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West and Central Africa Regional Environmental Law Study

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West and Central Africa Regional Environmental Law Study

Submitted To:

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REDSOAWCA
Abidjan, Côte d'Ivoire

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EXECUTIVE SUMMARY

This report surveys and assesses the state of environmental and natural resource laws and regulations in selected West and Central African (WCA) countries. Deficiencies in the laws constitute a major hurdle to environmental protection and natural resource management in these countries. Baseline data on national, state, local and customary laws thus represents a starting point in determining the necessity for revisions of existing laws or the promulgation of new laws.

The foundation of environmental law in West Africa is colonial law, which was derived generally by the application of early 20th century English and French law. These laws deal with health and sanitation issues and natural resource extraction. In regards to the latter laws, the focus is on exploitation -- not protection. Questions arise as to the adequacy of these laws to deal with old problems, let alone deal with new problems not contemplated when the laws were originally enacted. While several countries have enacted environmental legislation in certain sectors, no country has a comprehensive package of modern environmental laws.

Several factors, related to the lack of relevant and sufficient legislation, contribute to the failure of WCA countries to protect and manage effectively their natural resources. Jurisdictional battles between ministries and the frequent shuffling and rearranging of ministerial portfolios fosters institutional instability. Institutional capacity is a related problem. WCA institutions charged with environmental protection have lacked, or have not applied, sufficient resources, human or technological, to undertake properly their responsibilities.

The lack of political will presents a stumbling block. Environmental issues do not always command a high priority in light of the grave social, political and economic problems most of these countries face. Moreover, the people do not always have confidence in governmental institutions owing to problems of corruption and favoritism.

The failure to consider customary practices as they relate to natural resource use represents a major impediment to the sustainable use of the natural resources. For example, forestry legislation prohibiting the felling of trees in an area where tree felling is an age-old practice will not likely be observed. Without local acceptance and participation in the process of formulation and implementation, policies and laws requiring behavioral changes are doomed to fail.

This report recommends a variety of actions that could be taken to address the impediments to effective environmental protection and natural resource management. Such actions entail legal and policy reforms, institutional strengthening, promoting public participation, and education and training initiatives.

1. INTRODUCTION

Deficiencies in the laws constitute a major hurdle to environmental protection and natural resource management in the West and Central African (WCA) countries. Before changes in individual laws, broader coverage of laws, or model regional laws can be proposed, it is necessary to obtain baseline data on the existing laws, policies, codes, and regulations which are environmentally related. The U.S. Agency for International Development undertook an activity titled "Environmental Law Study in WCA Regional Countries," to survey and assess the state of environmental law and regulations in selected WCA countries.

USAID contracted with International Resources Group (IRG), Ltd., to perform this study. The IRG study team consisted of two legal specialists. J. Eugene Gibson, the team leader, is an international attorney with experience in the area of environmental law and a thorough knowledge of common law legal systems. The second member, Jean Claude Laurent, is an attorney with substantial environmental expertise and a thorough knowledge of Napoleonic Code legal systems. Gibson visited the anglophone countries (Ghana, Nigeria, The Gambia and Cameroon¹) and Laurent visited the francophone countries (Cote d'Ivoire, Mali, Niger and Sénégal). They were in each country for approximately one week. After visiting the countries, the team spent approximately one month drafting the report.

The report is based on summary discussions with government officials from the WCA countries, officials from bilateral and multilateral aid agencies, representatives from non-governmental organizations, attorneys in private practice and law professors, and a summary review of environmental and natural resource laws of the WCA countries. While the report does not purport to be a comprehensive or authoritative review of all the environmentally related laws of the WCA countries, the team believes all the main laws are identified. This report is intended to serve as a guide to facilitate more detailed study.

The report consists of seven sections. Section Two, "Legal Perspective," provides an overview of the legal environment in the WCA countries. Section Three, "Constraints on Enforcement," examines the type of deficiencies common to the WCA countries' environmental and natural resource laws and why the laws have not been effectively enforced. The issues discussed in Sections Two and Three are more-or-less germane to all the countries studied. Section Four, "Legal Framework," provides an overview of the law-making process and the role the executive, legislative and judicial branches of government play in this process. Section Five, "Environmental and Natural Resource Management Capacity," examines the management framework and institutional arrangements for environmental protection and natural resource management in the WCA countries, the role the public can play in these efforts via community groups and non-governmental

¹The Cameroon legal system is a mixture of common law and Napoleonic code systems.

organizations (NGOs) and the status of environmental impact assessment requirements. Section Six, "Legal Sectoral Issues," provides a base line sectoral survey on the status of environmental and natural resource laws and regulations and their enforcement. The survey identifies faults and makes recommendations as to how the laws could be improved. While Sections Four, Five and Six provide specific institutional and sectoral discussions of each WCA country, the report is not organized by country. These sections are organized so as to facilitate a comparison of the laws and institutions in each country. Section Seven, "Recommendations," recommends policy and legal reforms the WCA countries could undertake and the type of institutional strengthening required. Initiatives to promote public participation and opportunities for environmental education and training are reviewed. The section concludes with a discussion of regulatory and enforcement mechanisms. These are generic recommendations and will have to be tailored to the needs and conditions in each country.

2. LEGAL PERSPECTIVE

The environmental and natural resource laws of the WCA countries are derived from a number of sources, specifically: English and French law, national and state legislation, international law, customary law, and to a limited degree -- case law.

The former West African English colonies "received" the English law. For instance, Nigeria received the common law, the doctrines of equity, statutes and subsidiary legislation that were in force in England on January 1, 1900. Although local legislation gave effect to the received English law, the British Administration in Nigeria passed this legislation -- not a body of indigenous people. The British Parliament also "extended" English law to the former colonies. Much of the environmental law in West Africa is still derived, for the most part, from English and French laws of the early 20th century. These laws, transposed onto the West African colonial territories, seem to have reflected a perception within the colonial administrations of a need for regulation in two environmental areas: public health and sanitation; and, the extraction of mineral and other natural resources. Whether or not these laws were sufficient to cover the recognized environmental issues of that era, the weak and sporadic evolution of environmental law in West Africa has hampered environmental protection and natural resources management.

In recent years several of the countries have enacted environmental legislation in certain sectors, but no country has a comprehensive package of modern environmental laws. Environmental law-making in the WCA countries reflects a reactive as opposed to proactive approach, with governments responding incrementally to environmental and natural resource issues. The impetus for new law, in many cases, comes from an environmental crisis or the donor community. In drafting new laws, the WCA countries sometimes look to environmental legislation enacted in the United States and Europe.

Many of the WCA countries are signatories to various international environmental conventions.² Signing these conventions prompts the countries to consider environmental issues and pass domestic legislation so as to conform to their international obligations. Instances exist, however, where many of these countries have yet to enact domestic implementing legislation.

Customary law provides another level of complexity to the legal systems in the WCA countries. Customary law consists of the aggregate of customary practices, usages, mores

²The primary international conventions are: the United Nations Convention on the Law of the Sea, Convention for the Prevention of Pollution of the Sea by Oil, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), African Convention for the Conservation of Nature and Natural Resources, Convention Concerning the Protection of the World Cultural and National Heritage, Convention on the Conservation of Migratory Species of Wild Animals, and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Wetlands or Ramsar Convention).

and norms accepted by members of a community as binding among them. There are two classes of customary law: ethnic or non-Moslem customary law and Moslem law. Ethnic customary law is unwritten and indigenous to a country, region or community. Moslem law, based on the Moslem faith, is principally in written form and only applies to members of that faith. Ethnic customary law is unwritten, whereas Moslem law is principally in written form. Customary law bears on environmental issues to the extent that it addresses land tenure, land use and water rights issues.

Several customary law systems can exist in a country since each ethnic group has its own separate system. This diversity of customary law systems poses difficulties in determining uniformity of customary law systems in a country. Two features characterize customary law: first, its recognition as law by members of the ethnic group who accept it as reflecting usage and practice and second, the law can change from time to time so as to reflect changing social and economic conditions.

Customary law and the common law can exist side by side and the two sets of law are not necessarily exclusive of each other. Where deficiencies exist in some aspects of customary law, the common law may supplement. The usual test for determining the validity of customary law is whether the customary law is repugnant to natural justice, equity and good conscience.³ Additional tests formulated by some countries are whether the customary law is incompatible either directly or by implication with any law currently in force, or whether it is contrary to public policy.

Case law represents a final source of environmental law. Very little environmental litigation, however, has occurred in the WCA countries. In the United States, the vast majority of environmental litigation involves disputes with government agencies -- rather than disputes between private parties. Such litigation usually arises in two forms.⁴ A cause

³The phrase "natural justice, equity and good conscience" has come to be known as the repugnancy doctrine and its interpretation the subject of numerous treatises and cases. The term "equity" has a broad and popular meaning and a narrow technical meaning. The popular meaning is practically equivalent to natural justice or morality and the technical meaning to the jurisdiction of Chancery. In this circumstance, the broad meaning is followed. The term "natural justice," like equity, has a technical meaning. In this circumstance, natural justice is synonymous with natural law. "Good conscience" refers to a philosophical and theological conception of conscience. Basically, there is no precise meaning to the phrase "natural justice, equity and good conscience," and a liberal and flexible interpretation should be adopted, rather than a technical interpretation of each word.

⁴Federal and state environmental regulatory agencies in the U.S. usually enforce environmental statutes and regulations through administrative adjudications governed by either the federal Administrative Procedure Act (APA) or various state APAs. Adjudication is a broad residual category that includes the great majority of agency decisions affecting private parties. Formal adjudications, sometimes called "evidentiary hearings," "full hearings," or "trial-type hearings" are similar to court trials - but with some significant differences. Formal adjudications comprise only

of action may claim that an agency, such as the U.S. Environmental Protection Agency, acted improperly in implementing an environmental statute. The second cause of action arises from a claim that an agency has improperly threatened the environment. Both kinds of claims raise general issues about the procedural restrictions on suits against the government. Some of the WCA authoritarian regimes, however, prohibit the courts from considering the validity of any legislation that the regime has passed -- clearly a chilling effect on potential litigation. The section below on constraints on enforcement discusses additional reasons for the lack of an environmental jurisprudence.

Where there has been some environmentally related litigation, it generally occurs in the areas of water rights, land tenure and the tort laws of negligence, nuisance and trespass. As a practical matter, few private individuals have the financial and technical resources to prove their cause of actions, let alone afford the cost of bringing the action in the first place. Moreover, the francophone countries do not rely on judicial precedent to the same extent as the anglophone countries.⁵

a small proportion of agency decisions. Courts in the U.S. have developed doctrines such as unreviewability, standing, and exhaustion of administrative remedies to determine whether they will undertake judicial review of agency decisions.

⁵The anglophone countries follow the common law derived from England. In general this is a body of law that develops and derives through judicial decisions, as distinguished from legislative enactments. A fundamental tenet of the common law is the doctrine of stare decisis. This doctrine holds that when a point of law has been settled by a court decision, it forms precedent which is not afterwards to be departed from, and while it should ordinarily be strictly adhered to, there are occasions when departure is rendered necessary to vindicate plain, obvious principles of law and remedy continued injustice. In a broad sense the common law can also refer to those principles, juristic theory, rules of action relating to the government and security of persons and property which do not rest for their authority upon any express and positive declaration of the will of the legislature. The francophone countries follow the code civil derived from the civil law of France. Promulgated in 1804, the name was changed to "Code Napoleon" when Napoleon became Emperor. The terms "Code Napoleon" and "Code Civil" are both used in the francophone countries. In civil code countries the courts take more of a black letter interpretation to legislative enactments. Civil code courts are not instruments of law-making to the same extent as in common law countries.

3. CONSTRAINTS ON ENFORCEMENT

The various WCA governmental bodies charged with environmental protection and natural resource management experience considerable difficulties carrying out their mandates and have had limited success. Numerous constraints on enforcement exist. As alluded to above, many of the laws are old and fail to address today's problems, or in some cases -- no law exists.

The lack of subsidiary legislation also represents a major problem.⁶ For instance, Ghana's mining law specifies that:

The holder of a mineral right shall in the exercise of his right under the license or lease have due regard to the effect of the mineral operations on the environment and shall take such steps as may be necessary to prevent pollution of the environment as a result of such mineral operation.⁷

To regulate effectively the pollution arising from mining activities, the legislation must include environmental standards and quality control requirements coupled with scientific monitoring of pollutants in the environment. Subsidiary law regulating the level of pollutants permissible in the air, water and soil from a mining operation's liquid and solid waste discharges does not exist. This presents a legal problem in bringing an enforcement action since no specific standard can be shown to have been violated. The enforcement agency can only make the vague claim that the licensee failed to take "such steps as may be necessary to prevent pollution of the environment." In such situations there would have to be an egregious case of pollution in order to prevail. The lack of subsidiary legislation is prevalent throughout the WCA countries.

In the absence of subsidiary legislation, a ministry or agency will sometimes tell a foreign investor to follow the environmental standards in the investor's country or to follow World Health Organization (WHO) standards. The ministry or agency will probably not know what the specific standards are in the investor's country to determine the investor's compliance. Moreover, if each foreign investor follows a different set of standards, the enforcement agencies face a regulatory nightmare in determining compliance.

While non-statutory standards are difficult to enforce owing to the large element of subjectivity, they do have one advantage over statutory standards. The latter standards are

⁶Subsidiary legislation, also known as subsidiary instrument or delegated legislation, is law enacted in the exercise of powers given by a statute. It consists of rules, orders, regulations, by-laws and other instruments made under the authority of statutes. An enabling statute refers to a statute under which subsidiary legislation is made.

⁷The Minerals and Mining Law, 1986 (PNDCL 153), S. 72.

difficult to alter when the need arises and in theory non-statutory standards could provide a more pragmatic, responsive approach to pollution control.

Organizational instability contributes to ineffective environmental management. Governments, over relatively short periods, will shift responsibility for environmental management from different units and levels of government, thus losing the benefits of accumulated experiences and institutional learning. In recognition of how environmental responsibilities can easily shift, some WCA countries, rather than designate a particular ministry to enforce a law, provide the following definition for "Minister" in the definition section of the statute: "Minister means the Minister of the time being charged with responsibility for administering this Act."

Jurisdictional conflicts and overlaps among ministries and among national and local governmental bodies also contribute to enforcement problems. Environmental problems sometimes will not receive attention either because they are not seen as falling within the jurisdiction of any particular agency or because so many agencies conceivably have jurisdiction -- none of them take the initiative to address the problems. This invites abuses of privilege and a lack of accountability. As these countries move toward decentralized government -- a positive trend -- the jurisdictional issues will magnify and have to be worked out.

Even with well drafted laws and clear jurisdictional mandates problems arise. The governments lack the institutional capability to enforce the law. The governmental agencies seldom have the technical capability to conduct oversight and monitoring, or the legal expertise to bring enforcement actions.

A related problem occurs if the country lacks the technology and/or infrastructure to enable people to comply with the law. Adopting environmental laws from the developed countries with only minor modifications can pose compliance problems. Unrealistic laws do not engender respect for the legal system. Moreover, people will not observe laws that do not reflect their socio-economic conditions and customs and values.

An additional problem can arise if a developing country copies a specific environmental law from a developed country and the developing country fails to also introduce the developed country's complementary environmental laws. For example, if a developing country copied British water pollution control legislation, the straight forward sanctions against offenders may not reveal anything about complementary provisions in the public health law which

give relief to these sanctions.⁸ Consequently, the developing country winds up with an unworkable piece of legislation.

The lack of political will to enforce the law presents a major stumbling block. Several factors contribute to this lack of will. Environmental issues do not always command a high priority with the governments, even though several countries have established environmental agencies with competent staff. Morale and productivity at the agencies can sometimes be a problem, however. Staff are underpaid and do not have adequate resources to perform their duties. Periodically, some WCA countries face long stretches where they cannot pay their workers or fulfill other budget commitments.

All of these countries have undergone economic crises and many still experience severe economic problems. The governments are reluctant to crack down on people barely eking out a subsistence livelihood, or on alleged polluters when this would result in a company's bankruptcy. Moreover, the natural resource extraction industries constitute the major source of export earnings and the governments fear that taking steps to vigorously regulate these industries might curtail this revenue flow. Governments may also turn a blind eye to pollution problems generated by parastatals.

In many WCA countries, society largely operates through personalities rather than institutions. Even though laws and by-laws exist, personalities tend to be more powerful than the institutions and laws. A law-breaker can avoid punishment if he knows the right influential person to approach. Such a person can bring pressure to bear on the enforcement agency to be lenient or forgiving. Society is still orientated toward and works more through personal and informal ties rather than formal laws. Highly personalized networks, rather than institutionalized relationships, control operations.

Stringent environmental laws are unlikely to receive political consent or acceptance. Even if initially approved, their ineffectiveness becomes apparent when hard measures have to be implemented. Governments are generally unwilling to move against influential groups and persons who comprise the social strata close to those in government.

⁸An example of this occurred in Ghana with The Ghana Water and Sewerage Regulations of 1979 (LI 1233) which resemble The Rivers (Prevention of Pollution) Act 1951 of England and Wales. The public health authorities in England and Wales control elaborate sewerage systems and sewage treatment plants, while River Boards control river pollution. If the effluents fail to meet discharge standards, industries may discharge them into public sewers for treatment at sewage works. Ghana, however, only has a few scattered sewerage systems and sewage treatment plants - none of which are designed for industrial wastes. Moreover, these are not adequately operated or properly maintained. Ghanaian industries are left with no choice but to discharge pollutants into water courses. A multitude of reasons exist as to the problems industries would face in treating the effluents before discharging them.

Corruption represents another impediment to good governmental administration. In addition to not solving the environmental problems, pervasive corruption causes the public to lose confidence in the government and the legal system. This speaks to the need to perform government activities in an open and transparent manner.

Instances, nevertheless, exist where governments have taken decisive and dramatic action in implementing and enforcing environmental laws. The best example occurred when many of the countries banned the import of hazardous wastes. The catalytic spark for such government action usually comes from the environmental press and/or non-governmental organizations (NGOs), which galvanize the public to demand governmental action. Consequently, in addition to drafting better laws, strategies fostering an environmental consciousness and respect for the rule of law should be pursued.

4. LEGAL FRAMEWORK

This section provides an overview of the law-making process in each country and the role the executive, legislative and judicial branches of government play in this process.⁹

Ghana

The current military regime suspended the Constitution, dissolved Parliament and operates under a Proclamation issued by the Provisional National Defense Council (PNDC). The Proclamation defines broad executive and legislative powers. The essential character of the PNDC is that no substantive limitation exists on its lawmaking power. In regards to environmental and natural resource legislation, working groups comprised of bureaucrats from the appropriate government agencies prepare a draft law with the legal assistance from the Ministry of Justice. After ministerial approval, the legislation goes to the PNDC for final approval.

The previous civilian constitutions provided for judicial review of legislation; whereas, the Proclamation severely curtails this exercise of power. The Proclamation maintains the judicial system "with the same powers, duties and functions" as it had before, only it is now subject to any laws that the PNDC may make. The PNDC has also established the Peoples Court or Public Tribunal, which deals with vaguely defined economic crimes. The Ghanaian Bar Association takes the position that members of the Bar should not appear and represent clients in such proceedings.

Nigeria

Law-making is a comparatively easy exercise. It does not involve publication of bills or heated debates in legislative Houses. A Decree is made when signed by the Head of the Federal Military Government and an Edict is made when signed by the Military Governor of the State. The technocrats at the ministries will draft the environmental and natural resource laws with legal drafting assistance from the Ministry of Justice.

The Constitution, while not explicitly providing for environmental protection, does contain two environmentally related provisions. Section 16(2)(b) provides that the country shall direct its policy towards ensuring that the material resources of the community are harnessed and distributed to serve the common good. Section 17(2)(d) provides that the exploitation of human and natural resources in any form whatsoever for reasons other than the good of the community shall be prevented.

⁹Concurrent with political change and transformation sweeping through West Africa are, necessarily, changes in the governance structures and legislative processes. This study reflects the structures and processes in place in January 1992. Significant changes, particularly in those countries in transformation from military to civilian rule should be anticipated.

The Government of Nigeria (GON) seldom if ever resorts to the judicial process to enforce environmental laws. Furthermore, the courts are not entitled to inquire into the validity of Decrees or Edicts or any subsidiary legislation made under a Decree or Edict. What little environmentally related laws exist are based on tort law such as negligence, nuisance and the rule in Rylands v Fletcher.¹⁰ Standing issues also present a roadblock to environmental litigation.¹¹ Despite this lack of environmental case law, Nigeria is the most litigious country in West Africa and the Nigerian courts will likely be on the cutting edge of formulating environmental law in West Africa. Courts in the other West African countries find Nigerian case law persuasive.

The Gambia

The Gambia is unique among the WCA countries. With the exception of an aborted coup d'etat in 1981, it has enjoyed relative peace and stability. This has led to the label of The Gambia as the Switzerland of Africa. The country has a multi-party parliamentary democracy. D.K. Jawara leads the majority People's Progressive Party (PPP) and has served as Prime Minister since 1962.

The usual law-making procedure involves the preparation of a cabinet paper by the Permanent Secretary discussing the current law, its deficiencies and the need for new law. Actually, bureaucrats in the Department with primary jurisdiction over the particular subject matter prepare the paper. A working group may be formed, comprised of bureaucrats from other departments and ministries claiming jurisdiction or an interest in the proposed legislation. From the Department it goes to the Minister who will present the paper to the Cabinet. If the Cabinet approves the paper, the Permanent Secretary forwards the paper to the Attorney General's Chambers to prepare draft legislation.

¹⁰To prevail on a negligence cause of action, the plaintiff must prove that the alleged environmental delinquent, be it an individual or a company, has been negligent. The plaintiff has the heavy burden of proving that the defendant owed the plaintiff a duty of care and that this duty has been breached. A nuisance cause of action offers another remedy -- if the plaintiff can prove he has suffered damage. Private nuisance actions are easier to bring than public nuisance actions. A plaintiff bringing a public nuisance action must prove that he has suffered damage peculiar to himself which is different from that suffered by others. This is a difficult task since public nuisance usually affects all or part of the community. The rule in Rylands v. Fletcher, (1866) L.R.1. Exch. 265, affirmed (1868) L.R. 3 H.L. 330, requires that the plaintiff establish that the defendant brought on the plaintiff's land something that is "likely to do mischief" which escaped while under the control of the defendant who is using the land in a non-natural manner. Questions arise as to the meaning of non-natural user of land. Furthermore, there are numerous exceptions to the rule.

