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**REPORT ON:
THE IMPACTS OF THE LIBERIAN CIVIL CRISIS
ON WETLANDS**

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I. Introduction

The conception of people regarding wetlands, which constitute 0.5%* of the total land area in Liberia, is that this habitat is a vast waste lands. This view is similar to that of many other African countries. It is a great challenge to change the minds of people who have had such a feeling and attitude for over a century. The formidable task ahead is to rally the financial support and develop the appropriate awareness program that is capable of breaking through this barrier. This sort of program must involve relevant stakeholders, starting with policy makers down to the local people in wetland communities. They must all agree to the design and approach for making the program workable.

HISTORICAL HIGHLIGHTS:

The pre-war condition of wetlands did not experience such an enormous amount of pressure as seen during the crisis period. The wetlands in rural areas provided the basic livelihood for rural dwellers and had maintained the traditional services. The conflict had very minimal impact on wetlands in rural areas unlike the urban areas. The rural areas remain stable due to the trend of the crisis. The Civil War began in the rural parts of Liberia dislodging rural inhabitants towards the major cities along the coastlines. All of the mangrove wetlands can be found along the coast.

The rural dwellers dependence on wetlands made wetlands so important to them because they obtained their energy supplies, food, shelter, water, medicine and other ecological services from wetlands. They preserve their food by smoke drying since electricity was limited to cities. They used pit latrines to dispose their wastes. Their latrines and water sources were far apart. They had their own local laws regarding environmental management. They understood the relationship they had with wetlands and so were conscious as to how they exploited the wetlands and wetlands resources.

All of this went perfectly well until the civil conflict in 1990, which moved a very large number of displaced on to the capital city of Monrovia. This number raised the population of Monrovia from 250,000 to over a million. This was more than what the city could contain. Because the city center could not hold these displaced, they remained in wetland areas.

Monrovia comprises a very large portion of mangrove wetlands. This area became the prime target for livelihood means. It provided construction materials for shelter, food, fuel wood and water for irrigation of crops. These basic social services were over exploited due to the high population density. Consequently, the wetlands sustained very great amount of impacts in the areas of ecological, social, health and economic. This report presents a brief account of the various impacts.

II. THE IMPACTS OF LIBERIA CIVIL CONFLICT ON WETLANDS

Relief organizations came to the assistance of government to enhance efforts in meeting the livelihood demands of the displaced. This assistance came in the form of food, agricultural chemicals and fertilizes, construction of make – shift structures fishing nets and the rest of it. Being in an emergency situation, environmental

considerations were secondary to the primary interest of life saving. These actions excluded environmental impact assessments.

The absence of an environmental impact assessment created an adverse impact on the environment. Relief organizations did very little to train farmers as to the appropriate use of agro – chemicals and fertilizers. The lack of this training has led to the use of heavy dosage of pesticides and fertilizers within wetland areas. This has increased the level of salts concentration in wetlands. Some of the pesticides used are believed to be persistent in nature and may have very serious impacts.

* The National Biodiversity Strategy and Action Plan (NBSAP)

Due to the prolonged conflict, most of the displaced have adopted themselves and seem to be planning on permanent settlement. They have very limited land space to carry out business activities. In order to expand, they carry out landfill in the wetlands for constructing business centers as well as dwellings quarters. This has caused large areas of the swamp land to be reclaimed. This is visible along the Somalia drive in Gardnerville, near Monrovia.

A. Ecological

As a means of acquiring energy for cooking, the displaced moved onto mangrove forests to collect fuel wood. They harvested large portions of the Mesurado and Marshall Mangrove wetlands. They also carried out landfill to reclaim land for habitation and business ventures. The wetland became the major dumpsites for city garbage disposal. The poor sewage system that could not meet the demands resulted in individual homes, closed to wetlands, emptying sewage lines into the wetlands.

B. Social

The wetland became the ultimate place for garbage disposal of various waste materials which contain a large proportion of metals. These materials were mainly dumped into the rivers making the rivers very unsafe for swimming.

Persons, who have great passion for fishing, are losing the passion due to low catch in the Mesurado and other rivers. It has not yet been determined why such a low catch, but it can be speculated that the activities carried out on wetlands are adversely affecting the species population. This needs to be investigated in order to determine the cause. Not many persons can now be seen fishing as compared to some six months ago.

