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**POLITICAL ECONOMY AND THE ENVIRONMENT:
A THEORETICAL EXAMINATION OF GHANA'S
ENVIRONMENT-DEVELOPMENT CRISIS**

by
MEGAN K.L. McKENNA

A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfilment of
the requirements for the degree of
Master of Arts
Department of Geography

Carleton University
Ottawa, Ontario

October 10, 1990

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A Theoretical Examination of Ghana's
Environment-Development Crisis**

submitted by
Megan K.L. McKenna, B.A. (Hons.)
in partial fulfilment of the requirements for
the degree of Master of Arts

Thesis Supervisor

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28 November 1990

ABSTRACT

This thesis explores underdevelopment in Ghana in the context of exploitive relationships governing resource use, allocation and distribution. A major theme is that the "development crisis" is also an "environment crisis". Development theory must undergo a "re-think" in order to make the conceptual connections between environmental change as a social process, linked with economic systems. The processes and problems associated with deforestation in Ghana are examined in both an historical and contemporary context. Policy recommendations in the Ghana Forestry Sector Review (compiled by the Canadian International Development Agency) are evaluated in terms of concepts of "sustainability" and enhanced political economy theory. Alternatives to current development strategies are reviewed in light of how they address the critical resource needs of the poor and unempowered.

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List of Abbreviations

AAF-SAP - African Alternative Framework to Structural Adjustment Programmes

APPER - Africa's Priority Programme for Economic Recovery

CIDA - Canadian International Development Agency

EAP - Environmental Action Plan

EPC - Environmental Protection Council

ERP - Economic Recovery Programme

GFSR - Ghana Forestry Sector Review

GOG - Government of Ghana

IMF - International Monetary Fund

LPA - Lagos Plan of Action

PAMSCAD - Programme of Actions to Mitigate Against the Social Costs of Adjustment

PIP - Public Investment Programme

SAP - Structural Adjustment Programme

SD - Sustainable Development

TFAP - Tropical Forestry Action Plan

WB - World Bank

WCED - World Commission on Environment and Development

CHAPTER ONE

Introduction

The intent of this chapter is to provide a brief introduction to the main themes of the thesis. The urgency of re-conceptualizing the parameters of the environment-development crisis in Africa and Ghana is underscored by the extent and magnitude of the problem. To this end, a major objective of this work is to broaden the theoretical understanding of the parameters of "underdevelopment" in Africa to include environmental issues as central to analysis. This entails reconceptualizing "the environment" in political economy theory to explore specifically the socio-cultural factors and relations governing access to, distribution of and control over critical productive resources. "Underdevelopment" therefore, is understood as a process linked to social and environmental change in the context of underlying political economic relations. The primary contribution of this thesis to development studies is to initiate a theoretical "re-think" of the meaning of underdevelopment by providing a structural analysis of environmental change as linked with socio-cultural, political and economic processes.

Following an overview of thesis goals and objectives, the problem of deforestation in Ghana is discussed in relation to the need for a shift in development ideals away from concepts of growth and towards environmental sustainability and resource enhancement. Specific references are made to the Ghana Forestry Sector Review as a case study to focus discussion on the nature of Africa's environment-development crisis, sustainable development theory and possible alternatives to current development strategies. The final sections of chapter one deal with research design, the rationale for selecting qualitative analysis in this thesis and overall thesis organization.

1.1 Goals and Objectives

Africa's struggles against underdevelopment present an extraordinary challenge to the development community. The trend towards increasing poverty in most African states in the past 30 years has confounded development theorists and practioners. There are no simple cause-effect explanations for underdevelopment. Socio-economic processes, cultural factors, political decisions, resource endowments and historical experience combine to shape a country's direction of development. One of the central themes of this thesis is that development studies so far have neglected to the address the political economic *relationships* that cause poverty. These relationships are reflected in the socio-economic organization of production, political and economic institutions and in environmental change over time. Human and environmental poverty are not causes of underdevelopment, rather they are the effects of relationships that undermine people's ability to control and productively use livelihood resources. More appropriate development initiatives must be preceded by a re-examination of how development theory conceptualizes the roots of underdevelopment.

The other fundamental assumption of this thesis is that Africa's development crisis is inexorably linked with its environmental crisis (including degradation of soils, forests, water resources, mineral exhaustion, erosion, climate change and agrarian stagnation). The rationale behind this assumption stems from the fact that human and environmental processes are mutually recursive. On the one hand, humans use natural materials and interfere with natural processes, and on the other the environment influences the course and quality of human life. The relationships influencing resource allocation and use strongly affect the nature of environmental change and viability. It has been a general weakness of development studies to date that no theoretical connection has been made between environmental change as a function of social process, and the expansion and contraction of the world economic system (Redclift, 1987). Reassessment of theory would benefit from a

more systematic attempt to relate environmental change and the organization of production to processes causing human poverty and ecological degradation.

The importance of "environment" in development studies has increased considerably since the publication of the Brundtland Report in 1987 by the World Commission on Environment and Development. "Sustainable development" (SD) in this document is defined as meeting the "...needs of present without compromising the ability of future generations to meet their own needs" (WCED, 1987 p. 8). This is not the place to discuss in detail the implications and problems of sustainable development. However it is important to note that most concern with the concept of sustainability to date has focused not on the quality of the environment *per se* but on the ability of the environment to sustain the demands (material and aesthetic) that human populations make. To create conditions where development can be "sustainable" a number of momentous changes are needed, including greater international co-operation, establishing food security, more stringent pollution controls, species and ecosystems preservation *inter alia* (WCED, 1987).

Although this type of restructuring is necessary, I would suggest that re-conceptualizing the components and processes of the environment-development challenge is a necessary precursor to progressive change in development studies. The WCED for example, fails to identify the theoretical gap between environmental degradation as linked to the current (local, national and international) political economic order. Clearly, there is a need to challenge current thinking and values in evaluating Africa's crises. A legacy of maldevelopment and poverty in independent Africa adds urgency to the task of redefining our theoretical understanding of underdevelopment.

The goal of this thesis is to provide the theoretical basis for such an alternative through a structural analysis of Ghana's environment-development crisis in which the development process illuminates environmental change as it relates to structural poverty. A critical analysis of the Ghana Forestry Sector Review (GFSR) will facilitate an

examination of alternative development theories *vis-a-vis* the environment-development crisis in addition to evaluating concepts of "sustainability" with the aim of proposing an "enhanced" development paradigm. Conducted by the Canadian International Development Agency in 1985-86, the GFSR represents key policy directions in Ghana's development future. As a crucial developmental resource in the current Economic Recovery Programme (ERP), the viability and productivity of forests must be protected and enhanced. The urgency of this task is underscored by the fact that in the last two decades, forests have been disappearing at a rate of 22,000 hectares per annum resulting in some cases in the destruction of catchment area of water bodies (Environmental Protection Council, 1989). Other problems related to deforestation include sahelianization of the savannas, siltation of dams, destruction of wildlife, decreased moisture regimes and soil damage. The most critical problem however relates to reinforcing cycles of human poverty. Degrading the environment that people depend upon for survival lowers resource productivity and causes a continual cycle of over-exploitation and ecological destruction. Development cannot occur by eroding the resource base upon which its policies depend for success and survival. It is in this context that Ghana's Forestry Sector Review will be analysed with particular focus on the following:

1. How CIDA's problem identification and solutions compare to an enhanced political economy understanding of the "environment-development" crisis in Ghana?
2. What are CIDA's policies on "sustainable development" and are they likely to promote resource enhancement and long-term environmental viability in Ghana? What are the implications for the forestry sector?
3. Within the current context of structural adjustment and CIDA policy on sustainability, does the GFSR provide the policy means to achieve development of forests on a sustainable basis?
4. How is the proposed Ghana-Canada Forestry Development Programme designed to fit into the ongoing economic rehabilitation and development of Ghana? And, what are its chances of success measured in terms of environmental enhancement and resource empowerment of the rural poor?

Despite the use of the phrase "sustainable development", it is often the case that international aid agencies, institutions and governments adhere to ideologies and practices that are fundamentally at odds with environmentally sustainable development. This is in part due to a limited theoretical understanding of "environment" in addition to defining "sustainability" primarily in economic terms. For the purposes of this thesis, environmental issues refer to human relations with the surrounding milieu - including all aspects of land utilization, water, energy and mineral resources and of environmental pollution, hazard and amenity. Given that human and environmental relations and processes are inexorably linked, development is defined in terms of human action promoting sustainable resource use, resource enhancement and resource empowerment for the poor. In light of these precepts, it appears that there is a basic theoretical misunderstanding of "sustainable development" as it is translated into CIDA policy. Ghana's Forestry Sector Review will be used as a case study to investigate whether CIDA's stated commitment to sustainable development and protection of forest resources is reflected in its policy recommendations. From this analysis will stem a proposal for an alternate theoretical framework that incorporates human-environmental relationships as the primary component in realizing sustainable development.

1.2 Forests in Ghana - Depletion of a Critical Developmental Resource

The world's forest area has declined by approximately one-fifth (4 to 5 billion hectares) from pre-agricultural times to the present (Repetto and Gillis, 1988 p.3). Just over half of the remaining closed and open forests are in developing countries. In the past, little heed was taken as to the pace of exploitation which had devastating effects on forest regeneration and on other forest functions and yields. Issues surrounding deforestation in the Third World are critical because the struggle for conservation and management of forests is a struggle for survival as the daily lives of poor people are closely intertwined

with the environment. Forestry resources in Ghana (and indeed forests worldwide) provide numerous valuable resources upon which other activities depend, especially farming. Forests represent a critical hydrological system maintaining ground water resources in addition to contributing to local climate (rainfall, temperature) balance. They also harbour unique genetic material, provide protection against soil erosion (both wind and water), offer resources for basic shelter and daily subsistence (cooking, heating), provide habitats for wildlife and can also have extra cultural significance in terms of social customs or beliefs.

Rapid depletion of the Ghanaian tropical forest is a longstanding phenomenon. At the beginning of the twentieth century, one third of Ghana's land area (about 8 million hectares) was covered by natural forests (Repetto and Gillis, 1988 p.302). By 1950 the natural forest cover was reduced to 18 per cent and by 1980 virgin forest had virtually disappeared - closed forest area presently covers about 5 to 7 per cent of the total land area (Repetto and Gillis, 1988 p.302). Formerly forested land has been converted into cocoa or food crop farms, is under shifting cultivation, lies in fallows or remains as degraded forest areas. Rates of deforestation reached a peak between independence in 1957 and the mid 1970s averaging 45,000 hectares per annum (Environmental Protection Council 1989 p.1; Repetto and Gillis, 1988 pp.302-303). According to the Government of Ghana (GOG), CIDA and the World Bank, Ghana's already degraded forests are further threatened by the encroachment of the Sahara desert.

In Ghana, most tree planting efforts and management initiatives over the last decade have aimed at increasing supplies of marketable timber and pulp for export and fuelwood for cities. In the context of structural adjustment policies, forest products represent obvious short-term economic benefits. By contrast, reforestation has been vastly underattended for reasons that lie outside the monetized economy. Yet trees literally form the roots of many natural systems and are a vital component of the survival economy of the

rural poor. The dramatic changes in the regional forest cover in Ghana (initially in the southern cocoa belt and more recently in northern forest reserves) reflect powerful societal transformations. It is these structural transformations (environmental, political, socio-cultural, economic) that must be examined in terms of their profound implications for sustainable development. Prescriptions aimed at external balance of payments and fiscal management are clearly inadequate in terms of promoting sustainable development options.

1.3 Crisis in Ghana - the Need for Renewed Development Efforts

Ghana has experienced drastic economic decline since independence 1957. Once one of the richest countries in Africa with the brightest development potential, Ghana has fallen from a middle to a low income country. During the period 1970-1982, per capita income fell by 30% and real wages declined by 80%. Real export earnings dropped by 52% and decreased from 21% to 4% of the GNP (World Bank, 1988 p.1; CIDA, 1986 p.4).

Given the state of Ghana's socio-political and economic crisis in 1981 when the Rawlings regime took power, drastic policy measures were needed to stimulate economic rehabilitation. The Provisional National Defence Council (PNDC) opted to undertake a Structural Adjustment Programme (SAP) negotiated with the International Monetary Fund (IMF) and the World Bank (WB) in 1982-83. The SAP and interim results have received much attention both critical and complimentary. It is my belief that neither the PNDC's national goals nor its "sustainable development" rhetoric can be achieved in the current policy climate of adjustment through rehabilitation of the export sector. Current development strategies aimed at increased cocoa, timber and gold exports serve to reinforce structural poverty based on dependent development patterns, inequitable distribution of resources and non-sustainable resource use. Indeed, I would argue that the current programme fosters maldevelopment practices - exacting severe social, environmental, and

economic costs from the poorest sectors of society least capable of defending against environmental and economic contingencies.

The critical state of Ghana's economy and socio-political decline emphasize the need to find alternative development strategies. Before such strategies are developed however, it is essential to reconceptualize the parameters of the problem in order to uncover the roots of underdevelopment. Herein lies the argument for a new development paradigm, a shift in thinking that challenges normal professional ideals¹.

1.4 The Ghana Forestry Sector Review - Promoting Sustainable Development?

In September 1983, CIDA'S Ghana Country Programme review recommended to the President's Committee a two-pronged strategy for CIDA aided development in Ghana:

1. "Assistance in the provision of basic human needs with a concentration of programmes and activities in northern Ghana to arrest any further decline in Ghana's social infrastructure."
2. "Provision of short and medium-term support for Ghana's economic rehabilitation as part of a multi-donor response to Ghana's economic crisis contingent upon the application of structural adjustments negotiated by Ghana with the International Monetary Fund." (CIDA, 1986)

CIDA involvement in the forestry sector was contingent upon "the favourable outcome" of the first two years of Ghana's recovery programme. In 1985, it was determined that indeed, recovery was well under way (largely because of Ghana's own efforts) and that CIDA was to make additional funds available to Ghana. An important objective of Ghana's current development programme is "...the restoration of its export potential in gold, cocoa and lumber which seriously deteriorated between 1970 and 1985"

¹ Normal professionalism involves the thinking, values and methods linked with current core-periphery structures of power and knowledge, reproduced through teaching and defended by specialization. It values and rewards "first" biases which are urban, industrial, technicist, quantifying and concerned with things and with the needs and interest of the rich. In other words, current power structures are not the focal point of change (Chambers, 1986).

(Government of Ghana, 1985). Therefore, during the first quarter of 1985, a Forestry Sector Analysis of Ghana was carried out by CIDA to provide its management with "...sufficient information concerning the forestry sector to identify its overall potential, and formulate a rationale for possible intervention in the sector" (CIDA, 1986 p. i). The Forestry Mission to Ghana concluded that "...the forestry sector has the potential to make a significant contribution to the long-term socio-economic development of the nation" (CIDA, 1986 p.i). CIDA intervention into Ghana will be under the auspices of the proposed "Canada-Ghana Forest Development Programme" which focuses on four factors designed to fit into the ongoing economic rehabilitation of Ghana as pursued through the ERPs. It aims to:

- (i) assist the rehabilitation and modernization of privately owned timber industries;
- (ii) assist with modernization and expansion of privately owned timber industries;
- (iii) establish forest management techniques commensurate with industrial wood requirements, agricultural and rural needs and maintenance of the environment, and;
- (iv) upgrade professional and technical forestry education and training (CIDA, 1986 p. vi).

CIDA's policy proposals appear to support export-driven recovery programmes which are contradictory to its ethic of conserving and enhancing the resources base of a community or nation. According to official rhetoric in CIDA and Sustainable Development (1989):

massive investment to increase natural capital [is necessary] so that future dividends can be ensured and enlarged. A constant or increasing stock of natural capital is needed not only to meet the needs of present generations, but also to ensure a minimum degree of fairness and equity with future generations (p.9).

There appears to be a basic contradiction in stated ideology concerning "sustainable development" and practical policy response to development initiatives. Given that CIDA's priority areas of investment in Ghana's forestry sector concentrate on the processing of raw

materials, increasing the strength of existing manufacturing (primarily pulp and paper) and supporting manufacturing for export it is debatable whether the goals of "...conserving and enhancing the resource base, ensuring a more equitable distribution of the proceeds of growth and reviving growth to meet human needs and aspirations" can be achieved (CIDA, 1989 p.8). Such an apparent contradiction in theory and practice necessitates a review of CIDA's development strategies.

1.5 Research Design

The research approach to this thesis is qualitative and relies largely on primary archival sources. The archival documentation includes the Ghana Forestry Sector Review (1985) , the Forest Resource Management Project (World Bank, 1988) and documentation from the PNDC's Environmental Protection Council (1990). In addition, a number of informal interviews were conducted with key informants from CIDA and Ghana to obtain the most recent information on policy, programmes and problems connected to Ghana's environment-development crisis.

The GFSR consists of a main report and 13 appended volumes covering such topics as Forestry Education and Training, Forestry for Rural Development, Forest Industries, Wildlife Management and Forestry Research (see Appendix 1 for a complete list of the appended documents). The information in these volumes is extensive, providing a detailed review of various aspects of forest management, environmental economics and development. Included within the GFSR is a component linking its proposed efforts to an ongoing CIDA project in the north of Ghana - the Northern Region Rural Integrated Development Programme (NORRIP). Currently, some CIDA sponsored work in northern forest regions is already underway.

While further research into the specific effects of deforestation on the natural environment and rural livelihoods must be based on field data, I have chosen to focus on

theoretical implications of Ghana's environmental crisis as a necessary precursor to initiating a better understanding of the parameters of the environment-development crisis. In fact, as I will argue later in the thesis, it is at the theoretical and formative policy stages that many of the changes must first occur if environmentally based, human-oriented development is to be realized. The structure of decision making as well as the tangible results of this process must be reviewed critically and remain open to change if true progress is to be made in addressing environment-development problems of global magnitude.

1.5.1 Qualitative Research Rationale

A mainly qualitative approach to my research on the environment-development crisis was chosen for a number of reasons. To begin with, given that the environment is a vastly complex system, many of its attributes and relationships to human society cannot be quantified. Indeed, much environmental damage has occurred because of inadequately constructed environmental assessment models, placing "number values" on minimum acceptable damages to natural ecosystems or failing to account adequately for the implications of non-renewable resource extraction (for example, economists and most development agencies still include non-renewable resource use in "credit" columns, even though such non-sustainable behaviour jeopardizes the ability of future generations to meet their needs). Secondly, because levels and styles of development are culturally specific and perceptions and use of the environment are historically determined (each country having its own unique experience), interpretations of sustainability and development demand subjectivity and flexibility. The danger with quantitative interpretations of development (the IMF/WB structural adjustment programmes are an excellent example of this) is that they tend to prescribe universal solutions (eg. fiscal and monetary "shock treatment") to unique situations. Thirdly, given that the end product of development initiatives and

policies should be concerned with human and environmental betterment, qualitative analysis is more apt to consider non-quantifiable impacts as primary determinants of developmental "success". Too strong a reliance on economic indicators often leads the analyst to overlook such important things as distributive impacts of programmes, equitable resource use, class evolution and conflict and micro-level relationships (ie. intra-household disparities, gender interaction, ethnic differentials). Fourthly, the constant theoretical reference to "sustainability" as a desirable objective serves only to obscure the contradictions that "development" implies for the environment (Redclift, 1987). I maintain that environmentalism and political economy as a body of theory need to be re-evaluated in relation to one another as both stand to gain from sharing an analytical perspective. A tendency exists to "de-humanize" and "de-politicize" environmental issues at the international level through established economic development approaches while considering resource conflicts at the local or national level as other than environmental. Primarily quantitative evaluation can lead to specialized and mechanistic treatment of development issues that would otherwise benefit from an integrated and interdisciplinary study approach. The environment (human and biophysical) is affected by economics that is a product of social, political and cultural history which in turn is linked to geographical location, climate, natural resource endowment and technological development to name only a few of the numerous possible interconnections. Flexible, qualitative interpretation of data can lead to an holistic view of past, present and future issues. Finally, there remains a significant problem of statistical accuracy in Africa. For some classes of evidence viewed as basic to any appraisal of environmental change and economic crisis, there is nothing like a consensus as regards the accuracy, veracity and method of collection (Watts, 1989). The reality of empirical data collection is that the usual standard procedures of scientific measurement and observation are often not followed, leading to highly variable interpretations of development problems. Watts (1989) argues that geographers should be

particularly sensitive to the problematic stature of "facts" because of the controversial question of environmental degradation and ecological crisis in Africa. Berry (1984), in her article evaluating African agriculture in a national and international perspective, cites the reliability of national data on agrarian change as open to serious question.

[W]idespread acceptance of national and continental production figures has hindered understanding Africa's agricultural problems and performance not only because the data are themselves of questionable significance, but also because global data often serve to support global explanations. Explaining agricultural performance in terms of a single causal factor can be just as misleading as representing it by a single statistical indicator" (p. 63).

Clearly, statistical interpretation in the African context must proceed with caution and some scepticism owing to problems associated with accuracy, quality and availability. Not to negate the relevance of quantitative data, some tables, figures and statistics will be used in this thesis to help define general trends in deforestation and economic conditions. Given the theoretical and policy focus of my work however, the majority of my analysis will rely on qualitative research and interpretation.

1.6 Thesis Organization

Chapter one has served to introduce some of the major themes, terms and documentation that will be used throughout this thesis. Chapter two provides a review of development literature and theory in order to establish a framework for analysis in the rest of the thesis. The environment-development crisis is explored through a political economy perspective, focusing on modes of production research in Africa. The analysis will move beyond reviewing the historical dialectic contributing to conditions of dependency and class evolution and conflict in Ghana and into an examination of the treatment of such issues as "environment" and "sustainability" with respect to concepts of "development". Chapter three, reviews the historical conditions surrounding Ghana's incorporation in the world

economic system in addition to offering a critical overview of post independence development strategy. The aim is to show how structural underdevelopment evolves through the interaction of political-economic and socio-cultural institutions and processes. Particular emphasis will be given to the nature of change in environmental use and resource control, inter-regional disparities, the development of state institutions and the export orientation of the economy. Given the state of Ghana's socio-political, economic and environmental crisis, chapter four will be devoted to the policy measures taken since the Rawlings regime took power in 1981. The decision of the PNDC to opt for an IMF proposed structural adjustment programme (SAP) will be evaluated in terms of: the types of development SAPs are designed to achieve; whether sustainable resource use may be realized in the context of the Economic Recovery Programme (ERP), and; how the non-economic impacts of the ERP (especially the environmental and human costs) influence the sustainability of Ghana's recovery efforts. Chapter five deals specifically with the Ghana Forestry Sector Review in terms of its role in Ghana's overall development strategy. CIDA's policy recommendations for Ghana's forests and sustainable development ideology are evaluated in terms of how they compare to an enhanced political economy understanding of the environment-development crisis. Chapter six investigates some alternatives and options to current structural adjustment programmes and "normal" professional development paradigms. Attention will be given to the African Alternative Framework to Structural Adjustment Programmes (AAF-SAP) particularly in its treatment of environment and resource control. The final chapter seven, reviews some of the major theoretical and policy conclusions of the thesis in addition to proposing an alternative framework for assessing sustainable development actions.

CHAPTER TWO

Literature Review and Theoretical Framework

The purpose of this chapter is to provide a critical review of various development theories and introduce key concepts that are central to an understanding of the current African development-environment crisis. Concepts of "sustainable development" (SD) which have been popularized with the recent shift to "environmental thinking" in development studies will be analysed from a political economy perspective with the specific focus on Marxian modes of production theory. The rationale for combining political economy with sustainability concepts lies in the apparent theoretical gap in linking development theory with the environment. In other words, given that policies for the amelioration of poverty and protection of the environment may be regarded as the outcome of struggles between classes or social groups in the context of a state, it is a theoretical oversight, according to Redclift (1984), that these two elements have not been conceptually integrated in political economy. Poverty is the result of specific relations between the natural environment and socio-economic structures; therefore, as a necessary precursor to potential advancement of the current development debate, theoretical alternatives offered by evaluating environmental change as a function of socio-economic and political change over time should be considered.

Within the political economy school, dependency theory and modes of production analysis have figured prominently in development studies. While both of these theories offer some insight into problems of underdevelopment, they do not consider the centrality of "environment" in relations and structures of poverty specifically. Whereas dependency theory has been criticized for its predominantly macro-level treatment of explanations for underdevelopment, modes of production theory is often cited as economically reductionist

in its social analysis. Both theories have neglected to develop the importance of the environment and struggle over critical productive resources as determinants of human and ecological poverty. Where modes of production theory is most useful (and dependency theory is most seriously flawed) is in the analysis of micro-level social processes which determine (or mediate) the allocation and use of resources and thus shape environmental change. However, as Redclift (1984) argues, the environment (as a biophysical and social creation) has never been at the centre of the stage in Marxist thinking. One objective of this thesis is to locate issues relating to the development-environment crisis within the political economy tradition. Following Redclift, "...the aim is to make the environmental crisis a central concern of political economy and its structural causes a central concern of environmentalism" (Redclift, 1984 p.2). A review of literature in this chapter shows that while "modes of production" is a valid analytical concept, there needs to be greater focus on *structures* and *processes* linking environmental change to social change. This entails a clearer understanding of how pre-capitalist modes of production have been articulated with capitalist ones and the impact of this process on socio-cultural structures, gender and class struggle over resources and how the fruits of production are distributed. Herein lies the argument for developing an "enhanced political economy" theory of the environment-development crisis that attempts to draw conceptual links between environmental and socio-economic change over time.

There is mounting evidence and concern that present market-based strategies, such as the "Structural Adjustment Programmes" (SAP's) initiated by the World Bank and IMF in many African countries, including Ghana, are having highly detrimental impacts on the environment in concert with exacerbating conditions of human suffering. Indeed, as argued later in this chapter, conditions of environmental and human poverty are mutually recursive. If development is to be sustainable, the ecological systems on which economic production relies also needs to be sustainable. Note the very real concern of Brown and

Shaw (1982) in assessing the dangers of non-sustainable human action: "In a world where the economy's environment support systems are deteriorating, supply-side economics - with its overriding emphasis on production and near blind faith in market forces - will lead to serious problems" (p. 12). Consider the case of Ghana where a SAP (relying on neo-classical economic strategies) has been implemented, placing renewed emphasis on revitalizing the export sector (including cocoa, minerals and timber). This in turn strengthens the ecological threat, as the expansion of cocoa production, logging and timber exports and surface gold mining reduces the country's forest cover (Loxley, 1988). So far, the Government of Ghana has not had an effective policy to deal with this as efforts towards the environment remain piecemeal and are isolated (in the minds of economic policy makers) from other (primarily economic) issues of development. For development to be sustainable, there needs also to be sustainable patterns of economic exchange, combined with political, social and cultural structures that are also viable and sustainable in the long term. These are some of the critical issues that must be addressed at theoretical and practical levels to encourage alternative methods of dealing with Africa's environment-development crisis.

In order to be relevant, sustainable development goals need to take into consideration a wide variety of industrial and other productive structures in the global system. This requires an holistic view of the economy and ecology, together with political commitment to ensure that development is indeed "sustainable" (Redclift, 1987). Although by no means the absolute "solution" to understanding Africa's crises, Marxian analysis remains the most fertile intellectual tradition available in the search for alternatives to present development strategies as MOP locates economic analysis within specific social formations and explains the development process in terms of the benefits and costs they carry for different social groups and classes.

Chapter two is organized in the following manner. First, a brief overview of the historical context of Africa's incorporation into the world system is provided. Although it is recognized that differentiation within pre-colonial Africa prevents generalized conclusions, there are certain common elements in colonial exploitation which many countries have experienced. Second comes a review of relevant literature concerning political economy and theories of underdevelopment. Dependency theory, modes of production and articulation of modes of production are discussed in relation to structures of exploitation and environmental change. An analysis of Marxism, the environment and sustainable development is given in an attempt to consider ways in which environmental concerns can be given methodological rigour and consistency through some enhanced political economy (Marxian) principles. Also critical to this second section of chapter two are the cross-cultural differences in perceiving 'what is environment' and why this is theoretically important to concepts of sustainable development.

2.1 A History of Exploitation in Africa - Political Economy and Theories of Underdevelopment

The purpose of this section is to twofold; first, to review the historical conditions of Africa's incorporation into the world economic system and second, to evaluate the strengths and weaknesses of political economy theory in explaining how this incorporation has led to exploitation and underdevelopment.

It is critical to understand the historical importance of indigenous socio-economic, political and cultural structures in developing a comprehensive theoretical framework capable of explaining mechanisms of exploitation, dependency and environmental degradation. A country's development experience and struggles are specific to its socio-cultural and economic organization. Therefore, theory must adequately incorporate an

historical dimension of change as it effects social, political, economic and environmental factors.

Both underdevelopment and dependency theory (UDT) and modes of production theory (MOP) attempt to provide a framework for analysing the causes of poverty in Africa. This section aims to evaluate the adequacy of UDT and MOP in representing the complexity of social and human struggle in Africa in the face of political and economic transformation through time. That the roots of underdevelopment evolved in the struggle between people and the forces of socio-economic change introduced through capitalism is evident in contemporary patterns of poverty (especially in rural areas) and environmental degradation. The following analysis focuses on how UDT and MOP conceptualize issues of human exploitation and socio-cultural change in the context of capitalist penetration into Africa and how this relates to processes of underdevelopment. There is no simple cause-effect explanation for the creation of "underdevelopment" and the "Third World". Any attempts to formulate linear theories of stages of development or modernization have long since been dismissed as rigid, ahistorical, ethnocentric, lacking social depth and otherwise inappropriate. Leys (1977) argues that orthodox economic and development theories are incapable of grasping the real nature of the processes of underdevelopment and that fundamental problems of analysis accompany these strategies which cannot solve or even formulate critical issues central to development struggles (eg. popular struggle, inequity, structural disadvantage). Theories of modernisation have an highly ideological character that assumes that underdevelopment was a "primal" or "original" condition (Leys, 1977). Completely ignored are the pre-colonial nature of social differentiation, cultural and economic institutions and historical "development" experience both before and after European colonisation and imperialism.

In the study of underdevelopment, economic and political structures represent pivotal points of change. One of the primary problems in development studies thus far has

been in assessing which paradigm is most effective in evaluating change that includes an historical dimension and involves the creation of linkages between societies and global economies through the forces and relations of production. Moreover, resulting from external pressures are changes to cultural and social structures as they mediate between the micro- and macro-societies involved. Any comprehensive theory therefore, should encompass multi-level (or multi-organizational) terms of reference (eg. global, national, local, household, inter-class).

Initially, political economy development theory emerged in response to post WW2 mainstream ideology based on linear progress and modernization. Underdevelopment and Dependency Theory (UDT) was pioneered in the 1960s by such notable theorists as Andre Gunder Frank, Celso Furtado, Osvel Sunkel, Keith Griffin and others. There is significant variation within the school however the approach is primarily a structural one which builds on the history of capitalist development. Although it is an oversimplification to reduce a complex theory to a few propositions, it is beyond the scope of this analysis to provide anything more than a general account of some of the salient features of UDT to show how it differs from MOP in the treatment of underdevelopment studies.

"Dependence" refers to a situation in which the economies of certain (periphery) countries are conditioned by the development and expansion of other (dominant) countries to which the former are subjected by extra political and economic bonds. The relation of interdependence between two (or more) economies and between these and world trade assumes the form of dependence when the critical development strategy decisions (prices, investment, government macro-economic policies etc.) are made by individuals, groups or institutions external to the country. Therefore, the international historical processes of capitalism and commodity flows have caused the (dominant) "First World" to become developed at the expense of the (periphery) "Third World"; the development of the former causing subordination or "underdevelopment" in the latter. It is clear from this explanation

that the chief feature of the dependency school is its insistence that it is not internal characteristics of particular countries so much as the structure of the international (economic) system that is the key variable in understanding the processes of underdevelopment. The logic of the development process therefore, must be understood as aspects of imperialism (past and present) as firmly rooted within a globally defined historical context.

Samir Amin's (1972) work on "Underdevelopment and Dependence in Black Africa - Origins and Contemporary Forms" in many ways exemplifies the work of dependency theorists. According to Amin (1972), Africa's incorporation into the world economic system can be explained by dividing the continent into three macro regions based on the effects of the last period in African history - that of colonisation. These areas include; **Africa of the colonial trade economy** (traditional West Africa), **Africa of the concession-owning companies** (the traditional Congo River basin) and **Africa of the labour reserves** (the eastern and southern parts of the continent). Although these distinctions do not include all countries or regions they are useful generalisations to show the interaction between colonial policies and indigenous historical structures.

Amin identifies four separate periods in African history: the pre-mercantilist period stretching from the earliest days until the seventeenth century, the mercantilist period occupying the seventeenth century to 1800, a third period lasting from 1800-1890 and the final period of colonisation. Focusing on traditional West Africa of the colonial trade economy, the pre-mercantilist period boasted a vigorous trade of gold, rare goods (gum, ivory) and slaves among African empires (or "states"), with the Arab world and along coastal regions with European traders. For many societies of West Africa, this trade became the basis of their social organization, encouraging social differentiation and the creation of states and empires. Although integrated into external ("world") economies at this point, African societies of the pre-mercantilist period developed autonomously with

their own ruling classes, forms of surplus appropriation (tribute payments) and political systems.

It was not until the slave trade in the mercantilist period Amin argues, that Africa began to lose its autonomy. Reduced to the role of supplying slave labour for the plantations of America after the decline of the Islamic Empire to the north, Africa began to be shaped according to foreign mercantile needs (Amin, 1972). Political and economic balance in West Africa was interrupted by slave traders monetizing the economy (paying for slaves in money) and reducing the importance of feudal relationships between African ruling classes and their subjects. The slave trade monopoly had the effect of integrating Africa into the world economy in an inferior and dependent position as it subsumed the importance of indigenous traders and domestic goods and had a devastating effect on local power structures.

The third period witnessed the introduction of monopolies into Africa. Africa became the periphery whose function was to provide the products which would reduce the cost of raw materials and agricultural goods being used in Europe in its new industrial boom. During this period, West Africa was reduced to the subordinate functions of colonial trade as local social systems "adjusted" to new economic requirements. By the end of the nineteenth century, Africa was fully integrated into the world capitalist system through colonisation. Rather than trading by way of monopolies, production was organized on the spot so as to exploit both cheap labour and natural resources. Although the target was the same everywhere - to obtain cheap exports - different variants of the colonial systems evolved largely owing to regionally different pre-colonial histories. For instance, "Africa of the colonial trade economy" (eg. Ghana) experienced a radical change in socio-economic and political organization resulting from the development of agricultural commodity production (ie. cocoa). The colonizers used the complex social system that had evolved from the slave trade to orchestrate the commercial production of tropical

agricultural products for export under the terms that were favourable to central capital investors. The returns to local labour were so small that these products cost less than any possible substitutes produced in the centre itself. Under the circumstances of dominant trade monopolies in West Africa, direct taxation of peasants in money, political alliance with ruling indigenous social classes to appropriate tribal lands and administrative coercion (forced labour), indigenous societies were exploited and bore the direct costs of political-economic structural disadvantage. Because of social differentiation among rural producers, access to productive resources for the poor was restricted. Ruling classes kept the form of a tribute-paying social system, but this was integrated into the international system given the way production was organized for export (Amin, 1972). This colonial system also destroyed African domestic trade given the political restrictions enforced by European administrators on imports and exports (Amin, 1972).

In traditional West Africa, incorporation into the world economy was a significantly different process than that experienced in Africa of the labour reserves (where labour was forced to exploit vast mineral wealth and lands were expropriated for European settler farmers) and Africa of the concession-owning companies (where adventurers attempted to gain quick profits through plundering). The colonial system of trade in West Africa organized societies so that they produced exports on the best possible terms for the mother country. These relationships of organization, production, coercion and exploitation (environmental and human) must be understood if insight is to be gained into contemporary environment-development problems. "Development" therefore becomes a complex web of historical and environmental (resource) factors that combine to form exploitive, productive and distributive processes which affect the direction and type of socio-environmental evolution.

It is a significant absence in Amin's work that issues of human struggle and local level change and adaptation to the capitalist system are not discussed. Before European

colonisation, Africa was far from amorphous (socially, economically, culturally and politically), a fact that is often overlooked in dependency analysis. Because international economics figures so prominently in Amin's dependency interpretation of development and underdevelopment, social and class analysis is limited to a discussion of macro-economic events as determining class formation and social behaviour. Class evolution is seen as a direct function of the capitalist mode of production introduced by imperialism and foreign domination. Amin's categorization of Africa into three macro regions based on colonial experience remains only a generalized historical description, rather than a useful analytical concept. Within "traditional West Africa" for example, were a variety of culturally and socially diverse societies with specific institutions determining the mode(s) of production and access to productive resources. Use of the environment was (and is) socially and economically constructed. To assume that each social system would respond similarly to external forces (ie. colonial capitalism) is to overlook some of the fundamental processes connecting political and economic events with environmental change. That these processes are linked to exploitive relations causing structural poverty is evident from Africa's history of underdevelopment since colonisation.

In terms of general theory therefore, there are several omissions in UDT's conceptualization of underdevelopment in Africa. Rather than assess the relevance of UDT as an accurate method to describe historical change, my argument is based on the fact that dependency theory overestimates the power of the international system while at the same time underestimating the real influence of African nations and societies over their own affairs. The evolution of change in Africa did not occur in a capitalist vacuum after the advent of imperialism. It is true as Amin argues, that Africa is "dependent" on international (primarily capitalist) sources for a mixture of technology, financing, markets and basic imports. These same nations, while incapable at this time of living without the benefits of this system are equally incapable of living with the system. However, to overlook the

fundamental importance of Africans as significant players in their development past and future is to deny indigenous potential for change. Amin, for instance, fails to consider the implications of human struggle in shaping Africa's development experience. It must be understood that economic forces do not act alone, but must be grasped sociologically as modes or relations of production create specific configurations of political, environmental and economic conflict over time. It is this point that Amin, as a dependency theorist fails to explore adequately and where the particular strengths of Marxian analysis can offer further insight.

In the way of specific criticisms of UDT, comments will be limited to the more elementary precepts. As already mentioned above, dependency theory focuses on relations between systems or nations to the point where it neglects the internal processes of class formation that shaped historical development. Munck (1988) makes the valid criticism that the whole exercise of "systems" analysis results in overlooking the political, legal, ideological and social elements in an economic framework where the "...modes of extraction of surplus value provides a key to the 'innermost secret' of the social structure". Furthermore, Katz (1980) points out that the intricacies of African kinship, pre-capitalist society and internal dynamics cannot be represented through the ahistorical and determinant categories of "world imperialism" and "capitalist expansion". In his critical notes on UDT, Leys (1977) also attacks the mechanistic tendencies of dependency concepts. For example, concepts of class appear as rigid econometric categories resulting from dependent development patterns. "Classes do not appear as the prime movers of history in this perspective, and a corresponding theoretical eclecticism is apparent ('elite' is often use alongside 'class' for instance)." (*ibid.*, p. .95).

Given UDT's nebulous treatment of internal power structures and forces mediating between capitalist and non-capitalist systems, I would suggest that the concept of "exploitation" is also unclear. It is implied by UDT theorists, (although the mechanics

remain unexplained), that the masses of the Third World are exploited and suffer from problems relating to "unequal exchange". The idea of exploitation is central in understanding the current environment-development crisis, as peoples' control over resources is determined at a number of socio-political levels. It follows therefore that the methods and type of exploitation differ according to these levels and structures. Moreover, the idea of "unequal exchange" is vague and unrigorous, overlooking the fact that the global market is not merely an economic system, but also has ideological and political elements (Katz, 1980). Although "unequal exchange" does describe the real process of unequal capitalist development between core and periphery, it does not explain how historical and current capitalist phenomena block peripheral development.

The list of technical problems with UDT could be extended. Although it does make some valuable contributions at the macro historical, geographical and economic levels, it remains seriously flawed in explaining the various causes and recurrent processes of underdevelopment. I agree with Leys (1977) that the real trouble with UDT lies in the fact that while it "sensitizes" people to issues, it does not "...belong to a coherent theoretical system based on a consistent political standpoint and a consistent method of analysis; [the concepts] are ideological rather than scientific" (p.96). Ignored are the micro-level processes that perpetuate political economic structures causing poverty and unequal distribution of resources. The dependency theory framework is incapable of explaining how social, political and cultural change is linked to environmental change and underdevelopment.

Marxist modes of production theory (MOP) in many ways represents a progressive theoretical step beyond UDT. It places primary importance on the role of class transformation and struggle and the means of exploitation as causes of poverty and political-economic disempowerment. MOP is particularly useful in the study of underdevelopment in Africa (and the rest of the Third World) which, as it has been argued, cannot be reduced

to the effects of Europe's predatory needs. Poverty is socially and historically determined given the central role of class structures in mediating the establishment of capitalist relations of production and the use and distribution of resources. Capitalist expansion, development and underdevelopment are influenced by an integrated network of forces and relations of production that mediate resource use and shape socio-cultural change as it relates to the political economy. Understanding the social aspects of economic and political change are particularly important in the discussion and evaluation of kinship, African class formation and resource use.

