

The Formulation and Implementation of Environmental Policy in Ghana

Joseph R. A. Ayee *

Résumé: La Commission Brundtland a eu une influence certaine sur la formulation de plusieurs politiques, stratégies et lois pour la préservation de l'environnement. Si ces politiques et règlements se sont soldés par des résultats modestes en matière de protection de l'environnement dans le pays, il n'en demeure pas moins que certaines omissions dans le domaine de la planification remettent sérieusement en cause leur efficacité. Par exemple, ces politiques et mécanismes de régulation ne rendent pas compte de la complexité des réalités socio-économiques et politiques du Ghana. L'auteur soutient que, plutôt que d'introduire aveuglément de nouvelles politiques, l'on ferait mieux de combler les lacunes des stratégies actuelles en matière d'environnement, en mettant particulièrement l'accent sur une approche politique et économique plus intégrée.

Introduction

Environmental policy may be regarded as measures taken by a government aimed at the following three things: (i) assessing the state of environmental pollution; (ii) evaluating the pollution either in relation to its hazards to human beings or ecosystems; and (iii) controlling pollution by means of regulations, economic incentives and/or training, moral persuasion and information campaigns according to a set of policy goals that are more or less quantifiable, depending, as the case may be, on the existence of precise emission standards or environmental quality standards. Environmental policy goals may, therefore, be seen as the reduction of emissions or local emissions, a freeze of current emission or emissions levels, or a deceleration of envisaged growth rates.

It is against this background that this paper examines the significant changes of progress that have been made or achieved in environmental policy formulation and implementation in Ghana, with special emphasis

* Department of Political Science, University of Ghana, Legon.

on regulatory procedures and organisational structure. The paper has a three-fold aim. First, it argues that despite modest achievements in curtailing the problem, environmental pollution has been on the ascendancy mainly because there is a wide gap between the intent of policy and its implementation and because major problems were overlooked. Secondly, the paper discusses the major problems that confronted the implementation of Ghana's environmental policy, with particular attention to policy design, policy analysis and standard setting. Thirdly, the paper offers possible strategies for governmental, industrial and non-governmental sectors aimed at improving implementation and achieving a better environmental quality and management.

Environmental Policy in Ghana

Ghana's environmental policy has been shaped by three factors (i) the Brundtland Commission (the World Commission on Environment and Development); (ii) the Ghana Environmental Action Plan; and (iii) the National Environmental Policy of Ghana.

The Brundtland Commission

In late 1983 the United Nations established the Brundtland Commissions to look into the alarming rate at which environmental resources were being consumed, at the levels of waste particularly in the cause of development, and the ways in which developing countries were falling further behind the industrialised world in their standards of living (UN 1987:43-45)

The report that came from the deliberations of the Commission entitled, 'Our Common Future', made very important recommendations concerning the following: (a) population and human resources; (b) food and security; (c) urbanization; (d) industry and energy; (e) bio-diversity, oceans, etc. One of its slogans was 'sustainable development' which it defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (UN 1987).

The Brundtland Commission report made it crystal clear that so long as there is acute poverty, there will be environmental degradation. In view of this, the report enjoins all nations, rich or poor, to work toward the eradication of abject poverty. Equally important to the formulation of

National Environmental Action Plan (NEAPs) is the call by the report that the process of economic development must be more soundly based upon the realities of the stock of capital (natural resources) that can sustain it. In short, like the Stockholm Conference on Human Environment in 1972, the Brundtland Commission report, set the limits to contemporary thinking about development; the relationship between development and the environment has been firmly established.

The Ghana National Environmental Action Plan (GEAP)

The preparation of the Environmental Action Plan (EAP) was based on the objectives of defining the policy actions, related investments and institutional strengthening activities needed to make Ghana's development strategy more environmentally sustainable. The exercise was initiated by the Environmental Protection Council (EPC) of Ghana, and assisted by the World Bank, the United States Agency for International Development (USAID) and the British Overseas Development Assistance (BODA).

