

THE NATIONAL ENVIRONMENTAL POLICY
OF THE REPUBLIC OF LIBERIA

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Definitions

In the context of this document "Environment" is understood as comprising the whole set of natural or biophysical and man-made systems of the surroundings of human beings and other organisms as they live, work and interact.

"Ecosystem" means a dynamic complex of plant, animal, microorganism communities and their non-living environment interacting as a functional unit.

"Environment management" includes the protection, conservation and sustainable use of the various elements of the environment.

"Environment Monitoring" means the continuous determination of actual and potential effects of any activities on the environment.

"Environment protection" means all the interventions that may be deemed proper to maintain a high level of environmental quality, and that will also provide and enhance sustainable socio-economic development.

"Fire-wood" or fuel wood means any of the various trees tough fibrous substance cut for use to produce combustion energy for cooking, and heating.

"Fauna and Flora" is a combination of all animal and plant species within an ecosystem which constitute a core of the biological diversity.

1.0 INTRODUCTION

Article 9 of chapter II of the 1986 Constitution of Liberia encourages the government to pursue bilateral, regional and international cooperation in areas of mutual concerns. Thus, Liberia is party to some treaties and laws and a member of international and regional organizations for global protection of the environment and sustainable use of natural resources.

However, it was after Liberia's participation in June of 1992, at the United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro, Brazil, awareness about environmental protection gained some momentum in some circles. Prior to 1992 there was hardly any mention of environment in Liberia, except for considerations about the need to conserve the natural resources, primarily forest and wildlife. However, as a consequence of the prolonged civil strife, environment was never a major issue.

After the presidential election of 1997, as people began to rebuild their lives and the shattered economy, environment, water pollution, and deforestation became special concerns in national development issues. Notwithstanding as to the scope and complexity of environmental issues and their impact on national socio-economic development, the lack of a national institutional authority for overall management of environmental issues, and the lack of a national policy and the framework law to protect the environment have precluded effective and sustainable solutions to the environmental challenges facing Liberia.

As a commitment to environmental management, the Government of Liberia in 1999 established the National Environmental Commission of Liberia (NECOLIB) and charged it with the executive authority over all programs and activities relating to environmental matters in the country. The commission, which is intended to evolve into an independent environmental protection agency, is now a functioning entity and is focusing on carrying out its mandate. The major areas of focus include the formulation of a national policy, the drafting of a comprehensive framework environmental protection and natural resources law, and reporting on the current status of the environment in Liberia. Work on both the law and the status report is in progress. Secondly, up to date environmental issues have only been dealt with at sectoral levels, (without a unified approach) due to the lack of an institution charged with overall management of the environment.

The necessity for formulating a national environmental policy is in recognition of the severe impact of man's activities on all components of the natural environment, especially the influences of population dynamics, high density urbanization, resource exploitation and the further realization regarding the critical importance of restoring and maintaining environmental quality to the over all welfare and development of the people.

In order to implement this policy, it is the continuing responsibility of NECOLIB to use all practicable means possible, consistent with other essential components of national policy, to improve and coordinate government's plans, functions, programs and resources to the end that the nation may:

1. Fulfill the responsibilities of each generation as custodians of the environment for succeeding generations;
2. Assure for a Liberians safe, healthy, productive and aesthetically and culturally pleasing surroundings;
3. Attain the wildest range of beneficial usage of the environment;
4. Preserve important historic, cultural and natural heritage and maintain, where possible, an environment that will support diversity and variety of individual choice;
5. Achieve a balance between population and resource use which will permit high standards of living and equitable sharing of benefits; and
6. Enhance the quality of renewable resources and approach the maximum attainment of depleting resources.

The new thrust is based on fundamental rethinking and clear appreciation of the interdependent linkages among institutions, the development processes, and environmental factors as well as human and natural resources. Additionally, it is in consonance with the commitment of the Government of Liberia to create instruments that will lead to sound environmental protection in Liberia.

After the adoption of this cross-cutting policy it will be necessary that all ministries and agencies of the Government will review their statutory authority, administrative regulations and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies contained, which prohibit full compliances with the purpose and provisions of

this policy. This exercise will assure that their policies and regulations are in conformity with the intent, purposes and procedures set forth in this policy.

The overall policy goal of the National Environmental Policy is to promote sustainable development and conservation of the environment on a long-term basis for the betterment of present generations without compromising the ability of future generations to meet their needs.

Article 7 of chapter II of the New Liberian Constitution of 1986 provides for full public participation of all citizens in the protection and management of the environment and consultations with, and the involvement of a cross-section of stakeholders. It therefore represents a broad consensus of the stakeholders. It poses challenge to the stakeholders, be it sectoral ministries, the private sector, NGO's, CBO's, and PVO's to assure implementation of the policy. This policy is sounding a warning that we must all attempt to consider.

1.1 Background

Liberia is endowed with abundant natural resources. These served for giving impetus for the nation's development efforts since the opening of its market through the Open Door Policy in the early 1950's. Additionally, these natural resources remain the fundamental endowment from which the population derives their livelihood.

Nevertheless, in the process of exploiting these resources to meet social and economic needs, adequate care has not been taken to guard against the depleting of the resources. This is primarily due to the lack of a policy statement and a legal framework to direct activities and actions. This has given rise to a host of problems, including deforestation, soil degradation, bidding to decertification and mismanagement of solid and liquid waste as well as other problems associated with the pollution of air and water.

Hence, it is extremely important that ways to means are found to balance national development aspirations and the search for economic growth with a rational exploitation and sound management of the resource base. It is necessary that this be performed in a manner, which will make certain that economic development can be sustained in the long term.

However, the Commission has drafted the Environment Protection Agency Bill of the Republic of Liberia, which would allow for the creation of the Environment Protection Agency or Liberia. The general function of this agency will be for the management of the environment and it shall coordinate, monitor, supervise and consult on all activities in the protection of the environment and sustainable use of natural resources.

The exercise with the policy formulation and the drafting of the Environmental Protection Law will culminate into the preparation of a strategy to address the key issues relating to the protection of the environment and better management of renewable resources. This will make Liberia's development strategy more environmentally sustainable/friendly.

1.2 Economic Development and Environment in Liberia

There is growing acceptance, especially following the 1992 Earth Summit in Rio and the adoption of Agenda 21 by the international community that development does not only apply/relate to economic but also environmental and social dimensions. It is simple, since environmental protection is a key requirement for maintaining a sustainable way of life, we must ensure that while attempting economic development adequate measures are taken to avoid the depletion and degradation of natural resources.

Rather than creating an illusionary wealth by uncontrolled exploitation, natural resources, we need to employ sustainable principles of production, i.e. the environmental constitution, in the most efficient way possible, so that the Liberian human society can derive and sustain benefits.

The Government of Liberia performs limited activities if any regarding environmental impact assessment. Therefore, it is not aware of the negative impacts, which could culminate annual losses than could amount to several million United States Dollars, which could be equivalent to a significant percentage of the total GDP. The magnitude and pervasiveness of the losses impose a strong case for taking effective action to reduce the losses. This could be achieved through sound environment policy, an environment protection and management law, and an environment protection agency.

1.3 Environmental Policy

A National Environmental Policy provides a broad framework for the implementation of national objectives and plans. The policy aims at ensuring a sound management of resources and the environment, and will attempt to avoid any exploitation of these resources in a manner that might cause irreparable damage to the environment.

Particularly, the policy will provide for:

- ® Integration of environmental considerations in sectoral, structural, regional, and socio-economic planning at all levels;
- ® Sound management of the environment and natural resources;
- ® Protection and maintenance of human habitats, the ecosystems, and ecological processes essential for the functions of the biosphere;
- ® Guidance for national action plan and for healthy environmental practices on the national development effort;
- ® Sustainable development; and
- ® Common approach to environmental issues.