The Marxist concept of modes of production refers to a combination of relations and forces of production. Katz (1980) defines the relations of production as "...the specific mode of appropriation of surplus labour and the specific form of social distribution of the means of production corresponding to that mode of appropriation of surplus labour"(p.52). The forces of production on the other hand concern the choice and use of technology, labour and raw materials in addition to the organization of labour (Klein, 1985). Note that in terms of this thesis, labour exploitation is not the focal analytical point. Underdevelopment is also linked to the exploitation of resources in terms of use, allocation, distribution and appropriation of surpluses. In order to understand more fully the myriad of factors involved in resource exploitation and the environment-development crisis, social processes through which power over resources is vested must be examined. Given that rural poverty in Africa is (among other things) related to resource "disempowerment", the following review is directed towards gaining a better understanding of those socio-economic processes shaping resource use and exploitation as root causes of underdevelopment.

The concept of MOP is a useful good starting point in the historical analysis of underdevelopment for the following reasons; first, history is an evolutionary process changing according to dialectical relationships caused by socio-economic contradictions and

internal tensions and second, there is usually a material base to these contradictions as reflected in most social institutions and interactions. The strength of the Marxian MOP approach is that it provides a framework with which to analyse the complex relationships between capitalist and non-capitalist social and kinship structures - relationships that have reproduced and perpetuated conditions of underdevelopment. Unlike UDT, therefore, the MOP perspective can help provide insight into the intricacies of social phenomena and development through a theoretical differentiation of class (society) and economy. Although MOP theory has been criticized for being too economically reductionist and neglecting political and ideological factors, increasing numbers of local area studies have increased the wealth of knowledge surrounding local traditions, unique historical experience and micro-level socio-political processes.

It is important to realize that modes of production have historical meaning only if conceptualized within specific social formations and exist furthermore, only with respect to political and ideological instances which are apt to reproduce a particular mode (Katz, 1980; Klein, 1985). The concept of "modes of production" cannot be equated with "social formations". A society cannot be reduced to a mode of production (Amin, 1972). Social formations are **concrete** structures, organised and characterised by a **dominant** mode of production which represents the focal point of a complex series of subordinate modes. Thus in traditional West Africa for example, it is possible to have a communal mode of (agricultural) production based on kin-corporate relations linked to a dominant tributary mode of production.

The foundations of current disparity between Africa and the First World and the deepening poverty of most of that continent were, as has been argued, laid in the colonial era. Not only did there exist at the time of European imperialism complex agrarian and trading socio-economic structures in Africa, it is also true that these structures were differentiated (and remain so) in terms of regulating resource use and access. This fact is

significant in evaluating Marxian class theory and the centrality of socio-cultural institutions as mediators of economic change.

Consider for instance, the fundamental importance of peasant society in determining conditions of access to and use of resources in pre-colonial Africa. Note that, production and trade took place in a variety of peasant economies. As Bernstein (1979) asserts, rural cultivators that have been descriptively termed "peasants" have existed in very different types of societies and different historical epochs - for example during European and Japanese feudalism and in the pre-capitalist agrarian empires of India, China and Egypt. It follows in Bernstein's argument that such a general definition of "peasants" is ahistorical, and at best has only descriptive utility. "The peasantry" in Africa is often conceptualized (particularly in dependency theory) as a homogeneous group of producers subject to payment of tribute (tax) to a superior (tribal) authority and struggling against powerful outside (colonial) forces in an attempt to secure and sustain the interests of its members. MOP theory however specifies that relationships within societies are specific to particular technological, ecological and historical conditions. Bernstein's (1979) historical analysis of the peasantry in Africa draws attention to the importance of the fact that peasants societies were organized differently depending upon what was produced and the way in which surpluses were appropriated and distributed at the intra- and extra-household levels. The fact that there were different organizational structures among pre-colonial African societies suggests that responses to change also varied. This realization is critical in understanding that underdevelopment has an historically specific character.

According to Bernstein (1979) and Berry (1989), the term "peasant production" may describe a *form* of rural production, but fails to give any theoretical content in terms of social and/or historical specificity. The concept of modes of production on the other hand embodies contradictions and internal tensions within any given situation. While these tensions are not always economic, there is a material base to most social institutions and

social interactions (Klein, 1985). Therefore, clarifying what types of "modes" exist in a particular context help highlight the contradictions implicit in any situation in addition to understanding the relationship between the economic and non-economic (social, environmental, cultural, political) variables.

Since pre-colonial times, Africans have gained access to land, labour and capital for production both through exchange and through membership and status in various social units. "Access" therefore, depends on participation in a variety of social institutions in addition to material wealth and market transactions (Berry, 1989). Individuals' ability to generate a livelihood or increase their assets is in large part a function of access (as defined above). Furthermore, people relate to land and the environment because of the way they relate to one another, which in turn affects land use. Thus, in order to conceptualize more fully the processes governing development, one needs to construct a framework that goes beyond questioning simple relationships of how humans relate to their environment as mere economic actors, and seek to evaluate how a society is organized. In other words, gain an understanding of those relations between humans that create and determine power in land-based societies (Okoth-Ogendo, 1989). Such a task demands a clearer theoretical analysis of (peasant) modes of production in pre- and post-colonial Africa in order to assess the changes that have been wrought in society's use of the environment.

Conditions of access and control of the environment in Africa reflect more than sets of rules regarding rights of land use. Access also involves the allocation of power within a society and its exercise with respect to land use. Social affiliations and socially constructed identities (gender, generation) convey or mediate access to labour, capital, knowledge, authority as well as land resources (Berry, 1989). Thus, social identity and group membership become resources in themselves which represent objects of accumulation and have a direct impact on production and the use of the environment. Understanding access as a social process affects the way one thinks about strategies of land use and

"environmental protection". Modes of production analysis with its emphasis on social processes therefore, is a useful tool in initial research into how the history of access, control, and use of resources in pre- and post-colonial Africa has influenced development. Given this line of argument, the concept of "access" as a social construct may provide added theoretical insight into conceptualizing the link between peoples' use of the environment and environmental degradation.

As argued, "access" is in large measure a function of "class" or group membership. The concept of "class" in African society is potentially useful in clarifying conditions of access to resources in addition to explaining the dynamics of modes of production. In its conventional Marxian interpretation, classes are the product of economic relationships and struggles between those who control (or own) the means of production and those whose labour is exploited by those means. It is clear however, from the preceding discussion concerning access to resources, that social (or "class") interaction proceeds as the function of a combination of social and cultural factors (traditions) which in turn influence resource use, control and distribution.

Peasant production in much of rural Africa continues to exist (despite the relative degrees of penetration of capitalist relations) under conditions of free petty landownership and communal landed property (Hyden, 1980). It is therefore misleading to argue that pre-capitalist relations (as conventional Marxian interpretations indicate) have been "destroyed" by capitalist imperialism. Given this reality, one must also understand that the conditions under which appropriation of surplus product takes place in rural Africa are quite different from orthodox (capitalist or socialist) interpretations. In other words, the relations of production in African peasant society are qualitatively unique as productive and reproductive needs of the people can be met without the support of other social classes in the broader political economy (Hyden, 1980). Some would argue in fact (Hyden 1980, 1986; Ewusi, 1984; Chazan 1983) that peasant producers are separate from (but not

"outside") the state in that state structures are not an integral mechanism of the day-to-day productive activities of rural society. In this respect, the state, in certain respects, may be superfluous from the point of view of the individual producer.

Clearly, orthodox Marxian class theory does not adequately represent rural Africa's fractured social conditions. Conventional MOP theory therefore, must be "enhanced" to reflect more accurately the complex interactions between pre-capitalist and capitalist modes of production, social processes governing access to resources and their use and the implications of micro-level socio-cultural structures for environmental change.

Preceding arguments by Berry (1989) and Bernstein (1979) have demonstrated that orthodox conceptions of how western capitalist institutions and processes operate in conflict with local and national realities. African societies that had their own complex social systems and productive/distributive methods, did not passively accept a new economic ethos. Colonial administrators soon discovered unexpected reactions and adaptations to capitalist economic and political strategies. In Ghana for example, capitalism altered kinship systems and domestic organization so that by World War Two (WW2), there was a marked fragmentation of local communities as well as a severely eroded traditional lineage base (Mikell, 1989). Affinal relations in most African societies were constantly stressed because they had been over-utilized to serve economic benefit. Some areas of the most acute problems occurred in gender relations, conflicts between colonial and traditional courts and disputes concerning legalized land tenure (Mikell, 1989).

Colonial social control over indigenous people was exercised through access to and use of productive resources and related technology in addition to controlling the labour process - for example labour policies were enforced by the British colonial government compelling residents of Northern Ghana to work in the Southern export economy (Songsore, 1979). Colonial governments also facilitated the transformation of natural resources to commodities with the corresponding rights of ownership and control (Redclift,

1987). Unfortunately for the Africans, matters of macro economic control were usually out of their grasp and political opposition to protests was rarely tolerated. Capitalist processes were tightly regulated by the colonial administrators while associated socio-economic structures served to reaffirm western values and justify European exploitation of Africa's resource base.

With the introduction of European controlled mono-cropping and cash-cropping in West Africa for instance, peasant producers of these crops were incorporated into the global market system in a position of dependence. The primary question confronting European capital in the last quarter of the nineteenth century was how to organize the conditions of exploitation of African labour and land as it infiltrated the natural economy². In some regions, exploitive market conditions exacerbated the socio-economic disparities between "classes" that had arisen during pre-colonial European economic penetration (ie. class differentiation was especially apparent in areas of West Africa). Although the dynamics of class antagonism was (and remains) unique according to a country's particular history, the general effect was to assert tremendous socio-cultural transformations, especially in terms of resource use and control (Vercruysse, 1988). For instance, contrary to African "natural economies" where access to the means and relations of production form an integral part of social custom and cultural identity, market-based societies perceive the environment and its use as a resource base as separated from daily socio-cultural and political functions and relations, with value determined by its economic potential and use in production. Undeniably, this radical change in social values with regards to the

² By "natural economy" I am referring to Bernstein's (1979) use of the term to delineate a socio-economic formation in which the production of use values is dominant. This is not to negate the fact that widespread exchange and other relations existed in pre-colonial Africa, rather the term is used as an historical base-line between the period of penetration of modern capital and the socio-economic conditions prevailing before that process of penetration (p.423). Note that in this thesis, the primary objective is to focus on what repercussions the penetration of European capital had on the natural economy (economies) in Ghana in terms of relations established that perpetuate cycles of environmental and human poverty.

environment and material resources plays a critical role in the present environment-development crisis as indigenous socio-economic organizations seek to adapt to new and constantly fluctuating conditions. Development theory therefore must attempt to make connections between the environment as being a social construct and how this relates to resource use, distribution, structural poverty and ecological degradation.

In way of a criticism, a danger exists among modes of production theorists to generalize MOP into a universal theory and strict typologies. Class formation and social processes may also be described as functions of economic processes. In his critical review of Marxism and social class theories in Africa, Katz (1980) adheres to a more conventional explanation of MOP which is too narrow to represent adequately Africa's complex socio-economic landscape. Drawing on Bernstein's (1979) arguments concerning social diversity, it is clear that Katz's analysis fails to account adequately for social heterogeneity and variable modes of peasant production. Also absent from Katz's work is an awareness of the necessity of investigating particular peasantries with a view to understanding how they relate to the broader political economy (ie. in the overall development of commodity relations). In the evaluation of "class" and organization of production especially in rural Africa, it is critical to capture the dimensions of power over resources (land) in all its social, cultural and political complexity. Indeed, variations in power concerning the control of resources often find their origins in social adhesion rather than market operations (Okoth-Ogendo, 1989).

Hyden (1986; 1980) attempts to describe socio-economic power structures through the term "economy of affection" which denotes a network of support, communications and interaction among structurally defined groups connected by blood, kin, community or other affinities, for example, religion. The "economy of affection" links together systematically a variety of discrete economic and social units which in other regards may be autonomous. Hyden's analysis is interesting in that the economy of affection operates in many subtle

ways and that the intermittent nature of its "organizational articulation" defeats any simple categorization. However, the author falls short of evaluating the peasant economy in terms of the specific relations that individuals, households and cultural groups have regarding access to economic resources and how political economic processes at various spatial levels (local, regional, national and international) interact to shape "organizational articulation". Thus Hyden's conceptualization fails to provide a framework for studying the implications of specific social structures and how this may affect resource use and processes of political-economic development.

In her book, Cocoa and Chaos in Ghana Mikell (1989) makes the point that African socio-economic power structures played an active role in the development process. She argues, using Ghana's cocoa industry as an example, that given the nature of capitalist penetration not all areas or institutions of a society experience the same impact of the global economy. The social fabric of society can be highly variable in terms of class formation and struggle, production and economic systems and forms of exploitation. Note also that socio-economic transformation is evolutionary and continuous, so that impacts create fluid social conditions as opposed to static social typologies. The different forces involved with the patron-client relationship of capitalism, kinship patterns and the male/female division of labour make it difficult (if not impossible) to predict *how* all the different parts react to changes from various levels. Mikell maintains that structural poverty evolved from differentiated incorporation of parts of the (indigenous) African system into the global economy. This does not mean however, that the African peasantry has been completely "captured" by other social classes (Hyden, 1980). Given that many peasants are the owners of their means of production, it follows that they have not been completely subsumed by capitalism. It is not the existence of capitalism in Africa per se that undermines the position of the peasantry, rather the roots of underdevelopment may be

traced to **processes** of resource use and distribution that are associated to the capitalist mode of production as it has been articulated with peasant production (Hyden, 1980)³.

That the causes of poverty are fundamentally related to basic socio-economic processes is highlighted by the fact that decreasing numbers of peasants are able to "withdraw" from capitalist production. As rural socio-economic differentiation increases individual producers find it more difficult to escape from disadvantageous economic relations and exploitive economic activities. Heightened competition for fewer resources among rural producers also exacerbates environmental degradation given peasants' degree of dependence on the environment (Hyden, 1980). Although Hyden draws a valid connection between peasant commodity production, the natural environment and poverty in Africa, he neglects differentiation of wealth and unequal access to resources among the peasantry as contributing to poverty and environmental degradation. This shortcoming is related to his failure to elaborate on the specific intra- and extra-household relations that characterize the "economy of affection".

In the theoretical debate on causes of structural poverty, substantive amounts of scholarly material have been generated by MOP theorists over the interaction between pre-capitalist and capitalist forces and relations in society and the effects that this interface has

³ Given that there is a fair degree of controversy over the term "peasant mode of production" I have for the most part avoided its use so as to minimize ambiguity. According to Hyden (1980) the peasant mode of production is characterized by a rudimentary division of labour. Each unit of production is small with very little product specialization. Although these units are not wholly self-sufficient, management decisions are taken in light of domestic needs and capabilities. Most important, there is not functional interdependence bringing the separate units into reciprocal relations with each other. Therefore, the peasant system as a whole is "cellular". Note that in this explanation of producing units, Hyden fails to differentiate between types of peasantries. In other words, there is no indication given that different pre-capitalist modes of production exist, and the potential effect this could have on Hyden's "cellular peasant structure". To this brief explanation I would add a cautionary note that the social relations within each producing unit do not constitute the *social relations of production*. The social relations of production encompass and pertain to the relations of production, appropriation, distribution and utilisation of the social product as a whole (Bernstein, 1979). Generalised use of this term could create the misconception that the peasant mode of production is some amorphous economic system which is clearly not the case.

had on peasant production. By focusing on two different modes of production and the resulting distortion in each system as they interact, insight may be gained into African political, economic and social processes mediating resource allocation and use. Herein lies the basic assumption of the "articulation of modes of production" theory that steps beyond classical Marxist interpretations of class. The basic precepts behind articulated modes as outlined by Katz (1980) centre upon a number of points. First, the dynamic, historical process introduced through 19th century imperialism in Africa was imbued by contradictions produced by uneven development. Second, given that capitalism has a particular MOP, what is variable is the way in which the capitalist MOP is articulated to non-capitalist modes of production. Third, because change is evolutionary it is possible to have "stages of articulation" which allows exploration of the inter-relationships between capitalist and non-capitalist structures within colonized formations. Finally, articulation concerns the complexity of concrete situations (eg - exploitation, capitalist accumulation, socialization of labour etc.) . In other words, Katz (1980) argues capitalist modes of production alter other social structures but do not necessarily destroy them. In his article, "The Anomaly of the African Peasantry" Hyden (1986) maintains that the peasant mode of production is still a prevailing force on the African continent. He bases this argument on the assumption that appropriation of surpluses in Africa occurs through a segment of society that is not yet a class in the sense of being able to sustain itself in power independently of the peasantry. Whether or not one adheres to this line of analysis, Hyden's interpretation of African society has interesting implications for the articulation of modes of production debate. He suggests that because the appropriation of the surplus product in African economies is different from that found in "modern" economies, capitalist penetration remains limited in many African societies.

Drawing on Berry's (1989) work in "Social Institutions and Access to Resources", she maintains that peoples' ability to generate a livelihood or increase their assets depends

on their access to productive resources and their ability to control and use resources effectively. Access (the right to use or benefit from a productive resource) depends, in turn, on participation in a variety of social institutions as well as on material wealth and market transactions. It remains the case that access to resources continues to be channelled through social institutions which suggests that certain aspects of pre-colonial modes of production persist today. Note also that "traditional rights" can be phenomena created or recreated by rural elites in order to legitimize differential rights to resources. For rural populations however, the end result is the same - that "access" is influenced by social relations which themselves are objects of accumulation. This suggests that some degree of articulation between capitalist and pre-capitalist modes of production has taken place and that variations of pre-capitalist relations in production persist. Hyden's argument concerning peasant modes of production as a prevailing factor in present day Africa supports the notion that the use of purely market mechanisms (ie. price incentives) may not necessarily effect change in rural economies in terms of raising levels of (agricultural) production. This realization is critical in initiating effective development policy. Peasant involvement in the broader economy (which varies depending upon pre-colonial socio-economic organization) does not automatically mean that capitalist relations of production have "captured" pre-capitalist ones or that they are even mutually exclusive. It is undeniable however that capitalism has caused some degree of reorganization and social differentiation as indigenous societies adjust to changing conditions of production. Enhanced political economy theory attempts to expand on MOP interpretations of articulation and class struggle by evaluating the implications of changing conditions of production on economic development and environmental quality.

Concepts of articulation are useful in explaining internal differentiation within the peasantry, especially in reference to commodity production. Commoditisation was introduced through colonial capitalism and altered the reproduction cycles of various

systems of the natural economy. Essentially, labour and resource utilisation were drawn away from use-value production (in agriculture, hunting or fishing, animal husbandry or branches of craft activity) through a variety of means - taxation, forced labour, land alienation, coercion and the imposition of cash-crop production (Bernstein, 1979). The effect was an erosion of an entire culture of production that had previously been based on the natural economy.

The natural economy was replaced by a system of commodity relations (including the associated political, social and economic relations) which entailed immediate organisation of the production remaining in the hands of the producers with decisions concerning cultivation bylaws, land improvement schemes and credit and extension schemes controlled by non-peasant groups. Ultimately, these forces placed peasant farmers in a precarious situation as they became "squeezed" by commodity relations (Bernstein, 1979). The pressures arising from over-intensive cultivation of the land in order to meet decisions made by non-peasant groups increased long-term labour and land exhaustion. This simple reproduction "squeeze" (Bernstein, 1979) is a critical component in Africa's current development-environment crisis, as the resource base upon which people depend is being severely degraded through commodity relations.

Concurrent with this phenomenon was differentiation within the peasantry, as commodity production enhanced material competition between (male) producers and men and women. As soon as wealth is equated with capital, peasants become 'poor', 'middle' or 'rich' according to their ability to participate in market relations and amass "wealth" (Bernstein, 1979). Differentiation in "class" terms therefore, becomes another dimension of the intensification of commodity relations. I agree with Bernstein (1979) that although it is impossible to talk about peasants as a "class" in general terms, it is instructive to locate peasants within capitalist relations of production but without being subject to complete expropriation involved within the capitalist production process. Clearly, it is appropriate to

use the concept of articulation to analyse the conditions in which indigenous society has adapted and changed given impinging capitalist forces and relations of production.

Theories of class differentiation and articulation have been expanded through feminist literature that evaluates the role of gender in production. Similar to "class" systems, the transformation of sex-gender systems is tied up in the transition to capitalism (Stamp, 1989). In addition to class differentiation, female producers must also contend with gender differentiation in the productive and reproductive spheres. Stamp (1989), maintains that poor rural women pay a "double subsidy" in production. Women are expected to produce to support their husbands as in the "traditional" peasant food production economy, in addition to being expected to produce petty commodity surpluses, which their husbands then appropriate (Stamp, 1989). The role of women in production is central to understanding the impacts of articulation on pre-colonial societies in addition to the differentiation of wealth and access to productive resources between classes and among men and women.

Both Freund (1985) and Katz (1980) argue that the profound impact of colonialism in Africa lends itself to articulation concepts if only because conventional Marxist social categories are too rigid to reflect the fractured and evolving reality of African society. The "traditional-modern" dichotomy in orthodox class theory is neither analytically or descriptively useful. The African peasantry, far from being the "traditional and implicitly "backward" sector of contemporary societies is actually an impoverished class created by the relations of production that were imposed on pre-capitalist societies in the colonial era (Stamp, 1989).

In discussing class formation, Katz (1980) maintains a preference for articulated as opposed to the single-unity MOP approach because articulation allows for analysis of class formation and struggle while reducing the danger of defining classes by rigid economic categories. (Note, however that articulated modes of production are still restrictive in the

sense that they have a materialist basis and remain the function of economic processes). He goes on to argue that specific contemporary class formations have developed from the stunted transition to capitalism and therefore defy conventional Marxist categories. I would add that orthodox MOP analysis does not adequately reflect African socio-cultural, gender or class variations that sprang from interaction between local cultures, indigenous socio-political structures and conventions of resource control. Furthermore, articulated modes, by reflecting the dynamics of changing social structures, continue to meet the most important Marxist criterion in maintaining their (theoretical) meaning when assessed in terms of materialism. Because Marx's emphasis is on the material core of historical change (Freund, 1985) and given that capitalist transformation of indigenous structures has led to new structural features, it is clear that the "articulated modes" theory leads to an enhanced analytical approach able to evaluate social differences. It does so while reducing the particularism of inflexible analysis that stems from orthodox methodology. Articulation is a particularly important concept in terms of Berry's (1989) arguments concerning differential access to resources based on social and kinship relations. Concepts of articulated modes allow for the interaction of pre-capitalist and capitalist forces and relations in determining rules of access to the distribution and use of critical resources (in both the commodity and subsistence sectors).

It is unlikely that the debate between adherents and critics of articulation of Modes of Production theory will ever be resolved. However, as Kitching (1985) asserts, "We do not know what would be attained by resolving [the differences] even if we could" (p.117). In practical terms the literary battle between those who wish to articulate and those who do not wish to do so may be a case of academic overkill on a subject that is not entirely relevant to resolving the problems pertaining to the development-environment crisis. I maintain that the most relevant area for a new debate on Marxism must begin at the philosophical or epistemological level if it is going to progress as a theory. This idea is

supported by Kitching's (1985) assertion that any epistemology which does not base itself in a recognition that human purposes and activities have natural constraints must have serious faults. What I am suggesting is that Marxist analysis (in its current theoretical form and political-economic application) may contribute to an incomplete understanding of the consequences of human activity on Nature. If so, the implications for development could lead to profound problems in terms of misrepresenting or misunderstanding the roots of environmental exploitation.

2.2 Marxism, the Environment and Sustainable Development - Problems and New Directions

A central assertion of this thesis is that environmental and resource degradation directly result from cumulative land-use decisions through time and that these decisions must be considered as a part of a wider political economy analysis (Blaikie, 1985). As such, it is necessary to examine the relations of the decision-makers and other groups (or "classes") at the level of production. The primary focus is between rural populations and producers and their relations with the world economic system in so far as these relations help explain the dynamics and types of exploitation that are causing environmental deterioration. It is a fact that the social and physical landscape in which peasants and pastoralists find themselves in developing countries has long been affected by European (Western) economic, social and political influences (Blaikie, 1985). Two particularly important spheres within these areas of influence include the social relations of production at the level of enterprise and the conditions of exchange (the prices or costs of production and the product). In both of these spheres, surpluses are extracted from peasants which tends to enhance conditions of exploitation and exhaustion of peasant land and labour through the "simple reproduction squeeze" (Bernstein, 1979).

The research implications of these conditions clearly favour an approach that sees development as a social process influenced by the conditions of availability of other productive resources including human, financial, material inputs and knowledge and the institutional means to use them effectively. Conditions of access to and control of the environment and productive resources in Africa have undergone (and continue to undergo) change which creates uncertainty and tension (Berry, 1989). These tensions affect resource use and strategies of coping with environmental change. Therefore, it is critical that theory and applied developmental strategies reflect an understanding of these social transformations as reflected in the material and natural environment. In studying relations of poverty and exploitation, it was argued in the previous section that "modes of production" cannot be applied indiscriminately to the African situation where "class categories" do not coincide with conventional "economic" interpretations. In this thesis, modes of production will be used to evaluate relations of exploitation between groups in order to decipher how environmental factors interact with the social organization of resources to influence environmental quality over time. This challenges "conventional" economic interpretations of African social reality in at least two ways. First, it avoids economic reductionism in the sense that it sees peoples' response to development challenges as a cumulative process involving non-economic factors. The rich variation among African societies as they have been articulated with capitalism must be understood in the context of how people react to change, how elements of "traditional" societies affect resource allocation within the broader capitalist mode of production and how power (economic, political and social) is distributed among different social factions. Secondly, an "enhanced political economy" approach to underdevelopment in Africa demands an appreciation of the social philosophy of a people as necessary in understanding the dynamics of production structures. In this way the "enhanced" analytical framework is more useful than orthodox MOP theory as it does not assume the existence of class

conditions and/or associated economically reductionist behaviour that may not exist in the African context.

If by "development" we are given to understand a set of conditions facilitating human ascent, an ideology which demands establishing criteria, goals and methods for achieving self-determination (Goulet, 1971), it is apparent that factors other than those relating to economic prosperity must be considered. Especially for people of the Third World, this involves freedom from oppressive and exploitive relationships both within a society and external to it. Because these issues are the focus of Marxist theory, it is logical to build upon modes of production methodology in the search for a new "environmentalist" development paradigm. Note also that women play an important part in an enhanced "environmentalist agenda" given their central importance in productive and reproductive circles. An enhanced paradigm would frame questions of oppression (class, gender) in terms of resource exploitation as determined by social structures and structures of production. It remains to be determined however, whether this new paradigm will be a theoretical extension/expansion of MOP or an evolutionary step beyond Marxism.

Taking the idea of freedom from oppression and exploitation as paramount in development, consider that rural poverty in Africa results from poor people having limited access to or control over the use of particular livelihood resources. In his article "Environment and Access to Resources in Africa" Blaikie (1989) maintains that the environment can only be understood in relation to overall patterns of resource control which in turn operate within a variety of social, political, cultural and ecological processes. The conditions of an individual's resource "entitlement", in turn, change according to the level of their social system's integration into national and international systems. The functioning of households, regional economies and national and international systems are all interdependent.

Redclift's (1987) concept of the "internationalization of the environment" describes a process whereby the environment and the peasant have been integrated into a system where the production, processing, marketing and distribution of resources has become part of a vertically organized, globally controlled process. Whether or not rural producers have been "captured" by capitalist relations through commodity production and internationalization of their resource base remains a point of unsolved theoretical debate. However, most would agree that Redclift's argument is valid in the sense that it draws attention to the powerful macro-level forces influencing individual and group decision making. Although individual decision making is not a direct function of these forces, it is the case that producers' "option values" are increasingly limited as a result of internationalization of the environment. An "option value" as defined by Blaikie (1989) "...is like an insurance policy: it is a premium which one is willing to pay over and above the normal cost of an operation in order to be able to reduce risk and uncertainty" (p. 22). In terms of environmental degradation, it may simply be too expensive for a farmer to use conservation techniques in the short run to preserve the long term value of her or his land. Indeed, it may be that the return for conserving an already damaged environment is very low, reducing the "option value" of conservation practices. Therefore, uncertainty over or decreased viability of option values in terms of the dynamics between production and environmental preservation may lead to low environmental viability over time, further restricting individual access to livelihood resources.

It is the history of this process that political economy can analyse with a view to addressing the tension between humanity's material interests and environmental sensibilities. Marxism has the potential, in terms of socio-political and economic analysis, to focus on the ways in which the development of capitalism has internationalized the resource struggles of peasantries and pastoralists, thereby influencing the ways in which they use the environment. The control which international organizations are able to exert

over developing countries reduces the ability of the rural poor to preserve and enhance the environment and resource productivity. Therefore, in defining solutions to Africa's environment-development crisis, theorists must incorporate the overriding structures of the international economic system as they affect the dominant mode of production in a country and how this mode interacts with and shapes local productive strategies and resource use and allocation. Clearly, environmental change is linked to process in the broader political economy in addition to local production mechanisms.

In his chapter on "The Exploitation of Natural Resources and Labour" Blaikie (1985) seeks to develop a "wider political-economic analysis" capable of studying cumulative decisions and changes of perception through time. I believe that political-economy which seeks to evaluate the historical evolution of socio-economic structures, is the most viable framework within which a "sustainable development" component can be integrated. Marxian theory must be enhanced to address environmental issues in terms of exploitive mechanisms as the primary social determinant behind environmental deterioration. Before this goal can be achieved however, modes of production and articulated modes need to be "expanded" to allow for the study of change in perception of the environment as a function of modes of exploitation. This entails a review of relations and types of socio-environmental exploitation in addition to forms of surplus appropriation.

Redclift's (1984; 1987) treatment of the environment and Marxist thought introduces some key issues at the broader social scale, but fails to give adequate attention to micro-level exploitation. Within Marxism, he begins, the environment has served an enabling function, with "value" theoretically being derived only from the exploitation of labour power. According to this analysis, the barriers to development accrue from property relations and legal obligations, as opposed to individual resource control. Redclift notes that under commodity production, ownership of land and its economic exploitation are separated thereby removing environmental responsibility from the level of use or

cultivation. The resulting problem is that concern with the environment centres on property relations, leading to a separation between growth forces (economics) and environmental issues. Redclift concludes this argument with the valid concern that the failure to incorporate environmental issues as axiomatic "laws" or factors within political economy, jeopardizes sustainable development efforts.

Given that Redclift is writing within the political-economy framework, his position would be considerably enhanced if it were extended to examine specific types of environmental exploitation within and between various social groups. For instance, the Ghanaian male farmer experiences exploitation at a number of levels - through obligations to lineage or symbolic kinship ties, to the petty bourgeoisie, to the state bureaucracy (taxes, marketing boards, bribes etc.) and indirectly to the international market place (Vercrujse, 1988). If the farmer is a woman, there are additional exploitive relationships based on gender differences within productive and reproductive capacities (Mikell, 1989). The subordinate class position of women in African society has affected their access to critical resources (Robertson and Berger, 1986). Although women may in theory participate equally in state ownership of the means of production, they do not share equally in the **control** of those critical resources which remains male-dominated. The issues of "ownership" and "control" of resources in African society exhibit closely connected gender and class inequalities (Robertson and Berger, 1986). It is a significant absence in Redclift's analysis that the connection between gender issues and resource use is not discussed. Indeed, to a large extent, feminist political economy theory (in addition to mainstream political economy theory) has neglected the environment as a central component of its analysis.

For example, Stamp's (1989) concept of women paying a "double subsidy" in production is not extended into an environmental argument. It can be argued that because women are exploited by both capital and husbands in production, they are forced to over-

exploit the resource base. Examining intra-household differentiation in access to and control over land, labour and its products may provide insight into issues of environmental degradation. Mackenzie (1990) argues that "...the exploitation of the land base proceeded from a 'reproduction squeeze' (Bernstein 1979) whereby the option of investing in the maintenance of soil productivity became a less viable strategy for women in the context of struggles for power and access to land, labour and surplus" (p. 2). While feminist research in the last decade has tended to concentrate on understanding women's class position in society (Robertson and Berger, 1986), less work has been conducted into women's role in production and how their relationship to resource allocation and use has affected the environment. In fact, the gender of resource managers has rarely been considered of analytical significance in development theory (Mackenzie, 1990). As the primary agriculturalists in African society, women play a critical role in development as 'guardians of the environment'. Therefore, progressive change in the theoretical conceptualization of Africa's environment-development crisis, must necessarily include the struggles of women in the productive and reproductive circles. Enhanced political economy analysis can be used to study the basis of female subordination as it relates to environment-development issues by looking at intra- and extra-household factors influencing the use of resources and the distribution of surplus production.

Blaikie (1989) and Berry (1989) argue convincingly of the need to consider social differentiation in determining access to resources. Drawing on Bernstein's (1979) critique of "the peasantry" as an amorphous socio-economic group it is clear that Redclift's (1987) treatment of "the poor" in Africa is inadequate in terms of neglecting micro-level processes of social and environmental change. In some respects, Redclift's (1987) predominantly macro-level treatment and generalized environmental concerns bear a stronger resemblance to dependency theory than to Marxian political economy.

Again using Ghana as an example, Mikell (1989) shows that integration into the capitalist (global) economy introduced a series of conflicts and problems at the local level that have perpetuated conditions of inequality, inequitable distribution of livelihood resources, poverty and loss of environmental control. She argues that, regardless of the level of analysis (international, national, regional, local, household, gender) the repercussions of the cocoa-economy have been severe, leading to heightened resource competition and environmental degradation through international linkages and competing interests between capitalist-oriented groups (peasants, regional ethnic groups, men and women and traditional elites etc.). The critical importance of resource control and quality for the rural peasant is clearly demonstrated through their dependence on environmental resources for income and subsistence. Ardayfio-Schandorf (1989) observes this factor as particularly crucial in developing countries where the natural environment intersects the life of the majority of people. The point is that although Redclift (1984, 1987) assesses the development crisis as inexorably linked with the environment, a more complete theoretical understanding of human interaction with and use of the environment is necessary not only for the enhancement of Marxian theory, but in the interests of poverty alleviation and survival. Hardly anywhere in the large body of political economy research is there an accurate and systematic treatment of the relationship between changing patterns of access to resources and environmental change as linked with historical social evolution (Blaikie, 1989).

Despite some lack of depth regarding social analysis, Redclift's pleas for enhancing political-economy is highly topical given current development problems. In his book, Sustainable Development, Exploring the Contradictions Redclift (1987) examines in greater detail modifications to Marxist writings that would help produce a body of theory incorporating sustainable development concepts, especially at the macro level. I agree with one of the author's central points that crucial to paradigm evolution is the need to

understand ecological factors and their relationship to social structures by specifying the circumstances under which they are accounted for in political-economy theory.

Bernstein's "simple reproduction squeeze" for instance, offers a framework for evaluating the interaction between socio-economic and environmental systems, showing the relationship between ecological and human poverty (Bernstein, 1979). In a simplified version of his argument, he contends that one of the initial factors in the "squeeze" stems from a deterioration in terms of trade between necessary purchased commodities for consumption and agricultural inputs and commodities (usually primary agricultural surplus) sold by peasants. These conditions lead to a reduction in consumption and intensification of commodity production. The resulting problems cause increased production costs contributing to the exhaustion of land and/or labour. In turn, the exhaustion of land and labour reinforces degraded environmental conditions. He concludes that environmental degradation must be explained in terms of surplus extraction through social relations of production and in the sphere of exchange. Note that Bernstein's (1979) reproduction squeeze can be extended to refer to the "squeeze" experienced by women at both the levels of production and reproduction. The subordinate class position of women forces them to cope with a double burden of unequal access to and control over critical resources combined with intrahousehold exploitation (Robertson and Berger, 1986). The concept of the "simple reproduction squeeze" lends support to Redclift's (1987) idea that renewed Marxist thinking must view the environment as process rather than a form, constructing a set of conceptual relations between physical space, natural resources and constantly fluctuating socio-economic patterns. In other words, enhanced Marxist theory must recognize the environment as having its own intrinsic value, above and beyond the value it is afforded through incorporation into socio-economic systems (capitalist or socialist).

The urgency of formulating an expanded development-environment theory concerned with matters of resource control becomes more apparent when considering the

actual meaning of "sustainable development". The 1987 Brundtland Commission popularized the term "sustainable development" in its report designed to set a new global agenda for change (WCED,1987). The principle of "...meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED,1987 p.8) is by now widely accepted (at least in theory) and espoused by most nations, international institutions and development agencies.

The Brundtland Report is largely normative, describing how values "should" change and that successful implementation of sustainable development policies "should" foster "...greater co-operation among developing countries and between countries at different stages of economic and social growth..." in order to induce appropriate structural change and meaningful multilateral development initiatives (WCED,1987). Given that the Brundtland Report is not a policy document, but rather a policy guideline and that it was intended to raise the level of public awareness concerning development-environment issues, it remains a great success. However, numerous broad gaps exist in the Report's treatment of "sustainable development" which prevents the concept from becoming operational. Before examining the place of sustainable development in Marxist theory, it is first necessary to scrutinize more closely the meaning of "sustainable" and "development".

A simplified explanation of the economic terms "growth" and "development" quickly draws attention to the fact that current global strategies are both inappropriate and highly damaging. Whereas "growth" refers to expansion in scale of the physical dimensions of an economic system. "development" refers to a qualitative change (improvement or degradation) of a physically non-growing system in a dynamic equilibrium relative to the environment (Goodland, 1988). Tisdell (1988) notes that while there is general agreement in theory on the desirability of aiming for a "sustainable society", there is considerable disagreement over the focus of sustainability. Economists for example tend to view sustainable economic growth as the goal, whereas ecologists prefer to

promote the idea of sustainable productive systems. They argue that any physical subsystem of our finite and non-growing earth must ultimately be finite and non-growing if it is to be sustainable. Clearly, long-term "sustainable economic growth" becomes a contradiction in terms and will contribute to the degradation (or destruction) of planetary environmental systems. This is not the place to follow the debate between economists and ecologists on sustainability. However, the fact remains that if economic development is to be sustainable, the ecological systems on which economic production depend must also be productive and sustainable. Ultimately, the environment determines our ability to develop and therefore must be a planning and practical priority.

Although the Brundtland Report differentiates between what it sees as heuristic (sustainable) and destructive human behaviour, I believe that the "alternative agenda" proposed, covering such topics as population, environment, food security, agriculture, forestry and human settlement remains very general. Where poor people should be the focus of sustainable development policies, the Brundtland Report does not differentiate among types of poor people and assumes that despite cross-cultural, historical, political and environmental differences their needs and priorities are the same. In many ways, the WCED prescription suffers from ethnocentric, macro-analytical problems similar to underdevelopment and dependency theory. The danger of this type of sustainable development thinking is that it fosters "single solution" policies and neglects structural and society-specific problems.

Furthermore, the Brundtland Report mentions inequitable international structures and "core-first" policy proposals as major causes of perpetual underdevelopment in periphery areas. However, given that most of the WCED's environmental management solutions emanate from macro-level (international) organisational levels and institutions (eg. environment and international trade; environment and development assistance; environment and transnational corporations etc.) it is uncertain as to how global structural

change would result from this policy orientation. The World Bank's Tropical Forestry Action Plan (designed with the help of various United Nations bodies such as the Food and Agricultural Organization, the World Resources Institute and the United Nations Development Programme) is a prime example of a macro-level "solution" to a symptom of the environment-development crisis - a solution which ignores the effects of commercially biased international structures and current "development" initiatives (eg. structural adjustment programmes) on deforestation problems. Made to look like a new initiative borne out of increased awareness of the crises of tropical deforestation and desertification, the TFAP is merely a fresh legitimisation of old programmes of commercial forests (Shiva, 1989). Chapters five and six discuss in greater detail the objectives and implications of the TFAP.

I agree with Redclift's (1984) assessment of the global political scene that "...limits on international society's ability to solve environmental problems are not technical but political and economic, many of them stemming from the structure of demand in the developed countries and their relations with the underdeveloped world" (p.20). Extending this criticism to the Brundtland Report, it is clear that while general conceptual links are made between human and environmental poverty, the systemic **processes** underlying these links are not explored as that could demand a restructuring of the current inequitable international order. Political restructuring (on an international scale), while vaguely implied, is not a real component of the Report's agenda. In a later book, Redclift (1987), highlights a number of areas that have further complicated the international scene and the ability to work effectively towards sustainable development policies. To begin with, structural adjustment programmes continue to demand export-led growth strategies in less developed countries (LCD's) even though they extract huge environmental and social costs that cannot possibly be considered developmental. Tied to this problem is the massive Third World debt - countries are literally committing ecocide by mortgaging their

environments to finance the interest on loans that cannot possibly be repaid. Secondly, there is the fallacy of structural "adjustment" when structural reform is what is needed. Third, although the Brundtland Report cites the "aid-trap" as a significant barrier to self-determination, it fails to draw the connection between aid and monetisation of local economies. By reducing peoples' capacity to manage their own environment on a sustainable and productive basis, aid can contribute to the problem it is intended to solve. Much sustainable development planning (including that in the Brundtland Report) fails to incorporate cultures and cultural perspectives in the basic development framework, thereby limiting the chance of local level participation (LLP) which is a key ingredient for success.

