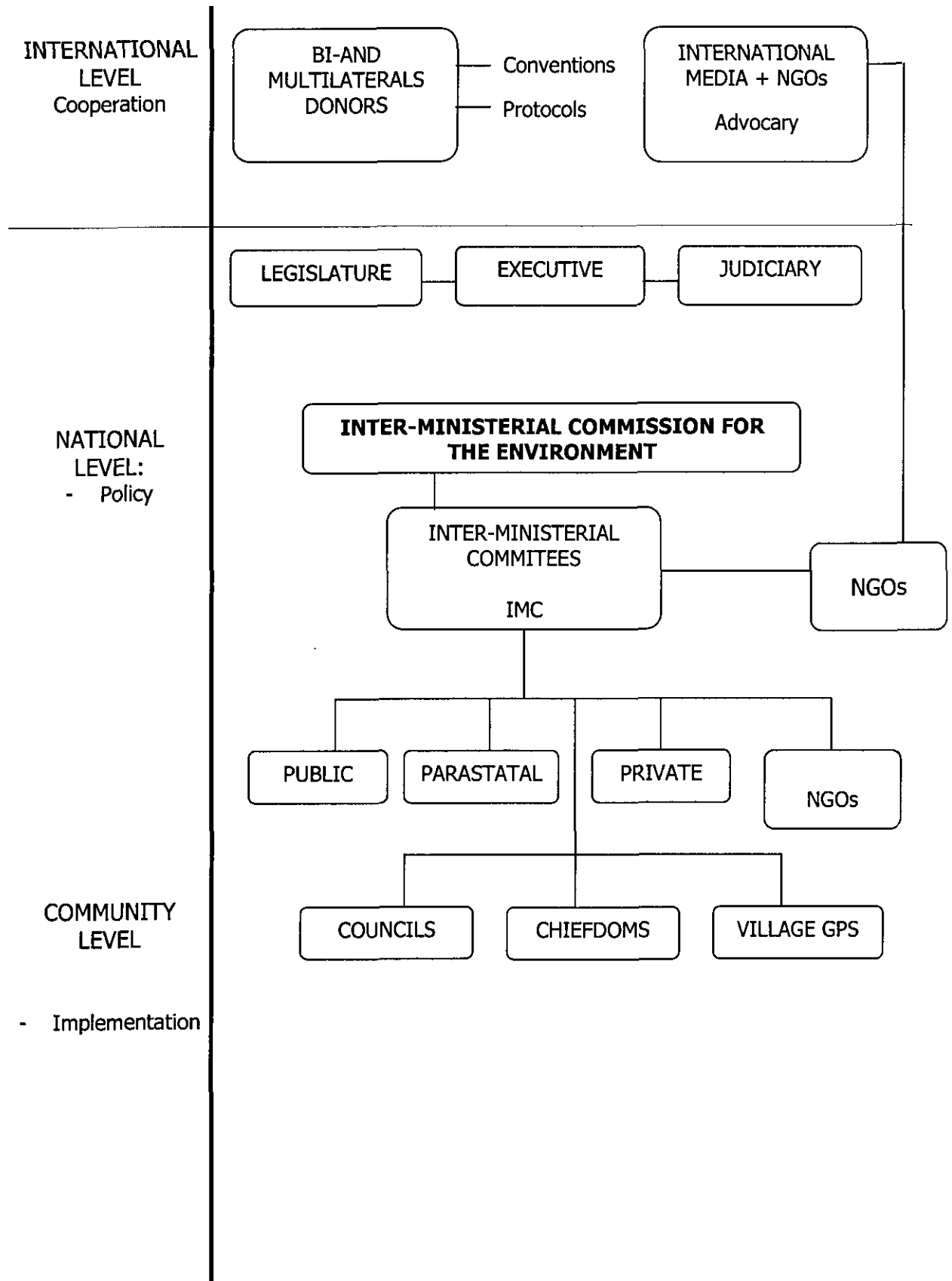
Under the direction of National Directors in the 16 GCLME countries, a team of 5 CEDA Experts prepared working documents during two months starting from early October 2007, to introduce the countries to the process and the procedures for the development of NPA as described in the NPA Manual. Following the Workshops, the International Experts assisted the National Experts in the formulation and refinement of their NPA documents. In November 2007, the CEDA Team organized National Workshops in Luanda (Angola) and Abuja (Nigeria) as envisaged in the subcontract.

At present, most of the countries have validated their Coastal Profiles, and most of them have had their NPAs endorsed at Ministerial level. The NPA of Sierra Leone with a foreword by the Hon Minister of Fisheries and Natural Resources is actually in its editing process. A global overview of the results is necessary to access the work done and the prospects for the future.

Administrative and Management Structures

For all GCLME countries viable Administrative and Management Structures have been identified for the implementation of the NPAs despite slight differences from a country to another. Those structures have extensions in different Ministries/Agencies/Departments which cover an aspect or the other of the Project. Different charts provide illustrations of this aspect of organization such as that of Cameroon.

Institutional framework for Cameroon coastal management



The perfection of this organigram is evident as it showing the existence of a chain of stakeholders acting in coordination at each country level. However, the question of its functionality remains open. Most countries could come up with this kind of organisational chart which clearly depicts the facts as they are now: a type of superstructure of cooperation to which inter-ministerial committees are hooked up in each country. . Certain among them did not pay specific attention to the preservation of their coastal environment and resources until very recently. However, the functioning of any such mechanism requires financial means as most reports point out. It has been very scarce to find at each national level financial provisions to endow a core team to lead the actions foreseen in the different programs. Financial mechanisms are discussed below.

Legal and Enforcement Mechanisms

Legal mechanisms find¹ a strong foundation in the Constitutions of most countries; the Benin Republic Constitution of 11 December 1990, for instance, stipulates in its articles 8, 27, 9, 28, 29 the following:

1°) The State guarantees to its citizens equal access to health, education, culture, information, professional training and employment (art 8)

2°) The State cares for the protection of the environment (art 27) so that each person may have access to a sound environment, satisfying and sustainable; everybody has the duty to fight for it. Each human being is intitled to development and to the full personal accomplishment in its material, temporal, intellectual and spiritual dimensions (art 9)

3°) Stockage, manipulation and evacuation of toxic waste or pollution from factories and other industrial or artisanal plants located on the national territory is under the law (art 28). The transit, importation, stocking, burial on the national territory of toxic waste or foreign pollutant, and any agreement relating to them, are a crime against the Nation. The sanctions are defined by the law (art.29)". This constitutional text for instance, provides on its own all the legal tools to undertake actions for the protection of the coast as part of the sound environment the State is supposed to offer to any citizen.

Besides, a body of national and international laws and regulations from the years 1960 on, provide for the different aspects of legality. Their ultimate goal is a sustainable management of the coastal and marine areas. At the national level, most Ministries in charge of Environment

have a national jurisdiction for all environmental issues. Some of the international laws still need to be ratified by a many of countries. The enforcement mechanisms result from the application of the different laws. In most countries they need to be activated.

In fact, the drawbacks observed presently will remain and even worsen in the coming years if no enforcement is done. The global economy requires more and more delocalization of industries. The most polluting ones are exiled in "developing countries" where less attention is supposed to be paid to the effects of such pollution on health. It is pertinent to observe that the quality of the air in most african coastal town is deteriorating day after day. Still no perceptible result of improvement is seen: health officers keep reporting an increasing number of respiratory diseases even for new born babies. Enforcement could bring a lot of improvement; most NPAs outline its absence. The NPA of Congo raises this problem and gives its reason: « laxism of monitoring and enforcement services due in part to a lack of motivation ».

Should we add a poor training of personnel and the total absence of required equipment?

Financial Mechanisms

Financial mechanisms are under elaboration through the Ministry of Environment in each country. However, most countries stress the absence of financial resources to carry on their projects. The Congo Republic NPA states "the insufficiency of financial means to back up programmes of management of local industries". The assistance of the International Community in most cases brings a large improvement to financial constraints.

Research/Monitoring Requirements

There is a wide network for research through Academia and specialized institutes which have the mandate to carry out research in the Coastal areas. Many private institutions do the same for their interest of companies relying on coastal resources. They are linked to international research institutions based abroad. All that combined resource, cannot stop growing; it can be tapped at any time when needed. The monitoring requirements, directly linked to research and implementation, are not clearly depicted in most NPAs probably because most countries have not started implementing their projects but the fact is that different state agencies and parastatals in each country can assist in implementing them.

Contingency Planning

Finally and not the least, each NPA has resulted in a series of projects. They are all contingent upon funding and should be carried out in a very short term if the goal is the health of the coast and its protection against land-based activities. Delaying them will result in a greater damage to the coast and hence to all the revenue generating activities for local populations. This is only possible with an involvement of the States and a good political will.

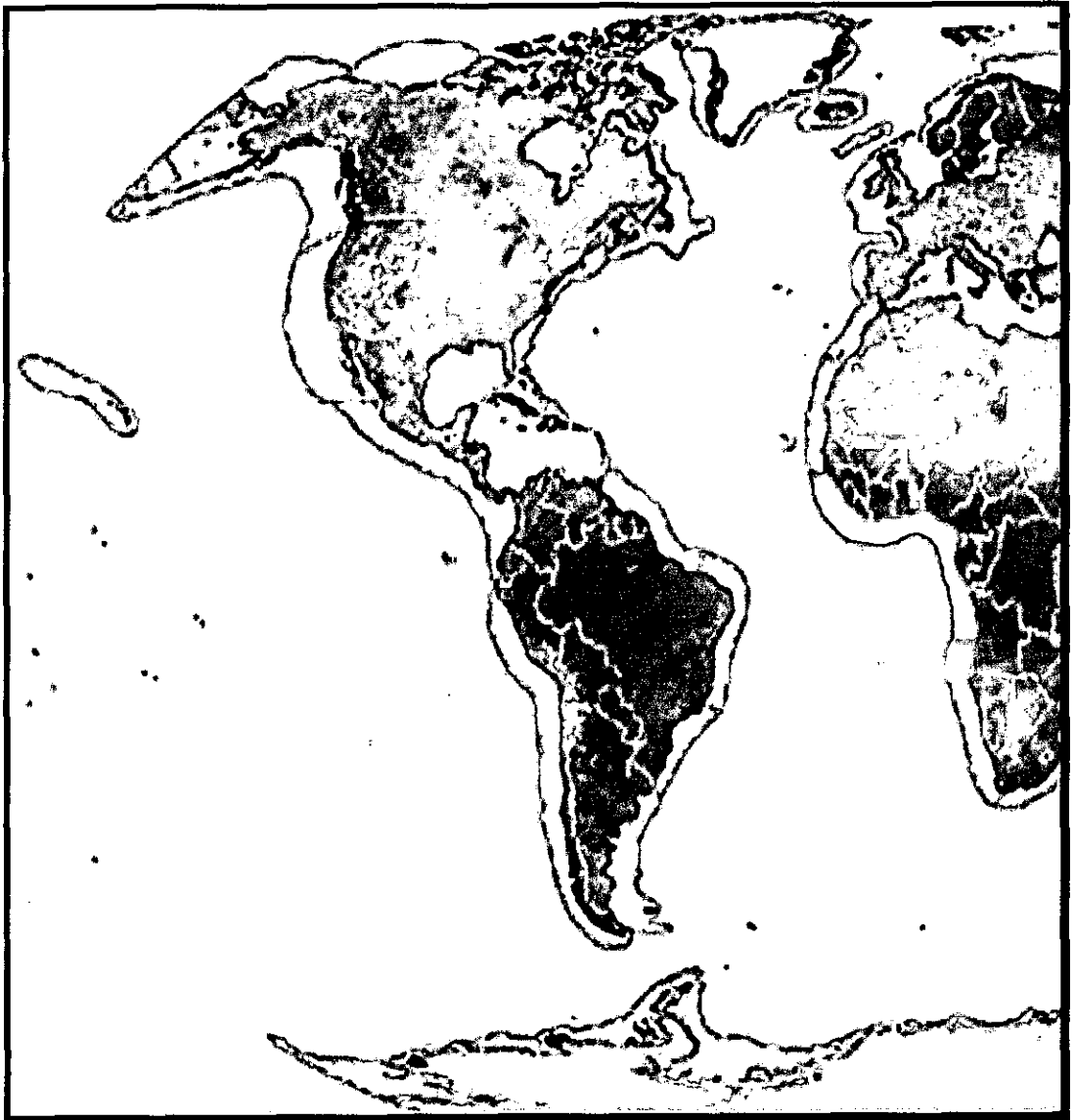


Figure 1: The GCLME in the world LMEs

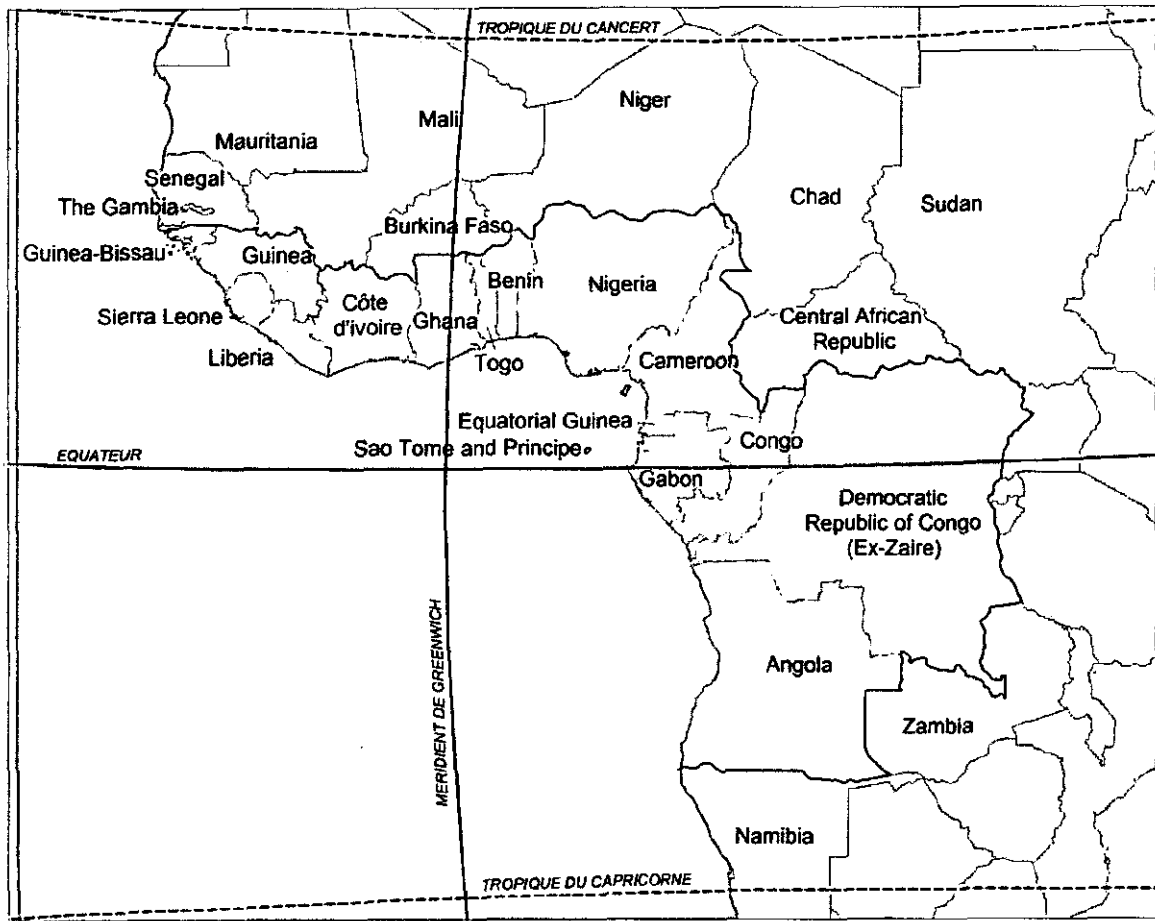


Figure 2: Location of the GCLME countries in the West and Central Africa

1. Introduction

After several decades of economic and social development that paid little or no attention to environmental protection including the conservation of the natural resource base for such development, West and Central African Nations have become conscious of the necessity of not compromising the well being of future generations of their peoples in their pursuit of economic growth. A new paradigm that considers economic and social development and environmental protection as complementary factors in their quest for sustainable development has become imperative.

For coastal nations, the sea off their coasts is a huge dynamic repository of food, energy and mineral resources. The beaches afford a vantage platform for tourism and associated leisure activities. The contiguous coastal areas contain biological diversity of global significance including some rare and threatened species. However, these environments are being degraded mostly from impacts deriving from Land Based Activities. Among the issues and problems of primary concern are the impacts of physical alterations and destruction of productive habitats, discharges of sewage, excessive nutrient loading, sediment mobilization, litter (in particular plastics), hydrocarbons, heavy metals, radioactive substances and a host of other hazards.

It is therefore not surprising that the 16 countries of West and Central Africa united under the umbrella of the Guinea Current Large Marine Ecosystem (GCLME) Project made it a common goal to make changes in the ways that human activities are conducted in the different socio-economic sectors to ensure that their shared the Guinea Current Large Marine Ecosystem and adjoining drainage basins, are saved from further deterioration and can regain their objective of sustainable development in the region.

The previous report submitted by CEDA, in fulfilment of the requirements stated in Section 2.06 (b) of Contract No 16001171) had dealt with the long-term development objectives of the project namely, (1) Recover and sustain depleted fisheries, (2) Restore degraded habitats and conserve significant biodiversity; (3) Reduce Land and ship-based pollution, and (4) Establish mechanisms for regional consultations and joint actions. It had focussed on the "Development of National Programme of Action (NPA) in Five GCLME Countries for the Protection of the Marine Environment from Land-Based Activities".

It is important to recall the conclusions of that first report as they contribute to a better understanding of the present one. This first report stresses the very high level of enthusiasm in the

different countries for the formulation of the NPAs: they have been waiting for their formulation since a long time.

Five countries (Cameroon, Congo DR, Gabon, Guinea, Sierra-Leone) involved in that Report understood that the NPA would afford a vantage platform to deal with Land Based Activities, sources of pollution in the coastal and marine environment.

That same report mentions the total implication and participation of the National Experts and GCLME Directors in each country in striving for a successful achievement of the NPAs. It also stresses, beyond the formulation and adoption of the National Programmes of Action, their implementation that will result in positive changes in the health of the coastal and marine environment. It is therefore necessary, even urgent, for the countries to embark in the shortest possible time on implementation of the provisions of the NPA. In this regard, particular attention should be paid to the execution of the pilot projects defined in the NPAs. This calls for the infusion of material and financial resources over and above those usually allocated to Environmental Protection Ministries/Agencies". This issue is still pending.

Finally, the first report suggested, that "One option for securing additional resources for NPA implementation is the organization of Donor Conferences where governments gather with their Development partners to address the issues and problems identified in the NPAs". The present report cannot but reemphasize those suggestions more than ever before.

2 – Objectives and terms of Reference

The present report, under contract N° 16001388 has a wider spectrum. It covers the 16 GCLME countries. Its purpose is “to complete the development of National Programmes of Action (NPA) and initiate their implementation in the 16 GCLME Countries. Its specified duties are clarified in Table 1.

Main duties	Expected results
1. Assist the National NPA Working Groups in Angola and Nigeria in finalizing and editing their NPAs documents for national adoption	Finalized NPA Documents submitted for National endorsement.
2. Assist the 16 Countries to set up administrative and management structures necessary to support the implementation of the NPAs. These include a) Organizational arrangements to coordinate among sectors and sectoral structures b) Legal and enforcement mechanisms c) Financial mechanisms d) Research and monitoring requirements e) Contingency planning	Report detailing Viable Administrative Management Structures set up in the 16 Countries
3. Assist the 16 Governments in taking immediate Preventive and remedial actions identified in the NPAs using existing knowledge, resources, plans and procedures	Report detailing Credible Preventive and Remedial actions instituted in the quest of resolving problems identified in the NPA.
4. Submit a Comprehensive Report to UNIDO/IGC	Comprehensive Report Submitted to UNIDO/IGCC.

Table 1: Main duties and Expected Results from the Mission



Photo 1: Characteristic waves around Libreville area (Gabon)

3 – Methodology

The methodology was to obtain, from each assisted country, after the training based on the NPA Manual, a report on the different aspects of the NPA including existing administrative and management structures to support the implementation of the NPA, legal and enforcement mechanisms, financial mechanisms, research and monitoring requirements and contingency planning.

Two workshops were organised to contribute to the finalisation of the Angolan and Nigerian NPAs. The first was organised in Luanda (Angola), from the 9th till the 21st of November 2007. This workshop allowed CEDA Team members to meet many stakeholders in the NPA program in particular the National Fishery Department in Luanda. The presence at the same time of potential financial stakeholders from abroad, made it compulsory to organise half-day workshops. The Chemical Group present in Luanda had one Workshop with Mrs Francisca Delgado, General Director of the National Institute for Fisheries. The second series of meetings was chaired by the General Director of the Ministry of Environment. It gathered 12 persons.

The first part of the workshops was devoted to finalizing the coastal profiles through the refinement of maps, tables and other analytical tools. The second half of the workshops addressed NPA issues. The completed reports, thanks to the great professionalism of the interpreter, Maria Esperança, were used as the basis for the definition of the projects extracted from the major themes.

The second workshop was organised in Otta, Ogun State (Nigeria) in the last weekdays of November. It gathered Nigerian NPA stakeholders. The quality of the participants and the nature of the papers presented turned this workshop to be quite pleasant. The mission of this NPA is essential for Nigeria as it has the largest coastal area which consists of rich and diverse ecosystems, natural resources, and large human populations. In line with the goals of Sustainable Development of Coastal Areas and the Nigerian National Environmental Protection Policy, the National Programme of Action will provide a comprehensive yet flexible framework able to preserve and protect the marine environment from sewage, physical alterations and destruction of habitat, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals and radioactive substances. . .

The format and extension of the submitted national reports vary from one country to another. It offers however a global view and shows the trends on which to build.

This present report will give the results for most of the countries of the GCLME.



Photo 2: A touristic beach at Casa del Papa in Benin Republic

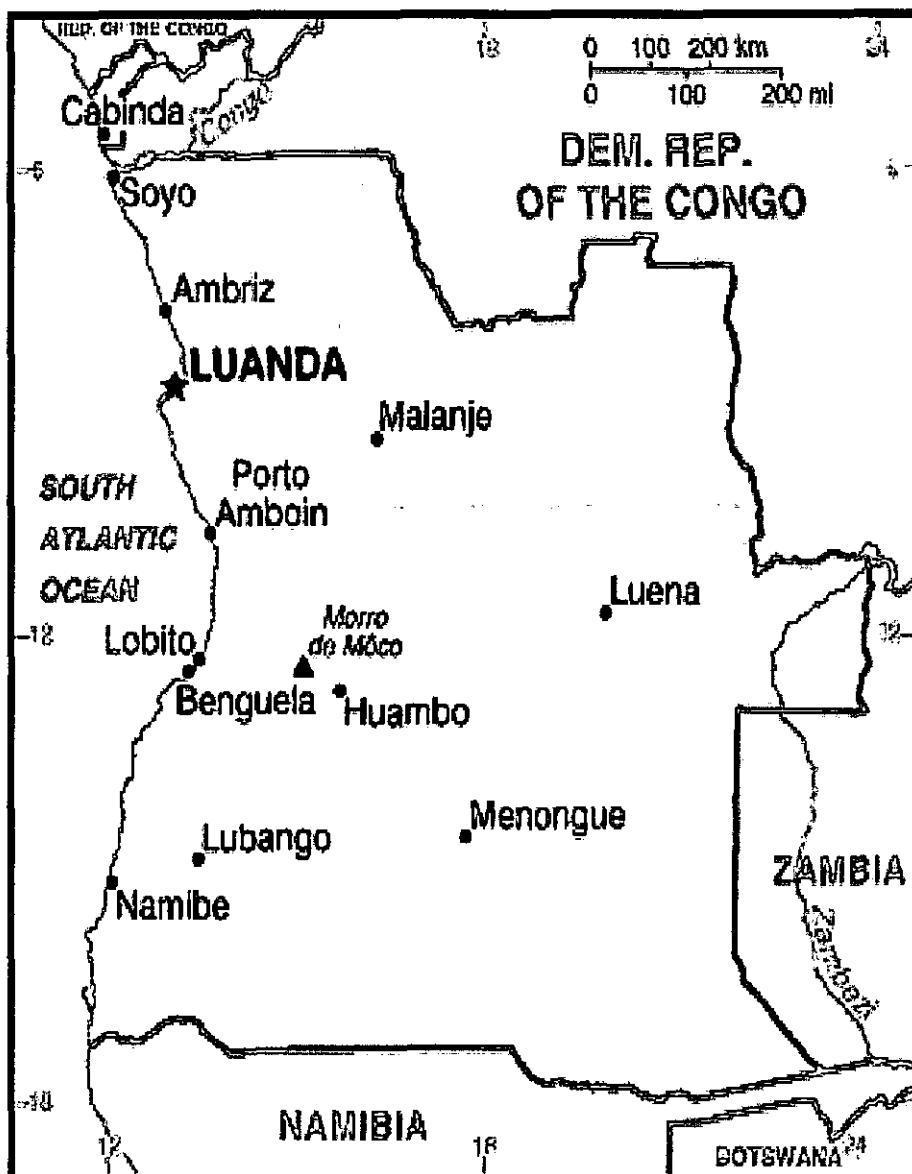
A detailed analysis of each of those reports follows highlighting the strengths and the weaknesses so that immediate complementary or corrective actions can be envisioned to push definitely to a successful launching of most of the projects identified in the NPAs.

Globally speaking, in all the countries, the institutional and legal mechanisms are in place. Most countries seem to have signed the same important treaties or conventions though they have not ratified them all. In certain countries, the GCLME project is the source of new legislation. This is the case for the Marine protected areas in Benin Republic.

4. Results by country

4.1 - Angola

Angola is located in Southern Africa, bordering the South Atlantic Ocean, between Namibia and Democratic Republic of the Congo. Its geographic coordinates are 12°30 S, 18°30 East. Its total Area is 1,246,700 sq km. Angola is roughly four times the size of Côte d'Ivoire. The border countries are : Democratic Republic of Congo 2,511 km (of which 22 5 km are the boundary of discontinuous Cabinda Province), Republic of Congo, 211 km, Namibia 1376 km, Zambia 1110 km. Angola claims a territorial sea of 12nm, a contiguous zone of 24nm and an exclusive economic zone of 200.

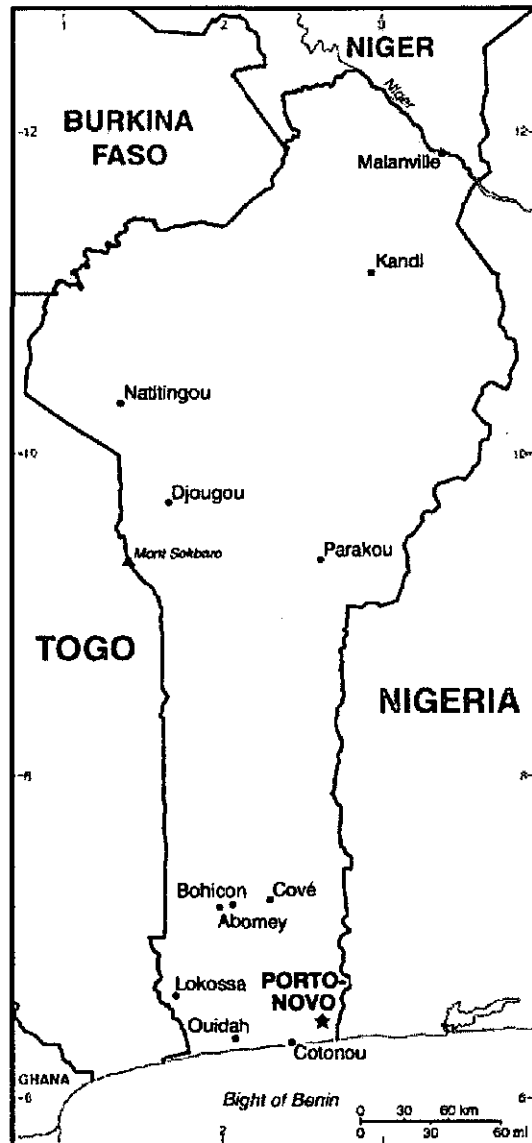


Country	Institutional/Administrative Mechanisms:	Legal/Reglementary	Financial Mechanisms	Research and Monitoring Requirement	Contingency Planning	Extra
ANGOLA	<p>The Ministry for Environment, Multi-Ministerial Commission for the Environment.</p> <p>Ministry of Environment</p> <p>Institutions involved in an integrated management of the coastal Area</p> <p>GOVERNMENT INSTITUTIONS</p> <p>The Ministry of Environment and Urbanism, Ministry of Agriculture and Rural Development, Ministry of Fisheries, Ministry of Energy and Waters, Ministry of Transport, Ministry of Petroleum</p> <p>Other institutions involved in the Integrated Coastal Zone management</p>	<p>Aspects</p> <p>Environmental Law approved by the Parliament in April 1998</p> <p><i>International Conventions on Marine and Aquatic Environment</i></p>	To be looked for	<p>University Universidade Agostinho Neto</p> <p>Okavango Ecological Research Institute (to be set up).</p>	<p>National Programme for Environment Management (PNGA) 2000 - National Oil Spill Contingency Plan (PNC). 2000 - National Programme for Environmental Education and Awareness (NPEC)</p>	<p>_____</p> <p>_____</p>

	<p>Universidade Agostinho Neto,</p> <p>Ministério da Indústria, Ministério da Defesa,</p> <p>Ministério da Hotelaria e Turismo, Ministério de Geologia e Minas, Ministério da Saúde,</p> <p>Ministério das Relações Exteriores, Ministério das Finanças,</p> <p>Ministério do Planeamento, Governos Provinciais,</p> <p>ONG's de carácter ambiental, Sector Privado,</p> <p>Outros</p>					
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4.2- Benin

Benin is located in West Africa, bordering the Gulf of Benin, between Nigeria and Togo. Its geographic coordinates are: 9°30' N, 2°15' E. Its total area is 112,620 sq km. It has 111,620 sq km land and 2,000 sq km of water. It is double the size of Togo. Its border is 1,989 km long. The border countries are: Burkina Faso on 306 km, Niger on 266 km, Nigeria on 773 km, Togo on 644 km. It has 121 km of coast line. Its maritime claims are as follows: territorial sea: 200 nm. Benin is a tropical country, hot and humid in the south while semiarid in the north.