Appropriate incentives and mechanism will be put in place to ensure compliance with the provisions of the policy. The primary aims of the policy will be pursued and achieved through harmonization and enforcement of relevant laws on environment protection.

1.4 Environmental issues

Environment is a concern with numerous of issues that are interrelated as a result of the systems in which we live and interact. Environmental issues of relevance to the Liberian environment

that will be considered during the formulation of the environmental policy includes the following:

- (a) Water Resources;
- (b) Forestry and Wildlife;
- (c) Land Management/Resources;
- (d) Mining;
- (e) Marine and Coastal Ecosystems;
- (f) Solid and Liquid Waste, and Industrial Waste;
- (g) Human Settlements;
- (h) Hazardous Chemicals;
- (i) Air and Noise Pollution;
- (j) Cultural heritage and Tribal Reserves; and
- (k) Public Education and Awareness

1.5 Policy Implementation

Policy implementation will entail crafting the policy instruments and strategies necessary to achieve the intended policy results. To enhance policy coordination and objectives, the policy must become an integral part of the country's overall national plan. This will arrest the problems of overlapping jurisdictions and duplication of functions between agencies and ministries. Various national agencies and ministries will implement a variety of individual environmental projects and programs to meet the goals of the National Environmental Policy.

1.6 Policy Instruments

A successful implementation of the National Environmental Policy, requires the creation and establishment of an appropriate institutional and legal framework geared towards:

- 3 Improve access to information on the environment;
- 3 Harmonization of the appropriate legal instruments;
- 3 Monitoring and evaluating the impact of policy decisions on the environment;
- 3 Improvement of access to information on the environment;
- 3 Improvement of the scientific base of environmental decisions through appropriate research programs;
- 3 The assessment of the potential impacts of public and private projects on the environment, and environmental mainstreaming into the national planning process; and
- 3 Establishing and implementation of appropriate standards and guidelines so as to ensure an acceptable level of public health and environmental protection.

The Environmental protection and Management Law, when enacted by legislation of Liberia, will provide for these tools of implementation as well as to prescribing the necessary environmental quality standards and guidelines for environmental management.

1.7 Institutional Arrangements

To ensure the effectiveness of the National Environmental Policy, the establishment of a functional, independent and authoritative institutional body for the management of the

environment is a prerequisite. Thus, the Environmental Protection Agency of Liberia shall be established.

The Agency shall operate under the guidance of a Council. The Council shall be responsible for policy formulation and directions based on the intent of the policy and law, setting priorities for national goals and objectives for environmental protection, ensuring the implementation of environmental policies and programs, and collaborate with the Agency on policy issues affecting the environment.

The Agency shall be responsible for coordinating, integrating, and harmonizing the implementation of environmental policy and decisions of the council and submission of the Line Ministries. Additionally, it shall encourage the use of appropriate environmental technologies, and propose environmental policies and strategies. The Agency will be entrusted with the responsibility for setting environmental quality standard as well as for ensuring the enforcement of these standards.

Nevertheless, other agencies and ministries that would be involved in the policy implementation will be strengthened to ensure efficiency, sound management, and sustainability.

1.8 Implementation

The necessary policy instruments and structures will be put in place as soon as possible and the National Environmental Policy will be implemented through the established institutional framework.

To enhance policy coordination and objective, the policy will be placed as a part of the country's overall National Plan. This will arrest the problems with duplication of functions between agencies and ministries. Various national agencies and ministries will implement a variety of individual environmental projects and programs.

2.0 National Environmental Policy

2.1 Preamble

Over a number of years attempts have been made to address environmental problems in Liberia largely for a specific purpose, cosmetic, or at best sector oriented and hence limited in scope. The existing policies and legislations are not in harmony with one another nor do they have bearing on present realities of the environment. Thus, there is clearly the need for a new direction and thrust in national development efforts to ensure that plans targeted at improving the economic standards and quality of life take into consideration and cognizance the present environmental conditions and the prevailing economic conditions.

Accordingly, Liberia is committed to the pursuance of social and economic development without undermining the integrity of the environment. Further, Liberia is committed to the goals of sustainable social and economic development. Also, Liberia recognized and acknowledges the vital role that women and children play in conservation and the sustainable management of the environment and ensures their participation in decision making on the implementation of

environmental policies. Finally, Liberia is mindful that regional and international cooperation is essential in attaining global environmental protection and management and thus commits itself to continued participation in global arrangements to protect the environment. It is based on these commitments and acknowledgements that the National Environmental Policy of Liberia is formulated.

Policy Goal

The overall policy goal is to ensure long-term economic prosperity of Liberia through sustainable social and economic development which enhances environmental quality and resource productivity on a long-term basis that meets the requirements of the present generation without endangering the potential of future generations to meet their own needs.

2.2 Policy Statement

Environmental Protection in Liberia shall be guided by the following principles of sustainable development:

- **The precautionary principle** - This means that in certain cases action has to be taken without waiting for substantial proof.
- **The polluter pays principle** - This means that the polluter or the person responsible for causing the environmental damage should bear the cost of repairs or protecting the environment.
- **Individual responsibility** - Is the responsibility of every to ensure that emission from individuals and households shall not amount to total to large volumes that will have subsequent impacts on the environment.
- **Consideration for our neighbors** - Each nation/individual should ensure that activities within its own boundaries do not cause harm to the environment in their neighbors/neighboring countries.
- **Promoting sustainable development** - Denote development that satisfies our contemporary needs without endangering the potential for future generations to satisfy theirs.

Particularly the Government will:

- a. Commit itself to the sound scientific and sustainable use of both renewable and non-renewable resources of the environment in the process of implementation of socio-economic national development;
- b. Create environment awareness among all sections of the community, including especially among and children, stressing the environment relationship to socio-economic development, and of the necessary for rational resource use;

- c. Develop procedures for the utilization of land resources in a manner that will ensure the maximum degree of economic value;
- d. Institute and implement an environmental quality control program by requiring prior environmental impact assessments for all investments that would be deemed to affect the quality of the environment;
- e. Institute the appropriate measures to control pollution and the importation and use of potentially toxic chemicals;
- f. Take appropriate measures to protect critical ecosystems against harmful effects, or destructive practices;
- g. Develop and maintain a professional agency within the country to supervise, coordinate, implement and enforce procedures and legislation essential for safeguarding the environment and maintenance of sound ecological systems;
- h. Oblige all concerned to provide the relevant information needed for environmental protection and for the enforcement of relevant environmental regulations and legislation;
- i. Promote and support research programs for understanding of the different environmental zones and the factors affecting them, also for health-related environment problems, and development of appropriate technologies for sound management of the environment and use of local resources, including renewable energy resources; and
- j. Establish an adequate legislative and institutional framework for monitoring, coordinating and enforcing environmental programs and issues.

The fundamental goals and objectives of the National Environmental Policy shall be pursued and achieved through the harmonization and enforcement of the environment protection and management law and the implementation of national plan. The plan will attempt to provide a coherent framework for the various policy interventions necessary to safeguard the environment.

2.3 Policy Objectives

The ultimate aim of the National Environmental Policy of Liberia is to ensure the improvement of the physical environment improvement of the, quality of life, and of the people/improvement of the economic and social living conditions of the entire citizenry, present and future generations it seeks to ensure reconciliation and coordination between economic development and growth with the sustainable management of the natural resources.

Particularly, the policy seeks to:

- ® Maintain ecosystems and ecological processes essential for the functioning of the biosphere;

- ® Ensure sound management of the natural resources and the environment;
- ® Adequately protect human, flora, fauna, their biological communities and habitats against harmful impacts, and to preserve biological diversity;
- ® Integrate environmental considerations in sector and socio-economic planning at all levels; throughout the nation; and
- ® Seek common solutions to environmental problems at regional and international levels.