The arguments for increasing LLP are numerous and compelling. Participation in development can have positive impacts in at least three areas: improving the facilitation of external (state) interventions, in contributing to more appropriate decision making (problem identification) and policy formulation and finally seeing participation as a means of empowering the (weakest) social groups towards access and control over resources and decision making (McCall, 1988). Furthermore, given that "the rural poor" are not a homogeneous group, concentration on LLP alerts development practitioners to the specificity of problems thus highlighting the need to develop a more rigorous theoretical and practical approach to define priorities, objectives and limitations within a particular context.

Redclift (1987) argues that environmental movements in the South are more aptly termed "livelihood struggles" - the attempt to create the conditions of existence necessary for social and biological reproduction outside the spheres of capitalist accumulation and market oriented resource use. The immediate task of the poor, is to resist the incorporation of resources at their disposal into wider spheres of accumulation. Concepts of "local level participation" and "empowerment" are integral components of a wider social struggle in poor countries to retain control over the natural environment and livelihood resources. There are at least two essential characteristics of the environmental movement as it applies to

developing countries: first that these movements are supported by people engaged in a livelihood struggles and second that this struggles is linked to sustainable objectives (Redclift, 1987). There is significant potential for mass mobilization over "environmental" issues in the Third World as the rural and urban poor seek to define the benefits of development in terms of basic environmental requirements - clean water, food, energy and shelter. Clearly, this understanding of "environmental movement" is radically different from that experienced in developed countries where the social struggles revolve more around conservation issues than fundamental questions of livelihoods and survival.

Livelihood struggles and differential access to resources relate to problems of accumulation, class struggles and exploitation. In the context of political economy, it has been argued here that underdevelopment in Africa can no longer be represented largely in terms of "labour exploitation". Therefore, the focus of an enhanced political-economy framework must revolve around "environmental exploitation" mechanisms that reduce the natural resource base upon which poor people depend for their livelihoods. "Conservation" concepts advocated in industrial societies are often (and inappropriately) interchanged with "sustainability" concepts and clearly do not provide a viable environmental framework for the South. Both Blaikie (1985) and Redclift (1984, 1987) maintain that the urgency of the environmental problem must be reflected in an equally urgent quest for an appropriate environmental framework for the South.

It is true of both Marxian and neo-classical approaches that current environmental policy fails to identify a political environmental *agency* without which nothing can be achieved and a *mechanism* through which environmentalist policies will be implemented. Fundamental to environmental concerns in developing countries is the realization that people cannot change the way they use resources without changing their relations with each other (Redclift, 1984). It is impossible as Blaikie (1985) argues, to separate ecological from political and economic conditions. Trying to extract more wealth from the

environment cannot replace what a peasant farmer loses through market forces. "Human poverty makes physical environments poor,...what needs to be recognized is the specificity of the relationship between structural factors and those of the natural environment" (Redclift, 1984 p.79).

Given that current Marxist political-economy centres on relations and forces of production, its theoretical framework could be "extended" or enhanced to focus on the evolutionary interaction between environmental resources and social perception/use of those resources as a function of economic behaviour. "Resources" for instance, have specific value in capitalist society according to how they can be used in a given productive system to satisfy consumers (this is also true of socialist societies within command economies). It must be possible to trace therefore, the significant transition points in socio-economic history where changes in production patterns initiate a transformation of environmental use. These "transition points" would be different according to cultural, historical, economic and socio-political experience. Such an analytical orientation would facilitate advanced social theory evaluating general mechanisms of environmental exploitation in addition to the changes one society could induce in another through its environmental values. Political-economy must adapt to evaluate the nature of poverty and exploitation which are clearly linked to how nature was transformed under capitalism and the forms of surplus appropriation experienced by LDC's.

I have argued that traditional Marxism is too narrow to conceptualize the appropriate relationship between nature and society. Developmental theory should recognize that a fundamental contradiction exists between human action governed by principles of commodity production and market exploitation (both capitalist and socialist) and environmental sustainability. While the potential for human material development is contained within Nature, there are limits which nature presents to human beings. Therefore, in order to understand society-specific problems and needs, enhanced political

economy theory would require a cross cultural historical approach examining the role of the environment with respect to the expansion and contraction of the world economic system. Such an analysis would likely demonstrate that the key to development and sustainable environmental use is through "empowerment" of those poor in LDCs, to control the use of resources at their disposal. Environmentalist ideals which currently lack a coherent political direction can be given conditional focus within Marxism if poverty, oppression and exploitation are viewed as the outcome of the relationship between the natural environment and socio-economic structures. Environmental and human poverty result not only from distributive and exploitive mechanisms, but perhaps most importantly from structural processes. Theorists must strive to propose a definition of development which recognizes that the limits of sustainability (environmental, economic, political and cultural) have structural as well as natural origins (Redclift, 1987).

Enhanced political economy analysis must be able to account for processes of exploitation at the macro social scale (ie. to think in terms of structural elements of environmental degradation) while at the same time linking these processes to modes of production research in a specific (national, local) context. The challenge facing enhanced political economy is in making the theoretical connection between socio-economic processes at various spatial scales and how this influences the direction of environmental change and resource use. It must also be recognized that environmental and social change are mutually recursive, each having an impact on the development constraints and opportunities inherent in the other. The importance of the cocoa economy and rise of differentiated group interests in colonial Ghana may illustrate this argument. By the end of the British occupation, the structural conditions existed for the perpetuation of exploitive relations between producing and appropriating classes, and the continued land pressures for cocoa, mining and timber concessions ensured the reproduction of underdevelopment through loss of environmental control at the productive level (Vercrujse, 1988). In the

case of Ghana, peasant producers have been drawn into commodity production at the international scale, reinforcing patterns of exploitation (environmental and labour). The structural processes have been established therefore, for the penetration of capitalist relations into a variety of commodity producing sectors, including agriculture, forestry and mining. The repercussions of these relations on producers and their environments must be examined by combining local level class and gender analysis with national and international socio-economic, structural and political trends so as to understand the historical and cultural processes directing environmental use as related to cyclical underdevelopment.

Understanding the mechanisms and processes of underdevelopment as they relate to human and environmental poverty is crucial in evaluating the historical development experience of a specific country. Concepts of class structure (group interests) and struggle are key components in analysing the direction and type of development strategies pursued within a given set of conditions. A review of the historical conditions surrounding Ghana's incorporation into the world economic system (provided in Chapter 3) will demonstrate the importance of forces and relations of production, especially within the cocoa economy, in structuring how people gain access to productive resources. The complex socio-economic system which arose from the colonial trade economy played a significant role in institutionalizing powerful local, regional and national elites that have created and perpetuated mechanisms of structural poverty resulting from inequitable access to resources. As seen in this chapter, the environment-development crisis must be viewed as the outcome between broader political economic events and how these events interact with the environment. Development strategies which fail to incorporate "social-environmental" processes as they affect resource use and productivity are usually inappropriate and counterproductive to sustainable objectives. Discussion in the second chapter concerning the urgency surrounding the need to "re-think" development theory results not only from the evidence of deepening environmental and human poverty in

Africa, but also from the inability of conventional theory to conceptualize and address these issues. This fact is important to keep in mind in the context of Chapter three's overview of Ghana's colonial and post independence development strategies which exemplify the problems stemming from a theoretical and practical misconception of development constraints and opportunities.

CHAPTER THREE

The Structures of Underdevelopment in Ghana: An Historical Overview of Socio-Political Conditions

The purpose of this chapter is to highlight the origins of the environment-development crisis in Ghana by examining Ghana's historical incorporation into the world economic order. Colonisation not only entrenched export oriented commodity production in Ghana, it also institutionalized relations of human and environmental exploitation particularly through the growth of the cocoa economy. An examination of post-independence development strategies shows that processes of underdevelopment have been perpetuated as a result of the state's inability to achieve social transformation combined with inappropriate market-based strategies that do not penetrate to the point of peasant production. These processes have been shaped by Ghana's historical development experience, the persistence of pre-capitalist social relations in exacerbating differential access to productive resources and by misdirected state planning.

3.1 The Current Crisis - Introducing the Problems

Ghana, in Sub-Saharan West Africa was the first colony on that continent to gain independence from its colonial master in 1957. An examination of Ghana's political-economy since independence would hardly stand as a model of success to the development theorist seeking evidence that scientifically formulated economic strategies provide an effective stimulus to prosperity. Once thought of as a country with substantial growth potential, Ghana is currently in the throes of a deep and multifaceted crisis symptomatic of institutional, economic and environmental deterioration. This crisis is characterized by economic hardship, political instability, increasing social differentiation and environmental degradation as reflected in declining cocoa productivity, deforestation and other related

ecological problems (eg. poor soil quality, desertification in the North, decreased moisture regimes in the North and the Forest Belt). Social differentiation in Ghana has significant implications for resource allocation and use as poor rural farmers struggle against increasing resource disparities in their efforts to gain access to productive resources (land, technology, credit facilities). In re-thinking development strategies therefore, it may be instructive to locate issues such as social fragmentation and differentiation to questions of resource productivity, distribution and enhancement. In order that a sound and sustainable development be realized, it is critical to have a holistic understanding of how people relate to the environment as a function of how they relate to one another. Socio-political institutions and processes which support them (as will be shown in the case of Ghana) factor significantly in the overall development equation.

More than 30 years of political and economic mismanagement in Ghana has intensified underdevelopment and increased environmental degradation. In terms of the political elements of the crisis, Ghana has had nine different governments within the short history of her existence as a sovereign state including three civilian and six military regimes as shown in Table 1.

Table 1

**Governments of Ghana in the Post Independence Period
1951-1981**

1. C.P.P. Government	Mar. 1951- Feb. 1966
2. National Liberation Council	Feb. 1966- Oct. 1969
3. Progress Party Government	Oct. 1969- Jan. 1972
4. National Redemption Council *	Jan. 1972- Oct. 1975
5. Supreme Military Council I *	Oct. 1975 - Jy. 1978
6. Supreme Military Council II *	Jy. 1978 - Jn. 1979
7. Armed Forces Revolutionary Council	Jn. 1979- Sept. 1979
8. P.N.P Government	Sept. 1979 - Dec. 1981
9. P.N.D.C	Dec. 1981 -

* note : the three periods indicated by (*) can be considered as one long stretch of military rule under Acheampong and Akuffo.

The fragility of the Ghanaian state structure has been demonstrated by its inability to deal effectively with the growing severity and persistence of its crises since 1957. As an economic crisis there is the evidence of a huge (and increasing) foreign debt burden, shortages of food and growing socio-economic disparities between regions and people. The economy also suffers from over-dependence on cocoa (the chief foreign exchange earner) which has undergone dramatic price fluctuations in world markets, making attempts at sustained and self-reliant growth and adjustment impossible. In environmental terms, attempts at modernization and industrialization and recovery efforts based on export-led growth (cocoa, timber, gold) have increased long-term unemployment, inequality and poverty among the people. Furthermore, financing short-term unsustainable growth strategies by mortgaging the environmental future is not only leading to ecocide but is effectively limiting the ability of most Ghanaians (who depend directly on the environment for their livelihoods) to define their own terms of development. Socially, this has created a growing awareness of the necessity for radical structural reforms. The seriousness of the economic and political crises has led to a loss of confidence in the state on the part of Ghanaians (Ewusi, 1984a). An all class crisis has emerged reflected in the tensions among most classes in society and the state. Promises of restructuring appear empty in the context of personalized politics and blatant inequalities of power and wealth (Ewusi, 1984a; Ninsin, 1987). As a result, society and government seem unable to form a development strategy that satisfies basic needs for all, heals historical trauma and widens the range of effective choice for the majority of citizens. Note however, that this apparent "inability" is a manifestation of colonial history, domestic policy and international factors creating a complex and interrelated series of events that have rendered development strategies since independence ineffective.

The broad objectives of this chapter are twofold. First to provide a general understanding of Ghana's current environment-development crisis through an examination

of some structural causes of underdevelopment. This includes an historical examination of colonial and post-independence economic and socio-political institutions and policy. Secondly, the constraints on achieving "sustainable development" given the post-independence socio-political arena will be discussed. The potential effectiveness of policy oriented economic reforms will be contrasted with the need for general structural transformation necessary for addressing the resource needs of the rural poor.

3.2 The Roots of Structural Underdevelopment

Given that "development" implies a multidimensional state in which human needs (material and social) can be met in the context of national policy it follows that "development strategies" per se should employ a combination of socio-political and economic measures that are mutually recursive. Therefore, understanding the historical nature of the state and the goals sought through specific policies is crucial to evaluating the dynamics of various "crises" and how they may most effectively be reduced or resolved. In the case of Ghana, underdevelopment stems from a general inability to control its own economic and environmental resources which is further complicated by weak political institutions that are severely restricted in terms of legitimacy, authority and power to effect change.

3.2.1 The Colonial Experience - An Overview

An investigation of the nature and origins of contemporary trends in spatial and social inequalities, together with the current economic and environmental crisis, reveals that they are directly linked to the dependent-capitalist nature of the historical processes of development (Songsore, 1979). Colonialism is both an economic system and ideology - a mix of laissez-faire and free trade economics combined with (in the case of Britain), social Darwinism and Christianity. It is an administrative system designed to incorporate the

interests of metropolitan and expatriate classes with colonial society and political-economic events. Colonialism also unleashed tremendous forces of transformation at every level of society; politically, socio-culturally, environmentally and of course economically.

An interesting factor to consider in this overview of historical events is that British colonial authorities may not have pursued fully the economic potential of African controlled commodities (primarily cocoa) in Ghana. Economic transactions were encouraged only if they were consistent with the profitability and accumulation of British capital to ensure that they did not threaten or undermine the social basis of British power in the colony. Given a collection of documents and statistics from 1900 to 1960, Kay (1972) in his book The Political Economy of Colonialism in Ghana presents a convincing argument that colonial management was very cautious in its development policy in order to maintain a tenuous balance between placing too much power in African dominated cocoa production and attempting to reinforce colonial politics and means of control.

What is now Ghana had trading connections with the outside world before it became a colony of Britain in the latter 19th century. The Ashanti Empire in particular (centred around present day Kumasi) was an extremely powerful trading network at the time of British infiltration and traded many commodities notably slaves and gold to both European merchants and northern Arabic states. Indeed, the pre-colonial division of labour did not subscribe to the "myth of the amorphous peasant"; petty commodity production (of agricultural and other goods), trading networks and monetisation were already established (Mikell, 1989). Therefore, when the British began to develop gold resources in the west and cocoa in the east between 1880-1900, the existing set of socio-economic relations (kinship, chieftaincy, trading patterns, land use etc.) were transformed through new mediums of exploitation and new exploitive classes. Wage labour was imposed through mining and commerce while commodity production altered farming arrangements and instilled new (capitalist) environmental values.

Kay (1972), using examples from the colonial Legislative Council Debates, evaluates the general economic policies for Ghana between 1889 and 1957 to show that there was a basic contradiction between **economic** and **political** determinants of policy. According to the author, it is possible to define five phases in the evolution of colonial economic policy:

1. **1889-1919** : the establishment and consolidation of the physical, social and administrative infrastructure of the colonial state
2. **1920 -1930** : the Ten Year Development Programme : designed to promote export diversification
3. **1930-1945** : depression, retrenchment and war
4. **1945-1950** : popular riots and royal commissions investigating self rule
5. **1950-1957** : terminal colonialism and the beginning of national development

Using events in the second economic phase from 1920-1930 to illustrate Kay's argument, the Ten Year Development Programme proposed a public expenditure of L 24 million on projects in transport and communications, water supply, drainage, electric power, maps, surveys and later agriculture. In the original proposal, agricultural diversification was to form a major component of public investment as overdependence on cocoa was seen as a dangerous weakness of the economy. Table 2 gives some indication of the world wide boom followed by the post WW I slump that affected the Ghanaian economy.

As it turned out, the motivation behind agricultural diversification was to slow the growth of the Ghanaian run cocoa economy. In economic terms, agricultural diversification was contradictory to colonial trading philosophy based upon "comparative advantage".

Table 2
Trade and central government revenue, 1918-22 (L 000's)

	Imports	Exports	Revenue
1918	3,256	4,472	1,299
1919	7,946	10,814	2,601
1920	15,172	12,352	3,722
1921	7,661	6,942	3,016
1922	7,900	8,355	3,357

source: Kay, 1972 p. 42

In political terms however, colonial administrators feared the development of a wealthy indigenous (African) class of planters that could represent a political threat to the colonial regime. Therefore, the diversification scheme was suggested in order to enhance the "traditional" framework of Ghanaian society (and reduce the relative control of African elites over the prosperous agricultural export sector) and to promote expatriate capital over Ghanaian capital and initiative. Investment funds were available for Africans wishing to convert their cocoa farms to alternative food or cash crops (especially cotton and sugar). The real issue of course was to reduce the rate of growth of the cocoa economy and maintain British control of the social, political and economic direction of colonial development. Department of Agriculture rationale for the scheme concluded that inadequate disease control by Ghanaian farmers and the poor quality of goods brought to market necessitated stronger British control in production and trade. The Department was wrong on both counts - the African farmers used highly successful and indigenous knowledge systems for pest control on infected cocoa trees - diseased areas were simply left fallow for a period of years until the problem was solved by nature. In terms of the quality of the product, international traders found it to be as good or superior to its main West Indian competitors (Kay, 1972). The economic logic of British attempts to reduce the competitiveness of the cocoa economy through agricultural diversification is clearly open to

question. Arguments that the industry was "unstable" were true, however, not because of the nature of the product but rather its export-orientation in the world economy. Refocusing efforts around another product (not controlled so strongly by the Africans) would have led to the same export dependency relationships, not to mention being ruinously expensive in the short run.

The point is that economic development was controlled by the British (wherever possible) in order to further political goals. The agricultural diversification scheme, although unsuccessful, shows that the structure of the colonial economy was manipulated to serve the interests of the ruling (British) class.

I agree with Kay's basic argument over the contradiction between economic and political purposes, and would suggest that two important trends emerged from this contradiction that had a critical influence on the direction of Ghana's subsequent development. First, the profound dislocation of national socio-political events from local level needs found its structural roots in the administrative decisions of colonial officials. This is not to suggest that there was ever a clear distinction between political and economic spheres in Ghana. To the contrary, it stems from the fact that the political economy is highly interdependent and thus any isolated "causes" of the present crises cannot be analysed separately. It is necessary to look at the historical process of change. Secondly, given that the British were concerned primarily with political gain and economic return, their "development policy" per se was not sensitive to the issue of regulating the direction or pace of change. The status of Ghana as a colony and not an autonomous "state" meant that ultimately, metropolitan interests figured significantly into policy. As a result, marked inter-regional disparities resulted from the rise of the cocoa industry as most of the supporting infrastructure was located Southern Ghana.

Continuing his historical research into other economic sectors, Kay (1972) argues that industries like mining and logging were encouraged by the British as they had

impossibly high capital expenditures for Africans, effectively barring their investment participation. Moreover, it was primarily private British capital that was used to develop an extensive railway system linking the mining and cocoa producing areas of Sekondi, Kumasi, Accra and Takoradi by 1920. The growth of trade experienced by the economy would not have been possible without government expenditures on harbours, wharves, culverts, road systems, rail, communications and administrative infrastructure (Songsore, 1979). However, investment by the British was highly strategic as they sought to achieve a balance between over-reliance on the successful Ghanaian dominated cocoa industry necessary to generate "development funds" and the need to protect British investment and ensure colonial control.

By 1910, Ghana had become the world's largest producer of cocoa - a position it occupied until the late 1970s (Green, 1988). The cash crop created considerable wealth in the country with production starting from a base of about 2,000 tons per year in 1900 and reaching approximately 200,000 tons by 1930 (Ewusi, 1984a). The capitalist organization of cocoa production acted as a transforming influence on the "traditional" structures of Ghanaian society through which the British ruled indirectly. The relative effectiveness of this indirect rule was limited however by some of the following factors:

- (i) A strong indigenous capital class that competed with the British for resources (labour, provision of transportation facilities by the state) and inhibited the expansion of British capital.
- (ii) An export sector not completely British dominated which was a situation far removed from ideal for colonial political-economic administrators.
- (iii) Mining (and later forestry), although completely controlled by the British, never achieved desired economic prominence.
- (iv) The potential of political insurrection on behalf of prosperous Ghanaian economic interests was always a concern of colonial administrators who sought to avoid direct confrontation as they were not only outnumbered but heavily economically dependent on the indigenous population and capitalist class.

In her anthropological study of Migrant Cocoa-Farmers of Southern Ghana (1963) Polly Hill notes that the economic and social organization of Ghanaian cocoa-farming is very complex, reflecting differences in social organization between patrilineal and matrilineal societies, population density, land tenure, accessibility, soil fertility and other factors. The migrant farmer of Southern Ghana (typically in the High Forest region) according to Hill's research of farming and migration patterns between 1954-61, resembles a "capitalist" rather than a "peasant". Land is purchased (or inherited) and worked, with the proceeds directed towards buying more cocoa land. Assumptions regarding revolutionary changes in social patterns introduced to Ghana by cocoa wealth and capitalist relations are not entirely true, as Hill's study of patterns of ownership in Southern Ghana have shown. Individual ownership of land, although an increasing phenomenon between 1900-1960, did not come to predominate over or eliminate communal (kin-corporate) ownership and control of land resources. Indeed, for migrant cocoa farmers there was little incompatibility between their enterprising behaviour and the continuance of traditional forms of social organization (Hill, 1963). In fact, the migratory process derives much of its strength and impetus from the fact that it is firmly based on "traditional organization". Hill noted that while pre-colonial kin-communal relations provided mutual "insurance" for the whole group through a lineage structure, there was sufficient flexibility in economic affairs to permit individual enterprise and private "profit" during each person's lifetime. The impetus for many of the alterations in social organization during colonial rule resulted partly from commercial cash cropping in addition to the imposition of British law. For example, there was a greater tendency of African cocoa planters (or land-owners) to leave property to a son (as common in English law) and not a sister's son which initiated significant changes in some societies (eg. the Akan) from matrilineal to patrilineal descent (Vercrujssse, 1988). Some would argue in fact, (Vercrujssse, 1988; Ardayfio-Schandorf, 1989) that capitalist relations and division of labour undermined female

participation in the cocoa market economy in terms of limiting equal female access to certain productive resources (eg. land). Mikell (1989) contends that changing economic and political factors during the colonial occupation marginalized ordinary women and decreased the role of even elite women as leaders and political representatives (matrilineal principles had been particularly strong in the seventeenth and eighteenth centuries during the process of state development among the Akan, for instance). Although women still maintained a central role as traders and producers, their status was reduced in terms of being defined in more traditional roles as mothers and reproducers for the lineage.

By WW 2, the direction of changing kinship dynamics in southern cocoa areas was clearly visible (Hill, 1963). Patrilineal and matrilineal identities were in conflict and affinal relations (over-utilized to secure economic benefit) were stretched (Mikell, 1989). By the 1950s, international, national, rural, ethnic and domestic stratification conflicts were converging to such an extent that deep divisions of interest sprang up within family units, kin groups and between lineages. Social differentiation complicated by the cocoa economy conspired against those kin groups without cocoa farms as well as reducing the economic interests of rural women, sisters as well as wives (Mikell, 1989). The framework for inequitable access to productive resources had been established well before independence. The persistence of pre-colonial relations among Ghanaians as they were articulated with colonial capitalism created a socially complex rural landscape.

The complexity of this landscape had (and has) significant implications for patterns of environmental change and resource use. Cocoa, as distinct from any agricultural crop which preceded it, would link Ghanaian farmers and traders to the British imperial system and through it to the global economy (Mikell, 1989). This in turn institutionalized the consolidation of social classes whose livelihood depended upon articulation within the global economic system (Mikell, 1989). The environment and resources upon which these producers depended therefore, were also internationalized. Confusion over patterns of land

ownership between local elites and chiefs (which became apparent in the haste to develop cocoa farms between 1900-1950) often resulted in unplanned and overexploitation of Ghana's natural resource base. The "timber rush" by numerous expatriate companies which lasted from 1940-1970, but peaked in the 1950s, was largely facilitated by changing patterns of access to traditional lands as chiefs sold concessions which had been held in trust for community use (Kay, 1972; Repetto and Gillis, 1988).

In terms of more general environmental trends, cocoa represented the beginning of some major problems related to market economics such as, deforestation, monocropping, the spread of plant diseases, soil erosion and food crop shortages. The conflict over resources introduced through cocoa punctuated a larger political struggle which continues in contemporary Ghana: it created socio-economic, ethnic and political unrest; it has complicated Ghana's attempts to diversify economically and industrialized in the post-independence era and as human and environmental poverty deepens under structural adjustment of the 1980s and '90s socio-economic disparities continue to widen as competition for productive resources intensifies.

Clearly, the complexity of the cocoa culture and rural social landscape defies Dependency theory or orthodox Marxian analysis. The current crises seen in most institutional structures of the independent state reflect not only peasant exploitation by international capitalism and social differentiation among rural producers and elites, but a loss of control at the local level of the use of the productive environment. Within colonial and neo-colonial social formations, small cultivators continue to be incorporated into the international economic sphere. Although the form of surplus appropriation and the class of appropriators changed after independence, the exploitation of Ghanaians has persisted through continued depletion of natural resources and loss of power to control the use of these resources. This set of exploitive relationships is highly significant if one is arguing for structural and ideological reform as a means to achieve sustainable development.

Clearly, policy shifts do little more than change the level of exploitation, serving in fact to further entrench structural underdevelopment. At issue, is the need for fundamental ideological change and policy reform.

As suggested earlier, rapid growth in the colonial cocoa economy was treated with some reservation by British administrators given the twin and contradictory imperatives of accumulation and control (Kay, 1972). For reasons of political survival, growth and prosperity often appeared as secondary concerns to matters of control and stability. I contend that this trend of political survival and self-service on the part of the state, usually at the expense of popular welfare, has survived throughout the post-independence era and perpetuated cycles of exploitation, structural disadvantage and instability. It will be argued in later sections of this chapter that post-independence "development" policies tended to enhance the interests of elite (ruling) groups to the exclusion of popular concerns (viz. inequitable distribution of productive resources, the neglect of the rural agricultural sector in favour of urban industrialization).

The colonial administration was further responsible for creating pronounced structural disparities between the Southern forest-economy and the Northern Territories. Activities aimed at the exploitation of resources in Southern Ghana required labour inputs that were met by displacing labour from the North to serve the Southern export economy. By 1940, many of the social and economic landmarks seen today were established in the so-called "golden triangle" encompassed by Kumasi, Accra and Takoradi (Figure 2). Some of these developments included: the Korle Bu Hospital, the Accra-Kumasi-Takoradi railway line (constructed between 1910-20), Takoradi Harbour (built in the 1920s) and the major trunk roads (the first of which was built in the Central Province between 1915-1920) connecting the principal administrative centres of Accra, Cape Coast, Takoradi, Kumasi, Tamale and Ho (Songsore, 1979). The other major period of infrastructural build up occurred shortly after independence during the Nkrumah regime.

Table 3 - Average Annual Growth of Exports in Ghana and Sub-Saharan Africa (expressed as percents), 1960-1980

	VOLUME		PRICE (a)			
	SSA		Ghana			
	1960-70	1970-80	1960-70	1970-80	1960-70	1970-80
Cocoa	- 0.8	- 1.4	- 3.6	- 6.2	5.4	14.2
Timber	4.4	- 0.5	6.7	- 14.1	1.0	0.4
Bauxite	12.5	25.0	---	- 4.3	5.6	2.2
Gold (b)	2.3	- 4.2	- 2.4	- 7.1	---	32.8

(a) export unit value index

source: World Bank, 1984 p.98

(b) world gold exports

The period after independence was especially significant in that it occupied a pivotal place in political-economic history - the repercussions of the development strategies pursued by the Nkrumah government are still being dealt with today. Kwame Nkrumah led Ghana through self-government in the 1950s and after independence began to focus on protectionist, industrializing and "socializing" policies as fundamental elements of his development strategies. Analysis of his government's development initiatives provides a basis for understanding the socio-political and economic factors associated with environmental-underdevelopment problems and the current Ghanaian crisis.

Additions to socio-economic capital were concentrated in the fields of health, education and road construction. That administration was also responsible for the building of the Tema Harbour and Akosombo Dam (Seidman, 1978)⁴. In what amounted to political violence, the colonial government adopted forced labour policies and designated the North as a "labour reserve" (Songsore, 1979). So vital was this region's labour supply to the development of the south that it was deliberately denied "development funds" lest it reduce the flow of cheap manual labour to the cocoa belt. Massive internal migration resulted in reducing the population of the North from 25% of the total population in 1890 to 16% in 1960 (Songsore, 1979). Transportation routes established by the British favoured intraregional contact in the South while at the same time forcing the North to become dependent on the South in terms of trade and access to economic resources (mining, cocoa, logging and farming were all focused in southern regions). The pattern of severe regional inequality that emerged in the colonial period (and persists today) can in large measure be attributed to the differential resource endowments of the regions as perceived within the colonial development paradigm and capitalist market economy (Songsore, 1979; Killick, 1978).

Moreover, by examining colonial development policies in northern Ghana in relation to infrastructural development, land, education and agriculture the contradictions between accumulation and control again become apparent, but with a much different outcome than in southern Ghana. Expatriate capital whose aim was to maximize profits from their stock of earlier investments in southern mining ventures and finance capital influenced the colonial state to minimize investments in the north and maintain the cheap labour regime in the region (Gariba, 1989). The result was limited capitalist penetration

⁴ Note that no extensive additions to capital stock have been made in the last 15 years, and that maintenance on existing infrastructure (which was one of the best in Africa) had deteriorated considerably.

which had a twofold effect. First, it perpetuated the apparent preservation of the peasant economic structure at the level of household production (ie. subsistence food farming). And second, it removed some of the productive male labour force through labour migration (Gariba, 1989). Colonial policy created a dialectic, regionalizing the North economically. Agrarian stagnation, which remains a severe problem in contemporary northern Ghana found its roots in the colonial period as peasants struggled over the distribution of produce between subsistence needs and commercial possibilities in the absence of a simultaneous expansion in productive capacity (Gariba, 1989).

In fact, the regional disparities created by colonial rule were later complicated by Nkrumah's import-substitution industrialization (ISI) policies which resulted in increased dependence on outside sources of credit to help finance manufacturing and infrastructural projects thereby institutionalizing economic inequity. The patterns of resource exploitation established in colonial Ghana established processes of inequitable resource allocation and development at a series of spatial levels:

1. **LOCAL** - given the dynamics of the cocoa economy, former "autonomous" peasants (in the sense that they controlled the use of the resources at their disposal after fulfilling community obligations) were incorporated into an internationalized division of labour in which their ability to control their immediate environment or resource endowments was dominated by a complicated set of capitalist class interests articulated within traditional social structures. The complicated link between cocoa, its rural peasant producers and an urban-oriented state is one that continues to pose problems for contemporary Ghanaian leaders as the highly differentiated rural social landscape causes tension between internal socio-economic structures often breeding political turmoil (ie. withdrawal from the formal state economy, political unrest etc.).
2. **INTER-REGIONAL** - if one were to draw a simplistic picture of the colonial space-economy, it would show "layers" of core-periphery relations. The centre would be the forest belt of central Ashanti (see Figure 3), the Eastern and Central regions which monopolized the modern socio-economic infrastructure. The resource frontiers (which had not yet been developed fully) offered cocoa, mineral and timber potential and were located primarily in the Western Region and north-west Brong Ahafo. The national periphery consisted of the large land area of Northern Ghana including the northern-most and south-eastern parts of the Volta region where cocoa-culture, minerals and timber extraction was undesirable or not possible (Songsore, 1979). Thus international dependency on the export trade was exacerbated and reinforced by inter-regional "dependency" on the cocoa-economy.

3. NATIONAL/INTERNATIONAL - In the pre- and post-independence period, the cocoa industry, timber, gold, diamond and manganese export activities maintained a dominant role as foreign exchange earners and provided the impetus for Nkrumah's ISI strategy. The early and initial success (especially in the colonial period) of the cocoa-economy placed Ghana in a dependent international position which successive post-independence governments have not been able to escape. Reasons for this involve a history of economic mismanagement combined with a lack of political authority, legitimacy and power.

In effect, rural and Northern Ghana have borne most severely the costs associated with colonial (and post-independence) development strategies as regional and resource disparities established in this era have been manifested by ineffective "modernization" attempts and the inability of post-independence governments to tackle the structural elements of inequity and exploitation. It is also crucial to be aware of the significant impacts colonisation had on African socio-economic structures and how articulation of these structures with capitalism affected the use and distribution of resources among rural populations.

A review of Ghanaian economic history since British occupation will show that one of the central problems facing rural areas is gradual decline and marginalization in comparison to ever increasing urban and national demands (Mikell, 1989). That a multiplicity of socio-political, environmental and economic problems face rural populations and that these concerns have been ignored or neglected in the course of conventional (neo-classical and orthodox Marxian) development theory suggests that a re-evaluation of underdevelopment studies is necessary. This brief overview of the impacts of colonial capitalism and development priorities on African societies demonstrates the need to conceptualize the level of theory relationships of change between people, the political economy and resource use if we are to understand processes of underdevelopment better. The "myth" of an amorphous peasant class, manipulated by international capitalist forces was also found to be inaccurate and unhelpful in attempting to evaluate the roots of social structures in Ghana.

FIG.3 GHANA: REGIONAL BOUNDARIES

Source: After World Bank (1988) Annex IV p.4

Produced on Nies

True, integration into the international capitalist system had a significant bearing on the general direction of development and resource use, however, equally significant (if not more so) are the local variations in African social structure (ie. lineage and kinship systems as articulated within capitalism) that determine specific access to productive resources. The kind of analysis which is needed to highlight the determinants of the environment-development crisis in Africa involved enhanced political economy theory which combines social, political and economic factors in seeking to uncover the mechanisms which perpetuate environmental degradation and human poverty. That these connections have not been made in the post-independence period is evident in the use of inappropriate policies and strategies by subsequent governments resulting in maldevelopment and an ever deepening crisis.

3.3 Post Independence Development - Mismanaging Crisis

Clearly, the foundations of current disparity and socio-economic inequality in the post independence period were laid in the colonial era. Also established were the economic, bureaucratic and coercive elements of the state infrastructure. In failing to make socio-political and economic structural transformations to the inherited apparatus that had evolved under British rule, the leaders of the new state of Ghana continued the state-centric approach to development which helped reinforce elitist bureaucracies and encouraged inappropriate policy formation (Ewusi, 1984b; Chazan, 1983).

As a consequence, the main organs of the State (which include government institutions) have become formalised only in terms of their judicial-administrative capacities and not because of their ability to promote popular political participatory roles. This is evident in the inability of successive civilian and military regimes to break away economically or structurally from the cumulative process of growth which was initiated in

the colonial period within the forest ecosystem together with ISI policies which intensified foreign debts, resource crises and inter-regional disparity.

The history of Ghana's political economy since independence has been one of stagnation and deterioration. The colonial experience left Ghana with a resource allocation pattern typical of dualistic (in the descriptive sense), less developed countries. This misallocation of resources is reflected in a breakdown of the Gross Domestic Product (GDP) per capita between 1950-81 which shows an overall decline of 0.7% each year in that time series (Roemer, 1983). Growth has tended to be unstable, unsustainable and sporadic in this same period as it originated in a limited number of sectors linked to foreign markets - particularly cocoa, mining, forestry and trade (refer to Table 3). The export enclave economy, initially established by exploitation of resources in southern areas closest to the coast, was reinforced by post-independence administration without regard to the resource potentials or needs of the remainder of the population (Seidman, 1978).

It can be argued that a central factor for the perpetuation of these structures after 1957 resulted from a growing centrality of a small group of people at the apex of the government apparatus. The fluidity of power, the fragility of the state power structure and the decreasing relevance of the state to on-going political and social processes are critical factors that have characterized the Ghanaian political economy from the 1950s to present (Chazan, 1983).

Table 3 - Average Annual Growth of Exports in Ghana and Sub-Saharan Africa (expressed as percents), 1960-1980

	VOLUME		PRICE (a)			
	SSA		Ghana			
	1960-70	1970-80	1960-70	1970-80	1960-70	1970-80
Cocoa	- 0.8	- 1.4	- 3.6	- 6.2	5.4	14.2
Timber	4.4	- 0.5	6.7	- 14.1	1.0	0.4
Bauxite	12.5	25.0	---	- 4.3	5.6	2.2
Gold (b)	2.3	- 4.2	- 2.4	- 7.1	---	32.8

(a) export unit value index

source: World Bank, 1984 p.98

(b) world gold exports

The period after independence was especially significant in that it occupied a pivotal place in political-economic history - the repercussions of the development strategies pursued by the Nkrumah government are still being dealt with today. Kwame Nkrumah led Ghana through self-government in the 1950s and after independence began to focus on protectionist, industrializing and "socializing" policies as fundamental elements of his development strategies. Analysis of his government's development initiatives provides a basis for understanding the socio-political and economic factors associated with environmental-underdevelopment problems and the current Ghanaian crisis.

3.3.1 The Nkrumah Years - A Legacy of Misdirected Development

Although political independence was achieved in 1957, many would argue that the fundamental organizational and spatial structures that formed the basis of the colonial economic structure remained intact. An overview of the "development policies" pursued by Nkrumah provides ample evidence that structural dependence and internationalization of the environment and resources were institutionalized. By 1961, cocoa production had resulted in a reserve accumulation sufficient to encourage the government to adopt both an expansionist and liberal policy regime. Nkrumah sensed a need to deliver more of the economic changes he had promised with independence and began to implement his "visionary" strategy of an integrated pan-African market led by Ghana (Killick, 1978; Romer, 1983). Nkrumah emphasized infrastructure as a leading sector and the government over-built (in terms of economic need and ability to meet recurrent expenditures) transport, utility and other services as a means of later stimulating directly productive activities. These policies however, failed to penetrate to the point of production and cocoa which was the mainstay of the rural and export economy remained in the hands of private families, entrepreneurs and petty commodity producers. Therefore, as Songsore (1979) argues, the government failed to undertake the adjustments necessary for achieving an internally integrated development, with indigenous producing classes controlling resource use.

The development strategy from 1957-1966 was based on the notion of a "big push" of massive investment that would break colonial economic dynamics, eliminate the vicious cycle of poverty and propel a "take-off" into self-sustained growth. It was however an unbalanced growth strategy for a number of reasons.

First, liberal policy merely encouraged the expansion of expatriate business interests in primary resource extraction, banking and import-export trade. Besides continued growth in cocoa and gold, the timber industry experienced substantial capital investment and growth in the early independence years. The official "Forest Ordinance"

(designed to protect indigenous ways of life in the forest zones of southern Ghana through the establishment of controlled logging reserves) left over from colonial rule proved to be of little use in the "timber rush" of the 1950s (Dunn and Robertson, 1973). There was a dramatic influx of Western capital into Ahafo forest reserves starting in 1947 which led to an highly confused legal situation. Frequent disputes erupted over entitlements as local chiefs and elite in the area often allotted the same plot of land or concession to more than one contractor (Dunn and Robertson, 1973). Indeed, as late as 1975 there was no unitary system for registration of timber concessions and felling agreements. The critical point is that in the case of forestry, Nkrumah's infrastructure expansion projects enabled further (mainly expatriate) capitalist penetration into the natural resource base facilitating more rapid, but not more controlled resource extraction.

Secondly, accelerated "modernization" through ISI policies created a greater dependence on outside sources of credit to help finance investments. Although the fundamental mechanics of the strategy were controlled through national planning that centred on the allocation of public investment with a growing share of resources controlled by the government, there was great pressure exerted by external oligarchies to participate in the national decision-making process (Romer, 1983; Songsore, 1979). Again, this encouraged patterns of resource use that were not conducive to balanced development.

Development theorists know today that strategies like Nkrumah's "big push" lead to multiple problems for a small, open and dependent economy like Ghana's in the 1960s. The wisdom of hindsight aside, I contend that Nkrumah's policies were hardly "visionary" in the respect that economic management of his plan was virtually impossible in terms of macroeconomic consistency and microeconomic efficiency. In other words, visions of Ghana as a modern industrial state and the establishment of a "pan-African" market were unrealistic given the available levels of human resources, the agrarian-based economy, socio-cultural history, class character and technological capacity of Ghana's economy (not

to mention the similar problems that existed in other newly independent states which would pose significant obstacles to pan-African industrialization).

Furthermore, factors influencing Ghana's ongoing crisis have been shown to be deeply rooted in its class system, socio-economic structures and political institutions and all governments, starting with Nkrumah have failed to achieve adequate changes in these structures. I would suggest that a starting point for true "development" would be to examine the relations of resource exploitation that are not conducive either to environmental sustainability (upon which Ghana's future depends) or economic stability. Environmental and economic maldevelopment continue to enhance political instability and elicit a cyclical response of Draconian economic solutions and political repression. It is also this author's opinion that despite Ghana's rapid changes in administrations and the variety of professed "development" ideologies, that any use of socialist terminology (notably by Nkrumah and Rawlings) is in large measure a diversionary tactic from the practical manifestations of their strategies which are based on acquisitiveness - the control of productive resources by the state.