Country	Administrative & Management Structure	Legal/Enforcement Mechanisms	Financial Mechanisms	Research/ Monitoring Requirements	Contingency Planning	Extra
Benin	<p><u>Institutional Frame & Structures</u></p> <p>Adoption of EPA in 1993, Création Beninese Environment Agency en 1995 Adoption of Agenda 21 National en 1997</p> <p>1. The National Assembly thanks to articles 28, 29 et 98 of the Constitution of 11 Décembre 1990 : has the power of orientation and definition of the general political frame and legislation as well as the control and protection of the environment and its natural resources.</p> <p>2. The Economical and Social Council , created in application of the articles 139, 140 and 141 of the constitution and the organic Law n° 92-10 of 1st July 1992, assures a political backup to the Ministry of Environment, Housing and Urbanism in its care to protect the environment</p> <p>3. Main concerned Ministeries</p> <p><u>Ministry of Environment, Housing and Urbanism (MEHU)</u></p> <p>Décret N°2003-072 : Ministry of Environnement, Housing&Urbanism</p>	<p><u>Cadre Legislatif</u></p> <p>1-Constitution</p> <p>- art 27 :l'Etat veille à la protection de l'environnement pour que toutes les personnes aient droit à un environnement sain, satisfaisant et durable, et il a le devoir de le défendre.</p> <p>- art 28 : Le stockage, la manipulation et l'évacuation des déchets toxiques ou polluants provenant des usines et autres entreprises industrielles ou artisanales installées sur le territoire national sont réglementés par la loi. Le transit, l'importation, le stockage, l'enfouissement, le développement sur le territoire national de déchets toxiques ou polluants étrangers, et tout accord y étant relatif, constituent un crime contre la Nation. Les sanctions sont définies par la loi (art. 29)ⁱ.</p> <p><u>L'Agenda 21 National:</u> adaptation nationale du programme "Action 21" qui a été adopté par la Conférence des Nations -Unies sur l'Environnement et le Développement à Rio de Janeiro en juin 1992. Adopté le 22 janvier 1997 par le gouvernement. Objectif :définir les orientations et conditions pour atteindre un développement durable. Le</p>	Through Ministry of Environment	National Committee for GCLME including Recherche from University National Institute NGOs	<p><u>PROJET 1</u> Control of Earth sources of domestic, industrial and agricultural pollution in the coastal waters of Benin Republic</p> <p><u>PROJET 2</u> Continuous control and fight against pollution by petrol carbohydrates and marine remains</p> <p><u>PROJET 3</u> Study and follow up of the environmental parameters of Benin coastal and marine waters</p>	

	<p>(MEHU) has as mission to set the politics of the benineese state in question of territory management, sanitation, environment, protection of natural resources, border delimitation, housing, urbanism, urban mobility, cartography and assure the control of its implementation.</p> <p>Technical backing up structures:</p> <ul style="list-style-type: none"> ➤ Direction of Environment (DE) ; ➤ The Benineese Agency for Environment (ABE) ; ➤ The Direction of Urbanism and Sanitation (DUA) ; ➤ The Delegation to territory Planning (DAT). ➤ The Departmental Directions of ➤ Ministry of Public Health (MSP) <p><u>Ministry of Mines, Energy et de l'Hydrolics (MMEH)</u></p> <p><u>Ministry of Interior, of Security and Décentralisation</u></p> <p><u>Ministry of Agriculture, Fishing and Cattle Raising</u></p> <p>According to Regulation N° 2001-</p>	<p>chapitre 16 de ce document traite « de la protection et valorisation de la zone côtière et de mise en valeur des ressources biologiques dans les écosystèmes marin et lagunaire du Bénin. »</p> <p>III.1.3. <u>Déclaration de Politique Nationale d'Aménagement du Territoire (DEPONAT):</u></p> <p>envisage la mise en place d'une approche intégrée de l'Aménagement du Territoire.</p> <p><u>Le Cadre Réglementaire : Les Traités et Conventions</u></p> <ul style="list-style-type: none"> ➤ La Convention d'Abidjan et le protocole y relatif signé en 1981 et ratifié le 16 octobre 1997 ➤ La Convention sur le droit de la mer : ratifiée par le Bénin en 1999 ; ➤ La Convention de Ramsar relatives aux zones d'importance internationale particulièrement comme Habitats des oiseaux. : Le Bénin est devenu partie contractante depuis le 24 janvier 2002 ➤ La convention sur la Diversité Biologique ratifiée 30 juin 1994 et le Protocole de Carthagène qui régleme les mouvements transfrontaliers des OGMs. ➤ La convention sur le commerce international des espèces de faune et de 			<p><u>PROJECT 4</u> A study on integrated management of urban used waters in particular statutes towns : Financement available</p> <p>National Budget contribution : 25000 US Dollars</p> <p><u>PROJECT 5</u> Evaluation of the demersal resources in the Benin continental Shell</p>	
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<p>364 of 18 septembre 2004, its goal is to facilitate the exploitation of natural and halieutic resources at levels compatible with the satisfaction of the needs of the country and in taking care of ecological equilibrium</p> <p>Through the following technical Directions :</p> <ul style="list-style-type: none"> ➤ Direction of Forests and natural resources ; ➤ Direction of Fishing ; ➤ Direction of Agriculture. <p><u>The Ministry of National Defense</u></p> <p>According to Regulation 2004-249 of 03 mai 2004 must</p> <p>*Look over national waters</p> <p><u>The Ministry of Higher Teaching and Scienntifical Research</u></p> <p><u>The Ministry of Culture, Craft, and Tourism</u></p> <p><u>The technical committee in charge of managing the coast</u></p> <p>Duty : conveive and implement an integrated program of management of the coastal zone</p> <p>This committee includes all the ministries interested into the management of the coast.</p> <p>Other actor: The autonomour Harbour of Cotonou; private societies; community and professional associations.</p>	<p>flore sauvages menacées d'extinction le 31 mai 1983 ;</p> <ul style="list-style-type: none"> ➤ Convention sur la désertification signée le 14 octobre 1994 puis ratifiée le 27 juin 1996. ➤ La convention sur la conservation des espèces migratrices appartenant à la faune sauvage. Le Bénin a adhéré à cette convention par le décret n°83-204 du 31 mai 1983. ➤ La Convention internationale pour la conservation des torrides de l'Atlantique a été ratifiée le 02 juillet 1968 par le Bénin. ➤ La Convention cadre des Nations Unies sur les changements climatiques. Cette convention a été adoptée le 13 décembre 1993, a été ratifié le 30 juin 1994 et le Protocole de Kyoto adopté en 1997 ➤ La convention de Londres : Le Bénin a adhéré à cette Convention le 25 février 1975 par ordonnance N° 75-13 du 25 février 1975. Cette Convention traite surtout des déchets contenant des quantités notables des matières ci-après : arsenic, plomb, zinc et leur composés. ➤ Convention relative à la protection de la couche d'ozone : Le Bénin a adhéré à la Convention de Vienne et au Protocole de Montréal et a ratifié ces deux traités en 1993. Il a eu à ratifié en 2000 l'amendement de Londres et l'amendement de Copenhague. 				
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		<ul style="list-style-type: none"> ➤ Convention sur la dégradation des Polluants Organiques persistants (POP) : Le Bénin a eu à signer cette convention en mai 2001 et à la ratifier le 05 janvier 2004 ➤ Convention de Rotterdam signée en 1998 et ratifiée le 05 janvier 2004. ➤ Convention de Bale et Bamako <p><u>Cadre législatif :</u></p> <p>Plusieurs textes législatifs et réglementaires relatifs à la protection de la zone côtière:</p> <p><u>a)textes législatifs relatifs à l'assainissement et à la protection de l'environnement en général</u></p> <p>textes réglementaires et législatifs, notamment :</p> <ul style="list-style-type: none"> ➤ Loi n°98-030 du 12 février 1999 portant loi cadre sur l'Environnement en République du Bénin. Elle définit les bases de la politique en matière d'environnement et organise sa mise en œuvre. ➤ La loi n° 87-015 du 21 septembre 1987 portant code de l'hygiène publique. ➤ La loi n° 87-016 du 21 septembre 1987 portant code de l'eau en République du Bénin. Elle a pour objectif, l'exploitation durable des ressources en eau. Elle met 				
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		<p>l'accent sur la protection qualitative et quantitative de l'eau de manière générale.</p> <ul style="list-style-type: none"> ➤ la Loi foncière ; ➤ le Code forestier ; ➤ la Loi sur la vaine pâture, la garde des animaux domestiques et la transhumance ; <p><u>2 Les décrets d'application de la loi-cadre :</u></p> <p>Du 12 février 1999, date de la promulgation de la loi-cadre à ce jour, des décrets d'application de la loi-cadre ont été pris. Il s'agit du :</p> <ul style="list-style-type: none"> ➤ décret N°2001-096 portant création, attribution, organisation et fonctionnement des cellules environnementales : ➤ décret N°2001-094 du 20 février 2001 fixant les normes de qualité de l'eau potable : ➤ décret N° 2001-109 du 4 avril 2001 fixant les normes de qualité des eaux résiduaires : ➤ décret N° 2001-110 du 04 avril 2001 fixant les normes de qualité de l'air : ➤ décret N° 2003 – 330 du 27 août 2003 portant gestion des huiles usagées : ➤ décret portant gestion des déchets 				
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		<p>solides :</p> <ul style="list-style-type: none"> ➤ décret 2001-294 du 08 août 2001 portant réglementation du bruit, ➤ décret N°2001-235 du 12 juillet 2001 portant organisation de la Procédure d'Etude d'Impact sur l'Environnement. ➤ décret N°2001-093 du 20 février 2001 portant Procédure d'audit environnemental. Mise en application : depuis 2001. ➤ décret N° 2001-190 portant organisation de la procédure de l'audience publique ➤ décret N° 2003-559 du 24 décembre 2003 créant le fonds National pour l'Environnement : instrument de gestion judicieuse des ressources mobilisées dans le cadre de la recherche de solutions aux problèmes environnementaux et l'amélioration du cadre de vie. ➤ Police Environnementale : Créée par décret N° 96-115 du 02 avril 1996 ; sous l'autorité du Ministre de l'Environnement de l'Habitat et de l'Urbanisme. ➤ objectifs : <ul style="list-style-type: none"> ✓ veiller à l'application de la législation environnementale ; ✓ rechercher, constater, et réprimer les infractions à la législation environnementale. A ce jour la Police Environnementale compte au total 23 agents dont 08 affectés à la Direction 				
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		<p>Départementale De l'Environnement, de l'Habitat et de l'Urbanisme de l'Atlantique Littoral.</p> <p>III.3.3. <u>Autres décrets relatifs à l'assainissement</u></p> <ul style="list-style-type: none"> ☛ décret n° 2000-671 du 29 décembre 2000 : réglementation de l'importation, de la commercialisation et de la distribution de matériels et biens d'équipements d'occasion. Objectif : limitation sur le territoire national de la quantité de déchets qui pourrait provenir de ces matériels et biens d'équipements d'occasion ☛ décret N° 2002-484 du 15 novembre 2002 : gestion rationnelle des déchets biomédicaux en République du Bénin. Il définit les différents types de déchets biomédicaux et traite de leur collecte, de leur stockage et de leur traitement. <p>III.3.4. <u>Les textes relatifs à la conservation de la faune et de la flore :</u></p> <ul style="list-style-type: none"> ☛ La loi n°87-014 du 21 septembre 1987 : réglementation de la protection de la nature et de l'exercice de la chasse en République Populaire du Bénin. ☛ La loi n°93-110 du 03 août 1993 : conditions de l'exercice de la chasse et du tourisme de vision en République du 				
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		<p>Bénin.</p> <p>Pour ce qui est des forêts et des végétaux :</p> <ul style="list-style-type: none"> ➤ La loi N° 93-009 du 02 juillet 1993 portant régime des forêts en République du Bénin. ➤ La loi N° 91-003 du 11 février 1991 portant réglementation phyto-sanitaire en République du Bénin. Elle traite des différents points ci- après : ➤ Arrêté N° 592/MDR/DC/CC/CP du 26 octobre 1995 relatif aux conditions générales d'emploi de certains fumigents en agriculture et dispositions particulières visant le bromure de méthyle et le phosphate d'hydrogène. ➤ Arrêté interministériel N° 0255/MDR/MF/MCT/DC/CC/CP du 19 mai 1993 : relatif à l'interdiction d'emploi en agriculture de matières actives entrant dans la composition de produits phytopharmaceutiques. ➤ Arrêté N° 188/MDR/DC/CC/CP du 22 avril 1993 relatif aux conditions de délivrance et d'emploi en agriculture de produits phytopharmaceutiques contenant certaines substances dangereuses. <p>5. <u>Textes relatifs à la Faune aquatique et à la pêche :</u></p> <ul style="list-style-type: none"> ➤ Ordonnance 73-41 du 05 mai 1973 				
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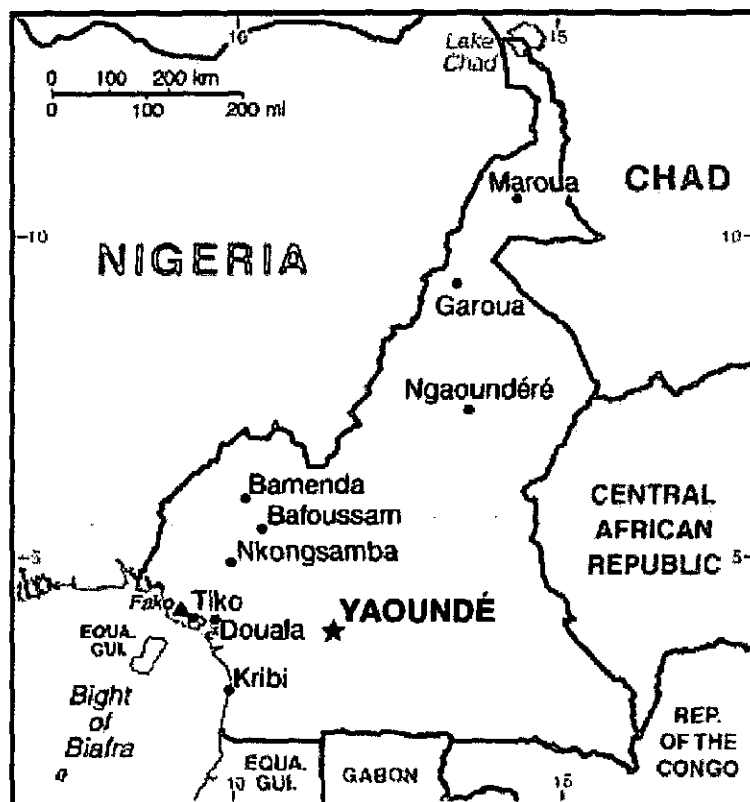
		<p>portant réglementation de la profession de mareyeur au Bénin,</p> <ul style="list-style-type: none"> ➤ décret n°204 P.C./MDRC, du 1^{er} octobre 1964 : contrôle des produits de pêche et des conditions de commercialisation de ces produits ➤ décret n°183 PR/MDRC du 25 avril 1966 portant application de l'ordonnance n°20 PR/MDRC/SP du 25 avril 1966 : réglementation de l'exercice de la pêche dans les eaux continentales du Dahomey et ➤ décret n°98-215 du 11 mai 1998 portant assurance qualité des produits de la pêche en République du Bénin. <p>Il convient de noter que le pouvoir exécutif a constamment manifesté son désir de contrôler la gestion des ressources aquatiques en prenant chaque fois que de besoin des textes réglementaires subséquents.</p> <p>On pourrait citer notamment :</p> <ul style="list-style-type: none"> ➤ Décret 2003-114 du 09 avril 2003 portant assurance qualité des produits de pêche en République du Bénin. ➤ Arrêté n°23 MDRC/SP du 08 février 1968 déterminant la taille minimum des crevettes de lagunes destinées à un traitement industriel ; ➤ Arrêté interministériel n°100 MTPT/MDRC du 31 juillet 1968 fixant les conditions de l'exercice de la pêche 				
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		<p>dans les eaux territoriales du Dahomey visant particulièrement l'application de l'ordonnance n°38 PR/MTPT du 18 juin 1968 portant code de la marine marchande de la République du Dahomey ;</p> <ul style="list-style-type: none"> ☉ Arrêté n°152 MDRC/SP du 16 septembre 1970 portant enlèvement des acadjas du lac Ahémé et des lagunes de Ouidah et de Grand-Popo. ☉ Arrêté interministériel n°5 MDRC/MEF du 16 janvier 1974, portant réglementation de la pêche et de la commercialisation des crevettes des lacs et lagunes de Dahomey ; ☉ Arrêté n°399 MDR/DC/CC/CP du 16 septembre 1966, portant définition de l'effort de pêche et les conditions de son exploitation dans les eaux maritimes béninoises, destiné à réglementer la pêche industrielle au Bénin en application de l'ordonnance n°73-40 du 05 mai 1973 portant organisation de la pêche industrielle au Dahomey ainsi que l'ordonnance 68-38 PR MTPT du 18 juin 1968, modifiée par l'ordonnance 69-49 PR/MAE du 09 décembre 1969 portant code la Marine Marchande. 				
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4.3 - Cameroon

Cameroon is in Central Africa, bordering the Bight of Biafra, between Equatorial Guinea and Nigeria. Its geographical coordinates are 6°00 N, 12°00 E. Cameroon covers a total area of 475,440 sq km of which 469,440 sq km are land while 6,000 sq km are water. Its land boundaries are 4,591 km in total. The border countries are the Central African Republic on 797 km, Chad on 1,094 km, Republic of the Congo on 523 km, Equatorial Guinea on 189 km, Gabon on 298 km, Nigeria on 1,690 km.

The coastline is 402 km and its maritime claims are a Territorial sea of 50nm. Cameroon has diverse landscapes: a coastal plain in the southwest, a dissected plateau in the Center, mountains in the West and plains in the north. The lowest point is the Atlantic Ocean at Om and the highest point is Fako on Mount Cameroon at 4,095 m.



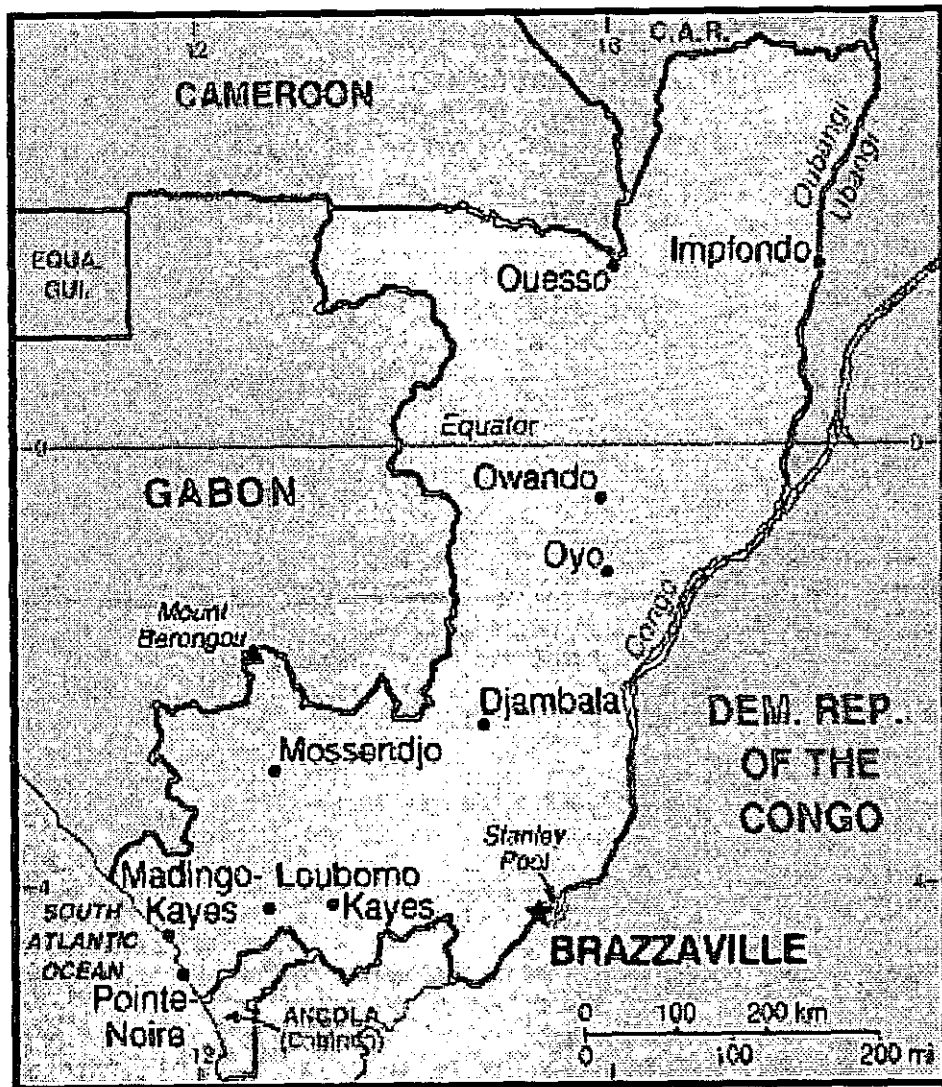
Country	Administrative Management Structures	Legal Enforcement Mechanisms	Financial Mechanisms	Research and Monitoring Requirements	Contingency planning
Cameroon	<ul style="list-style-type: none"> ▪ Ministry of the Environment and Forestry ▪ Permanent Secretariat of Environment ▪ Traditional chiefdoms ▪ Local councils ▪ National Assembly ▪ Presidency <p>Coordination organs</p> <ul style="list-style-type: none"> ▪ Interministerial Commission for the Environment (ICE) ▪ National Environment and Sustainable Development Advisory Commission (NESDAC) ▪ Permanent Secretariat for the Environment <p>Participating Ministries</p> <ul style="list-style-type: none"> ▪ Ministry of Livestock, Fisheries and Animal Husbandry ▪ Ministry of Territorial Administration ▪ Ministry of Housing and Town Planning(MINUH) ▪ Ministry of Industrial and Commercial Development (MINDIC) ▪ Ministry of Mines, Water and Energy(MINMEE) 	<p>1996: Environmental Outline Law</p> <p>The "Polluter pays" principle</p> <p>The "Principle of Responsibility"</p> <p>The "Precautionary" Principle</p> <p>The "Preventive and Corrective action" principle</p> <p>The "Subsidiary" principle</p> <p>Forestry law</p> <p>National Agricultural Policy of 1990</p> <p>International Conventions</p> <ul style="list-style-type: none"> ▪ Brussels Convention 1969: civil responsibility for damages from pollution; signed 29/11/69; ratified 14/5/84 ▪ Brussels Convention, 1969: Intervention in open seas in case of accidents causing or likely to cause pollution by hydrocarbons; signed 29/11/69; ratified 14/5/84 ▪ Montego Bay Convention, 1982: Law of the sea; signed 10/12/82; ratified 19/11/94 ▪ UNCED Rio-Convention, 1992: Biological diversity; signed 14/6/92; ratified 19/10/94 ▪ Rio Convention 1992: Climate change; signed 14/6/92; ratified 19/10/94 ▪ London Convention, 1973: Prevention of pollution from ships Marpol 	National Environmental and Sustainable Development Fund	National Committee for GCLME	<p>1-Sustainable Management of Fisheries and Coastal Fauna within the Marine and Terrestrial Ecosystems in Cameroon.</p> <p>2-Protection and Sustainable management of mangrove forests along Cameroon coast.</p> <p>3 Special industrial waste treatment hospital waste</p> <p><u>Projects</u></p> <p>1- Rational managements of agricultural chemical</p>

	<ul style="list-style-type: none"> ▪ Ministry of Agriculture (MINAGRI) ▪ Ministry of Transport(MINTRANS) ▪ Ministry of Tourism (MINTOUR) ▪ Ministry of Scientific and Technical Research (MINREST) ▪ Ministry of Public Works (MINTP) ▪ Ministry of Defence (MINEF) ▪ Ministry of External Relations (MINREX) ▪ Ministry of Economy and Finance (MINEFI) ▪ Ministry of Communication (MINCOM) ▪ Ministry of Education/Ministry of Higher Education(MINEDUC/MINE SUP) ▪ Ministry of Public Health (MINSANTE) ▪ Ministry of Social Affairs/Ministry of Women's Affairs (MINAS/MINCOF) ▪ Parastatals/Decentralised administrative services in South West, Littoral and South Provincial administrative units. 	<ul style="list-style-type: none"> ▪ 1988 Convention on the Creation of an International Compensation Fund in case of oil pollution ▪ Bale Convention, 1989: transfrontier movement and elimination of dangerous waste ▪ London Convention: Fight and Cooperation on pollution by hydrocarbons ▪ Madrid Protocol, 1991:Treaty on Antarctic relating to protection of the environment ▪ Vienna Convention, 1992: Protection of ozone layer <p>Regional/Sub regional conventions</p> <ul style="list-style-type: none"> ▪ Algiers African Convention 1968: Conservation of nature and natural resources; signed 15/9/68; ratified 29/9/78. ▪ Lome IV Convention CEE/ACP: 1989; signed 15/12/89; ratified 4/4/91 ▪ Abidjan Convention, 1981: Co-operation in the protection and improvement of marine and coastal zones of the West African region; signed 23/3/84; ratified 1/3/93 ▪ Bamako Convention, 1991: Prohibiting the importation of dangerous waste in Africa and controlling its transfrontier movements; signed 1/3/91 ▪ Abuja Convention, 1991: Instituting an African Economic Community; 			<p>products in the coastal zone</p> <p>2- Prevention of pollution by carbohydrates on Cameroun coastal area</p> <p>3- Elaboration of a monitoring programme on atmospheric pollution on Cameroun coastal area</p>
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	<p>National level – private institutions</p> <p>NGOs:</p> <p>Bioresources Development and Conservation Programme-Cameroon Environment and Resources Protection</p> <p>Living Earth</p> <p>Society for Initiatives in Rural Development and Environmental Protection (SIRDEP)</p> <p>Struggle to Economise Future Environment (SEFE)</p> <p>Network for Conservation of Wetlands(Netcowet),</p> <p>Cameroon Indigenous Voluntary Organisation for Sustainable Development (CIVOSD)</p> <p>Cooperatives and Common Initiative Groups (CIG)</p>	<p>signed 1/6/91</p> <ul style="list-style-type: none"> ▪ Dakar Convention, 1991: Co-operation of African Riverine States of the Atlantic coast; signed 11/12/92. 			
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4.4 Congo

The Republic of Congo in Central Africa, borders the Atlantic Ocean and shares borders with Cameroun, the Central African Republic in the North, Gabon on the West and the Democratic Republic of Congo on the East. Its Geographic coordinates are $1^{\circ} 00' S$, $15^{\circ} 00' E$. Its total surfade is 342,000 sq km of wich land occupies: 341,500 sq km and *Water*: 500 sq km. The Republic of Congo is slightly greater than the Guinea. The whole land boundaries are 5,504 km: Angola 201 km, Cameroun 523 km, Central African Republic 467 km, Democratic Republic of the Congo 2,410 km, Gabon 1,903 km. The Coastline is 169 km long; its Maritime claims read as follows: *Territorial sea*: 200 nm.



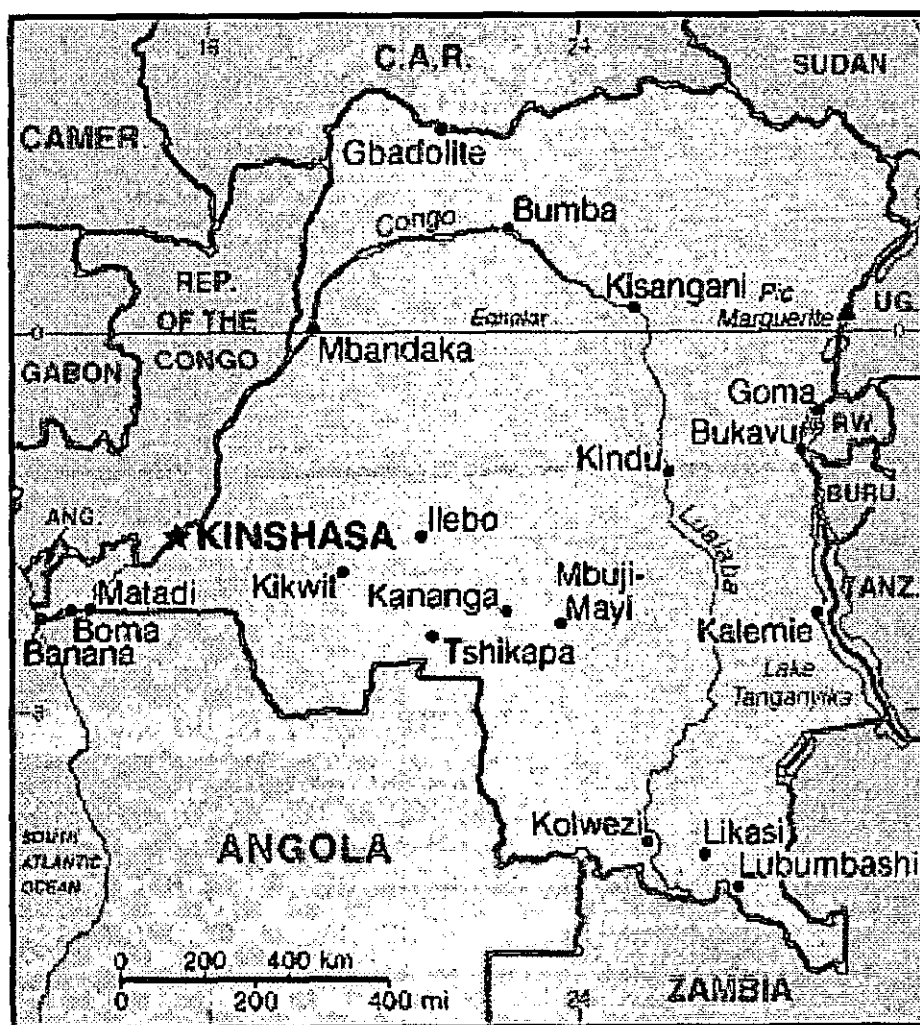
Country	Institutional & Management Mechanism	Legislative Mechanism/Enforcement	Financial Mechanisms	Research/Monitoring requirements	Emergency Planning	Extra
Congo	Ministry of Environment and Forestry Ministry of Health. Ministry of Foreign Affairs. Ministry of Energy and carbonhydrates high council of environment committee of Coastal Management	Le domaine côtier est géré selon les mesures prévues par : - L'ordonnance n° 22/70 du 14 juillet 1970 sur les mer territoriale, la pollution des eaux de mer, l'exercice de la pêche maritime et l'exploitation des produits de la mer ; - la loi n° 2/2000 du 1er février 2000 portant organisation de la pêche. - le code de la marine marchande de 1994 de la CEMA en cours de révision (prévention des différentes formes de pollution par les navires et autres engins de mer ; prévention de la pollution par les hydrocarbures ; prévention de la pollution par les substances liquides nocives, des ordures de navires, des	No specified	Délégation Générale de la Recherche Scientifique et Technologique. Université Marien Ngouabi ; Centre de Recherche Végétale (CERVE) ; Centre de Recherche et de Valorisation Zootechnique (CRVZ), Centre de Recherche Forestière du Littoral (CRFL) ;	Protomac Ecofac	

	NGOs	<p>eaux usées des navires, de l'immersions des déchets, des opérations de luttes), etc....</p> <p>- la loi n°003/91 du 23 avril 19991 sur la protection de l'environnement</p> <p>Protocoles, Accords, Mémoires et Traités internationaux portant sur la protection du milieu marin et côtier :</p> <p>- la Convention WACAF (15 décembre 1995) ;</p> <p>- la Convention RAMSAR (26 juin 1996) ;</p> <p>- la Convention sur la Biodiversité (26 juin 1996) ;</p> <p>- la Convention de Bamako (26 juin 1996) ;</p> <p>- la Convention sur les changements climatiques (26 juin 1996) ;</p> <p>- la Convention de Boon (mai, 1999) ;</p> <p>- l'Accord AEWA (janvier 1999) ;</p>		<p>Unité de Recherche et de productions des peuplements Industriels (UR2PI) ;</p> <p>IRD ex-ORSTOM</p> <p>Agri-Congo,</p> <p>Centre de Recherche Agronomique de Loudima (CRAL), etc....</p> <p>centre national de documentation et d'informations scientifiques (CNDIST).</p>		
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		<ul style="list-style-type: none"> - l'Accord de Lusaka(26juin 1996) ; - la Convention de Washington (CITES) (juillet 1982) ; - la Convention de Paris (19 juillet 1985) ; - la Convention d'Alger - la Convention OIPOL (21 juillet 1980) ; - la Convention MARPOL 73/78 (27 janvier 1983) ; <p>Par contre, le Congo est Signataire de :</p> <ul style="list-style-type: none"> - la Convention de Montego BAY (1982) ; - la Convention OPRC). 				
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4.5 Democratic Republic of Congo

The Democratic Republic of Congo is located in Central Africa, northeast of Angola. Its geographic coordinates are 0°00'N, 25°00' E. Its total area is 2,345,410 sq km. The land occupies 2,267,600 sq km and water 77,810 sq km. The Democratic Republic of Congo is three times the size of Nigeria. The total length of land boundaries is 10,730 km. The border countries are Angola 2,511 km (of which 225 is the boundary of Angola's discontinuous Cabinda Province), Burundi 233 km, Central African Republic 1,577 km, Republic of Congo 2,410 km, Rwanda 217 km, Sudan 628 km, Tanzania 459 km, Uganda 765 km, Zambia 1,930 km. The coast line is just 37 km. Its maritime claims read as follows: Territorial sea: 12 nm; Exclusive economic Zone: boundaries with neighbours



Country	<u>Administrative and Management Mechanism</u>	Legislative/Enforcement Mechanisms	Financial Mechanisms	Research/Monitoring Requirements	Emergency Planning	Extra
R.D. Congo	<p>Le Plan POLMARC relève de deux niveaux de responsabilité à savoir le niveau politique et le niveau technique. The POLMARC Plan has a political and a technical level</p> <p>Political level: Ministry of Environment and Foreign Affairs, Planification, Hydrocarbon, Industry, Economy, Transport, Health, Scientific Research, Budget, Infrastructure, Défense...</p> <p>A Consultative Permanent Council + national or foreign experts of public, private or independent organisms: propose to the Government the measures and practical solutions to face emergencies.</p> <p>A – At the technical level niveau Technique: The National Direction of the Interim Committee of the Guinea Current (Ministry of Environment) supervises and coordinates sub-commissions which are organs and</p>	<p>a) Cadre Juridique National</p> <p>L'ordonnance N°.....portant attribution des Ministères</p> <p>*La loi cadre sur l'environnement (en élaboration)</p> <p>*Arrêté portant création de la Commission Intérimaire du Courant Marin de Guinée</p> <p>*Arrêté portant création de la CNSE</p> <p>b) Sur le plan international :</p> <p>Processus de ratification en cours de diverses conventions, relatives à la préparation, à la lutte et à l'indemnisation</p>	<p>By the State (See Financial Cell)</p>	<p>Accepted Experts</p>	<p>None specified ; on going activity</p>	

