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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**TOWARD A VIABLE COASTAL RESOURCE
MANAGEMENT STRATEGY FOR LIBERIA:
THE FORMATION OF AN AUTONOMOUS
INTEGRATED COASTAL RESOURCE
MANAGEMENT COMMISSION**

By

CYRUS L. GRAY, JR
Liberia

A dissertation submitted to the World Maritime University in partial
fulfillment of the requirements for the award of the degree of

MASTER OF SCIENCE

in

SHIPPING MANAGEMENT

2000

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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Particular thanks go to Captain Fernando Pardo, my Dissertation Supervisor, for his insight and guidance while this work was being produced. I am also grateful to Ms. Lyndell Lunduhl and Dr. Moira McConnell for their assistance.

I return to Liberia fully cognizant of the importance of the IMO in ensuring the safety of the world's fleet and the cleanliness of the ocean.

This work is dedicated to my wife, Alice, and kids, Emil, Cyrus III, Oattie, Gerald, and Papus for their patience and to my dear mother, Mrs. Sarah V. Karbbar, for her moral and financial support to my family while I was away. I will remain ever indebted to her charity. I also like to acknowledge my brothers and sisters for their support without which my success at WMU may have been compromised.

It has been a blessing getting to know my classmates, all professionals from so many countries of the world. It is my hope that our link to the World Maritime University and the International Maritime Organization will remain ever paved so that together we can give to the world an enviable Maritime Industry.

ABSTRACT

Title of Dissertation: **Toward a Viable Coastal Resource Management Strategy for Liberia: The Formation of an Autonomous Integrated Coastal Resource Management Commission**

Degree: **MSc.**

Most of Liberia's population of three million live in the vicinity of its 350 miles long coast and depend to a large extent on the resources and economy associated with the coastal area. There is also a huge potential for earnings from the exploitation of offshore petroleum, something, which has been discovered in Liberian waters but remains unexploited. The level of development in these areas, environmental considerations, regional cooperation and compliance with internationally agreed standards and conventions leaves much to be desired for Liberia.

This dissertation is an appraisal of Liberia's treatment of these important issues, both in legislation and practice and an insight into the historical and economic framework upon which event have and continue to unfold. The main objective of this dissertation is to highlight the importance of a sober reflection of the management of Liberia's coastal areas and resources and to initiate discussions among policy makers and the general public about the necessity of setting into place measures for the proper management of the coastal area, their resources and the environment.

The dissertation recommends the achievement of these ends through the establishment of an Integrated Coastal Resource Management Commission fully dedicated to designing plans for the optimization and sustainable development of the resources and the environment, and the economic opportunities affiliated with the coastal area. It also points to the importance of coordinating the efforts of all sectorial ministries and agencies of government and soliciting regional and international participation and coordination so as to achieve a holistic treatment of the whole issue of coastal resource management.

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LIST OF ABBREVIATIONS

ACS	American Colonization Society
AFDB	African Development Bank
CCD	Coastal Conservation Department
ECA	Economic Commission for Africa
ECOMOG	Economic Community of West Africa Military Observer Group
ECOWAS	Economic Community of West African States
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FDA	Forestry Development Authority
G-77	Group of 77
GESAMP Marine Pollution	Joint Group of Experts on the Scientific Aspects of
ICAO	International Civil Aviation Organization
ICRM	Integrated Coastal Resource Management
IOC	International Ocean Commission
IOI	International Ocean Institute
IMO	International Maritime Organization
IT	Information Technology
LAMCO	Liberia American Swedish Mining Company

LPMC	Liberia Produce Marketing Corporation
LPRC	Liberia Petroleum Refining Corporation
NPFL	National Patriotic Front of Liberia
OTC	Oriental Timber Corporation
SIDA	Swedish International Development Agency
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNOPS	United Nations Office for Project Service
UNESCO	United Nations Education, Scientific and Culture Organization

1. INTRODUCTION

The coastal areas in many countries have been seen only in terms of their use for ports and fishing. In these areas fishing of near shore waters is the major economic activity supplying fish for subsistence for the inhabitants of urban centers. In Liberia port and fishing activities constitute the main use of the coastal area but both sectors are not optimized. These uses have been performed arbitrarily. Port efficiency is still wanting in all its aspects in the four seaports along the Liberian coast. The fishing industry on the other hand is virtually undeveloped; as a result foreign poachers seem more to be the proud owners of Liberia's fish resources than the people of the country do.

The coastal area, however, is far more extensive and important to the livelihood of man than just its use for port activities and fishing. In nature the coastal system maintains an ecological balance that accounts for shoreline stability, beach replenishment, and nutrient generation and recycling, all of which are of great ecological and socioeconomic importance. Activities that add further value to coastal resources include recreation and tourism, which have become major sources of domestic and foreign exchange earnings in many coastal nations. The coastal area may also contain valuable mineral deposits including petroleum.

Generally, the coastal area and its diverse systems are under increasing threat from unmanaged human activities such as pollution, habitat destruction and overexploitation in many parts of the world. In many countries this conflict has already reached a critical stage with large parts of the coastal zone polluted from ships, and local and upland sources. Fisheries have been severely degraded, wetlands drained, coral reefs dynamited and beaches long since ruined from human activities.

Most of the world's population live in 60km of the coastline and rely on coastal resources and economic activities associated with the coast on a large scale. For the last quarter century, governments have sort to assume control or, in the least, knowledge of the resources and activities of the coastal areas so as to explore ways in which they can be directed to the benefit of man. Coastal Zone Management as a formal governmental activity was first undertaken in the United States in 1972 with the enactment of the Coastal Zone Management Act. Ever since then application of a coastal zone management system has become widespread.

Coastal Zone Management, Coastal Area Management and Coastal Resources Management have been used interchangeably to refer to a process of governance which consists of the legal and institutional framework necessary to ensure that development and management plans for coastal areas and resources are integrated with environmental goals and are made with the participation of those affected. The purpose of Integrated Coastal Resource Management is to maximize the benefits provided by the coastal zone and minimize the conflicts and harmful effects of activities upon each other, on resources and on the environment. Prominence was given to Integrated Coastal Resource Management at the United Nations Conference on Environment and Development (UNCED) that culminated in the Earth Summit convened in Rio de Janeiro in 1992. The Agenda 21 Action Plan of the Rio Summit gave a prominent role to Integrated Coastal Resource Management in support of Chapter 17 of the Law of the Sea Convention (UNCLOS III).

For years nations have grappled over the question of adequate utilization of coastal resources, especially in the ocean zone. There are quite a number of studies that have been conducted, international agreements reached to address this matter and training and support programs initiated all over the world to enhance the sustainable development and use of coastal areas and resources. The marine environment has come to be viewed as an integral system necessary to sustain the activities of mankind and one that must be managed very carefully. Before the

20th century, the ocean was considered by nations to be divided into two general areas, the marginal sea and the high sea. The marginal sea was accepted to be the length of three miles from the coastline. This area was viewed as the sovereign territory of the coastal state. The high sea, which constituted the rest of the sea beyond the three miles, was considered free for all.

The erosion of this principle began in 1945 when president Truman asserted, in a proclamation, that the United States had exclusive right to exploit the mineral and hydrocarbon resources lying on or under its continental shelf. In a few years, more coastal nations followed Truman's lead by enclosing the resources of their adjacent continental shelf areas. Eventually, some nations extended their claims to include submerged landmasses beyond the recognized continental shelf. The steady assertion of claims over the ocean led to concern among many nations, including landlocked countries. Many maritime nations favored internationally imposed limits on enclosure. These nations were instrumental in convening in 1958 the first United Nations Convention on the Law of the Sea. This convention did not make much difference. A second convention was convened in 1960 and a third in 1973. The deliberations of the third convention which continued until 1980 cumulated, into what is now known as the United Nations Convention on the Law of the Sea in 1982 (UNCLOS III).

Initially started to halt the enclosure of the sea, UNCLOS III effectively sanction enclosure by delineating the ocean into zones. Articles 2 and 3 state that coastal states have sovereignty over their territorial sea where they have the right to establish its breadth up to a limit not exceeding 12nm, this area being an inseparable part of the territory of the state.