¹¹Standing refers to the doctrine that a plaintiff seeking to bring a claim demonstrate that he is a proper individual to challenge the government action, and that the issues he is raising are issues that the court is authorized to consider. The Nigerian Supreme Court relaxed the standing rule -- somewhat, in Fawehinmi v. Akilu.

From Chambers, the draft law goes to Parliament. Notice of the pending legislation will be published in the Gazette and several readings will take place in Parliament. When the proposed law arrives at the Parliament, the opportunity for public debate and examination arises. As a practical matter, relatively little debate occurs. The members of Parliament do not have committee staffs with specialized expertise to review and draft legislation and the members defer to the bureaucrats at the various ministries. Furthermore, PPP members of Parliament would not likely challenge legislation coming from the Prime Minister and party leader. Members of the public seldom take advocacy positions regarding legislation. After Parliament passes the legislation, it goes to the Prime Minister. This process can take up to two years.

The Judiciary is independent and will rule against the Government. Problems arise, however, in studying the courts' decisions since cases are not recorded. To circumvent this problem, attorneys cite cases from other jurisdictions. While not binding, Gambian Courts find such cases very persuasive. The Gambian Courts are particularly receptive to Nigerian case law. Nigeria has a well developed body of case law, but more important -- several of the judges in The Gambia are Nigerian. The Gambia does not have a law school; consequently, Gambian attorneys usually go to another African country or England for their legal education.

The Law Reform Commission will soon release a report on the customary laws in The Gambia. This marks the first ever recording of their customary laws. After reviewing the customary laws, the Commission may recommend that Parliament codify the laws. This report could have a bearing on natural resource issues to the extent customary law focuses on land tenure.

5 ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT CAPACITY

This section examines the management framework and institutional arrangements for environmental protection and natural resource management in the WCA countries, the role the public can play in these efforts via community groups and non-governmental organizations (NGOs) and status of environmental review (ER) requirements.

5.1 Management Framework/Institutional Arrangements

Ghana

Several government bodies exercise executing powers for environmental protection; however, no one body is empowered to exercise oversight of the whole environment or even a significant portion of it. Problems thus arise for these agencies to exercise their powers and to determine their exact jurisdiction. Environmental problems sometimes will not receive attention either because they are not seen as falling within the jurisdiction of any particular agency or because so many different bodies conceivably have jurisdiction, none of them take the initiative to address the problems.

The National Redemption Council (NRC) issued The Environmental Protection Council Decree, 1974 (NRCD 239), which established the Environmental Protection Council (EPC). The EPC serves primarily as an advisory and research organization, with the mandate to coordinate the activities of other governmental bodies. Lacking enforcement powers, the EPC serves as a meeting point for those agencies exercising power. Representatives from the Ministries of Health; Agriculture; Foreign Affairs; Lands and Natural Resources; Industries, Science and Technology; Local Government; Finance and Economic Planning; Works and Housing; along with representatives from other government agencies serve on the EPC. Furthermore, Section 3 of NRCD 239 specifies that two distinguished citizens with special interest and experience in environmental matters will serve on the EPC as representatives of the public interest.

EPC needs real enforcement powers. Environmental protection efforts require establishing certain quality standards and threshold measurements, and the ability to monitor these standards and measurements. Such a function should be centralized in one body and EPC can develop this technical capability.

The EPC currently coordinates the drafting of the National Environmental Action Plan (NEAP), which will provide a coherent framework for interventions. The EPC recognizes the inadequacy of much of the existing environmental legislation. The EPC, in cooperation with the appropriate agencies, will prepare a comprehensive package of legislation to address the various sectoral environmental problems.

The Local Government Law, 1988 (PNDCL 207), implements the Government of Ghana' (GOG) decentralization policy. District Assemblies, established pursuant to PNDCL 207, will play a key role in implementing the NEAP. This reflects the GOG's belief that national environmental policies and programs can best be translated into action at the local and district levels. As regards the functions conferred on them, the District Assemblies are empowered to make by-laws and to impose penalties.

District Environmental Management Committees, with broad responsibility for monitoring and coordinating environmental protection and improvement activities, will be established within each District Assembly. The District Assemblies will carry out environmental programs at the town and village level through Community Environmental Committees (CECs). The CECs will mobilize the people and resources in a community, provide for environmental discussions, promote energy conservation, and serve as environmental watchdogs.

Nigeria

The Federal Environmental Protection Agency (FEPA) and the Natural Resources Conservation Council (NRCC) share environmental responsibilities. FEPA, for the most part, has responsibility for "environmental" issues and NRCC has responsibility for "conservation" issues. Potential jurisdictional conflicts relating to overlapping responsibilities could arise between FEPA and NRCC in such areas as reporting and monitoring of natural resource conservation and in managing water resources and coastal zones. Furthermore, FEPA and NRCC may compete for funds.

The Federal Environmental Protection Decree, 1988 (No. 58), encourages the states and local government bodies to establish their own environmental protection bodies. To facilitate cooperation and coordination between FEPA and the states, Section V of the National Policy on the Environment established the National Council on the Environment (NCE). FEPA will act through the NCE. The states in turn will supervise their state bodies, which include local government representatives.

With The Federal Environmental Protection Agency Decree and The Guidelines and Standards for Environmental Pollution Control, 1991 established pursuant to this Decree and The Natural Resources Council Decree, 1989 (No. 50), the Government of Nigeria (GON) is taking positive steps to update its laws and establish agencies to enforce these laws.

The Cambia

The Ministry of Natural Resources and the Environment is the lead ministry dealing with the environment. The Ministry has four technical departments: Forestry, Water Resources, Fisheries, Wildlife Conservation and the Environmental Unit (EU).

The Forestry Department has few professional foresters on staff. The field level forestry staff has both enforcement and extension responsibilities, which may reduce their effectiveness in working with NGOs and villagers. The majority of the staff at the Wildlife Department's two sections, administration and education/extension, have minimal educational backgrounds. The Wildlife Department lacks sufficient professional staff to supervise, control and implement the new Kiang West National Park plan and create other wildlife refuges.

The EU reports directly to the Minister through the Permanent Secretary. The EU's responsibilities include: coordinating environmental matters at both national and international levels, providing technical assistance to both governmental and non-governmental agencies, participating in project design, establishing and maintaining an environmental information center, conducting ERs, and regular monitoring of the impact of various projects on the environment. The EU has not been able to carry out these responsibilities owing to its small size and lack of resources.

The EU has effectively coordinated inter- and intra-ministerial actions related to natural resource management. In particular, the EU took the lead drafting the NEAP. All the government institutions acknowledge the need for multisector integrated approaches to environmental degradation. With additional staff, resources and a clear mandate, the EU could spear-head this effort.

The GOTG policy calls for reducing planning at the national level and increasing the responsibility at the local level. Uncertainties exist as to what extent this delegation of responsibility is happening. The GOTG intends to develop a detailed plan for decentralization of government activities. Questions arise as to how the technical ministries will be represented and function in the field.

The Department of Community Development, located in the Ministry for Local Government and Lands, has field agents working with rural populations to stimulate self-help actions through the organization of village development committees (VDCs). While these agents have the potential to increase the success of local level planning efforts and mobilize the population, much depends on the personal interactions.

The VDCs, introduced in the 1975-81 Gambian Development Plan, are responsible for planning, programming and implementing government and donor development projects. VDCs seek to eliminate some of the inequalities in the traditional authority structure which gives decision-making authority predominantly to the elder males, by mandating female and youth representation. The VDCs have met with mixed success. Critics point out that VDCs are not indigenous social/administrative structures and are superimposed onto traditional systems. In the villages where the VDCs exercise real authority, the VDCs will usually be composed of the traditional leaders and perpetuate the existing social hierarchy.

Cameroon

The Ministry of Planning and Territorial Administration has responsibility for environmental management. The Department for Territorial and Environmental Planning, within this Ministry, monitors services and organizations for quality of life and the environment. The Under-department of the Environment and Human Establishments implements environmental policy, but suffers from a shortage of funds and personnel.

The absence of a well-defined national environmental action plan poses difficulties in carrying out environmental policy. However, the Government of Cameroon (GOC) is drafting a report on environmental issues in Cameroon for the United Nation Conference on Environment and Development (UNCED), which could form the basis for a NEAP.

The lack of coordination among ministries hampers effective environmental and natural resource management. Moreover, the ministries focus more on natural resource exploitation than protection and management.

The communes manage local affairs under the direction of governors, prefects and sub-prefects. Environmental policy is defined at the national level, while the communes are charged with implementing the policy. Community powers in the environmental area are limited to the approval of city planning, the application of commune's laws and regulations, and the adoption of regulations concerning police and highways.

Appointed municipal administrators govern the rural communes, whereas a mayor, elected by the municipal council, governs urban communes. This system leaves little opportunity for local citizens to select their leaders. To a limited degree some institutions are able to influence environmental policy. These institutions include private companies, cooperatives, consular chambers (chambers of agriculture, livestock and forests) and chambers of commerce, industries and mines. Despite some rhetoric regarding decentralization, the decision-making process remains a highly centralized-system.

Côte d'Ivoire

Environmental responsibility rests with the Ministry of Environment, Construction and Urban Affairs. The Ministry has an Environment Office and a Sanitation Office, which oversee the following Divisions: Management and Improvement of Natural Resources, Hygiene and Sanitation, Urban and Rural Conditions of Life, New Energy Resources and Soft Technologies, Legal Sub-directorate for Decentralized Cooperation, Social Mobilization, and Multi-Sector Environmental Cooperatives.

Several ministries share responsibility for natural resource management creating problems of overlap and numerous inter-ministerial conflicts. The Government of the Cote d'Ivoire (GOCI), with World Bank assistance, will soon commence work on a NEAP. An

autonomous secretariat has been established to coordinate this project and other inter-ministry environmental matters.

The Ministry of Interior and Security Affairs participates in the environmental field in matters relating to territory administration, local collectivities and decentralized cooperation efforts. Two types of municipalities exist in Cote d'Ivoire: urban collectivities and rural communities. Under the authority of the prefect, they administer local matters and enforce national environmental policy. The Cote d'Ivoire seeks to promote rural development and involve local people in the management of natural resources by decentralizing governmental decision-making.

Mali

As a consequence of growing concern about the environment and the sustainable management of the natural resources, the Government of Mali (GOM) established an inter-ministerial committee on environment. The Ministry of the Environment and Livestock, which sets Mali's environmental policy, chairs the committee. The committee includes the following ministries: Public Health and Social Welfare, Public Works, Agriculture, Industry, Justice, Finance, Defense, Education, Territorial Administration and Basic Development, and Employment. The committee acts in an advisory capacity and lacks regulatory or legislative authority.

The Committee will undertake a review of all the major environmentally related laws concerning agriculture, livestock, and natural resource management and consider new legislation and an administrative reorganization of the environmental structures. The GOM currently seeks to reduce significantly administrative departments and block the creation of new public entities. In such areas as urban and industrial pollution there is very limited authority and inadequate governmental arrangements. The major focus of new legislation will likely be on soil erosion, natural resource management, decentralization, and land tenure.

The GOM, through the Division of Urbanization in the Ministry of Territorial Administration, sets the budget and provides the general plans for the Districts with the Governor of each District responsible for implementation. Districts are divided into communes, which are headed by a mayor. Each commune is subdivided into quartiers. Elected representatives of the political party run the communes and quartiers. It is at these levels that the community interacts with its civic leaders.

Title XII of the constitution, adopted by referendum in January 1992, seeks to promote decentralization by creating a High Council of Communities (Council). Article 99 charges the Council with advising on all policies for local and regional development and advising the GOM on all matters pertaining to environmental protection and improvement of quality of life for the citizens in the communities.

The constitution confers significant powers on the Council. The GOM must file with the National Assembly a bill consistent with the Council's proposals within fifteen days of the proposal. Furthermore, the GOM must go to the Council for an opinion on all actions concerning the environment and the management of natural resources at the local level.

In light of the lack of environmental coordination and management, the GOM may wish to consider establishing a secretariat to coordinate environmental matters. The secretariat should be attached to a high level office such as the Head of State or the Prime Minister. The organizational structure of the secretariat should reflect the GOM's overall organizational structure. The secretariat could handle policy development and implementation, interagency coordination and environmental monitoring.

A high level national environmental committee (NEC) could provide critically needed support for the secretariat. The Head of State or Prime Minister could chair the NEC, which would be composed of the ministers who have responsibility for the natural resources and those whose activities bear on environmental management. The NEC would enable the secretariat to have authority above that of individual ministries. To promote public/private sector cooperation a national environmental council could be established to advise the NEC. The Council would be composed of representatives from the business community and NGOs.

Niger

Various ministries share responsibilities for environmental and natural resource management. The two lead ministries are the Ministry of Agriculture and Livestock and the Ministry of Environment and Water Resources. The former ministry has a Permanent Secretariat of the Rural Code which sets policy on natural resource management and land reform. The latter ministry has an Environment Division, a Fauna, Fishing and Fishery Division, and several departments for the development of forestry, environment and environmental community administration, and planning.

The ministries' responsibilities overlap and compete. Moreover, no process exists for resolving intersectoral conflicts and joint planning. This vertical management inhibits the development of cross-sectoral approaches to environmental management. Recognizing these problems and the need to promote decentralization, the Government of Niger (GON) sponsored a national conference that recommended the following development strategies:

Be prospective, and inform decision makers and players on short, medium and long range actions to be taken.

Be multi-sectoral: all technical, economic and social sectors in a given geographic area will have to take part in drafting and implementing the development plans.

Be multi-functional: local structures in charge of a geographical planning area will have to involve experts and project beneficiaries capable of understanding the various aspects of an area's development (economists, legal experts, geographers, agronomists, administrators, engineers, public officials, private companies, individuals, etc...).

Be participatory: all partners, whether private or public, associations, PVOs and NGOs must be involved every step of the way, from conception to implementation.

Be educational: teamwork by partners from various backgrounds and with various purposes implies common education and training efforts.

Involve the search for integration based on the structuring of that area in order to intensify internal links through regional specific and complementary characteristics.

Involve preservation and regeneration of development's structural bases (soil, vegetation, water) through their rational and optimal management.

After defining these planning policies, they should be reflected in the new responsibilities given to the regions and local collectives pursuant to the ongoing decentralization process. The conference further recommended that a legal and institutional framework be designed and implemented to carry out this new planning policy at the national, regional and local level.

Sénégal

Responsibility for environmental policy rests with the Ministry of Tourism and Protection of Nature, which has a Department of the Environment established pursuant to the April 1990 Order. The Department consists of the Office of Judicial Affairs, the Office of Training, Information and Sensitization, the Office of Waste, Water, Noise and Air Protection, the Coordination Division, and the Division to Prevent and Combat Pollution and Harmful Substances. The Ministry of Transport Equipment and the Sea; the Ministry of Urban Development and Housing; the Ministry of Industry, Commerce and Artisans; and the Ministry of Rural Development and Hydraulics also have environmental responsibilities.

A serious overlap of responsibilities hinders environmental management. The National Committee for the Environment has failed to resolve intersector conflicts. Furthermore, the ministries have not engaged in joint planning and inter-institutional agreements. A national multi-disciplinary secretariat, national environmental committee and national environmental council as proposed herein for Mali may be appropriate.

Sénégal has undertaken a series of steps to promote rural development and decentralization. The French colonial legacy, however, continues to impact profoundly

Sénégalaise administration and administrative practice, since Sénégal's administrative organization is very similar to French administrative organization. Initial efforts were aimed at community development through the establishment of an "animation rurale" service and the expansion of rural cooperatives. These programs gave way in the 1960's to specialized parastatals, which provided little opportunity for local participation or initiatives.

Since 1972, when the administrative reform law took effect, Sénégal has engaged in an effort to decentralize its administrative structures to promote rural development. This initiative led to the creation of locally elected councils in rural communities. Owing to the strong control from the prefect and sous prefect, who act on behalf of the Ministry of Interior, this initiative has achieved only marginal success. The Government of Sénégal (GOS) is now considering new reforms to make the system more responsive to the goal of decentralization.

5.2 Role of NGOs, PVOs and Community Groups

This section provides an overview of the role of non-governmental organizations (NGOs), private voluntary organizations (PVOs) and community groups. In recent years, NGOs have gained prominence for the effective environmental/development work they do at both local and national levels. NGOs, with the advantage of freedom from bureaucratic problems which face government agencies, are able to gain easy access at the grassroots level to engage in environmental activities. This access enables NGOs to play a critical role in sensitizing the local population to environmental issues and involving them in managing and protecting the natural resource base.

Ghana

NGOs, religious groups and professional associations play an increasingly active role at the national, state and local levels. NGOs have been especially effective working at the grassroots level in sensitizing the local population to environmental issues. Some examples of NGO participation in environmental projects are the afforestation programs of the Amasachina - an indigenous NGO, the Adventist Development Relief Agency's Community Collaborative Forestry Initiative (CCFI) Project and the ANCEN village pilot project at Dawa.

The environmental press has been effective in spot-lighting environmental problems, and raising peoples perception and understanding of environmental problems. When NGOs and the environmental press attempt to work at the national level, they are sometimes viewed as "agitators" and their opinions are not always solicited or appreciated. Nevertheless, NGOs could contribute to the formulation of the NEAP and its subsequent implementation at all levels. In this regard, NGOs should have formal representation on the EPC.

Nigeria

Nigeria has a large and growing NGO community. A few of the major NGOs are: National Universities Council (NUC), Manufacturers Association of Nigeria (MAN), Nigerian Academy of Sciences (NAS), Forestry Association of Nigeria (FAN), Green Environmental Movement (GEM), Nigerian Environmental Study/Action Team (NEST), Nigerian Environmental Society (NES), National Chamber of Commerce and Industries (NCCI), and the Nigerian Conservation Foundation (NCF).

Several of these NGOs participate in environmental policy operations and legal issues. The NCF played an active role in the formulation of the National Conservation Strategy and the National Conservation Education Strategy and serves on the NRCC. The legislation establishing the NRCC specifically states that the NCF shall serve on the NRCC. GEM attorneys engage in environmental policy advocacy and education efforts and serve on government advisory committees. NES has many members from the petroleum industry and lobbies on issues pertaining to the petroleum industry. NEST prepared a comprehensive survey of environmental problems in Nigeria.

The Gambia

A broad range of NGOs have long played an active role in The Gambia, especially at the grass roots level. International NGOs complement and generally work closely with The Gambian NGOs. The NGO community formed a network, known as The Association of Non-governmental Organizations (TANGO), which puts out the quarterly newsletter "TANGO Talks" (see Annex A).

NGOs serve as a catalyst for change in the society. They are always pushing at the boundaries of the national and customary law. They do not engage in advocacy work per se, but bring about change through their field work. The law may change to reflect a program that the NGOs have pursued that proved successful.

Although the GOTG and NGOs work together, the relationship can be strained. The GOTG believes that NGOs have their own agenda and that NGOs need direction, coordination and some policing. NGOs believe that their views are not always taken into consideration by the GOTG. Mechanisms need to be formulated to enhance better communication and cooperation. TANGO could perhaps serve as a clearing house and liaison between the NGO community and the GOTG.

Success in the field of NGOs depends not only on cooperation from GOTG but also with local and village leaders. The Alkalo and the village elders usually administer a village. The Alkalo is usually the oldest male member of the oldest patrilineage in the village. The village elders, the religious leader, (the Imam) and the community of Muslim believers form the village council.

Women are usually excluded from participating in the village council and consequently engage in local development through kafos. NGOs frequently target kafos as agents to implement rural development efforts. While kafos are recognized by customary law, the national law does not provide legal status for kafos. The Friendship Society Act, provides for legal recognition of charitable, non-profit organizations but the law is not really applicable to kafos, which are economic organizations. The customary law should be codified to give legal status to kafos.

Cameroon

In light of the GOC's problems in effecting change and protecting resources in local communities and nationwide, NGOs and PVOs are increasingly active at the grassroots level. The major international NGOs operating in Cameroon are: CARE, World Wildlife Fund (WWF), Catholic Relief Service (CRS), Association Bois de Feu (ABF), Institut Africain pour le Developpement Economique et Social (INADES), Comité Diocesain de Développement (CDD), Union des Église Baptistes du Cameroun (UEBC), Save the Children Federation (SCF), HELVETAS, Rural Training Centre (RTC Mfonta) Heifer Project International (HPI), and International Council for Bird Preservation (ICBP). CARE, WWF and ABF are the most active NGOs in environmental and natural resource projects. CARE works on agroforestry, water and reforestation projects. WWF concentrates on parks development/conservation and biodiversity through buffer zone management and ABF researches the problem of firewood.

PVOs also support natural resource management activities. The Association Française de Volontaires de Progres (AFVP), German Volunteer Service, Peace Corps, L'Association Néerlandaises d'Assistance au Développement (SNV), Organisation Canadienne pour la Solidarité et le Développement (OCSD) are very active in the field.

In the last two years the indigenous NGO community has steadily grown and now totals about 150. Several factors explain this growth. Rural populations and the donor community now see NGOs as more effective vehicles to deliver services than the government. Furthermore, as a consequence of the economic crisis the government can no longer afford its institutions and programs.

In order to share information and ideas and work together on projects, the NGOs are starting to form associations. In 1990 the National Association for NGOs involved in development in Cameroon (COPAD) was formed. The Federation of Non-governmental Organizations for Environmental Protection (FONGEC) was created in August 3, 1991.

NGO growth, however, experiences some impediments. Previously, Law No. 67/LF/19 of June 12, 1967, relating to the Right of Association, required that for any association to exist it must be declared by the interested members and recognized and approved by the government. Furthermore, the law made no specific reference to NGOs -- only "cultural associations." The GOC sought to depoliticize NGOs and maintain supervisory control

over them. Furthermore, the bureaucratic and legal requirements of Law No. 67/LF/19 pose problems for small NGOs with limited manpower and skills. International NGOs with their staff and resources have been more successful in gaining recognition.

In December 1990, the GOC passed legislation simplifying the requirements for associations to a simple declaration on the part of the group concerned. COPAD believes that additional legislative changes are necessary. The COPAD proposal emphasizes the need for the government to provide NGOs with legal status, specific provisions permitting accessing funds from any source and the elimination of the role of the Ministry of Territorial Administration.