For the preparation of the EAP, six Working Groups were set up in July 1988 to address areas of concern under the following sectors : (a) land management ; (b) forestry and wildlife; (c) marine and coastal ecosystems; (d) water management; (e) mining; (f) manufacturing industries and hazardous chemicals; and (g) human settlements. The last group, made up of leaders of the sectoral working groups, addressed legal and institutional issues, cross sectoral, environmental education as well as environmental data systems and monitoring. Members of the groups were chosen from a broad spectrum of Ghanaian social structure to ensure that all shades of opinions were represented.

The Working Groups undertook the following activities within each sector: (a) assessment of the state of knowledge; (b) identification of data gaps and additional research needs; (c) review of existing legislation and policy recommendations that have been made in the past, and propose a set of needed policy options; (d) make proposals for monitoring environmental change in relation to development activities; and (e) review institutional arrangements for the implementation of recommended policies, identify gaps, overlaps and inadequacies and make recommendations for the appropriate measures to strengthen institutional capacities. The six reports from the working groups, together with some

material were synthesised into the two volumes of the Environmental Action Plan (EAP). A draft strategy for action on the environment was drawn up.

In January 1989, a two-day review work session was held to discuss the drafts. After this, the working groups reconvened to revise the drafts in the light of the suggestions and comments emanating from the work-sessions. The suggested revisions were effected during the second phase of the EAP process, which culminated in a national conference in June 1989 to discuss the draft proposals and to seek a wider public participation in the plan's preparation. Over 200 participants representing a cross section of interests, including members of district assemblies (local government units), representatives of non-governmental organisations and government functionaries, took part in the EAP conference. The conference adopted the EAP in principle and charged the EPC with the responsibility of finalising the document, taking into account the views expressed at the conference and any that would be submitted to it later.

The EAP is presented in two volumes and focuses on five major environmental management issues, namely, (i) natural resources management; (ii) environmental quality; (iii) industry and the environment; (iv) energy and the environment; and (v) urbanisation and the environment.

Chapter I presents critical environmental issues in Ghana, by highlighting issues that need to be addressed if Ghana is to progress in the 'environmental revolution'.

Chapter II, on policy framework and a review of existing legislation, points to the weaknesses in existing legislative framework that have contributed to the state of Ghana's environmental degradation.

Chapter III deals with the main policy issues and provides a framework within which all development projects have to be carried out to safeguard the integrity of the environment. It also indicates what should be done in order to restore degraded environments. This section seems to be an important part of the EAP because it is what Garbrah (1989:38) refers to as the 'wrap and woof' of the EAP. It, among other things, recommends that the cost of prevention and elimination of pollution be borne by the

polluter and that the protection of the environment should be the responsibility of every Ghanaian.

Chapter IV discusses the legal and institutional issues. Seven legal issues are covered and fourteen recommendations made. One important recommendation is the establishment of Environmental Impact Assessment (EIA) for new investments to ensure that adequate steps are taken to protect the environment in the planning and execution of development programmes. Development projects and the activities on which EIA will be required are also indicated (Ghana 1989:21-23). The responsibility for the enforcement of environmental legislation is delegated to institutions like the Police and Navy. It is also recognised that Section 6 (3) of the Local Government Law, PNDC Law 207 of 1988, places responsibility for the development, improvement and management of human settlements and the environment in the districts on the District Environmental Committees (DECs). The role of the EPC vis-à-vis the DAs is also dealt with in the section. A section on the responsibilities of the DAs on the implementation of the EAP in general is dilated in Chapter 10, which deals with the EAP's Implementation Strategy.

Chapter V is devoted to conservation practices and restoration of the degraded environments. Seven recommendations have been made. They include the following:

- i) establishment of baseline for monitoring;
- ii) filling gaps and upgrading of knowledge of the structure and function of various systems. This covers both qualitative and quantitative aspects;
- iii) the research programmes, for example, the study of agro-forestry systems in different ecological zones to establish models of agro-forestry;
- iv) environmental impact studies;
- v) planning of the management of resources for example, water, land and coastal ecosystems;
- vi) decongestion of metropolitan areas;
- vii) establishment of the following bodies to be responsible for the various aspects of environmental management: (a) Band Use and Planning

Body; (b) Water Resources Commission; and (c) Human Settlements Units.