Specific Objectives:

- a. To ensure a quality environment, good health, and a decent well being for all residents in Liberia.
- b. To use the Liberian environment in such a way that will be beneficial to the present and future generations.
- c. To halt and reverse the current environmental degradation, manage the ecosystems in the biosphere for the maintenance of diverse biological diversity.
- d. To raise public awareness and promote understanding of the essential linkages between socio-economic development and environmental protection and to ensure that environmental knowledge becomes an integral part of the education system.
- e. To encourage the participation of the civil society, NGOs, CBOs, and private sector in the proper management of the environment.
- f. To foster communal management of the environment on common or customary land.
- g. To enact or promulgate environmental legislation and regulatory measure, which will be complemented by social and economic incentives and institutional arrangements to influence positive environmental management.
- h. To establish a resource inventory and environmental accounting for accurate monitoring of the state of the Liberian environment.
- i. To ensure that the actual costs for environmental use and abuse are borne by the user under the 'user pays' and 'polluter pays' principles.

2.4 Key Principles

There are certain key principles, which underlie the broad policy objectives to guide policy development and implementation strategies:

- a. Liberia's economic development should be based on sustainable natural resource use and sound management;
- b. The fundamental requirement for sustainable natural resource management is land security and resource tenure;
- c. Every citizen of Liberia has a constitutional right to live in a healthy environment and the obligation to keep the environment clean;
- d. Environmentally friendly, socially acceptable and economically viable technologies should be developed and disseminated for efficient use of natural resources;
- e. Sustainable natural resource and environmental development should dictate long-term food security strategies;
- f. Increased awareness and understanding of environmental and natural resource issues by Government and the public should be promoted;
- g. Enforcement of environmentally related laws should be prioritized;
- h. Full environmental and social costs or benefits foregone as a result of environmental damage and/or degradation should form part of public and private sector planning and minimized where possible;
- i. Put in place an integrated and multi-sectoral systems approach to resource and environmental planning;
- j. Regular monitoring, evaluation and assessment of the environment should be conducted and the results widely publicized;
- k. Encourage effective involvement of women and youth in natural resource policy formulation, planning, decision making and program implementation, as an essential tool;
- l. Create and facilitate the conditions and opportunities for communities and individual resource managers to sustainably manage their environment
- m. Use of incentives in addition to regulatory measures;
- n. Decentralization of decision-making to the appropriate level of government and civil society;
- o. Use of the most cost effective means to achieve environmental objectives;
- p. Sustainable harvesting of the natural resources and ecosystems;

3.0 NATIONAL DEVELOPMENT PRIORITY ISSUES

The national priorities of Liberia are closely linked to the National Environmental Policy. The National Environmental Policy focuses on social economic dimensions, sustainable development, working with the through people, and the improvement of the quality of lives for the population and promoting public participation.

The sustainability of Liberia's economic and social development is highly dependent on proper and responsible management of the natural resource base and on the environment in general. The environment is complementary to economic growth but requires a broader appreciation of the relationship between forces, which generate growth, and those that involve conservation of the natural resources base.

The widely believed view that there is an inevitable tradeoff between economic growth and environmental degradation is misleading. There are such tradeoffs in the short run - but in the longer run, the factors, which induce growth, must be reconciled with the integrity/status of the natural resource base if growth is to be sustained and to be benefited to future generations.

In Liberia, economic growth has been based primarily on the use of its renewable and non-renewable natural resources: forests, soil, water, biomass, and other resources. The proper management of these “natural capital” contributes significantly to regenerative growth and the long-term maintenance of consumption levels consistent with a healthy and a productive life. Irresponsible attitudes to the natural resources base result in environmental degradation, which is likely to have grave consequences on the future welfare.

The pressures on ecosystems in Liberia are significant. It is likely that if early adequate interventions are not made, pressures could build up to create a breakdown of such ecosystems, thereby ensuing in irreversible poverty. Presently, the problems confronting the natural resource base are numerous. They include the loss of productive soil and biomass due to inappropriate agricultural practices, the loss of forest as a result of farm encroachment, extensive logging/mining, and firewood extraction and charcoal production. Others are the irresponsible release of pollutants into the air and water and the population growth on a limited carrying capacity. The high pop is overburdening of urban systems as a result of rural to urban migration and natural pop increase, thereby resulting in air and water pollution, congestion, poor sanitation and disease.

Sustainable economic growth and development in Liberia will depend on the degree to which the rate of natural resource extraction is balanced against the rate of resource replenishment. Every Liberian must be made to realize that it makes economic sense to sustainably utilize the environment from which they derive their livelihood.

4.0 SOCIAL AND ECONOMIC DIENSIONS AND CROSSCUTTING ISSUES

Commitment to sound economic policies and the proper management of natural resources, decentralized and transparent public administration, good governance, and environmental concerns in national decision-making process, are requisite conditions for sustainable development. Environmental priority program areas of social and economic development along with policy strategies are as follows:

4.1 Occupational Health and Safety

One of the neglected aspects of the Liberian society is the absence of standards for occupational health and safety. Adequate laws to provide a safe and health environment at their work place. Therefore, the following strategy measures are recommended:

1. Standards for occupational health and safety are instituted for all workplaces in keeping with international laws, including workers' quarters;
2. A standardized public liability insurance policy/bond must be provided by law to address the needs of the public in the event of loss of life, health or property damage that occurs as a result of the activity of another individual or institution;
3. Encourage the selection and use of power generation equipment that are not hazardous to the environment and the health of the people;
4. Promote the development of safe and healthy regional energy potentials to address the needs of cities and communities;
5. Work places must provide public facilities and social services taking children into consideration;
6. Every work place must be non-smoking environment; and
7. Work places must ensure that there is no substance abuse.

4.2 Development of human Settlements

The population should be well housed/sheltered with adequate utilities and services that will guard against environmental degradation. There is a need to build and manage human settlements in order to balance human development with environmental management. It is important that human settlements planning and management incorporate environmental concerns. Communities should be encouraged to play a major role in designing and managing their own settlements. Therefore, the following strategy measures are recommended:

1. Simplify physical planning and zoning guidelines to facilitate environmentally sound human settlement development;
2. Promote the use of locally available materials in the design of human settlements;

3. Decentralize the management of social and infrastructural services and amenities to ensure localized management and enacting immediate actions and minimize environmental degradation;
4. Develop pilot projects, which demonstrate the advantages and practical use of environmentally friendly technologies;
5. Empower local communities to plan and develop their settlements;
6. Ensure that all burials are carried out in public/designated cemeteries and not on private lots;
7. Domestic animals should be confined in special places; and
8. Public places must have parking lots.

4.3 Recreational Space

The proper management of recreational space in Liberia is necessary for providing relaxation freedom and developing the aesthetic values. It is necessary to provide appropriate infrastructure and services at recreational space so as to enhance environmental protection. Therefore, the following strategy measures are recommended:

1. Develop and implement a systematic programme for enhancing the aesthetic value of recreational facilities in major towns and cities in Liberia.
2. Provide guidelines for the establishment and maintenance of recreational space.
3. Establish and/or re-activate playgrounds and city parks.
4. Promote all forms of recreational areas for tourism.
5. There should be recreation spaces for all schools and where possible private homes.

4.4 National Monuments and Cultural Heritage

Traditionally, myths and spiritual beliefs shroud the cultural practices of the different ethnic groups in Liberia. Special areas/sites are selected/preserved and set aside as shrines to offer prayers, demonstrate obedience and respect to their gods and ancestors.