Côte d'Ivoire

The law of 1901 fails to provide an appropriate judicial framework for the creation and development of NGOs. The associations must have a non-lucrative goal prior to the Ministry of the Interior granting authorization. Despite this difficulty, there is a growing NGO movement. The major NGOs are: Ivory Coast Nature specializing in flora and fauna, Green Cross, Ivory Coast Ecology, Environmental Africa, ESSO, and Health and Protection Line. The Environmental Network of the Ivory Coast (RECI) seeks to combine the growing NGO community into a federation.

Mali

Malian PVOs and NGOs have not been involved in the conservation of biodiversity and in sustainable natural resources management. They concentrate on rural development and do not specifically link projects to the protection of natural lands or the environment. Nevertheless, a broad range of NGOs operate at the grass-roots level. The GOM should consider revising its development strategies and creating a better environment and opportunities in which NGOs, PVOs and village associations could operate.

Niger

NGOs, PVOs, religious groups, and professional associations effectively work at the grass-roots level and are increasingly active at the national and regional levels. They work in the areas of integrated rural development, agroforestry, irrigation, soil fertility, reforestation, agriculture and parks development. Their size and approach differ according to philosophy, financial resources, and technical and institutional capacities. Outdated government policies and legislative framework constrain their development.

Sénégal

As in the other WCA countries, NGOs; PVOs; and local, national and international associations are increasingly active as economic constraints reduce the governments' resources. The GOS, historically, took a paternalistic approach to development through

government organizations. This tendency is changing, however, as international and local NGOs and village associations take on more activities.

Over fifty-seven major NGOs currently work in Sénégal. Most NGOs work in integrated rural development activities, however, a few work in managing and conserving biodiversity and natural resources. Several NGOs working at the national level formed a federation known as the Fédération des Organisations Non-Gouvernements Sénégalaises (FONG). At the local level, NGOs have also formed federations. The Federation des Associations du Fouta groups several associations under the same umbrella.

5.3 Environmental Reviews

Environmental reviews (ERs) provide a systematic procedure for environmental decision making so as to ensure a proper balance between the expected economic benefits and the environmental and social costs of a project. While the United States pioneered the development of environmental impact assessment (EIA) legislation, and important principles can be learned from studying the U.S. legislation, the U.S. legislation should not be seen as a universal model. Each country should adopt ER legislation which will best fit into its constitutional, economic, environmental, social and technological framework. Developing countries need to be realistic as to what is practical and absolutely necessary. The WCA countries are beginning to formulate ER guidelines. In this regard, a useful reference is "Guidelines to Environmental Impact Assessment in Developing Countries," by Y.J. Ahmad and G.K. Sammy. Ahmad and Sammy recommend the following steps: (1.) preliminary activities, (2.) impact identification (scoping), (3.) baseline study, (4.) impact evaluation (quantification), (5.) mitigation measures, (6) assessment (comparison of alternatives), (7) documentation, (8.) decision-making, (9.) post auditing.

Ghana

No law requires preparation of an ER to establish a factory, mining operation, or other large project. The EPC, however, serves as the focal point for a systematic environmental review procedure to decide whether to issue an environmental impact certificate. The EPC has prepared draft ER guidelines. Sometimes large foreign investors, particularly in the mining sector, will prepare ERs.

Nigeria

At this time Nigeria does not require ERs or have comprehensive programs for monitoring the environmental and social impacts of large projects. FEPA is in the process of formulating ER guidelines.

The Gambia

The Gambia does not require ERs at this time. The EU, while informally tasked with conducting ERs, has not been able to -- owing to lack of resources. The EU has requested sample ER documents from A.I.D. to develop their own process.

Cameroon

No law currently requires ERs. The GOC, however, recognizes the need for ERs and may soon address this issue.

Côte d'Ivoire

While no law requires ERs, large foreign investors -- particularly in the road building or mining sectors -- have prepared ERs. These sectors are familiar with doing ERs from their activities in other countries. Moreover, they believe that Côte d'Ivoire may eventually require ERs, and that it is more cost efficient to undertake such activities initially than to have to adopt them later.

Mali

While ERs are not currently required, the GOM is formulating ER guidelines as part of the proposed environmental code and will soon send a forestry service team to gather sample environmental laws from neighboring countries, with support from USAID/Mali.

Niger

ERs are not required. Furthermore, the GON lacks the capacity to analyze and review ERs.

Sénégal

While ERs are not currently required, acts 52-56 of the proposed Environmental Code provide ER guidelines.

6.0 LEGAL SECTORAL ISSUES

This section provides a base line sectoral survey of the status of environmental laws and regulations and their enforcement. The survey identifies faults and makes recommendations as to how the laws could be improved.

6.1 Land

Ghana

Land Tenure. A major facet of land management problems in Ghana revolves around ownership and tenure issues. The land tenure system includes many arrangements: outright private ownership, long-term lease, short-term rental (including share-cropping), and community and open-access. Clear, undisputable rights to land ownership -- including the right to bequeath to one's descendants, to sell, and to transfer ownership rights of use to others -- are essential incentives to ensure responsible resource management. However, formal land titles appear to be rare. When people are certain about the extent of their land ownership and tenurial security they are more likely to assume responsibility to prevent abuse. A comprehensive study on the extent to which tenure arrangements allow effective ownership would afford a good starting point to address this issue. The next step entails strengthening the legal and administrative mechanisms for land acquisition and tenure.

Land Use. The Land Planning and Soil Conservation (Amendment) Act, 1957 (No. 35), read as one with The Land Planning and Soil Conservation Ordinance, 1953 (No. 32), proposes the better utilization of land in designated areas by land planning and soil conservation through preserving land, reclaiming land and protecting water resources. Committees established in designated areas by the Minister of Agriculture are charged with implementing the Act. Coordinating committees will coordinate the work and policy of two or more committees. The committees may promote, for the purpose of the Act, other land use by proper methods of land cultivation and soil conservation.

The committees have the authority to enter upon land in a designated planning area and construct and maintain works for protecting water sources, controlling water, preventing and mitigating erosion, reclaiming land and utilizing swampland. The committees also have the authority to relocate someone using land for agriculture and animal husbandry from one area to another within the planning area when the land becomes exhausted or inadequate. The Minister may make regulations for the following purposes:

- Prohibiting, regulating and controlling the breaking up or clearing of land for cultivation or any other purposes, grazing or watering of livestock and firing, clearing or destruction of vegetation.

- Requiring, regulating and controlling afforestation or reforestation of land, protection of slopes, banks of streams and rivers and of dams, construction, repair and maintenance of contour banks, ridges, terraces or other anti-erosion barriers, repairing of gullies and maintenance and repair of artificial dams, reservoirs or other water conservation devices.

Seven areas have been designated as planning areas; however, little if any plans or projects have been effectuated. The Act, while apparently adequate to regulate land management, should also require comprehensive land use planning as a prerequisite for particular land use decisions. Furthermore, land use planning should be extended to the whole country. A centralized national institution could coordinate this function since confusion arising from a multiplicity of agencies, each with its own mandate, has impeded effective land management.

Few restrictions exist on controlling urban development. The Department of Town and Country Planning, at least in the urban areas, has plans for land use. This Department and the Ministry of Industries, Science and Technology, which approves the establishment of industries, have failed to coordinate their activities.

The Towns Ordinance, 1892 (Cap 86), The Rivers Ordinance, 1903 (Cap. 226) as amended 1935, The Mining Health Areas Ordinance, 1925 (Cap. 150) as amended 1935, The Town and Country Planning Ordinance, 1945 (Cap 84) as amended 1969 (Act 33), and various building regulations passed by local authorities pursuant to local government laws provide the substantive laws on the planning, development, improvement and management of human settlements. The Towns Ordinance, based on the British Public Health Act, 1848, and The Mining Health Areas Ordinance, while still in force, have been rendered obsolete by a series of local government laws. These laws regulate town planning on a piecemeal basis by controlling individual building operations, whereas, The Town and Country Planning Ordinance provides for a system of advance planning so as to guide the growth and development of settlements on a comprehensive basis.

The Town and Country Planning Ordinance vests authority for local planning in the central government and fails to provide a role for local authorities. As a practical matter, plans can not and should not be prepared without the active participation of regional and local authorities. The provisions of this Ordinance may have been transferred to the District Assemblies pursuant to The Local Government Law, 1988 (PNDCL 207).

Local authorities generally follow Model Building Regulations issued by the Ministry of Works and Housing. These regulations generally tend to be based on foreign norms, regulate against or discourage the use of some indigenous materials, institute costly unrealistic standards, stifle self-building of cheaper low income houses, and produce unnecessarily expensive, prestige buildings.

Coastal Resources. The following ordinances protect the coastal environment: The Beaches Obstruction Ordinance, January 29, 1987 (Cap No. 240), The Rivers Ordinance, February 4, 1903 (Cap No. 226), and The Land Planning and Soil Conservation Ordinance, 1953 (No. 32). These regulations are not enforced. The Rivers Ordinance deals only with the problems relating to dredging in fourteen rivers. Pursuant to The Land Planning and Soil Conservation Ordinance, a Planning Committee may construct and maintain works necessary for: protecting the source, course and feeders of any stream or river; disposing and controlling water -- including storm water; mitigating and preventing soil erosion; reclaiming land; and utilizing swamp-land.

The Maritime Zones (Delimitation) Law, August 1986 (PNDCL No. 159), implements the provisions of the United Nations Convention on the Law of the Sea relating to the delimitation of the territorial sea, the contiguous zone, the exclusive economic zone, and the continental shelf.

Protected Areas and Forest Reserves. The Wildlife Reserve Regulations, 1971 (LI 710), as amended, establish Wildlife Reserves by name and boundary description. The Ghana Forestry Commission Act, 1980 (Act 405), reproduces all previous provisions of this law with modifications as may be required according to the new Act (Sec. 8 to 12). These laws fulfill Ghana's obligations under the African Convention on the Conservation of Nature and Natural Resources to establish, maintain and extend conservation areas.

The Regulations designate four types of reserves (National Parks, Strict Nature Reserves, Wildlife Sanctuaries and Game Production Reserves) but fail to provide definitions. All reserves receive the same degree of protection relating to entry (subject to authorization by the Chief Game and Wildlife Officer), fauna and flora protection (hunting, capture, destruction and collection prohibited except with the written consent of the Chief Game and Wildlife Officer) and protection of their amenities. Nevertheless, legal distinctions should be established for the reserves so as to provide protection against management authorities. For example, the authorities should not be able to de-reserve a National Park or Strict Nature Reserve as easily as a Game Production Reserve or introduce non-native animals into National Parks or Strict Nature Reserves, as can be done in Game Production Reserves.

Several problems arise with this law. People may not receive fair and adequate compensation for their land when it is expropriated to establish a reserve. Secondly, the law and related policies fail to provide roles for the local communities in managing the reserves. Funds generated by the reserves need to go to the people in the community.

The Forests Ordinance, March 30, 1927 (Cap. 157), as amended by The Forest Protection (Amendment) Law, 1986 (PNDCL 142), prescribes the following procedure for establishing a forest reserve:

- The Central Government must provide notification in the Gazette of its intention to create a specifically delineated forest reserve and appoint a Reserve Settlement Commissioner (RSC).
- The RSC must publicize, in the vicinity of the proposed reserve, the Government's intention to create the reserve.
- The RSC must hold a public enquiry to receive and consider evidence relating to the existence of rights over the proposed area.
- The RSC must issue a judgment incorporating his findings and recommend areas to be constituted, the rights to be admitted and rights to be commuted for cash payment.
- A final Order must be published in the Gazette delineating the forest reserve area and establishing the nature and extent of the admitted rights.

This procedure provides for limited public participation and considers property rights. Section 18 of The Forest Ordinance stipulates that the constitution of a forest reserve shall not alter the ownership of the land. It offers an option for the management of such reserves, either by the owners under the direction of the forest service, or by the government for the benefit of the owners. Thus The Forest Ordinance provides for the involvement of local communities in managing the reserves. The Forest Improvement Fund Act, 1960 (No. 12) supports this policy and allows channelling of payments from timber harvesting and other fees, which are due to the customary land owners, as well as grants and other payments from the government, into the established forest improvement fund. However, the need for providing a greater role for peoples and communities in establishing forests and tree cover and in managing the forests should be more emphasized.

The majority of The Forest Ordinance's offense-creating sections, sections 22-33, have been repealed and replaced by The Forest Protection Decree, 1974 (NRCD 243). The Forest Ordinance, nevertheless, still contains an important provision. Pursuant to Section 16(8) of The Concessions Act, 1962 (Act 124), The Forest Ordinance "shall apply mutatis mutandis¹² to any land outside a forest reserve in respect of which rights relating to timber or trees have been or shall be granted." Actions that within forest reserves could be prosecuted as constituting offenses under NRCD 243 as amended by PND 142 (i.e. felling, removal, destruction of trees or timber without written authority of the competent forestry authority) have been successfully prosecuted when done in areas subject to timber

¹²Mutatis mutandis - (Latin) With the necessary changes in points of detail, meaning that matters or things are generally the same but to be altered when necessary, as to names, offices, and the like.

leases and licenses outside forest reserves. In this regard, greater attention needs to be paid to tree and timber protection outside the reserves.

Pursuant to Part II of The Protected Timber Lands Act, 1959 (No. 34) certain timber-carrying lands have been proclaimed Protected Areas with protection similar to that given forest reserves, thus providing temporary protection to areas with a good stocking of timber trees.

Forestry. The forestry legislation is contained in several ordinances, acts and decrees - several of which have already been discussed. The Forestry Ordinance, supplemented by the Forest Reserve Regulations, 1927 (L.N. 31), represents the principle element. The Trees and Timber Ordinance, 1950 (Cap. 158) and The Protected Timber Lands Act, 1959 (No. 34) complement The Forestry Ordinance. Both texts were replaced by The Trees and Timber Decree, 1974 (NRCD 273); however, several provisions remain in force.

NRCD 273, as amended by PNDCL No. 70, seeks to control the cutting and removal of trees and timber. The Decree mandates the registration of property marks and marking and numbering of stumps and logs as a means of tracing a log to its stump, the locality in which it was felled, and the person claiming title to the tree, and on whose behalf it was felled.

The Trees and Timber Ordinance prescribes minimum girths below which named species of timber trees may not be felled for conversion into timber or bought, sold or exported unless exempted by the Chief Conservator of Forests. This law is inadequate since only a few species are covered and the legal girth limits do not correspond with or are often lower than the minimum limits the Forestry Department would want to impose for management purposes. The Forestry Department attempts to remedy this situation by providing for stricter terms in timber lease agreements.

The Trees and Timber (Control of Measurement) Regulations, 1960 (L.I. 23), as amended by The Trees and Timber (Control of Measurement) - Amendment - Regulations, 1976 (L.I. 1090), require a Log Measurement/Grading Certificate (LMC) to validate a timber in the round transaction and to transport and export logs. The LMC provides the basis for freight payment and helps in maintaining the quality controls required for logs pursuant to The Trees and Timber (Control of Export of Logs) Regulations, 1961 (L.I. 130). Timber companies with processing capacity have been able to circumvent this law.

The Concessions Act, 1962 (Act 124) provides for the Head of State, acting as trustee for the customary landowners, to grant a tenurial system of leases and licenses for timber exploitation. Since the promulgation of the 1969 Constitution of the Republic, a Lands Commission has exercised this power on behalf of the Head of State. Revenues that accrue from forestry lands and rights on timber and trees are to be collected by the government and disbursed in accordance with the provisions of The Administration of Lands Act, 1962

(Act 123). The Timber Leases and Licenses Regulations, 1962, and The Forest Fees Regulations, 1976 (L.I. 1089), were enacted pursuant to The Concessions Act.

The Timber Leases and Licenses Regulations seek to ensure that the centralized decision-making authority receives information from the region and locality and that the Forestry Department has the opportunity to comment and advise. These procedures, however, result in a time-consuming, cumbersome lease renewal process. Rather than follow the procedures, some people elect to illegally harvest trees and will commence large scale farming without approval. Furthermore, the Forest Department performs very little monitoring as to lease compliance. The Forestry Department should also ensure that timber leases prohibit selective logging, which results in the over-exploitation of the better know timber species and the selective removal of the best looking trees. In addition, lease fees should be increased to reflect the true value of the timber to be harvested. Moreover, the GOG's Economic Recovery Program has resulted in an influx of persons into the timber trade and over exploitation of forest resources. The conservation of forests needs to be balanced against the need to generate foreign exchange.

The larger timber processing industries are subject to the provisions of the Timber Operations (Government Participation) Decree, 1972 (NRCD 139) and the forest industry as a whole is covered by certain provisions in The Investment Code, 1985 (PNDCL 116). The Timber Industry and Ghana Timber Marketing Board (Amendment) Decree, 1977 (No. 128) contains important provisions on log exports and on the commercialization of log and forest products. To deter the exploitation of the better-known species and to promote domestic value added in the wood processing industry, the GOG prohibited log form exports of eighteen tree species. This policy prompted the export of lesser know timbers - - but has been controversial. The World Bank has proposed through its Forest Resource Management Project a study to review the ban and to look at alternative strategies.

In 1980, The Ghana Forestry Commission Act, 1980 (Act 405), reorganized the governmental agencies in charge of the forestry sector. This law was subsequently repealed in 1982 by PNDC No. 42, which provides for the Commission to act in an advisory nature.

Nigeria

Land Tenure and Land Use. The Land Use Decree (No. 6) enacted in 1978 and later retitled as The Land Use Act (LUA) 1980 (cap. 202), vests all land in each state of Nigeria in the military governors of the states. The governors have sweeping powers and can revoke a right of occupancy on several grounds -- including an undefined "overriding public interest." The LUA thus supersedes the different forms of land ownership and tenureship existing prior to the issue of this law, namely community ownership or communal land, family land, individual land, and public land. The LUA seeks to make land accessible to every Nigerian for development purposes in any part of the country.

The LUA provides for statutory rights of occupancy over urban land and of customary rights of occupancy over rural land, via certificates of occupancy. Individuals, groups, institutions and government entities can apply for and obtain land in rural or urban areas. The LUA specifies the maximum land sizes an applicant can receive for various purposes, for instance: crop farming (500 hectares) and livestock grazing (5,000 hectares). Furthermore, the LUA unequivocally forbids the surrender or alienation of rights of occupancy or the certificates conveying those rights, except under stringent conditions. Sections 21 and 22 prohibit the sale or transfer of any right of occupancy without the prior consent of the government. When the holder of a statutory right of occupancy dies, his land or the rights thereto "shall not be divided into two or more parts," except with the Governor's consent.

The LUA, while interpreted to mean the control of land uses and the preservation of natural resources, in reality fails to provide effectively for proper land use. Massive development occurs in most states without proper planning, coordination or due consideration given to environmental concerns. Private sector land agents actively execute land transactions with very little monitoring. Licenses are obtained freely, and state and local governments exercise little control over land use, and the less influential citizens experience difficulty securing land.

The LUA needs modifying so as to facilitate the ability of ordinary Nigerians to acquire land. In many cases the informal, traditional land tenure system provided an effective mechanism for managing natural resources. Consequently, such informal tenure systems need to be identified and supported when designing land-use schemes.

One example of a viable communal tenure system occurs in the rural secondary and primary forest zones where community councils sometimes rent forest lands to outsiders with the funds going to community coffers. Traditional hunting and gathering rights continue to be respected and the community councils collect royalties on the forest products from the outsiders.

The Town and Country Planning Ordinance, 1946, modeled on The British Town and Country Planning Act, 1932, also contains specific provisions for proper planning of urban areas. In theory, the right of occupancy system the Ordinance prescribes should facilitate integrated development, since grants are suppose to be made on terms consistent with the state's planning and zoning arrangements. The Ordinance has proved to be an ineffective tool for controlling urban development, since it restricts the activities of the planning authorities to estate development and building control. The Ordinance is applied piecemeal and largely curative rather than preventive. Although, the Ordinance can impose the ultimate sanction of compulsory land acquisition for noncompliance, this is seldom done since the Ordinance is cumbersome and difficult to administer.

There should be more interaction between the Ordinance and the LUA, so as to facilitate effective physical planning and to prevent the development of slum areas. The LUA fails

to contain provisions for the automatic inclusion of development conditions on all rights of occupancy. Nevertheless, the case of Azie v. Commissioner of Lands (1960) 5 F.S.C. 221 provides a noteworthy example of enforcing grant terms. In Azie, the applicant fulfilled his building obligations but constructed additional buildings without planning permission.¹³ The court granted relief against forfeiture on condition that the lessee demolish the unapproved buildings. Examples of how the Ordinance and the LUA can work together are found in the states of Bendel and Rivers, where grants and certificates of occupancy contain user clauses.

Various state, town and country planning laws empower state governors to establish Boards and Authorities to carry out planning operations, including the provision of public health facilities, latrines, water supply, markets, garbage disposal, and the regulation of games and businesses injurious to health. For example, The Lagos Town Planning Ordinance established the Lagos Executive Development Board to formulate town planning schemes for Lagos and the surrounding areas.

The Nigerian Standards Organization Act, 1971 (No. 56), establishes the Standards Organization of Nigeria whose primary functions include advising the Federal government on national policy standards, standard specifications, quality control and metrology. This Act also contains provisions for preventing eco-system pollution.

Soil Erosion. Soil erosion represents one of the most serious environmental problems facing Nigeria. Anti-erosion measures vary widely in scope and effectiveness. Practically every state has legislative provisions prohibiting such erosion-inducing activities as bush burning, farming in erosion-sensitive zones, quarrying in certain regions, and unapproved road construction designs and procedures. Despite clearly worded, unambiguous laws, enforcement remains problematical owing to a lack of political will. Moreover, most people have no idea that such laws exist.

Forestry. The Forestry Ordinance, 1937 (Cap 75), and The Forestry Regulations promulgated pursuant to Section 46 of the Ordinance, The Forestry (Southern Provinces Native Authorities) Rules, 1943, The Forestry (Northern Provinces Native Authorities) Rules, 1951, The Timber Revenue Collection (Native Authorities) Rules, as well as the state laws, govern Nigeria's forestry sector. This legal overlap creates conflicting jurisdictions. As a consequence, abuses of privilege occur and a lack of clear responsibilities exists.