Chapter VI deals with education and training. It provides guidelines on which environmental education programmes should be based. Recommendations cover areas like (a) training in specific areas to provide necessary technical and professional personnel for specific areas, e.g. wildlife conservation and water management; (b) establishment of new training institutions or centres; and (c) non-formal education of the general public. Some information is also provided on the actual content of informal environmental education programmes. The syllabuses for the first and second cycle of educational institutions on environmental education have also been provided. These syllabuses are not separate subjects to be included in the time tables for the schools. Rather, they indicate how the environmental dimensions can be introduced into teaching of the already prescribed syllabuses. This policy, among other things, is to ensure that environmental study is not a subject to be learnt just for the purpose of passing examinations and then be forgotten, but rather part of the day-to-day activities of life.

Chapter VII discusses environmental monitoring issues. Among other things, the chapter calls for the establishment of a National Environmental Information System (NEIS) within the EPC and that all institutions participating in the monitoring network should be required by law to send data periodically to the EPC. This is to ensure that the EPC presents a state of environmental report to the government and the nation at large. This will provide timely warning and also the necessary inputs into the planning mechanisms in all the relevant sectors.

It must be pointed out that Ghana's EAP describes and identifies the country's environmental condition, specifying its chief problems along with the causes as well as a specific time bound plan of action to deal with the problems.

The National Environmental Policy

For the effective implementation of the EAP, a National Environmental Policy (NEP) was adopted in 1990 that recognises that environmental protection in Ghana as well as the fact that socio-economic development is

undertaken in such a way as to avoid the creation of environmental problems. Specifically, the NEP, like the EAP seeks to (a) maintain ecosystems and ecological process essential for the functioning of the biosphere; (b) ensure sound management of natural resources and the environment; (c) adequately protect humans, animals and plants, their biological communities and habitats against harmful impacts and destructive practices, and preserve biological diversity; (d) guide development in accordance with quality requirements to prevent, reduce, and eliminate pollution and nuisances; (e) integrate environmental considerations in sectoral, structural and socio-economic planning at the national, regional, district and grassroots levels; and (f) seek common solutions to environmental problems in West Africa, Africa and the world at large.

The ultimate aim of EAP and the NEP is thus to improve the surroundings, living conditions and the quality of life of the entire citizenry, both present and future. They also seek to ensure a reconciliation between economic development and natural resource conservation, and to make a high quality environment a key element supporting Ghana's socio-economic development.

To be able to achieve the objectives, the government of Ghana committed itself to environmentally sound use of both renewable and non-renewable resources in the process of national development and create awareness among all sections of the community of the environment and its relationship to the socio-economic development of the country.

The Environmental Action Plan (EAP) is to be implemented over a ten-year period, starting from 1 January 1991 to 31 December 2000. The first two years, 1991-1992 were the beginning phase, devoted to mobilisation of resources and assistance from the donor community. A mid-term review is scheduled for mid-July 1995 to take stock, assess progress or otherwise, and plan redirection.

The Implementing Agency

The Environmental Protection Council (EPC)

The implementing agency of Ghana's EAP used to be the Environmental Protection Council (EPC), established by the NRC Decree 239 of January 1974. It was deemed to have come into force on 1 September 1973, only a little over a year after the UN Conference on the Human Environment, held in Stockholm in June 1972. The functions of the EPC, as set out in the Decree were as follows:

- i) advise the government generally on all environmental matters relating to the social and economic life of Ghana;
- ii) co-ordinate the activities of all bodies concerned with environmental matters, and to serve as a channel of communication between these bodies and the government;
- iii) conduct and promote investigation studies in surveys, research and analyses, including the training of personnel, relating to the improvement of Ghana's environment and the maintenance of sound ecological systems;
- iv) serve as the official national body for co-operation and to liaise with national and international organisations on environmental matters;
- v) undertake such studies and submit such reports and recommendations with respect to the environmental matters as the government may request; and
- vi) to embark upon general environmental education programmes for the purpose of creating an enlightened public opinion regarding the environment and an awareness of the individual and collective role in its protection and improvement (Republic of Ghana 1974).

An examination of the functions indicates that the EPC was primarily an advisory and research organisation, which was expected to co-ordinate the activities of other bodies concerned with environmental issues, but without the power to enforce any measure for improving the environment. The farthest that it got to this, is in terms of an amendment made in 1975 which gave it power of entry and inspection for the purpose of obtaining information on the environment. As far as enforcing compliance of quality standards is concerned, the EPC can be described as a 'toothless bulldog'.