Recognizing the importance of these cultural and traditional beliefs and practices of our people and realizing the difficulties encountered through frequent violations of these practices by non-members, and the alteration of the land scale for development purposes, it is expedient that:

1. Shrines/grooves established by any ethnic group, be properly identified and demarcated and protected, but should not be established within city limits;
2. In the event of change of landscape for development, resettlement of people and compensation for property loss should be made;
3. Rehabilitation and relocation on the developing of sacred shrines/grooves should be encouraged/ensured;
4. Regulate traditional schools such as Poro so that they do not conflict with academic school year;
5. Promote traditional culture and integrate it into school system;
6. promote the establishment of museums and botanical gardens as a means of preserving our heritage and records;
7. Designate cultural and historic sites; and
8. Trees and area of traditional/medicinal significance should not be harvested.

4.5 Alleviating Poverty

The environment and natural resources of Liberia must be exploited and managed in such a fashion that will contribute to the reduction of poverty. Since poverty is one of the root causes of environmental degradation, its reduction is critical to environmental conservation and sustainable utilization of natural resources. Therefore, the following strategic measures are recommended:

1. Create the conditions that will bring about employment opportunities, and encourage diversification in production and improve marketing systems and credit schemes such as micro credits for women and the poor;
2. Encourage investment opportunities and entrepreneurship training for locals and introduce appropriate technologies;
3. Repeal laws that discriminate against women, the poor and the youth and disadvantaged;
4. Promote the culture of Liberia economy by expanding employment opportunities/base;
5. Resuscitate and rehabilitate degraded resource base through recycling technology, improving the livelihoods of the poor;
6. Develop market support services and make prices affordable for the poor;

7. Empower local communities to enhance their activities and build their capacities;
8. Amalgamate small towns and villages so that they may easily benefit from developments;
9. Promote local management of development initiatives and ensure that benefits accrued are shared equitably;
10. Increase farm to market roads to ensure food security and fair market prices;
11. Encourage cooperation between small entrepreneurs;
12. Institute free and compulsory education up to the elementary level;
13. There should be set minimum wage rate and job security for the youth;
14. Decentralize the banking sector and encourage community-owned rural banks and credit unions;
15. Establish a commission on poverty alleviation and involve local people in all concession agreements that will affect them; and
16. Eco-tourism should benefit rural people.

4.6 Managing Population

Since population and environmental issues cannot be divorced from each other, government must ensure that environmental concerns are addressed and built into population policies and attending programmes and activities and that population policy is supported. Policies and programmes regarding health, water, sanitation, land-use and the general well being of the people need to be consistent with population policy and programmes. The impact of population growth and distribution on the environment and livelihoods should be appreciated as it contributes to changing attitudes towards family size, which is reflected in population changes.

Therefore, the following strategy measures are recommended:

1. Include population and family life education and its relationship to the environment in schools and colleges to facilitate the implementation of the population programme;
2. Ensure improved health, education and living standards, especially of women to reduce infant mortality;
3. Plan spatial distribution of population to promote a balance for the rural-urban migration and the rate of urbanization;

4. Coordinate family planning programmes and health programmes with environmental programmes;
5. Integrate population, health and environmental education and information, and dissemination programmes, by use of combination of personal, print and electronic media;
6. Support women's literacy programmes and improve their skills through training;
7. Support social and economic development programmes and measures to reduce dependence of large families;
8. Sex education and family planning should be compulsory;
9. Decentralize employment opportunities;
10. Hospitals must conduct awareness an sex education; and
11. Monogamy must be compulsory.

4.7 Environmental Impact Assessment

All development, socio-economic, and land-use activities of any form, have impacts on the environment to one degree or another. Therefore, it is essential to assess and evaluate all on going and future activities to determine the latitude of the possible impacts. Environmental impact assessment is not an entirely new tool in Liberia. However, its use has not been fully understood and appreciated by policy makers and resource users. Environmental impact assessment shall be mainstreamed in order to curtail any adverse impact on the environment. Therefore, the following strategic measures are recommended:

1. Environmental impact assessment procedures should be determined by EIA because any line ministries, agencies and stakeholders and private sector;
2. EIA process shall be mandated by law and must require environmental impact statements prior to project implementation and environmental audits for all private and public development projects;
3. The Environmental Protection Agency must have the oversight function for EIA process, with the implementation being left with relevant line ministries, agencies and developers, and
4. The EIA process must be monitored from time to time by relevant authorities.

4.8 Environmental Information

Timely and accurate information pertaining to the environment must be available to decision makers and the public to allow for sustainable management of environmental resources. Additionally, such information forms the basis against which continuous emerging challenges are measured and interventions are instituted. The relevant institutions must continuously collect, analyze, store and disseminate reliable information relating to environmental management issues including biodiversity, soil conservation, pollution control, and fire wood supply and demand. Institutional guidelines on environmental information management should be well defined. Therefore, the following strategy measures are recommended:\

1. Document, evaluate, store, disseminate and utilize local and traditional knowledge and practices with regard to environment and natural resource management;
2. Provide legislation and guidelines on environmental information;
3. Create an environmental information center with the Agency and give it the mandate and necessary means to coordinate standardized environmental information and to act as the central depository for environmental information;
4. Encourage the promotion of interior regulations at the Ministry of Internal Affairs and ensure that copies of all concession agreements are kept at the Ministry of Internal Affairs.

4.9 Conservation of Biological Diversity

Liberia is a core for biodiversity within the Upper Guinea Forest Ecosystem of West Africa. The country possesses some of the region's greatest diversity of fauna and flora. Therefore, conservation of biodiversity both in and out of protected areas is a very critical environmental issue due to threats to many species and degradation of critical ecosystems. The present rate of forest destruction and decimation of wildlife as a result of unsustainable socio-economic activities is extremely alarming. Conservation of biodiversity is a form of natural resource management; its goal is to maintain national biological resources to meet the needs and aspirations of present and future generations. Therefore, the following strategy measures are recommended:

1. Develop comprehensive and coordinated policies, strategies and actions for biodiversity conservation;
2. Cooperate in the conservation of shared biological resources with other countries;
3. Foster public support for actions intended to conserve biodiversity and encourage the business community to invest in tree farming and multiplication of wildlife by emphasizing on public awareness on the values of biodiversity;
4. Encourage sectoral institutions concerned with biodiversity conservation – particularly FDA, Ministry of Agriculture and Ministry of Internal Affairs – to work in harmony in order to enhance coordination and eliminate duplication and conflict;

5. Identify and map areas of value and sensitive habitats of aquatic biodiversity, particularly breeding, nesting and feeding areas, and in consultation with local communities and other stakeholders; explore means to protecting such areas, including listing them as protected areas;
6. Establish a mechanism for collaboration between protected area management and neighboring communities;
7. Encourage agro-forestry and lowland farming; and
8. Regulate hunting in such a way to put a control on hunting, designating hunting seasons and banning commercial hunting.

4.10 Conservation and Management of Water Resources

Although Liberia is blessed with large bodies of water, supply and distribution of water are critical factor in the socio-economic development of the country. Rapid population growth, agriculture expansion and industrialization require adequate and safe supply of water. Water supply for the urban center is highly limited because of scarce resources, and access to safe drinking water is a major problem. Water resources, both surface and ground should be managed and developed sustainably. Our river basins should be well studied and included in basic planning and development and in environmental impact assessment programs. Priority should be given to watershed management to control, conserve and regulate the balance in catchments areas and watercourses. Therefore, the following strategy measures are recommended:

1. Water resources users, particularly women, should be involved in the design, implementation, monitoring and evaluation of water policies, programs and projects;
2. Promote regional cooperation in the development, management and equitable utilization of shared water resources;
3. Increase community awareness about the importance of water and its relation to hygiene;
4. Build and strengthen the capacities of institutions and communities to measure and assess the supply and quantity of water resources;
5. Encourage and promote integrated approach by involving concerned government agencies and NGOs in the implementation of water conservation and protection measures;
6. Develop programs and projects for catchments areas aimed at soil erosion water pollution control and siltation in order to maintain productive soil and water environments;

7. Develop a National Water Action Plan, which will establish an appropriate institutional and legal framework, standards and guidelines for different users based on ecosystems structures and functions;
8. Major water conservation and management projects should be subjected to the environmental impact assessment process and include the costs and benefits of protecting watersheds in forest, wetlands and other key ecosystems in the economic analysis of such water projects;
9. Grave sights should be substantial distances away from bodies of water;
10. Conduct sufficient training in water management; and
11. Promote a policy that ensures good portable water quality, including prohibiting washing upstream.