Article 56 of UNCLOS III describes the Exclusive Economic Zone as an area beyond and adjacent to the territorial sea not exceeding 200 nautical miles from the baselines from which the breadth of a country's territorial sea is measured. In this area, the coastal state has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-

living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil. It also has sovereign rights with regard to other activities for the economic exploitation and exploration of the zone. These rights include scientific research and the protection and preservation of the marine environment. All other states have freedom of navigation and over flight in the EEZ as well as freedom to lay submarine cables and pipelines. It is this part of the convention, which contains the greatest aspiration of most development states.

In 1992 the issue of environment was firmly incorporated into development and has since become a very important consideration. The Rio Declaration on environment and development contained in the United Nations Conference on Environment and Development held at Rio de Janeiro from June 3rd to 4th, 1992 gave support to the EEZ. In addition it gave responsibility to the state to ensure that activities within its jurisdiction or control do not cause damage to its environment or areas beyond the limits of national jurisdiction.

Together, UNCLOS III, UNCED and other international instruments attempt to enhance the integrated management of coastal resources contained in coastal areas and the EEZ for sustainable development while allowing freedom of navigation and non-harmful uses of the ocean. Chapter 17 of Agenda 21, which set forth rights, and obligations of states provides the basis upon which to pursue the protection and sustainable development of coastal resources. It includes Integrated Management and Sustainable Development of Coastal Areas, Marine Environmental Protection, Sustainable Use and Conservation of Marine Living Resources of the High Seas, Sustainable Use and Conservation of Marine Living resources under National Jurisdiction, Addressing critical uncertainties of the Management of Marine Environment and Climate Change, Strengthening Regional and International Cooperation and Coordination, and Sustainable developments of small islands.

Different countries have adopted different administrative methods to handle coastal resource management. Two commonly used methods are cross-sector

coordination aimed at achieving an integrated management of coastal resources and designation of a centralized lead agency empowered to control coastal resource management with authority over other sector-oriented agencies involved with separate areas of coastal resource management. Sri Lanka, for instance, has a centralized organ of government called the Coast Conservation Department (CCD) which is charged with the responsibility for coastal protection and coastal zone management. In the USA, on the other hand, a lead agency is designated among existing government agencies to coordinate the matter of coastal resources between relevant agencies.

This work looks at civil administration in Liberia and attempts to identify the ills affiliated with Liberia's management and use of its coastal resources. Its main objective is to advance a proposal for the design of a mechanism for the efficient management of coastal area and resources through the establishment of an Integrated Coastal Resource Management Commission empowered to coordinate activities of sectoral ministries and agencies of government that are responsible for functions that affect coastal resources.

To do this Chapters 2 gives a picture of existing situation with respect to coastal and marine resources management in Liberia while Chapter 3 reviews the legal framework under which sectoral ministries and agencies operate. Chapter 4 attempts to unfold the factors influencing national policies and the current state of affairs by revisiting the political and economic history of Liberia, the level of the country's engagement with the international community and the impact of current policies and practices in coastal resource management on the economy. Chapter 5 is a draft of a proposed Coastal Resource Management Commission.

This work is not an attempt to give the optimum solution to coastal resource management in Liberia, but rather to create the common concern and awareness amongst policy makers of the benefits that can be accrued from the adequate management of coastal resources, especially at this time of difficulties in the socioeconomic situation of Liberia. The current fragmentation of government

functionaries and the general breakdown in the national infrastructure due mainly to the effects of the protracted civil war may, very well, present the right occasion for the design and implementation of a completely new approach to the management of coastal resources unburdened by antique ineffective methods.

Research for this dissertation was done mainly from published materials both in Liberia and abroad. A survey of the physical operations at the Freeport of Monrovia and the Port of Buchanan was conducted in December 1999. Random interviews were also conducted at the Ministries of Transport, Agriculture and Lands Mines and Energy, respectively and the Bureau of Maritime Affairs, the National Legislature and the University of Liberia. Valuable materials on the state of Coastal Zone Management were obtained through communication with IOI and FAO and through resource links on the World Wide Web.

It is important to note the extreme difficulty encountered in acquiring hard documents on the workings of Liberia's ports and civil administration. Most of the archives of existing ministries and agencies were virtually destroyed and documents lost during the war period. In addition, there has been a huge labor turnover in the public sector to the extent that eight of every ten persons working in key positions today did not work in those positions ten years ago. As a result of these problems statistics on most activities in Liberia before 1999 are now non-existent. International organizations including the FAO, World Bank, African Development Bank and many such organizations have also experienced this gap in data for Liberia. Under the circumstances, all efforts were exerted to collect and analyze the relevant available information, and it is on that basis that this work has been done. Given sufficient time to search for more information in Liberia could have greatly enhanced this work. The rich experience of the author both in the private sector as a shipper in the Port of Buchanan (Assistant Operations Manager, B&B Logging Company, 1989 – 93) and in Liberia Civil Service as Administrative Assistant in the Ministry of Transport (1996) and then as Assistant Minister (1997 to present) has enormously enhanced the understanding and philosophy of the present Liberian Administrators.

2. COASTAL AREA IN LIBERIA

There are five main areas of coastal resource management in Liberia. They are fisheries, offshore oil and gas, marine transportation, tourism and environment.

2.1 FISHERY

The Ministry of Agriculture Annual Report of 1999 states the level of fish catch in Liberia to be very low as compared to the pre-war levels. While the average fish catch as of 1979 was 1.2 million tons, the 1998 figure is shown as 200,000 tons. This figure does not include illicit catch by poachers off the Liberian shores. It is believed that unreported catch by poachers and local fishermen who discharge their valuable catch to high sea markets is double the amount of catch landed on Liberian shores.

Table 1

Estimated Catch By major Stock (1998) - 200,000 tons

Pelagic	75%	150,000
Demersal	15%	30,000
Cephalopods	5%	10,000
Tuna	4%	8,000
Shrimp	0.8%	1,600

Source: Ministry of Agriculture, Liberia 1999

The relatively small catch in 1998 is attributed to two factors. The displacement of large fishing communities and companies, and the illicit fishing. During the

Liberian war, fishermen were especially singled out for harsh treatment to the extent that most of the fishing communities outside of the capital were displaced. The Montserrado Group of Companies, by far the largest fishing company in Liberia was ransacked and closed down after the military takeover of 1980. The second contributing factor to the low catch is the freedom of fishing in Liberian waters, allowing for the harvesting of inestimable value of fish and shrimp by unscrupulous poachers from Europe, the Far East and other African States. They operate in Liberian waters with impunity because of the lack of patrol boats to police Liberia's 70,000 square miles economic zone. Liberia is serving a UN Arms Embargo (UN Security Council Resolution Nos. 788 & 985, 1992 & 1995).

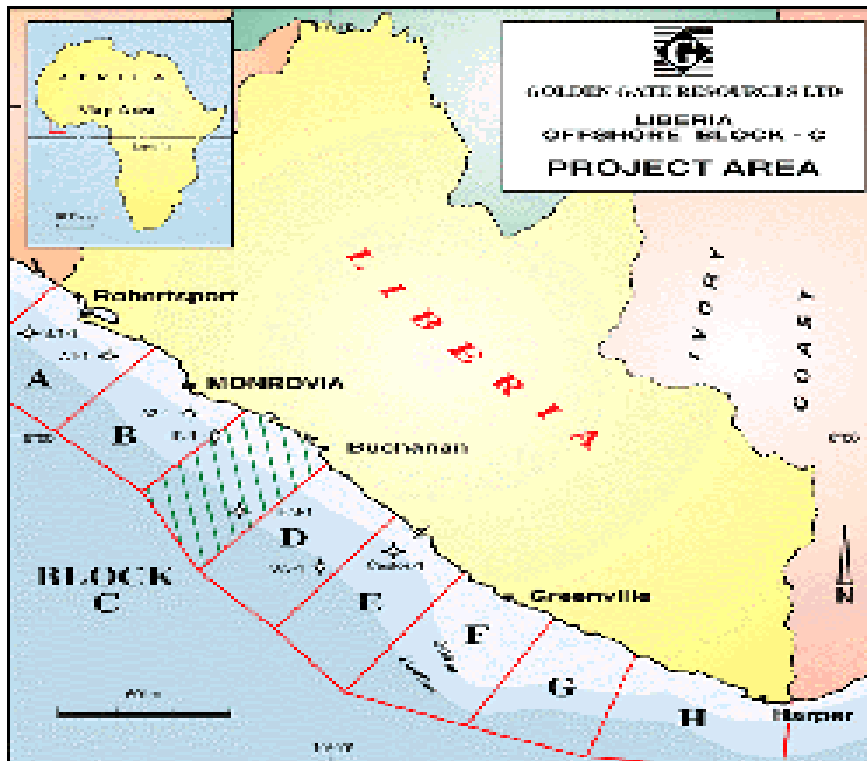
There are presently five fishing companies operating fifteen conventional fishing trawlers in the entire country and an estimate of 1800 artisanal fishermen sharing five hundred traditional fishing crafts at some 30 fishing stations along the Liberian coast. (1999 Annual Report, Ministry of Agriculture). The most valuable stocks in the area are the pelagic species. They are highly migratory, moving extensively within the region. As a result, there is little correlation between national fish capacity and resource base. Industrial fishing is non-existent at the moment. There is no fish exportation; nearly all catch is for domestic consumption. There is no quota of allowable catch, species or size restriction in Liberia fishery regime. In principle, Liberia's fishery resources is widely unregulated and unmonitored. The main fishing stations are located at the Freeport of Monrovia, Marshall Beach and the Port of Buchanan.