The powerless nature of the EPC is due to the fact that long before its establishment, many legal enactments empowering various official bodies existed to take action with respect to the environment. For instance, the Wildlife Conservation Act of 1961, regulate wildlife in Ghana; the Oil in Navigable Waters Act (Act 325) of 1964 aims at protecting inland navigable waters from the discharge of oil or any mixture of oil from a sea-going vessel; sections 287-288 of the Criminal Code of 1960 (Act 29) cover 'nuisances in the streets and the like'. The relevant provision seeks to prevent the accumulation and exposure of filth and refuse of all kinds and the prohibition of trades and activities which may endanger public health, or cause damage to lands, crops, cattle or goods or to their value. In addition, the Hazardous Substance Legislation and Pharmacy and Drug Act of 1961 (Act 64) were passed to control the distribution and use of dangerous drugs.

However, the legal enactments in relation to the environment were widely scattered among departments and ministries and not one of them can be said to enjoy exclusive oversight of the whole environment or even significant portions of it. Consequently, it was extremely difficult to determine exactly the responsibilities specifically assigned to the various organs of government with respect to the environment. The net effect was that many of the sectors with executing powers were unable to exercise these powers effectively.

In recognition of the fact that bodies and institutions wielded executing powers as far as the care of the environment is concerned, the Board of Governors of the EPC was made up of representatives of the major executing ministries and departments and a few individuals considered to occupy specially strategic positions in the governmental structure. The instructions include the following: (a) the Ministry of Health; (b) the Ministry of Industries; (c) the Ministry of works and Housing; (d) the Council for Scientific and Industrial Research; (e) the Universities; (f) the Attorney General's Office; (g) the Ministry of Foreign Affairs; (h) the Tourist Control Board; (i) the Meteorological Services Department; and (j) the Water and Sewerage Corporation. In addition, there was the provision for two distinguished citizens of Ghana with special interest and experience in environmental matters to serve on the board as representatives of the public. Thus, the governing board was responsible

for the discharge of the functions of the EPC. It was therefore considered the nerve-centre of the EPC. Theoretically then, the EPC was to act as the converging point for the bodies that actually exercise power with regard to various sectors of the environment. However, in practice things worked differently. We would return to this matter later.

Apart from performing its statutory functions, the EPC prepared a National Plan of Action to combat desertification, sponsored a conference on National Strategy for Resource Conservation and prepared a National Environmental policy statement. From 1993 to 1994 the EPC executed a United Nations Development Programme-Funded Pilot Project on Food and Energy Self-sufficiency in four villages in the Greater Accra, Western, Brong-Ahafo and Upper East regions.

To enable the EPC to have the power of enforcement, control and compliance, it was redesignated the Environmental Protection Agency (EPA) in 1994 by the government, to which we now turn.

The Environmental Protection Agency (EPA)

To promote environmental standards and ensure that environmental issues are on top of the agenda, the government of Rawlings' National Democratic Congress (NDC) took two steps. The first is the creation of a separate Ministry of Environment, Science and Technology. The second step is the establishment of the Environmental Protection Agency (EPA) by Act 490 of 1994 to replace the EPC. The functions of the EPA, unlike those of the EPC, are not only restricted to co-ordination but also extend to the enforcement of compliance of environment standards. Some of its functions are to:

- i) co-ordinate activities of bodies concerned with the technical or practical aspects of the environment and serve as a channel of communication between such bodies and the Ministry of Environment, Science and Technology (MEST);
- ii) co-ordinate the activities of such bodies as it considers appropriate for the purposes of controlling the generation, treatment, storage, transportation and disposal of industrial waste;
- iii) issue environmental permits and pollution abatement notices for controlling the volume, types, constituents and effects of waste discharges, emissions,

- deposits, or other sources of pollutants and of substances which are hazardous or potentially dangerous to the quality of the environment or any segment of the environment;
- iv) prescribe standards and guidelines relating to the pollution of air, water, land and other forms of environmental pollution including the discharge of wastes and the control of toxic substances;
 - v) ensure compliance with any laid down environmental impact assessment procedures in the planning and execution of development projects, including compliance in respect of existing projects;
 - vi) act in liaison and co-operation with government agencies, District Assemblies and other bodies and institutions to control pollution and generally protect the environment;
 - vii) initiate and pursue formal and non-formal education programmes for the creation of public awareness of the environment;
 - viii) impose and collect environmental protection levies (Republic of Ghana 1994).