Each Governor is vested with the power to constitute specific land areas within the states as forest reserves. Local governments are also empowered to demarcate their own reserves and establish "communal forestry areas."

¹³See also Attn. Gen of Kwara State and Ors. v. J.O. Ogunlade no.FCA/R/115/78.

Some of the newly appointed state government Commissioners for Agriculture and Natural Resources have enacted specific regulations to monitor and control the cutting of natural forest for the timber trade. For example, the Commissioner for Agriculture and Natural Resources in Cross River State issued regulations deeming it unlawful for any person or an association to deal in the timber trade and undertake or engage in retail trade in sawn timber of any size, unless they are registered with the Forestry Division in Cross River State.

These regulations contain penal provisions for offenders who traffic in illegal timber. The penalties include both fines and imprisonment, with the terms varying from state to state. Some state regulations include penal provisions for any Forestry Division staff who issues permits for the transport of illegal timber.

Nigeria is in the process of preparing a Tropical Forest Action Plan (TFAP). Criticisms of Nigeria's TFAP are similar to the criticisms raised with TFAP in other countries, specifically: too much emphasis on commercial forestry and not enough on social forestry and conservation, and the failure to adequately consider the role of forestry in the country's renewable natural resource sector.

The Gambia

Land Tenure. Land tenure regulations critically impact on the use and management of natural resources. Little economic incentive exists for activities that produce long rather than short term gains for individuals. For people to practice soil and water conservation or tree planting and other agroforestry techniques, tenure rights and the potential economic benefits must be clearly defined.

Customary land tenure arrangements in rural Gambia, which have been influenced by Islamic property law, do not recognize private ownership of land for agricultural purposes. Traditionally, the person who first clears a plot establishes permanent user rights and control over the land. The control over unused and unclaimed village land is vested in the village chief or Alkali. The Alkali usually allocates fields. At the compound level, land is divided between communal fields and those controlled by individuals.

An important facet of the land tenure system originates from Islamic property law. The legal conception of land as a resource is confined to the physical soil. Any objects -- buildings, trees, etc.-- affixed to the soil are generally regarded as the property of the party whose labor produced the objects, rather than the authority in whom control rights are vested or the person entitled to immediate access to use the soil.

The Alkali allocates, on a year to year basis, the communal land used by kafos. Problems have arisen, however, where women's kafos have lost control over places, equipment, and materials which they were initially given as a group. Furthermore, Akalis have asserted

control over land and wells dug for a kafo. Women gain use rights to the majority of their land through marriage or in some instances they inherit land from their mothers.

Changing patterns of land and natural resource use due to population pressure and changing climatic patterns have impacted on village negotiations for land access and use rights. Government interventions to promote more secure tenure in hopes of providing more economic incentives have often benefitted the household or compound head, while reducing security for other household members. A recent report by the Wisconsin Land Tenure Center, while recognizing certain constraints on the existing land tenure system, discourages large scale land reforms which would include individualization of tenure. The current system appears flexible enough to evolve -- in response to changing socio-economic needs. Nevertheless, reforms to address discrimination against women may be necessary. The current structure of customary tenure discourages women's involvement in agroforestry/tree planting or other activities that have no secure guarantee of economic benefit.

The Ministry for Local Government and Lands (MLGL) has responsibility for land tenure issues and land use planning. Statutory tenure rights are described in Part III of The Land Provinces Act and can be granted in the form of a leasehold. The person with control over the land and the district head must both consent to a leasehold's creation. The Divisional Commissioner must also approve of land disposal. The Commissioner will decide whether to forward the matter to the MLGL, depending on the purpose of the leasehold, the size of the area and the requested duration. Leaseholds can be established for up to 99 years, with the right of extension. A leasehold affords the opportunity to enter the land into the land register. Allocation of land pursuant to customary law, however, has the advantage of being steeped in tradition and thus possibly being better accepted than statutory law.

The recently enacted State Lands Act, 1990 (No. 2), seeks to introduce a unitary title system in designated areas.

Protected Areas. Section 6 of The Land Provinces Act, 1966, empowers the Minister to declare forest parks and make regulations for the protection, control and management of forest parks and protected trees outside of forest parks. Section 24 of the Act provides for the acquisition of land for public purposes. Control over all other forest land remains under the local authorities, who are also held responsible for fire control. However, all naturally grown forest products are owned by the government. Pursuant to Section 6 of The Land Provinces Act, the following subsidiary legislation has been promulgated: Provinces' Land Regulations, 1952, Provinces' Lands Protected Tree Regulations, 1952, and Declaration of Forest Parks 1952-1954.

Forestry. Tree tenure consists of a bundle of rights which may be held by different people at different times. In this regard, the following four major categories have been identified: the right to own or inherent trees, the right to plant trees, the right to use trees and tree products and the right to dispose of trees. Consequently, a property of trees comprising

all four categories of rights can only be obtained if the trees are a product of someone's labor and in conformity with Islamic property law.

The GOTG and the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH have established the Gambian-German Forestry Project. This project has established three pilot community forestry projects, whereby common property rights have been conferred to local communities. To date this project appears to be a success, as evidenced by the fact that no bushfires have occurred in the pilot communities. The documents implementing this project are attached in Annex B.

The Forest Act, 1977 (No. 9) and The Forest Regulations, 1978 (L.N. No. 12) promulgated pursuant to Section 30 of The Forestry Act constitute the primary forest legislation. Part III of the Act prescribes the procedures the minister must follow to designate forest parks and protected forests. In particular, paragraph 10(d) provides for granting groups and communities extended tree tenure rights. Pursuant to paragraph 10(e) the minister shall appoint a Reserve Settlement Officer (RSA) to determine the nature and extent of any property rights claimed in the designated forest park. For purposes of this inquiry, the RSA shall have judicial powers.

Part VI of the Act prescribes the legal proceedings to follow to enforce the Act. Forest officers and police officers have extensive police powers to enforce the Act. Convictions can result in fines, imprisonment and forfeiture.

The Forest Regulations contain provisions on controlled burning, licenses to exploit forestry produce, permits, minimum girth sizes, and royalty per tree. Transit passes are required to transport forest produce; however, very little inspection takes place to determine if the transit passes are in order.

Cameroon

Land Tenure and Use. The primary land tenure and land use ordinances are: Ordonnance No. 74/1 du 6 juillet 1974, fixant le régime foncier, modifiée par l'ordonnance 77/1 du 10 janvier 1977, which addresses land tenure issues; Ordonnance No. 74/2 du juillet 1974, fixant le régime domanial, modifiée par l'ordonnance 77/2 du 10 janvier 1977, which addresses the public domain land regime; Ordonnance No. 80/22 du 14 juillet 1980, portant repression des atteintes a la propriété foncière et domaniale, modifiée par la loi 81/21 du 27 novembre 1981, prescribes penalties for the non-respect of land tenure rights and the public domain; and Loi 85/09 du 4 juillet 1985, relative a la procédure d'expropriation pour cause d'utilité publique et aux modalités d'indemnisation.

The decrees addressing land use and tenure are: Décret No. 76/165 du 27 avril 1976, fixant les modalités d'obtention du titre foncier; Décret No. 76/166 du 27 avril 1976, fixant les modalités de gestion du domaine national; Décret No. 76/167 du 27 avril 1976, fixant les modalités de gestion du domaine privé c'è l'Etat; Décret No. 87/1872 du 16 décembre 1987,

portant application de la Loi 85/09 du 04 juillet 1985, relative à l'expropriation pour cause d'utilité publique.

Laws and regulations promulgated by the GOC and customary law at the village level determine land rights. In this regard, two laws governing the process of land registration warrant discussion. The Law of January 9, 1963, establishes the registration system and outlines the conditions for individuals to acquire definitive concessions from the government. The Law of July 7, 1966 as amended, specifies the procedure for registering land titles. The registration procedure entails the compilation of a file listing current land use, location and limits of land, names of adjacent landowners, names of all persons who helped bring the land into production, and other contracts affecting the land. Other procedural steps include demarcating the borders by all interested parties and filing the demarcation with the Prefect.

Few families or individuals, however, have formalized their land claims pursuant to these procedures. Rural residents tend to follow customary practices governing ownership and user rights and rarely follow national laws. Those citizens who register land are usually literate, aware of the registration ordinances, and tend to register primarily homes and businesses in urban areas. Approximately 2.4 percent of the owned land is held by land title. Moreover, the GOC lacks sufficient personnel to administer this system.

Problems arise when different members of a lineage claim the same parcel of land. A tribunal comprised of various ethnic groups in the area settle such disputes.

The conflict between national and customary law, common to most of the WCA countries, and the colonial legal heritage generate insecurity for land users -- particularly women. The Régime Domaniale and land use regulations vest ownership in the national government of all unappropriated lands and serve to reinforce the uncertainty, which characterizes land use management. The land use laws focus on occupied lands as instruments of production and fail to consider the sound management of land resources.

Forestry. Ordinance No. 73/18 of May 22, 1973, represented the first modern forestry law applicable to the whole territory of Cameroon. This law was replaced in 1981 by a more comprehensive law -- Law No. 81/13 of November 27, 1981, portant régime des forêts, de la faune et de la pêche. While following the lines established in the former law, Law No. 81/13 stresses management of natural resources and includes provisions related to national parks establishment, hunting and wildlife, and fisheries. Decree No. 83/169 of April 12, 1983, provides general forestry regulations to implement Law No. 81/13.

Part I of Law No. 81/13 provides for the joint application of land tenure and government lands legislation as well as the forest law in determining the system of forest ownership. This part also defines forests and forest lands; prescribes general rules for the use of forests, wildlife and fishery resources on public and private land; lists provisions related to

the applicable system for collecting duties and taxes; and the status of the national forests and wildlife administration.

Part II of the law addresses the forest domain categories: forest utilization and management, and the promotion and marketing of timber and other forest produce. The definition of forestry domain, however, is ambiguous and subject to abuses. The law defines forest to include all vegetated lands capable of furnishing wood or non-agricultural products, or of providing habitat for wildlife, or of affecting soil, climate, or hydrology. This definition includes natural grasslands and shrublands, which are not tropical forests in an ecological sense.

Officially constituted state forests fit within the following categories: production, protection and recreation forests; integral nature reserves and national parks; wild animal and plant sanctuaries; and state game ranches. Local council forests are constituted by decree for the benefit of local councils, or originate from forest plantations made by these entities. Individuals may plant private forests on land owned in compliance with the applicable land tenure legislation.

All other forests are communal forests. The forest produce in communal forests, with the exception of produce from trees planted by private individuals or local councils, belong to the government. The government, however, may grant timber harvesting rights, pursuant to conditions determined by the regulations, to the local population.

Chapters 1 and 2 of Title II determine the objectives of forest regeneration, the exercise of certain customary rights in state forests, the procedure for constituting reserved forest areas and for subsequent changes in land-use, the preparation of forest inventories and management plans in state forests and the applicable rules for timber harvesting in such forests. The general regulations, Decree No. 83/169, are principally concerned with forest exploitation and fail to consider sound management practices. Forestry management practices are driven by GOC revenue requirements.

Pursuant to the Forestry Law, "naturally growing trees are owned by the government while trees planted by man belong to whoever planted them." Rural people cannot understand why the government owns trees found on their land, regardless of how they came to be there. This law discourages tree cultivation by farmers.

The fragmentation of responsibilities among the governmental entities with responsibility for the forestry sector leads to waste of resources, implementation delay, and uncoordinated actions. Furthermore, the inclusion of wildlife and fisheries in the law, with no coordinating structure, leads to a multiplicity of authorities and jurisdictions. The proposed forestry legislation should resolve the jurisdictional conflicts and address the relationships among the forest, the arable soils which the forest produce and retain, and the subsistence needs of peasant farmers. The World Bank is assisting the GOC to reform its forestry and

wildlife laws and policies. Furthermore, the United Nations Development Program implemented a study on this subject in the Fall of 1991.

The lack of procedures to include local populations in natural resource management programs represents a serious oversight. The GOC should provide legal responsibilities to local communities for managing forest resources. The Tropical Forest Action Plan (TFAP) that the GOC prepared several years ago was roundly criticized for not taking the needs of the local populations into consideration. The TFAP also failed to engage NGOs and PVOs, did not consider biodiversity seriously, and focused too heavily on commercial extraction.

Côte d'Ivoire

Land Tenure. Both traditional and modern land tenure systems apply in the Ivory Coast. The land tenure system, based on colonial laws, consists of scattered statutes and lacks a coherent framework. Land can be acquired by two means: inheritance or by developing the land. Problems arise, however, in implementing the latter method since the law is not always clear as to whom property should belong after development efforts and infrastructure investments. Parties lack motivation to follow good natural resource management programs if they are not confident of benefitting from their labor.

The delimitation of government private lands is determined pursuant to portant réglementation des biens vacants et sans maître, 15 novembre, 1935 and portant réglementation de l'expropriation pour mise en valeur de la terre law, 12 juillet, 1971. The Decree of November 15, 1935, provides that the government can acquire ownership of traditional lands upon providing proof that the land has been vacant for over ten years. The Law of July 12, 1971, provides for the expropriation of rural lands that have not been developed adequately. A determination of whether the land has been adequately developed is based on the level of development of other land in the region and whether the land has been worked in the proceeding ten years. A committee, under the supervision of the Prefect, makes this determination.

The expropriation procedure concerns traditional lands in temporary concession occupation and land with an occupation permit attributed to the administration. The law has been criticized for not being enforced in a consistent manner and for not paying fair and adequate compensation in a timely manner. Furthermore, the restoration procedures, for all practical purposes, are inoperative.

Since 1900 the national government has claimed all vacant land and land to which no one else claims title. This conflicts with the customary law by which individuals can claim title. Relatif aux procédures domaniales et foncière, Decree No. 71/74 of February 1971, further clarifies land tenure procedures. Article 2 of this law provides for customary land use rights and specifies that customary rights cannot be sold, given or inherited. Article 5 provides that a land conveyance is null and void, unless notarized. However, there are only

two notaries outside of Abidjan and improper conveyances are the rule rather than the exception.

Forestry. The forestry laws are contained in Law No. 65/425 of December 20, 1965, portant code forestier and Decree No. 78/231 of March 15, 1978, fixe les modalités de gestion du domaine forestier de l'État. The latter law establishes management regulations for the government's forestry lands. The laws differentiate between registered forests and protected forests. While the law prohibits clearing registered forests, such forests can be declassified -- usually for conversion to agriculture. Decree No. 78/231 provides for permanent forestry property and rural forestry property. Permanent forestry property permits both afforestation and harvesting. While the forestry laws are technically adequate, they have not been rigorously enforced.

Mali

Land Tenure. The primary land tenure laws are: No. 82/122/AN-RM of February 4 1983, which establishes the fundamental principles concerning the attribution of the private lands of the government; No. 85/39/AN-RM of June 22, 1985, which modifies No. 82-122/AN-RM of February 4, 1983, prescribing regulations for the transfer of land ownership; and Decree No. 134/PG-RM of July 30, 1975, which repeals and replaces Decree No. 37/PG-RM of February 10, 1963, also prescribing regulations for conveying land.

The French Code Domanial et Foncier of 1932 and 1955-56 establish a land registration system, whereby people claiming title to land pursuant to customary law could "legitimize" their claim. Individuals and businesses can apply for permits to inhabit and occupy parcels in urban areas. However, these laws are not followed and few people register their land. Pursuant to these laws, the State claimed all the forest resources held under customary law. Subsequent revisions to these laws strengthened, rather than diminished, national control over the land. Post independence land tenure laws further sought to compel people to register their land claims -- to little or no avail.

No. 86/91/AN-RM of July 12, 1986, warrants particular attention. This law concerns the "Code Domanial and Foncier" and governs the public and private domain of the state and local collectives, mandates compulsory service, and reaffirms state control over the land. Furthermore, this law specifies the procedures for distributing unused and unregistered land. No. 86/91/AN-RM repeals the previous regulations, but fails to resolve the conflict between customary and modern law.

On most land, natural resource ownership is closely linked to land ownership. As a rule, a person who owns a parcel of land also owns the natural resources on the land. Land ownership carries with it the right to plant, prune and cut down trees, as well as the right to harvest fruits, bark and leaves.

As a rule, rural residents tend to follow customary practices governing ownership and use rights. Complications arise from simultaneous claims by different user groups to the different natural resources. The village headman or the village council usually exercises control over the village territory. The headman allocates unclaimed land, settles land and resources disputes, and decides on the utilization of communal fields, forests, fishing grounds, and grazing lands.

Forestry. A concentration of power in the hands of the national government and the virtual disengagement of rural people from responsibility over tree management characterize the Forestry Code, No. 86/42. The rural population rejects this Code, believing that it severely restricts the customary rights that landowners and landusers have over the natural resources. The contradictions between the local tenure rules and national tenure laws discourages landowners from planting trees on their land. Landowners fear losing land ownership since the foresters, working for the national government, require them to contact the Eaux et Forêts prior to pruning or felling trees in their own fields and to pay for permits to fell these trees. The lack of secure access to trees, constitutes a disincentive for villages to protect and plant trees on their land and to fight against the desertification process. The Forestry Code fails to clearly designate what rights individuals and groups have to trees located outside of the national forest domain. The Forestry Code should be revised to provide incentives and eliminate disincentives, specifically:

- establish cutting limits by region,
- formulate restrictions governing the use of protected species at the regional level or according to ecological zone in order to take into account the ecological diversity,
- clearly define the public domain and private and village domains,
- reconcile usufruct rights with customary rights,
- introduce special regulations for sylvapastoral areas,
- establish long term government leasing of sylvapastoral areas mandating proper environmental management and reforestation, and
- provide for local responsibility for forest management.

Law No. 86/42 requires fuel efficient woodstoves. This law, however, has been criticized as repressive and not containing sufficient incentives.

Niger

Land Tenure. Laws and regulations promulgated by the government and customary law imposed at the village or fraction level define land tenure rights. Few families or individuals, however, have formalized their land claims pursuant to the process mandated in the Domanial and Foncier Code. Rural residents tend to follow customary practices governing ownership and user rights and only resort to state procedures in extreme circumstances.

Pursuant to customary law, each village has a certain geographical space or territory, in which rights to land and other resources are allocated to various members of the village or faction and outsiders. The degree of control that a village or fraction exercises over its territories varies considerably, depending on how it originally gained control of the land, and its political and social relations with other communities and resource users. The village headman or the village council control the village territory. The headman, acting in concert with the village council, allocates land, settles land and resources disputes and decides on the utilization of communal fields, forests, fishing grounds, and grazing lands.

Extended families or individuals usually manage cleared land. Families and individuals generally obtain access to land through inheritance, gifts and borrowing arrangements. Individuals may obtain land through leases with a government entity. While land purchases, sharecropping, rentals and land pledges exist, they are very rare. Women obtain land through borrowing or temporary gift arrangements, while immigrant farmers borrow land and/or receive gifts of land.

Land Use. To conform with the goals of the National Charter, in 1984 Niger initiated the drafting of a Rural Code to reorganize natural resource management. The Code recognizes the importance of secure ownership and private investments on land in the management of natural resources -- such as wild "game" ranching, tourism site management, fisheries, agriculture and forestry management. The Code revises the status of forest classifications and the hunting and fisheries regulations.

Decree No. 89/007/PM of July 1989, created the National Committee to implement the Rural Code. The Minister of Agriculture, the Minister of Animal Resources and the Interior Minister serve on the Committee, with the Minister of Agriculture presiding as President. To implement the Rural Code, the Committee relies on directions made by the National Seminary of Guidir, general and specific principles of the Rural Code S.P.C.N.R. of January 1991, and recommendations made by the International Union for the Conservation of Nature. The main objectives of the Rural Code are:

- Equality and social justice for all citizens, men and women, with access to land and use of natural resources, regardless of whether this right is claimed pursuant to customary or modern law.

- Guaranteed security of tenure, compatible with the sustainable management of natural resources and the environment.
- Sustainable management of land and natural resource obligations. Pursuant to the Rural Code, an owner who fails to comply will not necessarily lose his land ownership, but will be obliged to designate another farmer to work the land.
- Land distribution subject to public investigation.

Forestry. The principal forestry laws are: Article 30 of July 7, 1935, which regulates forest clearance so as to control soil erosion; Decree No. 70/265, PRN/Dir-Cab of December 11, 1970, which entrusts forest and soil conservation to the Ministry of the Rural Economy; No. 74 of March 1974, confirms state ownership of trees and land without official owners; and Decree No. 74/226, August 1974, which provides for forest clearance contracts.

The tree tenure rules conflict with the Forestry Code. Tree ownership is closely linked to land ownership. As a rule, a person who owns a parcel of land also owns the trees on the land. Land ownership carries with it the right to plant, prune and fell trees, as well as the right to harvest fruit, bark and leaves. A key characteristic of local tree tenure rules is that field tree owners can harvest and dispose of their trees and products without obtaining permission from a higher authority. Another key characteristic of local tree tenure is that tree owners are not subject to any taxes for the use of their products, regardless of whether the products are for domestic or commercial use. Although some villages have "protected" species, generally the only restriction on the use of protected trees or natural resources concerns the felling of live trees without prior approval from village authorities. Most of the time, the restrictions are self enforced and not regulated. Lessees' rights to trees and natural resources are very limited; they cannot for example plant or cut trees without prior authorization of the land owner.

The government's assertion of ownership over field trees represents a greater constraint to agro-forestry extension than the local tenure rules, which generally provide both field owners and borrowers substantial control over trees and their products. The Forest Code of 1935, promulgated in francophone Africa, considerably diminished individual and community rights to trees. Under this Code, the government essentially claimed all forest resources on land held under customary tenure. Subsequent revisions to the Code since independence have strengthened, rather than diminished, government control over trees. Pursuant to the Forest Code, the government dictates the harvesting conditions for wood, fruit and other products.

Forest agents have considerable discretion in issuing permits. They are empowered to search for, as well as seize, illegally obtained forest products, without first obtaining a warrant from the court. In addition, forest agents can fine and arrest forest law violators.