2.2 OFFSHORE OIL

Exploration for offshore oil and gas is carried out in the jurisdiction of most West African states. Liberia has an excellent potential for the discovery and subsequent development of petroleum and natural gas both on the continental shelf and in deep waters. Widely spread wells drilled in the offshore basins in the 1980s by companies such as Amoco, Chevron and Union Carbide encountered, from fair to good, hydrocarbon shows.

Figure 1

Block C: Liberia Offshore oil Exploration Zone



Source: Golden Gate Resources Ltd. - www.ggrl.com

According to the report, Project Liberia, by Golden Gates Resources Ltd. (www.ggrl.com), the Government of Liberia, on October 14, 1998 signed an agreement granting Golden Gate Resources Ltd. and Societe Atlantique D'Energie Limited (Operator), both foreign companies, the right to conduct a geological and geophysical study of the petroleum exploration potential of an area off the Liberian coast designated as Block C, approximately 4,625 square kilometers.

While the founding of the Golden Gate's six-month exploration study has not been made public, the company has established that good quality potential reservoirs have been penetrated in Liberia. According to Golden Gate, the S/1-1 well contains marine sandstone that has porosity averaging 23% and permeability of

37Md in the upper part of the lower cretaceous. In the S/3-1 well, the upper cretaceous includes good reservoirs with porosity reaching 30%.

The nearest production to the Liberian site is more than 300km east at Espoir Field offshore Cote d'Ivoire. Golden Gate believes that the Espoir Field and other accumulation in Cote d'Ivoire offer encouragement that similar fields will be discovered in Liberia. Initial production from Espoir Field ranged from 18,000 to 20,000 barrels/day. There is no new information on whether actual oil exploration was started after the completion of Golden Gates' Evaluation of the site.

2.3 MARINE TRANSPORTATION

Marine transportation in Liberia involves two general areas. The first area is the transport of imports and exports to and from Liberian ports. Most consumable items in Liberia are imported. According to the 1999 Annual Report of Liberia's Ministry of Finance, Import value for 1999, main in food and machinery for transport and reconstruction was \$167 million while export, mainly of rubber and timber, was valued at \$56 million.

The four major ports providing service to vessels are Freeport of Monrovia, Port of Buchanan, Port of Greenville and Port of Harper. The Freeport of Monrovia, by far the biggest port, operates container and general cargo terminals, special cement and iron ore terminals, petroleum discharge terminal and tank farm, log and fishing terminals. Traffic in the port channel is relatively high. The iron ore terminal is presently being used for log shipment because the Bong Mining Company, which operated the terminal, did not return to Liberia after the war. The Port of Buchanan, initially built as an iron ore port by a joint venture between Liberia and Sweden (LAMCO), has also been converted to an exclusive log port operated by the largest logging company in Liberia, Oriental Timber Company (OTC). The turnover in this port is 50,000 cubic meters per month. The smaller ports of Greenville and Harper are log ports.

The second area of marine transportation is the transit use of Liberia coastal waters. Liberian coastal water as part of the West African Coast serves as a major transit route for foreign vessels, mainly tankers moving crude oil from the Middle East and West African Oil Fields to Europe and America. More than 600 million tons of crude oil transits this area yearly-amounting to an estimate of 1765 supertankers and 5883 mid-sized tankers yearly (P. Underwood & P. Saunder, 1985).

The potential for a major disaster along the Liberian coast is very real yet there is hardly any adequate regulatory regime in place and functioning to prevent pollution or any level of preparedness for eventually. An acceptable program of search and rescue is non-existent. Domestic shipping and transit shipping is unsupervised and unregulated. Compliance to international environmental laws is unchecked and taken for granted.

Coastal shipping, cabotage is undeveloped in Liberia notwithstanding the enormous potential benefits. Most of Liberia roads are unpaved and near impossible to use during the rain season. A good coastal shipping program could get essential cargo, which are predominantly discharged in Monrovia to cities along the coast by sea and reduce the difficulty in moving them onwards to the interior from the closest point along the coast.

2.4 TOURISM

Liberia possesses enormous beach resources and considerable natural beauty and cultural diversity, yet tourism remains underdeveloped. The coast is washed with some of the finest scenery on the continent. There are sandy beaches that divide the sea from numerous lagoons along the coast. Rich rivers flow from inland into

the sea at many points where they provide breathtaking beauty. The ecosystems in the numerous swamps common along the coast are still rich and uninterrupted.

The capital city of Monrovia sits on a Peninsula that displays a natural waterway in and around the entire city. These resources could be used to develop marinas for recreation and inland transportation to curb the congestion in the city. Except for use as a latrine by dwellers along its banks these waters remain, as they were 153 years ago, when Liberia declared her independence.

2.5 ENVIRONMENT

The environment has hardly been a consideration in the formulation of national policy in Liberia. While there is limited study on the impact of degradation of the environment from marine source, land based pollution is well documented in Liberia in two basic areas, sewage, and garbage disposal. The level of development in drainage is fairly small. The main population centers are cities along the coast. Almost all of these cities are more than one hundred years old. In addition, maintenance is not a common practice in Liberia; as a result the drainage and sewage systems in most cities are, at the least, impossible. Most private homes and buildings are constructed with their own sewage systems. A large number of the existing buildings, especially public facilities, however, depend on the city sewage system. Because of the poor network, Central Monrovia is a scene of domestic waste accumulation at street corners and frequent runoff of contaminated substances that should otherwise be in the sewage system.

There are many unfinished or partly destroyed public buildings now being occupied by squatters, mainly people who have been internally displaced by the war. Sewage network in these buildings is non-existent so the adjacent streets are often littered with waste of all kinds. There is yet no pipe borne water system for the large majority of city dwellers and diseases such as cholera and diarrhea, are common place in present day Liberia. Garbage disposal is also a problem. The slow pace with which garbage is collected around the city cannot catch up with the large accumulation of visible trash. In cases where the City Corporation disposes of them, they are normally dumped at isolated riverbanks or beaches.

There are other potential sources of environmental degradation, which goes, unnoticed in Liberia. Two such sources are agriculture runoff and domestic effluents leading to algae blooms and low oxygen conditions and the displacement on land of sediments collected through port dredging from the seabed which are known to contain toxic substances accumulated from anti-fouling paints and chemical spillage. The jetty at the oil terminal is also a source of concern. The large accumulation of petroleum product on the water surface is sufficient room for suspicion and study on the environmental impact of oil that have been persistently spilled in the air for years of discharge operations.

The question of environmental impact assessment which has become a yardstick for determining whether or not to grant permission to carry on development projects on environmental grounds is absent in policy making in Liberia. No particular attention is paid to the impact of human or other activities on the environment. The need for concern about the state of the environment can not be overemphasized. The estuaries and coastal areas of Liberia provide habitat for large populations of wide variety of seabirds, shorebirds, marine mammals and commercially important fish species. The coastal zone is also a favorable habitat for humans; many of Liberia's settlements are around the coast. Unfortunately, the coastal waters are also the recipients of much of the waste from the coastal settlements.