The functions given to the EPA are therefore more extensive, encompassing and embracing than those assigned to the EPA, since it has the power of enforcement and control. The EPA has the power to request for an environmental impact assessment from any person or organisation whose activities in its opinion has or is likely to have adverse effect on the environment. Where it appears to the EPA that the activities of any undertaking poses a serious threat to the environment or to public health, the EPA has the power to serve on the person responsible for the undertaking, an enforcement notice that requires him to take such steps as the EPA thinks necessary to prevent or stop the activities. The enforcement notice specifies three things: the offending activity; the steps taken required to be taken; and the time within which the steps should be taken. The EPA in the enforcement notice can direct immediate cessation of the offending activity where it considers that the circumstances so demand. Any person who acts contrary to the enforcement notice issued, commits an offence and shall be liable on summary conviction to a fine not exceeding 2 million cedis and in default, to imprisonment for a term not exceeding one year. In other words, the EPA, unlike the EPC, has the power to prosecute persons who fail to comply with its directives. Without prejudice to prosecution of the EPA, the Ministry of Environment, Science

and Technology is empowered to take further steps as it considers appropriate to ensure compliance with the notice given by the EPA (Republic of Ghana 1994). The EPA is also empowered to summon and request for information from any person. Any person who fails to provide the information without reasonable excuse or knowingly provides false information, commits an offence and is liable to a fine not exceeding two million cedis or to imprisonment for one year or to both.

To ensure the EPA's enforcement powers, Environmental Protection Inspectors (EPIs) are appointed by the governing board of the EPA. They have power to enter any premises for the purpose of ensuring compliance relating to the protection of the environment. Any person who assaults or obstructs the EPIs in the performance of their duties, is liable to summary conviction to a fine not exceeding 5,000,000 cedis or to imprisonment not exceeding six months or to both.

To help the EPA to perform its onerous functions, two institutions have been created. The first of these is a governing board. The Board is responsible for the discharge of the functions of the EPA, responsible for formulating policies to generate money for the National Environment Fund (NEF), determine the allocations to be made towards the objectives of the NEF and determine its annual targets. The Board consists of 13 members, who are appointed by the President in consultation with the Council of State. Membership of the board comprises: (a) a chairman who is a person knowledgeable in environmental matters; (b) the Executive Director of the Agency; (c) a representative of the Council for Scientific and Industrial Research – not below the rank of Principal Research Officer; (d) a representative of the Ghana Standards Board – not below the rank of Principal Scientific Officer; (e) a representative – not below the rank of Director from the Ministries of Environment, Local Government, Finance, Health and Education; (f) a representative of the Association of Ghana Industries; and (g) three other persons, at least one of whom is a woman (Republic of Ghana 1994).

All appointments to the board are based on knowledge, expertise and experience of the persons in matters relating to the environment. The composition of the board looks more expanded than that of the EPC.

The second institution established to help the EPA perform its functions is the Hazardous Chemicals Committee (HCC) which consists of the following: (a) the Executive Director, the chief executive of the EPA, appointed by the President in consultation with the Public Services Commission as chairman; (b) one representative of the Ghana Standards Board, Ghana Atomic Energy Commission, Ghana Cocoa Board, Crops Services Department of the Ministry of Food and Agriculture, Veterinary Services Department of the Ministry of Food and Agriculture, and Council for Scientific and Industrial Research; (c) three officers of the EPA; and (d) three other persons with specialised knowledge and experience in toxic chemical management.

The functions of the Hazardous Chemicals Committee (HCC) are to: (i) monitor the use of hazardous chemicals by collecting information on the importation, exportation, manufacture, distribution, sale, use and disposal of such chemicals; (ii) advise the Board and the Executive Director on the regulation and management of hazardous chemicals; and (iii) perform such other functions relating to such chemicals as the Board or the Executive Director may determine.