4.11 Conservation and Management of Wetlands

The importance of Liberia' wetlands are not fully understood. Wetlands play an important role in socio-economic development, and their conservation and management should be viewed as a national concern. They provide socio-economic and ecological functions such as serving as flood plains for erosion control and maintenance of biological diversity for daily living. Our wetlands are currently threatened with degradation as a result of pressure from firewood gatherers, uncontrolled solid and liquid wastes, settlements, and agriculture production and industrial expansion. There is urgent need to promote the conservation of wetlands in order to sustain their ecological and socio-economic functions for the present and future generations. Therefore, the following strategy measures are recommended:

1. Involve local authorities and all stakeholders in wetland resource planning and management;
2. Ensure development of a wetlands policy for Liberia;
3. Conduct an inventory of major wetlands to determine their location, status, ecological and socio-economic values, as well as their sustainable capacity;
4. Development around wetlands should require environmental impact assessment;
5. Encourage wetlands management plans, in consultation with wetlands users; and enact appropriate national legislation;
6. Establish full protection status for wetlands of significant biological diversity; and
7. There should be public ownership of wetlands, and wetlands communities must involved in the design and implementation of projects around the wetlands.

4.12 Environmental Economics

Environmental conservation and management require that we integrate environmental costs and benefits into national economic planning and development at all levels, this will be mainstreaming it into the media and long-term plans. This is necessary as it helps to reflect the true costs and benefits of development. All measures adopted in environmental management, whether direct or indirect, have economic and financial consequences. Regrettably in Liberia, we have not yet taken into consideration the direct and indirect impacts of environmental activities in environmental management. The cost/benefit factors have not been integrated into the national social-economic development planning process.

The true economic values of environment management/mitigation must be considered. Most frequently, it is the financial value of the natural resources that are considered. We should be guided by the fact that sustainable resource use and proper environmental management are the means to ensure that the economy has the resources to sustain economic growth. Therefore, the following strategies measures are recommended:

1. Environmental costs and benefits, including benefits foregone, should be included in the development planning and reporting period;
2. Depreciation or degradation of natural resources should be reflected in the national accounts as depreciation of capital assets;
3. Develop capacity in environmental economics in the Ministry of Planning and Economic Affairs, and the Ministry of Finance and other relevant line ministries and agencies;
4. Integrate environmental economic into the national development planning process;
5. Incorporate the environmental impact assessment process into the Ministry of Finance and the Ministry of Planning and Economic Affairs and other government agencies as an additional criteria for reviewing and approving investment programmes; and
6. Develop effective decentralized resource management mechanisms to involve local communities, NGOs and the private sector, thus augmenting the implementation of government agencies.

5.0 Sustainable Management of Sectoral Systems

Fundamental to sustainable socio-economic development is the creation of an integrated and multi-sectoral systems approach to planning and management of resources and the environment. Coherent policies are required to accomplish this, and the policies must address cross-sectoral environmental management issues. Environmental priority program areas for sustainable management along with policy strategy measures are as follows:

5.1 Land Use

There ought to be strict adherence to the sensible use of land in manners that are technically feasible, economically viable, and socially acceptable for land sustainability. Land is a complex commodity of vital importance to the people of Liberia, and the management will involve numerous complicated aspects. In Liberia, at the base level is a traditional system that holds land in trust for the collective use and welfare of a whole community. Therefore, whatever system of management and planning that is evolved must take cognizance of this fact.

The demand on the country's land and its resources to improve the people's welfare imposes on this complex situation. There is demand on these resources to improve the people's welfare as well as demand by developers of the private sector. The consequence is that concepts about and actual use of land conflict and creates a serious problem in defining a structure for any land management system, which is a component of environment. Yet, all land users, although having different and often contradictory sets of values, objectives, intentions, or strategies, maintain that their aim is at using the land to advance the people. Difficulty arise in the performance of the different objectives, leading to non-conforming uses of the land, conflicts, over-use, and sometimes even under-use of the land. Land resources and the processes of development that promote natural resources extraction, pollution and waste generation have unbalanced consequences on the environment.

The issue of land management should be considered as a central point in addressing environmental problems in Liberia. The following strategy measures are recommended:

1. The land-use capability and assessment should be promoted;
2. Measures should be taken against land degradation;
3. Full-scale agricultural activities in urban areas should be discouraged;
4. Set up a Land-reform Commission;
5. Land assessment and evaluation should be promoted;
6. Subject public land leases to the environmental impact assessment process;
7. Make it a requirement that new leases of public lands should carry conditions which prohibit environmentally unacceptable land-use practices;
8. Provide mechanisms for improved and sustainable management of common property resources; and
9. Involve local communities in Land-use Planning.

5.2 Forest and Wildlife

Liberia contains the last remaining portions of the upper Guineas Forest in West Africa, with high biological diversity and standing timber potentials. **According to the priority-setting workshop held in Elmina, Ghana, in December of 1999, Liberia was considered the most important country in the West African Region to contain a remnant of the major tropical rain forest blocks, and rated exceptionally high priority area.** These forests are significant for conserving biodiversity of flora and fauna species, and maintaining an ecological balance system.

However, this unique forest environment is now seriously threatened with depletion and species extinction because of uncontrolled logging/timber extraction, shifting cultivation, infrastructure developments and settlements, indiscriminate hunting practices, fresh water fishing, fire-wood and charcoal production and the harvesting of non-timber forest products.

Recognizing the role rainforests play in maintaining food security, storing scores of medicinal plants, income generation and averting global and regional climate off set and, realizing the alarming rate at which the forest of Liberia is disappearing, it is imperative and incumbent upon the Government of Liberia to take some mitigating measures. Therefore, the following strategy measures are recommended:

1. Conduct a forest cover assessment to gather information on qualitative and quantitative data on the general status of the rainforest to derive proper management strategies;
2. Encourage lowland (swamp) farming, mechanize farming, introduce crop rotation methods and create farming zones.
3. Develop a comprehensive land-use planning strategy;
4. Promulgate laws that will legalize and regulate hunting into seasons based on off-take and non-off-take periods.
5. Prohibit use of dynamic, chemical, and net size in fresh water fishing;
6. Review activities of mining concessions to set standard of operations that are internationally accepted and practiced under sustainable management policies;
7. Enact legislation that will maximize use of non-timber forest products on a sustained basis.
8. Create capacity building in forest and wildlife management and launch a public awareness campaign;
9. Organize vocational training for hunters;
10. Promote the concept of local community forests nation wide;

11. Empower local communities to development their own forestry programmes;
12. Encourage traditional forestry practices;
13. Institute penalty for abandonment of logs and wildlife;
14. Put in place an effective awareness programme about the conservation of forest and wildlife;
15. Promote the concept of protected species outside of protected areas;
16. Strengthen forest protection programmes to ensure adequate vegetation cover in critical areas and discourage developments that are likely to cause harmful changes; and
17. Protect the fauna and flora of Liberia considered being in danger of extinction as well as forest reserves for scientific, recreational and other cultural purposes.

5.3 Protected Areas

In recent years there have been increasing deforestation, soil and other forms of land degradation, and unwarranted deterioration of the environment. The need is compelling, more than ever before to secure development while at the same time sustaining the productivity of the natural vegetation, protecting wildlife, maintaining genetic diversity and avoiding forest and soil destruction.