2.6 OTHER AREAS

There are other uses of the coastal resources that need to be mentioned. Non hydrocarbon minerals, which have served the population, include sand and gravel.

Figure 2

Monrovia West Point Beach: Erosion from Sea Rise



Source: Liberian Post (www.liberian.tripod.com)

Mining of these minerals has supported construction work throughout the history of Liberia. It employs the services of huge fleet of trucks and provides employment for a number of coastal dweller. In the last few years, however, city corporations in coastal cities have named beach mining as one of the chief causes of beach erosion and sea rise.

In the port city of Buchanan, whole settlements have been wipe out by the sea. The famous Atlanta Street in Buchanan has become a matter of History as a result of the incursion of the sea. In the city of Monrovia the fishing town of West Point at the mouth of the Montserrado River, for instance, is being rapidly eaten up by the actions of the sea. Port dredging also interrupts the biological food chain processes of the sea and damage habitats of marine organism. In the face of these damages no conservation measures are being explored.

3. SECTORIAL APPROACH TO COASTAL RESOURCES MANAGEMENT

Liberia administers coastal resources through the sector-oriented method whereby particular agencies regulate different coastal resource with little or no reference to each other. Fisheries, Hydrocarbon, Maritime Transport, Tourism and Environment are each assigned to particular organs of government and treated separately from the others. As a result of the isolated manner in which the administration of these closely related areas is perceived and structured the optimization of coastal resources have been elusive.

A view of the legislation supporting each of the five mentioned areas seem to suggest that detailed information about coastal resources, their benefits to society and their sustenance for future generation were not considered by the legislators promulgating various enactment. Some of the laws are seemly vague and rest for their success on the wisdom and vision of the executive branch of government to design the right policies. Whereas this may be good in certain instances where the requisite technical knowledge and adequate funding is available, it can be disastrous in a country with limited trained manpower, inadequate placement and meager funds.

In many cases the legislation on a particular issue is duplicated between more than one organ of government with hardly any clear distinction of the functions or any form of coordination. As a result there is a general under utilization of the enormous resource capacity for development in fishery, hydrocarbon, maritime transport, tourism and environmental conservation. This chapter looks at Liberian

government policies and their implementation related to the five areas of concern in coastal resources management, and the laws supporting them.

3.1 FISHERY

One of the oldest legislation in Liberia is the Act creating the Ministry of Agriculture. The Agriculture Act of 1952 created a Department of Agriculture headed by an Agriculture Secretary accountable to the President of the Republic. This act empowered the department to regulate farming, forestry and wild life and the methods used to look after crops and animals for food security and commerce. In 1973 another Act to amend the Agriculture Act of 1952 changed the name to the Ministry of Agriculture.

In 1977, two separate Acts were promulgated creating the Forestry Development Authority (FDA) and the Liberian Produce Marketing Corporation (LPMC), respectively. FDA was to assume authority over the management of forest resources including timber and wildlife while LPMC was to support the cultivation of cash crops by private farmers, and serve as a bridge between farmers and foreign buyers of agriculture products. With this new Act, the Ministry of Agriculture was left with the function of regulating fisheries, aquaculture, animal husbandry and small farming. It also retained the authority to represent the government of Liberia at all international conferences related to agriculture.

Articles 14 and 15 of the Agriculture Act gave the Ministry the authority to regulate the fishery of Liberia's 200 nautical miles territorial sea under four counts:

- i. To ensure the adequate exploitation of Liberia's fishery for food and industrial purpose
- ii. To formulate guidelines for the establishment and operation of fishing companies
- iii. To maintain a registry of artisanal fishermen and monitor the exploitation of Liberian fishery at various fishing stations

- iv. To regulate fishing methods and implements to ensure that Liberian fishery is not abused or over exploited, and formulate measures relevant for the long-term viability of Liberian fishery as a source of food and income.

3.2 HYDROCARBON

The responsibility for administration of hydrocarbon under Liberian Law is viewed from two angles, exploration on one hand and purchase and distribution on the other. Two organs of government perform the respective functions, the Ministry of Lands, Mines and Energy and the Liberian Petroleum Refining Company (LPRC).

The Ministry of Lands, Mines and Energy is empowered to explore the utilization of potential hydrocarbon resources in Liberia. In April 2000, a Presidential Proclamation announced the creation of Liberia National Oil Company. The ownership and function of this new company, and the extent to which the company is backed by law in the face of the existence of both the Ministry of Lands Mines and Energy and the LPRC remains unclear.

3.3 MARITIME TRANSPORT

Maritime transport or shipping as it is normally called in Liberian Law refers to the use of coastal waters for domestic transportation and port operations. There are two government entities concerned with shipping: the Ministry of Transport and the National Port Authority. Of late the Bureau of Maritime Affairs, separated from the Ministry of Transport in 1989, has gotten into the picture performing port state control. Domestic shipping as an industry in Liberia is underdeveloped. The National Transport Policy of Liberia, last revised in 1979, emphasizes the use of roads over all other modes of transport even though road use have provided the biggest challenge in the movement of passenger and cargo over the years. In Liberia's 43,000 square miles of land, less than 300 km is paved. During the rainy season travel to the interior is at a stand still on most routes.

Figure 3:

Unpaved Road Linking the Interior in Liberia's Lofa County



Source. *Liberian Post* (www.liberian.tripod.com)

The Act of 1987 creating the Ministry, earlier a Department under the Ministry of Commerce Industry and Transport gave general responsibilities. Relative to shipping, one such provision states that “ the Ministry of Transport shall regulate the operations of ports and harbors and formulate policies to encourage the utilization of coastal waters for shipping as a business in Liberia.” No mention is made in the Act about concern for the environment or the question of ensuring compliance to international conventions on pollution by ships.

The Bureau of Maritime Affairs which was also detached from the Ministry of Transport in 1989 was given no mandate to perform maritime functions other than to laise with the International Registries Incorporated, then Liberia's Flag Ship Administrator, for the collection of funds from the Maritime Program. On November 1,1998 the President of Liberia directed the then Minister of Transport to effect the transfer of the Bureau of Shipping, its staff and functions from the Ministry of Transport to the Bureau of Maritime Affairs. Nearly two years after

the President's directive the completion of the transfer has not been realized for administrative reasons. For the main time, domestic shipping remains largely unregulated.

The Bureau of Maritime Affairs on the other hand has made marked improvement in relations to Port State Control at Liberian ports. An organized regime has been established and staffed with well train port states officers. Reports indicate that programs are being steadily developed to ensure compliance to IMO conventions in Liberia. Thanks to the foresight and willingness of the Maritime Executives to make these changes.

3.4 TOURISM

There is minimum use of Liberia's coastal resources for tourism. The Ministry of Information Culture and Tourism is charged with the formulation of tourism policies. The Ministry manages one Cultural Heritage Center called Kandiji at a beach resort near Monrovia, where cultural troupes are stationed. Arts and craft exhibits and traditional dance are staged to attract visitors during particular seasons.

These facilities are mainly visited by local and foreign residence of Monrovia. There is no concerted national policy for the development of tourism as a business in Liberia, notwithstanding the all year tropical climate and beautiful nature beach resources along Liberia's 350 miles coast.

3.5 ENVIRONMENT

Until 1999 no serious consideration was given to the environment in Liberia.

There have been threats to the environment reported by private sources resulting from sea rise, runoff from land, mainly attributed to poor sewage processing systems and marine pollution from ballast disposal by ships calling Liberian ports. Over 95 % of the country have been without pipe borne water for over 10 years.

The systematic disposal of waste by the city corporations and garbage collectors at riverbanks and on isolated beaches is common place.

In November 1999 the Convention on Bio-diversity was ratified by the Liberian Legislature and an Act to create the National Environmental Commission was promulgated. The Minister of Agriculture was named as its chairman. This Commission which has the mandate to formulate policies for prevention and control of environmental degradation is still being constituted.

Liberia's status as it relates to international conventions on the environment speaks for the level of priority given to the environment. Four key conventions are considered; they include the London Dumping Convention (1972), the United Nations Law of the Sea Convention (1982), the Montreal Protocol on Land based Sources of Pollution and Annex VI and IV of MARPOL (73/78).

Liberia has ratified none of the agreements stated. In the case of the UN Convention on the Law of the Sea which grants 200 nautical miles Exclusive Economic Zone to coastal states like Liberia, Liberia still holds claim to 200 nautical miles territory sea in contrast to UNCLOS III on account of an Act promulgated in 1977.