	<p>technical entities of preparation of the fight against pollution ; also in charge of all the questions relating to the technical sub-regional, regional and international cooperation. The Budget: National Direction of the CICG after the evaluation of the situation by the Permanent Consultative Council.</p> <p><u>Structural Organisation</u></p> <p>includes</p> <ul style="list-style-type: none"> ▪ A) A permanent Consultative Council of fight against Pollution(C.I.LP) ▪ B) A National TEchnical Coordination of Fight ▪ The permanent Consultative Council includes: <p>A presidency (Ministry in charge of Environment) A Secrétariat (Maritime Commissariat Maritime et National Direction CICG) The representative of the technical following Ministeries : Ministry in charge of Defense Ministry in charge of Interior Ministry in charge of Economy Ministry of Finances</p>	<p>des pollutions accidentelles.</p> <p>* la Convention Internationale de 1973/1978 pour la Prévention de la Pollution par les Navires telle que modifiée, ainsi que ces annexes II, IV et V.</p> <p>* la Convention Internationale de 1992 sur la Responsabilité Civile pour les Dommages dus à la Pollution par les Hydrocarbures (CLC 1992)</p> <p>* la Convention Internationale de 1992 portant création du Fonds d'Indemnisation pour les Dommages dus à la Pollution par les Hydrocarbures (FIPOL 1992)</p> <p>* la Convention Internationale de 1990 sur la Préparation, la Lutte et la Coopération en matière de Pollution par les Hydrocarbures (OPRC 1990)</p> <p>* la Convention d'Abidjan de 1981</p>				
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	<p>Ministry in charge of Scientific Research Ministry in charge of Mines Ministry of des Hydrocarbons Ministry in charge of Industry Ministry in charge of Fishing and Agriculture Ministry in charge of Health and Social Protection Ministry in charge of Transports and Communications Ministry in charge of Telecommunications Ministry of Foreing Affairs Ministry of Budget Ministry of PLAN</p> <p>B)National Technical Coordination and the Head quarters of Commandment</p> <p>Under the National Direction of the Interim Committee of the GC (Ministry of Environment). It has a autonomous administration and a budget depending of the Government for the functioning of the coordinations of fights against pollution</p> <p>l'Etat-major de commandment The</p>	<p>relative à la coopération en matière de protection et de mise en valeur du milieu marin et des zones côtières de l'Afrique de l'Ouest et du Centre</p>				
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<p>General Headquarter of Commandment Under the Political authority of the Governor of the Province of Bas-Congo and the Administrator of the Muanda territory for administrative responsibilities.</p> <p><i>Cellule Antipollution Anti Pollution Cell,</i> <i>Has a Director who coordinates the sub-celles of fight against pollution</i></p> <p><i>The experts required in those sub-cells come from different factories and organisations.</i></p> <p>4. Sub cell of Finances</p> <p>e) Intervention Group of Hydrocarbon Industry (GIP)</p> <p>Under the supervision of a National Technical Coordinator; based in Muanda. Includes all the hydrocarbon societies residing in Democratic Republic of Congo. Its goal is to</p>					
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	<p>Mobilise all the means available belonging to hydrocarbon societies Recruit the technical expertise and take the direction of the antipollution fight according to the hydrocarbon habits</p> <p>The GIP désignates its representative who is the coordinator of the intervention.</p> <p>f) Logistical Back up Group (GAL) Includes all the maritime harbours in the maritime reach of the DRC. It must assist logistically the teams of intervention on the place where an incident takes place.</p>					
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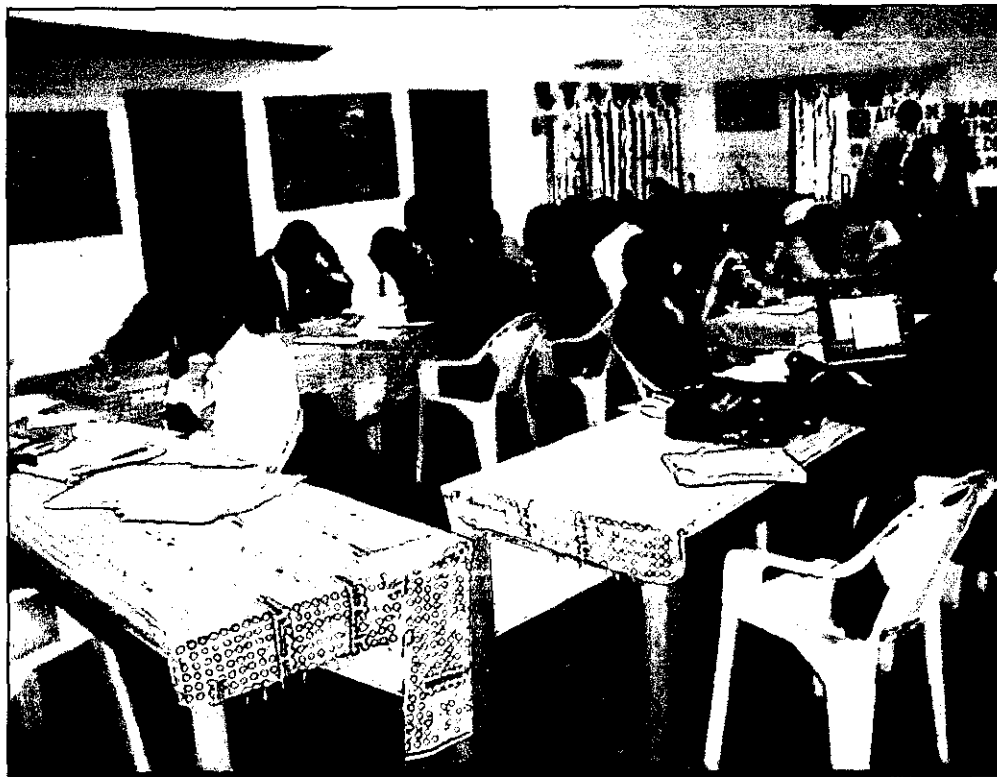
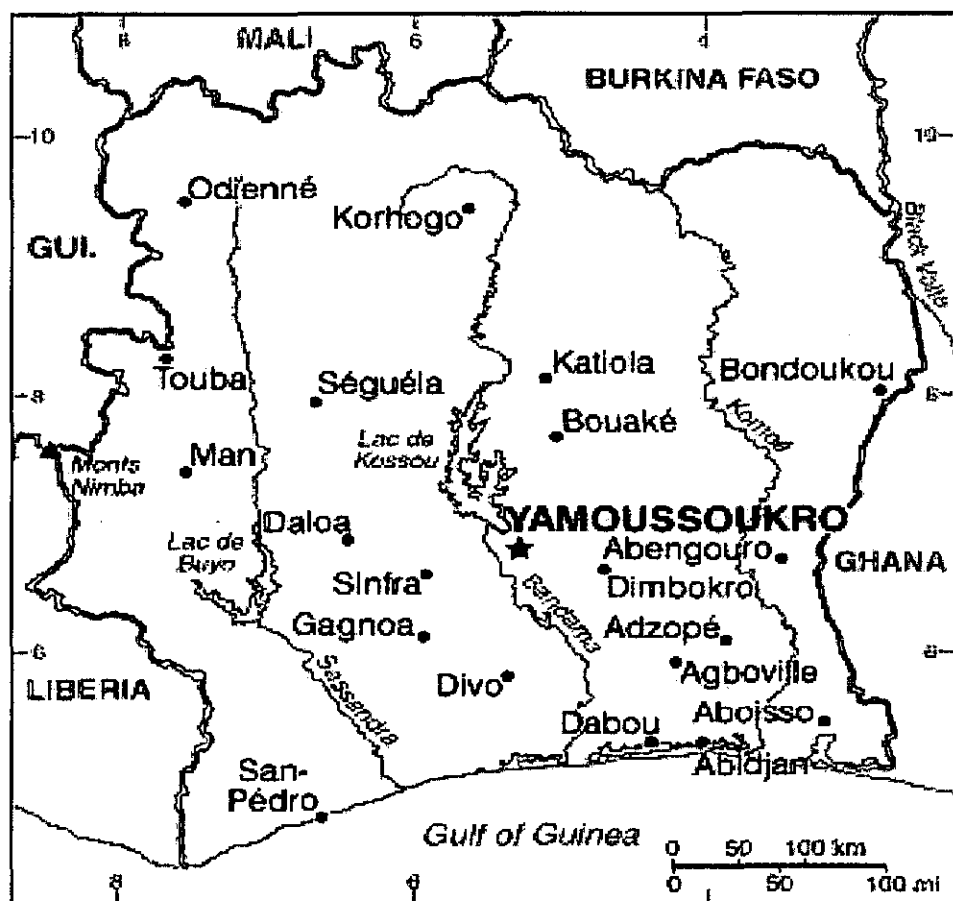


Photo 3: Working Groups during a Workshop Session in Kinshasa, DRC, August 2007

4.6 - Côte d'Ivoire

The Republic of Côte d'Ivoire is located in West Africa, bordering the North Atlantic Ocean, between Ghana and Liberia. Its geographic coordinates are 8°00 N, 5°00 West. Its total Area is 322,460 sq km of which Land is 318,000 sq km and Water: 4,460 sq km Area-co Its land boundaries are in Total: 3,110 km. The Border countries are Burkina Faso 584 km, Ghana 668 km, Guinea 610 km, Liberia 716 km, Mali 532 km. The Coastline is 515 km. Its Maritime claims are: Territorial sea: 12 nm; Exclusive economic zone: 200 nm Continental shelf: 200 nm.



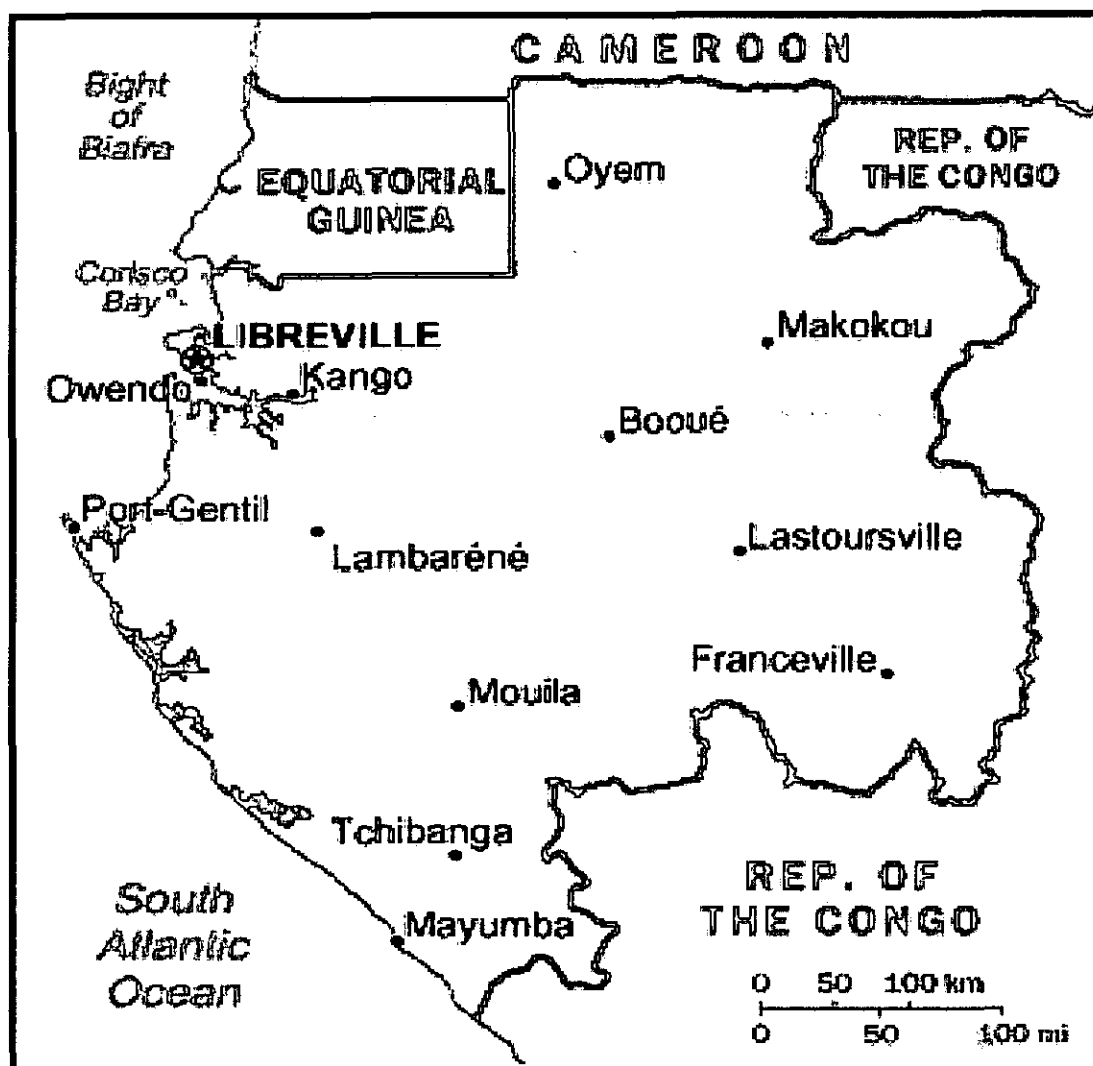
Country	Institutional and Administrative Mechanisms	Legislative and Enforcement Mechanism	Financial Mechanisms	Research Mechanisms	Emergency Planning	Extra
Côte d'Ivoire	<p>1-Ministries and Directions</p> <ul style="list-style-type: none"> ▪ Ministry of Housing, of life environment and environment (Direction of Environment; National Agency of Environment of Côte-d'Ivoire (ANDECI); Direction of building and sanitation; Ivorian Center Anti-Pollution (CIAPOL); Service of inspection of clasified installations ; ▪ Ministry of Agriculture and Animal Resosurces (MINAGRA) ▪ Ministry of Plan and Industrial (National Laboratory of trial of Meteorological quality and Pollution analysis (LANEMA) ▪ Ministry of Economical Infrastrucures (Direction of Water) ▪ Ministry of Higher Eduation, Research and Technological Innovation (Centre of Oceanologic Researchs (CRO); Institut of Forestry Research(IDESSA); Institute of Research on New Energies (IREN) ▪ Ministry of Public Healths ▪ Ministry of Forein Affairs ▪ Ministry of Interior and National Integration <p>2- Interministerial Organism of environment protection :</p> <ul style="list-style-type: none"> ▪ Protected areas on the coastal road of Grand Lahou-Sassandra Cell ; 	<p>1- Textes Réglementaires et Législatifs :</p> <p>Code de l'Environnement</p> <p>Forêt : loi du 20 Décembre 1965</p> <p>Environnement Industriel : décret du 20 Octobre 1926 et Arrêté du 28 Juin 1989</p> <p>Protection de la nature (faune et chasse) : loi du 4 Août 1965 ; arrêté n° 3 du 20 Février 1974</p> <p>Eau : décrets du 5 Mars 1921, du 25 Mai 1955 ; du 19 Mars 1921</p> <p>Loi N° 88-651 de Juillet 1988 : protection de la santé publique et de l'environnement contre les effets des déchets toxiques et nucléaires et des substances nocives ;</p> <p>Loi N° 95-553 du 18 Juillet 1996 portant code minier : comporte des dispositions pour la protection de l'environnement ;</p> <p>Loi N° 96-766 du 3 Novembre 1996 portant Code de l'Environnement</p> <p>En cours :</p> <p>Projet de Loi et décret sur les installations classées pour la protection de l'environnement ;</p> <p>Projet de Code de l'Eau</p> <p>Code de l'Environnement</p>	<p>National budget partnership would bent</p> <p>UNEP'S WACAP Programme</p>	<p>- Observatoire de la mer et du littoral (OMERLIT)</p> <p>-les programmes de recherche (CRO) intitulés respectivement « océanographie et gestion des aires côtières » et « qualité et fonctionnement écologique des écosystèmes lagunaires tropicaux » ;</p>	<p>None specified. On going activity</p>	

	<ul style="list-style-type: none"> ▪ Consultative Committee For Fishing ; ▪ National Committee of Sanitation ; ▪ National Committee of Public Sanitation ▪ Working Group on the Coastal Erosion of Port-Bouet <p>3- Non Governmental Organisations :</p> <p>Increasing in Number, increasing in efficiency</p>	<p>2 - Traités et Conventions internationales :</p> <p>Protocole relatif à la convention internationale de 1973 pour la préservation de la pollution par les navires (MARPOL, 2 Octobre 1983, ratifié le 5 Octobre 1987 ;</p> <p>Convention Internationale sur l'intervention en haute mer entraînant/pouvant entraîner une pollution par les hydrocarbures (6 mai 1985 ; ratifié le 7 avril 1988)</p> <p>Convention internationale sur la responsabilité civile pour les dommages dus à la pollution par les hydrocarbures ; ratifiée le 21 juin 1973, entrée en vigueur le 15 Juin 1975 ;</p> <p>Convention international portant création d'un fond international d'indemnisation pour les dommages dus à la pollution par les hydrocarbures, Bruxelles le 18 Décembre 1971 ; entrée en vigueur le 16 Octobre 1978 ; CI le 5 Octobre 1987</p> <p>Convention sur la préservation de la pollution des mers suite à l'immersion des déchets ; entrée en vigueur le 30 Août 1975 ; CI le 9 Octobre 1987</p> <p>Convention relative à la coopération en matière de protection et de mise en valeur du milieu marin et des zones côtières de la région de l'Afrique de l'Ouest et du Centre ; ratifiée le 23 Mars 1981 ; CI le 5 Aout 1984</p>				
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		<p>Convention Africaine sur la conservation de la nature et des ressources naturelles, Alger 1968 ; entrée en vigueur en CI le 16 Juin 1969 ;</p> <p>Convention sur le commerce international des espèces sauvages de faune et de flore menacées d'extinction, Washington 1973 ; entrée en vigueur en Cote d'Ivoire en Février 1993 ;</p> <p>Convention de Ramsar relative aux zones humides d'importance internationale ratifiée en Côte d'Ivoire en Février 1993</p> <p>Convention de Bâle sur le contrôle des mouvements transfrontaliers des déchets dangereux et de leur élimination (22 Mars 1989) ; CI le 9 Juin 1994 ;</p> <p>Convention de Rio sur la diversité biologique (Juin 1992), ratifiée par la Côte d'Ivoire le 14 Novembre 1994</p> <p>Convention de Rio sur le changement climatique (Juin 1992) ratifiée par la Côte d'Ivoire le 14 Novembre 1994.</p>				
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4.7 – Gabon

Gabon Republic is located in Central Africa, bordering the Atlantic Ocean at the Equator, between Republic of the Congo and Equatorial Guinea. Its geographical coordinates are 1°00 S, 11°45 E. The *total surface* is 267,667 sq km of which Land is 257,667 sq km while Water is 10,000 sq km. This country is twice the size of Benin Republic. The land boundaries are in *Total: 2,551 km*. The *Border countries* are Cameroon 298 km, Republic of the Congo 1,903 km, Equatorial Guinea 350 km. Gabon has 885 kms of coast line. Its maritime claims read as follows: Territorial sea: 12 nm Contiguous zone: 24 nm Exclusive economic zone: 200 nm



Country	Institutional and Management Mechanisms	Legislative and Enforcement Mechanism	Financial Mechanisms	Research and Monitoring Requirements	Contingency Planning	Extra
Gabon	Ministry of Environment, of Nature Protection and Town - General Direction of Environment and Nature Protection - General Direction of town - General Direction of Assistance to Municipalities - National Antipollution Centre - Urban Observatory - National Committee of Biosphere - National Council of Environment - National Commission for Sustainable Development - General Direction of Rivers and Forest - General Direction for Fisheries and Aquaculture - Institute of Public Hygien	26 Août 1993 : Loi n° 16/93, code de l'environnement 2005 : Décret n° 542 réglementant le déversement de certains produits dans les eaux -1/82 du 22 Juillet 1982 : orientation en matière des eaux/Forêts - 016/2001 du 31 décembre 2001 : Code forestier en République Gabonaise - 05/2000 du 12 Octobre 2000 : Code minier en République Gabonaise - 714/MSP/GSP/SGSHP : Arrêté portant fixation de contravention en matière d'hygiène publique - 405/PR/MEFEPEPEPN du 15 Mai 2002 : Décret portant réglementation des études d'impact environnementaux -820/PR/MSPP : Décret portant organisation et fonctionnement de l'Institut d'Hygiène Publique et d'Assainissement - 09/1984 du 12 Juillet 1984 : Zones				—

	<p>and Sanitation</p> <ul style="list-style-type: none"> - Ministry of Mines, Energy, Petro land Hydraulic Resources <p>Ministry of Planification and Development programming</p> <p>Private Sector, NGO and Civil Society</p>	<p>économiques exclusives de 2000 milles marin</p> <ul style="list-style-type: none"> - 013/74 du 21 janvier 1975 : Elimination des déchets et réduction des nuisances publiques - 011/2001 du 12 décembre 2001 : protection contre les rayonnements ionisants - Ord n° 2/2000 du 12.02.2000 et loi n° 4/2000 du 18/08/2000 : régime applicable aux investissements touristiques - Décret 062/1994 du 10 janvier 1994 : Régime de la pêche en R. Gabonaise - Décret 0331 : Avantages applicables aux pêcheurs traditionnels et industriels <p>Code Forestier : Loi n° 01/2000 du 31 décembre 2000</p> <p>Code minier : loi n° 5/2000 du 12 Octobre 2000</p> <p>Code des pêches : loi n° 1/82 du 22 Juillet 1982</p> <p>Conventions/accords internationaux :</p>				
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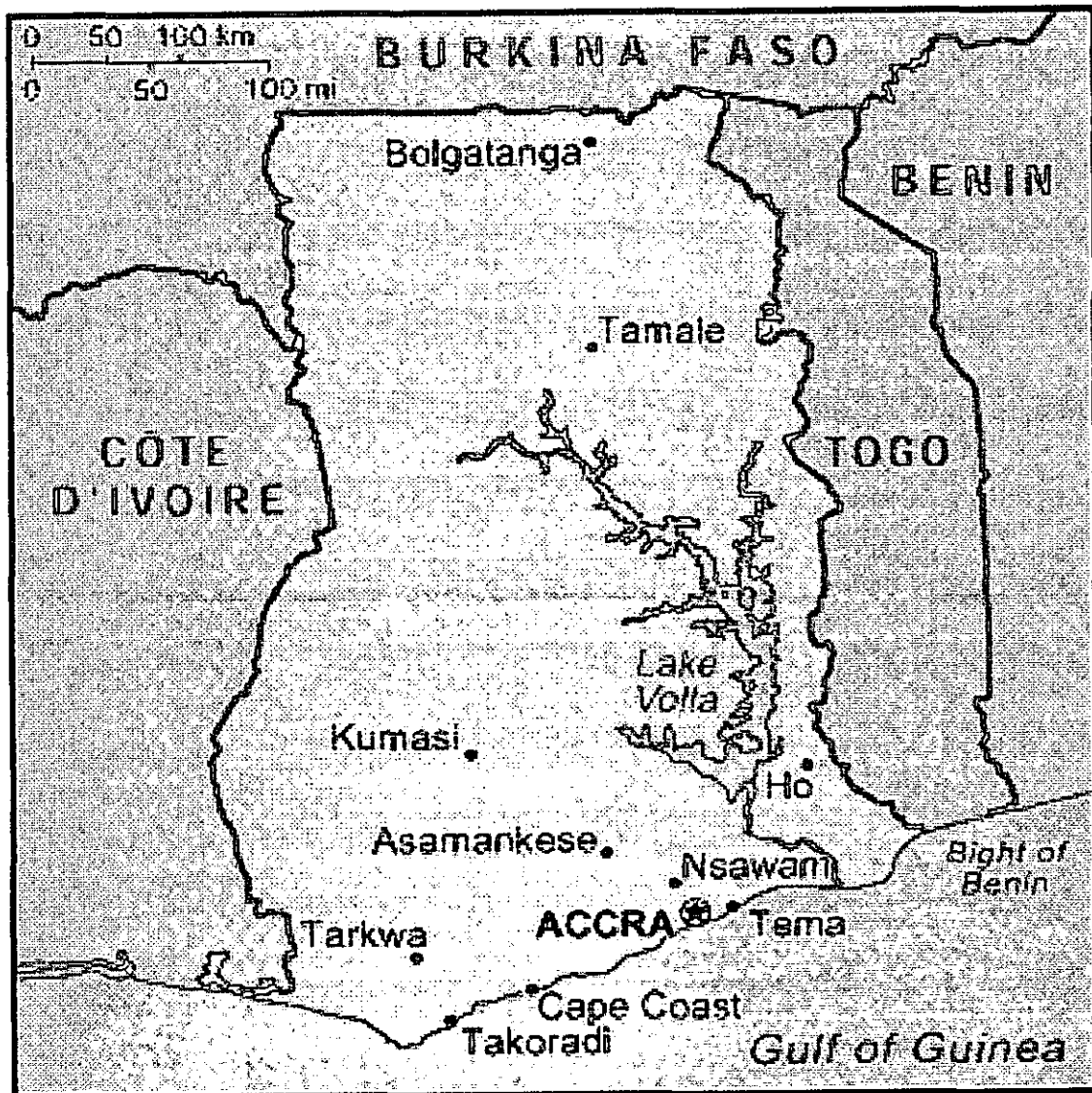
		<ul style="list-style-type: none"> - Accord cadre ONU sur l'environnement, signé à NY le 09 mai 1992, ratifiée Juin 1996 - Protocole ONU sur l'environnement, changements climatiques, signé à Kyoto le 11 décembre 1997, ratifié - Convention ONU sur l'environnement des Zones humides, signé à Ramsar le 2 février 1971, ratifié le 30 Avril 1987 - Convention ONU sur la Désertification, signée à Paris le 17 Juin 1994, ratifiée le 26 février 1998 - Convention ONU sur la diversité biologique, signée à Rio le 5 Juin 1992, ratifiée le 28 juin 1996 - Convention ONU sur le droit de la mer, signée à Montego Bay le 10 décembre 1982, ratifiée le 26 février 1998 - Convention Afrique sur l'environnement, la nature et les ressources naturelles, signée à Alger le 15 Septembre 1968, ratifiée le 29 Juillet 1987. 				
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		<ul style="list-style-type: none"> - Protocole sur la pêche et la protection des thonidés de l'Atlantique signée à Paris le 10 juillet 1984, ratifiée le 29 décembre 1989 - Accord de réciprocité sur la pêche avec le Congo signée à Libreville le 26 Juin 1971, ratifiée le 24 Septembre 1972 - Accord de réciprocité sur la pêche avec le Cameroun signé à Franceville le 9 Août 1974 ratifiée le 29 décembre 1989 - Convention sur le Développement de la pêche dans le Golfe de Guinée signée à Libreville le 21 Juin 1984, ratifiée le 29 décembre 1989 - Accord International sur les forêts et bois tropicaux, signée à Genève le 18 juin 1983, Loi 0019/87 du 29 juillet 1987 - Convention sur la Faune et la Flore sauvage signée à Washington le 3 Mars 1973, ratifiée le 29 juillet 1987 - Accord de coopération sous régionale sur la faune sauvage et la conservation signée à Libreville le 16 avril 1983 				
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		ratifiée le 30 décembre 1988 - Convention sur environnement et l'immersion des déchets signée à Londres le 13 novembre 1972, ratifiée le 02 juin 1980.				
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4.8- Ghana

The Republic of Ghana is located in West Africa, bordering the Gulf of Guinea, between Cote d'Ivoire and Togo. Its Geographic coordinates are 8 00 N, 2 00 W. Its total Area is: 239,460 sq km including 230,940 sq km of land and: 8,520 sq km of water. The country is slightly smaller than Ivory Coast. Gabon has a total of 2,094 km in border; Border countries are Burkina Faso 549 km, Cote d'Ivoire 668 km, Togo 877 km; The Coastline is 539 km long. Its maritime claims read as follows: Territorial sea: 12 nm; Contiguous zone: 24nm; Exclusive economic zone: 200 nm; Continental shelf: 20nm. The land scape is mostly low plains with dissected plateau in south-central area. Elevation extremes offer a Lowest point, the Atlantic Ocean 0 m ; Highest point remains Mount Afadjato 880 m.



Country	Institution/Administrative Mechanism	Legislative/Enforcement Mechanisms	Financial Mechanisms	Research and Monitoring Requirements	Contingency Planning
Ghana	<p>Ministry of Environment Science and Technology Ministry of Tourism and the Modernisation of the Capital City Ministry of Local Government and Rural Development Ministry of Ports and Harbours Ministry of Food and Agriculture Ministry of Health Ministry of Education, Youth and Sports Ghana Tourist Board Heads of District District Environmental Management Committees The Environmental Protection Agency</p> <p>Community environmental committees District Assemblies Traditional Chieftaincies</p> <p>Fisheries: Fisheries Commission Ministry of Trades, Industries and PSI -Fisheries Department -Navy</p> <p>Oil spill and marine pollution: Ministry of Mines and Energy Oil Companies EPA Ghana Navy</p>	<p>LEGAL FRAMEWORK</p> <p>1992 Constitution</p> <p>EPA ACT, 1994 (Act 490)</p> <p>Environmental Assessment Regulations, 1999</p> <p>Local Government Act, 1993</p> <p>Environmental Standards and Guidelines</p> <p>Structure in charge:</p> <p>Ministry of Justice and Parliament Attorney General's Department EPA Several pieces of legislation protecting areas : Severe erosion, Combating marine pollution Protection of wetland ecosystems Management of Fisheries resources for sustainable yield</p>	<p>National Budget</p> <p>Through Partnership : World Bank Sponsored Fisheries Sub Sector capacity Building Project</p> <p>UNEP's WACAF Programmes</p> <p>UNOPs sponsored Environmental Sensitivity Map for Coastal Areas</p> <p>UNEPs Wacaf Programmes</p>	<p>Geological Survey Department</p> <p>AESL Hydro Division</p> <p>Water Research Institute</p> <p>Survey Department</p> <p>CSIR</p>	<p>Oil spill contingency plan</p> <p>Coastal Zone Management Indicative Plan, 1990</p> <p>National Environmental Action Plan, 1994</p> <p>Draft Integrated Coastal Zone Plan, 1998</p> <p>Coastal Zone Profile of Ghana, 1998</p> <p>National Oil Spill Contingency Plan with</p>

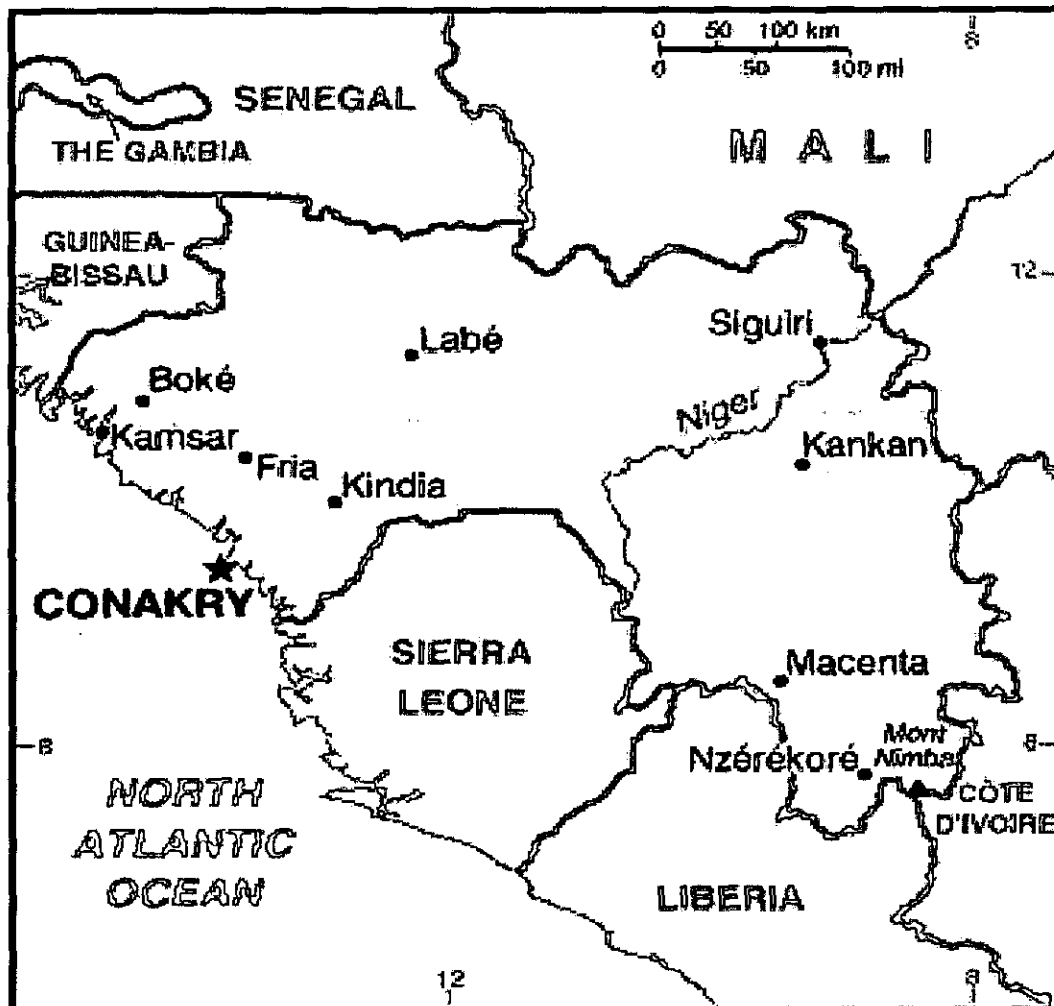
	<p>Ghana Ports & Harbours Authority GNC Ghana National Petroleum Corporation</p> <p>Protection of coastal wetlands Ghana Wildlife Department Forestry Department Fisheries Department Water Research Institute Water Research Institute Universities AESL-Hydro Division</p>	<p>Enforcement: EPA, Attorney General's Department Ghana Police Service Ghana Navy</p> <p>Environmental Related Conventions</p> <p>International Convention for the Prevention of Pollution of the Sea by oil, 21 October 1962 Treaty Banning Nuclear Weapon Tts in the Atmosphere, in Outer Space and under Water: 5th August 1963</p> <p>International Convention for the Conservation of Atlantic Tunas: 4th May 1966</p> <p>International Convention on Civil Liability for Oil Pollution Damage: 29 November 1969</p> <p>International Convention Relating to Intervention on the High Seas in cases of Oil pollution casualties</p> <p>Convention on Wetlands of International Importance, especially as Waterfront Habitats: 2 February 1971</p> <p>Treaty and Prohibition of the</p>	<p>Darwin Marine Biodiversity of West Africa Project by DFID implemented by the University of Ghana</p>		<p>Specific Reference to the marine environment 2002</p> <p>Environmental sensitivity map of coastal areas of Ghana, 1999 & 2004</p> <p>Activities:</p> <p>Ecological Baseline studies of Korle Lagoon (1990-2000)</p> <p>Lowr Volta Mangrove Project (1996-1998)</p> <p>Save the Seashore Birds Project (1985-1995)</p> <p>Coastal Area</p>
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		<p>Emplacement of Nuclear Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof: 11 January 1971</p> <p>Convention for the Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1981 (Abidjan Convention)</p> <p>United Nation Convention on the Law of the Sea: 10 December 982</p> <p>Montreal Protocol on Substance that Deplete the Ozone Layer: 24 July 1989</p> <p>Framework Convention on Climate Change: June 1992</p> <p>Convention on Biological Diversity, 1992.</p> <p>REGULATIONS</p> <p>Beaches Obstruction Ordinance, 1987</p> <p>Rivers Ordinance, 1903</p> <p>Maritime Zones Delimitation Law, 1986 (PNDCL 159) urban planning and development</p>			<p>Mmanagement Plan for Princess Town (1998-2000)</p> <p>On Going Projects</p> <p>Combatting Living Resource Depletion and Coastal Area Degradation in the GCLME through Ecosystem-based regional actions</p> <p>Amansuri Conservation and Integrated Development Project</p> <p>Danida Water</p>
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		<p>Town and Country Planning Ordinance (Cap 84)</p> <p>Fisheries (Amended) Regulations, 1977 and 1984</p> <p>POLICIES :</p> <p>National Environment Policy National Wetlands Policy Agricultural Policy Tourism Development Policy Land Management Policy National Health Policy Mineral Policy Wild Life Conservation Policy</p>			<p>and Sanitation Setor Programme II</p> <p>Reduction of Environmental Impact from Coastal tourism</p>
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4.9 - Guinea

The Republic of Guinea is located in West Africa, bordering the North Atlantic Ocean, between Guinea-Bissau and Sierra Leone. Its Geographic Coordinates are $11^{\circ} 00' N$, $10^{\circ} 00' W$; its covers 245,857 sq km including 245,857 sq km of land and 0 sq km of water. The Republic of Guinea is five times the size of Togo Republic. It has 3,399 km of border. The border countries are Cote d'Ivoire 610 km, Guinea-Bissau 386 km, Liberia 563 km, Mali 858 km, Senegal 330 km, Sierra Leone 652 km. The Coastline is 320 km long. Its maritime claims read as follows: territorial sea: 12 nm; exclusive economic zone: 200 nm. The climate is generally hot and humid; it has a monsoonal-type rainy season (June to November) with southwesterly winds and a dry season (December to May) with northeasterly harmattan winds.