Two innovations of the Act 490 of 1994 worth mentioning, are the decentralisation of offices of the EPA in the regions and districts, and the establishment of the National Environment Fund (NEF). Monies of the Fund are to be used for: (a) environmental education of the general public; (b) research, studies and investigations relating to the functions of the EPA; (c) human resource development; (d) such other purposes as the Board in consultation with the Minister of the Environment may determine. The sources of funding for the NEF are grants from the government for the protection or improvement of the environment, levies collected by the EPA in the performance of its functions, donations from the general public, institutions and organisations. The NEF is managed and administered by the Board and the Controller and Accountant General.

From what has been said so far, it is clear that the establishment of the EPA is meant to correct the deficiencies of the EPC which did not have enforcement and compliance.

Problems of Formulating and Implementing Environmental Policy in Ghana

The problems in the formulation and implementation of public policies are a source of concern to scholars, donor agencies and governments in developing countries especially. Even with relatively good policy and regulatory structures, public policy does not have its intended effects or impacts due to implementation difficulties or what is referred to as the implementation gap. The implementation of Ghana's environmental policy has been hampered by policy design, policy analysis and standard setting, inadequate attention to environmental issues by successive governments, bureaucratic politics and the non-existence of environmental interest groups.

Policy Design

Ghana's lack of an overall environmental policy or a well-formulated set of priorities is a major constraint to effective implementation. This makes it difficult to determine whether the overall objective is to maintain the status quo, achieve a specific degree of improvement of environmental quality, or prevent health damage from environmental pollution. Without clear priorities or criteria for setting priorities, policymakers have tended to address the easy problems first and to adopt an end-to-the-pipe approach to pollution control. For instance, vehicular pollution sources are yet to be covered by regulation, although vehicles are a major source of air pollution in the cities and the towns. Although a Hazardous Chemicals Committee has been established under the EPA, no attention has been given to the transport of hazardous substances. Similarly, wastes from urban settlements and misuse of disposed wastes have escaped regulatory attention, despite their important health consequences for large sections of the population.

A second weakness in policy design is the lack of key regulatory principles that would enforce compliance to environmental standards. The EPC which was replaced by the EPA in 1994 only failed to enforce its directive because the Decree that created it did not give it such a power. The EPA has enforcement and compliance mechanism. However, for these to be effective, the EPA should introduce the polluter pays principle, with

economic incentives for continued improvement. The environmental impact assessment of the EPA is laudable and may help to improve water pollution. Ghana still does not have an environmental impact law that would require environmental clearance of new projects. Again, the penalty for non-compliance with regulations or directives of the EPA, which stands at 2 million cedis or a term of imprisonment not exceeding one year, is not high enough to ensure deference. The policy on the environment does not include mechanisms to assure that pollution control equipment is operated regularly after installation. Consequently, many firms turn off pollution control facilities at night or during power shortages or cuts. Despite efforts to improve the inspection system, serious shortcomings remain in specifying the procedures and training the staff to carry out to the inspections. These factors of policy design contribute to poor implementation.

Policy Analysis

The lack of a strong policy analysis capability at the EPC has contributed to some of the problems in environmental policies, which have been designed and adopted without examining alternative policy options or considering the costs in implementation. The inability to set priorities and strategies for the severe problems of deforestation and sewage dumping by District Assemblies (DAs) has resulted partly from the absence of policy analysis. In addition, the Environmental Action Plan (EAP) and National Environment Policy (NEP) have been adopted without public debate over the options, reflecting a strong adherence to secrecy within the Ghanaian political and administrative system. Although the 1992 Constitution guarantees the right to information, both politicians and bureaucrats are wary to disclose information, which are not even sometimes detrimental to the interests of the government.

Standard-Setting Process

The process of setting environmental standards is mostly ad hoc and does not consider issues of implementation in either the process or the product of standard setting. The process of standard setting is not transparent, making it difficult to understand the scientific basis or the role of social values and hence difficult for affected parties and non-governmental

organisations (NGOs) to participate in the decisions. Standards rarely include a time frame for compliance, and firms have little incentive to comply with the standards, since the costs of non-compliance are minimal. The existing standards need to be revised to provide a mechanism for continued improvement over time, with the goal of achieving an international norm for exposure levels, especially toxic substances, in order to avoid the problem of double standards.