Liberia non-ratification of these and many other conventions is in no way an expression of her position on the substance of these international instruments. Liberia is simply awakening from isolation for twenty years of political instability and is just not abreast of current developments

4. ANALYSIS OF THE LIBERIAN SITUATION

Upon studying existing practices in Liberia it is obvious that there is no clear policy for the management of national resources. Many of the nation's policies, unguided by the reality of the day, are obsolete and require elaborate review and correction. This current state of affairs have had a negative impact on a nation just out of a very destructive civil war and still battling insurgents who frequently attack border towns.

This chapter looks at Liberia's troubled history, economy and international relations with the view to highlight the main causes of arbitrary management of the national enterprises with particular emphasis on coastal resources. It also views the practices that have lead to share neglect of the essential factors of coastal resource management and the level of ignorance and bigotry on the part of succeeding governments that have facilitated the maintenance of stagnation in Liberia.

4.1 HISTORICAL SUMMARY

The history of Liberia is basically the history of two distinct groups of people struggling for over 150 years to fine the formula to live together and prosper. One group, the so-called Americo-Liberian, consists of the descendents of settlers from the United States, mainly freed slaves and some freed African Americans who were born freed. This group which started arriving on the West African shores in 1822 was sponsored by the American Colonization Society (ACS) established by the United States of America, exclusively for that purpose. Liberia's relationship

with the United States, beginning with these events, is the most extensive and long-standing of any African Nation. The other group, which constitutes over 90% of the population, is made mainly of African natives totally 26 tribes, who had migrated from other African civilizations at periods covering hundreds of years.

Americo-Liberians, upon reaching Liberia, then known as the Grain Coast, eagerly emulated their former homeland. They adopted a constitution written by a team of Harvard Professors to launch their fledgling nation in 1847. They named their capital after the fifth president of the United States, James Monroe, and used the American dollar as legal tender. But in the face of all the virtues brought over to Africa from the United States these returning Negroes also brought a curse, the slave legacy. This time around they perceived themselves as masters and the natives their slaves.

This practice saw for over a 125 years a system of segregation whereby natives were excluded from the mainstream of national life. Neglect of the interior resulted in the annexation of large portions of Liberian lands by the French on the eastern border and the British on the southwestern border. It was not until 1904 that voting rights were granted the natives and even so, this was token surrender as there was only one political party, True Wing Party; and the party elite ultimately chose candidates to occupy government posts.

In 1971, a visionary leader assumed power after the death of President William V.S. Tubman; a President who had ruled the country to ruins for 27 years in what should have been the most prosperous years for Liberia. William R. Tolbert, the new President, directed his efforts towards economic empowerment of all Liberians. He tried to eliminate the system of government patronage of Americo-Liberian. He launched the famous “Rally Time” campaign declaring war on ignorance disease and poverty.

The Tolbert's Administration ushered in a period where citizens were urged to speak out against ills of their government without fear of retribution. He built more schools and roads than any of his predecessors and encouraged the rise of the Liberian middle class and an era of industrialization. He solicited opposition and encouraged the establishment of political parties. This was a clear departure from early administrations that operated oligarchies that gave no consideration to the views of the masses. President Tolbert is on record to have upheld the rule of law. He demonstrated this commitment when he signed the death warrant of his own brother who had been tried, condemned and sentenced to death by the court for murder. He also approved the death by hanging of a group of mainly Americo-Liberians in the city of Harper who had been condemned for ritualistic killings. He was loved by his people and internationally respected. At his death he was the Chairman of the Organization of African Unity and President of the World Baptists Alliance.

Many took the new freedom that Tolbert championed as a chance to avenge the oppression that previous settler regimes characterized. As a result agitation from young vocal leaders of the new political groupings led in 1980 to a coup d'etat headed by low ranking soldiers of the Army Forces of Liberia. Tolbert, undoubtedly considered as Liberia best leader, became the first victim of his drive for change. He was killed on the day of the coup led by twenty-eight year old Master Sergeant called Samuel K. Doe. The coup was overwhelmingly embraced by the masses. The day of the natives had finally come. Many of the settlers, among them some of Liberia's most educated and connected, were summarily killed and their properties destroyed or confiscated. Thousands fled the country launching the beginning of Liberia's brain drain.

For ten years the new government of mostly natives, untrained in the act of governance, administered the mismanagement of the country's economy. Within a few years the hopes of the people were dashed. Criticism of the regime was met with harsh treatment. Fighting amongst the ranks of the ruling council created tribal feuds between natives belonging to various groups. By early 1985, the

economic and political situation had seriously deteriorated. Promised elections were held and racked by the incumbent President Doe.

On the morning of November 12, 1985, Doe's closest friend and former head of the army, Gen. Thomas Quiwonkpa, entered Liberia and announce the overthrow of President Doe. The streets of the country were lighted with jubilant citizens in celebration of the takeover; but by noon Doe had regain power and begun the largest extermination of opponents imagined in Liberia at the time. Thousands, mainly from Nimba, Quiwonkpa's home, were rounded up and executed in all parts of the country. Hatred amongst the natives intensified during the next few years and opposition to the government both at home and abroad became widespread. This period was to see again the large migration of frighten opponents of the government into neighboring countries.

On the eve of Christmas 1989, President Doe informed the world that insurgents under the command of Charles Taylor, a former cabinet member, had invaded the country through Nimba County. Within six months, the group calling itself the National Patriotic Front of Liberia (NPFL), had occupied all of Liberia except the capital. The war, prosecuted mostly by uneducated natives, left in its wake the total destruction of the country's infrastructure and social institution. In September the same year, President Doe was captured and mutilated.

The war did not however end there. The Peacekeepers (ECOMOG) who had now become a faction in the war against Charles Taylor helped to create many other groups against Taylor. When years of continued fighting prove futile for all parties the Economic Community of West African States with the support of the United Nations initiated the Abuja Accord after many failed peace conferences of the factions. The Abuja Accord, a consensus arrangement, allowed for the creation of an interim government headed by a seven-man state council composed of five representatives of the warring factions, one representative of the non-combating civilians and a chairman chosen as a neutral person. Its main functions

were to disarm warring factions, conduct national elections and restructure the national army reflecting ethnic and geographical balance.

Disarmament was reasonably achieved and in 1997 national elections were held in which Charles Taylor was elected with an overwhelming majority and declared President of Liberia. By this time, an estimated 150,000 lives had been lost, 250,000 exiled in neighboring countries, 50,000 internally displaced and an additional 90,000 Sierra Leonean Refugee on Liberian soil (US Committee for Refugee, Liberia 1999, www.refugee.org/world/country/index/liberia).

4.2 ECONOMIC SUMMARY

Twenty years of political instability and the present disfavor of the Charles Taylor led government by major players in the international community have greatly hampered Liberia's economic recovery. Between 1950 and 1979, Liberia's economic performance placed her among the countries with the highest GNP, second to Japan; but today she has been declared unfit for credit by the African Development Bank, an institution which Liberia created. The nation has lost respect at the UN, the World Bank and the International Monetary Fund (Dr. Romeo Horton, Independence Day Oration, July 26, 2000). Investment has evaporated as confidence in the economic and political situation has eroded. Corruption has exploded into unbelievable proportions. Liberia's export sector, which has been largely based on raw material, is now mostly dormant. Ninety percent of all major concessions operated before 1990 have ceased to operate.

Table 2.

Liberia Economic Profile

POPULATION	2.3 MILLION
(POP. Growth Rate: 4.92%)	
(Birth Rate:41.88/1000 pop.)	
(Death Rate:1.28/1000 pop.)	
Infant Mort. Rate:	103.13
Death/1000 Live Birth)	

(Life Expectancy: 59.45 yrs)	
LITERACY RATE	38.35%
GDP: Purchasing Power Parity	US\$2.6B
NATIONAL BUDGET(1999)	US\$100M
EXPORT VALUE*	US\$56M
IMPORT VALUE*	US\$167M
EXTERNAL DEBT (1997)	US\$2B
RAILWAYS	490KM
HIGH WAYS (Only 657km Paved)	10,600KM
SEAPORTS	4
MERCHANT MARINE	1620 SHIPS
AIRPORTS (Only 2 with paved runways)	46
ELECTRICITY CAP. (Utilization: < 5% pop.)	332,000KW (1995)
PIPE BORNE WATER	<5% POP.