Country	Institutional and Administrative Mechanisms	Legislation/Enforcement Mechanisms	Financial Mechanism	Research/Monitoring Requirements	Contingency Planning	Extra
Guinea Conakry	<p>Centre for the Environmental Protection of the marine milieu and the coastal zone (CPEMZC).</p> <ul style="list-style-type: none"> - National Direction of Forests and Rivers (DNEF). - National Direction of maritime Fishing (DNPM) - National Direction for the Protection of Nature (DNPN) - National Direction of Agriculture (DNA) - National Direction of Tourism (DNT) - National Direction of territory management (DNAT) - National Direction of Selling Marine Marchande (DNMM) - National Center of Management of the Protected Areas (CNAGAP) - National Center of Boussoura Halieutic 	<ul style="list-style-type: none"> - l'Ordonnance O/92/019/PRG/SGG/92 du 30 mars 1992 portant Code foncier domanial et de la politique foncière ; - l'Ordonnance N° 045/PRG/87 du 28 mai 1987 portant Code de la protection et la mise en valeur de l'Environnement ; - la Loi L/95/23/CTRN du 12 juin 1995 portant Code de la marine Marchande ; - la Loi L/94/005/CTRN du 14 février 1994 portant Code de l'eau ; - la Loi L/95/036/CTRN du 30 juin 1995 portant Code minier ; - la Loi L/95/13/CTRN du 15 mai 1995 portant Code de la pêche maritime ; - le Décret N° 199/PRG/SGG/89 du 8 novembre 1989 Codifiant les études d'impact sur l'environnement ; - le Décret N° 200/PRG/SGG/89 du 8 novembre 1989 Portant régime juridique des installations classées pour la protection de l'environnement ; - le Décret N° 201/PRG/SGG/89 du 8 novembre 1989 portant Préservation du milieu marin contre toutes formes de pollution. <p><u>Cadre législatif international</u></p>	<p>Through the NPE at the National level</p> <p>To be found out at the International level</p>	<ul style="list-style-type: none"> - Scientifical Research Center of Conakry Rogbanè (CERESCOR) 	<p><i>Projet 1:</i> National strategy in communication, éducation and sensitisation of the public For the management of marin and coastalresources</p> <p><i>Projet 2:</i> Integrated management of the guinean coastal zone</p> <p><i>Projet 3:</i> Sustainable Management of the resources of the estuary of the Mellakoré by the creation of a marine</p>	

	<p>Sciences (CNSHB);</p> <p>- Scientific Research Center of Conakry Rogbanè (CERESCOR)</p>	<p>- la Convention des Nations Unies sur le droit de la mer, adoptée à Montego Baye le 10 décembre 1982 et ratifiée par la Guinée le 10 décembre 1982(Ministère Chargé des Transports Maritimes;)</p> <p>- la Convention relative à la Coopération en matière de Protection et de Mise en valeur du Milieu marin et des zones Côtières de la Région de l'Afrique de l'Ouest et du centre, adoptée a Abidjan (Côte d'Ivoire) le 23 mars 1981 et ratifiée par la Guinée le 23 mars 1981(mise en œuvre : Ministère de l'Environnement) ;</p> <p>- le Protocole relatif à la Coopération en matière de lutte contre les pollutions de la mer en cas de situation critique du Milieu marin et des zones Côtières de la Région de l'Afrique de l'Ouest et du centre, adoptée a Abidjan (Cote d'Ivoire) le 23 mars 1981 et ratifiée par la Guinée le 23 mars 1981(mise en œuvre : Ministère de l'Environnement) ;</p> <p>- la Convention internationale de Bruxelles de 1969 sur l'intervention en haute mer en cas d'accident entraînant ou pouvant entraîner une pollution par les hydrocarbures (mise en œuvre : Ministère Chargé des Transports Maritimes) ;</p> <p>- le Protocole relatif à la convention internationale de 1973 pour la préservation</p>			<p>transbourder Park</p> <p><i>Projet 4:</i> Collect and treatment of waste in Dubreka</p> <p><i>Projet 5:</i> Improvement of Waste managements in Conakry town</p> <p><i>Projet 6:</i> Recycling of residual waters in Conakry</p> <p><i>Projet 7:</i> Human and institutional capacity reinforcement for the conservation of the biological diversity and the</p>	
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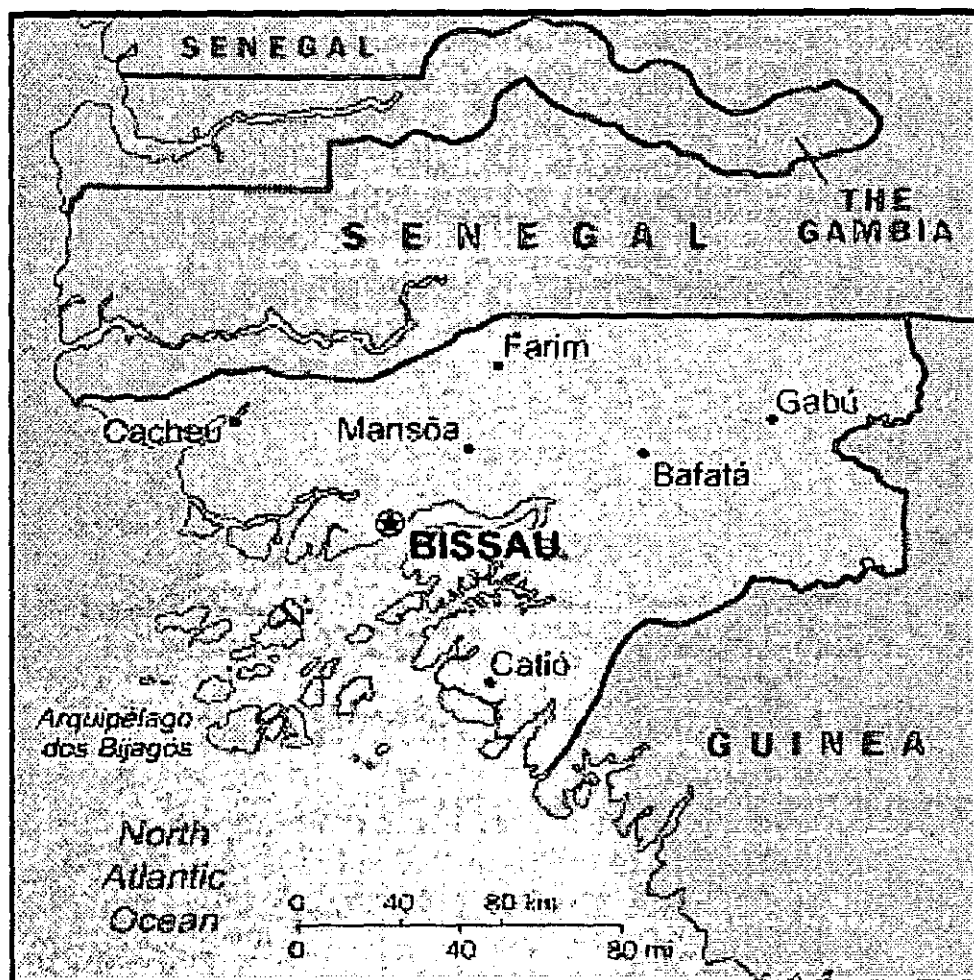
		<p>de la pollution par les navires (MARPOL). (mise en œuvre : Ministère Chargé des Transports Maritimes ;</p> <ul style="list-style-type: none"> - le Protocole de 1978 modifiant la convention internationale de 1973 pour la préservation de la pollution par les navires (MARPOL – 73/78) Annexe 1, 2, 3. Sa mise en œuvre en Guinée est assurée par le Ministère Chargé des Transports Maritimes); - le Protocole de 1992 modifiant la convention internationale de Bruxelles de 1969 sur la responsabilité civile pour les dommages dus à la pollution par les hydrocarbures (CLC), la Guinée a ratifiée le 29 août 2002.(mise en œuvre : Ministère de l'Environnement) ; - la Convention sur le mouvement transfrontière des déchets dangereux et de leur élimination (Bâle, 22 mars 1989). mise en œuvre : Ministère de l'Environnement ; - la Convention sur la Diversité Biologique, adoptée en juin 1992 à Rio de Janeiro (Brésil) et ratifiée par la Guinée le 7 mai 1993 (mise en œuvre Ministère de l'Environnement) ; - la Convention Cadre des Nations Unies sur les Changements Climatiques adoptée 			<p>sustainable use of marin and coastal resources.</p>	
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		<p>a Rio de Janeiro (Brésil) en juin 1992 et ratifiée par la Guinée le 7 mars 1994. (mise en œuvre : Ministère de l'Environnement);</p> <p>- la Convention relative aux Zones Humides adoptée à Ramsar (IRAN) en 1971 et amendée par le Protocole de Paris le 3 décembre 1982. La Guinée en est membre depuis le 24 septembre 1992 (mise en œuvre Ministère de l'Environnement);</p> <p>- la Convention sur la Préparation, la Lutte et la Coopération en matière de pollution par les hydrocarbures - OPRC adoptée en 1990 à Londres (Angleterre) et ratifiée par la Guinée le 29 août 2002 (mise en œuvre : Ministère de l'Environnement) ;</p> <p>- la Convention de 1992 sur le Fonds International d'Indemnisation pour les Dommages dus a la Pollution par les Hydrocarbures – FIPOL adoptée a Londres (Angleterre), ratifiée par la Guinée le 29 août 2002 (mise en œuvre : Ministère de l'Environnement) ;</p> <p>- la Convention de 1992 portant création d'un Fonds international d'indemnisation pour les dommages dus à la pollution par les hydrocarbures – FIPOL, ratifiée le 29 août 2002 (mise en œuvre Ministère de l'Environnement)</p>				
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		<p>Au niveau international l'on relève que la Côte d'ivoire participe étroitement aux initiatives continentales et sous-régionales conduites pour faire face aux problèmes générés par l'utilisation peu rationnelle de cet espace. Parmi les initiatives sous-régionales, il convient de citer ;</p> <ul style="list-style-type: none"> - la convention d'Abidjan qui dispose d'un plan d'actions pour la protection et la mise en valeur du milieu marin et des zones côtières de la région de l'Afrique de l'Ouest et du Centre ; - le processus africain pour le développement et la protection de l'environnement marin et côtier ; - le projet régional Grand Ecosystème Marin du Golfe de Guinée, devenu courant de guinée. <p>Au niveau international</p> <ul style="list-style-type: none"> - la convention d'Abidjan qui dispose d'un plan d'actions pour la protection et la mise en valeur du milieu marin et des zones côtières de la région de l'Afrique de l'Ouest et du Centre ; - le processus africain pour le développement et la protection de l'environnement marin et côtier ; 	<p>Not specified ; to be built in</p>	<p>Observatoire de la mer et du littoral (OMERLIT)</p> <p>les programmes de recherche (CRO) intitulés respectivement « océanographie et gestion des aires côtières » et « qualité et fonctionnement écologique des écosystèmes lagunaires tropicaux » ;</p>	<p>To be built in</p>	<p>_____</p> <p>_____</p> <p>_____</p>
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4.10 – Guinea Bissau

The Republic of Guinea Bissau is located in West Africa, bordering the North Atlantic Ocean, between Guinea and Senegal. Its geographic coordinates are 12° 00 N, 15° 00 W. Its total surface is 36,120 sq km including 28,000 sq km of land and 8,120 sq km of water. It is a country half the size of Republic of Togo. Its boundaries are 724 km in total. Its *Border countries* are Guinea 386 km, Senegal 338 km; Coastline: 350 km. It claims a *Territorial sea* of 12 nm and an *Exclusive economic zone* at 200 nm



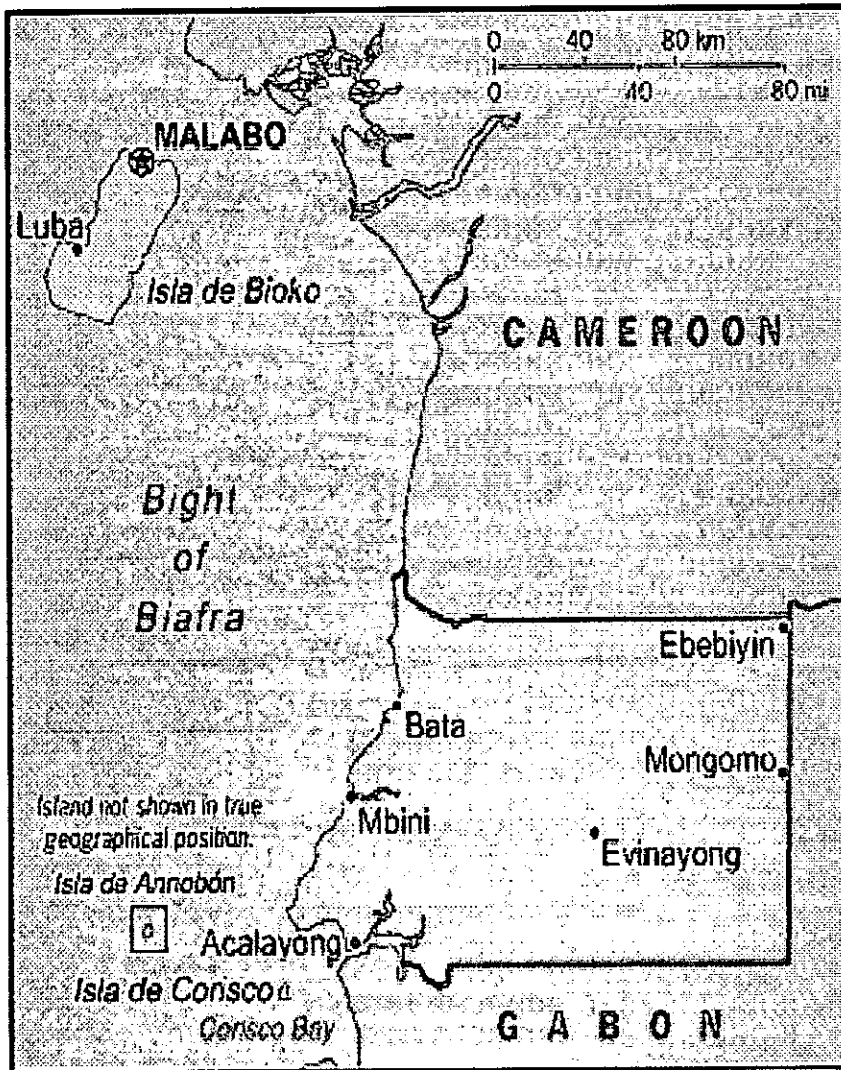
Country	Administrative Mechanisms	Legislative/Enforcement Mechanisms	Financial Mechanisms	Research and Monitoring Requirements	Contingency Planning	Extra
Guinea Bissau	<p>National Council of Environment</p> <p>Governmental Department in charge of the politics of environment</p> <p>Ministry of Rural Development, Environment and Craft</p> <p>State Secretariate for Energy, Natural resources and Environment</p> <p>General Direction of Natural Resources and Environment</p> <p>Cabinet of Coastal Planification</p> <p>National Institute of Technological Applied Research</p> <p>Center of Applied Investigation in Fishing</p> <p>Institute of Biodiversity and Protected Areas</p> <p>Cell of evaluation of Environment impact</p>	<p>Constitution: articles 9&10, consecrate the principle of monopole of the state on soil, subsoil, waters and plants, and has total autonomy on their management</p> <p>General laws on Fishing: Law n° 4, 2 August 94, B0 n° 31, defining technical means of fiscalisation, management and conservation of halieutic resources.</p> <p>Director plan of tourism, Decree N° 28, 8 August 1994; on forms of harmonization between touristic investments and the conservation of environment.</p> <p>Law Frame of the protected areas</p> <p>Law on the land, Law n° 5, 28 April 1998, B0 n° 17</p> <p>Convention on the protection and tilisation of transborder</p>		<p>National Institute of Technological Applied Research</p> <p>Center of Applied Investigation in Fishing</p> <p>Institute of Biodiversity and Protected Areas</p> <p>Cell of evaluation of Environment impact</p>	<p>1 -Project of fight against the pollution of the coastal and maritime zone</p> <p>2 - Elaborition of levels at national regional, sectorial plans of organization of the territory</p> <p>3 - Project of study of the ichtiology of the maritime fauna of the coastal zone of Guinea Bissau</p> <p>4 - Recuperation and improvement of degradated lands</p>	

		<p>rivers and international lakes</p> <p>Convention on the protection of the ozone layer</p> <p>Convention on the long distance atmospheric pollution (Quioto Protocol)</p> <p>Convention on humid zones of international importance, especially as habitat for aquatic birds</p> <p>Convention on the international trading of species of fauna and flora threatened of extinction (RAMSAR)</p> <p>Convention of Rotterdam</p> <p>Convention of creation of UICN</p> <p>Convention on quick notification in case of nuclear accident</p> <p>Convention on access to information, participation to the process of decision taking</p>				
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		<p>and of access to justice in environment matter</p> <p>Conventions on the effects of transborders industrial accidents</p> <p>Convention on the protection of world heritage, cultural and natural</p> <p>Convention on the protection of subaquatic cultural heritage.</p> <p>International convention for the protection of cultural immaterial heritage.</p>				
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4.11 – Guinea Equatorial

Equatorial Guinea is located in Western Africa, bordering the Bight of Biafra, between Cameroon and Gabon, and its geographic coordinates are 2° 00' N, 10° 00' E. Spread on 28,051 sq km, the Equatorial Guinea has a total of 539 km as terrestrial border with Cameroon (189 km) and Gabon (350 km), with a coastline of 296 km. The measured from claimed archipelagic are 12 nm for the territorial sea, and 200 nm for the exclusive economic zone. In a tropical climate, always hot and humid, the Equatorial Guinea spread on this original terrain where coastal plains rise to interior hills, with volcanic islands.



Country	Administrative Mechanisms	Legislative/Enforcement Mechanisms	Financial Mechanisms	Research/Monitoring Requirements	Contingency Planning	Extra
Guinea Equatoriale	<p>Ministry of Fishing and Environment (MPMA)</p> <p>Ministry of Agriculture and Forests</p> <p>Ministry of Health and Social Well Being</p> <p>Ministry of Mines and Energy</p> <p>Ministry of Interior and Local Associations</p> <p>Ministry of Housing and Urbanism</p> <p>Ministry of Industries and Trade</p> <p>Ministry of Education and Science</p> <p>Ministry of Information, Tourism and Culture</p> <p>Ministry of External Relations, Cooperation and Francophonie</p> <p>NGOs: Amigos de la</p>	<p>Law No 7, 27 November 2003 on Environment</p> <p>Law No 8/1988 December 31 regulating wild fauna and protected zones;</p> <p>Law No 2/1996 January modifying the articles 108; 109 of law No 8/ 30 April 1992 relative to the salary system of of civil servants</p> <p>Law No 1, 18 February 1997 relative to the exploitation of forests</p> <p>Law No 1, of 22 May/2000 relative to the revision of taxes of forest exploitation Guinea Equatoriale Republic</p> <p>Law No 4, 22 May /2000 on the creation of protected Areas in Guinea Equatoriale;</p> <p>Decree Laws No 6 of August 22/1990 creating the</p>	<p>National budget and support from international donors'</p>	<p>Experts for university and Ministry of fishing and environment</p>	<p>Projects :</p> <p>1- Realisation of a study on Fauna and Flora in the 2 protected areas of the Island de Bioko allowing the elaboration of a management Plan: \$ US:50.000</p> <p>2- Elaboration of a National catalogue on the species of protected Flora and Fauna: US \$ 65 000</p> <p>3- Fight against the deterioration and the contamination</p>	

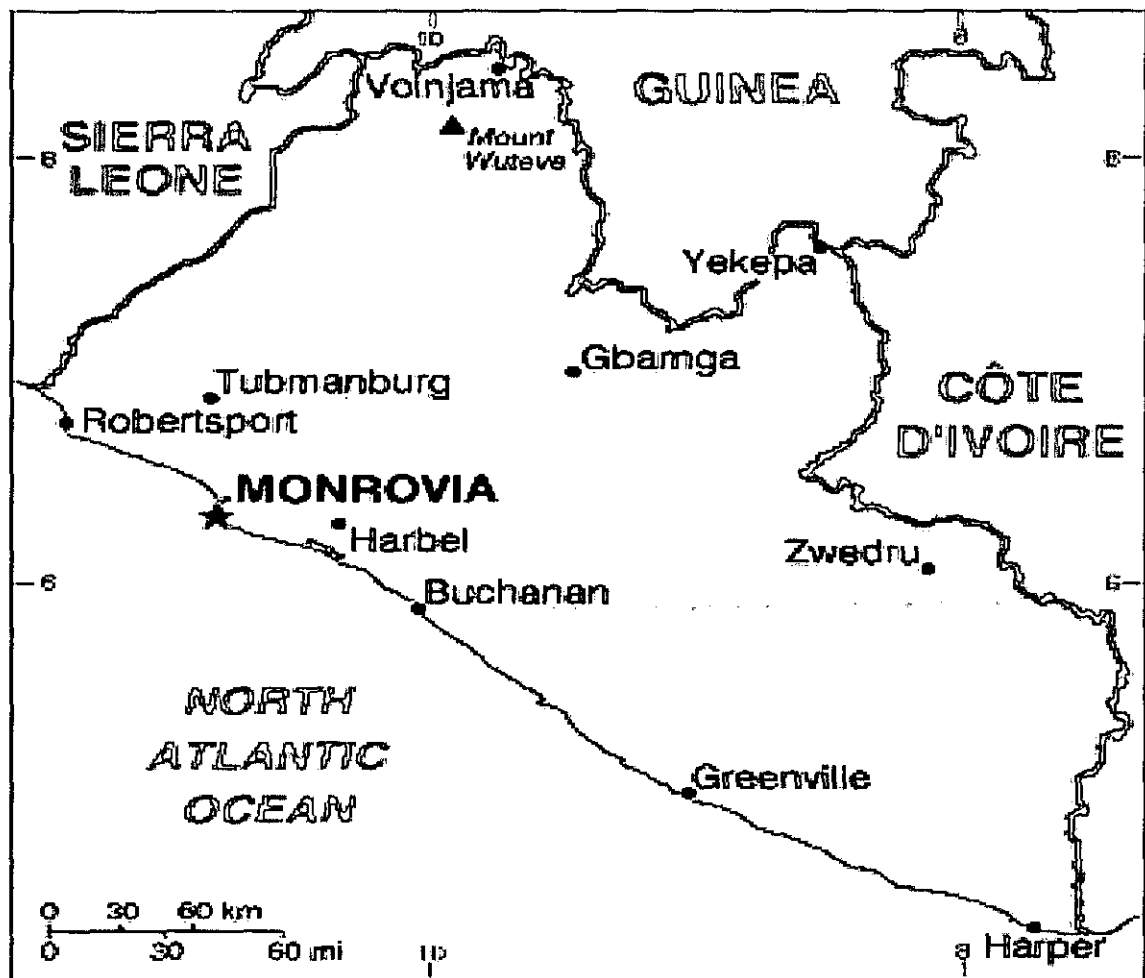
	<p>Naturaleza; ADELO; Amiflora; Bicam Afanss</p>	<p>National Committee for the protection of the Environment</p> <p>Decree Law No1, 2 January 1996 creating el impuesto of penalisation for the exportation of madera en rollo in Guinea Equatorial Republic;</p> <p>Decree Law No 3 of May 14 1997 on the ampliacion of the Protected area Monte Alen declared National Park</p> <p>Decree No 117 of 27 November1990 regarding the designation of the members of the National Committee of protection of the environment ;</p> <p>Decree No 9 , 17 December1991 on the national plan on environmen and against pollution in Equatoriale Guinea;</p> <p>Decree N° No 123, 23</p>			<p>of the coastal zones of Malabo city; US \$ 75 000</p> <p>4- Repealing of trees to creates green zones in Malabo and Bata cities; US \$ 60 000</p> <p>5- Control of the continental fluxes of domestic, industrial and agricultural pollution in the coastal waters of Malabo and Bata cities; USS 65000</p>	
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		<p>September 1996 relating to the approbation and promulgation of the organic regulation and functioning of the Ministry of Fishing and Forests</p> <p>Law No 7, 27 November 2003 regulating the environment ;</p> <p>Law No 2, 25 March 1988 regulting the installations, duplication and transfer of industries in Guinea Equatorial Republic</p> <p>Law No 4, 22 May 2000 relative to the creation of protected Areas in Guinea Equatoriale</p> <p>Decree No 6, 22 August 1990 relative to the creation of the National Committee for the protection of the environment;</p> <p>Decree No 117, 27 November 1990 relative to the designation of the members of the National Committee of protection of</p>				
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		the environment Decree No 9, 17 December 1991 which adopts the national law on environment and poverty in Equatorial Guinea.				
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4.12 - Liberia

The Republic of Liberia is situated in West Africa, bordering the North Atlantic Ocean, between Cote d'Ivoire and Sierra Leone. Its Geographic coordinates are 6° 30 N, 9° 30 W. Its total area is 111,370 sq km including 96,320 sq km of land and 15,050 sq km of water. The country has roughly the same size as the Republic of Benin. Land boundaries are in total 1,585 km. The border countries are Guinea 563 km, Cote d'Ivoire 716 km, Sierra Leone 306 km. Liberia has 579 km of coast line. Its Maritime claims are as follow: territorial sea: 200 nm. The Climate is tropical, hot, humid; it offers dry winters with hot days and cool to cold nights and wet, cloudy summers with frequent heavy showers



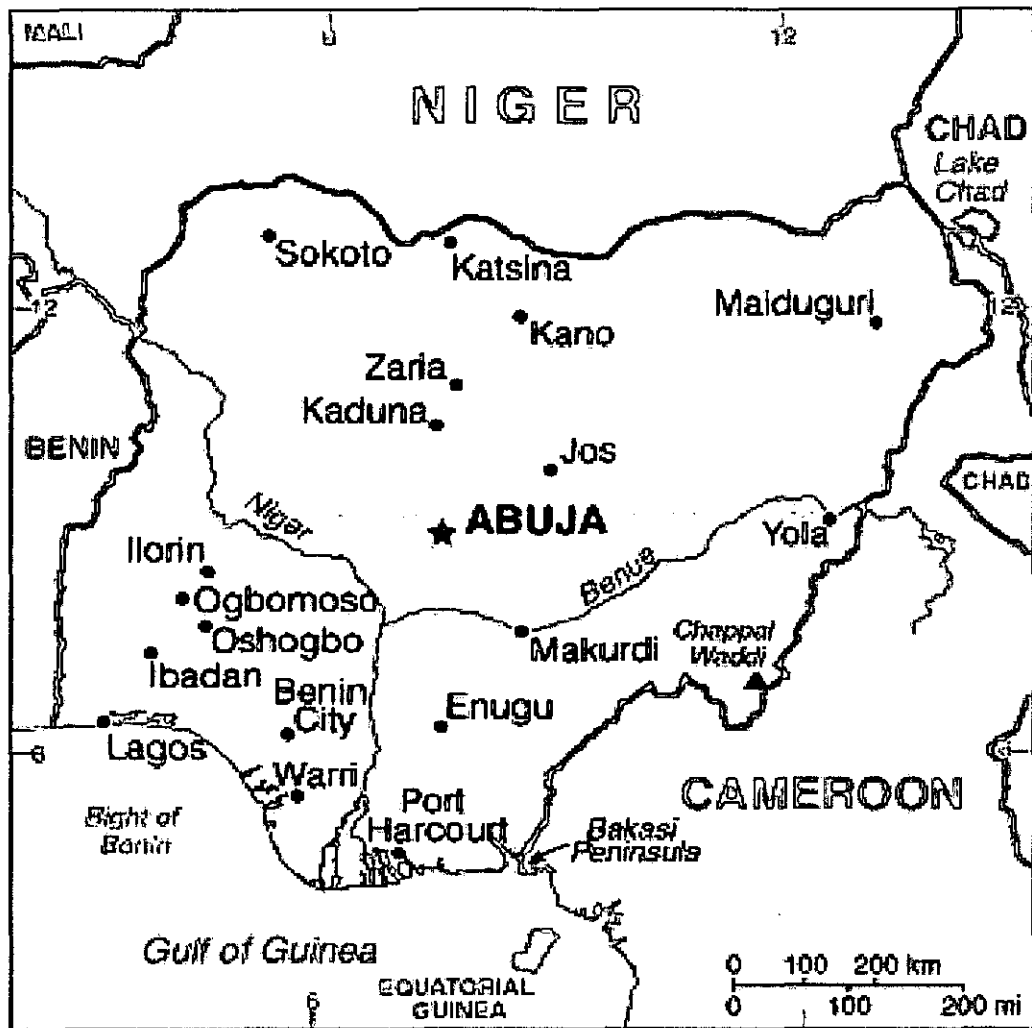
Country	Institutional Mechanisms	Legal/Regulatory Mechanism	Financial Mechanisms	Research and Monitoring Requirement	Contingency Planning	Extra
Liberia	<p>Administrative Structures</p> <ul style="list-style-type: none"> -Bureau of Fisheries, ministry of Agriculture. -Ministry of Lands, Mines and Energy (MLM& E), -Ministry of Health and Social Welfare (MOHSW). -Ministry of defense-plans. -Ministry of Planning and Economic Affairs -Ministry of Education. -Ministry of Public Work -The Bureau of Maritime Affairs responsible for all activities pertaining to maritime programs in Country. -Liberia water and sewer corporation supervises liquid waste management and sewer facilities 	<p>The Abidjan Convention defines environmental protection of the GCLME predominantly for cooperation in the protection, management and development of the marine and coastal environment of the west and central African Region adopted in March 1981.</p> <p>United National Convention of Climate change</p> <p>United Nations Convention on Biological Diversity</p>	International donors'	National experts from university and different research institutes	On going	

<p>-The Environmental protection Agency (EPA) promotes environmental awareness; develops environmental policy; institutes environmental protection mechanism and environmental management laws.</p> <p>-The university of Liberia (college of Agriculture and Forestry train; The Department of Geography, Liberia College; the college of science and Technology).</p> <p>-Liberia petroleum Refining Company (LPRC).</p> <p>-The society for the conservation of Nature of Liberia (SCNL) advocates for the conservation of the forest of Liberia and associated resources, especially wild-life.</p> <p>-Monrovia City Corporation (MCC) manages the collection and disposal of the solid wastes in urban areas of Monrovia and its environs.</p> <p>-Pollution control Association of Liberia is involved in advocacy for waste management and disposal, organizes clubs in schools and supports drama clubs in communities</p> <p>-Save My Future Foundation (SAMFU) gathers and disseminates information and data on natural and human resources in the</p>					
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	<p>country</p> <ul style="list-style-type: none"> -Ministry of Justice plans, administers and supervises all legal and regulatory matters in country -Ministry of Finance. -Ministry of Rural Development. -Forestry Development Authority plans. -National Oil Company of Liberia: plans, administer, manages and supervises the Oil and Natural gas exploration and exploitation in the country -local communities 					
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4.13 - Nigeria

The Federal Republic of Nigeria is a West African country, bordering the Gulf of Guinea, between Benin and Cameroon. Its Geographic coordinates are 10° 00 N, 8° 00 E. The Total surface is: 923,768 sq km of which Land is 910,768 sq km while Water is 13,000 sq km Nigeria is three times as large as Cameroun Republic. It has a total of 4,047 km of border. Border countries include: Benin 773 km, Cameroon 1,690 km, Chad 87 km, Niger 1,497 km; Coastline: 853 km Nigeria. Maritime claims are a Territorial sea of 12 nm and an Exclusive economic zone of 200 nm. The Continental shelf is 200-m depth or to the depth.