Article 127 of the Domania Code declares that all land held under customary tenure and not registered in the name of a non-government entity falls within the government's private domain. As a result, all unregistered land and resources on that land are subject to government regulation. If a person fails to register his land, he has no legal recourse to contest the government's taking of his land. For several reasons, however, people seldom register their land. The expense of registering the land and the lack of notaries contribute to the problem. Furthermore, the people do not believe it is necessary since they follow customary law.

The Ministry of Agriculture and Livestock issued Edict, No. 049 MAG/EL/CNCR of May 16, 1991, allowing village communities usufruct and development rights to natural forests in the vicinity of their village. This edict represents a major step towards decentralizing the control of natural resources and empowering local populations to manage their resources. However, before this edict can go into effect a new Rural Code must be passed.

Sénégal

Land Tenure. The colonial law of 1935, as in the other WCA francophone countries, vested the government as the primary land owner. Post independence laws steer a middle course between full individualization of title and nationalization of title, so as to encourage "free cooperation" between the public and private sector. The National Domain laws of 1964 and 1972 vests all unregistered property with the national government and forbids future registration; however, the law provides for formal recognition of occupancy rights. This reflects an attempt to unify customary, colonial, and Muslim land tenure systems.

These laws provide for the replacement of traditional authorities with local councils charged with planning and supervising land use, distributing land, settling land disputes and drawing up land registries. In only a few instances, however, have land registries been prepared. While the National Domain law and the 1972 Communauté Rurale law sought to grant the Rural Community Councils authority to manage the natural resources within a designated Rural Community area, these laws have been undermined by subsequent legislation, presidential edicts and governmental policy.

Land allocation problems abound. Instances are reported of people demolishing houses on land they were allocated, but had not previously occupied. These disputes reflect "illegal occupation" since Sénégalese law considers "squatting" a criminal offense. Such infractions are common since the National Domain Law of 1964 fails to recognize customary land rights or unregistered conveyances.

Forestry. The origin of regulatory policy can be traced back to the Decree of July 4, 1935, which established the forest code for the Africaine Organisation Francophone (AOF). French forest policy established extensive forest reserves by decree, in sparsely settled or pastoral areas. The Code vested sweeping police powers in the Forest Service and required permits for most commercial and extractive uses. Agroforestry was not practiced, since

domestic wood requirements were met by natural forest production. Article 30 of the Code prohibits private owners of forests and woodlands from clearing the land, if this would lead to soil erosion and flooding.

Two laws provide the basis for current forest management. No. 74/76 of July 1974, which repealed No. 65/23 of February 1965, provides the Forest Service with broad police powers and specifies punishments of fines and imprisonments. Decree 65/078, February 10, 1965, establishes definitions and methods of operation for the Forest Service to follow in implementing the Code. Decree No. 70/265, PRN/DIR-CAB of Dec. 11, 1970, charges the Ministry of Rural Economy with soil conservation.

6.2 Water

Ghana

Water Rights and Use. Customary regulations form the water laws in most villages; however, it is impossible to state any customary law which is applicable everywhere in the country. The customs stated herein are only applicable to the Akans, who form the largest ethnic group in Ghana.

Under customary law, water is essentially public property and cannot be claimed by an individual -- even though an individual may be the riparian owner. Where water abounds, this rule may be relaxed and an individual may use water naturally on his property without any interference from the public, and treat it as if it were part of his land. When the necessity arises that the public must share the water, no length of private use can create any ownership through prescription or ancient usage. When the chief grants permission, a person may divert water from a public river onto his land for a specific purpose and the diverted water becomes his property.

Questions arise as to whether customary law treats ground water as a part of the land and thus owned by the land owner or whether ground water should be treated like surface water. Nevertheless, whenever a landowner taps ground water into a well, the tapped water is his to the exclusion of the whole world.

Since the standards regarding water use and protection vary among the tribes, and since no means of effecting one uniform custom or practice throughout Ghana is available, customary law can not provide a nation-wide scheme for water administration. While customary law may be effective for regulating water use in small communities, the law breaks down when small villages become big towns populated with people with different religious and cultural backgrounds. Statutory water laws, while applicable to the whole country, prove more effective in cities and large towns.

Water Management. The Volta River Development Act, 1961 (Act No. 46), with its various amendments is probably the most advanced and comprehensive water management

legislation. Part I of the Act establishes the Volta River Authority (VRA), a corporate body, whose primary duties entail generating electricity and dam control.

The VRA and the Irrigation Development Authority (IDA), established pursuant to The Irrigation Development Authority Decree, 1977 (SMCD 85), require users to obtain permission to abstract water from the Volta Lake and Volta River. Otherwise no laws exist requiring people to apply for consumptive use permits. The IDA has the power to issue regulations, but does not appear to have exercised this power.

The Rivers Ordinance, 1903 rev. 1951 (Cap. 226), deals with problems relating to the dredging of some fourteen rivers specified in Schedule One, by establishing a license requirement for dredging and diverting water resources. The listed rivers can float timber or carry ships or have alluvial gold or diamonds in their beds. The majority of rivers in the country are not covered.

Schedule 3 of The Rivers Ordinance provides detailed regulations as to the conduct of dredging operations and the various powers the authorities appointed to administer the Ordinance have to enable them to carry out the provisions of the Ordinance. Regulations have not been promulgated for diverting water and licenses seldom have fixed terms or conditions for water diversion. The Ministry for Industry issues licenses and designates inspectors to monitor compliance with the terms of the licenses and the regulations. The inspectors have very wide discretionary powers and their decisions cannot be effectively challenged. Whatever supervision exists over the inspectors rests with the Minister. Regulation 10 gives the Minister the sole power to decide judicial questions like disputes and differences arising out of the interpretation of the dredging regulations. The Minister's decision cannot be questioned in any court of law by way of appeal.

The Rivers Ordinance fails to address preservation of water or aquatic life seriously or to establish any comprehensive machinery for water administration or management. The broad purpose of the Ordinance appears to be commercial exploitation and development of rivers and transportation of timber.

Pollution. The Oil in Navigable Waters Act, 1964 (No. 235), implements Ghana's obligations under the International Convention for the Prevention of Pollution of the Sea by Oil, 1954. Ghana has also signed the Liability 1969 and Fund 1971 Conventions but has failed to pass implementing legislation. While the International Convention primarily addresses marine pollution, Ghana enacted provisions in this Act to protect inland navigable waters from the discharge of oil or any mixture containing oil originating from a sea-going vessel, a place on land or from any apparatus used for transferring oil from or to any vessel. No legal restrictions exist on discharges into the marine environment of sewage, chemicals and other industrial wastes from land-based sources, ships or aircraft.

The Ghana Water and Sewerage Corporation Act, 1965 (No. 310), established the Ghana Water and Sewerage Corporation. The main objectives of the Corporation are:

- The provision for collection and conservation of water in Ghana, for public, domestic and industrial purposes {Sec. 2(1)(a)}.
- The establishment, operation and control of refuse removed through the sewerage systems {Sec. 2(1)(b)}.

While this Act demonstrates a sound environmental conscience in its outlook and content, the Corporation has failed to use its regulatory powers to create the necessary regulations to implement effectively the Act. The Corporation has become bogged down in the problems of water supply, and waste water management has not been addressed. Moreover, serious enforcement problems arise, since no reasonably practical means of waste treatment and disposal exist other than to dispose of such untreated wastes in water courses.

The following laws have provisions indirectly concerning water: Section 4(a) of The Forests Ordinance, 1951 rev. (Cap. No. 157); Section 3 of The Mosquitoes Ordinance, 1951 rev. (Cap. No. 75); and Section 12 of The Wild Animals Preservation Act, 1961 (Act No. 43). These statutes only deal with specific water problems and do not attempt to lay down any basis for water management law.

No statute specifically deals with the impact of inland drainage. The Volta River Development Act and The Ghana Water and Sewerage Act, however, contain some provisions relevant to controlling water pollution. Comprehensive legislation dealing with surface and ground water pollution, and requiring ERs for proposed projects, is required.

A plethora of organizations attempt to exercise water management: the Ghana Water and Sewerage Corporation, the Water Resources Research and Aquatic Biology Institutes, IDA, VRA and the EPC. The EPC has proposed the establishment of a Water Resources Commission to coordinate water matters.

Nigeria

Water Rights. Laws defining and allocating water rights are needed. Water rights problems raise complex, jurisdictional issues among the relevant authorities, such as the federal and state governments, the RBDAs and other government agencies.

Pollution. The Waterworks Act, 1915 (No. 11), contains provisions to protect the water supply from waste water. The Minerals Act, 1917 (Cap. 226), as amended, gives the President the power to make regulations for the prevention of pollution of any natural water supply or water course.

The Public Health Act, 1917, prohibits the fouling of water and the vitiation of the atmosphere. The penalties, however, are less stringent than the Criminal Code provisions.

The Criminal Code, 1958 (Cap. 42 & 165), contains penal provisions for the detrimental vitiation of the atmosphere.

The Public Health Act contains provisions prohibiting the introduction of any deleterious substance into the water supply for human and animal consumption, and similar provisions exist for vitiating of the atmosphere. State equivalents of this Act exist in most states in the country.

The states' environmental sanitation edicts also contain provisions against water pollution by industrial effluents. The penal provisions vary from state to state. As with the federal government, the state governments lack regulatory mechanisms for enforcing their laws.

The River Basins Development Authorities Act, 1986 (Cap. 396), establishes eleven corporate bodies, with the powers of control over designated internal maritime areas. The River Basin Development Authorities (RBDAs) may not be likely to address pollution arising from agricultural activities, since they exist primarily to promote agriculture. The RBDAs' procure and distribute pesticides and fertilizers, which contribute to pollution when washed into rivers and streams by rainfall.

The RBDAs have failed to establish comprehensive plans for water resources development. Private firms, individuals, communities, state water boards, municipal water bodies, state and federal ministries follow their own agendas without any overall control.

Section 9 of The Petroleum Act, 1969 (Cap. 350), authorizes the Minister of Petroleum Resources to issue regulations and directives to prevent the pollution of water courses and the atmosphere. The Petroleum (Drilling and Production) Regulations, 1969 (Cap. 350), have a few provisions addressing water. Section 15 specifies that licensees and lessees may "not deprive any lands, villages, houses or watering places for cattle of a reasonable (water) supply or interfere with any rights of water enjoyed by any person under The Land Use Act or any other enactment." Section 36 directs that licensees or lessees shall maintain all drilling and mining apparatus in proper and workmanlike manner and take all practical steps to control the flow and to prevent the escape of petroleum into any water, well, spring, stream, river, lake, reservoir, estuary or harbor.

Furthermore, Section 25 of the Regulations provides that the Director of Petroleum Resources approve all equipment used by licensees and lessees in order to prevent the pollution of inland waters, rivers, water courses, the territorial waters of Nigeria or the high seas by oil, mud, or other fluids or substances which might contaminate the water, banks or shoreline, or cause harm or destruction to fresh waters or marine life.

The Oil in Navigable Water Act, 1968 (Cap. 337), implements the terms of the International Convention for the Prevention of Pollution of the Sea by Oil 1954, by declaring it an offense to discharge oil or any mixture thereof into the navigable waters of Nigeria, from a vessel, on land or from any apparatus for transferring oil. Implementing

these provisions, however, present problems and under the existing regulatory system very little monitoring occurs.

The Federal Environmental Protection Agency Decree, 1988 (No. 58), contains provisions prohibiting the indiscriminate disposal of waste into the lagoons and waters of Nigeria, and authorizes FEPA to issue guidelines for the control and monitoring of the same.

Other relevant legislation in this area include The Sea Fisheries Act, 1971 (No. 30); The Territorial Waters Act, 1971 (Cap. 428); Petroleum Act, 1969 (Cap. 350); and The River Basins Development Authorities Act, 1986 (Cap. 396).

Water quality monitoring needs to be organized and conducted on a regular basis. In this regard, FEPA has environmental monitoring as one of its priorities and has established interim federal water quality standards and effluent limitations. The Guidelines and Standards for Environmental Pollution Control in Nigeria, 1991, are along the same lines as those established by the World Health Organization (WHO). FEPA has yet to implement a program to monitor the pollution of both surface and groundwater resources.

The Gambia

The National Water Resources Council Act, 1979 (Cap. 66:02), established the National Water Resources Council (the Council) to formulate water policy with the assistance of the National Water Resources Committee (the Committee). Five ministries are represented on the Council and all governmental bodies dealing with water issues are represented on the Committee. Responsibility for executing and enforcing the laws and regulations affecting water rests with the Department of Water Resources (DWR). The Council and Committee structure provide an adequate institutional framework for formulating water policy.

The Act defines the Committee's basic functions as including the coordination of water use, development and conservation projects. The Act fails to address such issues as pollution, contamination, and tolerable limits for chemical pollutants. Furthermore, the Act makes no reference to groundwater pollution or discharges from vessels. A comprehensive water law is needed.

The Cabinet approved an operational policy paper on water resources development. The DWR and the Gambia Utilities Corporation (GUC) have the following vaguely defined duties: the DWR provides water to rural areas and the GUC provides water to urban areas.

The DWR, using principally donor funds, does cite for wells and boreholes and arranges for their construction. Major problems arose early on when the GOTG ran out of funds to maintain and rehabilitate the wells and boreholes. The handpumps, in particular, require regular maintenance and repair. Consequently, the GOTG now requires the Alkali,

acting on behalf of the Village Community, to enter into a handpump maintenance agreement, see Annex C, before the GOTG arranges for well construction.

Steps to implement this program include: training for mechanics in each district, creation of Village Committees (comprised of the village head, a treasurer, secretary, male and female well caretakers) with responsibility for all well maintenance matters, a motivation campaign, and constant collaboration with extension workers.

Cameroon

Loi No. 84/13 du 5 décembre 1984 portant régime de l'eau, provides for the system of water ownership and Loi No. 73/16 du 7 décembre 1973 portant régime des eaux de source et des eaux minérale addresses the quality of water resources, rights of usage and conditions for water use. The latter law applies more to the exploitation and commercialization of water than to the regulation and establishment of quality standards. Loi du 5 décembre 1984 promotes rational water use; however, the regulations are inadequate.

None of the water laws address the problem of effluents, wastes and residual water. The law merely mentions the need for an inventory of water resources and establishes no quality norms to provide a legal basis for monitoring water quality.

Marine and coastal waters are governed by Decree No. 85/1278 of September 26, 1985, regulating harbor areas and Law No. 83/16 of July 21, 1983. The former Decree defines water pollution as the act of contaminating, dirtying, obstructing or endangering the natural environment. The scope of the law includes rivers and other bodies of water connected to harbors. The port authority must authorize any installation or plant. Although coastal pollution reaches an alarming level, the laws are poorly enforced.

The gravest problem in water resources management results from the lack of a regulatory framework to govern the management of water resources. A multiplicity of water related laws exist and problems arise in determining which applies and which ministry has jurisdiction. Moreover, the ministries do not adequately coordinate their actions. The pertinent water laws are:

- Loi No. 64/LF/23 du 13 novembre 1964 portant protection de la santé publique,
- Décret No. 76/372 du 2 septembre 1976 portant réglementation des établissements dangereux, insalubres, ou incommodes et ses arrêtés d'application,
- Loi No. 81/13 du novembre 1981 portant régime de la forêt, de la faune, et de la pêche ainsi que la loi portant réglementation foncière contenant des dispositions relatives aux régimes juridiques des eaux.

Côte d'Ivoire

The Central Laboratory for Marine and Lagoon Environment (Laboratoire Central de l'Environnement marin et lagunaire - L.C.E.) manages the Côte d'Ivoire's National Network for Observation of Ocean, Lagoon and Continental Waters and is responsible for physical, chemical and microbiological analysis of waters and aquatic flora and fauna.

The Decrees of March 5, 1925; May 25, 1955; and March 19, 1921, all address water issues. While the Decrees generally fail to address water pollution, Order No. 9929 of December 19, 1955, does refer to pollution of industrial origin. This Order states that:

... protected areas could be created around catchment zones meant for the water supply of the population as necessary in order to protect the underground waters against mineral and organic pollution. The creation of protected areas will lead to the prohibition of discharges without prior treatment of industrial waste waters whose level of mineral and organic substances or the bacteriological density could lead to the pollution of water.

The Decree of October 20, 1926, addresses pollution from dangerous and unhealthy industries.

The Decree of April 14, 1904, and Order No. 9929 of December 15, 1955, provide for the creation of pollution control zones around and along potable water supply sources. These laws address unsanitary conditions arising from human wastes and provide instructions for citing wells and treatment of residual waters.

Decree No. 68528 of November 28, 1968 (JOCI), while fairly comprehensive, only addresses water protection in the Abidjan region. This Decree establishes a protection zone to ensure the supply, conservation, preservation and use of water resources.

Administrative Notice of September 7, 1955, on the accounting book of the Water Distribution Services Agency addresses water potability problems. The Public Health Act contains provisions prohibiting the introduction of any deleterious substances into water supplies for human or animal consumption.

A variety of laws seek to protect marine resources. Law No. 61/349 of November 9, 1961, establishes the Merchant Marine Code. Law No. 77/926 of November 17, 1977, specifies the marine zones placed under national jurisdiction. Law No. 81/1048 of December 8, 1981, authorizes ratifying the agreement pertaining to cooperation in order to protect and develop the marine environment and coastal zones of the WCA region.

Marine pollution receives particular attention. Decree No. 85/949 of September 12, 1985, provides for a plan, known as the Pollumar Plan, for emergency intervention in the event of pollution at sea. The Decree addresses pollution of any origin at sea, in lagoons or

along the coastline. The impetus for this law came from the 400 ton oil spill in the Bay of Biafra in 1980.

The GOCI is currently considering sorely needed legislation to unify the existing water laws, revise them where needed and introduce ER procedures.

Mali

Water Rights and Use. Water property rights are part of the public domain and are inalienable. Consequently, local communities and decentralized collectives cannot claim ownership of ponds, rivers or springs.

Two possibilities exist, however, for circumventing this problem. Natural resources can be declassified and thus become part of the government's private domain. If part of the private domain, management responsibilities could be transferred to territorial institutions or authorizations of occupancy granted.

The law pertaining to the transfer of management specifies that: "for reasons pertaining to the general interest or of public utility, the government may transfer the management of its estate in the public domain to a decentralized local institution which will then assume responsibility for its conservation." The provision clearly states that the decentralized institution can only manage the resource and cannot dispose of it.

Authorizations of occupancy can be granted to a legal entity outside of the government system, such as a local collective. Such authorizations are subject to revocation without indemnization, for any reason deemed in the public interest.

Niger

A plethora of water related legislation exists, specifically:

- The Civil Code (art. 640-645) governs use of non-public water
- The Decree of April 14, 1904, concerns the protection of the public health
- The Decree of March 5, 1921, directs water users to seek permission from the proper authorities to use water and regulates waste water discharges
- The Decree of March 21, 1928, concerns the status of water

The Decree of September 29, 1928, governs the public domain and compulsory service and defines the public domain of surface water as including: navigable waterways and their overflow; springs, non-navigable watercourses and overflow areas; ponds and lakes to the highwater mark; and artificial water courses such as canals. Decree No. 55/490 of June 3,

1952, amends Articles 1 and 2 of the Decree of September 29, 1928, by defining all groundwater as part of the public domain. Order No. 9929 of December 15, 1955, issued by the Ministry of Public Works implements Decree No. 55/490 and supplements the Decree of September 29, 1928. This Order provides for protected areas around urban drinking water supplies and regulates groundwater use.

The Agreement of February 5, 1952, concerns the management of water, ice and electricity service in Niamey.

The Decree of October 30, 1935, concerns the protection of drinking water.

Provisions of the mining law, Law No. 61/8 of May 29, 1961, relates to water.

Law No. 63/31 of May 7, 1963, creates a public institution for the exploitation of underground water. Law No. 63/37 of July 10, 1963, amends Art 7 of Law No. 63/31 of May 7, 1963. Law No. 66-032 of May 24, 1966, amends art. 2 of Law No. 63/61 of May 7, 1963.

Decree No. 67/143 PRN/MER of September 1967, regulates the operation of pumping stations in grazing areas.

Decree No. 69/43 MTP/TM/U of January 2, 1969, establishes a Water and Electric Committee.

Cahier des Charges, July 9, 1971, provides for the Electric Company of Niger to operate a public drinking water supply company on a concessional basis.

Water Rights and Use. Legislation in force concerning water is primarily based on French colonial laws, unless amended or superseded by subsequent legislation. In the absence of such legislation, Islamic and customary laws apply. Water is considered to be in the public domain, except in certain cases -- such as a well constructed on private property by private means. In practice, the further from government authority the more likely water users are treated as water owners. Customary and Islamic law prevail in such circumstances and set priorities for water use. These priorities, in decreasing order of importance, are: drinking water, animal watering, irrigation, industrial, and recreational use. Urban areas, consequently, receive preference over rural and grazing areas. While legislation does not cover the amount of water that may be used in rural or urban areas, pumping stations in livestock areas may only be opened after exhausting surface water from the rainy season.

Water quality laws exist only for the urban areas and companies can be held liable for pollution.

The Ground Water Authority is charged with construction, operation, and maintenance of wells and boreholes in rural areas. The Water Commission, established pursuant to Decree

No. 66/016 PRN of February 10, 1965, is responsible for determining water policy and for examining and advising on any water legislation matters.

Niger is a member of several international organizations which regulate water resources. The Lake Chad Basin Commission -- comprised of Cameroon, Chad, Niger and Nigeria -- seeks to ensure that the development of water resources does not have detrimental effects on water courses in the basin or the lake or flora and fauna in the basin. This broad definition potentially encompasses such issues as: livestock production, agriculture, fisheries, transport and communication, tse-tse fly eradication, and hydrology.

The Niger River Commission and the Inter-African Committee for Hydraulic Studies are both charged with facilitating information exchange. These organizations may recommend legislation to member countries and theoretically are responsible for ensuring implementation by the member countries of any agreements reached. The Niger River Commission seeks to prevent pollution of the Niger River and requires that people consult with the Commission before undertaking activities that may effect the fauna and flora.

6.3 Plants and Animals

Ghana

Wildlife. The Wild Animals Preservation Act, 1961 (Act 43), provides the principal legislation governing wildlife conservation. The original spirit of the Act sought to preserve wild animals useful or inoffensive to man, to reduce nuisance or offensive species and to establish game reserves. The first schedule of Act 43 listed completely protected animals, such as elephants and birds used in the plumage trade. The fifth schedule listed nuisance species, such as lions, leopards, pythons and crocodiles. Fortunately, the Act has been amended and these schedules replaced.