*The huge disparity in import and export figure quoted above is due on one hand to the large imports by NGO and UN Agencies to support their operations in Liberia and the lack of figures for smuggled exports in minerals, fishery and agricultural produce.

Source. Liberia Economy, www.liberia.net

The lack of defined fiscal policy has allowed the few remaining concessions to operate arbitrarily with contracts created to benefit individuals rather than government. Many such concessions do not pay taxes or adhere to national policy regulations, where regulations exist.

Long before 1980, Liberia's monetary economy has been burdened by imbalances induced by disparities and active economic mismanagement. Even though economic growth was phenomenally high due to high price for Liberian raw material on the international market, no serious effort was made to diversify the economy through the development of a manufacturing sector that would have accounted for a significant

Percentage of GDP. Planners virtually ignored the development of a financial and service sector that would have absorbed unemployment and diversify the economy

to reduce the country's dependence on exports dominated by depletable natural resource. Nothing can explain the economic situation better; but all is not lost.

The formulation of economic goals consistent with national endowment and regional and global dynamics must now be vigilantly pursued. To accelerate rapid and long-term economic growth, the country must establish a set of norms. The first step in this process is to constitute some of the best minds into a committee fully supported to begin a realistic and impartial study of the Liberian situation and practices that will ensure succinct understanding of the factors necessary for national development. The development of sound fiscal and monetary policy reflecting the country strength and weaknesses must now be a priority.

4.3 REGIONAL AND INTERNATIONAL COOPERATION

Liberia is affiliated with almost all the major international groupings, including ACP, AFDB, CCC, ECA; ECOWAS; FAO, G-77, IAEA, IBRD, ICAO, ICFTU, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Inmarsat, Intelsat (Non-Signatory User), Interpol, IOC, IOM, ITU, NAM, OAU, UN, UNCTAD, UNESCO, UNIDO, UPU, WCL, WFTU, WHO, WIPO, WMO, and many other bilateral arrangements.

For the past ten years, however, Liberia's participation in programs of these organizations has been mostly passive. In fact, many of Liberia's foreign missions have been abandon during this period, and as such the promotion of the image of the country and programs of government is virtually unheard of abroad. This is happening in the face of concerted negative international campaign against the government of Liberia, emanating mainly from Liberian exiles in the United States.

In the West African Sub-region, relations with Liberia's neighbors are far from cordial. Liberia is perceived as a potential breeding grown for dissidents desiring

to invade neighboring countries. Presently there is a war of words between Liberia and Guinea, both accusing each other of aiding insurgents.¹²

The International Community, mainly the United States and Great Britain, have persistently singled out Liberia as the main supporter of the infamous RUF rebels in Sierra Leone. These developments have further isolated Liberia and made it difficult to achieve anything through regional and international cooperation.

Liberia must now move towards encouraging cordial relations with its neighbors. The African continent is perhaps the most balkanized. It consist of 178 borders among 53 countries; the purchasing power parity of the majority of which is below the level that would support economic investment of scale.¹³ Liberia must encourage cordial relations with her neighbor and through that enhance trade and regional cooperation, consistent with measures taken by other regions of the world.

4.4 IMPACT OF NEGLECT OF COASTAL RESOURCE MANAGEMENT

The manner in which coastal resources is perceived and managed by government has left much wanting for the Liberian economy. The increased lack of knowledge of coastal resources endowment has deprived Liberia of significant assets at this time of economic crisis. The accumulated impact of these conditions on the economy can be view from four main perspectives: loss of earnings, unemployment, under-utilization of transportation potentials and environmental degradation.

There is loss of income for failure to design adequate policies by which rent, royalty and capital flow from fishing licenses can be accrued. There is also lost of port income owing to unproductive practices and inefficient use of port facilities. In many areas, the ports of Liberia are under-utilized and services are not always the best because of berth limitations and failure to invest in the requisite port

¹² "Guinea Aids Insurgents", The Inquirer, 12 Jul 2000, 1

¹³ Economic Commission for Africa, Report 1999, (www.un.org)

equipment. In other instances resourceful port areas are given to private persons and companies without proper contract to ensure that the port is justly compensated. The ports of Harper, Greenville and the Bong Mines Pair at the Freeport of Monrovia were all given to private operators without sound managerial consideration. The sinking of the MV Victory Reefer in the Port of Harper in July 2000 has been attributed to the lack of navigational buoys along the port channels.¹⁴

Ports that are inadequately managed do not attract business. Accumulation of terrible practices in the ports may lead to high freight rates and directly impact the price of basic commodities on the local market.

Illicit shipping is also a common problem. Vessels under the protection of government officials utilize port and coastal fishery without compensating the ports or paying taxes to the government. Custom officers are highly restricted in performing their function in many such ports when it comes to certain consignees. The existence of petroleum resources in Liberian coastal water is a potential source of income. Government treatment of these resources and to what extent it enhances public good is still to be reviewed. Even though Golden Gate's exploration assessment was completed in early 1999, information on the status of offshore oil has not been made public by government.

Most Liberians of working age are currently unemployed. The current estimate is as high as 85%. Sound management of integrated coastal resources will consider the employment potential for ports fisheries, tourism and domestic shipping and provide the guidance for the optimization of these potentials.

It will enhance the economy through employment, income generation and speedy delivery of cargo along the coast.

Trucking of containers from Monrovia by road to distant areas has proven to be very difficult, at times impossible during the rain season. The topography of

¹⁴ "Downing of MV Victory Reefer Blamed on Port", The News, 15, Jul 2000, 6.

Monrovia is suitable for the use of the coastal waters rather than roads for cargo movement. If a system of coastal shipping is developed and utilized transit time for cargo was drastically reduce. This area may prove to be more viable than the Liberian Maritime Registry. With traditional maritime countries rapidly adopting the tonnage tax scheme and a second international registry allowing owners to freely man their vessel irrespective of crew nationality, Liberia and Panama flags may loss their competitive edge.

The potential for environmental disaster from oil pollution along the Liberian Coast is very real due to the huge traffic of oil tankers transiting the region. In addition, pollution from ship ballast and land based sources must be reviewed seriously and regulated in keeping with international standards. A system of environmental impact assessment must be designed and installed to ensure that current practices do not endanger the well being of the people and posterity. The official use of coastal zone for waste disposal by municipality threatens marine life. It must be discouraged.

The lack of an integrated policy on the treatment of coastal resources is the root cause of failure in coastal resource management. In order to remedy the gloomy picture set forth in this work, much planning has to be done. The good news is that new plans to structure a system that has completely broken down is much easier than repairing existing programs. Liberia needs a completely new plan of action suitable to the country's special situation conformity with and inclusive of acceptable international standards.

5. FORMULATION OF INTEGRATED COASTAL RESOURCE MANAGEMENT STRATEGY

5.1 JUSTIFICATION

Different kinds of coastal problems and opportunities constitute mitigating circumstances for the setup of a coastal management regime. They include the following:

Desire to increase economic benefits from the use of coastal resources

Problems of resource depletion

Increased pollution of coastal and ocean environment

Damage to productive coastal ecosystem

Threat to life and property from natural coastal hazards and disasters

Perceived economic opportunities associated with new forms of development in the coastal zone

Conflicts of interest among user groups

Coastal areas are a mosaic of rich and diverse ecosystems and resources that are strategically important to the economic and social well being and development of all human settlements. When applied in a timely and comprehensive manner, integrated coastal resource management can be the vehicle for sound investment and sustainable use of the coastal areas and their natural resources.

5.2 PARTICIPANTS AND RESPONSIBILITIES

Coastal resources management is the responsibility of the government, the public and all who benefit or suffer from the effect of the use of coastal resources. Programs to manage those resources and areas are most commonly performed by

governments for the benefit of their people. Particular government ministries and agencies are responsible for particular resources and their use. The key to success is the coordinated involvement of all parties and the demonstration that integrated coastal resources management is in the long-term interest of all.

Several Institutional approaches may be use to perform coastal resource management. They include:

A central planing unit (i.e. Ministry of Planning and Economic Affairs)

Formal establishment of an Interagency or Inter-ministerial council or committee

Creation of a Special Coordinating Commission or Committee and

Formal Designation of one Agency or Ministry to act as “Lead Agency” and to oversee interagency coordination process.