The structure of an ecosystem includes the species contained therein, their mass, their arrangement and other relevant information. In order for Liberians to communicate to decision makers their true desires about the maintenance of the natural environment and the pace of development, it is essential for the people to have a clear idea of the benefits they obtain from nature in its undeveloped state. Expanded attention should be given to linkages between the environment (protected areas) and economy-wide processes and policies. Protected areas can meet the needs of people only if social analysis is fully integrated with economic and ecological/biological analyses in their application to protected areas. Therefore, the following strategy measures are recommended:

1. Regulate forestry activities to enhance conservation and environmentally sound management practices;
2. Establish more protected areas in consonance with recommendations from environmental survey of the late 1970's;
3. Strengthen programs for the identification and study of the natural heritage in fauna and flora and for establishing a national inventory of forest resources;
4. Put in place a protected areas system throughout the country;

5. Advocate for more protected areas other than Sapo National Park
6. Enact legislation on the management of natural resources to provide for conservation of biodiversity in its wildest sense, including areas outside the protected areas system;
7. Development a policy framework for the identification and management of buffer zones and buffer areas in and around protected areas to help reduce conflicts between multiple-use and users;
8. Encourage and promote local community involvement in the understanding, planning and management of protected areas and in the sharing of benefits derived from these areas;
9. Re-assess priorities in protected area management and rationalize the protected area system through economic and social analyses to maximize the cost effectiveness in the conservation of biological biodiversity and human development; and
10. Increase protected area system to conserve and sustain management of a representative portion of Liberia's rainforests for future generations.

5.4 Energy Production and Use

Energy production, supply and utilization have serious implication for Liberia's economy and environment. Over the years, crude oil, hydro, firewood (fuel wood) and coal have been used for the production of energy in Liberia. The use of these resources has greatly contributed to the degradation of the Liberian Environment. As an oil importing country, Liberia spent about 30% of its foreign exchange earning on crude oil imports. Nevertheless, it must be noted that petroleum provides only a small percentage of the energy consumed in Liberia. Before the crises hydropower provided about 70% of Liberia electricity supply but the bulk of the present energy consumption, which is due to the crises, is derived from firewood and charcoal.

With the rapid population growth, acute poverty and the existing firewood production a dependence on firewood is sure to damage the ecology. Therefore, the following strategy policy measures are recommended:

1. Encourage the use of renewable energy resources, examples biogas, solar energy, and hydroelectric power, which will conserve the environment;
2. Develop and promote energy saving methods for non-renewable energy resources, examples efficient cooking stoves, improved charcoal production methods, electricity saving measures, and improved building technologies;
3. Ensuring the availability and equitable distribution of energy to all socio-economic sectors and geographical regions;

4. Reducing the country's vulnerability to short-term disruptions in the energy resources and supply bases;
5. Minimize firewood and charcoal consumption through the development of alternative energy sources and firewood and charcoal energy efficiency;
6. Introduce and establish nation wide fast growing tree species plantations for firewood, to reduce pressure on natural forest for charcoal production and local construction materials; and
7. Identify and re-assess potential sources of hydropower in Liberia.

5.5 Toxic and Hazardous Substances

Hazardous chemicals refer to those chemicals, which pose a risk or danger, through poisoning to those who come into contact with them through application, handling, exposed communities and use. The presence within the environment, and use, of hazardous substances for various purposes affect the quality of water, soil, air, and ultimately life.

The manufacturing, production, importation, and exportation as well as the utilization of toxic and hazardous substances should be regulated to ensure the maximum protection and safety of human health and ecology. For many years the use of potentially toxic chemicals in Liberia has proceeded without much consideration to the possible environmental consequences. Therefore, the following strategy policy measures are recommended:

1. Ensure effective handling, transportation, disposal and storage of hazardous substances;
2. Demarcate industrial parks from residential and commercial areas;
3. Draft legislation to control the importation, distribution, sale and use of pesticides and other toxic chemicals; and
4. Enforce existing regulations regarding notification prior to production/or importation of hazardous substances.

5.6 Agricultural/Forestry Chemicals

The manufacture, production, importation and exportation of all agricultural chemicals should be regulated to ensure a safe environment. Therefore, the following strategy policy measures are recommended:

1. Ensure that all hazardous and outdated agricultural chemicals do not entry the country;

2. All agricultural chemicals for importation should be approved by lead and relevant agencies concerned;
3. An inspectorate should be established to monitor and control the application of agriculture chemicals; and
4. Support international hazardous agricultural chemicals control and create awareness on the usage of only appropriate chemicals.

5.7 Waste Management and Sanitation

Solid and liquid waste management is posing serious environment problems particularly for urban areas and large villages. All wastes should be disposed on in a way that will not adversely affect the environment. The Government of Liberia will commit itself to a clean and healthy environment by protecting its territory against all forms of pollution: air, water, coastal, industrial, and land. A clean environment is a necessary condition for social and economic development. Properly planned and implemented sewage/effluent social management and sanitation is a recipe of long life. Therefore, the following strategic policy measures are recommended:

1. Conduct a comprehensive study of the current waste management system and assess the development needs;
2. Review of existing policies/laws/regulations for solid waste and effluent management under relevant agencies;
3. Identify designate and establish land fill sites for all urban areas;
4. Set up a joint monitoring and collaborating unit between agencies and institutions responsible for waste management programs and involve the local communities;
5. Design and instruct a waste management sensitization programs at various levels, especially among women and the youth;
6. Encourage reduction of waste generation, waste separation at source and recycling (industrial/urban);
7. Ensure proper drainages facilitate in all urban areas;
8. Encourage and stimulate community-based initiatives for clean environment;
9. Re-enforce waste disposal zoning and the payment rates for solid waste management and effluent disposal; and
10. Empower local communities to disposal of their wastes.

5.8 Marine and Coastal Management

Promote conservation and proper management of the marine environment against the adverse effects of human and animal activities to promote sustainable use of marine ecosystem and safe guard human health for social-economic development of marine resources. Therefore, the following strategic policy measures are recommended:

1. Legislate for the total protection of territorial waters;
2. Institute regulations for sustainable use of and the protection, control and development of coastal areas, mangrove swamps and river banks;
3. Institute and ensure integrated institutional and technical coastal management;
4. Ensure measures for monitoring and response to rising sea level and marine and coastal environmental problems;
5. Ensure ratification and signing of all environmental treaties, conventions and protocols including those for marine and coastal areas;
6. Conduct feasibility studies and re-assess coastal areas;
7. Build wave breakers along all major coastal areas; and
8. Ensure massive public awareness about marine and coastal management.

5.9 Mining and Mineral Resources

The mining industry is one of the major sources of foreign exchange earning in Liberia. It is one of the strategic sectors to receive attention under the Economic Recovery Program. Nevertheless, mining and mineral processing can cause serious environmental and conservation problems if not properly controlled. Mining and mineral resources have contributed immensely to the degradation of the Liberian Environment. The main problems associated with surface mining in Liberia include soil degradation, land devastation, and water pollution.

Cognizant of the degradation this sector has done over the years to the country, it is necessary that meaningful programs are arranged and placed to protect the ecosystems. The Government will attempt to subscribe and abide by the various international and recognize the existence of those that are not yet signed. Therefore, the following strategic policy measures are recommended:

1. That there should be the introduction of best technologies and practices for mining activities in-order to protect the environment;

2. That there should be a policy of revenue sharing from all mining activities to support human development and environment programs within area where mining companies operate;
3. That there should be coherence and information sharing between inter-sectoral agencies at mining sites;
4. That mining activities should take into consideration the socio, cultural and economic impact of the area;
5. That mining activities should consider the occupational health and safety of the people and the immediate surroundings;
6. That small-scale miners should be organized and environmental friendly and new technologies and practices introduced that will not pose threat to the users and the environment;
7. That all mining and mineral resources laws, rules and regulations take into account the concern for the environment and the Environmental Protection Agency (EPA) is established to monitor implementation;
8. EIA should be mandatory for all mining activities, including beach sand mining, and
9. Ensure local community involvement in decision about mining activities.