The regulation making powers contained in Section 11 provided authority to steer the Act in a new direction. The Wildlife Conservation Regulations, 1971 (LI 685), as subsequently amended by LI 1284 of 1983 and LI 1357 of 1988, now puts the focus on conserving wildlife, i.e. flora and fauna, and the degree of threat or endangerment to the species and not whether the species is dangerous or offensive to man. The regulations establish a system of permits and certificates for regulating international trade in endangered wildlife species so as to comply with Ghana's CITES obligations. The laws, however, overemphasize wild fauna and fail to provide adequate protection for wild flora. The schedules in Act 43 only cover fauna. Clear legal provisions authorizing flora protection are needed.

Section 11 also provides for establishing regulations to cover such matters as: hunting seasons; establishing reserves; and restrictions or prohibitions on the use of nets, pits or enclosures, guns, traps and snares, and explosives for hunting animals.

Act 43 charges game officers with enforcing the law. They may arrest without warrant any person whom they reasonably suspect to have violated provisions of the Act.

Pest and Plant Diseases. The Prevention and Control of Pests and Diseases of Plants Act, 1965 (Act 307), gives the inspector the power to apply such treatment and adopt such measures as he deems necessary for the purpose of preventing, exterminating, or restricting any pest or plant disease. The Prevention of Damage by Pests Decree, 1968 (NLCD 245), seeks to prevent the contamination, infestation or infection of food and feed stuffs by pests.

Fisheries. The Fisheries Law, January 30, 1991 (PNDCL No. 256), provides for a licensing system, various prohibitions, the creation of fishery zones for regulatory purposes and the appropriate fishing gear that may be used in these zones, sanctions for violations, and institutional mechanisms for the enforcement and/or operations. The Secretary for Agriculture is empowered to establish regulations pertaining to the type of fishing craft permitted, fishing gear, apparatus or methods for taking fish, licensing procedures and fees, vessel registration, and inspections.

The law establishes a Technical Committee, comprised of representatives from government agencies, and a Fisheries Advisory Council (FAC), comprised of government and private sector representatives. The FAC advises the government on all matters affecting the fishing industry as well as matters relating to the implementation of government policies on the development, management and utilization of fisheries.

The law also establishes the Fisheries Monitoring Control Surveillance and Enforcement Unit, which is charged with enforcing the law. The Unit, comprised of personnel from the Navy, Air Force, Fisheries Department and personnel from other agencies as needed, has extensive police powers. The composition of the Unit may provide a coherent and coordinated approach towards fisheries law enforcement. Questions arise, however, as to whether the Unit has sufficient equipment and resources to fulfill this enforcement role.

Violations of the law can result in stiff fines, imprisonment and confiscation of vessels and catch. Critics of the law maintain that the provisions prescribing imprisonment and/or confiscation violate the United Nations Convention on the Law of the Sea.

While the fisheries laws have historically not been adequately enforced, one noteworthy case exists. In the Decision of the National Public Tribunal, Accra, Case No. 85/89, March, 1989, entitled The People vs. Captain Papaikonoumou Nikolaos, Panayotis Stafilis, Chatzigeorgiou Nikolao Theodoreos Argoudelis, Ajax III, Ajax Shipping Company the defendants were successfully prosecuted for doing acts with the intent to sabotage the economy of Ghana contrary to Sections 9(1)(f) and 16 of The Public Tribunals law (PNDCL No. 78).

Customary regulations about fisheries conservation often emerge from traditional religious beliefs and taboos. These regulations are enforced by priests and priestesses who declare

the wishes of the spirits which are believed to inhabit the rivers. As part of traditional religious belief, fishing on one particular day of the week may be regarded as taboo. Also, fishing may be prohibited for two to three months each year. Breaking these prohibitions can result in a fine in cash or in kind or both. Customary religious beliefs can provide rules for conserving fish in the seas and rivers and thus permit fish to become reasonably mature before harvesting.

Wildfires and Burning. Bushfires represent the most degrading environmental factor in Ghana. More than any other event, the ravaging bushfires during the draught in 1983-84 served to raise public awareness of environmental degradation.

The Control and Prevention of Bushfires Law, 1990 (PNDCL 229), prohibits setting fires and prescribes penalties for illegal burning that include fines, imprisonment and community labor. However, authorized staff may use burning as a management tool in an established forest or wildlife conservation area, or with proper authorization a person can burn farm slash, grass, herbage and deadwood if controlled and confined within specific boundaries.

The law provides for the establishment of Bushfire Control Subcommittees in each District Assembly. The subcommittees are charged with: drafting by-laws on the prevention, control, and monitoring of bushfires; specifying burning periods; and setting up town, area and unit Bushfire Control Committees which will establish volunteer fire squads and educate residents on the dangers of uncontrolled fires. The law is especially noteworthy because of the roles assigned to the local communities.

Nigeria

The Agricultural (Control of Importation) Act, 1964 (Cap. 12), provides for regulating the importation of articles for the purpose of controlling plant diseases and pests. Pursuant to Section 4 of the Act, the Minister has promulgated The Plants etc. (Control of Importation) Regulations, which prohibit, restrict or control imported plants, seeds, soils, fertilizers, containers and similar goods. The Pest Control of Produce (Special Powers) Act, 1968 (Cap. 349), provides for the inspection of produce for pests before export at all sea- and airports.

Wildlife. The Wild Animals Preservation Act, 1916, and The Endangered Species (Control of International Trade and Traffic) Act, April 20, 1985 (Cap. 108), prohibit and control the hunting and trading of endangered and threatened animal life. The latter Act implements Nigeria's international obligations as established by CITES. Nigeria also signed the African Convention on the Conservation of Natural Resources and along with Cameroon, Niger and Chad ratified an Agreement on the Joint Regulation of Fauna and Flora on the Lake Chad Basin.

The Endangered Species Act lists ninety different rare and threatened fauna. The Act absolutely prohibits the hunting, capture or trade of fauna listed in Schedule 1, whereas

fauna listed in Schedule 2 may be hunted, captured and traded if an individual has a license issued pursuant to the Act. With regard to flora, however, a major deficiency appears -- since no separate national legislation of specific species, either rare or threatened, exists. The Act applies to species-oriented rather than spatially-oriented fauna. The wildlife laws concerning fauna emphasize protection and the regulation of hunting. These laws omit management of wildlife resources, including habitat conservation, from their purview.

Those states which have enacted legislation similar to The Endangered Species Act offer the only examples of wildlife laws being enforced. Since the Act is a federal law, the states do not have jurisdiction to enforce it and thus need their own legislation.

The National Park Decree, 1991 (No. 36), established five national parks and contains provisions pertaining to nature conservation. Section 35 authorizes the National Park's Governing Board to make regulations to manage the parks.

The Natural Resources Conservation Council Decree, 1989 (No. 50), establishes the Natural Resources Conservation Council (NRCC) to coordinate matters concerning the conservation of natural resources. The Decree vests the NRCC with the power to designate sites and species of conservation interest and to take fiscal measures to encourage conservation of natural resources.

The Gambia

Wildlife. The most relevant pieces of legislation are The National Environmental Management Act (NEMA), 1987 (Cap. 72.01); The Wildlife Conservation Act, 1977 (No. 1); and The Wildlife Conservation Regulations, 1978 (L.N. 36). The NEMA gives effect to the African Convention for the Conservation of Nature and Natural Resources and makes each minister responsible for implementing the Act. Section 5 of NEMA authorizes the responsible ministers to "make regulations for monitoring the state of the natural resources and the impact upon them of development activities." To implement the NEMA, Section 6 establishes the Natural Environment Management Council (Council). The Council receives advice from the Advisory Committee on the Management of the Natural Environment.

The Wildlife Act prohibits the hunting of wild animals, except with a hunting license. Section 16 authorizes the Minister to prescribe, by regulation, the form and conditions of the licenses. Occasionally, the Conservation Department confiscates illegally held animals; however, the Department lacks the staff to enforce effectively the existing legislation. Part III of the Act charges the Minister with designating, with the approval of Parliament, national parks, national reserves and local sanctuaries. The Act prohibits hunting and trapping within the parks and reserves and authorizes the Minister to make regulations to manage the parks and reserves.

The Banjul Declaration and various pieces of legislation express the GOTG's commitment to the preservation of its fauna and flora. The GOTG has demonstrated this commitment by setting aside park areas which are large compared to its Sahelian neighbors. The Kiang West National Park Order, 1987, established the 10,000 ha. National Park in the Kiang West Division, which includes woodland and riparian habitats. The Wildlife Conservation Order, 1978, established The River Gambia National Park. The GOTG, however, lacks adequate resources to maintain Kiang West and The River Gambia National Parks, let alone establish new parks. Nevertheless, the critical need exists to establish a park along the coast to protect and encourage the varied avian fauna.

Fisheries. The Fisheries Act, 1991, repeals The Fisheries Act, 1977 (No. 17), but regulations issued pursuant to the old Act may still be valid. The new Act addresses: fisheries development measures, local and foreign licensing, aquaculture, marketing and processing, prohibited fishing methods, enforcement powers, and penalties and legal proceedings.

The new Act prohibits the use of or possession with the intent to use, explosive, poison or other noxious substances for fishing, and prescribes stiff penalties of up to 1,500,000 dalasis and seven years imprisonment. The Act empowers the Minister of Natural Resources and the Environment to make regulations for the following purposes: prescribing the limits on the amount, size or weight of fish caught, retained and traded; prescribing minimum net mesh sizes; and designating prohibited fishing areas. Different licensing regulations will be established for artisanal and foreign industrial fisheries. Regulations will likely seek to enforce zoning of fishing grounds between the industrial and artisanal fisheries.

The Act establishes the Fisheries Advisory Committee, comprised of government and fishing industry representatives, to promote the fisheries industry and advise on development projects. The Committee will manage the Fisheries Development Fund, which will receive funds from fines and license fees.

Cameroon

Hunting and Wildlife. The GOC follows several strategies to protect wildlife, which is experiencing a serious decline. Part III of the Forestry Law, No. 81/13 of November 27, 1981, contains provisions regarding the exercise of hunting rights and wildlife conservation and management. The GOC controls hunting by: requiring a license, regulating the use of products derived from hunting, prescribing seasons, regulating the detention of wild animals, limiting customary hunting rights, and banning certain hunting procedures. Wildlife species are now classified into three categories, the first being totally protected.

To protect habitats, the law provides for several types of legally protected areas: integral or total reserves, partial or special reserves, national parks, and wildlife preserves. Despite these categories, legally protected areas are limited. While there are nine wildlife reserves,

two have been destroyed, one degraded over fifty percent, one open to timber concessions, and one is being declassified.

Bushfires. Many rural activities traditionally use bushfires, resulting in severe soil erosion. To address this situation, the law and decrees providing for the national system of forests - Law No. 81/13 of November 27, 1981; Art. 77 of Decree No. 83/169 of April 12, 1983; and Art. 75 of Decree No. 83/170 of May 12, 1983 -- subject fire setting to strict regulations.

Fisheries. Decree No. 83/171 of April 12, 1983, authorizes the GOC to establish protected zones in the Gulf of Guinea and the Bay of Biafra where fishing with trawling devices is prohibited. This zone includes the Pu Apwa-hife Road, the mouth of the Rio-del-Rey, Ambas Bay, Warship Bay, the mouth of the Bimbia and the estuary of Cameroon.

Article 10 of the Decree requires that an applicant for a fishing license must make a formal declaration agreeing to cooperate with the administration to ensure the control of fishing and good management of fishing resources. The Decree also prohibits the use of explosive devices for fishing.

The Forestry Law, No. 81/13 of November 27, 1981, regulates fishery development in rivers and fresh-water ponds. This is not unusual in the francophone countries that fresh-water fisheries fall within the jurisdiction of the forestry sector and are the responsibility of the national forest administration.

Part IV of this law defines various fishery resources, fishing activities, and fish processing and commercial operations. It regulates the exercise of fishing rights for traditional, commercial and industrial uses; the management and protection of the fishery resources in general; the operations of fish farms; the installation of fish processing establishments; and the sanitary inspection, packaging and transportation of fishery products.

Côte d'Ivoire

Wildlife. The Decree of August 5, 1965, protects fauna and prescribes restrictions on hunting. Order No. 3 of February 20, 1974, subsequently banned hunting nationwide. Hunting by tourists and administrative slaughtering for special reasons is still permitted. The ban on hunting has not been observed and Ivorian fauna has decreased drastically nationwide. The Government is currently considering new legislation to permit hunting in a sustainable manner.

Mali

Wildlife. All the legislation and codes dealing with wild natural resources and biodiversity are under a national review. The Wildlife Management Code (Code de la Chasse), Law No. 86/43, needs to update all the species, especially as it pertains to larger mammals, and formulate new rules for hunting.

The Land Clearing Code, No. 86/65, contains at least one section which particularly hurts natural regeneration and biodiversity maintenance. The Code taxes the land, if it has been fallow more than five years. Farmers respond by clearing land in three years.

Bushfires. The Fire Code, Law No. 60/4, which seeks to control bushfires, is currently being revised. Drafters may maintain the ban on bushfires for Sahelian and bourgu pastures. In the Sudanian zone, however, there would be a three year rotation system which would include a single year of early dry-season burning. The Fire Code also addresses the bearing of firearms and munitions.

Fisheries. The Fisheries Code, Law No. 86/44, fails to specify by size or weight the fish that can be caught. Pursuant to customary practice, however, the women who operate the fish collectives, which purchase the fish from the fishermen, will not purchase fish below a certain size or fish caught during a certain period of the year. The Code does not designate any areas as fishery reserves or address stocking or management issues. The GOM, however, does recognize the unsustainable harvesting that occurs as a consequence of the fish traps and may ban them.

Niger

Wildlife. The Decree of November 18, 1947, modified by the Decree of December 21, 1954, concerns the protection of fauna.

The Decree of April 27, 1954, concerns the protection of wildlife reserves and national parks.

Law No. 28 of 1962, regulates hunting and lists protected species. Decree No. 101 of 1966, prohibits hunting of birds except with traditional weapons. Decree No. 64/97 of 1972, subsequently banned hunting.

Decree No. 122 of 1964, prohibits marketing or export of products from wild animals.

The Stockbreeding Code, Act 19 of 1970, prohibits unnecessary ill-treatment of animals and lists measures to prevent the outbreak, control, and elimination of animal diseases.

Decree No. 206 of 1960, sets conditions for the import of any vegetable or other matter which could introduce organisms detrimental to agricultural crops.

Law No. 17 of 1971, regulates fishing and protects fisheries.

The GON is considering a new hunting code which would implement the government's obligations mandated by various international conventions. The code would seek to provide a national model for managing and conserving renewable wild natural resources for the

benefit of rural people while providing the government and the private sector with the capacity to administer and contribute to the code's goals. The code would seek to:

- conserve the natural habitat and biodiversity of Niger,
- enhance the capacity of the private and public sector to manage and conserve natural habitat and renewable wild resources,
- enhance public understanding of the importance of conserving natural habitat and wild resources,
- provide incentives for rural people to manage wild species,
- provide rural communities with the capacity to manage wild species in a sustainable manner, and
- ensure that rural people realize an equitable share of any benefits derived from their positive action in order to ensure their participation in the code's enforcement.

6.4 Waste Disposal

Ghana

No laws exist for regulating waste discharge from industrial, commercial or tourist activities. Any proposed legislation should consider wastes derived from organic, inorganic and radioactive effluents. Standards should be established based on the source of pollution and the receiving body of wastes. Legislation could encourage the recovery of materials from wastes, the use of wastes as a source of energy and the treatment of wastes. Discharging wastes into groundwaters, abandoned wells, boreholes or catchment galleries should be strictly prohibited. Water pollution control is ineffectively addressed with various provisions which seek to control nuisances. Jurisdictional conflicts arise, since the Inspector of Nuisances or the Health Officer or the District Commissioners potentially all have responsibility for giving notice to abate a nuisance. This procedure requires a court action and proves to be long and cumbersome. Moreover, the courts lack the technical expertise to decide such issues.

Nigeria

FEPA, pursuant to Section 37 of The FEPA Act, promulgated S.I. 8 National Environmental Protection (Effluent Limitation) Regulations, 1991, S.I. 9 National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations, 1991, and Guidelines and Standards for Environmental Pollution Control in Nigeria, 1991. The guidelines and standards relate to six areas of environmental pollution control: effluent limitations, water quality for industrial water uses at point of

noise, industrial emission limitations, noise exposure limitations, management of solid and hazardous wastes and pollution abatement in industries.

S.I. 8 mandates that an installation made pursuant to this regulation shall be based on the Best Available Technology (BAT), the Best Practical Technology (BPT) or the Uniform Effluent Standards (UES). S.I. 9 represents a very ambitious effort to tackle waste generation problems, by mandating that industries: release toxic substances only with approval; monitor and report discharges; list chemicals used; obtain permits for the storage, treatment and transportation of toxic wastes; adopt strategies for waste reduction; obtain permits for discharging effluents beyond permissible limits; and have a stock of pollution response equipment.

The Criminal Code, 1958 (Cap. 42), contains penal provisions for the detrimental vitiation of the atmosphere. The criminal code also imposes a sentence on parties found guilty of fouling internal waters of the country; eg: streams, lakes, and wells.

The environmental sanitation edicts of most states replace or complement existing federal public health laws and the town & country planning laws by providing for the control of such environmental sanitation issues as: refuse and waste disposal, industrial and commercial pollution, enhancement of aesthetic environmental quality, control of pests, and the safeguard of adequate water supplies. Tangentially, the edicts address the discharge of noxious or poisonous effluents into the environment via gutters, drains and other waste receptacles. The penal provisions and fines fluctuate widely from state to state. Consequently, some states may be attractive as pollution havens.

Each state has at least one authority charged with implementing the edicts. The emphasis and scope the states' edicts give to environmental issues varies widely. For example, the Gongola State environmental sanitation edict provides for three bodies: the State Task Force Committee, the Zonal Task Force Committee, and a State Environmental Health Advisory Committee. In Lagos State the responsibility for a healthy environment rests with the Lagos State Waste Disposal Board, which has wide powers pursuant to the edict.

Problems arise in determining which state agency has responsibility for solid waste or refuse management. Even if an agency recognizes and accepts the responsibility, it will usually plead inadequate funding and shortage of technical facilities and expertise.

The edicts establish a general legal framework for sanitation issues and in particular target domestic and low level industrial pollution. Problems arise, however, since effective regulatory mechanisms do not exist to enforce the edicts. Moreover, the edicts usually fail to explicitly provide for the means and procedures to identify discharges or set standards and limits.

The Sanitation Decree contains a noteworthy provision, which establishes a monthly environmental sanitation day that mandates that citizens participate in neighborhood clean-

efforts. This provision has had some success in mobilizing people to work together - not only on the designated sanitation day but in addressing other environmental problems.

The Gambia

The Environmental Protection (Prevention of Dumping) Act, 1988 (Cap. 72:02), provides for the prevention of the dumping of industrial waste into land or water. The Minister, in consultation with the NEMC, may make regulations providing for: standards for storing, recycling, handling and disposing of waste; issuance of dumping permits; and monitoring. No subsidiary legislation, however, has been prepared. Section 5 strictly prohibits dumping waste produced from sources outside The Gambia and mandates a fine of up to 500,000 dalasis and up to five years imprisonment.

Sections 9 and 10 of The Public Health Regulations provide for the disposal of night soil. Section 23 of the Regulations empowers the Medical Officer of Health to "order the removal of all collections of water, sewage, rubbish, refuse, ordure or other fluid or solid substances" as he deems necessary.

Cameroon

The National Commission for Work Hygiene and Safety, created pursuant to Decree No. 75/740 of November 20, 1975, addresses problems of hygiene and safety in the work place - particularly in the industrial environment. This Commission and the Superior Council of Health and Hygiene and Social Affairs, created pursuant to Decree No. 76/450 of October 15, 1976, could potentially play a role in regards to the management of toxic, industrial, commercial and household wastes. These organizations, however, function intermittently and with difficulty.

The following laws address pollution and nuisances originating from commercial and industrial establishments and authorize governmental monitoring:

- Décret No. 76/372 du 2 septembre 1976 portant nomenclature des établissements dangereux, insalubres ou incommodes, carries nomenclature defining dangerous, unhealthy and inhospitable establishments.
- Arrêté No. 17/MINMEN/ DMG du 21 octobre 1976 déterminant les conditions d'application du décret 76/372 du 2 septembre 1976, defines the terms of application for décret 76/372.
- Arrêté No. 13/MINMEM/DMG/SL du avril 1977 portant nomenclature des établissements dangereux, insalubres ou incommodes, defines unhealthy, dangerous and inhospitable establishments.

Circulaire No. D69/NG/MSP/DMP/SHPA du 20 août 1980 relative à la collecte, le transport et le traitement des déchets industriels, des déchets et ordures ménagères et des matières de vidange sanitaire, this order relates to the collection, transportation and treatment of industrial waste, household waste and garbage and sanitary waste.

The government exercises control a priori¹⁴ and a posteriori¹⁵ through authorization for opening up establishments and through inspections. These laws, some of which date from 1926, reflect a strong orientation toward public health issues. The GOC seeks to interpret them so as to control and prevent pollution. The laws, however, are inadequate for this liberal interpretation. For example, the law provides no discharge standards, and does not provide for collection areas.

Administrative circulars seek to cover gaps in the law. Circular No. D69/NCMSP/DMPHP/SHPA carries instructions on rules for the disposal of wastes but is inadequately enforced.

Côte d'Ivoire:

The Decree of October 20, 1926, represents the primary legal basis for pollution control. The following three statutes supplement this Decree: General Order No. 1268 of April 28, 1927, which sets the enforcement modalities; Order No. 25 of May 26, 1989, which sets general prescriptions applicable to all the establishments subject to the Decree; and Order No. 38 of June 28, 1989, which sets the nomenclature for the establishments subject to the Decree. The nomenclature lists approximately 400 items and classifies establishments into two categories according to risks of the establishments' activities.

To obtain a permit, the establishment owner must submit an application describing the establishment and the risks and nuisances associated with the establishment and the means to reduce them. The administrative services will review the application, which will be subject to public inquiry. The Minister in charge of classified establishments will issue a permit, prescribing operating instructions.