Unfortunately, Nkrumah's state-centric plan led to numerous excesses on the part of the elite bureaucracy and their close followers, a process that in part, was made possible by the continuation of the institutional structure which had come into existence in the colonial era as a product of the capitalist export economy. Killick (1978) cites numerous examples of white elephants that were typical of the CPP's inefficiency and inability to coordinate national planning in the context of existing class structures, institutions and technological potential. For example, state farms were designed to cultivate relatively abundant land intensively using scarce imported capital equipment; a pharmaceutical plant was designed to cost ten times as much as a feasible alternative; a sheet-glass plant was planned to produce enough for three times local market demand, and was then converted to a bottle-making plant; a tannery was built in the south of Ghana, 500 miles from the

northern meat factory that was to be its source of hides, whose output would be shipped 200 miles to a footwear factory located between the other two plants; a tomato- and mango-canning plant was established to accommodate the output of 2,500 acres of these crops in a region that grew neither of these commercially and could not begin to do so for at least five years; and the list of mishaps goes on. Although dismal economic performance is not solely the product of mismanagement associated with these types of projects (related macroeconomic forces and slow growth in other sectors are also important contributing factors), the proliferation of poorly planned schemes is indicative of the institutional and human resource gaps that Nkrumah failed to address in his development ideology.

Development strategies which rely on existing markets and institutions within the framework of Ghana's disjointed economy are incapable of achieving the reallocation of resources and "empowerment" of the producing class (in terms of controlling the use and products of available resources) that is required to raise the living standards of the entire population. To the credit of the CPP and Nkrumah, there is value in certain physical manifestations of the socio-economic policies he tried to implement such as the building of roads, schools, water supplies etc. Also, the problem of balancing national economic interests and sectional, class, or individual interests is perennial in any society and particularly acute in developing nations like Ghana (Roemer, 1983). However, the fundamental conflict between macroeconomic goals and microeconomic and socio-political reality ultimately contributed to Nkrumah's overthrow in February 1966 because his state-centric policies were non-sustainable (in terms of economic gain) and tended to appeal to narrow class and individual economic interests. I agree with Roemer's main thesis in Ghana 1950-80: Missed Opportunities that political participation in Ghana is primarily an expression of economic interests. The reality of Nkrumah's administration was that although the CPP was quite successful in mobilizing the people to achieve independence, a

highest tax for these logs (shipped in unprocessed form) but record a less valuable species (and hence lower tax) in government ledgers, and pocket the difference (Repetto and Gillis, 1988). Not only was this corrupt, it also contributed to the over-harvesting of Ghana's most commercially valuable tree species.

When the National Redemption Council (1972-75) assumed the right to the use of forest resources (as it recognized increased potential for generating export revenue from timber) the forests became even more vulnerable to open access and common property problems that had plagued traditional communities. Once their controlling authority had been officially reduced, tribal heads no longer had any strong reason to try to limit shifting cultivation or timber operations in their districts. In fact, timber smuggling and shifting cultivation actually increased during 1970s (Repetto and Gillis, 1988). Disempowerment in combination with rising rural poverty had serious consequences for the forest resource base. There seems to be little disagreement over the fact that ineffective and inappropriate government policies in the post-independence era contributed to serious economic problems. This in turn supports the idea that growing poverty (combined with commercial exploitation of land for cocoa, minerals and timber) was primarily responsible for deforestation as there were sharp increases in the areas under shifting cultivation coupled with greater demand for fuelwood (Repetto and Gillis, 1988).

Estimating government timber rent capture after 1971 represents an impossible task owing to smuggling and unreliable data. However, more reliable information does exist on royalties and license fees. For most of the post-independence period in Ghana, there has been no standard royalty policy, partly the result of political instability and also a reflection successive governments' generally inadequate and ad-hoc approach to forest resources. Each concession agreement contained its own unique set of charges up to 1976, at which time a standardized royalty system was implemented (Repetto and Gillis, 1988). In light of poor economic conditions, the standardized royalty system has proven to be an extremely

bureaucratic elite developed that made few group or personal sacrifices in the national interest.

Further, Nkrumah set the tone for subsequent governments in failing to implement strategies that penetrated to the point of production. The inability to stimulate grass-roots interest in the political process suggests that the personal costs demanded of the rural poor were too high in relation to long-run and tentative benefits that might accrue to them. Colonial bureaucratic exploitation and appropriation were replaced by new African dominated government elites and the local petty "bourgeoisie" remained intact, thereby reproducing the relations of exploitation and direct surplus appropriation at the local level. Chazan (1983) in a detailed account of the texture of post-independence politics in Ghana, argues that the reality of state dynamics changed during the Nkrumah years from emphasizing a commitment to development to a growing realization that options for change were constricted causing the workings of politics to become self-motivating and self-serving. After 1960, Nkrumah's policies increasingly became those of a leader devising appropriate means of coping with a steadily deteriorating situation.

It cannot be stressed enough that in the early years of self-government, development policy seemed to ignore completely the important issues of resource distribution control. Ghana was (and in many ways remains) a complex picture of state bureaucracies, Western interests, peasant farmers, local (rural) elites, ethnic groups and traditional socio-economic and cultural structures all competing in unequal terms for increasingly scarce resources. Economic development cannot take place within this environment of political fragmentation, lack of power consensus and dependent relations. History also demonstrates that by avoiding questions of resource control and environmental use there develop critical problems respecting the relationship between social change and the state that raise questions concerning the viability of government. Ghana is an unfortunately good example of this in terms of its cycles of military/civilian power

groups, political instability post 1960 and institutionalized social relations manipulated by nation leaders supposedly in the interests of the state. Regardless of the level of analysis in post-independent Ghana, it is true that resource competition and environmental degradation through international linkages and competing interests have left the nation open to external manipulation, class conflict and radical shifts in national ideology (Mikell, 1989). It is also apparent therefore, that any current rhetoric on "sustainable development" will remain just that unless preceded by a holistic analysis including historical changes in social, economic, political and environmental perception.

Throughout the history of the cocoa economy, production has remained in hands of private families and entrepreneurs. The introduction of cocoa farming on a cash crop basis throughout the southern regions in the colonial era created new marketing institutions, had a profound effect on traditional land tenure systems and radically transformed society's perceptions of the environment. Yet, as Mikell (1989) and Hill (1963) point out, indigenous societies managed to retain (at least) the core of their social hierarchy and traditional values. British conquest and rural transformation had shaken the system, but not destroyed it (Mikell, 1989). Given that land ownership has rested for the most part in the hands of individuals, kin groups and/or traditional political units, its acquisition and utilization could proceed to a great extent without reference to government. Therefore, the centrality of cocoa as a primary vehicle for export productivity and foreign exchange earnings in the Nkrumah years had the long-run effect of weakening the State's power. Recall that the colonial government's political authority was also weakened by the tenuous balance between needing the revenue from cocoa exports to finance infrastructure building and allowing too much economic (and hence political) power to develop among private African land holders.

The result during the CPP administration was that the state's control over resources was reduced as people began to opt out of the formal economy owing to adverse marketing

conditions and important productive resources were consolidated in self-enclosed "informal" sectors of the economy (Ewusi, 1984a)⁵. This is not to suggest that the privatized operation of much of the cocoa industry has had a beneficial impact on land use and distribution of wealth and political-economic power especially for small-scale producers of food crops (cocoyams, maize, pulses and nuts, vegetables etc.). In the more than three decades since independence, significant inequalities and concentrations of wealth have emerged within the traditional land tenure pattern, a process that has had significant influence on political-economic institutions and their ability to carry through at the local level macroeconomic national development policies. The privatization of land in combination with Nkrumah's "big push" reduced in real terms the goods that the state could offer to land-based peoples (food and cocoa farmers alike). Hence, the degree of dependence of the (rural) people on the government was also reduced.

Killick (1978) maintains that the basic contradiction in the Ghanaian economy during the Nkrumah regime (1957-66) and beyond, was the subordination of the cocoa producing peasantry to international capitalism through the mediation of the (now dismantled) Cocoa Marketing Board. Continued reliance on cocoa exports served to internationalize the Ghanaian economy, reinforcing and reproducing multiple layers of resource and labour exploitation. Once established, this pattern leads to an inescapable downward spiral of underdevelopment, environmental misuse and political instability. Economic and environmental poverty is felt most acutely by the productive and agricultural sectors of rural Ghana. No post-independence development strategy (including the most recent IMF backed Economic Recovery Plans) has addressed these problems. In terms of a political economy analysis, the significance of cocoa is not just that cash crop farming

⁵ The Cocoa Marketing Board (CMB) launched during the Nkrumah period was infamous for its corruption. Granted a total monopoly on the trade of cocoa, it expropriated an average of 40% of the surplus from the cocoa economy each year during its operations. This allowed the government to promote and finance its "big push" and infrastructural schemes (Killick, 1978).

constitutes a less than efficient allocation of resources and perpetuates exploitive relationships. It also lies in the fact that in the framework of traditional political institutions, it contributed in part to building wealth and power in the hands of a limited group of farmer-traders, elite ethnic groups (especially among the Akan), chiefs and petty bourgeoisie. This fundamental division of society from the earliest days of independence is critical in understanding current socio-political factionalism and ineffective adjustment policies.

It is beyond the scope of this thesis to examine the fate of each government succeeding the downfall of Nkrumah in 1966. Rather, in the next section I intend to make some general comments concerning the socio-political environment to establish the context for the current environmental/economic crises and the Economic Recovery Programme (ERP) instituted by the Rawlings regime in 1983 (to be covered in Chapter 4).

3.3.2 Deepening Crisis - A Review of Socio-Political Conditions: 1966-1981

The reduction of institutional capacities of the state after independence is reflected in the gradual loss of ability to control the distribution of services, meet recurrent social expenditures and invite meaningful popular participation in national development strategies. Some factors explaining the performance of the economy and reasons behind sectoral imbalances, production declines and lack of government investment in the economy are noted in Table 4 (Loxley, 1988). As previously discussed, the patterns and processes of exploitation and uneven development were set in motion by the colonial economic system and exacerbated by the rapid turnovers in government which did not encourage a continuity of policy making ideology or procedures. Overcentralizing the decision making process has been one of the responses of governments to loss of state control and legitimacy at the grassroots level (Ewusi, 1984a; Roemer, 1983).

I agree with Chazan (1983) that personalization of the government has, to some extent, become a substitution for popular political processes that would better serve state or common goals and reduce that power of the elite to pursue their personal or limited class interests⁶. Moreover, the loss of popular support (or perhaps more correctly, failure to establish popular support) is a critical factor in the mismanagement and lack of political foresight of present Ghanaian leaders in their pursuit of the current Structural Adjustment Programme (SAP).

Admittedly, post-Nkrumah regimes cannot be blamed entirely for each phase of the deepening crisis. Colonial history, ISI (import substitution industries) strategies and 30 years of mismanagement have helped create situation where political integration and institutionalization were inappropriate to the nature of various governments and their attempts to link together different geographic regions and sectors of Ghanaian society. Undoubtedly, economic policies that were "state-centric" were destined to failure given that the normative basis for political authority (centralism or statism) was lacking. Both Price (1984) and Ninsin (1987) maintain that this situation resulted from the effective efforts of functional African elites to capture the externally imposed colonial apparatus and little effort on the part of the new government to restructure social relations between groups (defined by their historical placement near the colonial centre) to reduce inequalities which characterized the colonial period.

⁶ In a limited sense, the popular element continues to exist in the PNDC, however it is represented through individuals, particularly Rawlings. "Personalism" in state politics refers to the fact that the PNDC and Council of Secretaries functions as an aggregate of individuals, appointed in their personal capacity with no organizational or accountability links to society (Ndu, 1988).

Table 4 - Some Factors Explaining the Performance of the Economy, 1970-83

Indicator	1970	1975	1980	1981	1982	1983
1. official exch. rate (C per \$)	1.02	1.15	2.75	2.75	2.75	2.75
2. real exch. rate (1970=100)	100	106	378	850	1020	1700
3. parallel rate (c per \$)	1.64	1.99	15.87	26.25	61.67	76.58
4. cocoa exports (metric tonnes)	362	322	240	201	160	148
5. cocoa producer price (cedis)	293	597	4000	12000	12000	20000
6. real producer price (1972=100)	106	90	45	62	49	34
7. terms of trade (1986=100)	81	96	95	62	48	48
8. external debt * (\$ m.)	489	676	1099	1111	1117	1132
9. debt servicing (% of exports)	5.0	5.4	7.7	6.4	8.3	20.9

* exclusion of IMF and arrears source: cited in Loxley (1988) p. 5

This reality is complicated by the fact that the resources (material and human) necessary for development were inaccessible or unavailable owing to continuous attempts at "adjustment" where reform was the critical issue. In essence the Ghanaian state structure has a superficial quality devoid of the necessary normative structural and socio-economic support from below that would allow indigenous, integrated development to occur (Ewusi, 1984a).

The two governments succeeding Nkrumah's CPP, the National Liberation Council (NLC) from 1966-1969 and the Progress Party (PP) from 1969-1971 both pursued

ruinous liberalisation policies. Debts increased, the relative value of the cedi plunged, goods and cocoa production dropped and the social infrastructure began to deteriorate (roads, schools, hospitals) as recurrent expenditures could not be met. As the Ghanaian economy lurched into the 1970s suffering from stagnation and decreased production, neither the National Redemption Council (NRC) 1972-1975 nor the Supreme Military Councils (SMC) 1975-1979 could stimulate sustained growth or control inflation through devaluation or liberal monetary strategies. From 1978 to 1981 (when Rawlings took power) Ghana represented a jumble of political instability including two military coups. Until 1983, economic anarchy prevailed with no coherent policy until the ERP in 1983. In sum, main political themes since independence include; fragmentation of decision making, administrative weakness, personalization of authority, elitism, economic stagnation and alienation, measures of disengagement from the formal political front, localism and civilian agitation (Chazan, 1983). The reasons for this are manifold and delve into some essential political economy questions concerning the location and distribution of power, the struggle for and manipulation of power and class reaction to the state.

Fragmented decision making, inadequate government resources (human and technical) and lack of authority have typified government response to environmental planning, especially regarding forest policy between 1966-81. Indeed, ad hoc responses to resource issues have been a prevailing theme in Ghana's political economy creating significant obstacles to environmentally sustainable development. Until the 1970s, the rights to use of forest resources were governed by traditional Ghanaian communities (ie. local chiefs or elites). For the most part, forests had been ignored by central governments between 1957-73 who lacked the expertise and personnel to police forest reserves and enforce logging restrictions. Indeed, corruption among government officials regulating logging exports was rife during the timber rush of the 1950s. The most valuable and largest species also carried the heaviest stump tax. Frequently, officials would enforce the

highest tax for these logs (shipped in unprocessed form) but record a less valuable species (and hence lower tax) in government ledgers, and pocket the difference (Repetto and Gillis, 1988). Not only was this corrupt, it also contributed to the over-harvesting of Ghana's most commercially valuable tree species.

When the National Redemption Council (1972-75) assumed the right to the use of forest resources (as it recognized increased potential for generating export revenue from timber) the forests became even more vulnerable to open access and common property problems that had plagued traditional communities. Once their controlling authority had been officially reduced, tribal heads no longer had any strong reason to try to limit shifting cultivation or timber operations in their districts. In fact, timber smuggling and shifting cultivation actually increased during 1970s (Repetto and Gillis, 1988). Disempowerment in combination with rising rural poverty had serious consequences for the forest resource base. There seems to be little disagreement over the fact that ineffective and inappropriate government policies in the post-independence era contributed to serious economic problems. This in turn supports the idea that growing poverty (combined with commercial exploitation of land for cocoa, minerals and timber) was primarily responsible for deforestation as there were sharp increases in the areas under shifting cultivation coupled with greater demand for fuelwood (Repetto and Gillis, 1988).

Estimating government timber rent capture after 1971 represents an impossible task owing to smuggling and unreliable data. However, more reliable information does exist on royalties and license fees. For most of the post-independence period in Ghana, there has been no standard royalty policy, partly the result of political instability and also a reflection successive governments' generally inadequate and ad-hoc approach to forest resources. Each concession agreement contained its own unique set of charges up to 1976, at which time a standardized royalty system was implemented (Repetto and Gillis, 1988). In light of poor economic conditions, the standardized royalty system has proven to be an extremely

weak means of raising forest revenues in recent years. Overvaluation of the cedi (especially from 1976-83) has caused the real value of forest royalties and fees to be so low that the wood taken from the forest could almost be considered a free good (World Bank, 1988).

The point is that the power of the state to effect meaningful economic reform and development between 1966-81 was virtually non-existent. Rural poverty continued to rise as did the tendency to degrade the environment in the struggle for survival (ie. through shifting cultivation, the search for fuelwood). Clearly in the case of deforestation in Ghana, environmental poverty is attributable to human poverty which in turn is a reflection of a deeper socio-political crisis. Successive governments proved incapable of addressing fundamental problems of inequity, poor distribution and negative growth in both rural and urban sectors. Macro-level policy shifts were meaningless in the face of structural poverty that had its roots in the colonial export economy.

According to Ewusi's (1984a) interpretation, the salience of the state is primarily a function of its ability to control resources (Power); to regulate people (Legitimacy) and to influence critical values (Authority). Autonomy of the political unit therefore can be evaluated in terms of power, authority and legitimacy. In Ghana, the historical processes of underdevelopment never allowed the connections between power, legitimacy and authority to materialize. The processes of land and labour exploitation have proceeded to the detriment of the resource base and have created conditions of structural poverty - forces mitigating against equitable distribution of resources. As a result, Ghanaians, individually and collectively have continued to reevaluate the costs and benefits of inclusion in a political process which has had little practical relevance to their resource and survival needs and has also been unable to restructure colonial and dependent-development institutions that perpetuate relations of environmental and labour exploitation. The precarious balance between interest groups in the Ghanaian state structure (largely a function of resource

competition beginning with the cocoa economy) has contributed to the formation of a volatile political climate in which governments have shown an inability to deal effectively with the growing severity and persistence of its crises.

It is my belief that, given Ghana's historical record, political leaders have sought very narrow private economic and power interests rather than addressing popular concerns. Although each post-independence regime has called for a transformation (in character and productive ability) of the peasantry and proletariat (albeit through various ideologies), no such transformation has taken place. It was not simply because the production structures had failed, but also because it is within these strata (at the level of resource use and control) that governments had the least legitimacy and power (Ndu, 1988; Ewusi, 1984a; Chazan, 1983).

These socio-political weaknesses have triggered a number of practical responses by Ghanaians including the formation of several distinct coping strategies (Ewusi, 1984a). The first such strategy is the "suffer-manage" technique meaning that most people resign themselves to a decline in standard of living within existing norms of behaviour. This phenomenon has occurred most significantly among the urban middle class. Second is the "escape" route which involves people (primarily highly educated and urban unemployed) leaving the country to seek better economic opportunities in neighbouring countries and abroad. The third behaviour involves a "beat the system" strategy. Two types of unofficial markets were constructed parallel to the formal market; first was the *kalabule* which diverts formal market resources like cocoa to alternative destinations such as Togo where they command a better price, and secondly was the "black market" that relied on hoarding and selling foods outside of official markets. Finally, the fourth mechanism adopted focuses on withdrawal and adjustment of production. This form of coping has been most prevalent among rural populations striving for self-reliance and autonomy through economic reorganization, for example restructuring local production away from cash crops

and towards foodstuffs, especially yams and potatoes. What I find particularly significant concerning this last strategy is that people have successfully opted out of capitalist market relations and taken direct control of their immediate resources in terms of use, production selection and distribution of subsequent goods. Such behaviour reaffirms the need to re-evaluate the state's approach to development in terms of identifying basic survival priorities as they are linked to access and control of resources. It is clear, from an examination of Ghanians' various coping strategies, particularly the "withdrawal" strategy, that use of the environment is socially constructed. Resource allocation and use can sometimes be changed according to survival needs. In planning for environmentally sustainable development therefore, it is critical to understand how the development process influences environmental change. Little consideration has been given to the impact of capitalist development strategies as they have been articulated with pre-capitalist modes of production on the environment. The structural linkages that exist between modes of production and socio-environmental change play a central role in determining development potential and constraints.

In this chapter I have argued that an examination of Ghana's political economy from independence to the Rawlings era shows that economic decline and political instability are mutually recursive forces. Largely the result of problems relating to social differentiation in determining access to and use of productive resources in addition to internationalization of the environment through the establishment of the cocoa economy and timber export, successive regimes have failed to address the critical issue of resource control at the point of production. Patterns of environmental misuse have thus been established and institutionalized through misdirected development strategies. Chronic social unrest and lack of belief in the political process have complicated problems of national planning. The next chapter will analyse the Rawlings regime and the Economic Recovery Plans (ERP) in terms of the effectiveness of these strategies in solving or at least addressing the issues

central to Ghana's development-environment crisis. Discussion will also address whether the processes contributing to human and environmental poverty are tackled effectively through structural adjustment programmes.

CHAPTER FOUR

A Socio-Political and Economic Review of Ghana in the Rawlings Era: Implications for the Development-Environment Crisis

Flight Lieutenant Jerry Rawling's military coup in 1981 ended two years of civilian rule by President Hilla Limann (September 1979-December 1981). The political, economic and social crises which were felt under the Limann regime affected its ability to provide a material base for representation of the classes which controlled the state (Hansen, 1987). Combined with severe economic hardship was human suffering and social unrest. The review of Ghana's post-independence development strategies in Chapter three showed that in the absence of including human and environmental dimensions as central components in analysis and policy, processes inducing structural poverty were perpetuated. Poverty in turn can be linked to environmental degradation (eg. deforestation), socio-political conflict and economic instability.

It was these trends of poverty and instability that Rawlings proposed to solve when he seized power in the 1981 coup - trends that had been established during more than 50 years of colonial occupation and three decades of mismanagement after independence. Evaluating current development policy necessitates asking a series of questions. First, will the agreement made with the IMF in 1983 provide realistic and achievable guidelines for self-sustained socio-economic and environmental rehabilitation to occur? Second, given the current institutional structures and socio-political climate, can the Rawlings government promote socio-economic development and the necessary redistribution of wealth, power and resources crucial to alleviating human misery and environmental destruction? In other words, is the current rhetoric concerning a "transition to socialism" and "environmental thinking" merely a collection of empty political slogans, or is the political scene changing to incorporate popular participation in the formation of national goals and implementation of

these goals? One of the main themes of this chapter therefore, is to evaluate domestic political and economic "change" as it bears directly on the environment. Examples from Ghana's environmental and forestry policy will be used to illustrate possible conflicts in Rawlings' development plans between economic and other objectives.

The main problematic of Ghana as a post-colonial state remains choosing a development option that offers the best chance of responding to crisis while seeking social welfare improvements, the reduction of poverty and greater popular participation in the development process. Although Rawlings and the PNDC identified popular participation and social transformation (Price, 1987; Ninsin, 1987; Hansen 1987) as key determinants of structural change leading to a more self-determined development at the time of the revolution, real development policy choices appear to contradict this political rhetoric. Part of the argument in this chapter focuses on the possibility that the regime's priorities changed in pursuing the IMF's structural adjustment programme (SAP). The choice to follow SAP prescriptions for economic ill-health represented only certain powerful interests among those that comprised the state. By centring on problems of production in the latest Economic Recovery Programmes (1983-90), Ghana reinforced its position in the world economy as a producer of exportable commodities. It is difficult to conceive that public policy in Ghana reflects the interest of the workers or of the masses of the people given that the poor appear to bear the brunt of recovery costs while receiving minimal benefits from a primarily neo-classical, trickle-down, macro economic strategy. The structural elements in Ghanaian society and polity that contribute to class differentiation, exacerbate the "simple reproduction squeeze" of cocoa production and reduce the viability of the natural environment have not been addressed. Ghanaian leaders were unwilling and/or unable to consider strategic alternatives to IMF and World Bank proposals. Because Ghana's attempt at structural adjustment and rehabilitation does not identify the real survival priorities of the people, the PNDC continues (in the eyes of the masses) to lack basic

political legitimacy either in terms of the normative attachment to political institutions and processes or rules of political practice or the satisfaction of fundamental resource and material needs (Hansen, 1987).

The crisis felt in Ghana is indicative of the problems facing other Sub-Saharan African (SSA) nations. In the past decade, six countries - Equatorial Guinea, Ghana, Liberia, Nigeria, Sao Tome and Principe, and Zambia - have slipped from the middle-income to low-income group as classified by the World Bank (World Bank, 1989). Since 1980, SSA as a region with few exceptions has witnessed falling per capita incomes, accelerating ecological degradation and lower per capita food production than existed in the previous decade. Referring to Figure 4, average growth rates in Gross National Income per capita in SSA experienced an overall decline between 1967-87. This reflects a number of broad trends (as seen in Ghana) which include stagnation in the food producing sector, infrastructural decline, lower industrial productivity and environmental degradation (World Bank, 1989). In the face of variable and declining commodity prices, most African countries have resorted to heavy external borrowing. SSA's total debt increased from \$6 billion (US) in 1970 to \$134 billion (US) in 1988. By the end of that period, the region's debt was about equal to its gross national product and three-and-a-half times its export earnings (World Bank, 1989). Figure 5 shows the overall trend of indebtedness in Sub-Saharan Africa between 1970-87. Note the particularly rapid growth in debts since the early 1980s which signalled the beginning of structural adjustment programmes. Coupled with debt problems is the fact that since 1978, terms of trade have been deteriorating steadily, resulting in an annual loss of about 10 per cent of export earnings per annum (Adedeji, 1989).

As debts have grown, so too have deteriorating social conditions and political instability. In light of structural adjustment programmes (SAPs) and renewed emphasis on export rehabilitation in commodity sectors (eg. agriculture, timber), the productive capacity

of land is falling because of shorter crop rotations, soil erosion, deforestation (linked to decreased moisture regimes, deteriorating soil quality etc.) overgrazing and shifting cultivation. Growing populations in the SSA continue to add to the problems created by structural human and environmental poverty.

Figure 4 - Gross National Income Per Capita in Sub-Saharan Africa and Other Developing Countries, 1970-87

source: after World Bank, 1989 p. 17

The magnitude of the environment-development crisis in SSA is somewhat daunting. As an example, Ghana typifies the need to promote social, economic and political structural reform as a precursor to more appropriate development strategies. Each country is different, however SSA shares the need to examine the relationships between environmental exploitation and resource use within the broader political economy if the roots of international dependency and underdevelopment are to be understood. It is doubtful that solutions to Ghana's (or SSA's) environment-development crisis can be reached through current structural adjustment strategies. The purpose of this chapter is to examine reason why the crisis cannot be solved with SAP and other market-based

solutions. In fact, these types of "answers" to Ghana's crises have become a significant part of the problem. In terms of chapter organization, the first section will examine patterns of rural poverty in the context of the political process, examining issues of legitimacy, popular participation and effectiveness in addressing structural causes of human and environmental deterioration. Following this introduction to contemporary Ghanaian political and economic problems will be a discussion the current Economic Recovery Programme (ERP). The future implications of the PNDC's liberal economic approach to development will be studied with respect to sustainability, resource enhancement and increased popular involvement in the political process. This last section is intended to demonstrate the need for a new direction in development theory as a means of providing practical alternatives to strategies that rely on rehabilitating environmentally exploitive mechanisms.

4.1 Poverty and Political Uncertainty

When Ghana became independent in 1957, it represented a singular political achievement that excited the minds of all people aspiring to freedom and self-determination in Africa. For Ghanaians it represented the hope that the historical record of colonialism would be swept away in a collective effort to develop as an independent nation. Thirty years after Nkrumah's vision of pan-Africanism, Ghanaian society (and much of the continent) is still waiting for structural reform, changes that will facilitate a bid for liberation from poverty, oppression and exploitation.

As reviewed in the previous chapter, Ghanaian political history is a record of military coups and counter-coups which, in the view of many citizens, do nothing more than decide who next is going to put their hands in the cash box (Hansen, 1987).

Figure 5 - External Debt of Sub-Saharan and Highly Indebted Countries, 1970-87

source: after World Bank, 1989 p. 21

The key foci of politics at the beginning of the 1980s were indicative of the themes that had come to pre-occupy Ghanaian life. Though economic progress has always been a central concern of African states, the substance of the political economy considerations moved from industrialization to rural development, from growth to averting total collapse, from production of surplus to maintaining minimum food supplies (Chazan, 1983). Thus, the emphasis became less on development than on survival - in political and economic

terms. The picture of economic stagnation presented in Table 5 draws attention to symptoms of structural inefficiency, inequality and an historical record of maldevelopment. According to Chazan (1983) and Hansen (1987) it was these inequalities and their concomitant dependencies that provided a major axis for political activism and power conflicts.

Table 5
Average Growth Rates of Key Economic Indicators in Ghana 1965 - 83 (expressed as percents)

Item	1965-73	1973-83
Population	2.2	3.1
Domestic Production		
a) GDP	3.4	-1.3
b) GDP per capita	1.2	-4.4
c) Agriculture	4.5	0.0
d) Industry	4.3	-7.0
e) Services	1.1	-0.3
Merchandise Trade		
a) exports	3.5	-6.4
b) imports	-3.5	-8.0
c) terms of trade	---	-6.5
Food Sector		
a) food production	2.0	-2.7
b) food production per capita	-3.0	-5.9
c) protein availability per capita	4.1	-4.0
Inflation		
a) consumer prices	6.3	49.9
b) food prices (local & imported)	6.6	53.2
c) non-food prices	5.8	46.5

source : Green, 1988 p. 12

Material inequalities were complicated by spatial, political, resource and social ones that caused substantial divisions in a society which, although pluralistic, had previously shown tolerance for differences (Ninsin, 1981, Chazan, 1983). During President Limann's administration, the economy deteriorated rapidly while state administrative institutions remained incapable of regulating or implementing government policies. The startling economic decline had a number of sources. Externally, low terms of trade for Ghana's major commodities during 1970-81, intermittent world recessions and the oil crisis complicated domestic economics. Internally, inflation, inadequate policy, smuggling and severe drought devastated any hopes of growth and recovery (Kraus, 1987). Between the period 1976-81, inflation averaged above 50 percent annually with real incomes dropping by roughly 80 percent over the years 1970-82. During this latter period, export production declined massively; cocoa production fell from 413,000 tons in 1970-71 to 258,000 tons in 1981-82; gold production fell by two-thirds, diamonds by 50 percent and timber production by virtually 90 percent as large mills halted operations for lack of capital equipment, spare parts and transportation (Kraus, 1987 p. 114). Decreased export production created massive import shortages of all goods, including necessary food supplies. In short, the implications of the economic situation so broad as to leave virtually no sector of society untouched by crisis, hence, popular mobilization to rid Ghana of Limann's P.N.P party was comprehensive in terms of support and rapid given little opposition to the takeover.

Between 1979 and 1981, virtually all major segments of society became politicized - as a popular reaction to rapidly deteriorating national conditions - religious associations, urban labourers, ethnic communities, local collectives, students, farmers, professionals the military and other class linked organizations. Each group reflected a particular set of economic, social and political interests showing the relative degree of social fragmentation and economic articulation that characterized the Ghanaian state. Although of differentiated

interests, most politicized groups were united in their criticism of more than two decades of political mismanagement. The personalization of politics; the stress on social interaction at the expense of substance; corruption, inefficiency and ineffective state apparatus were themes that pervaded Ghana's political history.

The socio-economic advantages related to power make power struggles acute. In Ghana (as elsewhere), high status is basically defined in terms of material possessions and wealth or their control and use, making power struggles compelling and inevitable. In effect there existed basic contradictions between political and economic interests in the basic formation of the state at independence, a situation complicated by ineffective administrations. Factors related to establishing a clear conceptual understanding of the new political entity were absent in 1957 (Chazan, 1983). At best, Ghana remained a "proto-state" at independence, bearing a (colonial) structure that ensured ongoing entrenchment into the global market system, no restructuring of social relations and a continuation of inter-regional dissonances exacerbated by colonial rule (Chazan, 1983). Early in its independent political economy, the new leaders formed a bureaucratic class later reinforced by the military, that encouraged complete centralization of decision making. The patterns of state-society relations that emerged in the post-independence period persist to the present and can be described as a combination of colonial administrative patterns (strong centralization) tempered by post-colonial elite class domination⁷. Chazan (1983) asserts that "...the Ghanaian state at its inception was an externally imposed entity that had yet to strike deep roots in the society" (p. 356). In other words, the political realm which although functionally distinct from its former colonial masters remained in a position of international

⁷ The "elite class" refers to controlling power interests at any one time which may be a clearly defined group or a combination of a number of groups representing various agendas (Economic, intellectual, radical, military, labour etc.). That a number of different interests combined in the Rawlings revolution of 1981 is clear judging from the breadth of popular support up to 1983. Whether or not the PNDC continues to enjoy the support of greater society since the introduction of the ERP in 1983 is a matter of much debate.

dependency. The fragility of the state has been underscored by deepening economic crisis through the years and social unrest, realities that galvanized the 1981 Rawlings coup.

It is in this context that the critical change in the nature of popular opinion and action must be understood. In 1981, Ghanaians turned to Rawlings as the alternative to chronic injustice and instability. There was a growing realization that options for change were constricted by the workings of politics which should concentrate more squarely on devising appropriate means of coping with a steadily deteriorating situation (Chazan, 1983). At the time, Rawlings appeared to offer a change from previous governments and development ideologies that had exacerbated class differences and structural poverty.

The revolutionary ideals expounded by Rawlings and the PNDC in 1981-82 were initially met with widespread (and somewhat cautious) popular interest (Ninsin, 1987). The new leader stipulated that there was a need for complete transformation of the socio-economic order and that nothing would be imposed on the people from above (even though the nature of the revolution had been). In his initial political statements, Rawlings endorsed popular participation as crucial in development efforts, promised that distributive and popular justice would reflect the "peoples' needs" and finally that leadership would be accountable to the people (Hansen, 1987). However, the conduct and character of Rawlings' politics, the real organs of power (which remain in the hands of the military) and the patterns and sources of recruitment of political officials were in direct contradiction to revolutionary rhetoric. That only the military and a small portion of the urban poor continue to support the regime is only one factor of by which the popularity of the current Economic Recovery Programme (ERP) may be measured (Ninsin, 1987).

No policy outcomes after 1981-82 reflected the interests of the peasantry, nor did these policies undertake the necessary radical reforms that were promised in the interests of the "peoples' revolution". I would argue in fact, that after 1982, populist organizations were allowed to exist to mobilize popular support for a government that required some

appearance of national legitimacy during negotiations with the IMF and World Bank to institute the ERP⁸. Note that during negotiations with the IMF and World Bank, there re-emerged in the Ghanaian state structure a more dominant "right" faction (notably in the military) as "leftist" interests were suppressed in the course of negotiating with the IMF. According to (Ninsin, 1987) this power realignment was inevitable as the "...IMF and its masters have never invested in revolutions. They only seek to destroy revolutions" (p. 27). I agree with this interpretation and would add that the subsequent victory of the right has exposed the lower classes to political and economic manipulation. The Rawling's "revolution" will continue to be unsuccessful in its aims (in a socio-political and developmental sense) as the coup did not produce a coherent revolutionary line, but instead allowed for the formation of a variety of popular movements and independent centres of initiative within the military and society only superficially controlled by the PNDC (Ndu, 1988).

This assertion stems from the fact that the PNDC and its current ERP have failed to address the resource empowerment and all class crisis which has evolved since colonial times, especially in the years since independence. Three decades of economic mismanagement contributed to social alienation at all levels and caused an uneven politicization of society. Many reformist, nationalist and revolutionary movements emerged in this environment comprised of urban professionals, intellectuals, students and workers, however each group seems to lack a dominant political and ideological agenda

⁸ Note that despite the formation and activity of revolutionary organizations in 1982, there were no real changes in the existing state apparatus. Organizations that pose a threat to the political hegemony of the Right (military) were neutralized through incorporation into the state structure. For example, the major institutions of radical change were the Peoples' Defence Committees (PDC's) and the Workers' Defence Committees (WDC's) which came to constitute a dual power structure in the country (along with the PNDC). In 1984, these pro-populist organizations were converted to Committees for Defence of the Revolution (CDR's) by Rawlings to eliminate their political role and confine the CDR's to economic support and mobilization functions (Ninsin, 1987; Hansen 1987).

and roots in popular forces and the countryside. This phenomenon underscores the fractured nature of the contemporary Ghanaian state. That the survival priorities of the rural poor were not strongly represented through some type of fairly unified voice suggests a number of things. First, that perhaps the poor who have traditionally been removed from (largely urban) state politics either failed to involve themselves in the political process or were overlooked by it. Second, that competing class, ethnic and rural elites could not come together to represent a cohesive rural political agenda. Or finally that the issues being addressed in the revolution did not excite popular rural interest. Chazan (1983) suggests that while a number of forces combined to limit popular mobilization in the countryside, rural social and economic fragmentation played a significant role.

Within the Rawlings government there exist political factionalism, institutional breakdown and class struggles which are reflections of the "all-class crisis" and the gradual erosion of the State's hold over critical social and economic processes in the country. The implication of these conditions for improving Ghana's development are sobering. The PNDC itself has failed to become a key institution in Ghanaian society. Rawlings has recruited professionals and technocrats for Cabinet positions who are protected from outside political intervention in implementing policies (Kraus, 1986). It is arguable, therefore, that present "economic reconstruction" strategies do not and would not receive common support from Ghanaians (rural or urban), as many of the policies proceed regardless of human and environmental cost. The PNDC remains the product of a multi-class alliance (dominated by right wing interests and the military) that is too politically divided and fragile to promote a "national democratic revolution" successfully, let alone co-ordinate a self-sustained socio-economic development programme. Development entails some consensus between government and society on a series of goals and objectives, and the current climate is not conducive to this process. Nor have government policies placed a priority on the survival needs of the majority of the populations which resides in rural

areas. The term "peoples' revolution" then is something of a misnomer as peoples' concerns and priorities are removed from real political action. This gap in turn complicates the efforts of international aid agencies, governments and institutions to identify actual development needs. National or sectoral economic growth (eg. rehabilitating the viability of the forest sector) are usually targeted as development priorities because they are consistent with the selective interests of the ruling group (in addition to the interests of the donor agencies). It is more difficult and not necessarily in the best interests of the ruling elites to promote as a development priority resource empowerment for the rural poor through structural reform, redistribution of power and greater self-reliant development. As in the case of Ghana, development "needs" (ie. better access to productive resources, political-economic empowerment, reduced social differentiation) and stated development "objectives" by the government (macro-economic growth, increased productive capacity and utilization, greater management efficiency) do not always coincide.

Progressive plans for transformation of the neo-colonial political economy can not succeed without an adequate class base and mass mobilization. During the last nine years of the Rawlings era however, questions have been asked about the destination of the PNDC revolution, particularly "who is the revolution for?". In the early days of the revolution (especially before the ERP in 1983) it appeared to be for the workers, poor and peasants. The continued failures of capitalist policies and development strategies up to 1981 sustained the relevance of radical alternatives (as proposed by Rawlings); however it would appear that the PNDC's current direction is anything but "radical" and is not likely to produce "...a total transformation" of Ghana's political economy as called for by the national leader in a speech to the nation on December 31, 1987 (cited in West Africa, January 1988 p.17).

The history of the past three decades in Ghana seems to confirm that the role of the military in political and economic development is no longer transient (Agyeman-Duah,

1987). What kind of revolution is under way in Ghana? What are the chances of addressing some of the critical environment-development issues given current ERP strategies? What have been the major determinants of the strategies adopted by the PNDC? Answers to these and other questions pertaining to the Ghana's political economy and development options require a critical review of the parameters of its economic stabilization and recovery programme. In my view, the PNDC's indifference toward the political position of the left, the lower classes and rural interests in the adoption of IMF policies and the continuation of these strategies at mounting environmental and human cost, showed the true level of government commitment to the so called "peoples' revolution". As rightist factions gained ascendancy in the government, socio-political reform and popular empowerment faded from the political agendas. The PNDC's rhetoric has proven to be empty as no concrete economic or political steps to build a political base for moving in a "revolutionary" direction have transpired. In addition, the political struggles for dominance and legitimacy on the part of the PNDC continue as severe disorder of economic conditions persists.

4.2 Ghana's Economic Recovery Programmes - What Kind of Development?

Prior to the implementation of the ERP in 1983, Ghana's economy was characterized by sectoral imbalances, falling output, rising poverty and infrastructural collapse. The social implications of the crisis were momentous as rural and urban malnutrition increased, living standards were reduced throughout the nation, severe shortages of food became a serious problem and informal economic activity rose substantially (Loxley, 1988). Table 6 illustrates the severity of the human crisis in terms of selected human indicators for the period of 1960 to the mid 1980s. After an unsuccessful attempt at a nationally engineered stabilization and adjustment programme in

1982, Rawlings was left with little choice but to turn to the IMF and World Bank as the only large scale international lenders of credit to Ghana.