5.10 Noise and Air Pollution

The effects of environmental pollution are felt in areas; people themselves, water, air, noise pollution, waste disposal, and etc. However, in Liberia, the standards, which serves as guidelines for monitoring agencies are generally lacking. An adequate assessment of whether the level of pollution caused by any activity is acceptable or not, safe or dangerous, depends on the minimum quality standards which have been determined for any activity and at any particular time and place. The appropriate knowledge, technology, and resources are necessary for setting standards and monitoring. Therefore, the following strategic policy measures are recommended:

1. Ensure and develop air and sound quality standards;
2. Encourage the designation of specific land areas to be used as municipal land fills for waste disposal rather than disposing around the swamps and backyards of our cities, which pollute our air through gas emissions;
3. Set standards for used-car importation and gas emissions;
4. Set standards for petroleum and diesel generators emissions; and
5. The issue of site pollution must be studied and considered.

6.0 WORKING WITH AND THROUGH PEOPLE

The involvement of the citizenry in environmental management and utilization of natural resources is very crucial. People's participation must be developed and supported by building the capacity of individuals, groups, and communities. Additionally, public education about environmental matters, as well as creating the condition whereas the public can participate in decisions that affect their environment and working with NGOs, CBOs, PVO's and Youth clubs should be considered. The private sector and the business community have a role to play as well, and their involvement is needed. Only if people are involved, informed, and trained about environmental matters will they appreciate the importance of nature and natural resources.

Stakeholder participation should be encouraged to involve everyone in decision-making, planning and implementation. Therefore, this will be accomplished through the following strategy policy measures:

1. Supporting capacity building, to include transfer of technology;
2. Promoting bio-prospecting in our rainforest;
3. Encouraging environmental education and public awareness;
4. Encouraging patenting for intellectual property rights;
5. Supporting public participation;
6. Promoting issues of gender concern, including equity and equality;
7. Encouraging dealing either NGO's, CBO's, PVO's, Youth clubs and the business community/private sector.

6.1 Capacity Building and Technology Transfer

The Environmental Protection agency, after its establishment, will foster and encourage the creation of an enabling environment for the transfer of appropriate technologies and capacity building, which will enhance national efforts geared towards sound environmental management and protection. Therefore, the following strategy policy measures are recommended:

1. Ratify of all relevant treaties, protocols and conventions that would facilitate technology and resource transfer and capacity building;
2. Encourage and promote tax incentives for adopting environmental friendly technologies;
3. Participation in international conferences and trade fairs to acquire knowledge and updated information;

4. Adopt internationally developed and recommended guidelines, standards and practices for technology transfer;
5. Promote use of appropriate technologies; and
6. Encourage and support local communities in acquiring sufficient training in environmental management.

6.2 Bio-Prospecting and Intellectual Property

Bio prospecting has been a historical traditional practice in all of our villages and towns. Although most herbalists claim they have cured multiple diseases, there are hardly any documented and analytical proofs. Some of these practices have acquired serious side effects resulting into death, paralysis, etc.

It is therefore recommended that government encourages and empowers universities, pharmaceutical laboratories and other bio-technical institutions to carry out research on medicinal plants and traditional knowledge. Therefore, the following strategic policy measures are recommended:

1. Encourage compensation and acknowledgment of research findings and works of people even when they are copied or used as reference;
2. Encourage, acknowledge and compensate individuals and communities who have been guardians of medicinal and traditional knowledge;
3. Encourage and motivate publication of research findings that are otherwise considered secret holding;
4. Encourage the promotion and public knowledge of generically modified organisms (GMO);
5. Patenting licenses must be promoted and individuals rightfully compensated for their intellectual property;
6. Traditional healers should be encouraged to worked in hospital, and they must be persuaded and not forced;
7. Establish research centers for traditional medicine and registry of traditional healers;
8. Encourage the establishment of traditional institutions and use of complimentary medicine;
9. Identify traditional healers and establish traditional healers association; and

10. Honor people for their discoveries in the area of traditional and complimentary medicine.

6.3 Public Education and Awareness

Develop an effective scheme for the promotion of environmental education and awareness in order to change people's attitudes and perceptions about the environment. Foster practices and values for sustainable development. Incorporate environmental programs into educational programs at all levels to enhance knowledge and skills and raise environmental awareness.

Therefore, the following strategy policy measures are recommended:

1. Promote formal and informal environmental education through government national plan, NGO's and the business community;
2. support environmental education programmes and awareness;
3. Ensure massive dissemination of information concerning environmental management at all levels;
4. Conduct research and provide incentives for the utilization of local knowledge on environmental issues related to education;
5. Establish environmental clubs and other associations in schools and other educational institutions;
6. Introduce environmental education in schools and universities and add environmental to the national curriculum;
7. Establish and maintain an environmental information center to provide documentation and referral services to the general public on environmental matters;
8. Ensure that environmental awareness and education is dramatized in schools and villages to relay the message to the understanding of the illiterate, and
9. Encourage adult literacy programs.

6.4 Public Participation

Encourage individual and community participation in improving the environment. Participation of the people in resource management and environmental protection is intended not only to enlist their support, but to also influence change in their behavior and attitudes.

Therefore, the following strategy policy measures are recommended to support public participation in environmental matters:

1. Ensuring full participation of stakeholders in the implementation of national environmental policy and program;
2. Conduct appropriate educational activities for awareness of peoples responsibilities towards and benefits from the environment and capacity building programs be carry-out for Government and citizens to help people utilize these benefits;
3. The proposed Environmental Protection Agency will formulate appropriate public hearing programs of all development initiatives having environmental impact on the stakeholders prior to their execution;
4. Develop guidelines on public participation in environmental and natural resource management;
5. Design programs that involve and benefit the most disadvantaged groups
6. Bridge the information gaps between central management and local communities resource users by developing information collection and dissemination;
7. Assist resource users to identify untapped resources; and
8. Encourage the involvement of women and children in environmental planning and decision-making.

6.5 Gender and Women's Issues

Gender is a core development issue and women play an important part in advancing and degrading the natural resources. Therefore, it is imperative to promote integration of gender concern into environmental decisions and particularly consider the role women play in environmental protection. Gender mainstreaming should form an integral part of the basic training and social development, and environmental and natural resources management. In environmental management, gender sensitivity must be made a priority for sustainability and development. Therefore, the following strategy policy measures are recommended:

1. Review all laws, and practices and norms considered to be discriminatory against women and propose remedial actions;
2. Ratify relevant international conventions and agreements, which promote Discrimination Against Women and the Beijing Plan of Action;
3. Strengthen women's environmental programs in the country;
4. Strengthen the newly created Ministry of Gender and Development to address issues throughout society, especially as they relate to international cooperation, economic development, environmental management, political participation, education and training, employment, health and nutrition; and

5. Promote environmental education aimed at women in various socio-economic groupings.

6.6 NGO'S, CBO'S PVO'S, Youth Clubs and the Private Sector

It is in our national interest to recognize and strengthen the role of individuals, NGO's Community-based Organization, Community Development Councils and the youth groups in sustaining the environment and also seek the business communities and the international communities cooperation in the formulation stage of the environmental management policy and allow them to serve as partners during policy implementation.

We must realize that in order to manage, protect, and sustainably utilize natural resources, people, communities, and organizations must be empowered and they must participate and equitably share the socio-economic benefits from the management of the environment and natural resources.