Study shows that establishment of a formal Coastal Resource Management Commission or Agency to coordinate the management of coastal resources and matters emanating from same has proven to be the most efficient approach in addressing this sensitive issue.

Government will have to give formal approval to the establishment of the Integrated Coastal Resource Management Commission since it may require significant realignments of institutional responsibilities and the expenditure of important sums of money.

5.3 Special Coastal Resource Management Commission

5.3.1 Special Commission

Even though the Liberian economic score may be gloomy for the moment, now is the appropriate time to put into place a guiding body, Special Coastal Resource Management Commission, to serve as the reference point for all entities associated with the use of coastal resources for the common good. The absence of fully functioning and efficient entities should make it easier for a well thought out plan to be introduced and accepted.

The Special commission may have five main functions:

- Planning Integrated Coastal management programs
- Promoting and Strengthening Interagency and inter-sectoral collaboration
- Reducing interagency rivalry and conflicts
- Minimizing duplication of functions of line agencies and providing a forum for conflict resolution among sectors
- Monitoring and evaluating the progress of Integrated Coastal Management projects and programs

The special commission oversees the implementation and operation of all coastal resource management programs and assume general management and support responsibilities, particularly with respect to coordination of plans, environmental impact assessment, human resource development, transnational issues, budget coordination and political accountability. These concerns are normally beyond the management responsibility of individual ministries or agencies, yet the Special Commission does not in any way assume the role of the individual ministries or agency to perform direct responsibilities designated to them. The Special Commission provides the framework by which all ministries and agencies can perform their designated duties in a coordinated fashion and with clear understanding and regards for each separate function, their coordinated optimization and impact on the community and/or nation.

An ideal integrated coastal resource management program will require adequate and up to date information of both scientific and economic nature. In addition to capacities already present within government ministries and agencies, partnerships must be sort with research institutions, universities and specialized organizations, both national and international, to assist in the constant collection and analysis of data, concerning coastal resource endowment, environmental assessment and degradation, mitigating strategies, new economic development possibilities and the like.

Public awareness and transparency must play pivotal roles in integrated coastal resource management. All efforts must be employed to ensure that there is general understanding of the goals and achievements of all programs.

5.3.2 Structure of Special Integrated Coastal Management Commission

An efficient coastal management commission does not require elaborate staff. As overseers they will rely to a great extent on the professional staff already present in various ministries and agencies and research from universities and other academic institutions and in a significant way on specialized international organizations and bilateral arrangements with friendly governments. The commission will however be required to maintain a competent team of managers to perform the task of research gathering, integrated planning, information management and program evaluation.

A Commissioner who must be an experienced civil servant and manager, very influential and well respected both locally and abroad will head the ICM Commission. He or she must be a tested performer who will stop at nothing to see that programs are supported and performed as planned. The Commissioner shall be the chief spokesman of the commission. A professional team of four Managers and an Executive Secretary will assist him or her. The four Managers will head the main four sections of the commission: Research Bureau, Planning Bureau, IT Bureau and Inspection & Verification Bureau.

5.3.3 Functions of Sections

Each of the four sections will perform the following functions:

The Research Bureau will conduct frequent study on principle issues and link with universities and research institution to conduct studies relevant to issues on coastal resource management and matters under consideration. This bureau will be required to make periodic publication of research results and up date of issues under review.

**ICRM COMMISSION
ORGANIZATIONAL STRUCTURE**

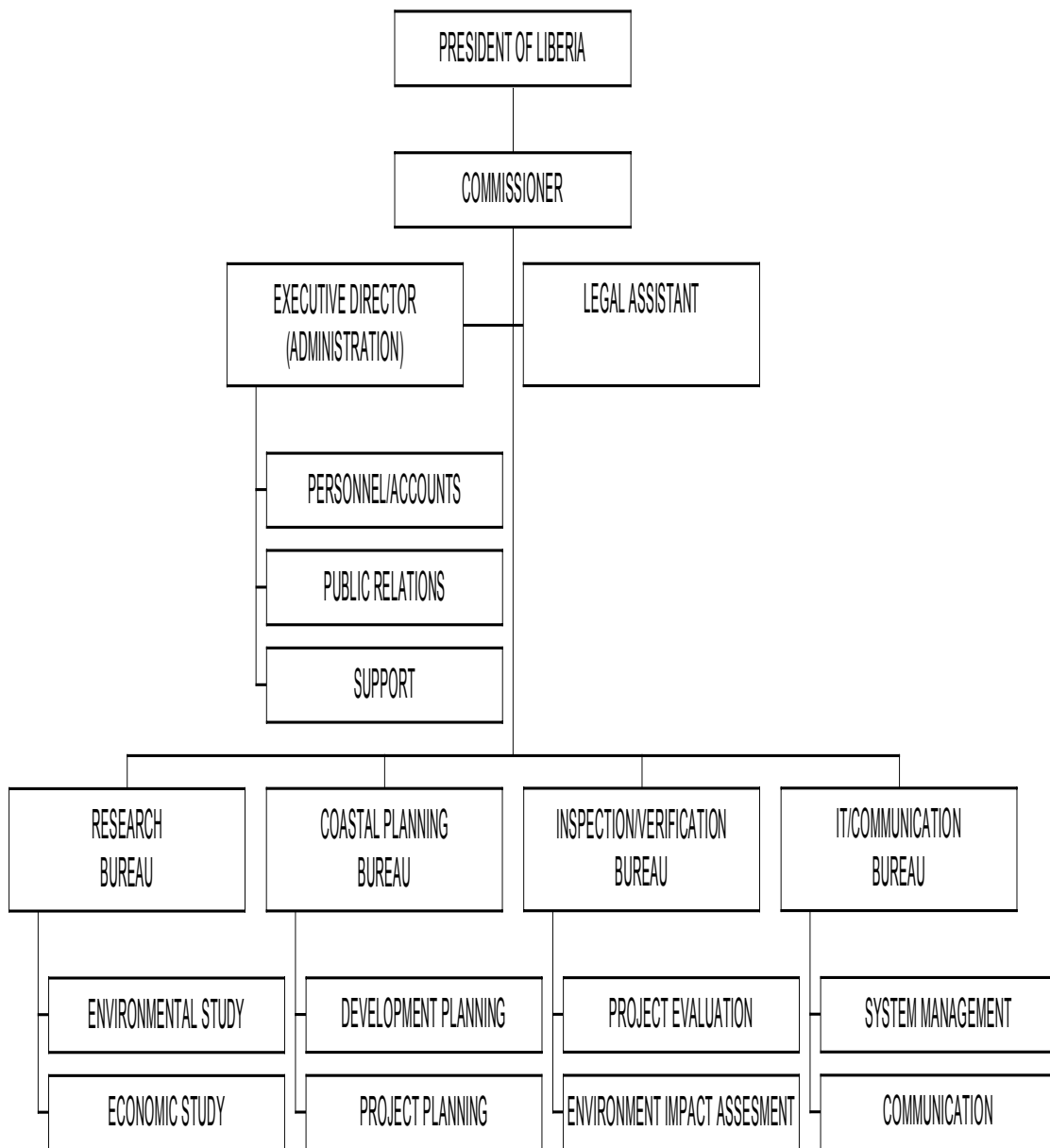


Figure 4

The Planning Bureau, with the involvement of relevant agencies and ministries, will design plans for the management of coastal resources and projects related to it. It will also work between agencies and ministries to constantly review and

adjust plans in keeping with current research findings and evaluation results to ensure suitability.

The Inspection & verification Bureau will constantly study the implementation and performance of programs under the eyes of the Commission and report achievements and short falls. It will conduct elaborate field operations covering the length of the Liberian coast, coaster waters and Environmental Impact Assessment (EIA) on all development projects. International expertise will be solicited to assist this bureau in the work of EIA for the first few years.

Integrated coastal management programs should be subject to regular monitoring and evaluation as a way of continually improving the process. It is especially important that the goals of the overall management effort and the goals and objectives of individual projects be specified as clearly and as quantitatively as possible; otherwise assessment as to how well they are being achieved is difficult. Enforcement of existing rules and regulations is one of the most difficult aspects of government. Chances of enforcement are dependent on public awareness and the credibility of government programs.