Inadequate Attention to Environmental Issues by Successive Governments

Successive Ghanaian governments have given precedence to short-term economic development rather than long-term benefits of sustainable growth or the full costs of environmental degradation. For politicians, environmentally oriented projects, such as waste treatment plants, conservation, and recycling projects, have received little or no attention, while the mega projects and prestige projects, which provide employment and other benefits for constituents, have attracted votes, money and priorities. Governments propaganda and rhetoric about environmental concerns in Ghana have not been equally matched with financial commitment. While it is unthinkable for a developing country like Ghana to have the financial requirement for implementing reforms in the environmental sector that would lead to a sustainable development, the funds allocated to the sector over the years are grossly inadequate. This is borne out by the subventions and grants to the EPC. In 1975-76 financial year, EPC received a grant of 225,000 cedis. Four years later, in 1979-80, this was increased to 484,000 cedis. In 1980-81 there was only a meagre 600,000 cedis to the EPC. In 1987-88 the EPC received a total subvention of 19 million cedis and for 1990-1992, 155 million cedis was granted the EPC under the Public Investment Programme (1990) for the implementation of three specific projects; the Hazardous and Toxic Substance Control, Environmental Impact Assessment and the Environmental Education Project and the Desertification Control Project (EPC 1975-1992). An appreciation of the sums of money should be made against the background that in all these years, government budgets ran into billions of cedis. Further, it is worthy of note that in 1987, one dollar was over 300 cedis and by 1992 a dollar was over 500 cedis. In 1995, one dollar is 1,100 cedis. One thing which needs to be pointed out is that the

EPC's allocation passed through its supervisory ministry, the Ministry of Local Government. The implication is that the EPC had to compete for funds with the various departments within its supervisory ministry.

For implementation to be effective, the financial resources provided to the implementing agencies should be sufficient to hire staff and conduct the technical analyses involved in the development of regulations, the administration of permit/service delivery programmes and monitoring of target group compliance.

Bureaucratic Politics

The emphasis on economic growth rather than environmental protection pervades the government bureaucracy as well. The absence of linkages across sectoral policies that affect the environment makes it difficult for the Ministry of Local Government (MLG) – the supervisory ministry of the EPC – to reduce environmental problems that originate from the policies implemented by other ministries. Because of the MLG's relatively low power and position in the bureaucratic hierarchy, other ministries have little incentive to pay attention to the environmental consequences of their policies. The MLG, therefore, proved incapable of asserting its influence over other ministries' policies that are likely to have environmental consequences.

A further debilitating factor was the ministerial location of the EPC. Since its establishment in 1974, the EPC had been placed under three different ministries. It was first placed under the Ministry of Finance and Economic Planning. The rationale among others, was to incorporate eco-development in the planning aspects of the country. However, in 1980 the EPC was moved to the Ministry of Health. Two years later in 1982 with the advent of the PNDC government, it was again moved from the Ministry of Health to the Ministry of Local Government. The Environmental Protection Agency created in 1994 is under the Ministry of Environment, Science and Technology. The problem at stake is not its ministerial location per se, but more importantly, the effects of this instability on the performance of the EPC and its successor, the EPA. The EPC and the EPA for that matter should have the requisite status and power to do its work without being distracted or deflected by the special sectoral or particularistic interests or concerns of any one ministry.

Absence of Environmental Interest Groups

Large industrial firms have little concern about the environmental consequences of siting decisions, retrofitting old technology, or introducing new technology. Because of the low cost of noncompliance, industrial firms, in both public and private sectors, have had little incentive to comply with environmental regulations. At the same time, it is important to note that the Ghana Trades Union Congress has not taken any major initiative for the control of pollution problems inside or outside the factory or for the safe operation of hazardous facilities. What has worsened the situation is the absence of environmental interest groups in Ghana to exert pressure on both the government and business to formulate and implement policies to protect the environment. Environmental activism at the national and grassroots level will help place the problems of deforestation, dam building and other environmental issues on the political and policy agenda in Ghana.