¹⁴A priori - (Latin) From the cause to the effect; from what goes before. A term used in logic to denote an argument founded on analogy, or abstract considerations, or one which, positing a general principle or admitted truth as a cause, proceeds to deduce from it the effects which must necessarily follow.

¹⁵A posteriori - (Latin) From the effect to the cause; from what comes after. A term used in logic to denote an argument founded on experiment or observation, or one which, taking ascertained facts as an effect, proceeds by synthesis and induction to demonstrate their cause.

Article 21 of this Decree specifies that an inspector corps will "have access to the establishments under their surveillance any time during their operation in order to make any verifications they deem necessary." The Decree provides for penalties for violations and the inspectors have the right to determine violations. To date, action has been taken against sixty-three of the one-hundred most polluting establishments. These actions usually consists of orders to correct the problem within a specified time. The following general measures are also being taken: creation of a waste grant service to handle waste disposal within an establishment, installation of atmospheric pollution equipment in Abidjan to test for the degree of atmospheric pollution, and establishment of an ocean outfall for urban waste water.

Mali

Responsibility for urban sanitation rests with the district and municipal governments. There do not appear to be any national laws regulating urban sanitation.

The new industrial pollution law, Law No. 91 1047/AN-RM, Protection of the Environment, establishes a broad legal framework for regulating all forms of environmental pollution and also considers the receiving medium. The Council of Ministers will issue a decree of application providing details for the laws application and implementation.

This law could benefit from some revisions. In order to have a regulatory measuring stick against which to evaluate environmental impacts or determine compliance, environmental quality and operating standards should be set. The concepts of integrated pollution management and pollution prevention should be referenced and defined. While the GOM lacks the capability to implement these concepts to a substantial degree, referencing them would serve to raise awareness and facilitate later implementation when the capability is developed.

The law's provisions on permits, reporting requirements, and enforcement require more consistency. Moreover, the substantive requirements and penalties for violations vary considerably for different pollutants and the receiving media, without apparent reason. For example, the air pollution section requires obtaining a permit and submitting certain (largely unspecified) information to the government. The waste materials section does not require permits, but does mandate reporting requirements and compliance with standards. However, no clear standards exist. For water pollution, the law bans outright the discharge of potentially harmful effluents -- but there are no permit or reporting requirements.

Harmonizing these requirements into a more coherent pattern would make implementation more manageable and equitable. The variations in penalties should be revised, as well as the differences which treat the failure to submit information as a violation only for some regulated activities.

Realistic requirements for corrective action should be specified. Specifying arrest, fines and abatement within one month for air and water pollution violations represents an arbitrary compliance deadline and will create implementation problems. In many cases, it will be technically and economically impossible for a violator to comply with this time schedule. Major process changes or capital investments must be negotiated between the government and the violator. The law fails to provide for recycling or waste reduction. Finally, the law needs more specificity about which government authorities are responsible for implementing the various sections.

Niger

Law No. 66/033 of May 24, 1966, seeks to regulate discharges from manufacturing establishments, workshops, factories, warehouses, construction sites and any other industrial or commercial establishments constituting a source of danger or inconvenience, whether to safety, hygiene or amenity of the neighborhood or to public health, or agriculture.

6.5 Hazardous and Toxic Substances, Fertilizers and Pesticides

Ghana

Hazardous and Toxic Substances. The Mercury law, 1989 (PNDCL 217), requires a license to possess mercury, except for small-scale gold miners. No other laws exist relating to toxic or hazardous substances. Draft legislation to control the importation, distribution, sale and use of pesticides and other toxic chemicals has, however, been prepared. To administer the proposed legislation, EPC proposes the establishment of an Inter-Departmental Pesticide Control Project (IPCP) comprised of all the agencies with activities related to pesticide use and control.

Pesticides. The EPC and the Ministry of Agriculture have established interim application procedures for examining agrochemical imports. A five-member subcommittee of the Toxic Chemicals Committee reviews pesticide import applications. The application must include technical data on pesticide composition. If approved, the applicant receives temporary clearance from EPC. All approvals are subject to further review after investigations determine the impact of the chemicals on the environment.

Nigeria

Fertilizers & Pesticides. The Agricultural (Control of Importation) Act, 1964 (Cap 12), provides for the prohibition, restriction and control of importation of artificial fertilizers and for their marketing, chemical composition and quality. Fines and penalties attach for offenses.

The Federal Environmental Protection Decree (FEPD), 1988 (No. 58) affords the most relevant legislation for environmental monitoring and prevention of pollution by

agrochemicals and pesticides. The Decree establishes the Federal Environmental Protection Agency (FEPA) and vests FEPA with the power to establish procedures for agricultural activities in order to minimize damage to the environment from such activities.

FEPA has the authority to establish procedures for monitoring and controlling not only the manufacture of pesticides and other related chemical substances for the enhancement of agricultural activities, but also their actual use.

Hazardous Substances. Section 20 of FEPD No. 58 prohibits the discharge of harmful quantities of any hazardous substances into the air, land, and waters of Nigeria, except where permitted.

The Harmful Wastes (Special Criminal Provisions, etc.) Act, 1988 (Cap. 165), warrants special mention since it carries a criminal penalty punishable by life imprisonment for carrying, depositing, dumping, transporting, importing, selling, buying, or negotiating trade in harmful wastes within Nigerian territory and the exclusive economic zone. The Act defines harmful waste as any injurious, poisonous, toxic or noxious substance and, in particular, includes nuclear waste.

The hazardous waste dumping at the port in Koko, which received international attention provided the impetus for the government to pass this legislation. The Koko incident involved 10,000 barrels of Italian waste material, including highly poisonous polychlorides biphenyls, stacked in a field on the outskirts of Koko.

The Gambia

Hazardous and Toxic Substances. Section 6 of The Environmental Protection (Prevention of Dumping) Act, 1988 (Cap. 72:02) strictly prohibits the importation of radioactive, toxic or other hazardous substances. The Act imposes a minimum fine of 10,000,000 dalasis and a maximum of 50,000,000 dalasis, a minimum prison sentence of five years and a maximum of fourteen years, and forfeiture of vessels or aircraft used in commission of the offense. Furthermore, convicted offenders are required to remove the waste, correct any environmental damage and compensate injured persons.

Fertilizers and Pesticides. No laws exist on the prohibition and/or restriction, importation, distribution, sale or use of fertilizers and pesticides.

Cameroon

Law 89/027 of December 29, 1989, forbids the introduction, storage, holding, transit and dumping of toxic and dangerous wastes in any form on national territory.

Decree No. 86/66 of December 27, 1986, controls the use of medicines and chemicals intended for animals, humans and cosmetic products. Regulatory measures, however, are not observed and potentially dangerous substances are readily available to the public.

Decree 83/410 of August 29, 1983, defines the framework for the control of radioactive substances. Only authorized radiologists and physicians are permitted to work with radioactive elements. This decree has proved difficult to enforce.

The laws dealing with toxic wastes fail to establish any threshold limits and are ineffective. Increased use of toxic products, and the lack of effective regulations and enforcement poses serious risks.

To limit the risks in transporting toxic materials, the GOC issued a memorandum, No. D 69/NC/MSP/DMPHP/SHA of August 20, 1980. This memorandum establishes conditions for the transport, collection and processing of industrial wastes, household wastes and sewage by requiring ministerial authorization and prohibits parking vehicles within two-hundred meters of a residence.

Mali

The new environmental pollution law, Law No. 91 1047/AN-RM, includes provisions for toxic wastes. Other pertinent laws are Loi No 89/61/AN-RH (13.g.89), Portant Repression de l'Importation et du Transit des Déchets Toxiques and Décret No. 90/355/P-RM, portant fixation de la Liste des Déchets Toxiques et des Modalités d'Application de la loi No. 89/61/AN-RM. The latter law also deals with pesticides and drugs and prescribes steps importers must take. The GOM's central veterinary lab will analyze samples of regulated toxic material.

Niger

Decree No. 69/99/MER of May 30, 1969, prescribes provisions governing the possession and use of toxic substances. The manufacture, conversion, extraction, preparation, possession, offer, distribution, brokerage, purchase, sale, import and export of toxic substances and in general, all agricultural, industrial and commercial operations involving these substances are prohibited without a license. Schedule C annexed to the Decree of April 2, 1951, lists the toxic substances. The Minister of the Rural Economy issues non-transferable licenses.

The Ministry of the Rural Economy issued Order No. 005 MER/AG of May 19, 1970, pursuant to Decree No. 69/99/MER of May 30, 1969, establishing a list of pesticides permitted for crop use. The pesticides are classified as follows: (I) insecticides and acaricides, (II) fungicides, (III) herbicides, defoliant and shrub control agents, (IV) miscellaneous pesticides.

Decree No. 98 of 1970, regulates the transport and management of dangerous or infectious materials.

6.6 Mining, Energy, and Industry

Ghana

Mining. Only with the passage of The Mining and Minerals Law, 1986 (PNDC L. 153), did environmental protection provisions surface in laws regulating mining. Section 72 specifies that:

The holder of a mineral right shall in the exercise of his rights under the license or lease have due regard to the effect of the mineral operations on the environment and shall take such steps as may be necessary to prevent pollution of the environment as a result of such mineral operations.

The law, however, fails to require an ER. For a licensee to know what adverse effect his operations will have on the environment and what steps are necessary to prevent pollution, an ER must be prepared. The Minerals Commission has prepared ER guidelines for prospective licensees. The Minerals Commission has broad authority in reviewing and approving license applications, and exercising this authority should require compliance with the proposed ER guidelines. Potential licensees may argue that the Minerals Commission is acting arbitrarily by insisting on an ER -- which is not legally mandated. This speaks to the need for legislation. The Minerals Commission is also taking the positive step of requiring the large gold mining operations to prepare environmental action plans detailing what steps they will take to comply with the law.

The state owned mining operations have seriously degraded mining sites. Problems now arise in privatizing these operations, because of concerns by potential purchasers as to whether they will be responsible for the clean-up efforts.

In addition to having a license revoked for polluting the environment, Section 82 imposes penalties of up to 500,000 Cedis and/or imprisonment not exceeding two years. To date, no company has had its license revoked -- and there have been egregious cases of pollution.

Section 83 authorizes the Secretary to "make regulations for the conservation and development of mines and minerals and for the purpose of giving effect to the provisions of this Law." Such regulations may provide for:

- the restriction of prospecting operations in or near any river, dam, lake or stream;
- preventing the pollution of waters, springs, streams, rivers or lakes;

- ensuring the safety of the public and the safety and welfare of persons employed in mines and the carrying on of mineral operations in a safe, proper and effective manner; and
- preventing injury to persons or property in a mining area by chemicals.

To date, regulations have not been promulgated. The law also fails to require environmental rehabilitation of the mined out sites. Such legislation should address: removal of tailings, leveling of land, restoration of top soil and site revegetation.

Although small scale gold mining has been done for centuries in Ghana, it was only legalized recently with the enactment of the Small-Scale Gold Mining Law, 1989 (PNDCL 218). The law opened the way for small scale gold mining activities to be brought into the formal economy. Unfortunately, the environmental problems have mushroomed with this legalization.

To deal with this problem, the Minerals Commission proposes to send out teams to locate and work with the miners in filling out simple ER forms. Such action would enable the Commission to identify small scale mining sites, and the process of working with the miners to fill out the forms would entail educating the miners as to good mining practices. The Mining Commission, however, lacks the resources to carry out this plan.

The use of mercury by small-scale miners poses serious problems. The Mercury Law, 1989 (PNDCL 217), seeks to address this problem.

Energy. The Petroleum (Exploration and Production) Law, 1984 (PNDCL 84), provides that "a contractor or subcontractor carrying out petroleum operations shall be responsible for any pollution damage caused or resulting from such operations undertaken by an agent or employee ... and shall take the measures to remedy any pollution or damage so caused." Regulations may be issued regarding: the prevention of pollution and the taking of remedial action in respect of any pollution ... and the safety measures to be taken, as well as for the conservation of natural resources and the avoidances of waste.

Industry. No laws exist for controlling industrial pollution or requiring ERs. Industries discharge untreated effluents directly into rivers and streams. The Investment Code, 1985 (PNDCL 116), however, requires that the environmental effect of an enterprise be taken into consideration before the Ghana Investment Centre approves the investment. Furthermore, Section 26(g) provides that:

In granting approval for investment the Centre may stipulate conditions in the approval certificate, the conditions to be complied with by the investor with regards to the prevention and control of any damage to the environment.

The Ministry of Industries, Science and Technology (MIST) and the EPC have an administrative arrangement whereby the MIST "invites" EPC officials to accompany them on approval inspections for new factories.

While the current level of industrial development is relatively low, proper industrial environmental controls must be established since increased industrial activities are expected as a consequence of the economic recovery program.

Nigeria

Mining. The Minerals Act, 1946 (Cap. 226), is the major law controlling mining and reclamation of derelict land. The law vests ownership and control of all mines and mineral oils in the federal government. A person must obtain a lease or a license to mine or remove materials from the land. The law, however, provides an exception for inhabitants of a given locality who may continue to mine minerals, e.g. salt, iron ore, soda, potash, etc. -- if this has been the custom.

Section 34(1) of the Act empowers the government to request the "reasonable restoration of any area used for mining operations by the replacement of surface soil, the filling in of worked areas, the removal of any tailings or other dumps or heaps caused by mining operations, and such other methods as may reasonably be required." The "reasonable restoration" provision has been translated into leases as a requirement to reclaim 70-80 percent of the mined area and in some recent leases 100 percent restoration.

The government's enforcement efforts have been ineffective, resulting in minimal compliance. Moreover, the law is inadequate for modern mining practices. Given the depressed prices for many of the minerals mined, especially tin, the government fears that enforcement of lease restoration clauses could result in the bankruptcy of companies.

Energy. As pertains to energy production, no separate statute exists to deal with the conservation of oil and gas, like in some oil producing countries. The Petroleum Act, 1969 (Cap 350), and The Petroleum (Drilling and Production) Regulations, 1969 (Cap 350), provide for the control of oil field drilling methods and procedures which are aimed at promoting the conservation of oil and gas resources.

The Petroleum Regulations empower the Director of the Petroleum Resources to give directions to license holders and to revoke licenses for failure to comply. The licensees are subject to work obligations relating to the prevention of oil pollution, safety standards and confinement of petroleum in prescribed receptacles or containers.

The Associated Gas Re-Injection Act, 1979 (Cap 26), governs the utilization and conservation of natural gas by laying down penalties such as fines or forfeiture of oil prospecting licenses or oil mining leases. The Act specifies that a company must submit detailed programs and plans for either the utilization or re-injection of natural gas to the

appropriate Ministry. Rather than reinject the natural gas, however, most companies flare off the gas. Although the companies are required to pay a sum for every 28.317 standard cubic meter of gas flared, the companies prefer to pay this sum rather than adopt alternative technology.

Licenses or lessees of an oil concession, pursuant to The Petroleum (Drilling and Production) Regulations, must "adopt all practical precautions" to prevent polluting the environment. This provision, however, presents implementation problems and is inadequate for preserving the environment from oil spillage. The Oil in Navigable Waters Act, 1968 (No. 34), which gives effect to the International Convention for the Prevention of Pollution of the Sea by Oil, also contains provisions dealing with energy production.

Judicial Precedent. Despite numerous oil spills, little litigation has occurred. Umudje v. Shell-B.P. Petroleum Development Co. of Nigeria Ltd., (1975) 11 S.C. 155, offers the most significant case.¹⁶ This action arose as a consequence of the defendants' oil exploration activities. The plaintiff, the adjacent land owner, complained:

1. that, in the course of road-building, the defendants had blocked and diverted a natural stream, thus interfering seriously with the plaintiff's fishing rights, and
2. that the defendants had accumulated oil waste on land under their control and that this oil escaped on to the plaintiff's land and caused damage there.

The Supreme Court, pursuant to Rylands v. Fletcher, found that the defendants were not liable because their blocking the stream had not caused flooding of the plaintiff's land but merely starvation of water and fish -- thus no escape. The plaintiff prevailed on the second count since clear proof existed that crude-oil waste, which the defendants accumulated in a pit on land under their control, had escaped on to the plaintiff's land where it polluted certain ponds and killed the fish therein.

Industry. The Factories Act, 1987 (Cap. 126), provides protective provisions for occupational hazards to which factory workers may be exposed. The Act sets minimum standards for safety and welfare of the workers and provides for proper fencing and containment of vessels or equipment containing dangerous or corrosive elements.

This Act provides that any confined place containing dangerous fumes be brought to the attention of the appropriate authority, and precautionary measures, such as providing suitable breathing apparatus, be taken before production begins. Similar provisions exist under the Act regarding any explosive, flammable dust, gas or like substance. The Act,

¹⁶See also Ige v. Taylor Woodrow (Nigeria) Ltd. (1963) L.L.R. 140 (vibrations causing damage to plaintiff's building); Oladehin v. Continental Textile Mills Ltd. (1975) 6 CCHCJ 1269 (industrial waste water damaging plaintiff's house).

however, fails to provide for any provisions or regulatory mechanism to monitor the emission of dangerous fumes into the atmosphere.

The Standards Organization Act, 1971 (No. 56), provides minimum acceptable standards for consumers in line with the provisions of the International Organization for Standardization. This law seeks to promote the development of standards so as to ensure acceptable and safe standards of goods and services within the country. While the Act fails to address this point, dangerous pollutants would probably fail to meet the required standards and thus fail to meet the provisions of the law. This Act seeks to prevent dangerous chemicals and other pollutants from degrading the environment.

The Federal Environmental Protection Agency Decree, 1988 (No. 58), vests FEPA with the power to issue guidelines for monitoring and evaluating pollution control procedures, for treating municipal and industrial wastes, for limiting unlawful effluent discharge and for protecting air quality and the atmosphere.

This Decree contains penal provisions against offenders discharging hazardous substances in harmful quantities into the air, land or waters. The Decree also empowers FEPA to establish other agencies, bodies or units to assist in specialized monitoring of the environment for protection and control of the environment -- for example, the Radiation Protection Agency. Furthermore, the Decree directs the Minister in charge of environment to encourage state and local government councils to establish their own environmental protection bodies so as to maintain good environmental quality.

The Gambia

Mining. The Minerals Act, 1953 as amended (Cap. 64), regulates the right to search for, mine and work minerals. Sand and gravel mining constitutes the vast majority of mining operations. Section 82 of the Act provides that the Inspector of Mines may in his discretion order a lessee or license holder to:

take such reasonable measures for the prevention or reduction of soil erosion caused by his operations or reasonably to restore any area used for prospecting or mining operations by the replacement of the surface soil, the filling in of the worked area, the removal of any tailing or other dumps or heaps caused by such operations and such other methods as may reasonably be required and, upon service of such order, the provisions thereof shall be deemed to be covenants and conditions of the lease, right or license concerned.

Neither the Act nor the subsidiary legislation defines what "reasonable" land restoration entails. Section 20 provides for compensation to property owners for any damage to the surface of the land as a consequence of a mining operation.

Section 43 states that: " No person shall in the course of mining or prospecting operations ... pollute or permit to become polluted the water of any river, stream or watercourse." Section 46 of the Minerals Rules, however, permits the deposit in a watercourse and the "escape" of chemicals or other substances deleterious to animal or vegetable life with the consent of the Minister.

Section 44 prohibits a lessee from altering a water supply unless the lessee has obtained a water right license. While the Minister is empowered to make rules "regulating the disposal of sludge and tailings and declaring any waterways to be sludge channels," this has not happened.

The Act requires a license and a security to dredge any river, stream or watercourse. The Minister may require such conditions or restrictions as he deems fit. The dredging and surface mining sections fail to require an ER and a monitoring program does not exist.

Energy. The Petroleum Act, 1921 as amended (Cap. 65:01). provides for regulating the importation, conveyance and storage of petroleum and other inflammable oils and liquids. Detailed subsidiary legislation exists.

The Petroleum (Exploration and Production) Act, 1986 (Cap. 65:02). while requiring "good oil field practices" only has this vague definition of what such practices entail: "all those practices that are generally accepted in the international petroleum industry as good, safe and efficient in exploring for and producing petroleum." Section 20 of the Act empowers the Minister to make environmental regulations with respect to:

- (b) conserving, and preventing the waste of, the natural resources, whether petroleum or otherwise;
- (e) the control of the flow and the prevention of the escape of petroleum or water, gases (other than petroleum) or other noxious or deleterious matter;
- (f) the prevention of the escape of water or drilling fluid or a mixture of water or drilling fluid or any other matter
- (i) the secondary or tertiary recovery of petroleum from a petroleum reservoir and the methods to be used in such recovery; and
- (j) the use of wells and the use of the subsurface for the disposal of petroleum, water and other substances produced in association with the exploration for, or the recovery of, petroleum.

Such regulations have not been promulgated. To date, the GOTG has only awarded one Petroleum Production License and as of the Fall of 1991, the licensee had yet to commence exploratory operations.

Cameroon

The pertinent mining laws are:

- Law No. 64/LF/3 of April 6, 1964, which provides for the administration of mineral substances,
- Law No. 64/LF/4 of April 6, 1964, which establishes the basis, rates and procedures for mining duties, royalties and taxes,
- Decree No. 64/DF/163 of May 26, 1964, which establishes the conditions for the application of Law No. 64/LF/3 of April 6, 1964 as modified by Decree No. 68/DF/224 of June 10, 1968, which provides for the administration of minerals,
- Decree No. 78/036 of January 30, 1978, regulates quarries.

The laws listed above establish conditions for prospecting, exploration, exploitation, possession, holding, circulation, trade and transformation of mineral substances but fail to provide for technical measures to help implement the laws. Furthermore, while the laws mandate a system of authorizations, permits and concessions, they fail to provide for EIAs.

Energy. Law No. 20 of November 26, 1983, provides for the administration of electricity. Article 20 of this law provides that power generation must not hurt river banks or harm the environment.

Memorandum No. 1052/MINMEM/DMG/SL of May 16, 1980, prescribes regulations concerning flammable liquids stored in tanks and the protection of ground water.