Table 6
Selected Human Condition Indicators for Ghana and Low Income Sub-Saharan Africa, 1960 to mid 1980's

	Ghana				Low Income SSA
	1960	1970	late 1970's	1980's	1982
average life expectancy	45	49	55	53	48
infant mortality rate	132	107	86	107-120	118
average calorie intake as % of requirements	92	97	88	68	91
proportion of population below absolute poverty line					
a) rural	--	--	60-65	68-72	65
b) urban	--	--	30-35	45-50	35
access to health facility *	--	--	--	30	45
health budget as % of GDP	---	1.2	---	0.26	0.95

* defined in terms of location within a 5 km radius. May overstate for urban population when facilities available are small to serve the entire population nominally within reach of them.

source: Gree., 1988 p.14

In following IMF and World Bank dictates, PNDC development strategies evolved along primarily macro-economic (monetary and fiscal) lines. Historical development experience, social structure, environmental productivity and enhancement, questions of distribution, "informal" economic activity (in the subsistence sector, through smuggling or

black market activity) and cultural acceptance of the new strategies, did not factor into the development blueprint.

Indeed, given the degree of social fragmentation and the functioning of rural economies as they have been articulated with capitalism, it remains questionable that IMF neo-classical solutions are applicable to non-orthodox (in the sense of market capitalism) conditions. Recall that the allocation and use of productive resources do not operate solely under the operation of market forces in Ghana. Social and cultural constraints to production (especially in allocating land for cocoa production and food crop farming) are significant. Under these circumstances an theoretical model which is macro monetary gives a very poor starting point for analysis of the Ghanaian political economy and an even poorer one for designing a complete and sustainable policy change package for making short or medium term projections. In light of Ghana's historical development experience (starting with colonialism) it is apparent that its economic problems do not flow simply from erratic production, low capacity utilization and fiscal mismanagement. Its economy (like every other economy in the world) operates within a particular context given specific constraints (historical, natural, international, cultural inter alia). The constraints that have been identified as critical in the current environment-development crisis relate to resource exploitation and dependent development patterns. Therefore, policies which do not seek to attack these structural causes of the crisis are incompatible with any type of integrated, sustainable development initiatives. It is my contention that SAPs are not only inadequate in the Ghanaian context, but also regressive because they institutionalize international, national and local mechanisms that perpetuate non-sustainable exploitation of the environment and of the people.

4.2.1 Economic Recovery Programmes (ERP): I. 1984-1986 and II. 1987-1989

Unknown to most people, talks between the PNDC and the IMF had begun in July 1982 and an understanding for an agreement was reached by February of 1983 (West Africa, 1986 p.67). Two phases of an Economic Recovery Programme (ERP I and ERP II) were planned for 1984-86 and 1987-89. The first phase included "stabilization" measures while the second phase concentrated on "adjustment" policies. The primary goals of ERP I included: arresting the decline in production, controlling inflation, stimulating exports and reduce luxury imports, restoring confidence in Ghana abroad, rehabilitating the productive and social infrastructure and increasing general standards of living. In the adjustment phase, the goals of ERP II involved: ensuring substantial economic growth at around 5 percent per annum, increasing the levels of savings and investment, improving the balance of payment problems and improving public sector management. "The ERP constitutes the first serious attempt in two decades at addressing issues relating to the proper management of macro-economic and structural adjustment policies" (Government of Ghana, 1985 p.1). Given that as much as two-thirds of Ghana's population is in the rural sector, the ERP is intended to focus on rural poverty and development, "...recognizing imbalances in the terms of trade between the rural and urban areas. The ERP's objective of initiating major improvements in average living standards necessarily implies a focus on the impact of macro-economic, sectoral and other policies on the living standards of the rural populace in general, and on those of highly vulnerable groups in particular" (Government of Ghana, 1985, p. 4)

The specific aims and means of achieving stabilization and adjustment entail liberalizing the foreign exchange system, increasing cocoa producer prices, using fiscal measures and monetary policy for greater economic balance, rationalizing the state-owned enterprise sector and liberalizing process domestically. Also an economic target is sector

rehabilitation and public investment programmes (PIP). These are designed to promote public participation in economic recovery while restoring regional integration and reduced disparity. Transportation and communication infrastructural improvements remain the key foci as stimulation and rehabilitation of the mining and forestry export sectors is critical to ERP's "success" (World Bank, 1987; Loxley, 1988)

According to the World Bank document, Ghana: Policies and Issues of Structural Adjustment (1987), the centrepiece of the structural adjustment programme is a market-determined exchange rate applied to all economic transactions and a liberal trading regime in which protection is provided by a stable and moderate tariff structure. Unification of the official rate and the foreign exchange auction in February 1987 extended the application of a "more realistic exchange rate" to cocoa and petroleum. In order to alleviate goods shortages, special import licenses (SILs) have been created. Also, during 1987 interim tax reforms have been implemented concentrating on strengthening export promotion which remains the cornerstone of the overall programme. Improved incentives for cocoa farmers have been one of the major policy reforms of the ERPs. Cocoa exports must improve to reach a sustainable production target of 300,000 metric tons per annum if structural rehabilitation and adjustment is to proceed as planned. The world price for cocoa is a critical and undetermined variable in the medium and long-term success of Ghana's "recovery". Higher short-term prices on international markets (1985-87) are expected to have a positive impact on production (as producer prices will then be expected to increase). Without this desired increase in cocoa production, the World Bank foresees a continuing and increasing problem in the area of debt servicing which is anticipated to "...remain severe over the medium term." (World Bank, 1987). In the period 1987-88 for example, the debt service ratio peaked at 67 percent, a fact that has placed "considerable strain" on the Ghanaian export economy (World Bank, 1988).

The preliminary impacts of the adjustment (up to 1985-86) have been encouraging in terms of meeting some of the macro-economic targets set by the World Bank. Economic growth occurred in all the main sectors; there have been increases in per capita consumption and incomes, real producer prices for cocoa, real wages in addition to renewed confidence in the banking system. GDP growth averaged 3.3 per cent for 1983-85 and 6.5 per cent for 1984-85, while inflation has fallen from an average of 75 per cent in 1980-81 and 1982-83 to a level of about 40 per cent in 1984 and 15 per cent in 1985 (Government of Ghana, 1985). Debt service payments and black market activity have also decreased (Loxley, 1988, Green, 1988).

Despite the initial success, there still remain some major areas of concern in the adjustment process. Food production is below 1970 levels and government policy in the area is ambiguous and inadequate (Green, 1988). According to Ewusi (1984b) in his study of the "Rural Dimensions of Poverty in Ghana" the "trickle-down" strategy advocated by SAPs has increased the plight of the masses of the poor in the rural sector of the economy, "... which over the past three decades, has not only stagnated, but has also been bedeviled by run-away inflation, chronic budget payments difficulties, and acute shortages of consumer durables and non-durable goods as well as industrial and agricultural raw materials" (p. 36). The author argues that conditions of dependence and underdevelopment cannot be broken if dreams of future prosperity continue to rely upon cocoa exports which have shown cyclical fluctuations on world commodity markets. Indeed, the commodity price of cocoa has declined on world markets since late 1988 (West Africa, January 1989). I agree with this point and add that there has been neither "adjustment" nor reform of the economy or land use patterns that contribute to the commodity "squeeze" experienced by rural (cocoa) producers⁹.

⁹ the commodity squeeze referred to, draws from Bernstein's (1979) "simple reproduction squeeze" as outlined in Chapter Two.

Ewusi (1984a,b) maintains that land pressures associated with cocoa production have increased considerably in the last two decades. The low nutrient value below the level of the top soil in Ghana's cocoa producing areas and the importance of natural protection to it in the form of forests or other type of natural vegetation permit only a relatively low degree of agricultural exploitation. Because the southern forest zone was the most suitable area for cocoa production (in terms of soils and climate) it has gradually lost its natural forest cover since the turn of the century as more people are drawn into commodity production and search for new land-based resources. The tendency toward expansion farming (leaving some areas fallow and expanding production into new or unused areas) ended abruptly when the virgin forest land in southern Ghana disappeared (Ewusi, 1984b). Formerly, the cost to farmers moving into virgin forest was virtually zero as new land was sought while older land was left fallow. With the disappearance of forest cover and increased competition for land, practices of leaving land fallow for a period to regenerate have a low option value as rural producers struggle to increase commodity production. No longer the biggest producer of cocoa in the world, Ghana has experienced increased competition from Malaysia, Ivory Coast and Nigeria since 1988 which has driven prices down and renewed pressure to further boost production to meet foreign exchange demands (West Africa, January, 1989). According to West Africa, the prospects for cocoa prices continue to decline for 1990-91 (January 1989). The end result is exhaustion of Ghana's land and labour resources as cocoa production and deforestation strengthen the ecological threat and jeopardize the stability of the very policies designed to promote development.

The point is that continued and intensified cash cropping in Ghana as the central component of the ERP is contributing to the gradual degradation of the ecology, including the forest environment (Dei, 1990). These external forces (of deforestation) persist through the activities of largely multinational corporations as Ghana fails to restructure its dependent relations with world commodity markets. The current trends in deforestation

can partly be attributed to the expansion of industry geared to exports as Ghana seeks to restore its resource industries (mainly logging and mining). Note that at the beginning of this century, Ghana possessed a forest estate of about 9.8 million hectares which had been reduced to less than half of that figure by 1950. As resource pressures continued in the post-independence period, the total stocks have declined to less than 1.7 million hectares by the early 1980s (Repetto and Gillis, 1988).

It is clear that current development policies are exacerbating conditions of resource exploitation and misuse. Government rhetoric in Ghana frequently targets rural poverty as a primary development goal, but continues to promote policies that are contradictory to such aims. Consider for instance, Ghana's eight point forestry policy (which was reviewed by the Canadian International Development Agency in 1986) as an example of contradiction between rhetoric and actual development strategies. The points include:

1. the creation of sufficient permanent resources to supply direct and indirect benefits necessary for the welfare to the people of Ghana;
2. to manage these resources by methods that will achieve sustained maximum productivity and value;
3. research into management issues;
4. public education aimed at improving the understanding of the value of the nation's forests;
5. maximum utilization of forest resources not dedicated to permanent forestry;
6. the training of staff;
7. the provision of technical agencies;
8. co-operation with all agencies interested in optimum land usage (CIDA, 1986 p. 68).

Criticisms of these objectives are numerous, however the most salient points centre around this forest policy as it relates to rural development and the ERP. It seems unlikely that the execution of this policy improve the economic situation of local people involved in forestry activities in Ghana. There is no direct recognition of the multiple uses forests

represent to rural dwellers (fuel, emergency food supplies, building materials, medicine, as a habitat for bush meat, as preserving soil quality and moisture regimes, in offering shade to young cocoa trees etc.). Rather, the forest policy appears to lean towards preservation and enhancement of trees as export and industrial commodities. Enhancing the productivity of forest resources for purposes of basic survival and economic empowerment among rural populations is not priority in the national forest policy, nor the Economic Recovery Programme. As stated in the ERP, "The government's strategy for recovery and rehabilitation of the sector is to increase the productivity of the forest base to the maximum; consistent with the need to protect the environment...the [forest rehabilitation] programme, which is supported by the World Bank's Export Rehabilitation Project, aims at achieving a quick increase in production of the private companies through providing them with spare parts, equipment and materials. The Ghana Timber Marketing Board has been abolished to free the industry of the Board's control functions" (Government of Ghana, 1984 p. 11). Clearly, there is a blatant contradiction between "rural development" rhetoric and real development action within the Government of Ghana (GOG). It is difficult to conceive that industrial forest development is in the survival interests of rural people as "trickle down" strategies have so far proved ineffective in alleviating inequitable distribution of wealth and resources in rural areas where poverty is the deepest.

In addition to policies directly concerned with forestry, there are also the impacts of non-forest policies to be considered in tracing the causes of deforestation. Policies pertaining to the rehabilitation of the mining sector under the ERP have significant impacts on ecological degradation. Since the last decades of the 19th century, it has been very difficult for Ghanaians to mine gold in Ghana on a large-scale for their own profit - the British simply outlawed Ghanaian ownership in the interest of protecting their own capital investments (West Africa, April 1988). This all changed with the Economic Recovery Programme in 1985. Mining contributed up to 15 per cent of Ghana's foreign

exchange earnings, second in importance only to cocoa. Ghana has good potential for expanding the gold output in view of the high grade of known deposits. The major steps taken towards resuscitating this industry have included exchange rate adjustments, provision of spares [parts for mining equipment], and the 35 to 45 per cent export retention programme. The new production strategy is to implement rehabilitation [of old mines] and expansion programmes simultaneously (Government of Ghana, 1984 p. 10). According to Mr. G.O. Kesse, director of the Geological Survey Department, Ghana is now in its third "gold boom" (others date from 1892-1901 and 1925-1935) (West Africa, April 1988).

The government's new approach has resulted in drastically increased production; 400,000 ounces in 1989 which is up at least 50 per cent from 1983 (World Bank, 1989). In mid 1988, the first new gold mine was opened up in Ghana in more than 40 years. The government is also encouraging surface mining projects to produce additional gold for export. It is the surface mining that is particularly destructive to the forests. Licences are being freely granted to mining companies with no regard to the effects that their operations have on the environment. Small-scale miners are also illegally (without licences) conducting surface operations with similar devastating effects on forests as they are cleared indiscriminately in the search for deposits. Surface mining has destroyed large tracts of land in Ghana's remaining forests through dredging and digging, pollution of rivers and careless handling of mercury (West Africa April 1988). The rehabilitation of the gold industry in the absence of associated environmental controls or regulations is further evidence of the GOG's disregard for ecological protection or enhancement. There is no connection in Ghana's development strategy (based on export rehabilitation of primary commodities) between structural mechanisms enhancing environmental exploitation and current development initiatives. It seems unlikely therefore that these strategies (which

either cause or advance resource degradation) will allow for the development of sustainable rural livelihoods or sustainable long term economic gains.

It is interesting to note that although abysmal rural standards of living have been used as a major indicator of poor economic health, few measures have been designed to deal with these and related problems. For example, forestry, mining and cocoa constitute the backbone of the Public Investment Programmes (PIP's) with minimal resources directed towards reducing regional inequalities and improving the social infrastructure sectors, notably education and health (refer to Table 7). Given the emphasis on export-oriented recovery, the relative position of food producers to cocoa producers continues to decline. Also, inflation has risen since 1985, causing real wages and incomes to decline. Moreover, there has been a general ignorance on the part of the government concerning the distributional impacts of the ERP regionally, between social groups as well as the impacts on women.

Recall that regional inequalities were complicated through colonial economic and development policy that led to a concentration of socio-economic infrastructure in the southern cocoa belt. Where disparities already exist between regions in terms of access to land resulting from ecological dictates as well as historical inequalities in regional development, ERP policies have done little to alleviate these structural imbalances. As the value of cocoa producing land in the south acquires greater value in terms of commodity production, it is increasingly difficult for those from the north to have access to it (Ewusi, 1984b). Conversely, increasing demand for labour in the south makes employment opportunities in that area more attractive than farm self-employment in the north. Therefore, in many respects, the colonial pattern of using those from the north as an active labour market is perpetuated and enhanced through present development initiatives. Cheap labour enables a small proportion of farmers to keep on starting new farms and expand

their holdings, thus leading to increased social and economic differentiation in rural Ghana (Ewusi, 1984b).

Table 7
Public Investment Programme 1986-1988
(millions of cedis)

	Total Projects	Local Costs	Foreign Costs	Total	%
Productive Sectors	78	11,852	62,340	74,192	30.2
-agriculture	50	6,251	19,096	25,346	10.3
-industry	14	1,846	7,334	9,180	3.7
-mining & forestry	14	3,755	35,910	39,666	16.2
Economic/ Infrastructure	96	43,414	115,545	158,959	64.7
-roads/highways	28	24,039	30,573	54,612	22.2
-transport & communications	38	7,765	45,732	53,496	21.7
-energy	21	8,789	28,228	37,017	15.1
-water supply	9	2,911	11,102	13,923	5.7
Social Infrastructure Sectors	27	6,640	5,934	12,374	5.0
-education	10	2,546	1,014	3,560	1.5
-health	17	3,894	4,920	8,814	3.6
Total	201	61,706	183,819	245,525	100.0

Source: Public Investment Programme 1986-1988, Government of Ghana 1985 p.53

Moreover, there has been a general ignorance (or neglect) on the part of the government concerning the distributional impacts of the ERP regionally and between social groups. The impact of costs and benefits are hidden in the gross economic indicators used by the IMF and the World Bank in most of their stabilization programmes as signs of "success". Although the government's PAMSCAD (Programme of Actions to Mitigate the Social Costs of Adjustment) was heralded as an important step forward in considering the human costs of economic policy, it does not tackle the structural elements of the crisis. Table 8 outlines the main expenditures of PAMSCAD. The programme "...seeks to address the needs of vulnerable groups who are in a precarious condition due to the adjustment program or due to the earlier period of economic decline. These vulnerable groups include small farmers, mainly in the Northern and Upper regions...also low income un- and under-employed urban households, and retrenched workers from the public and private sector" (World Bank, 1987 p. i). Investments in rural infrastructure, employment, health, shelter, agriculture and food will be made based on several criteria. First and foremost among these criteria is "...a high economic and social rate of return" (World Bank, 1987 p. 10). Action programmes will also be evaluated on the twin criteria of ease and speed of implementation. In addition they must not create distortions that are inconsistent with the aims of the ERP and in sensitive areas (such as redeployment and education) which have been particularly adversely affected by the ERP, interventions should have political marketability and currency. In short, programmes must "...serve to ensure the sustainability of the ERP, while alleviating the burden on the vulnerable groups" (World Bank, 1987 p. 10).

PAMSCAD may have some short-term impact on "essential issues" (such as immediate medical concerns, emergency food provision etc.) but the programme does not account for the recurrent costs of social adjustment such as schooling, community health clinics, provision of basic medical supplies and primary health care and public

transportation to urban centres and markets. According to PNDC government officials, "...[the] main thrust of ERP was to reverse the decline of health infrastructure and to substantially improve service delivery in terms of quality and coverage.

Table 8
Proposed Program to Mitigate the Social Costs of Adjustment

Type of Program	Estimated Cost (\$million)
Employment: Redeployment	0.34
Information Strategy for Redeployment	0.03
Counselling and Placement Services	0.10
Training Scheme	0.55
Employment: Public Works	32.90
Priority Public Works Projects	11.30
Labour Intensive Feeder Roads Projects	15.10
Rural Public Works in the North	6.00
Health	20.00
Essential Drugs	20.00
Food and Nutrition	4.00
Supplementary Feeding and Nutrition Education	4.00
Food for Work	?
Social Sector Planning	0.75
Ghana Living Standards Survey and Related Studies	0.75
Education	8.60
Rehabilitation of Secondary Schools	0.60
Repairing First-Cycle School Roofs	0.80
Use of Radio for Education	0.40
Improving and Expanding First-Cycle Education	?
Deworming of Primary School Children, Hygiene Education	0.60
Upgrading of Ghanaian Language Printing	0.50
Mass Functional Library and Community Initiative Project	4.00
Functional Literacy for Out-of-School Children (esp. girls)	?
Initial Food Stocks to Finance Revolving Fund for Food	1.20
Second-Cycle Boarding Schools	?
Income-Generating Activities for University Students	?
	<hr/> 67.09

source: World Bank, 1987a pp. 91-100d

The emphasis on health spending [under the ERP] has been on rehabilitation of existing hospitals, health centres training institutions, plant, machinery and equipment and the construction of rural health centres for rapid expansion of primary health care" (West Africa, January 1989 p. 2441). However, at the same time the government removed the subsidies on health care making services inaccessible to most rural people (up to 1983, health services had been virtually free for Ghanaians). PAMSCAD, with its short-term

"band aid" approach to health, poverty and adjustment-related problems does not come close to addressing the social and survival needs (which demand recurrent expenditures) of the rural populace. In rural areas, the control of diarrhoeal diseases, general health awareness, treatment of minor ailments, and provision of potable water continue to present major obstacles in the face of a grim economic environment (West Africa, January 1989).

Given recent attention to the "human face" of development and environmental impacts of structural adjustment in Ghana (and elsewhere that SAPs have been implemented) the government, the IMF and World Bank along with other major bilateral creditors, are more willing than ever to acknowledge the social costs of adjustment. However, each group maintains that before these costs become a central and priority issue, the emphasis remains on opening up the economy to foreign investment on increasingly attractive terms, and on "normalising" relations with creditors by keeping up the nation's "mortgage" payments (West Africa, January 1989). If one considers that PAMSCAD is designed to "mitigate" human costs induced by the adjustment plan rather than directly addressing them in order to attempt a structural "solution" to their root causes, it becomes clear that the IMF and the Rawlings regime have failed to incorporate a human dimension as central to the ERP. I would suggest that the only certainties the ERP development path are increased social and environmental deterioration.

Finally, and perhaps most significantly, the sustainability of the structural adjustment programme remains problematic. Recovery efforts tied to cocoa present major economic, social and environmental concerns. Increased forestry and mining activity, by degrading the environment, undermines the ecology on which development depends. The export focus of the programme also reinforces relations of human poverty, which in turn has serious implications for overexploitation of the environment. Given the current capacity and resources of the government the non-sustainability of export-oriented adjustment and questionable popular support for ERP policies, I suggest that from an

analytical point of view, current development directives are inappropriate and misguided. From a more practical point of view however, some could argue that Ghana had little choice but to turn to the IMF and World Bank in 1982 given the severity of the economic situation.

The fragility of Ghana's recovery and adjustment prompts questions concerning the political climate in which the Rawlings' government is carrying out its so-called "revolutionary" socio-economic development strategies. Indeed, in considering the potential success or failure of the ERP in the context of socio-political events, one is led to question whether or not economic stabilization of the type proposed is an achievable end without political and structural reform. The next section will address some of the ideological and practical political issues associated with the PNDC and their development strategies.

4.3 The Politics of the PNDC - A People's Revolution?

What kind of revolution is under way in Ghana? What significant changes, if any, has Rawlings make in the life of the nation? What have been the major determinants of the strategies adopted by the PNDC? And finally, what are the implications for the sustainability and the environment?

In addressing the first question, it is highly questionable whether the PNDC, despite its declared intention to give power to the people, has made any real progress in this area. The rural populace who constitute about 70 per cent of the nation have remained impervious to Rawlings' "revolution" (Agyeman-Duah, 1987). As early as 1982 when the PNDC attempted to impose controls on the sale and price of food to appease urban dwellers suffering from inflation, it became apparent that the concerns of the rural poor were not a priority in the latest set of development policies (Ninsin, 1987). The fact that

real and meaningful national democratization has not yet been realized, breeds growing distrust between the citizenry and the government (Robotham, 1988).

Although Rawlings is claiming that his development strategies are facilitating a "transition to socialism", the economic measures in themselves are not exceptional as they form part of a global restructuring of social conditions of production that, within the indebted peripheral nations, take on an unmistakably neoclassical (IMF) character. Therefore, if as Rawlings would lead us to believe, the Ghanaian reforms are to be seen as laying the groundwork for a "transition to socialism", the key to this must be seen in the political character of the regime (Robotham, 1988).

Many share the opinion that the political character of the PNDC remains unclear and as a result, the PNDC lacks political legitimacy in the eyes of many important political segments of the right and left (Kraus, 1987). For members of the left, workers and trade unionist and ordinary Ghanians, Rawlings has departed fundamentally from the deals for which he seized power: the right of all Ghanians to basic essentials, the right to education and health care and, most of all the right to participate in decisions over their lives (Kraus, 1987). It is also a commonly held opinion that the PNDC has betrayed the revolution by seeking economic salvation through the IMF and its orthodox, market-reliant economic policies and a concomitant reduction in the regulatory role of the state. Given this understanding of national political life, one could venture to answer the second question, "what significant changes has Rawlings made to national life?", by commenting that he has made very few structural alterations to a political and economic system that perpetuates social differentiation, mechanisms of dependence and authoritarian rule. Both the leftist and right centrist segments of society share an anger with the regime's failure to encourage political organizations that link the grassroots with the nation's political system (Hansen, 1987; Ninsin 1987; Kraus, 1987). As a result, the PNDC cannot hope to engender support and compliance from a major segment of the populace including the rural poor.

Conversely, the rural poor is left without a political vehicle through which to voice its concerns regarding basic livelihood struggles - access to markets, productive resources, food and health care. Clearly, the Rawlings regime does not want to return to a democratically elected political system as it is doubtful that any government could have launched an economic reform programme such as the ERP if there had been popular participation in the decision making process.

The IMF proposed "economic reforms" cannot hope to address the structural inadequacies that have forced Ghanaians into a "culture of silence" as many attempt to devise subsistence coping strategies that operate outside of the formal economy. Granted that economics forms a central component of development strategies, however, the path of the current regime is simply too limited in perspective given the totality of the Ghanaian crisis. The economic emphasis of the adjustment programme does not tackle the problems associated with the need for and successful implementation of true reform. The survival strategies developed by Ghanians have created self-contained socio-economic and political interest groups outside of state influence which must be brought into formal contact with governmental institutions and policies if sustained development is going to occur. The theoretical implications of these practical responses to crisis therefore, must address not only the fundamental causes of popular non-participation in the State, but also deal with the survival mechanisms formulated to cope with the problems. I agree with Ewusi (1984a) that existing behavioural patterns (ie. specific responses to change and crisis) must be acknowledged in terms of the local structures through which they have been mediated. By recognizing this, appropriate policy should be tied to peoples' development priorities and the socio-economic structures and conditions that regulate access to resources, rather than resorting to macro-level policy prescriptions which are far removed from the socio-economic realities of everyday (rural) life.

In addressing question three, evaluating the major determinants of strategy, it appears as though what were initially expressed as national interests have been mixed with political self interest and survival on the part of the PNDC after 1986, particularly when they opted to accept the conditions of EFF programme (Extended Fund Facility). By late 1985, only three EFF programmes existed (Brazil, Mexico, and Malawi) and all are designed in close collaboration with the Fund and World Bank (West Africa, January, 1988). In being "selected" to participate in the EFF programme, the GOG commits itself to at least three to five more years of "adjustment" policies approved in conjunction with the World Bank. This again brings into question the relative autonomy of the PNDC in "designing" Ghana's development strategies. In compensation for the loss of revolutionary momentum, there has been a gain in momentum of those domestic and external forces that have always sought to control Ghana's economic and political spheres. If one were to ask, "who is the revolution for?" the answer could be sought by evaluating the determinants of policy action since 1982. Given that the ERP seeks to establish conditions of economic efficiency and rehabilitation, it is not the poor and rural segments of society that stand to gain the most from rehabilitation of the old economic order. The active primacy of people in their own national economic future has become a passive and rhetorical political line. In terms of the PNDC's decision to continue with its SAP by agreeing to the conditions of the EFF, a debate arises concerning the difference between tactical and strategic compromise (West Africa, January 1988). IMF and World Bank programmes, it has been argued, are designed to integrate countries like Ghana more efficiently into the international capitalist system. Such programmes are often seen by those not in the elite classes of developing countries as strengthening those sections of the local power base which benefit most from the development of capitalist relations.

As discussed earlier, African economies have not been fully "captured" by capitalist relations and, as a result, strictly market-oriented policies remain ineffective in terms of

improving resources allocation and enhancing sustainable resource productivity, especially in rural areas. Elements of the IMF's macro monetary model do not provide much insight into critical micro and sectoral issues such as increasing social differentiation within the commodity producing sector. The ERP specifically, and SAPs in general, do not address the significant problems respecting varying economic structures in Ghanaian and African society and the responses of these structures to externally imposed economic "solutions". The structural reality of Ghanaian society, characterized by articulated rural economies, flexible and adaptive social structures and a resource-environmental crisis, defies neo-classical "adjustment" solutions. Attempts at increasing production in export sectors serve merely to complicate environmental depletion (of soils, forests, non-renewable minerals) and perpetuate relations of production that reinforce resource and labour exhaustion.

What then, are the implications for environmental sustainability? I contend that pursuit of IMF programme criteria by Ghana is inappropriate as programmes are focusing on the symptoms rather than attacking the fundamental causes of the country's malaise. Export led recovery programmes are indisputably at odds with environmental protection and sustainable use. The ERP is not designed to define policy actions, related investments and the necessary institutional-strengthening activities that are consistent with environmental concerns. In fact, the structural elements causing resource exploitation have been strengthened under the SAP.

Despite the use of "environmentally friendly" language, the World Bank continues to promote the same orthodox structural adjustment programmes focusing on export rehabilitation and more efficient resource exploitation as solutions to Africa's environment-development crisis. In a recent publication, Sub-Saharan Africa: From Crisis to Sustainable Development (1989), overpopulation, poor management, declining industrial capacity utilization and inadequate technology are still being cited as the "causes" of underdevelopment. This level of analysis is reminiscent of modernization theories.

Although the Bank uses words like "equitable", "sustainable" and "enabling", its policy prescriptions do not differ from the orthodox SAPs of the 1980s'. In fact, there are more blatant contradictions between rhetoric and policy action in this latest report than in earlier SAP documents on account of the Bank's recent discovery of "environmental issues". For example, the Bank maintains that economic sustainability can only be achieved if SSA maintains a minimum average growth rate in its GNP of 4 to 5 per cent (World Bank, 1989). The target growth rates per annum for specific sectors are as follows: agriculture 4 per cent, industry 5 to 8 per cent and all other sectors around 4 to 5 per cent. To meet these targets, Africa must not only dramatically raise the levels of domestic savings, but also greatly improve productivity while stabilizing population growth. The emphasis on growth targets is clearly at odds with concepts of sustainability which recognize the finite limits of the earth's resources and ability to absorb wastes. Relying on growth targets as measures of development also overlooks questions of distribution, economic and resource empowerment, productivity enhancement and ecological viability - all central concerns to sustainability.

Finally, the first item on the Bank's "new" strategic agenda for SSA in the 1990s stipulates that, "Adjustment programmes should continue to evolve" (World Bank, 1989 p. 14). In the case of Ghana, that would imply the continuation of export driven economic growth and the perpetuation of human poverty which is linked to environmental degradation. Clearly, Bank policies, new or old, are intended to promote growth at the expense of sustainability and human centred development. Efforts at economic recovery based on continued unsustainable environmental use (as seen in Ghana) are not only misguided and destructive but exact a huge toll on those poor rural populations whose lives intersect most closely with the environment. Neo-classical development strategies of the kind purported by the IMF and World Bank are simply incompatible with environmental enhancement. "Enhancement" does not have a market value and lies outside monetary

measures, thus it is very difficult to convince funding bodies like the IMF and the World Bank that reduced environmental exploitation may actually be a more viable option in terms of future development. Structural adjustment in Ghana has produced little enduring poverty alleviation and certain of its policies (for example, continued reliance on primary or low-processed commodity exports) have worked against the poor. Unless SAPs are more closely related to the wider livelihood struggles of the rural poor and those in direct productive contact with the environment, there is a danger that the process of adjustment will have negative impacts of growth, living standards, employment, social development, political stability and of course the environment (biophysical and climatic). SAP programmes are not only environmentally damaging, but also incomplete in the sense that fiscal, trade and price balances are considered ends in themselves. As pointed out earlier, human-condition and environmental imbalances (which are mutually recursive) as related to employment, incomes, nutrition, health and sustainability do not receive equal priority (West Africa, January 1990).

Over and above certain basic ideological contradictions between environmental sustainability and structural adjustment, Ghana's ERP can be criticized on several specific points that show its incompatibility with environmental concerns. To begin with, the framework of the programmes is constructed exclusively around macro or sectoral monetary measures which tend to abstract from both environmental constraints on and changes in the local economies. No allowance in production figures (eg. cocoa) is given for increasing stresses on already degraded environments (soil exhaustion, erosion) causing the option value of conservation of land, soils and forests to be low or unknown. Such a land use pattern facilitates continued environmental neglect and ensures the reproduction of exploitive relations between rural groups. Note that this is only one example of how macro economic targets are made in complete ignorance of local environmental and social conditions of production.

Secondly, no account is taken of sectoral environmental or distributional impacts of policies. The Ghanaian economy today, as it was in colonial days, is characterized by a narrow and lopsided production base (cocoa, timber and minerals being the top three exports) which renders it highly susceptible to external shocks and over-exploitation. The ERP, with its emphasis on export growth is diverting attention away from structural transformation in favour of focusing on the symptoms and fallout from the consequences of external dependence. The environment continues to be a casualty of market adjustment and maldevelopment practices.

Third, the purely production oriented strategies for cocoa are not only going to exacerbate social and class differentiation, they are also likely to exclude many of the poor and vulnerable (whose access to productive resources is already severely limited) as income enhancement policies are biased against them. Given that human poverty makes physical environments poor, lack of attention to the most needy groups in society (especially rural areas) serves to enhance their livelihood struggles. In addition, poor and vulnerable groups are particularly susceptible to exogenous shocks and tend to bear a disproportionate percentage of the IMF's "short sharp shock approach".

According to preliminary results of the Ghana Living Standards Survey (which was conducted between August 1987 and September 1988, based on the World Bank's Living Standards Measurement Study methodology),

"...farmers in the northern region of Ghana have been correctly identified as a group which requires special efforts to improve their condition...Although cocoa farmers are relatively better off than other farmers, they make up nearly a fifth of those classified as poor under the broad definition...The relatively low access to services such as safe drinking water and other utilities, even among wealthier groups, reflects the past deterioration of infrastructure in Ghana. Likewise, access to social services, particularly among the poor, is limited".
(World Bank, 1989-90 p.33)

Public investment programmes (PIPs) under the ERP concentrate on infrastructure investment to buoy production and transportation of commodities (cocoa, timber and minerals) for export, not basic social services. Although the World Bank targets future expenditure on "a strategy of poverty alleviation", no specific time frame is given and we are given to understand that this can must be preceded by "...improving the rural terms of trade and agricultural productivity [through] improving producer incentives..." (World Bank, 1989-90 p.33). In the same report on Ghana's Structural Adjustment for Growth the World Bank also stipulates that, "Unemployment is not an important cause of poverty...this implies that the main cause of poverty in Ghana is low incomes among those who do work" (p.33). It almost defies understanding why the World Bank does not associate unemployment with poverty. Lack of employment opportunity is a structural feature of the Ghanaian economy where economic decline has led to mass layoffs ("redeployment") in the public sector since 1987 and increased land pressures have reduced the demand for poor urban labourers in the agricultural work force (West Africa, July 1989). In light of an unstable economic situation the quality and availability of basic social services have declined resulting in increasing incidence of poverty in urban and rural areas (West Africa, January 1988). Although unemployment is not a direct cause of poverty it is definitely a contributing factor and representative of the general structural economic malaise. Referring to Figure 6, it is apparent that the world price for cocoa has been declining since 1983-84. This in turn has caused terms of trade to deteriorate between necessary purchased commodities for consumption and agricultural inputs and the real producer price for cocoa. Poor cocoa producer conditions has resulted in decreased output (Figure 6), threatening the viability of Ghana's ERP. These trends are linked to increased rural poverty, unemployment of farming wage labourers and enhance environmental exhaustion Ewusi, 1984a,b). It is highly unlikely that the World Bank's effort to alleviate

poverty (despite their "renewed interest" in the environment and social issues) through market mechanisms will succeed in Ghana (or SSA), and if it does, any "success" will be short lived as exhaustive commodity production (cocoa, timber etc.) is unsustainable in both human and environmental terms. Economic recovery will continue to be an unattainable goal if non-sustainable resource use continues. The ERP does not address fundamental problems related to differential access to productive resources, nor does it examine the processes contributing to human and environmental exploitation.

In general the prospects for alleviating environmental and human poverty in the context of the ERP in Ghana and SAPs in Sub-Saharan Africa are bleak. The pressure of the political economic crisis in Ghana has led to a deterioration in the quality of domestic analysis and management, forced a shortening of time horizons (for key areas like foreign exchange), created increased uncertainties (reflected in the poor domestic investment ratio) and reduced ability to monitor and control policy (Green, 1986). Popular support for PNDC initiatives is minimal which not only reflects dissatisfaction with EKP policies, it is also indicative of the distrust Ghanaians harbour at the close association of the Rawlings regime with the IMF and World Bank (West Africa, January 1988). The government continues to lose legitimacy in the eyes of Ghanaians who feel that the PNDC is compromised its "revolutionary" social and political objectives in favour of right wing economic policies that reinforced essentially neo-colonial economic structures (West Africa, January 1988). Although Rawlings identified that one the character of the economy and society and its location in the world market economy as a primary cause of underdevelopment, the ERP has done nothing to change these structural impediments to socio-economic transformation and development.

To summarize this chapter, it is important to stress that Ghana's SAP programme is beset with problems as it enters the 1990's. First, there is the high cost of servicing the external debt which stands at over \$3 bn in 1989 from \$1.6 bn in 1982 which poses a

In terms of social impacts, this has had the unfortunate effect of undermining small scale (subsistence) peasant agriculture and exacerbating economic inequality in the region. Of particular importance in parts of the North is the growing conflict between peasants and chiefs over the control of land and their subsistence base (Gariba, 1989). Resource (land, productive technology) empowerment therefore is a particularly critical concern of northern rural poor.

5.2.1 Environmental Contribution of Forests

In addition to yielding timber and non-timber products (wood fuels, bushmeat, medicinal plants, edible plants, plants used for construction or production of other goods like mats, baskets, furniture, dyes and tools, honey, resin, gums etc.) forests fulfil other important functions ¹². For example, converting high forests to shifting cultivation in Ghana increases soil erosion on average by a factor of twelve, from 6 to 70 tons per hectare per year (World Bank, 1988). At this rate top soil cover would be lost between 10 and 15 years, depending upon the mechanical properties of the soil (World Bank, 1988).

Eliminating savanna forests also increases annual soil losses from less than one ton per hectare to more than 100 tons per hectare (World Bank, 1988). Not only does this increase nutrient losses of unprotected savanna soils it also reduces the habitat for wildlife and may affect the moisture regime through loss of vegetation (World Bank, 1988; CIDA, 1985). Furthermore, Ghana's high forest contains more than 2,100 identified plant species in the forest zone, including 360 species of tree. Of these species, 18 are endemic and 23 species have officially been declared "threatened" (World Bank, 1988). Deforestation serves to

¹² Minor forest products such as those listed are usually excluded from the calculation of the economic value of forests for two reasons: first, because there is a preconceived notion among economists that these goods represent remnants of traditional ways of life that are facing decline and second, that it is difficult to calculate or estimate the value of the goods and services produced from minor forest products.

fact exacting unacceptable costs from the environment and those least able to cope with crisis. Despite recent government rhetoric on "environmental thinking" (West Africa, July 1989) little real political attention has been afforded to environmental concerns and sustainable resource use. Structural adjustment as currently pursued in Ghana is incompatible with social, economic and political reform necessary for development.

Trends of socio-economic differentiation that were exacerbated in the colonial period with the introduction of the cocoa economy have persisted throughout the post-independence era. In the absence of structural reform (economic, political or social) the PNDC's development policies continue to undermine the position of the rural poor in a number of ways. First, by reinforcing the export of commodities under the ERP, the PNDC has perpetuated relationships of exploitation (human and environmental) between rural producers and those who would appropriate their surpluses. Secondly, the environment and economically vulnerable groups bear the brunt of costs for export and receive a disproportionately small share of benefits. And third, the ERP ensures internationalization of Ghana's environment and resources given the focus on cocoa, timber and gold to generate economic growth.

It is in the context of this political-economic and social climate that problems associated with deforestation, a significant part of the environment-development crisis in Ghana, will be examined. The next chapter (five) evaluates the GOG's response to deforestation as it is outlined in the Ghana Forestry Sector Review (1986). As a donor agency in Ghana's forestry sector and the author of the GFSR, the Canadian International Development Agency (CIDA) has a significant role in rehabilitating that country's forests. The policy actions of CIDA will be evaluated in terms of how they respond to rural needs in light of sustainable development objectives. The general aim is to evaluate whether or not national and international response to environmental problems is appropriate in terms of development theory and practical response to the environment-development crisis.

CHAPTER FIVE

The Ghana Forestry Sector Review - A Critical Review of CIDA and Sustainable Development

The Ghana Forestry Sector Review (GFSR) is an analysis of that country's forestry potential with the purpose of "...identifying major constraints to long-term sustained development in the forest and forest industry sector and to recommend measures which would help in overcoming such constraints" (CIDA, 1985 p. iv). The review was carried out following a request by the Government of Ghana (GOG) and was undertaken as a multidonor sectoral review with the World Bank as lead agency¹⁰. A field mission was carried out in April 1986 in cooperation with several government agencies, principally the Ministry of Lands and Natural Resources (MLNR), the Forestry Department (FD), and the Forestry Commission (FC). Non-government organizations were not involved in the work of the mission. By February of 1987, the report had been reviewed and accepted by the GOG during a World Bank, CIDA and FAO follow-up mission (CIDA, 1989).