Country	Administrative & Management Structure	Legal/ Enforcement Mechanisms	Financial Mechanisms	Research/Monitoring Requirements	Contingency Planning	Extra
Nigeria	<ul style="list-style-type: none"> -Three tiers of Government(1979 Constitution) -Federal Ministries Environment; Foreign Affairs; African Integration; Defense -State&Local Governments National Policy on the Environment NGOs and Civil Society -Nigerian Conservation Foundation - Delta Environmental Network - Ecological Society of Nigeria Fisheries Society of Nigeria (FISON) - Forestry Association of Nigeria (FAN) - Friends of the 	<ul style="list-style-type: none"> -Environmental Impact Assessment legislation (FEPA 1989) -National Guidelines and Standards for Environment Poution control in Nigeria (FEPA, 1990) -National Environmental Protection (Effluent Limitation) FEPA 1991 -National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes -National Environmental Protection (Management of Solid and Hazardous Wastes)Law and sea Abidjan Convention 	<ul style="list-style-type: none"> To be built National Budget and International sponsors and donors' 	<ul style="list-style-type: none"> -National Universities: University of Lagos Lagos State University Obafemi Awolowo Univerity (Institute of Ecology) University of Benin University of Port Harcourt (IPS, IGST) University of Calabar Institute of Oceanography Delta State University Federal University of Technology Uyo Department of Petroleum Ressources (DPR) Nigerian National Petroleum Corporation (NNPC) Petroleum Training Institute Warri -Nigerian Institute of Oceanography and Marine Research 	<ul style="list-style-type: none"> See projects: 1- Coastal erosion control 2- Sustainable Management of Coastal Lagoons 3- Remediation of Areas Polluted by Oil Spill 4- Sustainable Development of Stubbs Creek Forest Reserve 5- Environmental Eucation and Public Awareness Programme for Sustainable Coastal Zone Management 6- A Baseline 	<ul style="list-style-type: none"> Task team Members -Mr Akin Awobamise Coordinator, Fedral Ministry of Environment Ibadan -Dr. L. F. Awosika, Core Team Leader, NIOMR Lagos -Dr Segun Oyewo, Core Team member, NIOMR Lagos Dr Oscar Umoh, Core Team Member Mr Henry Williams, Core Team Member Mr Senas Ukpanar, Core Team Member Mr. Ledum Mittee, Core Team Member Prof. O. Osibanjo, Core Team member Dr R. Folorunsho, Core Team technical support NIOMR, Lagos

	<p>Environment (FOTE)</p> <ul style="list-style-type: none"> - Friends of the Niger Delta - Niger Delta Environmental Survey (NDES) - Niger Delta Wetland Centers - Nigerian - - - Environmental Society <p>International Organisations</p>	<p>Harmful Waste Decree N° 42 of 25.11.1988</p> <p>Regulations S.I.8, S.I.9; S.I.15 of 15.8.1991</p> <p>FEPA Regulations 1991</p> <p>FEPA solid and Hazardous Wastes Management Regulations 1991 on "cradle-to-grave" Waste Management</p> <p>Regulations of 15.8.1991: National Environmental Protection Regulations</p> <p>Ordinance of 23 May 1937: Forest Ordinance-Northern Region</p> <p>Decree N° 36 of 26.8.1991: Federal National Parks Decree</p>			<p>Ecological/Environmental Data Acquisition Project for Akwa Ibom State</p> <p>7- Flood Control Drainage at Ewt Housing Estate and its Environs, Uyo</p> <p>8- Assessment, Conservation Strategies and Management of Ibeno/Okposo 1 and II Beaches</p> <p>9- Marine Erosion control at Okorutipa, Oko Iyak, Akata, Iwopom, Ibena Local Government Area</p> <p>10- Gully Erosion Control at Utu Etim Ekpo, Etim Ekpo LGA</p> <p>11- Integrated Waste Management in Eket Urban</p>	<p>Mr A. Udofia, Core Team technical support Federal Ministry of Environment Ibadan</p>
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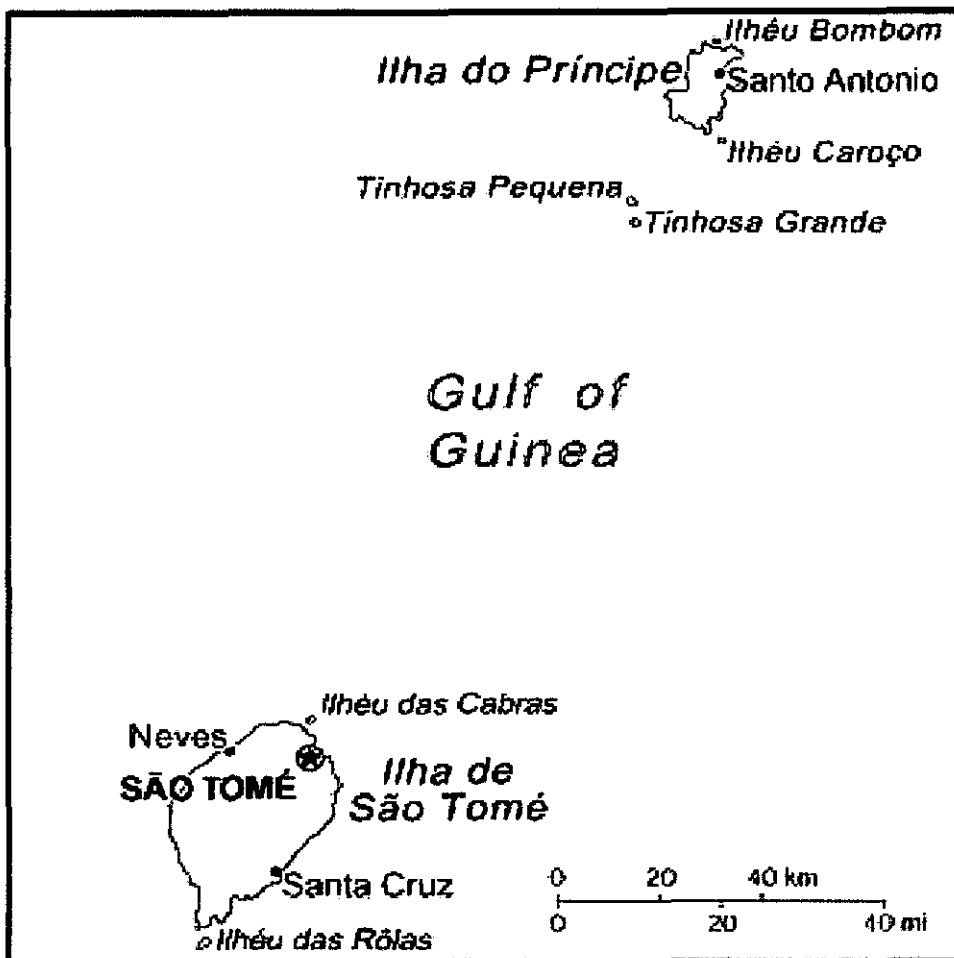
		<p>Environmental Regulations Governing Environmental Protection</p> <p>National Guidelines and Standards for Environmental Pollution control in Nigeria (FEPA,1990)</p> <p>Petroleum Control Act 1968</p> <p>Petroleum Drilling and Production Regulation 1969</p> <p>Exclusive Economic Zone Decree 1978</p> <p>Natural Resources Conservation Agency Act 1990</p> <p>Oil in Navigable Waters Act cap 1990</p> <p>International</p>			<p>12- Ocean Current and Circulation Patterns in the Nigerian Continental Shelf</p>	
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		<p>Agreements, Protocols and Treaties</p> <p>African Convention on the Conservation of Nature and Natural Resources 1968</p> <p>International Convention on the Establishment of an International fund for compensation for Oil Pollution Damage 1971</p> <p>Convention on the Prevention of Marine Pollution by dumping of Wastes, 1972</p> <p>Convention on Conservation of migratory species of wild animals 1979</p> <p>Convention for cooperation in the protection and development of the marine and coastal environment of the</p>				
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		<p>West and Central African Region 1981</p> <p>1989 Basel Convention on the transboundary movement of Hazardous wastes and their disposal</p> <p>RAMSA Convention 1971</p> <p>Convention on the Prevention of Marine Pollution by dumping of wastes and other matter, 1972 (London Dumping Convention)</p> <p>International Convention for the prevention of Pollution from Ships, 1973, modified by protocol of 1978 relating thereto (MARPOL 73/74)s</p>				
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4.14. Sao Tome & Principe

Sao Tome e Principe is group of islands which two main one Sao Tome and Principe situated Central Africa, straddling the Equator, in the West of Gabon Republic. Its geographic coordinates are 1° 00 N, 7° 00 E. Sao Tome e Principe total area is 1,001 sq km, mainly on land. The coastline is around 209 km. The measured from claimed archipelagic are 12 nm for the territorial sea, and 200 nm for the exclusive economic zone.



Country	Administrative Mechanisms	Legislative/Enforcement Mechanisms	Financial Mechanisms	Research/Monitoring Requirements	Contingency Planning	Extra
Sao Tome & Principe	<p>Ministries of Social Equipment and Environment</p> <p>Ministry of Agriculture and cooperation and Regional Development</p> <p>Ministry of Commerce</p> <p>Ministry of Industry</p> <p>Ministry of Fisheries and Tourism</p> <p>Ministry of Health</p> <p>Ministry of Preventive Medecine</p> <p>Ministry of the power and water company</p>	<p>Agenda 21</p> <p>Draft Law on Forestry</p> <p>CITES Convention</p> <p>Basel Convention on hazardous Wastes</p> <p>Law of the sea convention</p> <p>Fisheries (Marine resources) Law, December 1991</p> <p>Land Law: lei fundiaria 1991</p> <p>Sanitation Code, 1980</p> <p>Draft Code of waters (1991)</p> <p>Draft Regulation of Distribution and Drainage of waters 1991</p>	<p>PIP</p> <p>International Financial cooperation (EC, Japan, Portugal, European Firms, African Development Bank)</p>	<p>National Experts</p>		

	Ministry of Foreign Affairs NGOs: Clusa, Ami, Peace-Corps Instituto de Ecologia Associacao de Desenvolvimento e Ecologia	Proposed National Environment Legislation Draft Law on civil public action of responsibility for environmental harm				
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4.15 – Sierra Leone

The Republic of Sierra Leone is located in West Africa, bordering the North Atlantic Ocean, between Guinea and Liberia. The geographic coordinates are 8° 30' N, 11° 30' W. The total area is 71,740 sq km. Land occupies 71,620 sq km and water 120 sq km. The country is slightly greater than Togo Republic. It has 958 km of border. The Border countries are Guinea 652 km, Liberia 306 km. Sierra Leone has 402 km of coastline. Its Maritime claims are a Territorial sea: 12 nm and a Contiguous zone: 24 nm; Its Exclusive economic zone: 200 nm continental. Its shelf: 200 nm. The country has a Tropical climate Hot and humid; the rainy season extends from May to December and the dry season from December to April.



Country	Institutional & Administrative Mechanisms	Legislative & Enforcement Mechanisms	Financial Mechanisms	Research Mechanism	Contingency Planning	Extra
Sierra Leone	<p>1.1.1 Government Organisation</p> <p>At present the following ministries are in one way or another associated with management issues pertaining to the coastal environment of Sierra Leone:-</p> <ul style="list-style-type: none"> - Ministry of Lands, Country Planning and Environment - Ministry of Transport and Communications - Ministry of Mineral Resources - Ministry of Agriculture, Forestry and Food Security - Ministry of Tourism and Culture - Ministry of Works, Housing and Technical Maintenance - Ministry of Energy and Power - Ministry of Marine Resources <p>At times, jurisdictional rights of these ministries, overlaps.</p> <p>3.1 NGO, Civil society international organisations:</p> <p>-The Sierra Leone Conservation Society;</p>	<p>-The Fisheries Management and Development Act (1988),</p> <p>-The Environmental Protection Act (2000) makes reference to the coastal environment.</p> <p>-The Forestry Act.</p> <p>- The Wildlife Conservation Act (1992).</p> <p>-The Mining Act (short of marine mining activities).</p>		<p>The Institute of Marine Biology and Oceanography (IMBO). IMBO through it's research units of physical/chemical oceanography, fisheries, marine geology and geophysics, collects and analyses data on coastal resources, environmental degradation, pollution, oceanographic parameters and sea level rise.</p> <p>Other Departments /institutions: The department of Geography Fourah Bay College, University of Sierra Leone, and Njala University.</p> <p>International organizations: UNDP,</p>	<p>I: Sustainable management of coastal estuaries</p> <p>II: Tittle. Integration Waste Management in Freetown Stakeholders participation: Freetown City Council National Petroleum Unit The Division of Environment, FCC. NGOs & CBOs</p> <p>III: COASTAL EROSION CONTROL</p> <p>Stakeholders Participation: Sierra Leone Roads Authority</p>	

	<p>- Council For Human Ecology in Sierra Leone; - Friends Of the Earth, - Environmental Foundation for Africa etc. Some of their activities include;</p> <ol style="list-style-type: none"> 1. The promotion of public awareness and action on environmental degradation in the coastal zone, 2. Promotion of public interest in conservation and the protection of biological diversity in the coastal zone, 3. Provision of expertise and guidance on matters affecting the coastal environment, 4. Assistance in the development and implementation of local conservation policies and support of local conservation activities on the sustainable use of resources in the coastal zone. 5. Research and Training 			<p>IMO,IOC, IUCN, WWF,UNEP, etc.</p>	<p>(SLRA), Ministry of Tourism and Culture, coastal communities, Local Governments, Relevant Research Institutes.</p> <p>IV: Strengthening of Fisheries Management Capacity</p> <p>Project V: Ballast water Management and control in the Sierra Leone Marine Environment</p> <p>Stakeholders Participation:</p> <p>Petroleum product producers, petroleum unit of the Geological Surveys of Sierra Leone, relevant research institute/universities, environmental protection departments/com</p>	
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					<p>mission, coastal communities, SLPA, Marine Police, Naval Wing SLA, Fishing Industry, GCLME Project and environmental NGOs</p> <p>VI: Environmental Education and Public Awareness Programme for Sustainable Coastal Zone management in Sierra Leone</p> <p>Stakeholders Participation: In addition to partner institutions identified above, other stakeholders include:GOSLte Ministries of Agriculture and food security; Rural Development, Women Affairs; community Development</p>
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					<p>Committees in affected communities, Petroleum oil companies and manufacturing industries, maritime operators, and NGOs and CBOs in the affected region.</p> <p>VII: Establishment of a Coastal Zone Information System in Sierra Leone</p> <p>VIII. Socio-economic valuation of coastal Sand resources.</p> <p>Stakeholders Participation:</p> <p>In addition to partner institutions identified above, other stakeholders include:GOSL Ministries of Industry and Tourism; Rural</p>
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					<p>Development, in other parts of the world.</p> <p>Project sustainability:</p> <p>From the outset, the programme will be planned and coordinated with the involvement of all stakeholders who will also take over ownership at the end. The executing Agency will provide yearly budgetary provisions to ensure the sustainability of the project when the donor aid comes to an end, in addition to other stakeholders contribution.</p> <p>IX: Water quality.</p> <p>Project X: Title. Updating of topographic map information on the coastal areas of Sierra</p>
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					<p>Leone Stakeholders Participation: In addition to partner institutions identified above, other stakeholders include:GOSL Ministries of Agriculture and Forestry, and Food Security Development, in other parts of the world.</p> <p>XI: Conception and Installation of settled or simplified sewerage in the local communities of Freetown (One pilot project location per community</p>
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4.16 - Togo

The Republic of Togo is a West Africa country, bordering the Bight of Benin, between Benin and Ghana. Its geographic coordinates are 8° 00' N, 11° 0' E. Its total area is 56,785 sq km with 54,385 sq km of land and 2,400 sq km of water. It is half the size of the neighbouring Benin Republic. It has in total 1,647 km of border. The border countries are Benin 644 km, Burkina Faso 126 km, Ghana 877 km. Togo has 56 km of coast line. Its Maritime claims are a territorial sea at 30 nm and an exclusive economic zone at 200 nm.



Country	Institutional & Administrative Mechanism	Regulatory and Legislative Mechanisms	Financial Mechanisms	Research/Monitoring	Contingency Planning	Extra
Togo	<p>Ministry of Environment and Forestry</p> <p>Ministry of Agriculture;</p> <p>Ministry of Husbandry and Fishing</p> <p>Ministry of Defense and Ancient Fighters</p> <p>Ministry of Health</p> <p>State Ministry</p> <p>Ministry of Mines and Energy</p> <p>Ministry of Waters and Hydraulic Resources,</p> <p>Ministry of Security</p> <p>Ministry of territorial administration</p> <p>Ministry of Higher Education and Scientific Research</p> <p>Ministry of Culture, Tourism and Leisure</p> <p>Ministry of Commerce, Industry, Craft</p> <p>Ministry of small and average size firms and promotion of the franchised zone</p> <p>Ministry of Foreign Affairs and African Integration</p> <p>Ministry of Transports, Post and Telecommunication and technological innovations</p> <p>Actors of the Civil Society and private Sector (ONGs)</p>	<p>Arrêté N° 010/MERF du 28 Avril 2005 portant création, attribution et fonctionnement du Comité National de Coordination et de Suivi de la Gestion de l'environnement marin et côtier</p> <p>Arrêté n° 012/MERF du 28 Avril 2005 portant création, attribution et fonctionnement du Comité de pilotage du projet de lutte contre la dégradation des zones côtières et la réduction des ressources vivantes dans le Grand Ecosystème Marin du Courant de Guinée par des actions régionales</p> <p>-Nouvelle loi fondamentale du 14 octobre 1992</p> <p>-Article 41 a consacré le droit de l'homme à l'environnement et l'obligation pour l'Etat de protéger l'environnement.</p> <p>- Article 84 intègre au domaine de la loi, les règles relatives à : i) la création des parcs nationaux, des réserves de faune et de chasse, ii) au classement et au déclasserment des forêts classées ;</p> <p>i) la loi N°98-006 du 11 février 1998 sur la décentralisation ;</p> <p>ii) la loi 96-004/PR du 26 février 1996 portant code minier ;</p> <p>iii) la loi 96-007/PR du 03 juillet</p>	Bilateral cooperation	<p>Faculté de Droit à l'Université de Lomé en partenariat avec Université de Liège (Belgique), Université de Maastrich (Hollande), Université Nationale du Bénin (République du Bénin),</p> <p>La Faculté des Sciences</p> <p>La Faculté des Lettres et Sciences Humaines</p> <p>UNITAR</p>	<p>Projects :</p> <p>1-Fighting marine pollution by phosphate muds by settling and identification of a strategy of sustainable management</p> <p>Cost: 5 millions US \$</p> <p>2 - Protection of the Coast against erosion;</p> <p>Cost: 6.000 000 US \$</p>	

		<p>1996 relative à la protection des végétaux ; iv) le décret N°98-099/PR du 30 septembre 1998 portant application de la loi n° 96-007 du 03 juillet 1996 relative à la protection des végétaux. Une loi portant code des hydrocarbures a été également adoptée.</p> <p>Instruments juridiques internationaux :</p> <ul style="list-style-type: none"> -Convention concernant l'emploi de la céruse dans la peinture, Genève 1921, -Convention relative à la conservation de la faune et la flore à l'état naturel, Londres 1933, - Convention internationale pour la protection des végétaux, Rome 1951 ; -Accord concernant les mesures à prendre pour la protection des peuplements de grosses crevettes, de homards d'Europe, de langoustines et de crabes, Oslo 1952, -Convention sur le criquet migrateur africain, Kano 1962 -Traité interdisant les essais d'armes nucléaires dans l'atmosphère, dans l'espace extra-atmosphérique et sous l'eau, Moscou 1963 -Convention phytosanitaire pour l'Afrique, 				
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		<p>Kinshasa 1967</p> <p>-Convention africaine sur la conservation de la nature et des ressources naturelles, Alger 1968</p> <p>-Convention relative aux zones humides d'importance internationale, particulièrement comme habitats de la sauvagine, Ramsar 1971</p> <p>-Traité interdisant de placer des armes nucléaires et d'autres armes de destruction massive sur le fond des mers et des océans ainsi que dans leur sous-sol, Londres, Moscou, Washington 1971,</p> <p>-Convention concernant la protection du patrimoine mondial culturel et naturel, Paris 1972,</p> <p>-Convention sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques, (biologiques) et à toxines et sur leur destruction, Londres, Moscou, Washington 1972,</p> <p>-Convention internationale sur la prévention de la pollution par les navires, Londres 1973,</p> <p>-Convention sur la prévention de la pollution des mers résultant de l'immersion des déchets et d'autres matières, Londres 1973,</p> <p>-Convention sur le commerce international</p>				
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	<p>des espèces de faune et de flore sauvages menacées d'extinction (C.I.T.E.S.), Washington 1973,</p> <p>-Convention relative à la conservation des espèces migratrices appartenant à la faune sauvage, Bonn 1979,</p> <p>s-Convention relative à la coopération en matière de protection et de mise en valeur du milieu marin et des zones côtières de la région de l'Afrique et l'Ouest et Centre (WACAF), Abidjan 1981,</p> <p>-Protocole relatif à la coopération en matière de lutte contre la pollution en cas de situation critique, Abidjan 1981,</p> <p>-Charte africaine des Droits de l'Homme et des Peuples du 27 juin 1981,</p> <p>-Convention des Nations-Unies sur le droit de la mer, Montego Bay 1982,</p> <p>-Accord international sur les bois tropicaux, Genève 1983,</p> <p>-Convention de Vienne pour la protection de la couche d'ozone, Vienne 1985,</p> <p>-Convention sur l'assistance en cas d'accident nucléaire d'urgence radiologique, Vienne 1986,</p> <p>-Protocole de Montréal relatif à des substances qui appauvrissent la couche</p>				
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		<p>d'ozone, Montréal 1987,</p> <p>-Traité instituant la Communauté Economique d'Afrique¹,</p> <p>-Convention sur la diversité biologique, Rio 1992,</p> <p>-Convention cadre des Nations Unies pour les Changements Climatiques, Rio 1992,</p> <p>-Convention cadre des Nations Unies sur la Lutte contre la Désertification,</p> <p>-Accord de partenariat ACP-CE signé à Cotonou le 23 juin 2000,</p> <p>-Traité de l'union Africaine signé à Lomé, en juillet 2000.</p>				
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5- Analysis of the results by Country

5.1 – Angola

A workshop was organised in Luanda start up the writing of the NPAs for this country and other lusophone. Unfortunately, communication problems prevented an efficient forwarding of the results. An emergency need for Angola is a viable communication system within the project, facilitating its relations with the neighbouring countries and the other partners in the project.

As can be seen from the synthesis from this country, the legislative and enforcement mechanisms, the financial and monitoring mechanisms are still to be improved on. The contingency planning has the advantage of been made of three on going projects: the National Programme for Environment Management, the National Oil Spill Contingency Plan and a National Programme for Environmental Education and Awareness (PECA). It might be necessary to better know those projects, assess their level of realisation and understand what their financing mechanisms are.

5.2 – Benin

The Republic of Benin offers, as most of the countries in the GCLME, a rich and vast corp of administrative and legislative text. It is an advantage that the Law on Environment is deeply enshrined in the constitution, providing by so doing a means to each citizen to be able to see its good application. This is a great help when comes the time for IEC action plan on the different issues on environment.

The financial mechanisms are essentially upon bilateral cooperation. However one can already see the involvement of the State in the achievement of projects linked to the safety of the environment. Benin is a decentralised country and it has a study going on “the integrated management of urban used waters in towns of particular status” for which the National Budget is contributing 25000 US Dollars. It would have been quite informative to know which actions are undertaken to secure the quality of life in the towns where atmospheric pollution is credited as one of the highest in West Africa.

There is a large cooperation of international bodies in the protection of the Benin environment particularly in forest management.

5.3 –Cameroon

The Republic of Cameroon has a good stock of administrative and management structures. They have been articulated into a organisational chart visible in the first section of this report and linking international cooperation with national governmental structures. As already pointed out in the diagnostic part of this report, the viability of inter-ministerial structures can always be questioned. Cameroon, as other countries, does not need a supplement of legislative and regulatory texts, though it might be necessary as the NPA points out to find out how to enforce the existing laws and regulations.

Cameroon is one of the rare countries in the GCLME region which has a structure in charge of financing environment actions, the ‘National Environmental and Sustainable Development Fund’. The NPA report is not clear on how research is done and what are the monitoring structures available beside independent monitors. The contingency planning is also not clearly articulated. However, the projects identified have a wide spectrum and go from the sea level to that of hospitals never mentioned in the other reports. The NPA forwarded by Cameroon can be edited without much improvement.

5.4 – Congo

The Republic of Congo is a good example of the laws and regulations to be found in most of the GCLME countries. The NPA however does not mention any financing mechanism nor does it come up with projects to be undertaken in the short, medium or long run. The different efforts to know the donors’ contributions are for different political issues. It is important to mention that this country is just coming out of war and might need some more time to be fully involved in the different issues of GCLME management.

5.5. Democratic Republic of Congo

The NPA submitted by the Democratic Republic of Congo provides what is expected in regard to the administrative and management structure as well as the body of laws to be used as the basis for the enforcement and protection of the coast. It is a result of many correspondences and a national workshop in Kinshasa. Despite the short length of its coast, the system to protect it is a very sophisticated one, and the DR Congo has a structure taking care of providing financing. It is difficult to assess how viable are the structures described without further study.

5.6 – Côte d'Ivoire

The interest of the Republic of Côte d'Ivoire for its coast is recent, the country being essentially turned towards the exportation of its forestry products. As usual, there is a great number of existing laws that can provide for the protection of the coast, but there is no project envisioned for the present. Cote d'Ivoire mentions, as is the case for all the countries above, the active presence of different NGOs in the field of coastal protection.

The financial Mechanisms is to be worked upon: no structure is cited as providing any help in that area. Probably the international cooperation is needed.

5.7 – Gabon

The NPA submitted by Gabon reports of the potential for good administrative and management as well as legislative and enforcement mechanisms. The other data are, for the time being, missing: financing, research and monitoring, contingency planning or even projects. This is easy to understand because the concern for the preservation of coastal area from land based activities is recent for this country as it is for many others. However, there is a high disposition to act through different state bodies for a quick push in this direction.

Gabon is an oil and wood producer. These are the two major industrial activities that could be responsible for pollution and deterioration of the quality of the environment. The oil companies – which started their activities since 1950 - are involved in preserving the marine coastal area and are aware of the necessity to pollute as less as possible. They contribute to some of the necessary research on this question. The longer tradition in wood exploitation has not impacted very much the coast, except by the left over logs of wood on the beach making it difficult to use for tourists.

The existence within the Ministry of Foreign Affairs of a “Direction Générale du Droit de la Mer” covering all the possible activities relating to the sea is a powerful tool of awareness on the issues relating to the protection of the coastal area.

5.8 – Ghana

Ghana holds a long tradition of attention to the coast for of historical reasons. The NPA submitted outlines the administrative and management mechanisms have been thought of for sectorial application: fisheries, oil, etc. The laws and regulations which can be the basis for enforcement exist, and there is also the recognition of a complementarity between the different stakeholders in the exploitation of coastal resources. Although we know that many projects are

carried out to protect the beach, we do not have a lot of them submitted, except the one on oil. The NPA does not stress the financial mechanism, but the tradition exists that factories be participants in such projects and there are many NGOs in favour of environmental protection. Ghana involves most of its main institutions in the preservation of its marine and coastal resources are vital for the growth of the economy. If the existing laws are updated, if enforcement becomes the rule, if the polluter payer principle becomes a routine, it might give rise to a new deal for the global growth of the marine activities still protected from the nuisances of the land based ones.

5.9 – Guinea

Like most of the other countries, The Republic of Guinea has the potential to build a viable administrative and management mechanism. It has a full body of laws and has ratified many treaties on environmental issues. As stated in the first pages of this report, the viability and the efficient connexion of all the structures are still going on. The potential contingency planning covers the coastal area. This country has the possibility to fund some of its actions through the National Programme for Environment.

5.10 – Guinea Bissau

Guinea Bissau is largely dependant on its maritime resources for economical growth: fishing, tourism, biodiversity are to be taken in account and cared for. The exploitation of these resources have started some years back. Despite the coast line, most of the inhabitants are farmers, which might explain why the country is still working on most of its plans concerning the coastal zone.

There is a vivid awareness and a vision of what should be done to protect the coast and the marine resources: organize the management and exploration of the resources of the marine and coastal zone, facilitate access to all the existing health and sanitation structures and equipment, reinforce organizational and institutional capacity, educate and communicate on environment, decentralize the management of marine and coastal resources. Bilateral and national resources will allow these wishes to become facts.

5.11 – Guinea Equatoriale

The Republic of Guinea Equatoriale has a clear view of what endangers its environment: atmospheric pollution due to global warming, irrational and over exploitation of forest resources for economical revenues, marine pollution even in the absence of sure data, coastal erosion because of sand exploitation. To all these one must add the presence and exploitation of oil and gas off shore since 1998 with all the risks linked to such industry. The NPA is focused on human needs in relation with socio economical needs with due insistence on fight against poverty. This is the ultimate goal to be reached through the need to preserve biodiversity, ecosystems and environment. A training of all the actors, an up dating of the existing legislation.

5.12 – Liberia

Liberia has inherited a good potential administrative and management mechanism. It is quite understandable that the body of law texts is not entirely known and that the country did not submit any financial mechanisms. Much is not known on research and monitoring facilities and the projects to prepare a contingency planning are still to be built in.

5.13 – Nigeria

Nigeria NPA is one of the most exhaustive available in the GCLME project. Not only the administrative and management structure is available, but there is a core team in charge of coordination of the actions to be carried out in the NPA. Nigeria, as most of the countries, has a list of treaties and agreements relative to the protection of the environment per se and in particular devoted to the coastal area. Of course, we do not know how funds can be secured to carry out the necessary actions to be implemented. But the existence of NGOs along with international cooperation can certainly alleviate the difficulties. Most universities in the southern part of Nigeria do research on an aspect or the other of the protection of coastal areas and the NIOMR (Nigerian Institute of Oceanography and Marine Research) has a mission to do research on this topic. Petrol companies have also their own research units. The contingency planning appears through the numerous projects in view. This NPA is almost ready for publication. It can be a model for many others.

5.14 – Sao Tome & Principe

Environment pollution and coastal degradation are not yet an important question in Sao Tome and Principe. However, there is a real need to start thinking of the measures able to preserve the quality of life there, since the islands, living mainly on wood exploitation and tourism, are also valued for their different ecosystems: different species of fauna and flora are specific to this area of the world. Industrialisation has not impacted the environment but the existing laws are outdated and as such, cannot be enforced. The present government will certainly look after these issues.

5.15 – Sierra Leone

The NPA shows a great potential for efficient Administration and Management. It cites only three laws. The financial mechanisms are not yet described and we do not know if they can afford to back up actions to protect the coast line. There is a good research potential and the projects identified come with stakeholders.

5.16 – Togo

The Republic of Togo despite its small size is much concerned by the preservation of its coastal environment. Two main problems are to be overcome: the coastal erosion by the sea and the pollution of the marine waters by phosphate industry which has an effect on the neighbouring coasts in Benin and Nigeria. The coastal line is quite vulnerable and human habitat suffers of regular assault by the waves since the building of the harbour. The other factor of pollution and environment deterioration are linked to fuel, unloading of clinker in the harbour area and inadequate sanitation in general. The two projects presented by the country will help solve most of the discomfort mainly if neighbouring countries associate to the effort of preservation of the coast line.



Photo 4: Flooded area near the Douala harbour (Wouri River mouth)

6 –On going activities: Preventive and remedial actions identified in the NPAs

Following the prescriptions and methodology of the training manual, the 16 countries of the GCLME Region have been able to write their own NPAs. They identified as a result of this training, a series of projects to be implemented. However there is a need to take immediate preventive and remedial actions for certain situations arising on the coast and endangering heavily the protection of coastal resources and their contribution to economic growth. At present, most countries can base their actions on existing knowledge, resources, plans and procedures. This section of the report will describe such actions using the canvas offered by the training manual itself.

- ***Raise awareness:***

NPAs require collaborative endeavours, hence the need felt by most of the ministerial stakeholders to associate to its actions NGOs and civil society members. They are most of the time a good channel to disseminate information and coordinate immediately needed efforts. The cases reported here are from Benin Republic. In this country, the beach mainly in growing cities such as Cotonou or Grand Popo has become a place of important convivial rendezvous.

As in many coastal countries, the sea is not perceived as a simple reservoir of salty water but rather as a divinity, able to provide wealth. *Mamy wata* (the Water goddess) has decided to live in there. But his dwelling must be clean as well as the beach directly attached to it. Every year, certain cultural festival starts from the beach before extending to the city. For those reasons, different associations either of *Vodun* devotees or friends of a clean environment gather and clean the beach off the physical and solid remains of the pollution: leaves, bottles, cans, etc.

Their awareness has gained in strength since they got to know of the existence of the Benin Marine Protected Areas and were informed of the various pollution effects due to human activity either from the continent or the sea itself. Benin Nature for instance has chosen to protect marine turtles and send back into the sea infant turtles hatched a few months before.

Other examples can be found in other countries. The Democratic Republic of Congo in its Polmarc Plan, has a whole series of successive and planned awareness actions. The plan suggests that information be disseminated on pollution prevention to all stakeholders and if necessary that an immediate emergency action be undertaken: monitoring of the state of pollution, preventive

operation and finally intervention in actions such as pumping of oil layers, cleaning of polluted sites, lightening of oil tanks, spreading of products, etc.