C. Health

The mass movement of war affected persons to wetland areas posed serious health risks. The wetlands became a site for human waste disposal. Agriculture activities carried out by the displaced were also creating health risks as the result of the heavy dosages applied to their crops excluding professional supervision. Some of these chemicals were banned chemicals. The main production sites were wetland areas. Underground waters became infected as the result of run off.

In rivers and streams displaced persons used dynamite and poison baits to kill fishes. This was a serious problem in the Marshall Wetlands.

The legacy of the crisis, in regards to health risks, can be observed in the various make-shift structures; unauthorized market centers; squat latrines overhanging rivers and streams; unregulated use of agro-chemicals in wetlands; bad health practices adopted as the result of the crisis situation, these and many more can now be observed around many parts of the cities. This has necessitated the need for behavioral change.

In other situations, latrines are in close proximity of wells. Corpses were also dumped in the wetlands during the crisis. The self settlement of migrants without the guidance of relevant government institutions was the prime factor for make-shift structures.

This is now a great challenge to government to effect remediation. The need for international assistance in this regard can not be overemphasized.

D. Economic

The destruction to wetland habitat by the various adversed actions of the displaced has great economic implications. The heavy dosage of agro-chemicals, over harvesting of the mangrove, land filling, are all factors to affect the biodiversity population in wetland areas. These actions are capable of reducing biodiversity species, thereby making livelihood much difficult for community dwellers. In some instances, fisher men in some areas are finding it hard to make good catches of fish.

III. NATIONAL EFFORTS TO ADDRESS WETLAND PROBLEMS

The major step taken by government to begin addressing problems of wetland degradation was the accession and ratification of the Ramsar convention on Wetlands. As the result of this accession and ratification process on November 2, 2003, the Government of Liberia received two separate grants from the Ramsar Bureau in January 2005. The two grants were of the Ramsar Small Grant Fund (SGF) and the Swiss Grant for Africa (SGA). Each of these grant, that was made available in the amount of CHF 16,500, helped the Liberian Government to conduct a Post-Conflict Wetland Assessment. The outcome of this assessment include, the establishment of a National Wetland Committee(NWC), drafting of a National wetland Policy outline, designation of four wetland areas as Ramsar site and the maps of the four sites. Inclusive of these outputs is the drafting of this report on the post-conflict assessment of 2005.

Following the setting up of the national Wetland committee, a sub committee was set up to develop the policy outline that included national strategies for addressing the problems. Upon the completion of the sub-committee's work, the policy outline was adopted on February 7, 2006 by the NWC in a one-day stakeholders' meeting, which was also part of the grants received. During this meeting, several ministries and agencies of government, private entrepreneurs and ngo representatives were at this meeting. They adopted better ways of communication and collaboration amongst stakeholders decided the way forward in a number of strategic priorities contained in this report following.

IV. RECOMMENDATION FOR STRATEGIC PRIORITIES FOR CLEAN UP AND REMEDIATION

The first priority action by the NWC is to seek relevant legislations for the legislative enactment of the proposed policy. The policy after enactment becomes the tool for addressing the issues of wetland problems in Liberia. The committee can then lobby for other laws that may be needed for critical situations.

The second priority action will be to establish full management authority over all Ramsar sites. In order to do this, several projects will be designed for each site that will involve the local authorities and expertise. This will require high level assistance from donors.

The third priority action will seek to integrate wetland issues in the national planning process that will ensure the protection of wetlands by all sectors. This means mainstreaming wetland issues.

The Fourth action of priority will seek a national mobilization process through a national awareness program that aims at behavioral change towards wetlands. This will target wetland communities and policy makers.

The last priority action will seek international cooperation with neighbors of shared water resources. The cooperation will focus on joint projects around management authority and communication strategies.

Some Liberia wetland Photos for the Proposed Ramsar Sites and only existing Ramsar site "Lake Piso"



Kpatawee Rice Project Site



A photo of Marshall wetlands



More photo of Marshall



This is a photo of Lake Piso being used as a dumpsite



This is a photo of Mesurado wetland



Gbedin Project Site