The IT/Communication Bureau will manage the Commission's information system and ensure that vital links to the Internet, and an Intranet system are in place and functioning. This Bureau will be vital to the work of the Commission. Most of the work of such overseer institution is based on the ready availability of vital current information sources. The internet and links to other international coastal resource management and research institutions and teams around the world will be essential in ensuring that the Commission remains up to date and accurate in all aspects of its work.

The heads of each of the four sections must, as a requirement, have the requisite professional qualification in the relevant areas of study or related fields. The Executive Director shall serve as administrator of the Commission. With the help of two trained Assistants, the Executive Director shall administer all accounts,

facilitate all communication in and out of the Commission and organize all publications and public relations matters. The Executive Director shall also perform general administrative tasks including personnel and logistics matters and control all support staff.

5.3.4 Staffing of Sections

The following is the lists of professional staff under the four sections:

Bureau of Research

Three Research Officers, each in the areas of Environment, Economic and Maritime Affairs, respectively.

Bureau of Planning

Three Planning Officers each in the areas of Development Planning, Microeconomics, and Environment, respectively.

Two Jr. Planning Officers, all university graduates under the age of 30 years

Inspection & Verification Bureau

Two Sr. Inspectors with vast experience each in Project Evaluation, and Environmental Impact Assessment, respectively.

Four Jr. Level Inspectors

Bureau of IT/Communication

Two Computer Assistants, each with advance knowledge in Computer Engineering and Software Design, respectively

The staff of the Special Commission must be compensated in keeping with their status as professional civil servants.

5.3.5 Training

For the commission to ably perform its task as a professional institution, training programs must be constantly identified and provided for staff on a regular basis. There are periodic training programs in Integrated Coastal Management and Sustainable Development issues that are being sponsored by international organizations and conducted all over the world. One such program is that conducted under the auspices of the International Ocean Institute (IOI) based in Halifax, Canada. The Commission should also keep abreast of and attend all relevant international meetings related to its work. On the national level workshops and seminars must be designed and conducted regularly to create a forum for the discussion of relevant issues.

5.3.6 Financial Considerations

Large sums of new funding are generally not required to put an Integrated Resource Management Program into place, as it can often be accomplished by staff delegated from existing agencies, provided the appropriate professional disciplines and experience are represented. However, large sums of money may be needed to set up the organizational and research infrastructure and to cover payment of professional staff salary which would sometime include expatriate income, where there are no existing programs in place or where they are undeveloped.

Funding is normally allocated by the national government. International organizations and friendly governments may however provide substantial funding where they find the national government to be serious about sustainable development. Some of the international groups that will be willing to support integrated coastal resource management are UNEP, IOI, FAO, UNDP, IMO, UNESCO, UNOPS, SIDA, to name a few. Most such groups and friendly governments will be willing to assist if they are brought into the picture in the very beginning.

5.4 FOUR STEP FOR IMPLEMENTING INTEGRATED COASTAL RESOURCE MANAGEMENT

There are many ways through which an integrated coastal resource management program can be set into place. Four steps presented in the World Bank Report on “Guidelines for Integrated Coastal Zone Management” offer a list of comprehensive procedures for the overall effort in developing, implementing and controlling an Integrated coastal resource management program for Liberia.¹⁵ They are, Initiating the Effort, Formulating the ICRM Plan, Formal Adoption by Government of the Program and the Operational Stage.

5.4.1 Initiating the Effort

This stage involves few individuals who recognize the need for improved management and begin consultative meetings with key agencies and stakeholders. A concept paper is normally drafted to give a clear picture of the need for ICRM program to influential parties. This stage ends with the creating of a small team of planning brought together to formulate an ICRM plan through review of institutional capabilities.

As much as possible, the formulation team should be composed of local staff selected from key government agencies having important management roles regarding coastal resources. All the relevant local and international agencies should be represented. It is best that the team be directed by someone representing a higher policy level in the government, either the Ministry of Planning or the President's office.

5.4.2 Formulation of ICRM Plan

At this stage the planning team assemble necessary information and data on the physical, economic, environmental and social characteristics of the coastal area and resources and prepare a plan that takes into consideration public participation, technical, financial and manpower feasibility, new economic development opportunities and assessment of institutional capacities. They should also develop options for interagency coordination, possible new regulation and management measures, and submits recommendation to government.

An effective ICRM Program must be based upon adequate information. Some of this data may be available in existing country profiles, national development plans, specialized resource inventories and the like. Sources may include government agencies, universities and other research institutions; resource related private sector firms and relevant international organizations. A new initiative to study and formulate plans on important issues, the environment for instance, where they have never been considered should be undertaken.

The plan should be concluded with a realistic timetable and a budget.

5.4.3 Formal Adoption of ICRM Program by Government

The government must give a timely consideration of the plan and move to adopt policies, goals, and new management measures for the initiation of the ICRM Commission. At this stage enactment of legislation may be necessary to strengthen the mandate of the ICRM Commission. Funding allocation should climax this stage.

5.4.4 The ICRM Program Becomes Operational

The ICRM program becomes operational when:

The ICRM Commission begins oversight of the ICRM process and program.

New and revised management programs come into effect

Individual sectoral line agencies and ministries continue to perform their regulatory and management responsibilities but now in conformity with ICRM programs

Specific projects are designed and undertaken in connection with new economic opportunities in the coastal area

A monitoring and evaluation program is initiated.

CONCLUSION

In Liberia, most major developments and economic activities are centered in coastal cities. As a result, there is continued growth of coastal population as a consequence of migration of people in search of employment, education, health care and better life, in general. Evidence presented in this dissertation shows that despite the enormous resource capacity of Liberia in fishery, offshore oil and a rich and long coastline comprising valuable beaches and mangrove of diverse marine ecosystems, the great majority of the population is very poor and do not have access to basic services including water and electricity. Further, the quality of the country's environment is for the most part being degraded during either to neglect or exposure to harmful waste by human actions.

The obvious inadequacies in resource management and the lack of the necessary infrastructure for development have been attributed in the short term to twenty years of political instability and in the long term to the general neglect by

succeeding administrations of basic principles of good governance. In addition, the method of civil administration by sector, whereby coordination of the efforts of various closely related agencies and ministries is not an operational requirement has created duplication of functions and poor utilization of existing resources for development.

Evidence also suggest that the unfortunate state of mismanagement and corruption is not the result of deliberate efforts on the part of individuals or groups to continually ensure the perpetual stagnation of Liberia, but rather the result of the lack of a functioning integrated national development plan fully understood by all parties including government functionaries, the private sector and the general public. These conditions are being further aggravated by the poor relationship currently existing between Liberia and her neighbors on one hand and Liberia and major powers in the international community on the other. Persistent insurgency and threats of war emanating from neighboring countries against Liberia is putting a drain on national resources and diverting much needed cash to the support of the war efforts.

The main goal of this dissertation is to create the awakening among decision makers and the general public of the inadequacies prevalent in the present management of national resources so as to ignite decisions both at government level and among the population of ways to arrest these inadequacies. This dissertation is intended to serve as a general guideline to direct these deliberations by addressing the management of coastal resources and environmental conservation.

Experiences of many countries of the world indicate the integrated treatment of coastal area management as the best way forward. Targeting coastal resources management, through the formation of an Integrated Coastal Resource Commission, will set the frame work for viewing government functions from a holistic stand point and ushering a new concept of collective understanding of the

role of government in all its sectors by all parties to achieve efficiency and enhance accountability.

The end result of Integrated Coastal Resource management is the utilization of coastal resources for the satisfaction of economic needs of the citizenry while ensuring that those uses do not lead to depletion of the resources or degradation of the environment.

Nothing will succeed in the face of political mistrust, instability and war. While it is the collective responsibility of the people of Liberia to foster tolerance and love for one another, the leadership of Liberia, including the government, civic organizations and the church must move urgently to encourage the improvement of relations with neighboring governments and the international community. The leadership must, as a matter of urgency commit itself to fostering genuine reconciliation and dedicate efforts towards the massive return and resettlement of exile Liberians living as refugees in neighboring countries. Without these efforts at healing the wounds of a divided country, there will always be mistrust under the perceived or actual fear of war and instability, and no country, no matter how richly endowed or military strong it may be, can prosper in political upheaval.