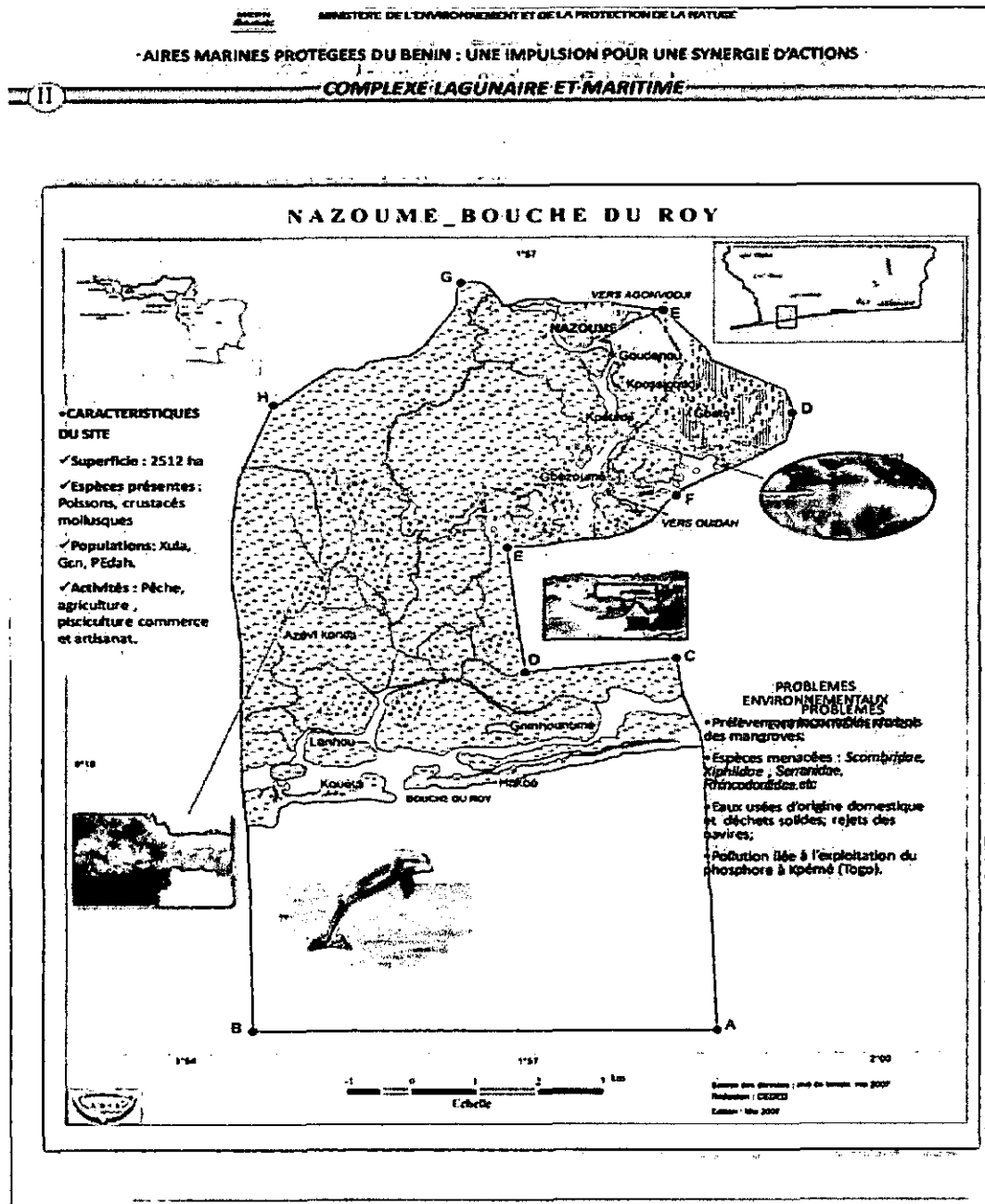


Figure 3: The map of one Marine Protected Area initiated in Benin



Photo 5: Water Road Project initiated on Coastal Lagoons between Benin and Togo

- ***Generate ideas:***

The core teams in each country and the stakeholders in the ministries as well as the numerous NGOs have generated ideas built into pilot projects. Those of two countries, Nigeria and Cameroun will contribute to this report.

- Nigeria has a project on coastal erosion. This is a transfrontier project since the neighbouring countries of Benin Republic and Togo have the same preoccupations. The project is under the umbrella of the Federal Ministry of Environment, in association with the Nigerian Institute for Oceanography and Marine Research. Oil companies will contribute also. The objective of this project is to understand the causes and forces responsible for coastal erosion along the Nigeria coastline and improve coastal erosion in affected areas. They envision the monitoring of erosion and ocean dynamics at designated stations along the Nigeria coastline, implementation of stop gap measures including the construction of environmentally friendly structures. The dissemination of information includes public enlightenment campaign on the remediation and mitigation of coastal erosion.

Another Nigerian project relates to a sustainable management of coastal lagoons. Its objective is to evaluate the present status of the physical, chemical and biological

characteristics of coastal lagoons as benchmarks for sustainable management especially in terms of fisheries, bio-diversity issues, environmental quality and potential health/livelihood impacts. As action, they envision the development of plan of action for cleaning the lagoons and long term plans for sustainable management of the lagoons including particular focus on their socio-economic importance.

In Cameroon, the management of the mangroves is an illustration of the combination of local knowledge and economical needs. Cameroonian entrepreneurs need sand to build; this sand is extracted from the mangrove areas and sold at a better price for building entrepreneurs. This extraction provides excellent natural material and saves the sand from the beach which causes its erosion. The sand from the mangrove area is not as salty as that of the sea and it leads to almost no corrosion of metal in concrete pillars and roofings. Reforestation of the mangroves is emphasized and practised. Fortunate enough, this activity should improve the fish habitat in the lagoons and offer a better supply of protein in the local diet.



Photo 6: Sand mining in coastal lagoons in Douala (Project initiated by Communities)

Monitoring and strengthening actions:

At the present, most activities undertaken under the NPAs are in a fledgling stage.. They need more time for a monitoring to take place and for a strengthening linked to on going actions.

- ***Legislative framework:***

There are many laws and Decrees related to the Coastal Zone Management in the 16 countries of GCCLME Region based on the Convention of Abidjan and the Washington Conference. Each initiated project is supported by special decrees for protection of Coastal and Marine Environment in the GCLME countries.

In Benin, there is a proposal for a law creating in Benin. The mission is to provide relevant data to the Government on the step to follow for the classification of MPA. This project of decree of 04 chapters and 12 articles is structured as follows:

- Chapter 1. Definitions and creation
- Chapter 2. Objectives, principles and methods of management
- Chapter 3. Bodies of management
- Chapter 4. Final provisions.

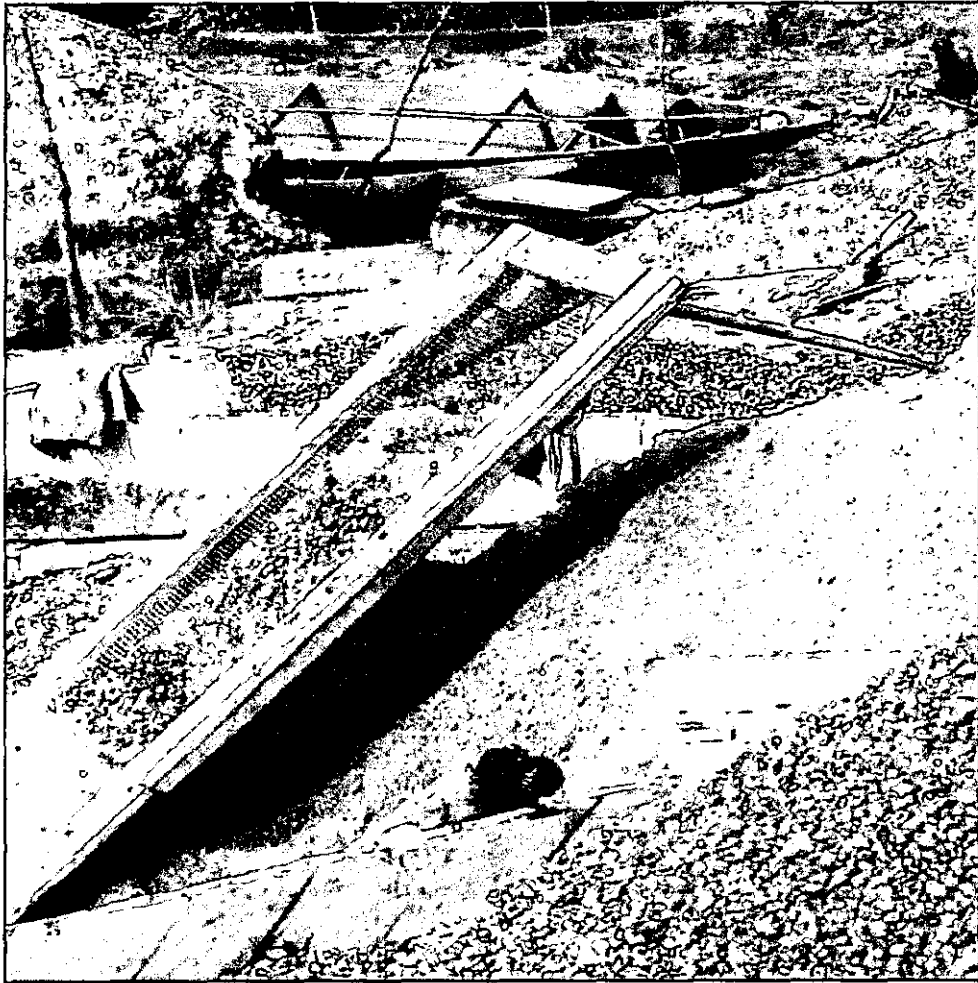


Photo 7: Serious mining in Coastal Rivers at Douala

7-Conclusion

At present, a global overview of the different reports submitted to CEDA suggest a deep understanding of the problems to be solved by the NPA programs in each of the 16 countries. All the reports show a great understanding of the importance of the coasts and their resources for human development, environment protection, economic growth through tourism or fishing for instance. Most NPAs have come up with a harvest of important projects. It appears, however, that the different administrative structures are not functioning properly giving rise to shortcomings that should be remedied during the editing process. The different suggested proposals and structures should in the same manner, be enhanced through the corrections envisioned by the different National Experts. A better knowledge and description of the administrative and management structures in each country could allow the creation of a platform and a core team to coordinate and assess the national efforts. It will also help in accelerating the trans-boundary exchanges as neighbouring countries meet to pursue the same NPA goals. It seems, Nigeria excepted, that most countries might be missing the financial means for a better coordination of the national efforts to promote all the activities selected under the Plans.. The same applies to legal and enforcement mechanisms. Getting to know for instance which conventions or treaties on environment have been ratified by each country gives the legal means for any long term activity. However, despite the ratification of the conventions and treaties, their enforcement is weak perhaps, inexistent, most of the time.

Real development politics should be built by most countries taking into account a real dialogue and deep information of the local communities to be involved if any long term success is to be expected. NGOs and the Civil Society, not mentioned in all the received reports, should be associated with the NPAs. Most of the time, they have root-based actions and can be more proactive in finding financial partners. Two or more countries having the same priority should be encouraged to achieve them cooperatively. Finding financing could be easier in such circumstances.



Photo 8: A part of coastal lagoon with full amenities for fish-farming

8. Suggestions and Recommendations

8.1 Communication.

- Suggestions and recommendations as formulated here derive from the problems to be solved. Most of them are common to all the 16 GCLME countries. If we take fishing for instance, which relates to both the marine and the coastal eco-systems, we can notice in general a lack of inventory for species, the rarefaction of certain species, anarchic exploitation of halieutic resources, pollution due to hydrocarbons, the threat of disappearance of certain species and the rupture of the biological chain, pollution due to continent based activities. The reasons are also known : lack of management policies, , lack of trained personnel, inexistence of financial resources and lak of will.
- The ecosystem might show a pollution of lakes, lagoons and coastal rivers, the degradation of the mangrove, problems in evaluating stocks, loss after fishing, lack of counselling and unsolved legislative problems due to a lack of regulation of fishing, an increasing number of petroleum exploitation permits, the building of a dam up-stream, etc. The ability to provide a solution to these problems in a specific environment makes it extensible to other countries having the same problem to solve. Communication is therefore a great requirement for this problem to be resolved. The implementation of the tasks to protect the 16 GCLME countries against land based activities requires therefore that they be able to communicate easily one with another. It becomes therefore imperative that each country be given the appropriate means for its action. DSL internet has therefore become a priority as as are means of transportation and hard software

8.2 - Viable Administrative and Management Structures:

All the countries involved in the GCLME project do have administrative and Management structures as proven in the summary. Their viability is questionable; it is mainly a question of the link the project has with the national Ministry in charge of environment and the Ministry in charge of finance. It is also a question of political priority. It would certainly be a great decision to convince the political decision makers at the national level to provide means to the existing structures for implementation of the identified projects. This is a plea to be undertaken by each NPA project leader. Within the different countries, a core team should be clearly set up, with a

precise organizational chart as well and a precise program of activities, targeting the accomplishment of selected projects as they will be prioritized by each country.

There are of course, constitutional constraints. The NPAs in each country lack clearly formulated and set up targets, guidelines and standards. They do not seem to be part of a global coastal planning process. A whole series of actions should be undertaken towards viability. They can be linked with pricing issues for consumption of appropriate goods and, waste removal. Management options should be clearly defined. They should include a better assessment of environmental legislation and regulations and give way to clear guidelines and standards. In the shortest span of time possible, the polluter pays principle should be compulsory and enforced by appropriate control systems. Another system to protect wetlands, lakes and lagoons should be enforced so that it becomes more and more difficult to release untreated waste, liquid or solid into them.

8.3 – Legislative and Enforcement:

There is a great provision of laws in each country. Suffice it to say that they are not well known and enforced. This requires a double action of Information, Education and Communication at first hand, and then a close association of local communities with the management and control of the different resources.

It might also be useful and necessary to read the law text anew so as to avoid conflicting interpretation of their content. Most countries have signed the same laws and international treaties. It would therefore be useful that neighbouring countries combine their effort in the improvement of the existing legislation.

8.4 Financial Mechanisms

Most countries are lacking financial means for their activities though they understand its great importance. Each country should be encouraged to secure national funds as a priority. The Public Investment Projects undertaken every year in those countries is a good and legitimate source of funding.

8.5 – Research and Monitoring

A great deal of the research useful to NPAs is already available. It might be necessary to add some more, since research can always be improved on almost no country holding an NPA

stressed the need for monitoring, which no matter what aspect one takes, is a key issue to assure a sound and safe direction to each project under realisation.

8.6 - Contingency

As such, no country came up with a contingency planning, which includes a hierarchy in the projects lined up and an articulation of a link between them. The question of what should come first and why is certainly a management as well as a political issue. It requires therefore an input from the government and the parliament. It should not exclude the involvement of the public which is rarely consulted for such aspects.

This apparent absence of contingency planning can however be misleading. Except a few countries which did not present a project, the number of projects from the NPAs is already a prospective contingency planning. When the means of implementation are found, they would certainly turn to be the place of demonstration of the different capacities each NPA stands for.

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ANNEXES

REPUBLIQUE DEMOCRATIQUE DU CONGO

**MINISTERE DE L'ENVIRONNEMENT CONSERVATION DE LA NATURE EAUX ET
FORETS**

AVANT-PROJET

PLAN POLMARC

**Plan National d'Urgence contre la Pollution Maritime et Côtière de la République
Démocratique du Congo**

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Intérimaire du Courant de Guinée
(CICG/RDC)**

**Projet s'inscrivant dans la logique
d'application du Protocole d'Abidjan**

AVRIL 2007

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1. INTRODUCTION

1.1 Contexte

La République Démocratique du Congo dispose des riches écosystèmes marins, côtiers, fluviaux et lacustres aux intérêts vitaux biologiques et socio-économiques qu'il importe de prendre des mesures préventives contre les déversements des hydrocarbures et des substances nuisibles.

Partant de son estuaire avec un linéaire d'environ 40 Km limité au Nord par le CABINDA de la République d'Angola, à l'Ouest par l'Océan Atlantique au Sud par la République d'Angola et à l'Est par la République du Congo, l'espace côtier et marin de la RDC s'étend, selon les recommandations de l'Atelier de validation du Profil côtier et marin de la RDC tenu du 15 au 16 mars 2007, de MATADI à MUANDA en couvrant tout le Bas-fleuve.

Il constitue un site important pour l'implantation des entreprises maritimes, pétrolières et industrielles ainsi que pour le développement urbain.

L'exploitation off- shore et on shore des hydrocarbures et le volume sans cesse croissant du trafic maritime, le convoyage et stockage des hydrocarbure par Pipe-lines, citernes et tankers le long du fleuve Congo, le développement des activités industrielles et agro-industrielles, ainsi que le développement urbain dans les milieux côtiers, fluviaux et lacustres, font courir aux milieux marins, côtiers, fluviaux et lacustres une menace réelle de pollution.

Les conséquences sont telles que si l'on ne prend pas des dispositions, l'on met en danger toute l'existence de l'écosystème avec incidence directe sur la vie humaine et, aussi avec risque d'affecter d'autres pays partageant le même écosystème avec la RDC.

Par ailleurs, sur le plan sous-régional des pays membres du Comité Intérimaire du Courant de Guinée partant de l'Accord d'Abidjan recommande à chaque pays d'avoir un Plan National d'Urgence à mettre en œuvre en cas des catastrophes majeurs de pollution par des hydrocarbures.

1.2. Objectifs et buts

Le PLAN POLMARC a pour objet de fixer les responsabilités et d'assurer une intervention rapide et efficace dans les opérations de lutte en cas de pollution ou de menace de pollution par les hydrocarbures ou des produits chimiques, des milieux marins et côtiers de la RDC.

En vue d'atteindre cet objectif, le Ministre de l'Environnement, Conservation de la Nature, Eaux et Forêts, en vertu de l'ordonnance lui donnant l'autorité de la mise en œuvre du Plan d'urgence met en place une structure de coordination chargée de la responsabilité nationale de toutes les interventions suite à des accidents de pollution ou des menaces de pollution dans les milieux marins et côtiers de la RDC.

1.3. Champs d'application et Zone géographique

Le présent plan d'action doit être suivi en cas de pollution par les hydrocarbures et des produits chimiques dans les eaux marines et les zones côtières ainsi qu'en haute mer si la pollution de cette zone présente une menace pour l'intégrité des eaux sous juridiction congolaise.

La pollution peut se produire par suite d'évènements de mer (accidents de pétroliers, rupture de pipe-line, accident sur une barge) ou d'accidents provenant des infrastructures industrielles et portuaires.

En cas de pollution traversant les frontières ou d'une pollution de grande envergure ou il a été décidé de mettre en œuvre la coopération régionale (WACAF) et internationale (OPRC), le présent plan sert de base pour la participation de la République Démocratique du Congo dans une telle opération.

1.4. Abréviation et définition

Les abréviations principales utilisées dans ce document sont

CCP : Conseil Consultatif Permanent de Lutte contre la Pollution
CICG : Commission Intérimaire du Courant de Guinée
CNT : Coordination Nationale Technique de Lutte contre la Pollution
G.A.L. : Groupe d'Appui Logistique
GIP : Groupe de l'Industrie Pétrolière
CNSE : Commission Nationale de contrôle et Surveillance pour la préservation de l'Environnement
DCA : Direction de la Cellule Antipollution
OFIDA : Office des Douanes et Accises
ONATRA : Office National des Transports
RDC : République Démocratique du Congo
CZN : Commandant sur zone national
CZS : Commandant sur zone suprême
FIPOL : Fonds international d'indemnisation en matière de pollution par les hydrocarbures
OMI : Organisation Maritime Internationale
OPRC : Convention internationale de 1990 sur la préparation, la lutte et la coopération en cas de pollution par les hydrocarbures
PNU : Plan national d'urgence en matière de pollution marine par les Hydrocarbures
POLREP : Rapport de pollution
VHF : Très haute fréquence

Aux fins de ce Plan :

Hydrocarbures signifie des hydrocarbures de toute sorte, y compris le pétrole brut, le fuel, les résidus et les produits raffinés.

Accident maritime signifie

- i) l'abordage de navires, l'échouement ou tout incident de navigation ou autre événement à bord d'un navire ou extérieur à lui qui a pour effet des dommages matériels ou la menace de dommages matériels imminents pour le navire ou sa cargaison ;

- ii) un événement dans un port ou installation portuaire créant une menace de pollution ;
- iii) un événement sur une unité au large se traduisant par un déversement ou une menace de déversement ;

Événement de pollution signifie un fait ou un ensemble de faits ayant la même origine dont résulte ou peut résulter un rejet d'hydrocarbures et qui présente ou peut présenter une menace pour le milieu marin ou pour le littoral ou les intérêts connexes d'un ou plusieurs États et qui requiert une action urgente ou d'autres mesures de lutte immédiates;

Le Plan signifie le présent plan d'urgence sous-régional en matière de pollution marine par les hydrocarbures.

Autorité gouvernementale signifie le ministère compétent ayant la responsabilité gouvernementale de traiter les événements de pollution;

Autorité opérationnelle signifie le ministère compétent ou l'agence compétente ayant la responsabilité opérationnelle de traiter les événements de pollution marine;

Commandement opérationnel signifie la coordination globale et la direction des opérations de lutte conjointe incluant à la fois les ressources nationales et les équipes d'intervention, les équipements et autres ressources (aéronefs, navires ...) apportés par une autre Partie dans une opération d'assistance. Il est exercé par l'autorité opérationnelle de l'État directeur sous la responsabilité du commandant sur zone suprême (CZS).

Commandant sur zone suprême (CZS) signifie l'officier désigné par l'État directeur et ayant le commandement opérationnel global de toutes les opérations de réponse conjointe menées dans la cadre du Plan.

Commandant sur zone national (CZN) signifie un officier désigné par l'autorité opérationnelle qui contrôle l'ensemble des moyens de lutte qui pourraient, sur demande, participer aux opérations de lutte conjointe. (Note : il est préférable mais pas obligatoire que le CZN soit la même personne que celui qui joue le rôle de commandant sur zone dans le plan national d'urgence)

Officier de relations publiques signifie un officier chargé d'informer les médias sur le déroulement des faits et de faire connaître au CZS les réactions du public.

Centre de coordination de la lutte signifie un bureau fonctionnant 24 heures sur 24 et comportant les équipements de communication appropriés, installé aux fins du Plan par chaque Partie qui sert de chambre d'opérations du CZS ou du CZN lorsque le Plan est activé.

Équipe d'intervention signifie un groupe de personnes envoyé en assistance par une Partie à l'autre pour prendre part aux opérations de lutte en tant qu'unité indépendante. Elle peut inclure des personnes à bord de navires, d'aéronefs ou autres moyens autonomes ou des personnes participant au nettoyage à terre. Elle peut inclure des personnels venus de l'industrie.

Opérations en mer signifie toutes mesures, y compris l'intervention sur la source de pollution, la surveillance en mer, le confinement de la pollution, la récupération du polluant, l'application d'agents de traitement à partir de navires ou d'aéronefs, ou toute autre action menée au large pour répondre à un événement de pollution, diminuer son étalement et faciliter la récupération du polluant ainsi que pour réduire les conséquences de l'événement.

Opérations à terre signifie toute action menée sur le rivage ou en mer en frange littorale en vue de récupérer, enlever ou détruire le polluant et de réduire son impact ou ses effets.

Rapport de pollution (POLREP) signifie le rapport par lequel une Partie informe les autres Parties d'un déversement et leur notifie l'activation du Plan.

Liste des autorités (LA) signifie un document adopté à la première réunion des Parties contractantes et mis à jour régulièrement qui désigne les diverses autorités décrites dans le Plan ainsi que les diverses informations les concernant.

1.5. Cadre Juridique

1.5.1. Sur le plan international

La République Démocratique du Congo s'est engagé dans le processus de ratification de diverses conventions, relatives à la préparation, à la lutte et à l'indemnisation des pollutions accidentelles.

- Les procédures de ratification, en cours, concernent les conventions ci-après :
 - la Convention Internationale de 1973/1978 pour la Prévention de la Pollution par les Navires telle que modifiée, ainsi que ces annexes II, IV et V.
 - la Convention Internationale de 1992 sur la Responsabilité Civile pour les Dommages dus à la Pollution par les Hydrocarbures (CLC 1992)
 - la Convention Internationale de 1992 portant création du Fonds d'Indemnisation pour les Dommages dus à la Pollution par les Hydrocarbures (FIPOL 1992)
 - la Convention Internationale de 1990 sur la Préparation, la Lutte et la Coopération en matière de Pollution par les Hydrocarbures (OPRC 1990)
 - la Convention d'Abidjan de 1981 relative à la coopération en matière de protection et de mise en valeur du milieu marin et des zones côtières de l'Afrique de l'Ouest et du Centre

1.5.2. Sur le Plan National

Les opérations d'urgence en RDC repose sur une base juridique formée par les dispositions suivantes:

- L'ordonnance N°.....portant attribution des Ministères
- La loi cadre sur l'environnement (en élaboration)
- **Arrêté portant création de la Commission Intérimaire du Courant Marin de Guinée**
- Arrêté portant création de la CNSE

2. DELIMITATION DES RESPONSABILITES

2.1. Organisation

Le Plan POLMARC relève de deux niveaux de responsabilité à savoir le niveau politique et le niveau technique.

- A. Niveau politique :** Le ministère de l'environnement en coordination avec les autres ministères concernés est le premier responsable de la mise en œuvre du Plan POLMARC. Les Ministères concernés sont : Intérieur, Affaire Etrangères, Plan, Hydrocarbures, Industrie, Economie, Transport, Santé, Recherche Scientifique, Budget, Infrastructure, Défense...

Une Conseil Consultatif permanent est créée pour réfléchir et proposer au gouvernement les mesures et solutions pratiques pour faire face à l'urgence.

Ce Conseil se fait assistée par des Experts nationaux ou étrangers des organismes publics, privées ou indépendants selon le choix du Conseil.

- B. Au niveau Technique :** La Direction Nationale du Comité Intérimaire du Courant de Guinée relevant du Ministère de l'Environnement supervise et coordonne des sous-coordinations qui sont des organes et entités techniques de préparation et de lutte contre la pollution. Cette Direction est le Point focal du Ministère de l'Environnement sur toutes les questions ayant trait avec la pollution marine et côtière. Elle est aussi chargée de toutes les questions en rapport avec la coopération technique sous-régionale, régionales et internationale. C'est elle donc qui prépare les dossiers à jour pour le Ministre de l'Environnement et du Conseil Consultatif permanent de lutte contre la Pollution. Les organes et entités techniques sous sa coordination sont désignés par le Ministre de l'environnement sur proposition et avis technique de la Direction Nationale du CICG. Le Budget de fonctionnement de ces organes et entités sont préparés par la Direction Nationale du CICG. Le Directeur National du CICG après l'évaluation de la situation par la Conseil Consultatif permanent soumet au Ministre de l'Environnement le Plan Technique détaillé des opérations et le budget ad hoc.

Il lui soumet également la procédure de demande d'aide technique conformément au Plan Sous-régional de Coopération en cas d'urgence.

Au-delà du Plan Technique détaillé, le Directeur National présente au Ministre de l'environnement les possibilités d'actions et de passation d'instructions susceptibles d'être mises en œuvre, sans autorisations préalable de l'autorité supérieure, en vue de pouvoir intervenir en cas d'incident imprévu.

2.1.1. Organisation Structurelle

L'organisation générale du PLAN POLMARC met en place la structure suivante :

- Un Conseil Consultatif permanent de lutte contre la Pollution (C.I.LP)
- Une Coordination Nationale Technique de lutte

a) Le Conseil consultatif permanent de Lutte contre la pollution (C.C.P.LP)

Le Conseil consultatif permanent de Lutte comprend :

- Une présidence (Ministère chargé de l'Environnement)
- Un Secrétariat (Commissariat Maritime et Direction National CIGG)
- Les représentants des Ministères Techniques suivants :
 - Ministère chargé de la Défense
 - Ministère chargé de l'Intérieur
 - Ministère chargé de l'Economie
 - Ministère des Finances
 - Ministère chargé de la Recherche Scientifique
 - Ministère chargé des Mines
 - Ministère des Hydrocarbures
 - Ministère chargé de l'Industrie
 - Ministère chargé de Pêche et Agriculture
 - Ministère chargé de la Santé et de la Protection Sociale
 - Ministère des Transports et Communications
 - Ministère chargé des Télécommunications
 - Ministère des Affaires Etrangères
 - Ministère de Budget
 - Ministère du PLAN

Ce Conseil est animé en permanence par le Président et le Secrétariat composé d'un noyau de cadres compétents dans les divers domaines environnementaux.

b) *La Coordination nationale technique et Etat Major de Commandement*

Elle est assurée par la Direction Nationale du Comité intérimaire du Courant de Guinée relevant du Ministère de l'Environnement. Elle est désignée en tant que telle à cause des dossiers techniques nationaux et sous-régionaux en rapport avec la lutte contre la pollution marine des zones côtières dont elle traite en tant que Point Focal au Ministère de l'Environnement. A ce titre elle fait partie du Secrétariat permanent du Conseil Consultatif permanent de lutte contre la pollution.

Elle a sous sa responsabilité la convocation de l'Etat Major de Commandement en temps de crise et la supervision des coordinations Techniques de lutte contre la Pollution. Elle dispose d'une administration autonome et d'un budget relevant du Gouvernement pour le fonctionnement des coordinations de lutte contre la Pollution.

Elle a en charge la préparation, la mise en œuvre et le rapport des opérations. Sur décision du Ministre de l'environnement, elle requiert les services des entités et organismes publics et privés.

Elle met en marche les mécanismes de demande d'aide selon les procédures du plan sous-régional et de l'Accord de la Coopération en matière des urgences des pays membres du Comité Intérimaires du Courant de Guinée.

La Coordination nationale technique est dirigée par un Coordonnateur National secondé par un Coordonnateur national adjoint.

c) *l'Etat-major de commandement*

En cas de crise, il est mis au niveau de la Coordination technique de lutte, un Etat Major de Commandement basé à Muanda dans la Province du Bas Congo.

Il est placé sous l'autorité politique du Gouverneur de la Province du Bas-Congo et de l'Administrateur du territoire de Muanda pour des responsabilités administratives.

Cet Etat Major de commandement est chargé de toutes les actions de lutte en mer et à terre. Il comprend les organes suivants :

- le Ministre Provincial de l'Environnement ;
- l'Administrateur du Territoire de Muanda ;
- le Coordonnateur National Technique ;
- le Directeur de la Cellule Antipollution ;
- le Commandant Force Navale de la Base Navale à Muanda
- Le Commandant de la Police Nationale du Territoire de Muanda
- Le Commissaire Maritime de Muanda
- le Commissaire maritime de Matadi
- Le Directeur Provincial des hydrocarbures
- Le Coordonnateur Provinciale de l'environnement
- Le Médecin Directeur provincial de la Santé
- Le Directeur Provincial du Tourisme
- Le Directeur Provincial de l'OFIDA (Douanes)
- Le Directeur Provincial de l'Immigration

- Le Directeur des Ports maritimes de l'Onatra
- Le Représentant des sociétés pétrolières

L'Etat Major de Commandement a pour mission d'exercer au niveau local la coordination de l'ensemble des opérations de lutte et de veiller à la mise en œuvre du Plan Polmarc.

Le Coordonnateur National technique membre du comité de commandement rend compte au Conseil consultatif permanent de lutte contre la pollution par les hydrocarbures.

d) Cellule Antipollution

Elle est dirigée par un Directeur qui coordonne des sous-cellules de lutte contre la pollution

Les experts requis dans ces Sous cellules proviennent des sociétés et organisations selon le critère de choix établis par l'Autorité du Plan sur proposition de la Coordination Nationale Technique.

Elles sont au nombre de trois :

1. La Sous Cellule des experts antipollution : elle s'occupera des études permanentes sur la prévention de la pollution en vue de préserver l'environnement marin, côtier, fluvial et lacustre contre les déversements des hydrocarbures et autres produits toxiques. Elle est subdivisée en 3 Bureaux fonctionnelles à savoir :

- Bureau d'études géographiques et de cartographie environnementale de vulnérabilité ;
- Bureau d'études météorologiques, océanologiques, hydrologiques, de pêche et études côtières ;
- Bureau d'études biologiques et toxicologique environnementales

2. Sous Cellule des experts opérationnels : Elle est animée par des experts qui ont une expérience et qui participent aux exercices d'interventions de nettoyage et récupération des pollutions. Elle est composée de :

- Bureau de la brigade d'intervention ;
- Bureau de préparation du matériel et équipements d'intervention

3. Sous Cellule administrative, logistique et équipement : elle se charge de la gestion quotidienne du personnel, d'achat des produits et maintenance des équipements. Elle est composée de :

- Bureau de gestion de ressources humaines ;
- Bureau de gestion de logistique et maintenance ;
- Bureau de gestion des stocks des dispersants et autres produits de lutte.
-

4. Sous Cellule des Finances

e) GROUPE d'intervention de l'industrie pétrolière (GIP)

Sous la supervision du Coordonnateur National Technique, il est mis en place un Groupe d'intervention de l'industrie pétrolière basée à Muanda pour assister le Comité de commandement. Il est composé de toutes les sociétés pétrolières opérant en République Démocratique du Congo.

Il a pour assignation de :

- mobiliser les moyens disponibles de lutte appartenant aux sociétés pétrolières ;
- engager l'expertise technique et prendre la conduite de la lutte antipollution selon la pratique de l'industrie pétrolière.

Le GIP désigne son représentant qui est coordonnateur de l'intervention.

f) Groupe d'appui logistique (GAL)

Ce groupe est constitué de tous les ports maritimes situés sur le bief maritime de la RDC. Il a pour rôle d'appuyer logistiquement les équipes d'intervention sur les lieux des incidents.

3. PLAN OPERATIONNEL

3.1. Evaluation de la menace

3.1.1. Renseignement initial

Le renseignement initial du risque ou du constat de la pollution dans le milieu marin ou côtier est porté à la connaissance de l'Administrateur du Territoire de Muanda qui l'achemine au Coordonnateur National Technique de lutte contre la Pollution par les hydrocarbures.

L'information sur l'incident peut provenir du paysan, du pêcheur, d'une société pétrolière, d'un navire ou d'un aéronef, etc.

3.1.2. Evaluation de la menace

A la réception du renseignement initial, l'Administrateur du Territoire prend des mesures pour confirmer l'ampleur de l'incident ou u sinistre. Cette confirmation permet de classer provisoirement la gravité de l'incident selon les catégories Tier1, Tier2 ou Tier 3

Cette classification provisoire permettra au Coordonnateur National de dépêcher une équipe de la Cellule d'Antipollution pour évaluer avec précision la menace en définissant sa gravité selon :

- la nature de pollution,
- l'ampleur ;
- les sensibilités menacées ;
- localisation ;
- les conditions météorologiques etc.

3.2. Déclenchement du plan et Diffusion de l'Alerte

Une fois les précisions du renseignement réunies, Le Coordonnateur National informe le Ministre de l'environnement qui convoque le Conseil consultatif qui décide du déclenchement du Plan d'urgence Polmarc.

3.2.1. Alerte et Mobilisation des moyens

Dès la confirmation de la gravité majeure, le Coordonnateur National met en alerte les moyens de lutte disponibles et notifie les entreprises publiques et privées pour disponibiliser les moyens d'interventions dont elles disposent. Celles-ci disponibilisent sans délais leurs moyens de lutte.