Strategies to Improve Implementation

Although Ghana has several plans, policies, laws and regulations on the environment, their implementation has been fraught with problems. This section is devoted to examining three strategies aimed at improving implementation.

Regulatory Structure

The regulatory structure needs to be strengthened along several dimensions. Since the current system of setting standards is non-participative, non-consensual and non-transparent, there is a need to have a multiple perspective approach that will involve all the affected parties and interest groups in designing and deciding on standards. As the current environmental monitoring arrangements are weak, there is very little reliable information on the status of environmental quality in various regions and districts. Creating a monitoring network to assess environmental conditions will help in identifying areas of severe degradation and in planning administrative action for improvement. The government in consultation with affected parties could design a time-bound programme to control pollution from existing sources. Better compliance with time-bound regulations can be achieved through the

design of feasible regulations, viable options and separate regulations for old and new facilities (Baumol and Oates 1988).

Organisational Structure

The second strategy to improve implementation is through strengthening the EPA. Additional resources (financial, technical and human) need to be mobilised to improve the EPA's capacity in policy analysis. An important element in capacity building is upgrading the skills of the staff of EPA's Environmental Protection Inspectors (EPIs), since these individuals must simultaneously negotiate with firms to secure compliance while performing a police function.

The government should also encourage the development of private-sector organisations in areas such as environmental audit, environmental impact assessment, environmental quality analysis, and design of pollution control systems. In the long run, this approach will facilitate the development of environmental service organisations, which will act as a separate interest group to promote the broad goal of environmental quality, rather than relying on the regulatory approach of the national, regional and district offices of the EPA.

Despite the increasing interest in environmental issues, poor awareness of environmental problems persists among the public and private sectors. Elite attitudes are changing to some degree, due to the combined efforts of the EPA, mass media and international agencies, such as the United Nations Environment Programme, World Health Organisation, the International Labour Organisation and UNICEF. To support and accelerate this process of attitudinal change, major efforts at environmental education need to be introduced in schools throughout the country (Reich 1991).

Political Incentives

Improvements in implementation also depend on the political feasibility and the structure of political incentives. Increasing the involvement of political parties in environmental disputes raises the stakes for effective environmental protection and increases the political incentives for both the public and private organisations to implement the existing regulations. Non governmental organisations play an essential role in environmental

issues by assuring the social accountability of both public and private institutions, in serving as watchdogs for the regulators and the regulatees, and in promoting redress for victims of toxic contamination. Providing a formal role for NGOs in the policymaking process could assist in the implementation of the regulations and could encourage public debate of existing policy and implementation problems. At the same time, the government needs to assist in strengthening professional associations in environmental health, occupational health and safety, and public health, and could thereby enhance their roles in policy analysis and in public debate over policy options (Hawkins 1984; Landy *et al.* 1990).

Conclusion

Environmental problems in Ghana reflect a complex reality intricately interwoven with the nation's socio-economic structure. Since poverty is a major factor that contributes to environmental degradation and inadequate implementation in Ghana, policy makers need to adopt a three-pronged strategy of high economic growth, high pollution control investment and effective population control. An emphasis on only one element of this strategy will not resolve the dilemma. Given the complexities and failures of environmental issues to date, there is the need to move away from less regulatory approach to a more integrated political economic approach based on both political and economic incentives for environmental protection. There is the need to create incentives for developing cleaner technologies and fostering cleaner industries, as part of an overall ecological modernisation of the Ghanaian economy. Since environmental problems cut across many ministerial boundaries, there is a need to have a mechanism to examine the environmental impact of policies from all sectors. There is a need to make politicians and bureaucrats aware of the linkages between economic and ecological aspects and between health and environmental aspects, especially because of the tight nexus between poverty and the environment in Ghana. There is also the need to develop expertise within political parties and incorporate environmental issues into political competitions. There is the need to have priorities for protecting the environment, with a focus on the basic causes of degradation and not the manifested effects. The objectives have to consider the costs of implementation: who will bear the costs... and a realistic time frame.

It must be emphasised that incremental tinkering with Ghana's environmental policy and regulations will not result in substantial improvement of the quality of the environment. What is required is a comprehensive rethinking of environmental policymaking and implementation, and the adoption of innovative measures that fit with the political and economic realities of the 1990s and beyond.

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