Therefore, the following strategy policy measures are recommended:

1. Put in place an effective outreach program and build the capacity of the youth;
2. Build capacity within the National Environmental Commission of Liberia, and when established, within the Agency, to empower and develop environmental management capacities of NGOs and Community groups;
3. Encourage the involvement of professional bodies, trade unions, marketing associations, student organizations, and local community people in environmental awareness raising programs;
4. Encourage communities to make use of the knowledge and capacities of local environmental NGO's, CBO's, and PVO's, CDCs and local business communities in implementing environmental activities at the grass roots level;
5. Establish and strengthen Environmental Units within line Ministries and Agencies;
6. Organize environmental clubs at the village and clan levels; and
7. Encourage local business communities to support environmental and nature clubs.

70. POLICY IMPLEMENTATION

Policy implementation will involve the detailing of policies from the level of intent to the structuring of actions as required to achieve intended policy outputs and impacts of the outputs. The priority is to create and establish an appropriate legal and institutional framework to facilitate implementation of the policy. The next step would be to develop a scheme for

monitoring and evaluation to assess the impact that policy implementation may have on the environment, economy and population.

The Implementation of the National Environmental Policy depends on specific actions directed towards major sectors and problem areas of the environment, acceptance by all sectors, and the commitment to adhere to the principles of the policy by all sectors. Consequently, this policy is based on the understanding that environmental issues involve an approach to problem solving, contingent on interrelated, intertwining and holistic and systematic views and actions.

The strategies are to a large extent focused on Social and Economic Dimensions, Sustainable Management of Natural Resources and Working with and through people. The policy implementation is largely to be conducted through the Agency and other relevant institutions and organizations. The policy is to be formulated, adopted, and implemented over a period.

The actions envisaged will establish and/or strengthen legal, institutional, regulatory, research, monitoring, evaluation, public information and outreach, the other relevant mechanisms for assuring the attainment of specific goals, objectives and strategies of the policy.

8.0 LEGAL ARRANGEMENTS

In Liberia, many legal enactments have been codified to empower various official bodies, which actually exercise executing powers in protection of the environment. However, these powers are widely scattered among these bodies and no institution maintains exclusive oversight of the whole of the environment. In the face of this confused state of affairs, it is extremely difficult to determine specific assigned responsibilities to the various government agencies with respect to the environment.

Besides, many of the institutions with executing functions are unable to exercise these functions effectively because of overlapping jurisdictions. It is evident that there are a number of problems relating to the environment, which have not received the attention they deserved because they have not been seen as falling clearly within the sphere of responsibility of any particular institution.

Hence, it has become imperative to promulgate a framework legislation, which shall mandate the standards, guidelines and procedures for environmental protection, based on this National Environmental Policy. Such action will positively affect the sustainable management of natural resources and the environment.

9.0 INSTITUTIONAL ARRANGEMENT

Environmental concerns are cross-sectoral and will require an integrated multi-sectoral management approach. This requires a comprehensive institutional mechanism that will ensure widely active participation and interaction of people and organizations including NGO's and local communities.

The institutional arrangement to enhance the effectiveness of the National Environmental Policy will include establishing a national environment council and an autonomous government agency with ultimate oversight powers and responsibility for protecting the Liberian environment. An effective institutional arrangement must be supported by a specialized environmental court and mechanism to promote environmental protection on the lowest level of the Liberian society.

The Council shall be responsible for policy formulation and directing the purpose of the law, setting priorities for national goals and objectives for environmental protection, ensuring the implementation of environmental policies and programs, and collaborate with the Agency on policy issues affecting the environment.

The Agency shall be responsible of coordinating, integrating, and harmonizing the implementation of environmental policy and decisions of the Council and Line Ministries. Additionally, it shall encourage the use of appropriate environmental technologies, and propose environmental policies and strategies.

To achieve this, the independent Agency, detached of Cabinet influence, shall be established through appropriate legislation with responsibilities including but not limited to the follow;

1. To coordinate, integrate and harmonize the implementation of environmental policy and decisions of the Policy Council and the Line Ministries;
2. To propose environmental policies and strategies to the Policy Council and ensure the integration of environmental concerns in overall national planning;
3. To collect and prepare basic scientific data and other information pertaining to pollution, degradation, environmental quality, and environmental resource use;
4. To give technical support and render advice;
5. To encourage environmental technology research, the use of appropriate environmental technologies and renewable sources of energy and natural resources;
6. Monitor and assess environmental projects and activities; and
7. Enter into regional and international cooperation for the management of shared natural resources and the harmonization of environmental law and standards.

10.0 INTERNATIONAL TREATIES AND OBLIGATIONS

Owing to the complex nature of environmental issues, there is increasing concern for regional and global approach to address the issues. Also, it has become increasingly obvious that environmental problems hardly respect national boundaries. Some of these problems, such as pollutions, climate change, and drought are, by their very nature, international or global in character. It is therefore essential that these problems be tackled at those levels. Liberia will participate actively in international efforts towards the protection of the environment.

Liberia will maintain, and where necessary, increase its participation in the activities off the United Nationals environment agencies, other multilateral organizations and non-governmental organizations, and observe the numerous international agreements to which Liberia is a party.

At the regional and continental levels, Liberia's environmental policy will function in the context of an increased effective participation in all protocols and conventions to which it is a party. These issues form the basis for enhancing sensible management and conservation of environmental resources.

11.0 MONITORING AND EVALUATION

There is need to obtain information about the environment modification as a result of the various human use systems which are in a constant state of instability. Information about the environment concerns issue involving time, space, and perceptions and environmental processes, both man-made and natural.

There is need for a sound knowledge about the resource factors: what is available to all actors, where they are, how much there is, and in what state are the questions that need answers. This is necessary to ensure that resource exploitation does not exceed the natural resistance of the environment.

Evaluation and monitoring will be concerned with the relationship between the focus of the policy objective and the outputs target of the project activities, but simultaneously considering changes of environmental situations and adjusting accordingly.

Thus, in order to ensure that the provisions of this environmental policy are successfully achieved, continuous monitoring and evaluation of the overall programmes and activities must be conducted. The government must support, through its national budget, the strategies and activities of the formulated policy and the needed monitoring and evaluation mechanism. It is important that measures of progress and effectiveness of the proposed strategies are evaluated as investment in the authority and environmental programs are carried out.

A fully organize mechanism will be set-up to appropriately conduct monitoring and evaluation. The mechanism will involve all the necessary agents and government institutions engaged in environmental activities because monitoring and evaluation will entail adequate and precise coordination and collaboration between concern government agencies, donors and NGO's. Any monitoring and evaluation mechanism or system that is set-up will have to support the different environmental management program of the agency.

The established agency will not be a data collection agency. Various institutions of government have been charged with the responsibility of gathering environmental data or environmental related data. It is only where no institution collects a specific data that the Environment Protection Agency will undertake or commit an institution to perform such function. These various institutions will function as intersections of the environmental base network. Therefore,

the actual need now is to strengthen the intersections network with the required needs, particularly for analyzing of data and reporting on monitoring and evaluating.

CONCLUSION

Since environment is a cross-cutting issue, it calls for policies which are forward looking and which transcend all other sectors. A national environment policy that integrates all environment-related sectoral policies is vital to the effective protection and management of the environment.

The National Environmental Policy formulated in this documents is important because it provides a systematic and logical framework in which to address environmental issues. Moreover, it provides benchmarks for addressing environmental problems in the medium and short-term. Also, as with policies in general, this policy necessarily influences financial/donor support to particular sectors or non-sectors. Further, it serves as a means of generating information and awareness on environmental problems.

Finally, the National Environmental Policy of Liberia demonstrates this country's seriousness towards sustainable protection of the environment and management of our natural resources.