The Canadian International Development Agency (CIDA) played a central role in the analysis and compiled an extensive report on a development strategy and policy recommendations for the forestry sector (including wildlife). Given that the GFSR consists of a main report and 12 appending working documents, evaluation will be limited to the recommendations outlined in the main report and those presented in Appendix VII, "Forestry for Rural Development" (Appendix 1 provides a list of the working documents). The primary reason for including this appending working paper is that it is representative of

¹⁰ Also participating in a study of Ghana's forestry sector (separate from CIDA's review) was the British Overseas Development Administration and the Food and Agriculture Organization of the United Nations. The Canadian mission also liaised with the Ministry of Lands and Natural Resources, the Forestry Department, the Forestry Commission and with other government agencies while in Ghana (CIDA, 1986).

CIDA's ideological and practical position on a number of issues that have received attention in this thesis including sustainable development and the parameters of the development-environment crisis.

In this chapter, the ideas, priorities and guidelines of the GFSR will be analysed with respect to their potential for sustainable development and viability in terms of addressing some of the fundamental problems relating to underdevelopment in Ghana. Furthermore, CIDA's recommendations in the Review will be assessed in terms of how they compare to official CIDA policy on sustainability in addition to their potential impacts on developing (or rehabilitating) Ghana's forest ecosystem. Given that the "success" of the GFSR and related projects is measured in terms of the macro-economic goals related to Ghana's present Structural Adjustment Programme (SAP) and export rehabilitation attempts, the document is open to criticism on a number of counts; first in terms of failing to consider the environmental and social impacts of export driven growth at the local level; secondly, by neglecting to address directly the increasing deprivation of the rural poor while increasing the vulnerability of tropical ecosystems; and third, by perpetuating channels of "normal professionalism", centralized decision making and existing structures of environmental exploitation. The present Ghana-Canada Forestry Programme designed by CIDA and proposed in the GFSR extends forestry activities in the same disastrous directions that the World Bank (through its SAP and Export Rehabilitation Programmes) has initiated and encouraged in the past. Recommendations in the Review are not only contradictory to principles of sustainability in general, they also contravene the concepts of sustainability outlined in CIDA's policy document CIDA and Sustainable Development (1989).

The Ghana Forestry Sector Review has a number of major flaws, each of which will be examined in this chapter. To begin with, it fails to take into account the role of international development financing in the destruction of tropical forests through cocoa

farming (cash cropping), mining and other market oriented strategies stressed by the current Economic Recovery Programmes. The document places undue emphasis on the poor as causing deforestation, overlooking the structural determinants influencing Ghanaian responses to the development environment crisis. It is biased against the poor both in form and content. Secondly, the GFSR is an extension and expansion of ongoing World Bank forestry projects that follow guidelines provided in the World Resource Institute's (WRI) Tropical Forestry Action Plan (TFAP)¹¹. Both of these reports can be criticized on the grounds that they rely too heavily on market-based, commercial and industrial concerns that selectively utilize the forest ecosystem in non-sustainable ways. Related to these concerns is a third criticism which attacks CIDA's idea of "sustainability" with respect to the "Ghana-Canada Forest Programme". This programme comprises two essential elements: firstly, a line of credit for the purchase of Canadian logging and sawmilling equipment, and secondly, technical assistance in the planning, modernization, and expansion of the private timber industry. In terms of cost, CIDA's official Forest Industry Development Aid (FIDA) involves \$50 million for the line of credit and \$3.15 million for the technical assistance, to be disbursed over a period of five years. The FIDA component of the programme specifically targets "... the rehabilitation of the infrastructure, the logging industry and processing plants...to provide the timber sector with equipment necessary for the growth phase in Ghana..." (CIDA, 1986 p.vii). In no way does this "development" focus address ecological sustainability or issues of resources control and empowerment among the rural poor, the segment of the population which stands to gain the

¹¹ The Tropical Forestry Action Plan is a report of an international task force convened by the World Resources Institute in Washington in 1987. It describes a new US\$1 billion plan to "...conserve and develop tropical forest resources on long-term sustainable basis, for the benefit of not only tropical countries, but all the people of the world" (WRI, 1987 p. 1). The five fundamental components of the TFAP include; Forestry in Land Use, Forest-based Industries, Fuelwood and Energy, Conservation of Tropical Forest Ecosystems and Reaching the People Through Institutions. A critical overview of the ideological and project components of the TFAP and how it relates to CIDA's Forestry Sector Review of Ghana, will follow later in the chapter.

least from CIDA's macro-economic "trickle-down" policies. FIDA is only one example within the GFSR that clearly demonstrates the exclusive "returns on investment" logic which leads to the large-scale transformation of natural forests as well as prime agricultural lands into commercial plantation of industrial wood and cash crops. Again, CIDA's practical approach to development issues as demonstrated in the GFSR is biased towards commercial and industrial matters at the expense of human, social and ecological concerns.

In general, CIDA's analysis of the forestry sector is limited in scope to commercial-industrial programmes under such initiatives as "the Development of Forest Energy Resources", "Integrated Intensive Forest Management Aid", "Forest Education and Institutional Aid", inter alia. CIDA's efforts are misleading in both the type of projects chosen to achieve "sustainability" and the investment profiles afforded to these initiatives. Finally, given that the GFSR involves a high degree of capital-intensive, externally-controlled and centralized planning it is clear that the interests and primary concerns of indigenous people are not a priority in decision making (Shiva, 1989). Market-oriented strategies neglect the economics of traditional (kinship) and peasant life based on natural forests and subsistence food production. Recall also that local economies can involve a series of complex social relations that mediate resource use in addition to becoming objects of accumulation themselves (Berry, 1989; Okoth-Ogendo, 1989).

The purpose of this chapter therefore, is to use the Ghana Forestry Sector Review as a case study to evaluate CIDA's policy and practice on sustainable development and investigate the potential of CIDA activities in the forestry sector for promoting environmentally sound development in Ghana. It is also interesting to note the ideological and practical connections between CIDA's involvement in Ghana's forestry sector and various World Bank initiatives, especially its SAP emphasizing export rehabilitation and the general guidelines on "forest conservation and development initiatives" provided through the TFAP. Clearly, the recommendations of CIDA, especially in terms of the GFSR, were

not conducted within an international policy vacuum. In other words, while the focus of this chapter pertains to CIDA policy, it is essential to realize that there are other key determinants and organizations which figure prominently in establishing "sustainable development" goals and financing "development" programmes (in this case, notably the World Bank).

The organization of this chapter will be as follows. The first five sections deal with background information pertinent to Ghana's deforestation problem. A physical and ecological overview of the natural environment and the importance of forest ecosystems to rural life will be complemented by a description of some the socio-cultural practices surrounding forestry. This includes an investigation of land and tree tenure issues, forestry concessions and reserves, institutions and finally policies facilitating rapid deforestation in Ghana. The significance of this information to the critical review of the GFSR is to demonstrate that numerous interrelated factors combine to create conditions conducive to environmental degradation. It is essential to evaluate these historical, social, political and economic trends as a precursor to more effective and comprehensive action designed to promote sustainability.

The remaining sections of chapter five deal directly with Ghana's Forestry Sector Review with specific reference to CIDA's identification of the "forestry problem" and recommendations used to address these problems. The most salient points in the main report will be evaluated in addition to drawing policy and project examples from the working paper, "Forestry for Rural Development" (an appending document to the main report). CIDA's approach to Ghana's environment and development crisis will be analysed from the perspective of enhanced political economy theory, with the intent of highlighting the conceptual weaknesses and contradictions of "sustainable development" policy in that country. The final section of this chapter poses some important questions concerning

possible alternatives to Ghana's current development path. Alternatives and lessons to be learned from past experience will be examined in detail in Chapter six.

5.1 Ghana's Physical Setting

The Republic of Ghana lies between 5 degrees N and 11 degrees N latitude and between 1 degree E and 3 degrees E longitude. Covering an area of 23.9 million hectares (238,500 km sq.) it is bounded by Cote d'Ivoire on the West, Burkina Faso on the North, Togo on the East and the Atlantic Ocean on the South. Its population of 14 million people is estimated to be growing at 3 per cent per annum (World Bank, 1988). The country is divided into nine regions and 66 districts with the forest industry being centred within Brong Ahafo, Ashanti, Eastern, Central and Western Regions (MAP - review p.17).

Ghana's forestry and logging sector has since the early 1970s accounted for about 5 to 6% of total GDP and has ranked third, next to cocoa and minerals, among commodity exports. In 1985 CIDA estimates had forest covering about 34% of the total land area (CIDA, 1986), whereas in 1988, World Bank estimates projected that 48% of the country's total area was covered by forest vegetation (World Bank, 1988). Despite the discrepancies in statistics, it is generally agreed upon that Ghanaian forests are being depleted at a rapid rate. The Environmental Protection Council (EPC), an environmental body within the PNDC, calculated that among other things, the forests are disappearing at a rate of 22,000 hectares per annum resulting in some cases in the destruction of catchment areas of water bodies (EPC, 1989). Other environmental concerns include:

[D]estruction of the savannas created by deforestation through such practices as indiscriminate bush fires are also causing sahelianization of the savannas, and siltation of dams. Wildlife resources are also threatened. Hydro-electric schemes have created serious human settlement problems, including the introduction of vectors of bilharzia and uncontrolled spread of aquatic weeds in some areas of the lower Volta with the consequent cessation of agricultural activities and pollution of drinking water. There is hardly any control of the health aspects of mining and industrialization and the use of hazardous chemicals. There is also no planned use of river basins. Rapid rural -urban drift and excessive pressures on already inadequate services have created serious problems in urban centres" (EPC, 1989 p.1).

Clearly, the quality of Ghana's environment as a resource for sustainable development and the improvement of the quality of life is changing. The type, rate and implications of these changes require immediate attention if degradation of the environment is to be slowed or reversed. Before examining measures designed to revitalize the forestry sector and the environment, an overview of Ghana's ecological zones, land use and land tenure is necessary.

5.2 Ecological Zones

Ecologically, Ghana comprises two main zones: the forest zone and the savanna zone (see Figure 7). The high forest zone covers roughly one third of the country (8.2 million hectares), but supports two thirds of the population (World Bank, 1988). It includes the wet and moist evergreen forest, moist semi-deciduous forest and dry semi-deciduous forest. It has a bi-modal rainfall ranging between 1,300 and 2,100 mm annually and generally good soils (mostly forest ochrosols) (CIDA, 1986; World Bank 1988). Most of the country's exports (cocoa, oil palm, rubber, timber and mineral production) come from this area. The forest zone of Ghana includes two major sub-categories:

(i) **tropical high forest** - which at the beginning of the century covered virtually the entire 8.2 million ha of the high forest zone region, and has been reduced to about 1.7 million ha today. This translates to an annual reduction of 75,000 ha or 2 per cent. The high forest is the major source of logs for the wood products industry.

(ii) **savanna forest** - presently covers an area of approximately 9.4 million ha (out of 15.7 million ha of savanna region). The forest vegetation here plays an important role in the supply of building poles, fuelwood and charcoal. The immediate cause for deforestation in this area has been the search for agricultural land, rather than the quest for timber or fuelwood. Forest plantation in both the high forest and savanna zones is registered at 76,000 ha, however only 50,000 ha of that area is firmly established plantation land (World Bank, 1988; CIDA, 1985; Dei, 1990).

The second major ecological region, the **savanna zone** covers 66% of the country's total area or 15.7 million ha in the Northern, Upper East, and Upper West Regions and parts of the Brong-Ahafo and Volta Regions. This major ecological region includes four vegetation types:

- (i) **derived savanna**
- (ii) **southern guinea**
- (iii) **northern guinea**
- (iv) **sudan savanna**

The rainfall in the north is monomodal and ranges between 800 and 1,200 mm per annum. It is erratic and unpredictable with evidence of a decreasing trend in the last 30 years (World Bank, 1988). It is uncertain what mechanisms affect the overall climate, but there is a body of opinion that a continuous belt of high forest has a stabilizing effect on the climate and that rainfall and moisture regime is decreased by deforestation (CIDA, 1986). The soils in the greater savanna zone are relatively poor, comprised mainly of savanna ochrosols and groundwater laterites (World Bank, 1988). The most important agricultural activities in this zone are annual food crop production (rice, groundnuts and pulses, vegetables and legumes etc.), cotton and livestock production (World Bank, 1988). Much of Ghana's domestic food crop production comes from a class of dynamic and efficient capitalist farmers in the North that benefited from massive investments in agriculture (especially irrigation schemes) starting in the 1970s (Gariba, 1989).

FIG.7 GHANA: FORESTS AND VEGETATION

0 20 40 60 80
KILOMETRES

Swamp and Mangrove Zone

Coastal Scrub and Grassland

Rain Forest

Interior Wooded Savanna

Moist-Semi-Deciduous Forest

Source: World Bank, 1988, Annex V, p. 11

In terms of social impacts, this has had the unfortunate effect of undermining small scale (subsistence) peasant agriculture and exacerbating economic inequality in the region. Of particular importance in parts of the North is the growing conflict between peasants and chiefs over the control of land and their subsistence base (Gariba, 1989). Resource (land, productive technology) empowerment therefore is a particularly critical concern of northern rural poor.

5.2.1 Environmental Contribution of Forests

In addition to yielding timber and non-timber products (wood fuels, bushmeat, medicinal plants, edible plants, plants used for construction or production of other goods like mats, baskets, furniture, dyes and tools, honey, resin, gums etc.) forests fulfil other important functions ¹². For example, converting high forests to shifting cultivation in Ghana increases soil erosion on average by a factor of twelve, from 6 to 70 tons per hectare per year (World Bank, 1988). At this rate top soil cover would be lost between 10 and 15 years, depending upon the mechanical properties of the soil (World Bank, 1988).

Eliminating savanna forests also increases annual soil losses from less than one ton per hectare to more than 100 tons per hectare (World Bank, 1988). Not only does this increase nutrient losses of unprotected savanna soils it also reduces the habitat for wildlife and may affect the moisture regime through loss of vegetation (World Bank, 1988; CIDA, 1985).

Furthermore, Ghana's high forest contains more than 2,100 identified plant species in the forest zone, including 360 species of tree. Of these species, 18 are endemic and 23 species have officially been declared "threatened" (World Bank, 1988). Deforestation serves to

¹² Minor forest products such as those listed are usually excluded from the calculation of the economic value of forests for two reasons: first, because there is a preconceived notion among economists that these goods represent remnants of traditional ways of life that are facing decline and second, that it is difficult to calculate or estimate the value of the goods and services produced from minor forest products.

accelerate the likelihood of species extinction in these ecological areas. Finally, there are more than 200 identified species of forest fauna in Ghana's remaining treed areas, many of which are very rare or endangered. World Bank estimates predict that in 1985, almost 21,000 wild animals were exported alive, worth up to \$ US 344, 032. Monkeys have been a particular focus of attention owing to their role in AIDS research in North America and Europe (World Bank, 1988). The export of plants to industrialized countries is also practised for use in laboratory applications. The point is that Ghana's forest ecosystems are being exploited in unsustainable and harmful ways, with little attention be afforded to the potential local impacts of a degraded environment.

Dei (1990) notes that a number of forest plant species are use as supplementary or emergency food and that trees can have spiritual meaning for communities. However, government lacks the personnel to carry out detailed surveys of gathering habits and cultural beliefs so that information remains scarce and the importance of these resources continues to be neglected or underestimated. Forests are used in many important ways that appear intrinsically "non-economic" to the development practitioner seeking to "preserve" the forests by increasing the availability of commercially viable species for export. In terms of local development therefore, the input or participation of rural communities and populations in defining environmental use and perceived problems is critical, if benefits of forestry projects are intended to accrue to those groups most affected by the relative health of the surrounding ecology. Selective revitalization of some aspects of an entire forest ecosystem (eg. tree planting for industrial log production) clearly does not solve the dual problem of overall environmental degradation and related human poverty.

There is evidence (Dei, 1990; Repetto and Gillis, 1988) that there are many benefits provided by tropical forests to human populations which depend on them as a resource for food, materials and a variety of products in addition to their role in environmental enhancement and regulation. The lack of data surrounding the value of

environmental services unfortunately prevents analysts from building what otherwise would be a very strong case for the protection of tropical humid forest in Ghana. Thus far, government and international programmes and policies have proceeded without an effort to develop or consider some methodology for measuring the environmental and human costs of deforestation and its associated problems (particularly erosion, loss of soil nutrients and potential hydrological change). The standard cost-benefit analyses (CBA), by placing arbitrary economic values on forest resources, cannot account for long-term discounted effects on the forest resource base and supporting environmental systems. CBAs are also deficient in the area of calculating the socio-cultural impacts of a degraded environment in terms of its affect on production methods, social organization, spiritual beliefs and local indigenous technical knowledge systems. Given that potential detrimental effects are difficult to establish in the areas of longer term human and environmental costs, government and international resources are usually channelled into more tangible areas of forestry management and assessment including sector and institutional support, silviculture and plantations and technical advice. Inputs into such projects have measurable benefits and therefore are commonly perceived as more critical to environmental protection and enhancement than local cultural and environmental studies. It is this very type of behaviour however, that perpetuates non-sustainable resource use and continued environmental depletion. Therefore, it must be recognized that before sustainable development objectives are established, a review of development ideology and methodology is fundamental to improved problem definition. This does not guarantee that critical "self-examination" among international aid agencies and governments will immediately lead to more appropriate project design. Rather, a theoretical and/or methodological review could represent an important initial step in structural change (in terms of decision making power) that is often cited as an obstacle to sustainable (or at least more appropriate) development.

5.3 Land Use

Land use in Ghana has been grouped into eight major categories (World Bank, 1988(Table 9). According to World Bank sources (1988) the area of land under agriculture is increasing due "...primarily to the rapid increase in population (currently at 3% per annum but expected to accelerate to 3.5% per annum in the 1990s)" (p.3). Population densities (calculated excluding forest reserves) range from 17 inhabitants per km sq.in the Northern Region to 95 per km sq. in the Upper East within the savanna zone, and from 32 per km sq. in Brong-Ahafo to 140 in Central Region within the high forest zone, but much higher densities are often reached locally. In the Ghana Forestry Sector Review CIDA cites the movement of cocoa farmers into the Western and Brong-Ahafo Regions in response to the spread of cocoa crop disease in the Eastern Region as well as poor indigenous land management practices (including bush fires use to clear land) as one of the most important causes of deforestation.

Table 9 - Land Use in Ghana (1986)

	<u>million ha</u>	<u>%</u>
1. Forest Reserves	2.6	11
2. Wildlife Reserves	1.2	5
3. Unreserved High Forest	0.5	2
4. Savanna Woodlands	7.1	30
5. Tree Crops	1.7	7
6. Annual Crops	1.2	5
7. Unimproved Pasture	3.6	15
8. Bush Fallow and Other Uses	6.0	25
TOTAL	23.9	100

source: World Bank, 1988 p. 3

The World Bank's staff appraisal report, Ghana: Forest Management Project (1988), also cites the western migration of cocoa farmers as a significant cause of forest depletion

and notes that improved cocoa producer prices, which rose from 23% FOB value to about 43% between 1985-88 enhanced this general trend.

Both CIDA and the World Bank cite increased shifting cultivation as another key factor in deforestation, however structural causes of this trend are not explored by either organization. Ewusi (1984a) maintains that the rapid rise of consumer prices in the 1970s and 80s, coupled with increased competition for productive land in the large rural agricultural sector and declining real terms of trade for cocoa farmers increased general levels of rural poverty. Long-term economic slumps have also increased land inequality. Recall that the introduction of cocoa for export in the colonial era played a critical role in shaping the dynamics of social differentiation in the rural economy of Ghana. Especially important was the impact of cocoa on capital accumulation and property rights and that of regional inequality on the labour market and indeed on surplus generation (Ewusi, 1984a). Conditions of access to land (both for cocoa and food production) were in large part determined by social status and organization. As pre-capitalist organizations of production were articulated within the capitalist economy, changing social relationships created the emergence of powerful rural elites. In the post independence era, these rural elites have played an important role in contributing to differential access to land. Ewusi (1984a) using data collected in the 1970s by the FAO in its agricultural census argues that over the years, there has been considerable inequality in wealth and income in the rural sector. Data from the mid 1970s shows that less than 55 per cent of the farmers in Ghana have holdings of less than four acres claiming 10 per cent of the cultivated land area, while the top 10 per cent of land owners claimed over 57 per cent of the cultivated area (Ewusi, 1984a). As Ghana does not have large plantations of a land owning class, this is a high figure and illustrates how far social differentiation has advanced in the countryside (Ewusi, 1984a). Also a factor is the serious inequality among cocoa farmers in terms of output. In 1963-64, the richest 15 per cent of cocoa farmers produced two-thirds of all the output; and the top 5 per

cent received over 13 times as much income as the poorest 18 per cent. These trends intensified into the 1970s where studies showed that the lowest 16 per cent of cocoa farmer produced only 1.3 per cent of the output while the top 18.2 per cent produced 60.3 per cent (T.K. Buxton, 1976 cited in Ewusi, 1984).

In terms of general agricultural land use in both the forest and savanna zones, cropping involves clearing the forest (usually through bush fires) and cultivating the soil, enriched by nutrients from the ashes of the burnt trees (slash and burn or shifting cultivation). After approximately three years of cultivation, decreased soil fertility and weeds cause the farmer to seek a new plot of land, leaving the older one to be invaded by shrubs and trees for 5-15 years as it regains its fertility¹³. As population pressure increases, combined with expanded cocoa farming under the Economic Recovery Programme (ERP) the bush-fallow system becomes a more prominent symptom of the multiple structural causes leading to environmental deterioration.

In the Northern and Upper regions, when agriculture based on the bush fallow system is replaced by permanent agriculture, tree vegetation develops into a stand of evenly spaced mature trees preserved for their economic importance. Because of their direct (fruits etc.) and indirect benefits (maintenance of soil fertility, reduction of soil erosion and preservation of the microclimate) these economic trees play a vital role in the rural economy (Dei, 1990). The intermittent canopy of large-crowned trees also raises the humidity near the ground at the onset of the rainy season¹⁴. In areas where population increases are

¹³ Wood, plants restore fertility slowly by bringing up mineral nutrients from the deeper soil horizons and depositing them on the soil surface in the form of leaf litter. The "bush-fallow" system is widely practised in Ghana and is (from the agricultural point of view) a good system provided that there is ample land (CIDA, 1986).

¹⁴ The cocoa plant for example which is Ghana's most significant export, depends upon a shade cover of tall forest trees to preserve a humid micro-climate, particularly in the harmattan wind (a term used by Africans since medieval times to refer to the dry, parching land wind that blows

placing immediate demands on the environment in terms of needing land for more intensive (mechanical) cultivation and fuel, (both wood and charcoal) the economic trees are lopped and felled. Clearly, there is a tradeoff between the short term gain for fire wood and the more long term benefits from fruit, shade and erosion control. In these instances, the option value for long term conservation is lower as immediate survival needs usually take precedence (Dei, 1990).

In the post-colonial period, Northern Ghana's role as a commercial food producing region was entrenched through state subsidized farms and agrarian policy. With the introduction of credit facilities, improved farm technology (pesticides, fertilizer, machines), irrigation schemes, inter alia, in the 1970s and 80s internal differentiation in the North has been enhanced (Gariba, 1989). Changes in the patterns of control of rural productive assets have been characterized by a male bias in addition to creating a local and regional elite of capitalist farmers. With the potential for commercial production (as opposed to subsistence production), the selective and exclusive ownership of this new means of production by male elders and traditional leaders has introduced individual proprietary rights and a basis of accumulation along narrow economic lines (Gariba, 1989).

The preservation of natural forest and farm trees is also important in all areas of Ghana to ensure the survival of indigenous species of plants and wildlife. This is essential both in terms of preserving gene pools and producing a number of direct benefits from medicinal plants, meat from wildlife and the use of trees for a uses (construction, fuel, fodder, fertilizer etc.) (CIDA, 1986). Note that up to 75 percent of the protein consumed by rural populations comes from bush meat, the supply of which is rapidly dwindling

south along the coast from the Sahel close to Upper Guinea during the months of November through March, raising dust clouds and causing potentially severe wind erosion in some areas). Trees also reduce the light intensity and decrease potential wind and water erosion.

especially in the Northern, Brong-Ahafo and Eastern Regions given rapid deforestation and the reduction of species habitat (CIDA, 1986; World Bank 1988).

5.4 Land and Tree Tenure

Land tenure systems in Ghana includes private and State holdings and Stool or Skin Land. Stool or Skin lands are controlled by the head of a community, extended family, tribe or clan on their behalf. The symbol of such authority is referred to "Stool" in Southern Ghana and "Skin" in Northern Ghana, similar to the way "Crown" refers to the authority of a king (World Bank, 1988). Stool or Skin lands are vested in the state and held in trust for the "owners". The Government of Ghana (GOG) does not legally recognize any land tenure other than those mentioned. However, it is important to realize that within communities, various social relations between and among families or groups play an important role in the distribution and use of land. In many cases the word "ownership" is inappropriate (a fact that continues to complicate development initiatives based primarily on market mechanisms and capitalist conceptions of outright or individual land ownership) as land and tree resources are often allocated on the basis of social equity or affiliation. "Control" of resources is often a more appropriate term and an especially important concept in the context of differential access to critical resources among men and women. In other words, the use of lands may depend upon social relations and needs and gender with the status of these relations and needs subject to change from generation to generation. The point remains that mechanisms affecting access to and use of particular resources are not governed only through market transactions and that use of resources can also be subject to "rules" that do not comply with orthodox market mechanisms.

"Land tenure" in Ghana refers to the possession or holding of the many rights associated with each parcel of land. For any land tenure system, people, time and space (ie. spatial dimensions) have a significant bearing on these "rights" (Ridell, 1987). Trees

play a significant role in land tenure in Ghana. They are an integral part of a multiple land use system called "agroforestry" involving the combination of forest trees with crops or with domestic animal or both. They are usually planted or tended for their products (food, materials, fuel) or their services (shade, boundary markers, erosion control) (Benneh, 1987). Two major agroforestry systems can be identified in Ghana: the bush fallow system and cash tree cropping (mainly cocoa).

The bush fallow system is the predominant peasant system in the traditional forest belt and savanna regions. Rotation of fields rather than crops is the main characteristic of the system, therefore, the availability of land is essential. Although some trees may be cut down in the bush fallow plot, most are left standing to provide shade for certain crops and material for medicine, fuel, chew sticks and ropes (Benneh, 1987). Essentially, a bush fallow plot is a system in which a natural forest is transformed into a harvestable forest. In northern Ghana, economically useful trees (shea nut, dawadawa) are integrated with food crops. That member of the land owning group who is the first to cultivate a piece of unclaimed land establishes the right of use (personally and for their descendants). These rights extend also to the fallow vegetation (Benneh, 1987).

Cash tree cropping became important in Ghana with the introduction of commercial cocoa farming in the colonial era. The fact that it did not necessitate a break with the traditional bush fallow system facilitated its rapid expansion in the forest belt (Hill, 1963; Mikell, 1989). The land for tree cultivation is prepared in a similar way as that for food crops under the bush fallow system - after having been nurtured in appropriate forest beds, seedlings of the tree crop (cocoa, oil palm, coffee or rubber) are transplanted to a prepared field. The new seedlings are protected by shade from the few trees left standing in the field (banana, plantain and taro are usually favoured) (Benneh, 1987). Access to these tree resources is gained by a member of the land owning group in the same manner as under the bush fallow system. The biggest change cocoa has effected in land tenure is that non-

members of the land owning group ("stranger farmers") can acquire land through purchase, tenancy arrangements or gifts (Benneh, 1987; Hill, 1963). The sellers tend to be chiefs who act on behalf of the community as a whole (Hill, 1963).

Both the bush fallow and the cash tree cropping systems are experiencing increasing environmental stresses. Increasing population, differentiation of land holding size and poverty is reducing the fallow period of bush plots close to population centres from an ideal of 25-30 years to only 2-3 years (Benneh, 1987). When population pressures were lower and bush fallow periods longer (especially in the Northern, Upper and Eastern Regions) regulated measures to conserve land resources were unnecessary. Fruit, housepoles and wood fuels were in abundance and close to villages. Because of the strong seasonality in most farming regions, tenurial systems (as determined by village elders) are geared to what is needed during the cultivation of the annual staple crop. In general, the planting of a tree gives exclusive rights of ownership to the (male) planter and equal division of the yield among his descendants (note however, that different ethnic groups have different rules regarding trees on family land leased or pledged to stranger farmers). The result is that in many areas (especially the savanna zone) the chiefs prohibit tree planting as the granting of such rights obviously diminishes the scope for the guardians of the land to reassign the land to another farmer (CIDA, 1986). Despite the need for fuelwood therefore, trees are not readily planted in some northern regions (Benneh, 1987). As people seek to cultivate food and search for fuelwood, the number and viability of fallow plots is reduced. The increasingly unequal distribution of land holdings (in terms of acreage) is also a factor in rapid land and labour exhaustion. Smaller acreages are being cultivated by more people in the struggle against declining real incomes (especially since the early 1970s) and higher domestic food prices (Ewusi, 1984a, 1984b). In terms of the direct effects on forests, species of trees which play an important role in restoring soil fertility and maintaining water balances are eliminated as fallow periods become shorter and

competition for a shrinking resource base intensifies.. As food crop yields decline, the cassava plant (which is tolerant of low fertility) is becoming the major feature of the subsistence agriculture in rural areas (Benneh, 1987).

Cocoa farming on the other hand, has virtually eliminated most of the naturally occurring forest in the Forest Belt (Repetto and Gillis, 1988). As migrant cocoa farmers seek new lands to cultivate, encroachment on government forest reserves has increased. Covering about 10 per cent of the area of Ghana, the reserves represent the best potential for migrant farmers (Benneh, 1987). Two significant areas of tension arise as farmers encroach upon forest reserves. The first is the obvious conflict between agricultural and forestry land uses. The second arises between the local chiefs that used to control the use of the reserved land and government authorities, as the chiefs may tend to allocate some of their former "traditional" lands to migrant farmers. The source of this confusion, or difference in perception of resource use was intensified with the enactment of the Stool Lands Act of 1960 and the Administration of Lands Act of 1962. These Acts transferred the control of the management of Stool and Skin Lands to the Head of State. Except in the case of forest reserves and other lands directly held and managed by the State, control of these lands has been devolved to the Paramount Chiefs, District Chiefs, Sub-Chiefs, village headmen and other stools and or skins, to ensure that farmers can continue to practice their usufructuary rights (World Bank, 1988). The greatest effect of this change has been to weaken the sense of responsibility of the chiefs and the lessen their authority in the eyes of their people. Another source of conflict that has arisen owing to the two Lands Acts, occurs between chiefdoms. Boundaries are often disputed, as alienated land is not always commonly registered, and the terms of alienation may not be recalled equally by both parties. A particular source of tension is the ownership of the right to dispose of standing trees and the usufruct of those trees for forage, firewood, medicinal bark, fruit ,

nuts etc. (CIDA, 1986). In areas of acute land shortage, the *taungya*¹⁵ agroforestry land use system has been introduced to facilitate the release of land under forest reserves to food crop farmers. This is particularly popular with landless farmers as it is their only means of gaining access to productive resources. According to Benneh (1987), the main problem with this system is that farmers cultivate the tree crops on the plots they are using and therefore tend to lay claim to the land released to them. While customary tenure can adjust itself to innovations like the taungya system (which is based on small scale farming), industrial re-forestation schemes are less successful as tenure adjustment with large scale operations is more difficult and meets with opposition by local communities. This has to do with basic social organization. Tenure in Ghana (and Africa) reflects human interaction - an expression of social relationships and the expected behaviour of others in response to actions *vis-a-vis* resources (Ridell, 1987). If a forestry or agroforestry plan (eg. establishing large scale "reserves" or commercial forest lots) increases the ambiguity of a set of relationships with regards to control or use of a parcel of land, the chances of people cooperating with those changes are much decreased (Ridell, 1987). Trees have traditionally been a major factor in African tenure. Cocoa, oil palm etc. were quickly integrated into local economies in Ghana's moist forest belt, with corresponding changes in prevailing land tenure systems. Trees therefore, have **cultural** as well as **economic** and **ecological** significance, a fact that tends to complicate problems surrounding rapid deforestation, land deterioration, soil erosion and exhaustion. In other words, development schemes (eg. reforestation) must take into account mechanisms of traditional

¹⁵ **Taungya** is a method of establishing treed areas where farmers are involved in land clearing and planting and grow subsistence crops between the trees planted. Taungya plantations were started in the late 1920s and by 1967 nearly 5,000 ha had been planted. According to official records, there were 52,000 ha of taungya plantations by 1985 (CIDA, 1985). According to CIDA (1986) and World Bank (1988) estimates, the official records are unrealistically high. CIDA (1986) contends that only 50-60 per cent of what is claimed to be planted is actually productive and operational (Annex VII, p. 14).

resource control if trees are to be effectively integrated into environmental and resource enhancement schemes. It is a common fault of development agencies and governments of developing countries to neglect the relationships between peoples' rights to plant and use trees, which in turn depends on the prevailing systems of land tenure and tree tenure when designing agroforestry and "sustainable development" projects (Fortmann, 1987).

From this brief introduction to land and tree tenure in Ghana, it is apparent that market solutions aimed primarily at industrial forest plantations, better management of public lands, more efficient logging equipment and technical advice on forest product manufacturing, address only a small portion of the economic issues at stake.

Given the basic understanding that the environment has intrinsic socio-cultural and ecological value beyond that determined by its economic potential in the market place, it is easier to understand why market-based economically driven solutions to environmental problems are not entirely successful or appropriate. The very fact that tree tenure can be differentiated from land tenure and that both of these resources are not always subject to "titles" in the market economic sense suggest that purely market-oriented "solutions" to deforestation problems in Ghana may have limited effectiveness. The complex nature of tenure and resource control is especially apparent in rural Ghana where cocoa has complicated land pressure and social differentiation. Although cocoa farming derived its initial impetus from its reliance upon traditional (kin-corporate) approach to ownership of land and political relations, the cocoa industry has systematically altered social relations in such a way that exacerbates differences in social status and ability to accumulate wealth, land and productive resources (Mikell, 1989). A number of serious environmental and developmental problems (such as rapid deforestation and deepening rural poverty in the face of degraded environments) have resulted.

A society or community which mediates or combines the distribution and use of resources through economic and/or social means is likely to have a much different

perception of the environment and environmental problems than are largely market-based (industrial) societies. Therefore, "development" initiatives in Ghana, especially since it is a country where the majority of people depend directly on the environment for survival should reflect some awareness or sensitivity to these issues, preferably at both the policy and practical level. It cannot be stressed enough, that before progressive changes can occur in environment-development initiatives, an examination of development theory (ie. promoting methods of research and analysis that recognize social and cultural factors as critical in resource control and use) is paramount.

5.4.1 Forestry Concessions and Reserved Lands

By the end of the nineteenth century, colonial occupation of land had initiated major changes in the relationships between commoners, chiefs and the colonial administrators. In 1894, the Crown Lands Bill was passed in order to reduce confusion over claimed titles or boundaries that had previously been allocated by local chiefs. With the increased demand for timber, mining and cocoa concessions at the beginning of the twentieth century, colonial administrators passed a number of ordinances to alienate certain resources as "reserved" lands, leaving other areas as "unreserved" lands. Simply put, Forest Reserves are areas legally constituted to produce timber in perpetuity and Unreserved Forests are areas slated for future agricultural development (CIDA, 1986). In both cases these forests are located on Stool or Skin lands. In creating regions for different land uses, the British hoped to secure for concessionaires (mostly foreign companies) firm titles to the land and also reduce the status of local chiefs' economic and social power (Vercruijsse, 1988). After the passage of the 1911 Forest Ordinance, which clearly delineated large tracts of land in the high forest zone and limited areas of the Northern, Upper, Eastern and Western Regions as areas of "controlled" exploitation, further attempts to create reserves were firmly opposed by the caretakers of the land, especially in the high forest zone (CIDA,

1986). Local chiefs and indigenous governing bodies felt that their power would be further diminished under colonial control if the British enhanced their mechanisms of land alienation.

However the commercial development of cocoa led to some change in attitude. By the late 1920s and early 1930s, it became clear to local power structures that greater stability of tenure was needed for cocoa which took 10-15 year maturation periods than was necessary for annual cropping regimes on communal lands. Large scale deforestation to the north of cocoa growing regions was not only associated with the death of cocoa (which requires the benefits and shade from surrounding tree cover) but also decreased humidity. Therefore, by 1939 the Forestry Department (FD) had persuaded the Stools in the high forest zone to create forest reserves of over 1.5 million hectares (Dunn and Robertson, 1973).

Despite the Forest Ordinance and the reserve system, deforestation in the cocoa belt continued at increasing rates during the 1940s and 1950s. Prior to independence in 1957, timber firms in Ghana typically obtained concessions of 50 years duration and less frequently of 99 years duration. As a result, there was a dramatic influx of Western capital into government forest reserves causing considerable problems respecting the control of cutting, inadequate conservation techniques by the larger companies and over-exploitation of the most economically valuable timber species (Dunn and Robertson, 1973). In 1947, the two largest Ghanaian timber companies were both expatriate - Glickstens having larger concessions than the Victoria Sawmills (which still exists today, but is now called the Mim Timber Company). By the mid 1950s, the real "timber rush" had started and there were 20 companies working in the Ahafo region where there had formerly been two. District councils employed an inadequate number of inspectors that were incapable of keeping effective checks on cutting in both reserved and unreserved lands. Despite previous attempts by colonial administrators to establish clear rules of tenure, the legal situation of

local chiefs granting land remained confused. In fact, as late as 1975, there was no unitary system for registration of timber concessions and felling agreements in Ghana (Dunn and Robertson, 1973; CIDA, 1986).

By 1976, many of the longer term concessions which were extremely large and held by foreign timber companies, had begun to expire. For example, five of the largest foreign firms in 1971 held concessions averaging 270,000 hectares accounting for 46 percent of the total concession area allocated at the time (cited in Repetto and Gillis, 1988). After 1971, there occurred major concession policy changes making the duration of holdings much shorter (less than 25 years) and restricted entirely to Ghanaians. Repetto and Gillis (1988) argue that in addition to shorter concession lengths which tend not to provide incentives for maintenance and enhancement of forest values, government policies on silviculture treatment, royalties that reduce high-grading and penalties for noncompliance with felling rules were also conducive to poor management practices and forest depletion.

Throughout its history, practice and policy in Ghana have tended to encourage forest-based industrialization. Before 1979, the export tax was 10 percent on logs, 5 percent on sawn timber with plywood and other products being exempt. In order to further encourage processed exports, all export taxes on sawn timber were removed in 1979 (Ghana Timber News 1979:7, cited in Repetto and Gillis, 1988). Given the substantial overvaluation of the *cedi* in the 10 years prior to 1983 however, the tax incentive was largely ineffective. Although export bans on timber have been decreed in the 1970s and early 1980s on endangered species of teak, the ban was not enforced. Log exports declined from 460,000 cubic metres in 1977 to a low of 50,000 cubic metres in 1982, which partially reflected government policy banning 14 valuable commercial species but also reflected a decreased availability of these species (CIDA, 1986). Under the current ERP, the ban on these species still exists but exports have increased since 1983 owing to

increased use of secondary species (refer to Appendix 4 for Ghana's 1983 Log Exports by Species).

In spite of policies and efforts to nurture forest-based industrialization successfully, the value of official forest product exports declined from a high of US\$91.4 million in 1976 to a low of US\$14.8 million in 1983, mainly due to general economic deterioration during this period. In addition, from the mid 1970s to the present, the efficiency level of Ghanaian forest industries has been very low. After 1976, studies have shown that recovery rates in lumber were but 70 percent of achievable levels with plywood recovery rates at about 67 percent of optimal targets. Moreover, Ghana's long-time distorted price structure contributed to the low efficiency in wood processing and thus promoted greater forest damage over wider areas per cubic metre of processed output (Repetto and Gillis, 1988). According to CIDA's review of Ghana's forestry sector, the fall in production between 1976 and 1984 can also be "...attributed to the difficulty in obtaining both spare parts and new equipment from foreign exchange earnings. contributing factors for this shortfall were controls imposed by the GOG, and the unrealistic level at which the cedi was fixed until 1983" (CIDA, 1986 p. iii).

The lack of efficiency, inadequate personnel and training and poor management on the part of many of the GOG's forestry institutions has also had a deleterious effect on resource preservation and enhancement (CIDA, 1986; World Bank, 1988). The Ministry of Lands and Natural Resources is the umbrella organization under which the Forestry Department (FD) operates. Major bodies associated with the FD include the Ghana Timber Marketing Board (GTMB), the Forest Products Department, the Forestry Research Institute and the Lands Department. General forestry services, education, planning and production processes are all directly overseen by the FD. Following a review of the forestry sector by the Forestry Commission in 1983 and upon the added recommendation of the World Bank, the GTMB was disbanded owing to allegations of corruption and general inefficiency in

regulating exports and timber trade abroad. In the GFSR, CIDA cites the Forestry Department as an area where significant improvements in management capability, research and extension services are needed in order to preserve the forest resource base.