3.2.2. Diffusion de l'alerte

C'est au cours de sa réunion de crise que le Conseil consultatif diffuse l'alerte. Cette alerte est communiquée aux services et administrations concernés aux fins des dispositions utiles. Parallèlement le Coordonnateur National convoque l'Etat Major de commandement.

3.3. Commandement opérationnel

Le Coordonnateur National assure le commandement opérationnel de l'ensemble des moyens mis en œuvre dans les opérations de lutte, définit les rôles des membres de l'Etat Major de commandement et responsabilise les équipes d'intervention et leurs commandements.

3.4. Diffusion des informations

3.4.1 Prévision sur la Pollution

L'ensemble des informations sur la pollution est collecté par l'EMC et centralisé par la Coordination Nationale.

3.4.2. Transmission des informations.

Régulièrement toutes les informations sur la pollution et les prévisions partent des autorités locales et de membres de l'Etat major pour être acheminées à la Coordination Nationale. Celle-ci les soumet à la cellule antipollution pour des études élaborées et en fait une synthèse au Conseil consultatif. Le Conseil consultatif décide de la publication au Public.

3.5. Conduite des opérations

Les moyens existants en permanence et ceux disponibles au sein des sociétés publiques et privées déterminent la conduite des opérations. D'une manière générale, trois types d'opérations sont envisagés à savoir :

- **Opération de surveillance de la situation de pollution ;**
- **Opération préventive (manœuvre de barrages, réduction des déversements de polluant à la mer etc.;**
- **Opération d'intervention (pompage de nappes, allègement des citernes, épandage des produits, nettoyage des sites pollués.**

Dans chaque type d'opération, le Coordonnateur National responsabilise les autorités de commandement et d'intervention.

3.6. Utilisation des dispersants

Dans les opérations de lutte contre la pollution par les hydrocarbures, la République Démocratique du Congo se référera à la liste des dispersants autorisés par le Centre de Documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux (CEDRE), homologués par le Ministère de l'Environnement après avis préalable de la Cellule Antipollution.

4. Moyen de lutte

En plus du stock propre du Polmarc, un recensement de l'ensemble des moyens utiles aux opérations de lutte sera effectué dans les établissements classés en général et dans ceux de l'industrie pétrolier en particulier en vue de le disponibiliser en permanence en cas de crise. Ces moyens comprennent :

- les matériels spécifiques de lutte ;
- les moyens nautiques
- les moyens aériens ;
- les moyens de transports terrestres ;
- les matériels de communication
- les moyens de l'intendance.

5. Information du Public

Officier de Relations Publiques (ORP)

Lors du déclenchement du Plan Polmarc, le Président du Conseil Consultatif Permanent désigne un officier de relations publiques qui a pour tâches :

- d'assurer les rapports avec les médias
- de préparer des communiqués de presse

- de faire le suivi auprès des médias des informations publiées

Communiqués de Presse

Pendant la période d'exécution du Plan Polmarc, l'officier de Relation Publique prépare et diffuse des communiqués de presse sur base des informations données par la Structure de Commandement.

Conférence de Presse

Une fois le Plan déclenché, Le président du Conseil Consultatif permanent, assisté du Coordonnateur Technique de lutte, du Directeur de la Cellule Antipollution et du Commandant sur Zone peuvent décider d'organiser une conférence de presse pour informer les médias de la situation et des mesures prises pour lutter contre la pollution.

6. ANNEXES

Liste des autorités du Plan

a) Autorité Nationale Gouvernementale Compétente

Titre : **Ministre de l'Environnement**

Adresse : **Ministère de l'Environnement**

17 av Papa Iléo, ex-des Cliniques

C/GOMBE

Tél : 00243816886412

Email : rdc_minenv@yahoo.fr

b) Autorité opérationnelle nationale

Titre : **Coordonnateur National du PLAN**

POLMARC

Adresse : **Ministère de l'Environnement,**

17 av Papa Iléo ex-des Cliniques

C/Gombe

Tél : 00243997816451

Email : cicgrdc@yahoo.fr

c) Point de Contact National

Titre : **Commissaire Maritime**

Adresse : **Ministère des Transports**

PORT DE L'ONATRA/MATADI

Tél : 00243999951015
Email : ewey15050@yahoo.fr
cicgrdc@yahoo.fr

d) Cellule de lutte Antipollution

Titre : Directeur de Cellule Antipollution

Adresse : Ministère de l'Environnement, 17 av
Papa Iléo ex-des cliniques
C/GOMBE

Tél : 00243815011210
Email : cicgrdc@yahoo.fr

Membres de la Cellule de lutte Antipollution

Directeur de la Cellule Antipollution :

Professeur MUSIBONO EYUL ANKI Dieudonné

Bureau Biodiversité et écotoxicologique : Responsable,
Professeur IFUTA Séraphin

Membres :

- Professeur OKONDA AHOKA,
- Dr BIEME LOKWA
- CT BEYA DIBWE
- MBUNGU Noël
- MWANAMBUYU KABALA
- Professeur BULUKU
- KATAWA GUMEDI

**Bureau d'études géographiques, météorologiques,
océanographiques et hydrographiques :**
Responsable, Professeur KANIKA Thomas

Membres :

- HALISI NTIKALA
- MATANDA Moris
- BABOLONGO INYUKA

Bureau d'études Juridiques

Responsable, KABITSWA Alphonse

Membres :

- LIMBELE Jean-Lambert
- MONDONGA Edmond

Bureau d'études socio-économiques
Responsable, MWAMBA SEYA

Membres :

- KADIADIA Jean Pierre
- PEMBELE Celine
- Kempfine Minon

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Membres :

- KAMBE-mi-MANZEL
- ASSANI KUMBUSA
- INZIE NGILIBANKIE
- Patric Claes

Bureau Finance

Responsable, Moïse MUHINDO WETEMWAMI

Membres :

- BOMINI NZENIMA

e) Commandant sur Zone

Titre : Commandant Bn Force Navale Banana

Adresse : Base Navale Banana

Tél :

Email :

f) Autorité douanière compétente

Titre : Directeur OFIDA

Adresse : OFIDA, Bld du 30 juin place Royal

Tél :

Email :

g) Autorité d'Immigration compétente

Titre : Inspecteur DGM

Adresse : DGM Bld du 30 juin

Tél :

Email :

Groupe d'Appui de l'Industrie Pétrolière, Plan sectoriel et Atlas de sensibilité disponible

a) PERENCO-REP

- Plan d'urgence
- Plan antipollution
- Atlas de sensibilité disponible

b) COHYDRO

- Plan d'urgence

c) SOCIR

- Plan d'urgence

d) SEP-CONGO

- Plan d'urgence
- Plan antipollution

Groupe d'Appui Logistique

- a) ONATRA : Contact : Directeur des Ports Maritimes, Mr UMBA
- b) RVM : Contact : Administrateur Directeur Technique, Mr.....
- c) SOCOPE : Contact : Administrateur Directeur Général, Mr Guy Desplat

Description du matériel Permanent

Description du matériel de lutte contre la pollution

DESIGNATION	NOMBRE
Camionnette plus remorque	01
Camion Benne	01
Jeep 4x4	04
Vedettes :05M	02
Vedettes :08M	02
Vedettes : 12M	02
Ecremeurs	02
Réservoirs	5/5m3
Réservoirs	3/8m3
Flottants	2/10m3

Barrages Compacts	(à déterminer) 05c/120m
Générateurs de puissance	02
Pompes à diaphragme HARZ	02
Pompes centrifuges LISTER PETER	05
Nettoyeur eau Chaud. Haute pression	01
Explosimètre	03
Viscosimètre	02
Projecteurs	04
Compresseur d'air	01
Vêtements spéciaux de protection	100
Equipements de plongé sous-marine	02
Détecteur d'interface	02
Combinaison KAKI	50
Bottes imperméables	50
Chaussures de sécurité	50
Conteneur de pièces et accessoires	001
Compteurs geiger	50
GPS	05
Logiciel GIS	02

Description du matériel de transmission

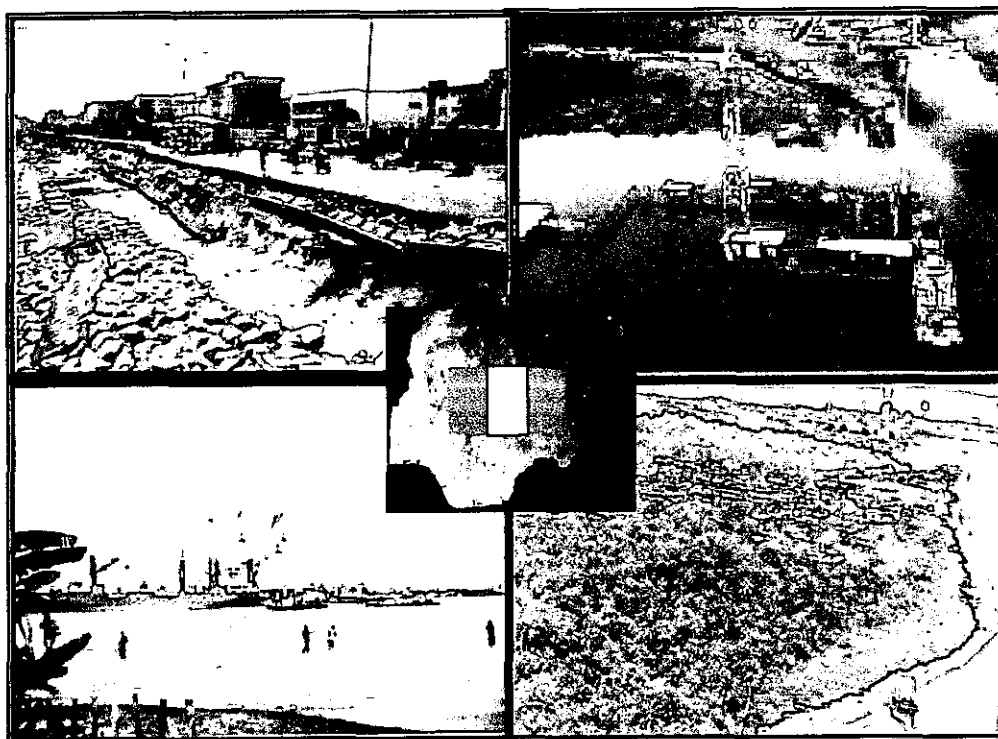
E/R HF type	02
E/R VAF RT2048 Fixes	06
E/R VHF portatif Stornophone	18
Mobil phone	20

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**NATIONAL PROGRAMME OF ACTION (NPA) FOR THE PROTECTION OF
THE MARINE ENVIRONMENT FROM LAND- BASED ACTIVITIES IN
NIGERIA.**



**UNITED
NATIONS**

ENVIRONMENT PROGRAMME

**GLOBAL PROGRAMME OF ACTION FOR THE
PROTECTION OF THE MARINE ENVIRONMENT FROM
LAND BASED ACTIVITIES (GPA/LBA)**

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EXECUTIVE SUMMARY

MISSION

The Nigerian coastal environment consists of rich and diverse ecosystems, natural resources, and large human populations. In line with the goals of Sustainable Development of Coastal Areas and the Nigerian National Environmental Protection policy, the National Programme of Action (NPA) will provide a comprehensive yet flexible framework, to preserve and protect the marine environment from sewage, physical alterations and destruction of habitat, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals and radioactive substances and other coastal hazards.

CHAPTER ONE : THE NIGERIAN POPULATION AND MARINE ENVIRONMENT

Nigeria, the largest country in Africa with a total area of 923,769sq km (land 910,768 and water 13,000 sq km) is located between 4° and 14° latitude north and 2.30° and 14.30° degrees longitude east. The coastal areas stretch inland for a distance of about 15km in Lagos in the west to about 150km in the Niger Delta and about 25km east of the Niger Delta. The coastline stretches for about 853km. The Nigerian coastal area is divided into four main geomorphic zones namely:

- the Barrier lagoon coast which lies between Badagry and Ajumo east of Lekki town;
- the Mahin mud coast lying between Ajumo and the Benin river-estuary in the north-western flank of the Niger delta;
- the Niger Delta lying between Benin river in the west and Imo river in the east and
- the Strand coastline lying between Imo river and the Nigerian/Cameroon border in the east with the Cross river inclusive.

COASTAL DEMOGRAPHY AND SOCIO - ECONOMICS

Nigeria consists of 36 States with the Federal Capital Territory, Abuja. The Nigerian coastal zone sprawls a total of nine coastal States namely: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Lagos, Ogun, Ondo and Rivers. Nigeria's population grew from about 88,992,220million in 1991 to 140million in 2007 with a population growth currently running at 3.2% Fishing is a major activity especially in the coastal areas. Resources include crude oil, coal, tin, columbite, palm oil, peanuts, cotton, rubber, wood, hides and skins. Industrial products include textiles, cement and other construction materials, food products, chemicals, fertilizer, ceramics, steel and petrochemicals. Subsistence agriculture produces maize, yam, and other domestic food crops. Cash crops include cocoa, rubber, cotton and palm products.

CHAPTER TWO : COASTAL STATES PROFILES

The Nigerian coastal zone sprawls a total of nine States namely: Lagos, Ogun, Ondo, Delta, Edo, Rivers, Bayelsa, Cross River and Akwa Ibom. The total coastal States population is estimated to consist of about 26.52% of the national population

AKWA IBOM STATE

Akwa Ibom State is located in south eastern Nigeria in the Niger Delta. The capital city is Uyo. The state has 31 local governments and a land area of 8,412km². Between 1991 and 2006, the population grew from 2,409,613 to 3,920,208 people respectively. The average population density is 466 persons per km². There are several more rural than urban communities with a rural/urban population ratio of 70 / 30

The principal traditional occupations are farming, fishing and trading. In more recent times, the oil industry, manufacturing sector and the civil service have offered white collar job opportunities. The dominant industries include Oil and gas, Agro-Allied, Woodworks and Furniture, Soaps and detergents and Cosmetics. The principal intra-state modes of transportation include motor vehicles dominated by two-wheel motor cycles known in local parlance as Okada on land. On the numerous creeks in the state, motorized and manually operated canoes are widely used. Rural communities depend on rivers creeks and shallow wells as source of potable water. In the urban area, most residents depend on wells and in some cases boreholes sunk in private residences.

BAYELSA STATE

The population of Bayelsa as at the 2006 census stood at 1,703,358 people. Most people live in the rural areas. The rural/urban population ratio is 90 /10. The traditional occupations are fishing, farming and trading. The dominant Industries include Oil & gas, Agro-Allied, Woodworks and Furniture, Soaps and detergents and Cosmetics. The principal intra-state modes of transportation are motorized boats on the numerous creeks in the state. Access to potable water is generally poor in the Niger Delta where it is estimated that less than 20-24 % of rural communities and 45-50 % of urban dwellers have access to potable water. Generally, there is no central sewage system for any city in Bayelsa State. Most households are connected to soak-away pits the sludge of which is periodically evacuated by private entrepreneurs.

CROSS RIVER STATE

Cross River State is located in the south eastern most corner of Nigeria. Between 1991 and 2006, the population grew from 1,911,297 to 2,888,966 people respectively. The average population density is 143.3 persons per km². The urban areas are more populous than rural areas with a rural/urban population ratio of 25/75. The principal traditional occupations are fishing, farming and trading. In more recent times, the oil industry and manufacturing sector have offered white collar jobs. The dominant industries in order of importance include Petro chemical, Wood processing, Agriculture/Fishing, Quarrying and Cement. The principal intra-state modes of transportation include motor vehicles on land and boats on the numerous creeks in the state. Access to potable water is very poor. Generally, there is no central sewage system for any city in the State.

DELTA STATE

The population of Delta State grew from 2,690,491 in 1991 to 4,098,391 in 2006. This phenomenal rate is ascribable to the influx of people as a result of the State's creation in 1991. The population density is 240.9 per km² (Table 3.4.). The rural/urban population ratio is estimated at 30/70%. The principal traditional occupations are farming, fishing and trading. In more recent times however, the oil industry, industrial manufacturing sector have offered white-collar jobs. The dominant industries include Oil and gas, Petrochemical, Wood-processing, Rubber Latex and Agriculture. The principal intra-state modes of transportation include motor vehicles on land and motorized canoes on the numerous creeks in the state. Access to potable

water is generally poor. Access to health facilities is generally poor. Generally, there is no central sewage system for any city in the State.

EDO STATE

Edo State population as at 1991 stood at 2,172,005 but rose to 3,218,332 million in by 2006. The rural/urban population ratio is estimated at 30/70 as most of the population is concentrated in the urban area. The principal traditional occupations revolve around fishing, farming, ecotourism, woodworks, arts & crafts and trading. The dominant industries include Agriculture/Fishing, Petro chemical, Brewing and Plastic manufacturing, Lumbering and saw milling and Rubber processing. The principal intra-state mode of transportation is via motor vehicles on land. Some transportation on water also occurs in the riverine area. Less than 20-24 % of rural communities and 45-50 % of urban dwellers have access to potable water. Access to health facilities is generally poor. There is no central sewage system for any city in the State.

LAGOS STATE

The state has 20 local governments and a land area of 3,568.61km². With the creation of the Federal Capital Territory of Abuja in 1976, Lagos ceased to be the capital of the State which was moved to Ikeja. Equally, with the formal relocation of the seat of the Federal Government to Abuja on 12 December 1991, Lagos ceased to be Nigeria's political capital. Nevertheless, Lagos remains the commercial nerve center of Nigeria. The State is situated on a system of barrier/lagoon complex. Lagos State experienced a nearly a doubling of population from 5,725,116 in 1991 to 9,013,534 people in 2006. Out of this population, Lagos metropolitan area is occupied by over 85% on an area that is 37 percent of the land area of Lagos State.

The principal traditional occupation is fishing and to a lesser extent, farming. However, the city (former capital of Nigeria) is the economic center of Nigeria. The dominant industries are Leather and textiles, Pharmaceuticals, Metals and Alloys, Cosmetics, Soap and detergents and Shipping. The principal mode of transportation is by motor vehicles on land. In spite of abundant waterways, transportation on water is poorly developed.

The two main water works and several mini waterworks in the State serve only 25% of the population while people depend on water from bore holes and wells. With the exception of a few new estates, there is no central sewage system for any city in Lagos State.

OGUN STATE

Ogun State with a land area of Ogun State is 16,762km² has 20 local governments. Ogun State population as at the 1991 census was 2,333,726. This population figure grew to 3,658,098 in 2006. Population density is about 218.24 per km² with most of the population living in the rural areas and a rural/urban population ratio of 61/39. The principal traditional occupations are farming, trading while and fishing is done in the coastal areas. The dominant industries in order of importance include Agriculture/farming; lumbering, sawmilling and woodworks, quarrying; and sand mining (River Channels) . The principal intra-state mode of transportation is by motor vehicles on land in upland areas. Access to potable water is also generally poor where it is estimated that less than 20-24 % of rural communities and 45-50 % of urban dwellers have access to potable water. Generally, there is no central sewage system for any city in the State. Most households are connected to soak-away pits the sludge of which is periodically evacuated by private companies.

ONDO STATE

Ondo state has a land area of 14,769 km² . Between 1992 and 2002, the population grew from 2,312,535 to 2,983,433 people. The projected figures for 2012 and 2022 are 3,856,469 and 4,984,900 people respectively. The principal traditional occupations are farming and fishing while some trading activities also take place. The dominant industries in order of importance include Agriculture/farming, Lumbering, Sawmilling and Woodworks, Quarrying, and Sand mining (River Channels). The principal intra-state mode of transportation is by motor vehicles on land in the upland areas. However, motorized transportation on water is also prominent in the coastal area which constitutes about 21 % of the entire state. Access to potable water is also generally poor as is the case in the entire Niger Delta where it is estimated that less than 20-24 % of rural communities and 45-50 % of urban dwellers have access to potable water. Access to health facilities is also generally poor in the Niger Delta. Generally, there is no central sewage system for any city in the State.

RIVERS STATE

Rivers State with a total land area of 11,077 km² is divided into twenty-three Local Government Areas (LGAs). Rivers State had a population figure of 4,309,557 (old Bayelsa inclusive). The population of the now Rivers States stood at 5,185,400 (2006 census). Population density is

about 468.12 with most of the population living in the rural areas and a rural/urban population ratio of 61/39. The principal traditional occupations are fishing and farming while some trading activities also take place. The dominant industries in order of importance include fishing, agriculture/farming, lumbering, sawmilling and woodworks, Oil and Gas, Quarrying; and sand mining (River Channels)

The principal intra-state mode of transportation is by motor vehicles on land in upland areas. However, motorized transportation on water is very prominent in the coastal area which constitutes about 75 % of the entire state. Access to health facilities is generally poor in the Rivers State. Generally, there is no central sewage system for any city in the State. Most households are connected to soak-away pits the sludge of which is periodically evacuated by private entrepreneurs.

CHAPTER THREE : ENVIRONMENTAL PROBLEMS OF THE COASTAL AREA

The following environmental problems have been identified to be degrading the Nigerian coastal areas:

- Coastal erosion
- Flooding
- Pollution from Oil spills, solid wastes and sewage
- Over exploitation of fisheries resources and the adverse effects of global climate change and sea level rise

EXISTING INSTITUTIONAL AND LEGAL FRAMEWORK

Nigeria has many existing national state and local government legislations and edicts with the ultimate goal of sustainable management of the coastal and marine areas. At the national level, the Federal Ministry of Environment has a national jurisdiction for all environmental issues. States Ministries of Environment complement the national legislation. Three tiers of Government exist in Nigeria under the 1979 constitution amended in 1984. These are Federal, State and Local Governments. Research and Academic Institutions with the mandate to carry out research in the coastal areas include the Nigerian Institute for Oceanography and Marine Research (NIOMR) and many other Universities

LEGAL FRAMEWORK

The Nigerian Constitution allows the federal as well as state governments to make legislation, laws and edicts on the environment. The most important one is the Environmental Impact Assessment legislation (Environmental Impact Assessment Decree No.86 of 10 December 1992).

The regulatory instruments include:

- National Policy on the Environment (FEPA, 1989)
- National Guidelines and Standards for Environmental Pollution control in Nigeria (FEPA, 1990).
- National Environmental Protection (Effluent Limitation) Regulations S.I.8 (FEPA, 1991).
- National Environmental protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations-S.I.9 (FEPA, 1991).
- National Environmental Protection (Management of Solid and Hazardous Wastes) Regulation S.I.15.

There are also many environmental related legislation affecting the conservation and management of resources within the Nigerian coastal zone.

Nigeria is signatory to several International and United Nations Conventions, Protocols which include the Law of the Sea Convention of 1982, Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1981 (Abidjan Convention), International Convention for the prevention of Pollution from Ships, 1973, as modified by the protocol of 1978 relating thereto (MARPOL 73/78).

PROGRAMME OF ACTION

An analysis of the socio-economic and morphology of the Nigeria coastal area/zone has revealed that the Nigerian coastal zone is being degraded by the following hazards and problems:

Pollution in the form of oil spills, Industrial and Agricultural effluents, inadequate management of sewage and solid wastes and air pollution from power plants, gas flaring and vehicular emissions

Ecosystems' modification in the form of Erosion, Flooding, Deforestation, Salt water intrusion and Invasive/exotic species

Global climate change and Sea-level rise
Unsustainable exploitation of living resources

ACTIONS TO ADDRESS PROBLEMS

Many of these coastal problems cut across State boundaries in the Federation, however, the severity may differ from State to State. The national action programme will, through appropriate projects and actions, initiate steps to minimize and or ameliorate negative impacts associated with relevant issues and promote sustainable development through awareness generation and projects-oriented interventions among others. Specific programmes of actions to address the problems shall include:

Oil spills

In terms of responsibilities, The Federal Ministry of Environment shall be charged with overall supervision of that aspect of the NPA that deals with oil spill remediation and prevention. This will be done in close liaison with state Ministries of Environment and the stakeholders especially oil companies. Associated projects to ameliorate, mitigate oil spill will be financed by polluters, the national ecological fund, as well as counterpart funding from state governments.

The Nigerian government shall put in place measures to prevent further degradation of all coastal areas especially lagoons by regulating pollution inputs from source and developing relevant management expertise. A more holistic programme to rejuvenate polluted lagoons like the Lagos lagoon shall be funded by the Federal government through ecological funds with inputs from the State government, Industries. Other actions for government shall include:

Encouraging the entrenchment of enforceable management policies, ensuring the availability of adequate data and information for oil spill remediation,
easy activation of all levels of spill contingency plans and compliance with provisions of relevant international protocols and treaties.

Ewage and solid wastes

A national Plan to establish Land fill sites across the nation is on going. However removal of solid waste from local dumping sites and transportation to the established sites is inefficient and

constitutes major problems for both government and other stakeholders. The Federal government has also installed small scale incinerators for combustion of solid waste especially metals and glass including hospital syringes. The Federal Government shall provide more funding to States' governments to clear and dispose solid waste.

In the new National Plan of Action the Federal, State and local government will ensure that solid waste is properly disposed. Collection and disposal of waste shall be the immediate responsibility of local governments with appropriate funds from Federal and State governments.

Industries producing materials which contribute to solid waste like "pure water sachets" shall be made to put in place plans to collect and dispose their waste in collaboration with the local government.

"Waste to wealth" plan shall be the goal of both Federal, State and Local governments.

Coastal erosion and flooding

Most coastal erosion mitigating options are funded by the Federal Government through the Ecological Fund. The Federal Ministry of Environment through the Division of Coastal Zone Management shall implement in collaboration with State governments and Stakeholders programmes to protect physical structures along the national coastline from erosion.

The following national standard should be adopted in any beach nourishment programme:

- Reduction of beach face gradient to allow waves to break farther offshore.
- Use of appropriate sediment grain sizes. (too fine sediment are easily eroded)
- Burrow pits should be sited far off from an eroding beach.
- Use of Afforestation should be encouraged as much as possible.

Erosion control measure using hard structures must undergo very stringent environmental impact analysis and studies to ensure that any such option will result in more adverse impacts on the updrift side.

The Federal Government, State and Local government shall put in place actions to deflood coastal areas especially where large populations, socio economic activities exist.

Public enlightenment activities on the appropriate ways of waste disposal that clog drainage channels shall embarked upon by local and State governments.

Invasive and exotic species

The Nigerian government shall take all necessary measures to arrest the spread of Nypa palm, restore mangrove populations and develop industries around the utilization of Nypa palm as a control measure that will at the same time create employment.

Global climate change and sea level rise

Nigeria will prosecute the ongoing programme to phase out gas flaring by the year 2008. Such a programme is in line with the objectives of the UNFCCC and the Kyoto Protocol on gaseous emissions. Nigeria has also executed in the recent past, a programme to encourage manufacturers of refrigeration units to use non – Freon alternatives. Other areas of activities include development of human resources in relevant disciplines. Adaptation options require education, provision of infrastructures, enhancement of management skills and research to collate and analyse historical climate data and associated metocean data.

Specific areas of intervention to address adaptation options in Nigeria in this plan will include:

- Building human capacity to conduct research into land-ocean interaction that will identify the impacts of atmospheric change, variability and extremes on the Nigerian coastal socio-economic and ecological systems.
- Strengthening of national and local research communities' capacity for assessment of the impacts of atmospheric change, variability and extremes for the identification and assessment of adaptive responses.
- Strengthening national capacity by developing and implementing Integrated Coastal/Fresh Water Area Management plan.
- Developing human and infrastructural capacity for water conservation measures, planning and preparedness for droughts, salt water intrusion and severe floods.
- Developing capacity for modeling, evaluating and designing physical structures (e.g. groin, breakwaters, dykes, and sea wall) to combat sporadic flooding and coastal erosion.

Unsustainable exploitation of living resources

Within and even outside the context of the NPA, the Nigerian government will strengthen appropriate institutional and legal frameworks. The FAO code of conduct for responsible fishing will also be promoted. Furthermore, the practice of aquaculture will also be promoted because of its potential to relieve the huge pressure presently on capture fisheries.

PILOT PROJECTS

Using the African Process portfolio of projects as a frame of reference, a project proposal most likely to address the foregoing problems will be one that strengthens Management & Monitoring, Control & Surveillance". Specific projects will be implemented as pilot projects to address the environmental problems highlighted above.

INTRODUCTION

1.1. THE GLOBAL PROGRAMME OF ACTION

At an inter-governmental conference held in Washington D.C. in 1995, the international community recognized that the impacts of land-based activities on the marine environment are significant and agreed on the Global Programme of Action for the Protection of Marine Environment from Land Based sources. The primary objective of the GPA is to facilitate *“the realization of the duty of States to preserve and protect the marine environment. It is designed to assist States in taking actions”*. The coast is an area of high socio-economic activities. This is due to the fact that coastal and marine areas contain vast natural resources. Pressures arising from such activities usually result in the degradation of the area. Most of the degradation in the coastal and marine areas results from land-based activities, which are responsible for over 80% of such impacts.

1.2. MISSION

The Nigerian coastal environment consists of rich and diverse ecosystems, natural resources, and large human populations. The National Programme of Action will provide a comprehensive yet flexible framework, to preserve and protect the marine environment from problems associated with physical alterations and destruction of habitat, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals, sewage, and radioactive substances. The sustainable use of coastal and ocean resources is linked to public health, food security, economic and social benefits, including cultural values and traditional livelihoods. Hence, this National Programme of Action is of high priority.

1.3. OBJECTIVES OF NPA

National programmes of Action are iterative processes, which call for the phased implementation of priorities identified within a cross-sectoral, participatory framework. The fundamental purpose for implementing this national programme of action is to ensure the health and sustainable use of coastal and marine resources by responding in a strategic and feasible manner, using targeted, integrated and adequately resourced measures, to both sustained and short-term pressures caused by human activities on land.

The basic objectives of the National Programme of Action include:

- Identification of resources and threats to the environment from land based activities.
- Provision of a flexible mechanism for identifying and addressing priority problems through partnerships and consensus amongst stakeholders.
- Strengthening public sector's ability to effectively respond to causes of environmental degradation from land based sources, and to ensure the sustainability of the actions and projects undertaken to address the problems.
- Mobilisation of resources and partners, including the private sector, for implementation of specific projects to address the problems.
- Heightening awareness and understanding of the value, benefits and vulnerability of strategic coastal and marine environments.

1.4. NATIONAL PLAN OF ACTION

In order to realize the objectives of the National Programme of Action presented in the previous section, this National Action Plan has been prepared to include:

- Compilation of basic political, socio-economic and demographic information on all littoral states.
- Identification of traditional and contemporary occupations as well as dominant industrial activities
- Evaluation of housing, sanitation and health needs
- Identification of key environmental problems and their impacts in the coastal area of littoral states and beyond
- Identification of extant initiatives to address problems so identified
- Development of problem – specific projects including means of funding
- Execution of developed projects in order to ameliorate the existing situation

CHAPTER FOUR

EXISTING INSTITUTIONAL AND LEGAL FRAMEWORK

INTRODUCTION

In recognition of the need to address issues associated with various environmental problems in the country, several bodies and institutions have been established in response. In addition, Nigeria has many existing national state and local government legislations and edicts that are designed to ensure the sustainable management of the coastal and marine areas. All national legislation have national jurisdiction. In other to remove duplication and conflicts, states or any other local legislation are meant to reinforce the national legislation. At the national level, the Federal Ministry of Environment has a national jurisdiction for all environmental issues.

INSTITUTIONAL FRAMEWORK

Three tiers of Government exist in Nigeria under the 1979 constitution amended in 1984. These are Federal, State and Local Governments. The Nigerian Constitution allows States to make legislation, laws and edicts on the environment.

In Nigeria, many Ministries, Extra-ministerial departments, Agencies of the Federal Government, State and Local councils, Research Institutes, Universities, Private organizations and NGOs have been actively involved in different activities aimed at the sustainable development of the coastal zone. In recognition of a need for co-ordination, there is also a joint Ministerial committee set up by the Federal Government to hold regular consultations on matters of mutual interest for the protection and development of the coastal and marine environment.

Ministerial and extra – Ministerial departments

The ministerial and extra-ministerial departments with one role or the other in sustainable environmental development include but not limited to;

The Federal Ministries of Environment, Agriculture, Water resources, Science & Technology, Foreign Affairs, Presidency, African Integration, Defense. Others include the equivalent state ministries and the equivalent local government committees where applicable. Some states also have Environmental Protection Agencies performing roles similar and complementary to those of the Federal Ministry of Environment in the respective states.

Research and academia

Several academic and quasi-academic bodies and agencies play important roles in sustainable development of the Nigerian coastal area. The Nigerian Institute of Oceanography and Marine Research (NIOMR) has responsibilities to conduct research into the living and non-living resources and the physical characteristics of the Nigerian territorial waters and high seas beyond. NIOMR through its research Divisions of Marine Geology/Geophysics, Fisheries resources and Physical/Chemical Oceanography is involved in the collection and analysis of data on coastal resources, environmental degradation, pollution, oceanographic parameters and sea level rise.

Many Nigerian Universities are also involved in research activities concerning various aspects of coastal zone management. These Universities include:

- University of Lagos;
- Lagos State University;
- Obafemi Awolowo University (Institute of Ecology);
- University of Benin;
- University of Port Harcourt (IPS, IGST);
- University of Calabar
- Institute of Oceanography (University of Calabar).
- Delta State University;
- Federal University of Technology Uyo;
- Department of Petroleum Resources (DPR)
- Nigerian National Petroleum Corporation (NNPC)
- Petroleum Training Institute Warri

NGOS, Civil societies

Some Non Governmental Organizations have programmes dealing with aspects of environmental protection in the Nigerian Coastal zone. Such NGOs include; Nigerian Conservation Foundation (NCF), Delta Environmental Network, Ecological Society of Nigeria (ECOSON), Fisheries Society of Nigeria (FISON), Forestry Association of Nigeria (FAN), Friends of the Environment (FOTE), Friends of the Niger Delta, Niger Delta Environmental Survey (NDES), Niger Delta Wetland Centers, Nigerian Environmental Society (NES), Nigerian Environmental Link (NEL), Nigerian Study Action Team (NEST), Nigerian Environmental Watch (NEW), etc.