While the production and consumption of energy constitutes a significant source of pollution and a very real environmental problem, existing laws fail to adequately address the problem. Wood or charcoal supply eighty to ninety percent of the country's domestic energy needs, but no provisions are made to regulate the sustainable use of these resources. The government's energy policy has been tangled in an inter-ministerial conflict since 1988. The Ministry of Mines, Energy and Water has jurisdiction over energy policy while the Ministry of Agriculture has jurisdiction over forest policy.

Niger

Mining. Law No. 61/8 of May 29, 1961, represents the major mining law and Decree No. 219 of 1961, establishes regulations pursuant to Law No. 61/8. Decree No. 133 of 1969 modifies Decree No. 158 of 1961, regarding creation of a council of mines and provides for its composition. Ownership and control of all mines and petroleum resources is vested with the national government, which issues licenses or leases pursuant to the mining law.

Provisions of the mining law authorize the government to request restoration of mined areas. The GON, however, has failed to enforce reclamation provisions of the law.

Decree No. 134 of 1969 amends Decree No. 23 of 1968 pertaining to the institution of an enterprise scheme for research and exploitation of uranium.

6.7 International Conventions

Ghana

Ghana is a party to the following international conventions: the United Nations Convention on the Law of the Sea, International Convention for the Prevention of Pollution of the Sea by Oil, 1900 Convention on the Protection of African Wild Fauna, 1933 London Convention Relative to the Preservation of Fauna and Flora in their Natural State, African Convention on the Conservation of Nature and Natural Resources, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Nigeria

Nigeria is a party to the following international conventions: African Convention for the Conservation of Nature and Natural Resources, Convention Concerning the Protection of the World Cultural and Natural Heritage, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention on the Conservation of Migratory Species of Wild Animals, and the Convention for the Prevention of Pollution of the Sea by Oil. Nigeria along with the United Republic of Cameroon, the Republic of Niger and the Republic of Chad signed an Agreement on the Joint Regulation of Fauna and Flora on the Lake Chad Basin. Furthermore, Nigeria has been an active participant in the Hazardous/Toxic Waste Convention. Nigeria, however, is not a party to the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Wetlands or Ramsar Convention). Nigeria needs in some instances to pass domestic legislation so as to comply with these international obligations.

The Gambia

The Gambia has signed the following conventions and agreements: Convention on the African Migratory Locust (1963), Convention on International Trade in Endangered Species of Wild Fauna and Flora (1977), the United Nations Convention on the Law of the Sea (1982), Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (1985), Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency (1985), the African Convention on Nature and Natural Resources (1987), and the World Heritage Convention (1988).

Côte d'Ivoire

The Côte d'Ivoire is a signatory to the following international conventions: African Convention for the Conservation of Nature and Natural Resources, Convention Concerning the Protection of the World Cultural and Natural Heritage, Convention for the Prevention of Pollution of the Sea by Oil.

Mali

Mali is a signatory to the following international conventions: African Convention for the Conservation of Nature and Natural Resources, Convention Concerning the Protection of the World Cultural and Natural Heritage, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention for the Prevention of Pollution of the Sea by Oil, and the Rome Convention on Plant Protection.

Niger

Niger, along with its neighbors signed the Agreement on the Joint Regulation of Flora and Fauna of the Lake Chad Basin and the Niamey Agreement on the River Niger Commission and Navigation and Transport on the River Niger. Niger is also a signatory to the Yaoundé Agreement; the 1976 Yamoussoukro Convention on Game Hunting Regulations applicable to tourist entering countries in the Conseil de l'Entente; the 1961 Rome Convention on Plant Protection; the African Convention for the Conservation of Nature and Natural Resources; the Convention Concerning the Protection of the World Cultural and Natural Heritage; the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and the Convention for the Prevention of Pollution of the Sea by Oil.

7.0 RECOMMENDATIONS

This section recommends policy and legal reforms the WCA countries could undertake and the type of institutional strengthening required. Initiatives to promote public participation and opportunities for environmental education and training are reviewed. The section concludes with a discussion of regulatory and enforcement mechanisms. These are generic recommendations and will have to be tailored to the needs and conditions in each country.

7.1 Policy and Legal Reforms

This survey determined that existing laws are not always adequate to address environmental problems. Furthermore, subsidiary legislation which would assist in implementing the enabling laws, is lacking in many cases.

A complete inventory, review and analysis of all national, state and local laws; subsidiary laws; and customary laws dealing with the environment and natural resources in the WCA countries is needed. Furthermore, a review of court cases interpreting the provisions of the relevant legislation is needed. Where legislation is similar to legislation in other countries, a review of court decisions interpreting the legislation in those countries would be appropriate. The WCA common law countries,¹⁷ if they do not have a case on point, find case law from other common law countries very persuasive. Given the lack of environmental case law to date in these countries, a compilation of relevant case law from other regions could prove helpful.

As a starting point in preparing a comprehensive study this report could be circulated to the appropriate ministries, attorneys in private practice, the law schools and NGOs in the WCA countries for review. They should comment on the report's accuracy, what additional laws there may be and expand on the legal analysis. After conducting a complete inventory and analysis of the environmental laws, each government could designate an office to maintain a complete set of that country's environmental laws.

A comprehensive law review may indicate the need for massive law reform. Initial law reform efforts, however, should be targeted to those areas where the environmental problems are the greatest. This review should consider the laws' compatibility with the objectives in the National Environmental Action Plans (NEAPs) that many of the WCA countries are currently formulating. NEAPs could be a vehicle for a law review, as is happening in Ghana. Institutions, government and private, can best design and implement laws when policies and plans establish clear priorities and goals.

¹⁷The WCA common law countries are Ghana, Nigeria and The Gambia. Cameroon, Liberia and Togo are a mixture of common law and civil code legal systems.

This review should lead to recommendations where laws need to be revised or repealed. If new legislation is warranted, the drafters should consider whether the new legislation should be an independent piece of legislation or consolidated with other laws.

If comprehensive environmental legislation meets with strong resistance from various government ministries and the private sector, the governments could consider enacting an Environment Protection Policy Law. This law would constitute a legal framework and contain basic principles to be followed by each responsible ministry in enacting appropriate legislation.

Given the complexity of drafting new laws or revising old ones, and the possible opposition, the technical and legal staffs conducting the review may want to consider devising more flexible and creative ways to manage with the laws they have.

The technical and legal staffs conducting the review need to consider whether the laws are sufficiently clear for the enforcement agents to understand. Since the ministries handle most enforcement, the question is whether an enforcement agent can apply the legal requirements to determine who is suppose to comply, what compliance entails, and whether a violation has occurred. Also, for each of these elements, is the law sufficiently comprehensive? The regulators also need to consider whether a court would concur in the law's clarity, even though the regulators are confident that they understand the law.

The review should examine whether the penalties are too low. The fines may need to be raised substantially to reflect present conditions -- especially in those countries that have experienced high rates of inflation. In addition, the review should examine whether the laws clearly authorize the government to order violators to make the necessary changes to comply with the law or else shut down. Compliance with the law and permit conditions is the key issue -- not fines.

New legislation should take into account customary practices, since custom and culture bear on resource use. For example, forestry legislation prohibiting the felling of trees in an area where tree felling is an age-old practice will likely not be observed. The same legislation, however, with strong management-oriented rules providing alternatives to prohibited practices may produce compliance. Public information programs should engage the affected people in debating proposed legislation. The bottom line is that without local acceptance and participation in the process of formulation and implementation, policies and laws requiring behavioral changes are doomed to fail. Ghana's bushfire law and The Gambia's community forest project provide good examples of involving local populations in the design and implementation of laws and programs.

The review should pay particular attention to the jurisdictional issues of conflict and overlap among the federal, state and local governments. A possible solution to jurisdictional problems is for the federal government to play a coordinating function and assume lead responsibility for establishing guidelines and procedures. State governments

and local authorities could have clear responsibility for monitoring and implementation, with periodic audits by federal representatives. Effective management controls for monitoring and measuring performance should be mandatory.

Many of the WCA countries are just now beginning to formulate guidelines for ERs and the review process could provide input on this difficult issue. Various government entities should establish compatible permit and licensing structures linked to ERs. An environmental review process should be a routine facet of government policy development and/or project review. In order to ensure the comprehensive application of ERs, governments could mandate that any application for a government permit be accompanied by either an ER or a certificate describing the environmental impacts with proposed monitoring and mitigation measures.

An environmental impact could be defined as any harmful effect on the natural or physical environment or natural resources. This definition could be drafted in a number of ways to make it more or less comprehensive. Two components should comprise the environmental review process. There first needs to be an environmental screening process to determine what type of environmental review to perform and then the actual review document. Some countries may need to pass enabling legislation requiring ERs. Completed, reviewed and approved ERs should be readily available to the public.

Established industries, mines and petroleum operations should prepare environmental action plans detailing what steps they will take to comply with environmental laws and by-laws and their time frame for achieving compliance.

7.2 Institutional Strengthening

Federal, state and local levels of government need to develop the expertise to analyze ERs and to determine if they conform to the recommended guidelines. Furthermore, governmental entities must strengthen their monitoring and enforcement capabilities. Technical and financial assistance from the donors will likely be required at all levels for formulating guidelines, regulations and standards and assisting with ERs.

The lead environmental enforcement agency should have access to a laboratory facility to carry out rapid analyses of water, soil and toxic chemical substances. Furthermore, a mobile pollution testing unit should be formed to undertake on-the-spot analyses of air, soil and water pollution.

Increased evaluation and monitoring will determine whether the sources of pollution or natural resource exploitation are exceeding acceptable limits, and if so, this data will serve as the rationale for the formulation and enforcement of environmentally-related policies, laws, rules and regulations. A sound factual basis and an actual need for legal requirements is crucial. Nevertheless, given the lack of baseline data in many of the countries, the governments may have to implement laws and regulations where they

perceive a great threat to the environment of public interest. Legal drafters need to be sensitive to this problem and design laws so as to facilitate the collection of relevant data.

Given the pressing problems facing the WCA countries, environmental monitoring will probably not be a high priority program. Requiring regulated entities to, in effect, periodically monitor and inspect themselves and report the results to the government can supplement government inspections. Self inspections are of course subject to mistakes and fraud, but they can be effective with responsible companies.

Companies should be required to maintain their environmental records for a certain time period -- such as two or three years. This could prove helpful, if the government discovers a problem and wants to check earlier records. Such records could also prove helpful in determining the overall quality of the country's environment and providing baseline data. Many of the WCA countries, however, will not be able to handle substantial new records. Consequently, the reporting requirements should be kept simple, with the reporting frequency limited to an annual basis.

All government agencies charged with environmental protection and/or natural resource management should have a legal division. The main responsibilities of the legal divisions would be to: advise their agency on legal matters; study and keep up-to-date records of all existing and proposed legislation dealing directly or indirectly with the environment -- both national and international; draft, assist in or promote the drafting of environmental legislation, ER procedures and standards; and monitor, inspect, report or assist in cooperation with other bodies and agencies, in the implementation and enforcement of all legislation dealing with environmental degradation.

The legal divisions should function on a continuous basis and be staffed by full time attorneys, assisted by environmental inspectors. When bringing an enforcement action, the attorneys and inspectors will have to be able to show that the inspector had adequate reason to conclude the existence of a violation, the necessary proof of violation and what contrary evidence the defendant will produce.

7.3 Promoting Public Participation

NGOs can serve as a catalytic spark to engage the public in taking environmentally responsible actions and to help foster an environmental consciousness. Effective enforcement of environmental laws will only occur when the public demands that the government enforce the law and government officials are held accountable for their actions. The Koko incident involving the dumping of hazardous wastes demonstrates that the public can be energized to demand environmentally responsive actions. In many cases the donor community initially influenced the governments to take environmental actions, but as a consequence of the rapid growth among NGOs, more pressure for environmental action is coming from within the countries. NGOs could be even more effective if they have access to the type of legal mechanisms discussed in 7.5.

NGO coalition building should be facilitated. A first step would be to establish a net to exchange information. The NGO network in each country could publish an environmental newsletter -- such as the one in The Gambia-- distributed free of charge, advising on legal and policy developments. If the NGOs coalesce into a viable coalition, foreign assistance funds could be channeled directly to the coalition and the coalition could make small grants and loans to NGOs and community development organizations. The coalition would not undertake projects itself, but remain a foundation type mechanism for dispersing funds. An NGO coalition could also serve as a liaison in coordinating activities with the appropriate governmental bodies.

NGO development is particularly important in light of the decentralization process underway in many of the WCA countries. Also, well developed village organizations and associations could address the concerns of the rural populations -- if they have good information and a supportive legislative context in which to work.

In some countries, however, the legal and bureaucratic demands present problems for young, indigenous associations or organizations to receive governmental recognition and approval. Moreover, the legal frameworks some countries prescribe are really not appropriate for NGOs. The issues are further complicated since some governments fear that NGOs will assume a political character and threaten the political regime. International NGOs equipped with finance, managerial skills and qualified staff can pursue the complex, time consuming requirements to obtain legal recognition, whereas indigenous, rural and village NGOs with limited staff, structure and resources are severely handicapped. NGOs require a legal status that will enable them to access financing for projects from any source.

Government/private sector advisory committees or task forces should be established at the national, state and local levels to review environmental issues and make recommendations to the appropriate government agency. The private sector representatives should be from both environment/development NGOs and the business/regulated community. Involving the regulated community may produce less stringent requirements, but the requirements may be more realistic and easier to enforce. These advisory committees or task forces should have at least one attorney as a member.

7.4 Education, Training and Public Awareness

Representatives from the WCA law schools should be involved in the comprehensive environmental law review efforts described above. The reports arising out of this effort could form the basis for environmental law courses at the law schools. Few lawyers have been trained in the legal mechanisms for regulating environmental protection. Such legal expertise will enhance the quality of environmental management. Furthermore, the law schools could work with the Science and Education Departments at the Universities to develop a multidisciplinary course on environmental law and management.

The law schools could work with the local bar associations to develop one/two day continuing legal education seminars for attorneys. Furthermore, the bar associations could establish environmental law sections.

The WCA countries would benefit from sharing information with each other on their environmental laws. The Centre d'Etudes de Recherches et de Documentation en Droit International et pour l'Environnement in Yaoundé, Cameroon, could facilitate and coordinate this process. Both francophone and anglophone attorneys work at the Centre.

Nonformal, educational programs need to be created to advise local authorities and community groups on the laws, the purpose of the laws, and how to implement the laws. Educational efforts prepare the ground for law enforcement and can also provide an effective tool against environmental degradation and other violations of regulations through the weapon of public opinion.

Attitudes toward environmental quality and natural resource management are matters of human habit. Sufficient resources will never exist to send enforcement agents house to house in the cities, towns and villages to enforce the environmental laws and force people to change their habits. The success or failure of laws and regulations will thus depend on the responses and the general attitudes of the majority of the people. Since a sizeable portion of the population can neither read nor write English or French, educational programs should be conducted through the kinds of media understandable to all. Once an educational program proves successful in modifying habits, governments will face a growing public demand for increased environmental protection and natural resource management.

NGOs could sponsor environmental workshops and conferences open to the executive and legislative branches of government, the business community and the public at large. NGOs are well suited to sponsor workshops and conferences since they could draw a broad range of attendees. If a government ministry hosts a conference, it may try to select the attendees from within the executive branch of government or limit the conference to party members.

Special efforts should be made to ensure that members of the legislative branch attend the workshops and conferences, since they will need to draft and pass new environmental laws. Newly elected representatives in newly established democratic bodies would particularly benefit from such workshops and conferences. Even in those countries with established legislative bodies, the representatives usually defer to the executive branch in drafting environmental legislation. This occurs because of the political power of the executive branch and the technical expertise in the government agencies. Clearly the agencies need to draft the subsidiary laws, but the legislative branch could play a greater role in drafting executing laws. Also a legislative body fully aware of environmental laws would be more likely to try to compel the executive branch to enforce the law.

The agencies and ministries charged with environmental protection and natural resource management should develop comprehensive manuals which could be made available to the

public at a nominal fee. In many WCA countries, obtaining copies of the laws, even from the enforcement agencies can pose problems. Consequently, if one wants to comply with the law, determining what is the law is the first hurdle.

The manuals should thoroughly address all policy, regulatory and legislative codes, and practices. For each level, it should outline required documentation (plans, licenses, permits, annual reports, audits, etc.), distribution of responsibility among officers, sanctions, renewal or amending procedures and associated policy, regulatory and legislative codes, and practices.

AID could sponsor individuals in the public and private sectors, that are likely to hold environmental leadership positions in their countries, to attend the Environmental Law Institute's three month course on "Environmental Policy: Development and Implementation".¹⁸

7.5 Regulatory and Enforcement Mechanisms

Economic incentives and disincentives focusing on market-based mechanisms should be built into the fiscal system for reducing pollution by industries, petroleum and mining companies. This represents a long-term approach as opposed to regulations and standards which can be pursued over the medium term. Direct interventions will be required in the short term. Direct interventions can be pursued for clean-up, reclamation, and rehabilitation efforts or when the other mechanisms are incapable of addressing immediate problems. Again, the need to identify and prioritize environmental problems is ever present.

The economic incentives and disincentives for environmental and natural resource management must be integrated and made part of a coherent economic plan. Otherwise, in an effort to promote a government's economic growth agenda, bureaucrats can become confused as to how vigorously they are to enforce environmental regulations, which could potentially negate economic growth.

Problems arise with regulation and standards when they are not adequately monitored and enforced, since they are subject to abuse. Consequently, the issue arises as to whether new requirements should be implemented if that country does not have the institutional capacity for adequate monitoring and enforcement. Too many unenforced laws reduces a government's credibility and people lose respect for the law. This speaks to the need to identify environmental priorities in a country. On the other hand, there are advantages to having the laws on the books. The requirements will guide responsible parties and will be in place when enforcement becomes feasible.

¹⁸For further information on this course contact: Michele Frome, Environmental Law Institute, 1616 P Street, N.W., Washington, D.C. 20036, Tel: (202) 939-3800

Pollution control policies and legislation must relate to the level and the operational efficiencies of the environmental technologies existing in the country as well as the socio-economic conditions. In this regard, there are two approaches to pollution control: best available technology (BAT) and best (reasonably) practical technology (BPT). Regardless of which approach or combination of approaches a country adopts, approval for new facilities should be contingent on an ER which specifies regulatory standards. Moreover, provision should be made for phasing in tougher standards.

Where feasible, the regulations on new facilities could include BAT requirements. The BAT approach seeks to use the best available technology available on the world market and ensures the highest efficiency in the use of resources, and also the highest quality of effluents discharged from industries and sewage treatment plants. This approach implies uniform standards and consequently does not consider the assimilative capacities of the receiving media for the effluents and the intended use of the receiving media. In relatively unpolluted areas or countries with weak economies, BAT requirements may prove unduly restrictive and economically burdensome. Moreover, many of the WCA countries cannot afford BAT technology. However, where pollution directly affects public health, such as the discharge of asbestos dust into the work environment, financial constraints should not be a limiting factor.

Developing countries with limited financial resources usually adopt the BPT approach, which seeks the least costly way of cleaning the environment and avoids idealistic maximum standards inherent in the BAT approach. The BPT approach strives to balance the ability of a country, industries and individuals to pay for pollution control facilities and the need to maintain minimum standards of environmental quality in relation to the requirements of public health and the health of the environment. Problems can arise, however, if industries interpret BPT to mean "cheapest possible technology" and fail to provide acceptable solutions to pollution problems. The BPT approach puts greater pressure on the regulatory agencies to determine exactly what is technically feasible and the level of effluents the receiving media can safely accept. Countries adopting a BPT approach should be prepared to adopt stricter standards (no detectable impact) as and when they become necessary.

Fines, fees and licenses should be consistent with the polluter pays principle, i.e., the level of penalty or fee should be proportional to the level of damages resulting from the pollution. Fee structures could be based on the following components: modest fixed charges going toward the monitoring and regulatory process, annual license fees proportional to the environmental degradation, and environmental performance bonds adequate to cover potential environmental damages in excess of the licensed amount. Proper accounting procedures must be in place to ensure that this revenue goes for the legally designated use. In addition to generating revenue, these charges can greatly affect the degree and type of use of a natural resource. For example, where water is scarce, charging substantial fees discourages consumption, whereas charging minimal or no fees encourages consumption.

In light of the overwhelming case load that effective enforcement actions would produce and given the tendency of many of these governments to try to "work things out" with alleged polluters, rather than pursue lengthy, expensive enforcement actions, the regulatory agencies should develop settlement procedures. Negotiated settlements, however, while increasing the efficiency of the administrative process, come at the expense of other interests. Decisions made without a full testing of the facts and adversarial debate on matters of law and policy may produce questionable results. People indirectly affected may believe that the decisions are unfair to them. Consequently, settlement procedures in their rules of practice should include an opportunity for interested members of the public to comment on proposed settlements.

Alternative dispute resolution measures such as mediation, arbitration or summary mini-trials could be developed. Some familiarity with such measures already exists. A few WCA countries use arbitration for commercial disputes and a large number of family law issues, in the African traditions, are settled by mediation within the family in the broad sense of the term. The lack of an environmental jurisprudence in both the courts and regulatory agencies further augers for informal but structured methods of conducting adjudications. Such methods would afford a good first step in building a more formal system. Any dispute resolution procedures should, however, entail an open and transparent process.

Several problems may arise from more effective enforcement. Unscrupulous bureaucrats may see increased regulatory mechanisms as tools for graft and corruption. In this regard, the "quiet, work it out approach" invites abuse. Problems could also arise from abuse of power, since many of these agencies combine the functions of law maker, prosecutor and judge. Systems of checks, which will minimize the risks of bureaucratic arbitrariness and overreaching, must be designed.

Many of the WCA countries are taking preliminary steps toward democratically elected governments. However, elected officials will still operate within an authoritarian system. The political and legal systems are too often designed for stability rather than change, and are resistant to the revised relationships essential to the new political order trying to emerge.

Action should be taken to build democratic institutions. The type of legal mechanisms that will prevent abuse of power and foster political responsiveness to pressure for environmental action are: "government in the sunshine" laws; development of an administrative procedure act similar to that in the United States: private citizen actions to police government and industry compliance with the environmental laws, with the right to recover attorney fees; the right to participate in public hearings and rule making procedures; and a free press. These are long term recommendations and many of them will not be feasible to implement in even the medium term in many of the WCA countries. Implementing such legal mechanisms will pose enormous challenges to the legal profession and government bureaucrats.

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