Reorganization and development of Ghana's forestry institutions and research centres form a large portion of the Canada-Ghana Forestry Programme. Under the present Economic Recovery Programme, the main area of focus is also on strengthening the institutional capabilities of key organizations in the forestry sector to, "...carry through major sector policy and institutional reform measures of the ERP project and strengthen the capacity of the export sector organization and industries to effectively manage and implement proposed measures" (GOG cited in CIDA, 1986, p. 91). More specifically, the funding for the forestry component of the ERP will be directed towards the following project initiatives:

1. restructuring of marketing organizations and procedures;
2. increasing foreign exchange availability; and,
3. assisting selected state-owned timber companies and privately owned companies (GOG, 1985).

Clearly, the concentration of investment in forestry institutions is on export rehabilitation and promotion which is likely to have serious complicating effects on the viability of the resource base given the strong commercial bias of the ERP. Issues of long-term ecological enhancement and productivity, redistribution of land, poverty alleviation and local level participation in resource management have not been considered in the institutional "reorganization". The current ERP policies serve merely to legitimate historical processes of environmental exploitation and resource degradation.

It is a commonly held opinion that the impact of forest policies per se on forest depletion in Ghana has been secondary to that of more general macro economic policies governing exchange rates, taxation, agricultural pricing and monetary policies. Policies governing large infrastructural projects have also been relatively unimportant in forest

depletion (Repetto and Gillis, 1988). The Volta River Hydro-aluminum project conducted between 1962-67 remains the single largest infrastructural initiative in Ghanaian economic history and resulted in the flooding of between 500,000 and one million hectares of land. Although this only submerged a small proportion of Ghana's remaining forest cover, the project displaced large number of families forcing them to migrate and turn to shifting agriculture for survival. Therefore, the project indirectly placed additional pressure on the forest estate by creating more shifting cultivators (Repetto and Gillis, 1988).

Based on some of the information provided here, it is clear that policies which at first appear to have few implications for forest use directly, ultimately have significant bearings on the sources of policy-induced forest destruction. Included in this list are all of those investment and trade priorities that are biased against the small agricultural producer and further impoverish those households living at the margin of subsistence. These so-called "development" policies retard sustainable self-reliance, cause rural populations to be more dependent on natural forests for subsistence needs and increase land exhaustion (Repetto and Gillis, 1988). This emphasis on national policies does not imply that external agencies have been blameless in the long-term misuse of developing countries forests (and other natural resources). Indeed, as will be seen in the Ghana-Canada Forest Programme specifically and the Ghana Forestry Sector Review in general, emphasis is often placed on those very structural mechanisms that exacerbate over-exploitation of the natural resource base, with a seeming disregard for the micro-level social, cultural, environmental and economic costs incurred.

5.5 The History of Deforestation in Ghana

Table 10 shows that the rapid deforestation between 1920-1950. Data are not available for the turn of the century, however processes of deforestation that continued into the 1970s were well underway before 1920, concurrent with the expansion of cocoa farms.

By 1980, virgin forests in the forest zone had all but disappeared (Repetto and Gillis, 1988). Once-forested areas, now in fallow, including degraded forest, converted forest land (cocoa), and food crop areas now cover about 27% of the land area (Repetto and Gillis, 1988). In the decade prior to 1976, average annual deforestation was 45,000 hectares per year. Deforestation slowed in absolute terms in the period 1976-80 and again from 1981 to 1985 to approximately 22,000 hectares per year. The decline after 1980 is not so much a reflection of changes in forest use policies as it is an indication that there is quite simply little left to deforest (FAO 1981 p.200, cited in Repetto and Gillis, 1988).

Table 10
The History of Deforestation in Ghana (000' hectares)

year	area of closed forest	area of woodland or open forest	total forest area
1920	9,871	---	---
1937-38	4,789	11,111	15,900
1946-47	4,37	---	---
1948-49	4,236	---	---
1950-51	4,087	11,085	15,321
1953	2,810	---	---
1958	2,493	11,824	13, 824
1960-61	2,424	10,687	13,111
1968	2,207	9,711	11,918
1980	1,718	6,975	8,963

source: cited in Gorintz, 1987 p.56

A disproportional amount of the blame for deforestation has been place on the poor rural farmers of Ghana. It is important to stress that deforestation is rooted in complex and interdependent socio-economic, political and historical trends and the development of the cocoa export economy. The rapid depletion of Ghana's tropical forests is a long-standing phenomenon. According to recent studies (CIDA, 1985; World Bank 1988; Repetto and Gillis, 1988; Dei, 1990) Ghana's already degraded forests are sharply threatened in the next 15 to 30 years by the southward progression of the Sahara. "There is growing evidence that deforestation in the forest zone may interact with desertification in the arid and

semi-arid zones, amplifying climatic disturbance and leading to a distortion which the chairman of Ghana's Environmental Protection Council, Colonel Christine K. Debrah, has referred to as '...creeping savannization of the forest, sahelization of the savanna, and desertification of the Sahel' " (cited in West Africa, October 1989, p.1677).

Cited as the principal sources of deforestation in recent years (since 1980) are shifting cultivation (which involves clearing land with bush fires) and fuelwood harvests and increased gold mining activity since the beginning of the Economic Recovery Programme in 1983 (Repetto and Gillis, 1988; West Africa, January 1989). From the turn of this century until the mid 1960's, the second most immediate cause of deforestation was the expansion of cocoa farming into closed forest areas. Although logging has not been the primary cause of deforestation since the late 1970's, new logging roads have facilitated the spread of shifting cultivation which is driven by both rural and urban poverty (Repetto and Gillis, 1988). These patterns of poverty and deforestation are also seen in other developing countries - Sabah, Sarawak, Indonesia, Brazil, Ivory Coast, Nigeria inter alia (West Africa, October 1989; Repetto and Gillis, 1988; World Bank, 1988).

Using output figures for cocoa and logging as indicators of trends in deforestation, one could argue that tree crops and logging have been less important causes of resource depletion since 1960 than has shifting cultivation. Although the data presented in Table 11 do not conclusively establish that deforestation is linked primarily to poverty induced shifting cultivation, the table does show that areas under shifting cultivation are significantly larger than that under logging and hence represents a greater overall threat to environmental degradation. By 1980, areas under shifting cultivation had reached 9.2 million hectares (approximately 40 per cent of the land area) in a country of 11 million people (Repetto and Gillis, 1988 p.302). In the period between 1960 and 1982, Ghanaian cocoa exports had declined from nearly one third of world exports to less than 15 per cent (Repetto and Gillis, 1988 p.302). According to Roemer (1983), cocoa production dropped

significantly after 1970, tonnage in 1977 was less than half that of 1970. Furthermore, the volume of logs harvested in 1980 was only 25 percent of that in 1973, a boom period in the world timber market (Repetto and Gillis, 1988 p.303). After 1983, and the beginning of export rehabilitation under the World Bank's Structural Adjustment Programme, log production recovered slightly (World Bank, 1988). However, even by 1984 production was less than half of that in the early 1970s (refer to Table 12). The point is that output of logs and cocoa has dropped over the years as the incidence of poverty and land exhaustion has increased. From independence to 1983, GNP per capita declined on average 0.7 per cent per year (Repetto and Gillis, 1988 p. 304). The trend has been accelerated in since 1970 with average GNP per capita growth rate of negative 2.1 per cent (World Bank, 1987; Loxley, 1988). Therefore, rather than being linked to a boom either in logging or cocoa production in the last two decades, deforestation has been connected to deepening human poverty reflected in greater reliance on subsistence (shifting) agriculture.

Table 11 - Ghana: Deforestation, shifting cultivation areas and logging areas

	Area (hectares)
1. Deforestation (hectares/year)	
(a) 1970-76	45,000
(b) 1976-80	27,000
(c) 1981-85	22,000
2. Area Under Logging	1,167,000
3. Area Under Shifting Cultivation	9,180,000

source: after FAO 1981, cited in Repetto and Gillis (1988)

Deforestation due to fuelwood harvests is a critical problem in Ghana, which has one of the world's highest per capita fuelwood consumption rates. World Bank figures indicate that the harvest of timber for fuelwood by 1983 was about 12 times the harvest of

logs for wood products (World Bank, 1988). Repetto and Gillis (1988) maintain that as levels of poverty increased, so too did the reliance by impoverished urban and rural families on fuelwood as household energy. The assertion that growing poverty was the single largest cause of deforestation is supported by the data in Table 12 which shows increasing fuelwood consumption after 1970.

These figures support the assertion that the reasons for deforestation go beyond forest-based policies such as under taxation of timber, the short duration of concessions, ineffective management programmes and insensitivity to environmental issues. Recall that the Ghanaian economy since 1963 had undergone severe decline. Falling levels of economic well being have had significant deleterious implications for the forest resource base. Macro-economic crisis in addition to forestry policies themselves with built-in mechanisms toward waste have been important contributing factors to environmental degradation and reflect underlying structural inequities complicated by two decades of economic mismanagement leading to human and environmental poverty. Repetto and Gillis (1988) present a compelling argument that growing poverty is primarily responsible for deforestation. In his work on The Dimensions and Characteristics of Rural Poverty in Ghana, Ewusi (1984a) contends that poverty is a function of increasing socio-economic differentiation in terms of size and number of land holdings and concentration of income (see chapter five, section 5.3). Deforestation in Ghana points to the environmentally destructive links between exploitation, forces and relations of production and human poverty.

Rapid depletion of tree stocks in both the high forest and savanna zones is causing unprecedented changes in the ecology of rural areas, principally in the carrying capacity and fertility of the soil which adversely affects both cocoa and food crop production (World Bank, 1986).

Table 12
Ghana log production, recorded log export volumes and fuelwood harvest
1950-85 (million cubic meters)

Year	Volume of industrial logs extracted	Volume of logs exported	Fuelwood harvests
1950	0.56	0.29	n.a. (a)
1955	1.14	n.a.	n.a.
1960	1.83	n.a.	n.a.
1965	1.59	n.a.	n.a.
1970	1.23	0.46	8.44 (b)
1972	1.86	0.94	8.44 (b)
1973	2.05	1.08	8.44 (b)
1974	1.43	0.43	8.44 (b)
1975	1.33	0.44	9.57 (c)
1976	1.38	0.34	9.57 (c)
1977	1.03	0.39	9.57 (c)
1978	0.99	0.40	9.57 (c)
1979	0.49	0.19	9.57 (c)
1980	0.48	0.12	10.33
1981	0.48	0.22	10.59
1982	0.78	0.17	10.58
1983	0.68	0.21	11.15
1984	0.76	0.25	11.35
1985	0.92	0.24	11.65

source: cited in Repetto and Gillis, 1988 p. 303

(a) n.a. = not available

(b) average for 1970-74

(c) average for 1975-79

The depletion of tree stocks introduces a break in the nutrient cycles that combined with incentives to intensify cocoa production has exhausted the land to a point where erosion of the soil during rains and winds has become a significant problem in Ghana's high forest zone (Repetto and Gillis, 1988; World Bank, 1986; World Bank, 1988).

The processes of environmental degradation and loss of tree cover are linked to a variety of socio-economic activities. Surface gold mining, for example, has a destructive impact on forests even though this activity is not related to logging or agriculture per se.

The recurrence of gold as an important foreign exchange earner has assured mining of a central place in the ERP as mining is encouraged regardless of the environmental costs. The fact that deforestation is a multidimensional problem reflects underlying social, economic and political trends that have combined to induce structural poverty and intensify the simple reproduction squeeze experienced in rural areas which ultimately erodes the resource base. The pattern of land use and environmental exploitation is important in determining the relative "health" of the environment which helps determine productivity in terms of food and cash crop production and energy supply (Ardayfio-Schandorf, 1989).

Environmental degradation (deforestation, soil erosion etc.) directly result from cumulative land-use decisions through time and these decisions must be considered as a part of a wider political economic analysis as argued in chapter two. An evaluation of deforestation in Ghana and environmental deterioration as a whole, must include the mechanisms of choice of land-use in addition to processes initiating specific choices, who makes them and why (Blaikie, 1985).

It may be necessary at this point to reiterate that the physical and social landscape in Ghana in which rural producers seek their livelihoods, has long been affected by external economic, social and political influences (initial European traders, colonial occupation and finally the ongoing process of the expansion of world capitalism). As argued previously, the relations of rural production in Ghana must also be seen in the context of external (world) economic pressures. Immediate land use decisions therefore are connected to international and national trends that affect the social relations of production (or decision making) at the level of the enterprise (eg. the farm) and the exchange relations of commodities. In developing nations, these mechanisms are biased against the individual producer resulting in deterioration of the terms of trade between what is needed to produce and the value of that which can be sold. Poverty, land exhaustion and environmental deterioration are built in to the system and are reinforced as rural populations seek to

intensify production on degraded land and defoliate regions in search of more productive areas in the struggle to gain access to livelihood resources. Rural poverty is not only perpetuated by power structures it is reinforced through the spatial marginalisation in which peasants have to use marginal (degraded or naturally less productive) land (Blaikie, 1985).

This is not to suggest that deforestation in Ghana is solely the product of some international capital logic which reduces history to the unilinear progression of imperialism and the search for profits. Rather, the point is to show that environmental deterioration in Ghana has a social, economic and political history and that this history has played a formative role in the patterns of development and land-use seen in contemporary Ghana. Capitalist development is a multidirectional and episodic process with complex determinants (both internal and external to a nation or community). Development practioners and theorists alike must recognize that in each society, unique contradictions exist in terms of economic, social and political history that shape the processes of development thereby necessitating a comprehensive understanding of the political economy as a whole. The historical nature of the various struggles over resources by the multiple levels of African society points to the need for understanding the social nature of accumulation in addition to the economic nature of accumulation. It is these patterns of accumulation that form the core of the environment-development crisis in Africa.

Returning to the Ghanaian example, it is ironic that following the rapid disappearance of natural tree cover in the 1970s many of the macro-economic policies since 1975 most responsible for poverty-induced deforestation actually limited further reduction of forests that might have arisen from logging alone. For example, in almost every year since 1963 the Ghanaian *cedi* has been overvalued which slowed economic growth and logging exports. Between 1976 and 1983, the ratio between official and unofficial (black market) rates for the *cedi* reached their highest point, varying from a low of 4.96 in 1979 to a high of 18.18 in May 1983 (World Bank, 1988; Repetto and Gillis, 1988 p.306). The

effects of overvaluation on logging were threefold. First, unless companies were willing to try and smuggle timber out of the country, it made exports virtually worthless (note that recorded exports for timber alone in the period 1977-79 almost exceeded the volume of official exports in that same period). Second, given that export markets were depressed, foreign exchange necessary for machinery and parts (including the logging industry) was extremely difficult to obtain. Estimates have placed the timber industry at operating between 25 and 30 percent of its capacity in the period 1977-1984 (CIDA, 1986 p. iv; World Bank, 1988 p.1). The third mitigating factor that slowed logging deforestation involved government responses to the economic malaise. Continued overvaluation of Ghanaian currency and mismanagement of exchange rates resulted in rampant inflation after 1971. In addition strict government price fixing on virtually all staple agricultural goods exacerbated rural and urban poverty. Macroeconomic policy virtually collapsed in the period 1973-83 as inflation averaged 52 percent per annum (Repetto and Gillis, 1988 p.306).

In light of these circumstances, forestry policies trying to minimize deforestation would have had only limited impacts. Shifting cultivation and increased fuelwood consumption brought on by heightened poverty in rural and urban areas remained the primary factor in forest resource degradation. Besides structurally induced poverty and overdependence on export markets, government forestry policy remained sorely inadequate both through lack of resources and lack of management. Typically, timber was sold off too cheaply, sacrificing public revenues and the undervalued non-timber benefits of standing forests while encouraging logging exploitation by foreign timber companies (CIDA, 1986). In fact, the terms of many timber concession agreements and revenue systems have encouraged wasteful resource use, both through rapid depletion of some valuable species and through tax and trade regimes and laws governing land tenure that are biased against

preservation of standing forests (CIDA, 1986; Repetto and Gillis, 1988; World Bank, 1988).

The history of deforestation in Ghana also reflects the history of uneven economic development, socio-economic differentiation, commoditisation of the environment and macroeconomic policy that has so far ignored the potentially disastrous effects (environmentally, economically and socially) of continued resource depletion. Even though Ghana has recently adopted some environmental and forestry measures (under the Environmental Action Plan in 1988-89), it has not modified existing policies that aggravate depletion, such as increased reliance on cocoa, gold and timber as foreign exchange earners. Therefore, the balance of deforestation continues at significant rates (Repetto and Gillis 1988) and the development-environment problem worsens. Forestry and macroeconomic policy that does not specifically address the root causes of poverty (ie. - the structural mechanisms which perpetuate environmental and human poverty) cannot hope to reverse historical trends contributing to underdevelopment.

The Ghana Forestry Sector Review (1986-87), conducted by the Canadian International Development Agency (CIDA), attempts to address some of the issues associated with deforestation and environmental depletion problems. Focusing primarily on export rehabilitation and improved capacity utilization of established forest industries, the Review identifies a number of perceived "obstacles" to sustainable forestry development. CIDA's approach to Ghana's forestry sector, identification of environmental problems (related to forestry and human poverty) and sustainable development goals will be evaluated in following sections. It is critical to note that problem identification is a key indicator of both development ideology and methodology. Therefore, before proceeding with an evaluation of CIDA's approach to "sustainable forestry development" in Ghana, it is necessary to outline some of the most salient aspects of the Ghana Forestry Sector Review in terms of the topics addressed and various policies and programmes proposed.

5.6 The Ghana Forestry Sector Review (GFSR)

The principle objective of the GFSR was to identify major constraints to sustained, long-term development of the forestry sector and forests and to propose measures that would help overcome these constraints. For this purpose, a development strategy for the forestry sector (including wildlife) has been devised. The Canadian International Development Agency (CIDA) undertook the task to formulate a rationale for possible intervention in the forestry sector consistent with its efforts to assist in the rehabilitation of Ghana's major export earning sectors. The two main components of the study included:

- (i) A desk study of Ghana's forestry sector - to familiarize CIDA personnel with the current economic situation in Ghana and the role of the forestry sector in the nation's economic rehabilitation and;
- (ii) A field mission to Ghana - which aims to update, refine and confirm information contained in the desk study report.

In terms of the desk study, the major foci for forestry sector rehabilitation include macroeconomic variables and export sector rehabilitation. CIDA has designed its policy and programmes in Ghana's forestry sector after the following four key variables in the desk study:

1. determining the potential role of the forest resource within the rehabilitation of the country's economy;
2. assessing the institutional and policy making structure pertaining to the forestry sector;
3. assessing the level of forest utilization in the country taking into consideration:
 - (i) the domestic market
 - (ii) the export demand for Ghana's wood products
 - (iii) the interrelationship between forest utilization, the estimated annual allowable cut, and preservation (or rehabilitation) of the environment
 - (iv) constraints to the rational commercialization of the forest resource.
4. conducting an overview of possible options identifying main sectoral priorities and areas of geographical concentration (CIDA, 1986 p. 118).

The field mission on the other hand was composed of three CIDA specialists (Team leader, Timber Utilization Specialist and a Forest Management Specialist) given the task of

collecting from both Ghana officials and officials of the donor community, data and documents found to be relevant and available. In addition, the mission is to define with Ghanaian officials a plan of action towards potential forestry project implementation. This will be made possible by CIDA officials visiting "...field sites which will give an appreciation of conditions and problems in silviculture, forest management, timber harvesting and transportation, timber processing and export operations" (CIDA, 1986 p.3) It is also the job of CIDA officials (involved in both aspects of the GSFR) to discuss capabilities and constraints in sectoral rehabilitation and in the provision of forestry assistance.

Clearly, CIDA's role in Ghana's Forestry Sector Review requires a comprehensive understanding of issues and problems. Indeed, the final report contains a series of appending documents outlining the details of final recommendations. While the main report gives a summary description with emphasis on major issues and development strategy, the annexes provide a detailed description of the forestry sector as researched by CIDA officials (see Appendix 1). Given that the focus of this thesis concerns issues underlying Ghana's development-environment crisis, and owing to the volume of supporting material generated by the main report, I have chosen to focus on its primary policy conclusions in addition to CIDA proposals on Forestry for Rural Development. This approach will facilitate a review of the primary issues outlined in previous chapters regarding structural obstacles to rural development in addition to highlighting CIDA's development ideology and ideas on sustainability.

5.6.1 Development Constraints - Industrial and Rural Forestry

According to CIDA's review of Ghana's development constraints,

"There is general agreement that [Ghana] does have the necessary land and water resources to feed its people and generate the surpluses necessary for economic take-off. Increasing concern is, however being voiced over the ongoing destruction of these resources under the dual impact of population growth and the use of inappropriate technologies...[Ghana] needs to produce more, but the environment's capacities for sustained production also need to be maintained. Safe guarding the potential for production is one context in which forestry can and must make a major contribution...." (CIDA, 1986 p.13).

Because forestry products are Ghana's third most important export earner, efforts have concentrated on revitalizing the export and production capacity of the forest industry as a priority in establishing "sustainable" economic growth and environmental use. In other words, the most critical aspect of improving development initiatives through forestry is perceived as "...managing industrial forestry production and export earning in accordance with sustained yield policy" (CIDA, 1986 p. 13). The main summary report sites specific constraints to this process which CIDA has documented (in order of importance to reflect their development priorities and activities in Ghana's forestry sector) to include:

1. INFRASTRUCTURE - Ghana's major port at Takoradi (see Figure 8) is presently unable to handle efficiently the export of logs, lumber, plywood and veneer. Without improvement in the calibre of the port's management coupled with a substantial upgrading of loading and unloading equipment and storage facilities, the export of forest products from this port cannot be significantly increased. Also cited as major obstacles to "development" of the forest sector is the state of serious disrepair of roadlinks between producing and exporting areas and the fact that rail transport of logs is functioning well below capacity.

2. ADMINISTRATION AND MANAGEMENT - cumbersome administrative procedure and prohibitive duties and taxes imposed by the (now illegal) Ghana Timber Marketing Board (GTMB) have caused the marketing of forest products to be a slow and costly process. In order to amend this problem, the GTMB will be replaced by the Timber Export Development Board (TEDB) and the Forest Products Inspection Bureau (FPIB) as of 1986-87.

3. INDUSTRIAL EFFICIENCY - because of old and worn out equipment, the logging and timber industry is working well below capacity. For example, in 1983 recorded lumber production was only 17% of estimated capacity and recorded plywood 34% of capacity. Lack of foreign exchange during the period 1970-1985 is seen as the major cause of inability to buy parts and machinery leading to poor industrial maintenance. Without extensive rehabilitation of equipment in the immediate future, increases in forest sector production and export cannot be continued.

4. FORESTRY DEPARTMENT - which is charged with the execution of the GOG's forest policy suffers from "...a serious lack of trained staff, and is almost completely devoid of the most fundamental transportation and communication equipment" (CIDA, 1985 p. 120). The inability of the Forestry Department (FD) to manage the utilization of Ghana's forest resources will seriously jeopardize future wood supplies needed for a revitalized and expanding timber processing industry. "Without management, significant environmental deterioration will inevitably occur. This will adversely affect the nation's ability to produce food crops" (CIDA, 1985 p. 120).

5. FOREST CONCESSIONS - the present locations and size distribution of forest concessions are not conducive to effective use of the available commercial timber. CIDA projects that once the rehabilitation phase of structural adjustment has run its course, growth in the timber industry can be expected. In order to enhance this process, a more rational allocation of concession is essential.

CIDA's introduction to the GSFR emphasizes its development role as providing "Assistance in the provision of basic human needs...to arrest any further decline in Ghana's social infrastructure" (1986 p. 1). However, none of the recommendations in the main report directly addresses issues associated with human and environmental poverty. Instead, the focus is on infrastructure, technical assistance and management and export rehabilitation. Both short-term and long-term commitments to Ghana are concerned with efficiency constraints while apparently little practical financing is directed towards researching and addressing factors that tend to induce structural poverty and environmental deterioration.

Figure 8 - Forest Industries and Infrastructure

source: after CIDA, 1986, p. 123

CIDA's introductory problem statement also referred to the need for "economic take off" and the need to discontinue the use of "inappropriate technology". It is surprising that CIDA would refer to "economic take-off" in the context of supporting sustainable development in Ghana given that the Agency claims to promote development with a human focus. Use of that particular phrase is reminiscent of the Rostow Growth Model ¹⁶. Evidence of such orthodox thinking on behalf of CIDA is somewhat alarming in that responses based on this model tend to focus on solutions through competitive market capitalism. Such theories are not really applicable to Africa's environment-development crisis in which cultural, social, historical, political and psychological factors are seen to mitigate against "rational and maximizing behaviour" in the capitalist market place. Indeed, cultural and social factors are usually cited as the most critical "obstacles" to capitalist development. It is not difficult to critique this position in a number of ways; however, it is beyond the scope of this chapter to do so. What is essential to realize is that reliance purely on macro economic and technical solutions to development problems (which combine in ways to create non-economic and non-technical problems) is inadequate and inappropriate. "Development" is not an automatic process nor can it be technically determined.

In the seventh appendix to the main Forestry Sector Review report are listed some of perceived constraints to highlighted by CIDA's forestry mission in rural development in Ghana. These constraints are summarized below:

¹⁶ The basic goal of development as seen by the Rostow Model is the attainment of a "high mass consumption" society. To reach this level, a society progresses unilinearly from a subsistence state to preconditions for economic take off followed by take off at a certain critical point of accumulation and technology to industrialization and finally high mass consumption. This type of orthodox development theory usually relies on per capita income as the indication of economic development. It is a view in which developing societies move toward ever greater availability of goods and services for their citizens. This is the historical nature of "progress" according to orthodox theory.

1. LAND AND TREE TENURE - traditions (which are mainly unwritten) vary significantly between localities making their operation uncertain and liable to a variety of conflicting interpretations. This interferes with the introduction of a "free-market" into the concession allocation procedures.

2. DEMOGRAPHIC FACTORS - "Depletion of tree cover in Ghana is occurring mainly because of the increase in human population...the population increase is not accompanied pro rata by improved agricultural yields per hectare" (CIDA, 1985 Annex VII p. 1). This is complicated by a rising demand for fuelwood and land availability, traditional cropping systems and cultural practices which seem to discourage tree planting in certain circumstances.

3. CULTURAL FACTORS - cropping systems which make allowance for an unpredictable climate but deplete soil fertility unless restorative bush fallow is allowed is exhausting the productive capacity of the land. This is particularly acute in the savanna zone which is experiencing a trend towards lower annual rainfall and has highly variable crop yields from year to year. Other factors contributing to forest degradation are methods of animal husbandry which make protection of young trees against browsing very difficult and bush burning to clear land.

4. GROUP AND USER CONFLICTS - exist between farmers (cocoa and food crops) and loggers in the high forest zone as to rights to natural trees in farms and compensation for damaged crops. In many cases, compensation to farmers is not forthcoming and as a result they are unwilling to plant trees.

Consistent with the macro-economic development themes of the main report, CIDA's rural forestry development constraints focus on factors interfering with the operation of "free-market" forces. No mention is made of micro-level processes shaping peoples' resource use strategies. Analysis appears to stop at poor people being the cause of environmental degradation. The structures and processes which motivate coping behaviour and survival strategies that degrade the environment are not included in CIDA's evaluation of rural underdevelopment.

Improving the managerial and equipment needs of the Forestry Department (FD) appears to be the cornerstone of the rural development programme. According to CIDA's conclusions and recommendations, the most critical component in rural forestry "...involves the strengthening of the Forestry Department (FD) to carry out planting and protection of trees on land outside forest reserves by rural populations, seedling production, intensification of extension (in collaboration with the Ministry of Agriculture)

and publicity on rural forestry and demonstration of agroforestry packages " (GSFR, cited in World Bank, 1988 p. v). In other words, the constraints are mainly technical. Indeed, the report on rural development goes on to add that , "Where forest has been degraded by fire, past logging, or farming below the critical stocking for the next timber crop, it is from a technical view, desirable to replace the depleted forest by plantations..." to create marketable timber crops (CIDA, Annex VII p. 14). There is no evidence that consideration is given to local populations in terms of their input into these development initiatives or in terms of social, cultural or economic impacts that may accrue from such projects. Furthermore, care must be taken in the reforestation process to select types of trees that are responsive to and appropriate for local soil, vegetation and moisture conditions. Heavy concentrations of certain commercial species in areas where they do not naturally occur may cause severe damage to specific ecologies.

Commercial development responses (similar to those in the GSFR) obey exactly the patterns of the capital intensive and capital concentrating project which are most likely to perpetuate mechanisms of social injustice and ecological imbalances. The bulk of the money in the rural forestry programmes is used for industrial development and strengthening of official departments. It is not clear why CIDA would choose to strengthen a government department (the Forestry Department) that has already proved in Ghana to ignore ecological imperatives and indigenous rights of rural people.

Other impacts of rural deforestation which, according to the GSFR are "...of lesser importance but may be locally significant..." include: desiccation of crops in the high forest zone by harmattan winds, destruction of crops and property by tornadoes at the beginning and end of the wet season, soil erosion, disappearance of medicinal plants, wildlife and game through loss of a forest microclimate and lower yields from crops stressed by more direct exposure to sun and wind (CIDA, 1986 p. 50). How CIDA concluded that these issues, all of which directly affect the daily lives and well-being of

Year	Number of cases	Percentage of total cases
1990	10	10.0
1991	15	15.0
1992	20	20.0
1993	25	25.0
1994	30	30.0
1995	35	35.0
1996	40	40.0
1997	45	45.0
1998	50	50.0
1999	55	55.0
2000	60	60.0
2001	65	65.0
2002	70	70.0
2003	75	75.0
2004	80	80.0
2005	85	85.0
2006	90	90.0
2007	95	95.0
2008	100	100.0
2009	105	105.0
2010	110	110.0
2011	115	115.0
2012	120	120.0
2013	125	125.0
2014	130	130.0
2015	135	135.0
2016	140	140.0
2017	145	145.0
2018	150	150.0
2019	155	155.0
2020	160	160.0
2021	165	165.0
2022	170	170.0
2023	175	175.0
2024	180	180.0
2025	185	185.0
2026	190	190.0
2027	195	195.0
2028	200	200.0
2029	205	205.0
2030	210	210.0
2031	215	215.0
2032	220	220.0
2033	225	225.0
2034	230	230.0
2035	235	235.0
2036	240	240.0
2037	245	245.0
2038	250	250.0
2039	255	255.0
2040	260	260.0
2041	265	265.0
2042	270	270.0
2043	275	275.0
2044	280	280.0
2045	285	285.0
2046	290	290.0
2047	295	295.0
2048	300	300.0
2049	305	305.0
2050	310	310.0
2051	315	315.0
2052	320	320.0
2053	325	325.0
2054	330	330.0
2055	335	335.0
2056	340	340.0
2057	345	345.0
2058	350	350.0
2059	355	355.0
2060	360	360.0
2061	365	365.0
2062	370	370.0
2063	375	375.0
2064	380	380.0
2065	385	385.0
2066	390	390.0
2067	395	395.0
2068	400	400.0
2069	405	405.0
2070	410	410.0
2071	415	415.0
2072	420	420.0
2073	425	425.0
2074	430	430.0
2075	435	435.0
2076	440	440.0
2077	445	445.0
2078	450	450.0
2079	455	455.0
2080	460	460.0
2081	465	465.0
2082	470	470.0
2083	475	475.0
2084	480	480.0
2085	485	485.0
2086	490	490.0
2087	495	495.0
2088	500	500.0
2089	505	505.0
2090	510	510.0
2091	515	515.0
2092	520	520.0
2093	525	525.0
2094	530	530.0
2095	535	535.0
2096	540	540.0
2097	545	545.0
2098	550	550.0
2099	555	555.0
2100		

rural populations in addition to representing significant obstacles to environmental sustainability, are of "lesser importance" remains undetermined. It is clear however, that given the focus of CIDA policy for Ghana's forest and environmental recovery, that local level participation and non-market solutions receive little or no attention in policy recommendations. In their concluding paragraphs on the importance of forestry for sustainable rural development, the CIDA field mission states that, "...forestry, long considered to be exclusively a government activity is and must increasingly become the people's business...the degradation from tropical deforestation and desertification observed in recent years and which have been exhaustively documented are basically linked to development problems. Any attempt to tackle the issue must take into account the human factor and give special consideration to the development of the largest number of people, which means rural dwellers" (CIDA, 1986 p. 14). This statement seems incredulous given the fact that nowhere in the GSEF has prominence been given to issues of human struggle and environmental enhancement through non-exploitive mechanisms. The approach, conception and implementation of CIDA policy in Ghana's forest sector rely almost exclusively on export rehabilitation as opposed to rural livelihood issues. At the same time CIDA professes to be concerned with the human dimension of development, it is contributing to export policies that will undermine the well-being of this "human dimension" as it struggles to cope with an ever more degraded environment. Export oriented growth through timber, gold and cocoa institutionalizes exploitive relationships and legitimizes processes contributing to structural poverty. While CIDA attempts to promote an interest in forest conservation and enhancement, notice that these concerns are not linked to policies demanding structural change in the national economy in the interests of sustainable, human-oriented resource development. Poverty in Ghana is linked to environmental depredation. Rather than attempting to locate and redress the root causes of poverty in Ghana, CIDA has indirectly reduced poor peoples' command over their own

livelihoods in not challenging the mechanisms governing the forces and relations of export-oriented production. The superficial treatment of environmental change in Ghana involves few references to structural underdevelopment. It is in the area of poverty (human and environmental) alleviation that the greatest challenges and potential to achieve sustainable development occur.

5.6.2 Canadian Involvement in Ghana's Forestry Sector

Over the long term (1985 - 2000), tropical hardwood consumption in Europe is projected to grow at a rate of 2 to 3 percent per annum, depending on global growth rates and the availability of desired tropical species (CIDA, 1986 p. 128). CIDA contends that once the competitiveness of Ghana's timber industry has been restored by the "...successful implementation of all major elements of the rehabilitation program, the Ghana producers can regain their traditional share of the West-European market for tropical hardwoods (logs, lumber, veneer, plywood, furniture components)" (CIDA, 1986 p. 122). Moreover, given ongoing modernization and diversification of the timber processing industry, combined with application of forest management on reserved and non-reserved forests, the timber industry should be able to expand its share of the West-European market (CIDA, 1986).

Because the GFSR targets the private sub-sector as a particularly important group that is expected to benefit from many of the new incentives developed within the forestry sector, the focus of many of CIDA's recommendations remain market based. The future of the timber industry requires an adequate commercial and industrial wood supply. Additional or renewed supplies will come from new industrial plantations. Despite its research and recent field mission to Ghana, CIDA officials did not appear to make any theoretical or practical connection between the mutually recursive cycles of deforestation and rural poverty as critical problems. Instead, the authors of the report chose to caution

against over-exploitation of wood resources as something that "...may lead to a deterioration of the rural environment which in the long run will affect the nation's ability to produce sufficient food crops" (CIDA, 1986 p. 123). Again, this statement seems incredulous given the rising levels of rural poverty (measured in terms of GNP) and blatant degradation of the environment (one which is virtually devoid of natural forest cover in the high forest zone). It is not the case that over-exploitation of the environment "may" affect resources; rather the question remains of what can be done to a severely eroded environment in order to reduce the historical trends of structural environmental exploitation. The CIDA report has not identified the main root causes or determinants of deforestation and environmental ruin. To highlight shifting cultivation and an increasing population base as the primary causes of deforestation is to be blind to historical trends, structural inequities, existing exploitive mechanisms, continuing socio-economic differentiation and specific cultural responses to economic pressure. Although significant problems complicating underdevelopment, shifting cultivation and population increase are not the sole causes of deforestation. Even if they were, CIDA recommendations do not specifically address those groups that are the initiators of the perceived problems. Export rehabilitation, technical assistance to managerial bodies and research funds directed at industrial plantation silviculture do not attack the structural imbalances leading people to intensified shifting agriculture nor do they address the population issue. Therefore, whether or not one believes in CIDA's "problem identification" as accurate, the fact is that the two most significant "causes" are not addressed in the main report or any of the appending documents.

Five possible areas of Canadian intervention in Ghana's forestry sector have been identified. CIDA's assessment of "needs" focuses exclusively on industrial production of timber and export rehabilitation. They include "...equipment requirements and wood supply, to firstly regain and subsequently maintain its competitive position on the export

market...the proposed development programme requires a long term (at least 15 years), commitment from Canada to achieve sustained development" (CIDA, 1986 p. 123).

Despite the fact that much of CIDA's policy dialogue concentrates on "sustainability" as a desired goal, it remains unclear what the term means in Ghana's development context, and how it may be achieved with the major recommendations for action outlined in the GFSR.

The identified areas of intervention, requiring an expenditure in Canadian dollars of almost \$74 million involve:

- 1. Short-term line of credit** - to assist in the rehabilitation of private logging and timber processing firms (2 year duration, estimated Can. \$9.3 million)
- 2. Long-term line of credit** - for forest industry development supported by technical assistance to aid qualifying industries in the modernization, diversification and expansion of their operation so as to increase their long-term economic viability (5 year duration - estimated Can. \$ 53.1 million)
- 3. Financial and technical aid to Ghana Forestry Department** - to improve the integrated and intensive management of reserved and non-reserved forests in one or more selected forest districts (10 to 15 years duration - estimated Can. \$9.5 million)
- 4. Financial and technical aid to Ghana's forestry and technical training institutions** - the Institute of Renewable Natural Resources, the Kumasi Technical Institute and the sunyani Forestry School, to help reduce the professional and technical personnel shortages (5 years duration - estimated Can. \$2.0 million)
- 5. Continuation of the forestry component of NORRIP¹⁷** - Currently, the implementation of integrated area development is limited to two areas (Central Mamprusi and Eastern Dagomba) with other areas to follow by 1990. The Ghana Forestry Sector

¹⁷ NORRIP (Northern Region Rural Integrated Programme) is a programme aimed at development of Ghana's northern area and was started in the late 1970's. The theory behind NORRIP is that it engenders community participation and "bottom-up" development principles in village programmes focusing on "...potable water and health, agriculture, roads and economically beneficial initiative projects...Sustainability of projects will be a goal. This will require full community participation...good project design and implementation" (NORRIP Inception Report - Draft, 1990 p. ii). Agro-forestry projects have been an ongoing concern in several villages in northern Ghana since 1985.

It is interesting to note that although NORRIP, like other CIDA programmes is designed to promote local level participation, the management structure has established restrictive criteria for requests from communities. District planners, community development officers and Project Management teams (which are not from local communities), screen requests for assistance on the first on the basis of economic viability and secondly on whether they have a "socially beneficial nature" (NORRIP Inception Report - Draft, 1990). It appears that the conceptual design and review of these local level participatory projects has a very strong "top down" element.

Review would consider contributing funds and additional technical assistance to forestry in Northern regions. CIDA projects that the need for the establishment of woodlots, wind breaks, etc. in the Northern Savannah is significant enough to permit greater Canadian activity than is currently envisaged (5 year duration - not included in 1985 budget estimates) (CIDA, 1985 pp. 123-124).

Table 13 summarizes the cost of the proposed Ghana-Canada Forestry Programme. In light of CIDA's identification of constraints to development and the Ghana-Canada Forestry Programme, a series of questions arise concerning CIDA's sustainable development ideology and whether the problems identified adequately reflect some of the root causes of Ghana's environment-development crisis.

Table 13
Cost Summary for CIDA's Involvement in Ghana's Forestry Development Programme, estimated in 1985

CIDA PROGRAMME COMPONENTS

1.Short-term Credit for Rehabilitation of Private Industry.....	9,300,000
2.Long-term Credit for Industry Development Assistance(FIDA).....	53, 150,000
3.Integrated Intensive Forest Management Assistance (IIFMA).....	9,500,000
4.Forest Education and Institutional Assistance (FEIA).....	2,030,000
5.Continuation of NORRIP Forestry Component.....	-----
6.CIDA follow-up Missions.....	290,000
TOTAL CIDA FORESTRY PROGRAMME	<u>74,270,000</u>

source: CIDA, 2986 p. 147

5.7 CIDA, Sustainability and the Environment-Development Crisis

"The principal objective of the GFSR was to identify constraints to long-term sustained development in the forest and forest industry sector and then recommend measures which would help in overcoming such constraints" (GFSR Abstract - Draft, 1989

p.1). What is CIDA's idea of "sustained development"? Will the measures recommended in the GFSR help overcome Ghana's development "constraints"? Are forestry and environmental concerns adequately analysed in terms of their historical, social and structural factors? Has CIDA failed to consider any critical issues related to the development-environment crisis that could reduce the likelihood of achieving sustainable development?

It is my contention that CIDA policy on sustainability as reflected in the recommendations for action in Ghana's Forestry Sector Review is inadequate in terms of problem identification (ie - understanding the issues) and problem solution (ie - practical development responses). Given that these assumptions are valid, it is clear that the Ghanaian government will have to consider possible alternatives to its current development strategy if sustainability remains a real goal.