Some of the activities of the above NGOs and Civil Societies include;

- The promotion of public awareness and action on environmental degradation in the coastal zone,
- Promotion of public interest in conservation and the protection of biological diversity in the coastal zone,
- Provision of expertise and guidance on matters affecting the coastal environment,
- Assistance in the development and implementation of local conservation policies and support of local conservation activities on the sustainable use of resources in the coastal zone.

Apart from the NGOs, there are also Community Based Organizations like the South South Coalition in the Niger Delta. These are village organisations and are present in the most communities in the Nigerian coastal Area. These organisations are involved in self-help projects such as provision of basic amenities e.g. electricity, portable water, roads, schools, primary

health care clinics etc. CBOs tend to complement Government efforts.

International organisations and activities

The country has enjoyed some form of bilateral and multilateral technical and financial assistance and collaboration on coastal environmental management from such agencies as UNDP, IMO, RECTA, WWF, IUCN, UNEP, IBRD, UNIDO, JGOFS, GOG – LME, GC – LME, GIWA, ACOPS etc.

LEGAL FRAMEWORK

Various laws, guidelines, standards and regulations exist with the overall objective of preventing and controlling pollution in the coastal area. However, the prevention and control of pollution is neither cheap nor convenient. Quite often, stakeholders usually only embark on these measures because they are obliged to comply with these existing laws, regulations and guidelines issued by appropriate authorities. It is also important to recognize that environmental problems often transcend geographical boundaries and therefore have both national and international implications.

Federal and local laws, regulations, guidelines

The Federal government has several legislations aimed at protecting the environment. One of the most important is the Environmental Impact Assessment legislation (Environmental Impact Assessment Decree No.86 of 10 December 1992). This legislation makes it mandatory that all major developmental projects should carry out EIAs and obtain permits arising there from before the commencement of such activities. The legislation is supervised and enforced by the Federal Ministry of Environment. A similarly important legislation is the Federal Environmental Protection Agency Decree No. 58 of 30 December 1988 as amended by Decree 59 of 1992 and further amended by Decree 14 of 1999 address issues relating to interstate planning especially transboundary waters and Air pollution.

Other environmental legislations include the following:

- Federal Environmental Protection Agency Decree No.58 of 30 December 1988 as amended by Decree 59 of 1992 and further amended by Decree 14 of 1999.
- National Effluent Limitation Regulation (FEPA), 1991
- National Environmental Protection (Pollution and Abatement in Industries in Facilities Producing Waste) Regulations, 1991
- Environmental Impact Assessment Decree No. 86 of 10 December 1992
- Environmental Impact Assessment—Procedural Guidelines, (FEPA), provides guidance on the content of an EIA.
- The FEPA Act, cap 131, LFN, 1990
- Harmful Waste Decree No. 42 Of 25 November 1988: *Harmful Wastes (Special Criminal Provisions etc.)*
- Regulations S.I.8, S.I.9. S.I.15 of 15 August 1991: *National Environmental Protection (Pollution Abatement in Industries and Facilities Producing Waste) Regulations.*
- *National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations.*
- FEPA Regulations 1991, Article 2 on Waste Notification
- FEPA solid and Hazardous Wastes Management Regulations 1991 on 'cradle-to-grave' Waste Management.
- Regulations of 15 August 1991: *National Environmental Protection (Effluent*

Limitation) Regulation.

- Regulations of 15 August 1991: *National Environmental Protection (Pollution Abatement in Industries and Facilities Producing Waste) Regulations*.
- Ordinance of 23 May 1937: *Forest Ordinance- Northern Region*.
- Decree No. 36 of 26 August 1991: *Federal National Parks Decree*.
- Environmental Regulations Governing Environmental Protection.

Some environmental regulations related to the protection of the environment include:

- (i) Criminal Code Section 247 Forestry Act, 1958
- (ii) Land Use Decree 1978
- (iii) Quarries Act 1969

Regulatory instruments include:

- ◆ National Policy on the Environment (FEPA, 1989)
- ◆ National Guidelines and Standards for Environmental Pollution control in Nigeria (FEPA, 1990).
- ◆ National Environmental Protection (Effluent Limitation) Regulations S.I.8 (FEPA, 1991).
- ◆ National Environmental protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations-S.I.9 (FEPA, 1991).
- ◆ National Environmental Protection (Management of Solid and Hazardous Wastes) Regulation S.I.15.

There are also many environmental related legislation affecting the conservation and management of the Nigerian coastal zone. Such legislations fall under; Forestry, Wildlife, Fisheries, Crude Oil exploration and exploitation, Exclusive Economic Zone and National Resources Conservation. Examples of these include:

Forestry Ordinance of 1937

Mineral Act of 1946 which affirms ownership of all minerals as property of the Government

Petroleum control Act 1968

Petroleum Drilling and Production Regulation 1969

Petroleum Act 1969 which established the right of Nigeria to exploit petroleum and gas in Nigeria's EEZ

Wild Animals Preservation Law 1972

Forestry Amendment Edict 1973

Exclusive Economic Zone Decree 1978, which established an EEZ of 200 nautical miles adjacent to the Territorial Sea

Crude Oil Transportation and Shipment Regulations 1984

The Endangered Species Decree 1985

Federal Environmental Protection Agency (now Federal Ministry of Environment) Act 1988 cap. 131

Associated Gas Re-injection Act cap.20 1990

Harmful Waste Act cap 165 1990

Land use Act cap 202 1990

Natural Resources Conservation Agency Act cap 285 1990

Oil in Navigable Waters Act cap 1990
Sea Fisheries Decree 1992.

The Land use Decree of 1978 stipulates that all land resides with the federal Government of Nigeria. The Decree provides for granting the statutory right of occupancy over land and customary rights over rural land to developers, Institutions and Government. The Decree also empowers the Governor of each state to hold trust and administer land for the use of all Nigerians. All coastal land areas are consequently under this decree.

International agreements, Protocols and Treaties

Some environmental problems are trans-national and even sometimes global. There are thus several international protocols addressing such and related problems. Nigeria is a signatory to a number of such treaties for the protection of the coastal environment especially from land-based sources of pollution. Examples include;

African Convention on the Conservation of Nature and Natural Resources 1968;
International Convention on the Establishment of an International fund for compensation for Oil Pollution Damage, 1971;
Convention on the Protection of World Cultural and Natural Heritage, 1972;
Convention on the Prevention of Marine Pollution by dumping of wastes, 1972;
Convention on International Trade in Endangered Species, 1973;
Convention on Conservation of migratory species of wild animals 1979;
Convention for cooperation in the protection and development of the marine and coastal environment of the West and Central African Region, 1981;
Convention of the United Nations Law of the Sea, 1982
1989 Basel Convention on the transboundary movement of Hazardous wastes and their disposal.
RAMSA Convention 1971;
Convention on the Prevention of Marine Pollution by dumping of wastes and other matter, 1972 (London Dumping Convention)

Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1981 (Abidjan Convention) - 1 protocol

United nations Convention on the Law of the Sea, 1982
International Convention for the prevention of Pollution from Ships, 1973, as modified by the protocol of 1978 relating thereto (MARPOL 73/74)

CONSTRAINTS IN THE PRESENT INSTITUTIONAL AND LEGAL FRAMEWORK

The major constraint with the present institutional framework is the overlap in responsibilities of various institutions. For particular problems, responsibilities are vested in many agencies and bodies. To compound the problem, there are also sometimes conflicts between the three tiers of Government especially where enforcement issues are concerned.

With regards to the legal framework, Nigerian laws are not dynamic enough to cope with

international trend (Ja'afaru & Akinsoji, 1997). In terms of adequacy, the content of existing laws appear to address the relevant issues. However, where penalties are prescribed, imposed liabilities for non-compliance are grossly inadequate and insufficient to serve as deterrent. Another major constraint is the non-ratification of conventions and treaties to which Nigeria is signatory. It is clearly important to ratify and domesticate such treaties by incorporating them into our national statutes.

Other specific constraints and suggested ameliorations include the following;

- (i) EIA Legislation as it affects sand-mining and land reclamation should reduce the land acreage from 50 hectares to 25 hectares because all sand-mining activities obviously generate serious impact.
- (ii) Generality of the public sector/service/ministries are quite unaware of the existence of Environmental Legislation. So public awareness is very important and if possible it should be included in the schools' curricula.
- (iii) The compliance enforcement of the Environmental law is very low. There is a need for the establishment of Environmental Arbitration Court. Even though some of the states already have, but there is a need for the Government to harmonize this into the National Programme.
- (iv) Registered consultants should be given duties to assist in compliance monitoring.
- (v) Enforcement of protection of wetlands should be carried out.
- (vi) Laws on the protection of Hydrological (watersheds) or source of rivers be enacted.
- (vii) There is no good working relationship within various forms of Government Environmental agencies and usually there is conflict in the area of enforcement. The role of each tier of Government environmental agencies should be properly defined.
- (viii) Local Authority Health and Sanitation Department should be empowered and strengthened to perform their statutory roles instead of appointing adhoc committees to avoid duplicity of duties.
- (ix) Government cannot shoulder the role of funding Environmental Projects alone, complementing role should also come from other sectors.
- (x) More institutions in the country should be carried along in some of the environmental activities or projects implementation at the National and State levels.
- (xi) Environmental Endowment Fund should be set up.

CHAPTER FIVE

PROGRAMME OF ACTION

INTRODUCTION

Sequel to the GEF MSP project for Sub-Saharan Africa (Awosika et. al., 2001) and similar initiatives, the problems in the Nigerian coastal area have been identified and fall under the following broad disciplines;

Pollution

- i. Oil spills
- ii. Industrial and Agricultural effluents
- iii. Inadequate management of sewage and solid wastes
- iv. Air Pollution from power plants, gas flaring and vehicular emissions

Ecosystems' modification

- i. Erosion
- ii. Flooding
- iii. Deforestation
- iv. Salt water intrusion
- v. Invasive/exotic species

Global climate change and Sea-level rise

- i. Unsustainable exploitation of resources

Most of these issues are common to all states of the federation even if the severity varies from state to state while a few are peculiar to certain states.

PROGRAMME OF ACTION

Introduction

Already, government has in place appropriate institutional and legal instruments. The National Policy on Environment (NPE) was launched in November 1989. These initiatives provide for a viable national mechanism for co – operation, co – ordination and regular consultation as well as linkages within and between various tiers of government and institutions.

The Federal Ministry of Environment has overall responsibility for environmental protection especially pollution control matters in Nigeria. Other institutions with complementary roles are:

- State Environmental Ministries of Environment
- Local Governments
- Department of Petroleum Resources (DPR)
- Nigerian National Petroleum Corporation (NNPC)
- Nigeria Maritime and Safety Authority (NAMASA)

- Research Institutes
- Universities
- Relevant Ministries and Extra – Ministerial Departments
- Nigerian Navy

Oil Spill

It is also important to recognize that oil pollution problems often transcend geographical boundaries and therefore have both national and international implications. Accordingly, Nigeria has relevant local statutes while she is also a signatory to many international conventions. The Federal Environmental Protection Law is a major legal stipulation for environmental protection in Nigeria with relevant articles to facilitate its functions.

The national programme of Action will, through appropriate projects and actions, ameliorate the problems highlighted above.

- Petroleum Regulations 1967
- Mineral Oils Safety Regulations 1963
- Oil Terminal Dues Act, 1969
- The Associated Gas re – injection Act, 1969
- Oil in Navigable Waters Act No. 34 1968
- Petroleum Act 1969
- Petroleum (Drilling and Production) Regulations 1969
- Petroleum (Drilling and Production) Amendment Regulations 1973
- Petroleum Refining Regulations 1974
- Oil Pipeline Ordinance (CAP) 145, 1956 and Oil Pipelines Act, 1965
- Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (DPR, 1991) and others.

Nigeria is also a signatory to a number of international agreements and treaties for the protection of the Seas and coastal areas from pollution by oil and other pollutants.

Solid Waste

The environmental policy management tools designed to ameliorate the problems include Decree 42 of 1988 and other relevant laws and regulations by State and local governments which are in conformity the Federal environmental policy.

Establishment of dumping sites across the nation is on going. However removal of solid waste from local dumping sites and transportation to the established sites constitutes major problems for both government and other stakeholders. The Federal government has also installed small scale incinerators for combustion of solid waste especial those that are not easily destructible from hospitals and other areas (e.g. Hospital syringes, metal and glass).

Specifically local governments are charged with clearing and disposal of solid waste. State government have set up special agencies like LAWMA (Lagos State Waste Management Authority) charged specifically for the collection and disposal of solid waste. The Lagos State government also recently launched the Model city plan to rid the environment of solid waste.

Within this plan the State Government in collaboration with local government will put in place active actions to rid the environment of solid waste. Such action include more regular clearing of solid waste from dumping location, enforcement of solid waste act, alternative use of solid waste (waste to wealth). Other States and Local governments in Nigeria are also to implement similar plans in Lagos Sate.

In the National Programme of Action, oil spill control and remediation measures shall be implemented in areas that have been impacted by oil spill as well as other areas that may be impacted based on appropriate trajectories.

Associated projects will be financed by the polluters, and possibly by the Federal and state governments.

Communities and private sector initiatives include formation and encouragement of community associations to collect solid wastes from their localities and deposit in designated locations for the uptake by solid waste removal trucks.

Coastal erosion and flooding

Causal chain analysis of erosion in Nigerian shows that root causes of coastal erosion along the Nigerian coastal zone are largely anthropogenic in nature. While natural causes also play important roles in certain areas like the Mahin mud coast national Plan of actions to combat coastal erosion should address the root causes of coastal erosion.

In the new National Plan of Action the Federal, State and local government will ensure that solid waste is properly disposed.

Collection and disposal of waste shall be the immediate responsibility of local governments with appropriate funds from Federal and State governments.

Industries producing materials which contribute to solid waste like "pure water sachets" shall be made to put in place plans to collect and dispose their waste in collaboration with the local government.

"Waste to wealth" plan shall be the goal of both Federal, State and Local governments.

Public enlightenment activities on the appropriate ways of waste disposal shall embarked upon by local and State governments.

Erosion mitigation usually consists of soft and hard structures. Soft measures are those options, which do not involve large physical construction like beach nourishment. Soft measures also include legislation that are used to ensure good land use and erosion abatement. Hard measures are those that involve physical structures like sea walls, revetments, bulkhead, groins, breakwaters etc

Soft method

i. Beach nourishment.

Beach nourishment involves the use of sand to replenish the beach. Sand could be dredged from nearby burrow pits and pumped on the beach. This is very popular option in Nigeria especially along the Bar beach.

It must be pointed out that though beach nourishment is usually a stopgap measure, its ability to combat erosion is efficient if such nourishments are implemented along correct procedures. Some of these procedures involve the general reduction of the slope along the beach face as well as the surf zone. This will allow the waves to break farther offshore with less impact on the shoreline. The use of the appropriate grain size is also another criterion for a successful beach nourishment programme. The location of burrow pits just offshore eroding beaches amounts to robbing Peter to pay Paul. Sitting of burrow pits near shore only increases the dynamics of incoming waves.

ii. Set-back lines: A set back line is a predetermined line forward of which no hard physical structure must be built. This however cannot be implemented along the Victoria beach since there are existing buildings close to the beach. Set back lines 20 times the annual rate of erosion can still be implemented along fast developing Lekki beach down drift of the Victoria beach.

Hard solutions

These are either concrete or metal structures, which involve heavy to moderate machinery, engineering and costs. These structures are expensive and though they might stop or slow down the rates of coastal erosion at the specific site they often result in the transfer of the problem down drift especially if they are not properly engineered. Examples of these hard structures include Groins, bulkhead, revetments, and breakwaters.

i. Groins

These are structures built perpendicular to the shore. They could be built of rocks or concrete. They result in the trapping of sediment within the groin cell but cause tombolos as a result of erosion on the upper part of the groin cell and deposition on the down side of the cell. They are most effective when there is constant mechanical recharge of the updrift side.

The following national standards involving the following should be adopted in any beach nourishment programme:

Beach nourishment shall be implemented where and when necessary only as a stop-gap measure.

Reduction of beach face gradient to allow waves to break farther offshore.

Use of appropriate sediment grain sizes. (too fine sediment are easily eroded)

Burrow pits should be sited far off from an eroding beach.

Use of Afforestation should be encouraged as much as possible.

ii. Revetments

This consists of construction of concrete structure on the foreshore surface. This helps to stop the erosion of the shore face but could result in the undermining of their foundation.

iii. Breakwaters

Breakwaters are structure built parallel to the coast. They result in the damping of the

approaching waves thereby creating calm water behind. Breakwaters could also be constructed on the beach and in this way they act as seawall. Typically, sea walls are concrete on which waves break. Sea walls are generally not environmentally friendly as they result in beach loss. In most case the foundations of sea wall are eventually undermined and eventual collapse is normal. Most coastal erosion mitigating options are funded by the Federal government through the Ecological fund. However, local mitigating structures are been implemented by stakeholders especially in the Niger Delta. For example SPDC built breakwater and revetments in Forcados top protect its oil facilities. State governments also use State resources to implementation of small scale project.

National plan of action involving any of the above hard solutions must undergo very stringent Environmental Impact Analysis to ensure that any such option will result in more adverse impacts on the updrift side.

The Federal Government, State and Local governments shall put in place actions to deflood coastal areas especially where large populations, socio economic activities exist.

Public enlightenment activities on the appropriate ways of waste disposal that clog drainage channels shall be embarked upon by local and State governments.

Sewage

In most large Nigerian cities, there is no central sewage treatment plant except in some relatively new estates and factories. In most cases, households are connected to self-contained septic tanks. Therefore, raw human waste evacuated by dedicated trucks is generally disposed into coastal waters.

Due to unavailability of sewage treatment plants in coastal mega cities, raw sewage is generally disposed in coast waters, and offshore. This practice is very prevalent in Lagos, Warri and Port Harcourt where coastal population is very high. The Federal Government has a policy on the environment that spell out the need to ensure the safe treatment and disposal of sewage. However, treatment and disposal of sewage is usually the responsibility of State and Local governments. Collection of sewage from household septic tanks are done by private companies who dispose the untreated sewage to lagoon, rivers and even offshore.

Presently there is no plan to have a centralize d sewage treatment for cites due to the fact that most cities are already developed. However, State governments enforce removal and treatment before disposal. There are plans to construct small scale treatment plants to ensure treatment of sewage before disposal. However, lack of funds and infrastructure has not made this possible. Hence the indiscriminate disposal of raw sewage still persists.

Global change and sea-level rise

Global Climate change and expected impacts present threats to the achievement of sustainable development in Nigeria. Among the most important projected adverse effects of the climate scenarios on the Nigerian coastal areas and resources include:

- Sea level rise - which will cause large-scale inundation, and exacerbate coastal erosion and salt water intrusion into coastal aquifer.
- Losses of ecotones with direct effects on wildlife distribution, survival, and subsistence of

local communities.

- Greater frequency of high intensity rainfalls that would increase soil erosion, flash floods and storm sewer overflow.
- Increased frequency of ocean storm surges.
- Changes in ocean dynamics, which could have effects on fishery resources, migration and nutrient distribution patterns.

There are many different policy proposals designed to reduce greenhouse gas emission. Regardless of the specifics, each proposal confronts a basic question: How quickly should greenhouse policies proceed given the economic costs of containing environmental damage on one hand and the risks and uncertainties about the timing and buildup of environmental damage on the other? Economic analysis is central to resolving this question.

Nigeria is said to be contributing between 10-20% of emissions to the global average through flaring of gas especially in the Niger Delta. It is worthy to note that Nigeria has now embarked on a programme to phase out gas flaring by the year 2008. Such a programme is in line with the objectives of the UNFCCC and the Kyoto Protocol. Ratification of this Protocol could assist in the realisation of this goal and help to attract assistance of some western countries in the development of technology for gas re-injection or harnessing of the gas which would have otherwise be flared.

Nigeria's economy is presently developing and will require increased demand for energy in the form of oil and gas. Such demand should be achieved using sustainable policies to adapt to climate change and sea level rise. Adaptation options to climate change and sea level rise should aim at minimising the negative impacts, maximising positive impacts, and allowing them to take advantage of opportunities that arise as a result of atmospheric changes.

Adaptation options require education, provision of infrastructures, enhancement of management skills and research to collate, analyse historical climate data and associated meteocean data. Nigeria as a developing nation still lacks human and infrastructural capacity to respond adequately to many of the adverse impacts of climate change. These adaptation options involve financial resources, human and infrastructural facilities through international assistance, cooperation and sponsorship. The Kyoto Protocol offers the platform for Nigeria to take advantage of international programmes embracing the above adaptation options.

Clean development projects can include "afforestation" (growing and nurturing new forests) and "reforestation" (repairing old ones stripped bare of trees and other vegetation). Both activities would involve large-scale tree-planting schemes. More trees would create natural blankets to soak up carbon dioxide from the atmosphere ("carbon sinks"), thereby helping industrial countries achieve part of their individual emission reduction targets. Such schemes would simultaneously enrich soil quality in host countries' farms and enhance agricultural yields.

Mitigating the impacts of these changes would include development of technologies to conserve soil moisture, increase soil organic matter, and reduce soil erosion. Also required is research to increase crop diversity in terms of both species and maturity periods to enable farmers to select crops to fit rainfall regimes. These climate change mitigation options will also require western technology, human resources and facilities. Projects under the CDM could be the platform for the funding and implementation of such agricultural projects.

Specific areas of intervention to combat adverse impacts of climate change in Nigeria in

this plan will include:

Build human capacity to conduct research into land-ocean interaction that will identify the impacts of atmospheric change, variability and extremes on the Nigerian coastal socio-economic and ecological systems.

Strengthen of national and local research communities' capacity for assessment of the impacts of atmospheric change, variability and extremes for the identification and assessment of adaptive responses.

Strengthen national capacity by developing and implementing Integrated Coastal/Fresh Water Area Management plan.

Develop human and infrastructural capacity for water conservation measures, planning and preparedness for droughts, salt water intrusion and severe floods.

Develop capacity for modeling, evaluating and designing physical structures (e.g. groin, breakwaters, dykes, and sea wall) to combat sporadic flooding and coastal erosion.

Promote the use of alternate sources of energy e.g. solar, hydro etc.

Phase out gas flaring.

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ANNEXES

LETTERS TO STATE MINISTRIES OF ENVIRONMENT

Honourable Commissioner
..... State Ministry of Environment
.....

Dear Sir,

**GLOBAL PROGRAM OF ACTION (GPA): QUESTIONNAIRE ON THE
NATIONAL PROGRAM OF ACTION FOR PROTECTION OF THE
NIGERIOAN MARINE ENVIRONMENT.**

I am pleased to inform you that a task team has been inaugurated by the Honourable Minister of Environment to put together a National Program of action for the for the Protection of the Nigerian Marine Environment as part of the Global Programme of Action for Land based Activities (GPA/LBA) of the United Nations Environmental Programme. (UNEP).

The National Programme of action is expected to serve as a structure for analysing cross-sectoral linkages, evaluating alternatives, incorporating inputs from diverse stakeholders, and identifying focal points for optimal intervention.

In order to ensure wide inputs from government and stakeholders, please find attached questionnaire which consists of sets of questions and inputs to assist the core team in the formulation of the National Plan of Action.

Kindly complete the questionnaire and full as possible and forward on or before 10th July 2002 to:

The Coordinator
National Task team
National Plan of Action for the protection of the Nigerian Marine Environment.
Federal Ministry of Environment
Ibadan.
Tel/Fax:
e-mail: (or) niomr@linkserve.com.ng

Thanks for your cooperation

Akin Awobamise
National Coordinator
FOR: HMS for Environment

FEDERAL MINISTRY OF ENVIRONMENT

NATIONAL PROGRAMME OF ACTION FOR THE PROTECTION OF THE NIGERIAN MARINE ENVIRONMENT FROM LAND BASED ACTIVITIES.

PREAMBLE

The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and the Washington Declaration was adopted in 1995. The Global Programme of Action for Land Based Activities GPA/LBA is designed to be a source of conceptual and practical guidance to be drawn upon by national and/or regional authorities for devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities.

The United Nations Environment Programme GPA Coordination Office in The Hague, The Netherlands, coordinates the tasks and activities of UNEP as secretariat of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA).

The GPA aims at preventing the degradation of the marine environment from land-based activities by facilitating the duty of States to preserve and protect the marine environment by:

1. Identify and assess problems related to:
2. Establish priorities for action by assessing the nature and severity of coastal
3. Set management objectives for priority problems for source categories and areas affected on the basis of established priorities.
4. Identify, evaluate and select strategies and measures to achieve these objectives.
5. Develop criteria for evaluating the effectiveness of strategies and measures.

The present Nigeria project proposes support to the development of an action-oriented National Programme on Land-based Activities in Nigeria, within a regional context, for the Protection of the Marine Environment from Land-based Activities. This approach is entirely consistent with and complementary to the various initiatives formulated to date under the Regional Seas Programmes with assistance of UNEP and the Global Environment Facility's Strategic Action Programmes (GEF-SAPs) to address the impacts of land-based activities. This project will serve to link the development of the National Programme of Action on Land-based Activities and the participation of Nigeria in the GEF/UNEP Medium-Size Sub-Saharan Project, by incorporating common elements and activities. The project will build on lessons learned in developing National Programmes of Action in other countries, and could be used for more widespread application and guidance to other countries in the process of addressing land-based activities at the national level.

The main objective proposed is:

To develop a National Programme of Action (NPA) for the Protection of the Marine Environment from Land-based Activities, for Nigeria, devising actions to address specific

causes of environmental degradation or threats from land-based activities including a timetable costed and targeted interventions for implementation.

It is the objective of the task team that relevant data and information is sought from a wide range of stakeholders in Nigeria. The Task team hence will be pleased to have you complete the attached questionnaire to assist the Task team in its work.

QUESTIONNAIRE.

1. STATE PROFILE

- a) Name of State Capital
- b) Population of entire state..... (please give population trend in the past 10-20 years).....
- c) Dominant industry(ies) in the State..... (please give details i.e. types, names, location etc).

2. LOCAL GOVERNMENT PROFILE

- a) Number..... (please list names and capitals. Please provide map if available showing local governments within your State)
- b) Population of each local government

3. IDENTIFICATION OF THE NATURE AND SEVERITY OF COASTAL PROBLEMS.

- a) Please list in order of priority which of these coastal problems affect your State (please indicate the locations of these problems and give indication(s) of the severity i.e. 1- high, 2- medium, 3- low):

- i. Coastal erosion
- ii. Pollution (indicate either from Oil spill, Sewage, Solid waste, Industrial effluents, Persistent organic pollutants, Radioactive substances, Heavy metals, Nutrients, Sediment mobilization, litter etc
- iii. Flooding
- iv. Deforestation
- v. Salinisation
- vi. Habitat destruction
- vii. Subsidence

- b) Please give the rationale for the ranking in your State.
- c) Which of these point sources contribute to coastal degradation in your State? (please give details and all necessary information):

- i. Waste --water treatment facilities
- ii. Industrial facilities
- iii. Power Plants
- iv. Military Installations
- v. Recreational/Tourism facilities
- vi. Construction works(dams, coastal structures, harbor works urban expansion)
- vii. Coastal mining
- viii. Aquaculture
- ix. Habitat modification (e.g. dredging, filling of wetlands or clearing of mangroves)
- x. Introduction of invasive species.

d) Which of these non-point (diffuse) sources are responsible for degradation in your the State (please indicate locations and other pertinent information and much as possible?)

- i. Urban run-off
- ii. Agricultural and horticultural run-off
- iii. Forestry run-off
- iv. Mining run-off
- v. Construction run-off
- vi. Landfills and hazardous waste sites
- vii. Erosion as a result of physical modification

e) Please indicate which of these are sources of atmospheric pollution in your States or cities (Please quantify the contribution of each to atmospheric pollution).

- i. Transportation (e-g. vehicle emission)
- ii. Power plant and industrial facilities
- iii. Incinerators
- iv. Agricultural operations

f) Which of these critical habitats (list in order of priority) are of concern in your State?: mangrove, lagoons, wetlands, estuaries, shorelines and watersheds.

4. ESTABLISHMENT OF PRIORITIES.

a) Please state the relative importance of impacts upon food security, public health, coastal and marine resources, ecosystem health, socio-economic benefits including cultural values in relation to the coastal problems identified in question no 3 (i.e. Coastal erosion, Pollution, Flooding, Deforestation, Salinisation, Habitat destruction, Subsidence)

b) What are the options established by the State to address the following coastal problems?: (please give details of programmes including cost, management setup etc):

- i. Coastal erosion
- ii. Pollution: (from Oil Spill, sewage, solid waste, Industrial effluents, Persistent organic pollutants, Radioactive substances, Heavy metals, Nutrients, Sediment mobilization, litter etc)
- iii. Flooding
- iv. Deforestation
- v. Salinisation
- vi. Habitat destruction
- vii. Subsidence.

c) Please state relevant State and local government legislation which are relevant to the coastal hazards identified in your State.

d) Do you have any proposal (s) for pilot projects to address these coastal Problems? : If yes please submit a brief write-up on the pilot project giving details of location, cost, implementation procedure, duration and any other necessary information.

e) Do you have any other relevant information to assist the development of a national Plan of Action for the protection of the Nigerian Marine Environment?

NAME AND ADDRESS OF CONTACT PERSON IN THE STATE MINISTRY OF ENVIRONMENT:

.....
.....
.....
Tel:..... Fax:
E-mail:.....

Please forward your answers to:

The Coordinator
National Task team
National Plan of Action for the protection of the Nigerian Marine Environment.
Federal Ministry of Environment
Ibadan.
Tel/Fax:
e-mail: or niomr@linkserve.com.ng

Thanks for your cooperation.

FEDERAL MINISTRY OF ENVIRONMENT

**NATIONAL PROGRAMME OF ACTION FOR THE PROTECTION OF THE
NIGERIAN MARINE ENVIRONMENT FROM LAND BASED ACTIVITIES.**

QUESTIONNAIRE

This is to inform the general public that a task team has been inaugurated by the Honourable Minister of Environment (STATE) to put together a National Program of action for the for the Protection of the Nigerian Marine Environment as part of the Global Programme of Action for Land based Activities (GPA/LBA) of the United Nations Environmental Programme. (UNEP).

The National Programme of action is expected to serve as a structure for analysing cross-sectoral linkages, evaluating alternatives, incorporating inputs from diverse stakeholders, and identifying focal points for optimal intervention.

In order to ensure national coverage, the core team would like to receive inputs from stakeholders, NGO, CBOS to assist the core team the formulation of the National Plan of Action.

All interested in providing information to the core team are requested to answer the following questions as much as possible and forward their input to the address below on or before 10th July 2002.

The Coordinator
National Task team
National Plan of Action for the protection of the Nigerian Marine Environment.
Federal Ministry of Environment
Ibadan.
Tel/Fax:
e-mail: (or) niomr@linkserve.com.ng

Akin Awobamise
National Coordinator
FOR: HMS for Environment

FEDERAL MINISTRY OF ENVIRONMENT

NATIONAL PLAN OF ACTION FOR THE PROTECTION OF THE NIGERIAN MARINE ENVIRONMENT FROM LAND BASED ACTIVITIES.

QUESTIONNAIRE.

1. Please list in order of priority which of these coastal problems affect the coastal areas (please indicate the locations of these problems and give indication(s) of the severity i.e. 1- high, 2- medium, 3- low):

- viii. Coastal erosion
- ix. Pollution (indicate either from Oil spill, Sewage, Solid waste, Industrial effluents, Persistent organic pollutants, Radioactive substances, Heavy metals, Nutrients, Sediment mobilization, litter etc)
- x. Flooding
- xi. Deforestation
- xii. Salinisation
- xiii. Habitat destruction
- xiv. Subsidence

2. Which of these point sources contribute to coastal degradation in Nigeria? (please give details and all necessary information):

- xi. Waste –water treatment facilities
- xii. Industrial facilities
- xiii. Power Plants
- xiv. Military Installations
- xv. Recreational/Tourism facilities
- xvi. Construction works(dams, coastal structures, harbor works urban expansion)
- xvii. Coastal mining
- xviii. Aquaculture
- xix. Habitat modification (e.g. dredging, filling of wetlands or clearing of mangroves)
- xx. Introduction of invasive spec

3. Which of these non-point (diffuse) sources are responsible for degradation in Nigeria (please indicate locations and other pertinent information and much as possible?)

- viii. Urban run-off

- ix. Agricultural and horticultural run-off
- x. Forestry run-off
- xi. Mining run-off
- xii. Construction run-off
- xiii. Landfills and hazardous waste sites
- xiv. Erosion as a result of physical modification

4. Please indicate which of these are sources of atmospheric pollution in Nigeria. (Please quantify the contribution of each to atmospheric pollution).

- v. Transportation (e-g. vehicle emission)
- vi. Power plant and industrial facilities
- vii. Incinerators
- viii. Agricultural operations

5. Do you have any proposal (s) for pilot projects to address these coastal problems? If yes please submit a brief write-up on the pilot project giving details of location, cost, implementation procedure, duration and any other necessary

Information.

6. Do you have any other relevant information to assist the development of a national Plan of Action for the protection of the Nigerian Marine Environment?

NAME AND ADDRESS OF RESPONDENT:

.....

Tel:..... Fax:

E-mail:.....

Please forward your answers to:

The Coordinator
 National Task team
 National Plan of Action for the protection of the Nigerian Marine Environment.
 Federal Ministry of Environment
 Ibadan.
 Tel/Fax:
 E-mail: or niomr@linkserve.com.ng

Thanks for your cooperation.

CAMEROUN

Le Cameroun a ratifié la Convention d'Abidjan et adhéré au Programme d'Action Global qui a été développé sous les auspices du PNUE, conformément à la mise en œuvre de l'Agenda 21 issu de Rio.

Il a, enfin, relevé le passage du projet vers une *Commission Permanente du Courant de Guinée* qui deviendra une réalité les 21 et 22 septembre 2006.

ⁱ Loi N° 90-32 du 11 décembre 1990 portant Constitution de la République du Bénin.