5.7.1 CIDA and Sustainable Development - a critical review

In a recently published policy document, CIDA and Sustainable Development: How Canada's Aid Policies Can Support Sustainable Development in the Third World More Effectively (1989), various guiding principles concerning CIDA past and present sustainable development initiatives are outlined. The report is broken down into six areas of interest :

1. The Growth Imperative and Sustainable Development
2. Sustainable Development and Central Decision Making
3. Protecting, Preserving and Enhancing the environmental Basis for Development
4. Managing Urban Growth
5. Democratizing the Development Process
6. Operational Priorities for Sustainable Development

It is beyond the scope of this chapter to evaluate all these aspects of CIDA policy with respect to Ghana's development initiatives, therefore I will concentrate on the growth imperative and sustainable development (which figures significantly in the GFSR and provides a basic ideological review of sustainability) as well as evaluate how CIDA intends to protect, preserve and enhance the environmental basis for development.

The Ghana Forestry Sector Review (1986-87) was conducted at the time CIDA set out a new strategy for international development initiatives which gave priority to the concept of sustainable development. Concurrent with CIDA's change in policy focus was the publication and release of Our Common Future by the World Commission on Environment and Development in 1987. By now, the WCED's definition of "sustainable development", protecting the needs of present generations without compromising the ability of future generations to meet their own requirements, has been widely popularized and is presently used by CIDA as a general ideological and policy guideline (MacNeill et. al, 1989).

It is an indisputable fact that mass poverty is the greatest ecological threat to the basis of future development and well being. "If mass poverty is not reduced significantly and soon, there really is no way to stop the accelerating decline in the planet's basic stocks of ecological capital - its forests, soils, species, fisheries, waters and atmosphere" (MacNeill et. al, 1989, p. 2). The essential problem with development processes thus far has been that the gains produced by unbridled growth and exploitation have degraded the planet's environment, depleted its basic ecological capital at an alarming rate, and left increasing numbers of people poor and vulnerable.

According to the GFSR (1986-87) and more recent documents including CIDA and Sustainable Development (1989) and the World Bank's Sub-Saharan Africa: From Crisis to Sustainable Development (1989), the primary cause for poverty is population growth outstripping per capita income growth in most (if not all) developing areas - Africa, Latin

America and Asia. Herein lies the essence of CIDA's "growth imperative" in attempting to achieve future sustainability in the Third World. Improvements in "development" are measured in increased GNP per capita figures (MacNeill et al, 1989). If the aim is to assure that the world is well on its way to sustainable development during the beginning of the next century, then two things are necessary according to CIDA: a minimum standard of per capita national income growth (CIDA cites nothing less than 3%) and "...vigorous policies to achieve greater equity within developing countries" (MacNeill et al, 1989 p. 3). CIDA points to a number of strategic imperatives to facilitate sustainable development based on the above two conditions. Some of these include:

1. reviving economic growth to meet human needs and aspirations and reduce population increases
2. ensuring a more equitable distribution of the proceeds of growth
3. re-orienting technology and managing risk
4. conserving and enhancing the resource base
5. merging environment and economics in decision making.¹⁸

It is contradictory, as argued earlier in the chapter, that CIDA is able on one hand to encourage continued growth in terms of macro economic indicators while on the other hand assert that environmental sustainability is fundamentally threatened by neo-classical development strategies aimed at macro-economic growth. CIDA, however, is not alone in its self-contradiction. The Brundtland Report (1987) advocates a world economy growing by a factor of 5 to 10 and at the same time respecting ecological limits. The Report sees these levels of growth as necessary to eliminate poverty and achieve "sustainable development". Not only is this logic basically conflictual, it is also entirely unsound in

¹⁸ CIDA's operational priorities for sustainable development are outlined in a general policy template called "Country Programme Plans for Sustainable Development" (Appendix 2). The purpose of this is to "...place CIDA in a position to better understand and reflect those needs and priorities in its various programmes" (MacNeill et. al, 1989 p. 61).

that economic growth without a fundamental restructuring of exploitive mechanisms cannot facilitate sustainability. Nowhere in CIDA policy in general or the GFSR specifically, does CIDA identify clearly the basic need for true structural reform. Nor does CIDA contend that continued efforts at growth through export development perpetuate unequal economic links in terms of trading, technology, and commodities thereby eliminating sustainable development as a viable possibility.

It is true, as CIDA stipulates, that sustainable development depends on a political system that ensures effective citizen participation in decision making and has a built in capacity for self-correction in terms of administrative decisions. However, CIDA stops short of speculating on interim policy decisions that could facilitate this type of structural change. It is difficult to conceive that such a structural change in Ghana, for example, would be spontaneous on the part of the ruling party. Certainly, the freedom of popular decision making is a normative ideal to which development practioners can aspire, but an ideal that remains unattainable under given current structural obstacles. I contend that CIDA's policies do not address these or any other (economic) structural barriers to development or sustainability. Highlighting population growth as the major factor leading to world poverty is only a superficial explanation of numerous historical trends leading to maldevelopment involving complex social, economic, environmental and political factors. Sustainable development, apart from economic and ecological concerns, must also be defined in social, ethical, political and cultural terms. Any awareness of these issues is absent from CIDA's forestry review of Ghana and from more current policy documents. CIDA's policy on sustainable development is not only analytically shallow and less than rigorous in defining what structures and issues need to be considered in the drive to sustainability, it also remains devoid of any specific suggestions concerning an enhanced development methodology that could facilitate more accurate identification of poverty related problems. Commoditisation and internationalization of the environment (see

Chapter 2) are key factors in creating structural poverty, both human and environmental. One questions in general terms, the potential long-term effectiveness of practical development initiatives that are the product of such analytically vague policy guidelines.

Moreover, as previously discussed (see Chapter 2), there are no simple cause-effect explanations for the creations of underdevelopment in the broadest context, nor the problems relating to deforestation and environmental degradation in Ghana. With its emphasis on industrial modernization in the forestry sector and technical assistance in learning and management institutions, it almost appears that CIDA's forestry review of Ghana attempts to formulate a plan of action based on a linear theory of stages of development (especially given the reference to "economic take off" in the forestry sector as pointed out earlier in chapter five). Such strategies tend to be ahistorical, lacking social depth and otherwise inappropriate to a specific country's historical development experience.

The development of European trading partners early in Ghana's history, the spread of the cocoa economy and accompanying social differentiation based on accumulated wealth, expatriate investment in Ghana's natural resource base, various governments' development strategies, and numerous other political, economic and social trends have all combined to establish and perpetuate structures of inequality and specific exploitive relations that have led to underdevelopment. It is critical that development policy and programmes reflect a greater understanding of Ghana's structural roots of the development-environment crisis in terms of relationships, forms and types of exploitation established externally and internally. The roots of underdevelopment, as argued through enhanced political economy, are socially and environmentally specific. For CIDA to contend that deforestation and poverty result from overpopulation and inability to generate more rapid economic growth reflects inappropriate research methodology, leading to weak policy formation and recommendations.

CIDA's general statement on "Protecting, Preserving and Enhancing the Environmental Basis for Development" in the third chapter of CIDA and Sustainable Development is devoid of historical, social or cultural analysis. According to enhanced political economy theory, processes of underdevelopment and ecological deterioration must be placed in the broader context of interrelationships between environmental change and social change. Local use of the environment occurs, in certain segments of society as a function of the interface of resource users with extra household, non-local forces of accumulation and resource extraction (Watts, 1989). "Achieving more Sustainable Forms of Industrial Development, Reducing the Use of Chemicals, Shifting from Green Revolution Technology and Protecting Gene Pools, Species Habitats and Other Prized Economic Assets" (cited in MacNeill et. al, 1989 pp. 31-38) have questionable relevance to the resource struggles of poor and unempowered people which revolve around basic problems of structural inequality; who exploits what, for what purpose, how is it exploited and used and who benefits? Although one cannot say that CIDA's problem identification in terms of the environment is "wrong", it can be argued that it is weak in failing to address possible structural causes relating to human and environmental poverty. Indeed, Africa's most basic "environmental problems" are systemic - relating to the organization and types of production.

The goal of sustainability, however valid as a concept, requires a certain degree of self-criticism on all political and ideological sides (developed and developing alike) as a necessary precursor to improved theoretical and practical development solutions. By not addressing power and productive structures that perpetuate current trends in critical decision making, sustainable development will remain nothing more than an unattainable ideal.

5.7.2 Forestry Development Issues - A Critical Review

The Ghana Forestry Sector Review was carried out as a multidonor sector review with the World Bank as the lead agency. CIDA has formulated many of its recommendations for action along the guidelines of the Tropical Forestry Action Plan (TFAP) as outlined by the World Resources Institute. In an insightful work critiquing the ideological and practical components of the TFAP, Shiva (1989) argues that the Plan is made to "...look like a new initiative borne out of increased awareness of the crises of tropical deforestation and desertification...it is in actual terms, merely a fresh legitimisation of old programmes of commercial forests" (p. 5). In many respects I agree with this condemnation and would add that the same criticism could be applied to Ghana's Forestry Sector Review. Numerous measures proposed by CIDA in the GFSR serve to reinforce the World Bank's structural adjustment programme in Ghana which, it has been argued, will likely deepen long-term poverty by reinforcing current patterns leading to underdevelopment. For instance, CIDA has proposed to assist the GOG in increasing short term aid in support of the forestry component of the Bank's Export Rehabilitation Programme. Investments in the forestry sector therefore are limited to strengthening the capacity of the export sector organizations and industries, establishing quick lines of credit to the timber sector to finance purchases of spare parts, materials and mobile logging equipment and restructuring marketing organizations "...so as to enable timber companies to export with a minimum amount of Government control" (CIDA, 1986). Based on the previous overview of its contents, the GSFR which stresses industrial forest development for export, is neither ecologically sound nor people-oriented. Furthermore, CIDA's recommendations for action in Ghana's forestry sector concentrate on inappropriate and unsound ideas of "sustainability" as argued in the previous section. These two factors, combined with pressure from environmentally reactionary international organizations (like

the World Bank and the International Monetary Fund) have served to establish significant obstacles to achieving environmental sustainability in Ghana.

To begin with, all of the policies proposed in the GFSR without a single exception involve top-down, capital intensive projects. Local participation in the review was never an issue. Ghanaians (government officials, industrialists) were contacted in information gathering sessions of CIDA's field mission, but no "participatory model" was followed (despite CIDA's rhetoric concerning the importance of sensitivity to grassroots level customs and survival practices) that encouraged the inclusion of locally defined environmental needs. Ghanaian input was limited to government officials and private sector business interests. By its very nature as a "sectoral review" forestry has been framed exclusively as an industrial and commercial activity which is in itself a threat to Ghana's remaining forests. Drawing on Shiva's (1987) general criticism of the commercially based TFAP, it could be argued that CIDA's stated desire for economic returns to "development investments" overrule (in the same way that the TFAP does) social and medium or long-term sustainability imperatives; "...what is technically feasible and economically rewarding to the entrepreneurs today, is propagated as progress and development" (cited in Shiva, 1987 p. 11). This reality leads one to question the real, underlying purpose of Ghana's forestry review. What is the ultimate goal of this development plan? I would suggest that rather than preserving the forests and their inhabitants (or users) the GFSR is designed to promote industrial and economic growth. Agency rhetoric concerning sustainable forestry use and development with a human and ecological focus seems to be little more than a collection of slogans given the practical implications of their investment funds.

The type and control of projects or policies suggested in the GFSR all share a commercial or industrial bias, which takes forestry away from the influence of local communities and makes it a capital intensive, externally controlled activity (Shiva, 1987).

For example, the working paper on "Forestry for Rural Development" prescribes rather significant transformation of the natural forest base (especially in the Northern Savanna) to wood plantations for fuelwood and industrial logs. Frequently, wood plantations can cause further damage to areas that are being reforested. The Western Region of Ghana, which was formerly rich in mahoganies, was replanted in selective areas with Meliaceae until it was realized that the pyralid shootborer *Hypsipyla* made impossible the effective regeneration of indigenous vegetation by plantations (CIDA, Annex VII, 1986). Despite the known effect of the shootborer, district foresters continue to plant Meliaceae (CIDA, Annex VII, 1986). Other examples of inappropriate species selection have reduced the effectiveness and productivity of some plantation sites in Ghana (CIDA, 1986).

In the conversion of degraded forest lands to plantations in any region, there have been no impact analyses on how plantations would affect the local ecology, wildlife or human populations. The exploitation of Ghana's forests since colonial times for cocoa, minerals and timber has created a dangerous situation of ecological degradation, not to mention the human costs associated with commoditisation of the environment and tropical deforestation. It is true that CIDA, as an international development agency has expressed concern over the alarming environmental situation in Ghana (and other countries). However, in virtually all of its practical responses to the situation, CIDA has identified market economy solutions to a market created problem. Therefore, the measures initiated by CIDA in its rural development programme (agroforestry practice and research, tree farming, institution strengthening, charcoal and fuelwood production, forest management inter alia) have again reinforced market uses and continued commoditisation of Ghana's natural environment. It is this author's contention that CID has completely misconceived the nature of deforestation and environmental degradation in Ghana.

Shiva (1987) argues that the general crisis in tropical forestry needs to be understood in the context of three fundamental "economies" - Nature's Economy (of

essential ecological processes - production of humus, hydrological balance, soil conservation etc.), the Market Economy (of industrial-commercial demands) and the Survival Economy (of basic needs satisfaction - fuelwood, fodder, fruit, small timber etc). Clearly the most significant conflict between the three economies is visible through "Market-Nature" interactions, the demand for biomass from the urban-industrial sector as well as the survival requirements of people which have increased dramatically in Ghana since the turn of the century. In light of the Ghana's current structural adjustment programme and export rehabilitation, it is clear that the biomass requirements for Nature's Economy have remained neglected and unfulfilled, resulting in ecological destabilisation, high social costs and a downward spiral of environmental-human poverty. The conflict between the rural survival economy and the market economy again pose serious problems in Ghana if one realizes that since 1983 and the implementation of the SAP, the interests of the economically powerful (industry, export and trade) have been institutionalized over the interests of the economically weak (those engaged in a livelihood struggle). The irony in Ghana's present Economic Recovery Programme (ERP) is that needs of the Survival and Natural economies have been undermined in practice, even though in theory they are legitimised as being for the poor.

Several basic myths have been perpetuated in CIDA's GFSR relating its policies for "sustainable development". They bear strong ideological connections to the guidelines provided by the World Bank's Tropical Forestry Action Plan. Through the establishment of international forestry programmes like Ghana's Forestry Sector Review, a number of processes have been created or reinforced that militate against the ecological and economic recovery of marginalised people and communities. They involve:

1. blaming people or cultural factors as the primary cause(s) of tropical deforestation (ie. - overpopulation, shifting agriculture and bush fires were cited as the most significant causes of deforestation in Ghana).

2. offering commercial afforestation projects as a guarantee of ecological recovery and increased human welfare. Relating to this is the assumption that commercial forestry, the market economy and privatisation will help alleviate scarcity problems for the poor (Shiva, 1987).

3. the idea that forest conservation techniques of the "developed" world can be applied to the developing world. Not only is this questionable on the grounds that the forest ecosystems in these regions are radically different making it difficult to apply the experiences of the first world to the tropics, it is also questionable in the sense that developed world has even "protected" its forests and environment and must teach conservation to the third world (Shiva, 1987).

These myths are not only prevalent in CIDA's forest review of Ghana, but are also contained in the World Resource Institute's (funded by the World Bank) publication called "Tropical Forests: a Call for Action". Indeed, in a 1987 executive summary of the Ghana Forestry Sector Review, CIDA cites the WRI's report as an important framework for forestry, agricultural and rural development. Regarding Ghana's environment in general and forestry sector in particular, CIDA asserts that, "Increasing concern is, however, being voiced over the ongoing destruction of these resources under the dual impact of population growth and the use of inappropriate technologies...the protection and development of natural resources [is] viewed as the sine qua non of a more viable economy. The recently launched Tropical Forestry Action Plan also gives prominence to solving the problems of the agriculture/forestry interface, which is now the major challenge in tropical forestry" (CIDA, 1987 p.1). From an ideological and practical view, it is alarming to think that Canada's largest development agency is promoting "sustainable development" through "...safeguarding the potential for production" (CIDA, 1987 p. 1) within Ghana's industrial forestry sector. Continued growth through market exploitation and commodity export is not only contradictory to any real hope of sustainable development, it also clearly displays the broad gap between official rhetoric on "people first development" and actual development practice. It is equally alarming to realize that CIDA, in practice, agrees with the World Bank's vision of "environmentally sound" forest use in developing countries, a vision that relies wholly on market exploitation and use of the Third World's resource base

as the engine for increased growth and generation of wealth. "If properly used and managed, the tropical forests constitute a massive potential source of energy, a powerful tool in the fight to end hunger, a strong basis for generating economic wealth and social development, and a storehouse of genetic resources to meet future needs" (World Resources Institute, 1987 p.3). The Ghana Forestry Sector Review, in its problem identification and recommendations for action, displays a strong similarity to ideals expounded by the World Bank and the World Resource Institute (WRI). One could also argue that these ideals or myths resemble the political and ideological tools used for the colonisation of common forest resources by the British in colonial Ghana. The centres of exploitation and planned destruction of the environment may no longer emanate from London, but the contemporary international logic of "development" (albeit from the World Bank or the Canadian International Development Agency) has not changed significantly. The mechanisms of power in terms of economic and environmental decision making remain beyond the grasp of Ghanaians.

CIDA has recently published a Forestry Development Issues Paper called "Sustaining the Forest - Policy Guidelines" which was prepared in August of 1988. In this document, CIDA has committed itself to "...improving aid delivery in terms of efficiency and achievement of objectives" in the hopes of fostering environmentally sound, sustainable development. Once again, the guiding principle to halting destructive pressure on forests remains "...more intensive silviculture and land management [to] sustain the productivity of the whole landscape" (CIDA, 1988 p.1). It has already been argued that such a position is not only inappropriate, but also destructive to the environment and people who depend upon it directly. There are however, a few other criticisms that need to be discussed in this overview of forest development issues.

To begin with, CIDA tropical forestry policy in general and the GFSR in particular, tends to legitimise and facilitate the transfer of resource control and forest management

from local people to the state and from Third World countries to pseudo-experts in international aid agencies in the North. It remains unclear how intensive and improved technical managed use of the environment will alleviate the historical and international precedents causing environmental exploitation, how more forest wealth generated through silviculture will result in greater equity and better human and environmental welfare and finally how developed nations hope to succeed at promoting self-reliant development if problem identification, management and project implementation are conducted through a "top-down" development process.

This brings up a second, related issue that peoples alienated from and ignorant of tropical forests would prescribe to those who have generations of forestry and farming knowledge about local forest ecosystems (Shiva, 1987). It is quite likely, that CIDA's definitions of "productivity" and "development" of Ghana's forest resources are contradictory to the concepts of "productivity" and "development" as they would be defined from the perspective of the Survival Economy (basic needs and sustainability). In their policy document on "Sustaining the Forests" (1988), CIDA's objectives are designed to "...increase sustainable economic output...maximize the productive environmental effects of trees in the landscape...[and] assist in the human resource development necessary to ensure the sustainable forest use will be feasible for each assisted country through its own people" (p. 9). Drawing on Shiva's (1987) argument in the general context the pattern of resource utilisation encouraged by CIDA is based on reductionist foundations, which sees forest ecosystems as timber mines of commercially valuable species. An alternative to this type of forest use, would define "productivity", "yield" and "economic value" in light of multipurpose utilisation of an integrated ecosystem (Shiva, 1987).

Finally, issues of social equity and resource empowerment must be addressed. In Ghana (as elsewhere in the Third World) the organisation of rights and entitlements have evolved such that production and distribution of wealth generated by forestry production do

not accrue to poor (rural or urban). Despite the fact that forestry on public lands is supposed to generate national income that will help stimulate economic recovery and improved standards of living for all Ghanaians, this has simply not been the case. In fact, for much of Ghana's rural population, increased GNP per capita still does not provide justice (in terms of resource empowerment) to the communities who depend on rights and entitlements (not purchasing power) to satisfy survival needs.

In forestry, farming and all other forms of production, the relations of production determine in large measure the relations of distribution. Shiva (1987) argues that if production is organised in accordance with Market Economy logic, it will likely be distributed according to that logic. As a result, purchasing power, not need, will determine access and entitlement in the economy (it is recognized that social and cultural factors also have a potential role in distribution). The poor who have no purchasing power or ability to accumulate wealth and whose survival needs are often the most acute, cannot register their demands through the organisational structures of the market. Again, this is especially important in the case of women who pay a 'double subsidy' based on exploitation in the productive and reproductive spheres. The social imperative in forestry specifically and development in general must deal with a revival of people's rights and resource entitlement so that they better control their livelihood base.

5.8 Contradictions in Forest Development - What Next?

The body of this chapter has been spent highlighting various problems and contradictions within CIDA's Forestry Sector Review of Ghana and how this relates to inconsistent policies on sustainable development. The World Resources Institute's Tropical Forestry Action Plan was also cited as a leading source of misconception in terms of appropriate problem identification and solutions to environmental and human degradation in the Third World. In recognition of the ecological crisis generated by

deforestation in Ghana, CIDA has sought to reaffirm mechanisms of market exploitation of the resource base through policies based on export rehabilitation and improved industrial forestry efficiency. Rather than reversing ecological decline, these recommendations will likely have the reverse affect. The ecological ignorance and practical indifference of the Ghana Forestry Sector Review to local survival needs and conditions is obvious given CIDA's investment profile in Ghana's resource economy.

The fact remains that it is easier to criticize forestry policy and environmental abuse than it is to propose real and viable alternatives to continued resource depletion. Another problem, which was not discussed in this chapter involves the issue of "sustainability" itself. It is an unfortunate fact that although the concept of environmental sustainability has now become a "buzz word" in development circles, examples of successful sustainable resource-use are few and far between being vastly outnumbered by blatantly non-sustainable activities. It is not my purpose to evaluate the implications of this problem here, rather it should be noted as a general concern that the word is used and misused in different contexts to refer to different things. Misrepresenting "sustainable development" issues can lead to inappropriate solutions as seen in the Ghana Forestry Sector Review.

In terms of alternatives or progress in working towards more appropriate and environmentally sound development, Ghana may pursue at least two alternatives including its own environmental "action plan" proposed by the Environmental Protection Council or the recent African Alternative Framework to Structural Adjustment Programmes (AAFSAP). These options will be reviewed and evaluated in the next chapter with specific reference to Ghana's current environmental and economic situation. Consistent with the themes in this chapter, the two alternatives will be evaluated in terms of what they identify as the root causes of the environment-development crisis and how they propose to deal with these problems. Issues of structural reform, resource empowerment and distribution will be central to the critical review.

CHAPTER SIX

Alternatives and Lessons for New Directions in Development

A critical evaluation of the some issues surrounding the environment-development crisis in Ghana, specifically in the forestry sector, shows that "normal professional thinking" continues to dominate development ideology in both problem identification and problem solving. CIDA's Ghana Forestry Sector Review exemplifies some of the theoretical limitations associated with how normal professionalism addresses environment-development problems. "Normal professionalism" means the thinking, values, methods and behaviour dominant in a profession or discipline (Chambers, 1987). The "first" thinking which accompanies normal professionalism has a structure, traits and set of associated values generated by and serving the interests of people other than the rural poor. Preceding chapters have criticized development ideologies and responses to problems that perpetuate normal professional structures of analysis. Ghana's Forestry Sector Review has shown that "first thinking" is deeply rooted and usually unquestioned so that terms like "population", "resources", "environment" and "development" take on a certain meaning that points in a specific direction (Chambers, 1987). This trend in development theory and methodology often leads to misleading prescriptions (as seen in the case of Ghana) so that "normal development thinking" actually becomes part of the problem. Absent from the GFSR was a practical understanding that poor people must be the starting point in the environment-development crisis and that by not placing a priority on problems of the rural poor the objectives of policy makers cannot be met.

In Ghana's forestry sector, normal professional development thinking has started with economic potentials and activities and how they could be exploited or promoted - the ultimate goals being to raise rates of return and economic growth. Not only is this type of

economic growth unsustainable, it completely contravenes the fundamental precepts of sustainable development in general as resources and the environment are being used in ways that are promoting ecological degradation and perpetuating mechanisms of unsustainable exploitation. In identifying population growth and shifting cultivation as the two most important causes of deforestation and environmental degradation, CIDA not only failed to challenge normal professional thinking it also failed to make important linkages between people, society, historical experience and the political economy. If CIDA had started with poor people and the environment as their development priorities, it may have been more obvious to evaluate these linkages in terms of why poor people exploit resources and the environment in ways which are not sustainable. Instead, the GFSR attempts to "solve" problems in the forestry sector with simple and direct recommendations that appear ignorant of the historical, international, structural and socio-cultural factors that have shaped Ghana's specific development process. Attempting to solve resource depletion problems directly through afforestation, policy changes aimed at stricter control of forest products, improved silviculture techniques, research projects, institutional strengthening inter alia, may have some validity but these measures neglect the critical linkages between people, historical experiences and the processes of change. Clearly, environment and development questions require some degree of methodological pluralism in order to help understand the interplay between various processes of change. The methodology of neoclassical economics ignores how culture and history influences peoples' perceptions and use of the environment. What is needed to help avoid misleading prescriptions based on normal professionalism is self-criticism on the part of theorists and practitioners combined with the hope that multiple insights (stemming from a variety of outlooks and different analytical methods) will guard against mistaken action based on one perspective. Herein lies a strong argument (as presented in Chapter two) for enhanced political-economy theory. This is not to suggest that political-economy holds all the answers to our

theoretical and methodological problems. Rather, enhanced political-economy theory as applied to the environment-development crisis provides a viable framework for renewed analysis in the areas of processes of change, incorporating social, economic, cultural, historical, political and ecological elements. Renewed analysis incorporating an understanding of processes and multidimensional relationships must precede more appropriate development efforts if sustainability is to be realized.

Enhanced political-economy theory challenges the standard agenda as presented by normal professional thinking. It does so in a way that places the priorities of the rural poor, which centre around the Survival Economy, as fundamental to analysis. This is a unique perspective for at least two reasons. First, theoretical treatment of issues based on "poor first" ideology offers a very different alternative from normal professionalism which tends view poor people as development "problems" instead of potential solutions. Cultural factors, population growth, inadequate technology, irrational market behaviour, inadequate production incentives and lack of education are often cited as significant "causes" of underdevelopment. However, if one takes the "poor first" attitude, it becomes necessary to evaluate why people react in the ways that they do, and what processes are forcing them to respond to various development challenges. "Sustainable development" therefore, comes to mean the creation of certain conditions which allows poor people to adapt to change, meet contingencies, overcome conditions which force a short-term view of survival and enhance long-term productivity (Chambers, 1987).

The second argument for enhanced political economy theory as applied to the environmental-development crisis, is that it seeks to increase our understanding of how people and the environment interact to shape and create processes of change. "The environment" therefore is not a separate entity from "society". Rather, environment and society are conceptually linked so that "sustainable development" becomes a goal which incorporates a wide range of factors - cultural, political, economic, human - instead of being

limited to largely economic and resource-flow categories. This understanding of sustainability and environment-development questions, progresses beyond that which is provided by the WCED in the Brundtland report.. The Brundtland Commission in some of its earlier work, cited certain key environmental issues which it placed in the "standard agenda" of normal professional thinking. None of the items listed - including carbon dioxide emissions, climatic change, air pollution, acid rain, water pollution, hazardous waste inter alia - started with people. Rather, they started with things or physical entities. As Chambers (1987) notes, even the central human settlements issues failed to focus on people and instead dealt with categories and services provided to people such as shelter, water supply, land use and tenure, health, education, managing rapid urban growth etc. In addition (and this is true of Ghana's Forestry Sector Review), management issues were stated at the macro level and tended to exhibit "first" categories - strengthening government departments, improving technology transfer, managing private and public sector interests in resources, providing better environment and development assistance and so on.

Normal professional thinking does not promote as its primary concern(s) the interests of poor people nor a sense that processes and relationships shaping change are critical in the interests of renewed development study and practice. This thesis has shown for instance, that CIDA's review of Ghana's forestry sector and its policy guidelines on sustainable development do not start with people. No truly "alternative" form of analysis or policy recommendations were followed which challenged the standard agenda or sought to clarify the meaning of "sustainability" either in general or in the Ghanaian context. The list of critical environment-development issues receiving little or no attention in the GFSR (but essential in the interests of sustainability) are extensive and involve the socioeconomic aspects of rural household and community uses of forest resources, agricultural and other non-forestry land use issues that impact on forest resources, the cultural and environmental impacts of logging and industrial forest development, women and gender issues in forest

resource use, the history of change in environmental perception among rural populations and the distributional impact of increased export activity on the resource-dependant rural poor.

Moreover, few if any connections were made to policies affecting resource use in other sectors that could have significant impacts on forestry. For example, decisions concerning agriculture (both food and cash crops), transportation infrastructure, export rehabilitation, currency, debt servicing, employment etc. all affect resource availability and use. In Ghana, these indirect policy decisions in combination with the history of forestry mismanagement are biased against the preservation of standing forests and encourage continued nonsustainable exploitation of the environment. Attempts to promote "sustainable development" within a specific sector (like forestry) demonstrate a general misunderstanding of the types of changes necessary to alleviate the environment-development crisis and completely ignore the importance of relationships within the social-environmental system. Because change (negative or positive) is a process, and the linkages between biophysical and human-cultural systems are highly complex, measures to promote sustainability need to concentrate on these processes and linkages instead of isolating physical or social elements of the underlying problem(s).

In light of the preceding theoretical comments, chapter six will critically review two policy documents that are intended to provide development alternatives to the crises that face Ghana and Africa. The first document, Ghana's Environmental Action Plan, deals specifically with the environmental crisis in that country. It aims to promote a style of more environmentally conscious development by identifying some significant problems and solutions to ecological deterioration. The second document is the African Alternative Framework to Structural Adjustment Programmes (AAF-SAP), which as evident from its title, seeks to establish alternative parameters to orthodox (neo-classical) development programmes.

Following a brief overview of their most salient points, the two plans of action will be critically examined in terms of how they address the need to understand more fully the processes of change, whether the need for structural reform is highlighted and finally if the concerns of poor people are put first in attempting to achieve sustainable livelihood security. The aim of this general analysis is to comment on whether real alternatives to present patterns of development and resource use are being offered or if relationships of exploitation and structural poverty are being overlooked in the course of using "sustainable development" terminology.

6.1 The Evolution of Ghana's Environmental Action Plan - from the Ghana Forestry Sector Review to the Environmental Protection Council

Implementation of Ghana's ERP necessitated a controlled and rational approach to economic planning and management. Because of the focus on export rehabilitation of cocoa, timber and gold, the PNDC took steps to monitor the potential and progress of these commodity sectors more closely. Concern with the resource base in relation to economic growth and recovery eventually stimulated the formation of a new Environmental Action Plan in 1988-89. The Ghana Forestry Sector Review played an important role in development planning for the forestry sector in terms of how it could meet renewed export demands. The purpose of this section is to explore the evolution of environmental planning in Ghana's forestry sector starting with recommendations made by CIDA in the GFSR in 1986. The guidelines and implications of the Environmental Protection Council's recommendations for sustainable forestry use will be discussed in the context of resource enhancement for meeting peoples' survival priorities.

Within the policy recommendations on forestry institutions, training and research in Ghana's Forestry Sector Review, CIDA focused on two major shortcomings in the national forest policy:

- 1 . the lack of guidelines on the utilisation of the timber resource, in particular the relationship between the granting of concessions and the development of wood-using industries; and
- 2 . the lack of guidelines that ensure that the utilization of the forest resource contributes to rural development rather than the "impoverishment of rural areas" (CIDA, 1986 pp. 68-69).

CIDA officials went on to point out that the lack of guidelines on integrated utilization in the forest policy has led to the Balkanization of large concessions into economically nonviable holdings. As a result of discussions on a National Forest Policy in addition to initial proposals for a National Environmental Plan, the Government of Ghana in cooperation with CIDA officials drafted a new forest policy in 1986 that was aimed at revitalizing the forestry sector. "The overall objective of Ghana's National Forest Policy shall be to develop manage and regulate the utilization of all forest resources to provide the maximum sustainable benefit to the people of Ghana" (CIDA, 1986 p.70). The proposed forest policy covers 12 points: the resource base, protection, inventory, community forestry and national tree planting, reforestation, industry, trade, rural development, education research, conflicts with other land-use alternatives and objectives.

In 1986-87, the draft forest policy had yet to be reviewed by the Environmental Protection Council (EPC), a body formed just before the advent of the GFSR (until recently therefore, it remained merely a set of recommendations for action). The EPC's function is to play a coordination role in environmental matters in addition to representing the concerns of numerous government departments including: Foreign Affairs, Finance and Economic, Health, Agriculture, Lands and Natural Resources, Industry, and local governments. At the time of CIDA's review of the Forestry Sector, the most active committees of the EPC were the National Tree Planting Committee, a National Anti-Bush

Fire Committee, and a national Anti-Desertification Committee. Because national environmental policy was going through a period of change during the GFSR combined with the newness of the EPC, very little was done between 1985-89 in the area of establishing a comprehensive set of environmental guidelines to regulate national development policy.

CIDA's proposals for a national forestry action plan can be criticized on the same grounds as those relating to its primary recommendations in the main report of the Forestry Sector Review. As outlined in more detail in chapter five, these criticisms relate to the commercial and industrial bias of policy suggestions, in addition to the fact that CIDA's "normal professional thinking" fails to consider the human dimension of the environment-development crisis as a priority in planning for sustainable development. In terms of ideological and methodological approaches to environmental problems, there is a strong connection between CIDA's policy statements regarding forestry in the GFSR, and the most current Environmental Action Plan outlined by the EPC in 1989. Irrespective of its nationally defined parameters, normal professional thinking and management structures continue to dominate "environmental questions" in Ghana as development strategies have failed to target structural change as a priority in planning. This points not only to a theoretical poverty in development studies, but also a methodological one as the standard agenda continues to permeate "environmental thinking" in Ghana at every level of policy, project and financial planning.

In the introduction to the EAP, the critical state of Ghana's environment is discussed. Identified as particularly salient in the process of environmental deterioration are "...human factors such as individual attitudes, settlement patterns, industrialization and lack of effective planning tools which are contributing to the deterioration of the country's environment. The gaps in knowledge of the complex functional relationships of the components of the environment as well as weaknesses in the systems for determining

environmental change are also identified" (National Conference of Environmental Action Plan, draft, 1989 p. 1). In turn, these factors are cited in the report as having created problems of deforestation, sahelianization of the savannas, siltation of dams, depletion of wildlife resources, pollution of drinking water and destruction of water catchment areas.

To this end, the stated objectives of the draft National Environmental Policy (NEP) are to "...to improve the quality of life, and the surroundings and living conditions of the entire citizenry, both present and future. It must ensure reconciliation between economic development and natural resource conservation" (National Conference on EAP, draft, 1989 chpt. 3 p. 1). Specifically, the policy should:

1. maintain a healthy ecological balance and ensure the protection of the biosphere;
2. ensure sound management of resources and of the natural environment, and avoid any exploitation of them which causes significant or irreparable damage to the ecological balance;
3. adequately protect humans, animals and plants, their biological communities and habitats against harmful impacts and destructive practices;
4. ensure that more account is taken of environmental aspects in structural and socio-economic planning of the national, regional, district and grassroots levels; and finally
5. seek common solutions to environmental problems in West Africa, Africa and the world at large (National Conference on EAP, draft, chpt. 3 p.1).

The policy guidelines to environmental protection in Ghana also stipulate that the preventive approach should be paramount in development-environment planning; that is, an approach requiring socio-economic developments is to be undertaken in such a way as to avoid the generation of environmental problems. Prevention is therefore to be achieved through the integration of environmental requirements into the planning and execution of actions in many economic and social sectors, with emphasis on prior environmental impact assessment as an essential tools for ensuring such integration.

Given that the "...Environmental Action Plan is based on the identification of the kinds of environmental effects of the various land resource processes" it follows that

improved land management practices occupy the brunt of the EAP (National Conference of Environmental Action Plan, draft, 1989 p.2). According to the plan, land management comprises the decisions and actions that lead to the use of land for specific purposes, including agricultural production, forestry and urban development. Land resource processes of development and use have varying consequences on the environment as a result of biophysical extraction, increment and waste generation. The "environmental effects" therefore, are the effects on the quality of the land (National Conference of Environmental Action Plan, draft, 1989). These repercussions may be limited to the site (eg. increasing soil acidity) or they may be transmitted beyond the immediate confines of the problem area to other indirectly related sites (eg. deforestation leading to increased runoff and erosion in the immediate area and stream siltation in more distant areas).

The report isolates thirteen related land management problems in Ghana that have led to environmental deterioration and nonsustainable development practices. The problems identified range from mono-cultural production in agriculture, poor management of pasture land and deforestation around human settlements to insecure patterns of land ownership and inadequate local and farm planning practices. The EPC concludes that the overall impression of land use and management in Ghana is one of lack of coordinated policy and planning. "The lack of integrated policy and planning lies at the heart of the land management problems at the national, regional, district and farm levels in Ghana...The overall effect of this situation is the inability to attain production objectives and also the threatened ecological status of land and the environment" (National Conference on Environmental Action Plan, draft, 1989 p.5). To the end of improved land management capabilities, the GOG advocates the employment of appropriate technology so as to demonstrate a more practical the concern for environmental protection. Appropriate "technological solutions on the environment can and must be incorporated into socio-

economic development activities..." (National Conference on Environmental Action Plan, draft, 1989 chpt. 3 p. 4).

A closer look at Ghana's new Environmental Action Plan shows that there is very little that is "new" in terms of problem identification or problem solution. Although local participation was encouraged at the national policy conference, the decision making structures and management issues remain "top-down" and oriented to macro-economic policy. Given the input of the World Bank, however, this is not surprising given that Ghana is currently operating within the practical framework of a structural adjustment programme. On a more conciliatory note, the fact that Ghana has moved in the direction of trying to promote environmentally conscious development can be interpreted as a progressive step. However, this must be balanced by the fact that rhetoric concerning "green thinking", if it is not conducive to promoting structural reform, creates only an illusion of progress. The following section evaluates critically the viability of the EAP as a set of guidelines to address Ghana's environment-development crisis.

6.1.1 The Environmental Action Plan - Chances for Success?

The list of potential criticisms of Ghana's EAP centres around a few basic points. Firstly, the five specific policy guidelines of the National Environmental Plan are general to the point of being ambiguous. There is no clear indication that these five points deal with the specific environmental problems contributing to Ghana's current development crisis. A policy focusing on the "elimination of pollution and nuisances" while it strives to take "more account of environmental aspects" of planning at various spatial levels is, to say the least, inadequate given Ghana's specific problems relating to cocoa-farming, deforestation, dependency on exports and world markets. What is an "environmental aspect" of a development problem? Environment-development problems are inexorably interconnected and mutually recursive. More importantly, how does the government of Ghana intend to

"maintain a healthy ecological balance" without addressing first the severe state of environmental degradation in the agricultural, forestry and mining sectors (its major foreign exchange earners)? No mention whatever is made of the human impacts of commodity exports or resource deterioration on the majority of the population who live in rural areas and depend on the environment directly for survival. In no way do these guidelines provide any insight or realistic measures as to how environmental concerns will be integrated into economic policy. Again the EAP displays a blatant bias toward technical and managerial solutions that filter from the "top-down" approach to problem identification and solution.

In fact, the EPC has done little in identifying the need for a new paradigm of development - one which places a high value on Nature's Economy and environmental protection over economic growth while reducing blind faith in technological and emphasizing consultation, participation and foresight in planning. It is highly unlikely that environmental protection in Ghana will be achieved in the absence of structural reform; addressing those mechanisms that continue to promote unsustainable exploitation of the ecology and resource base. The processes of environmental change in this policy document have been completely overlooked. Some understanding that development is an historical process shaping the complex interaction between humans and nature is a necessary precursor to an improved or enhanced development methodology, one that seeks to uncover the mechanisms behind poverty rather than simply addressing the physical manifestations of exploitation and resource misuse.

In terms of a second criticism, the need for economic structural reform as it is linked to poverty is not mentioned. Clearly, Ghana's natural environment and human populations continue to suffer under development strategies that reinforce the export of primary commodities (cocoa, timber, gold) to drive "economic recovery". It is disappointing that the Environmental Protection Council has not identified any economic

policy actions that may be counterproductive to environmental protection and therefore reduce the chances of achieving sustainable development. Also disappointing, but not surprising given the "normal professional ideology" that guides the thinking of the EAP, is the fact that re-empowerment of rural poor in terms of access to productive resources is not mentioned anywhere in the document. A secure stake in resources is a condition for good husbandry, sustainable management, and long-term conservation or investment. In this, poor people are not different from the rich. For the poor, as for the rich, short leases or insecure tenure prompt quick exploitation with little concern for long-term degradation (recall the explanation of resource conservation having a low option value in the face of immediate livelihood struggles). A longer term review requires that investments (of time, labour, technology) be safe, and this safety can only be gained through resource empowerment.

The implications of empowerment bring us to a third problem with Ghana's EAP. Namely that the EPC's proposal for an alternative agenda to development fails to make any direct references to human welfare and poverty. The one place where people are mentioned in the main policy guidelines, the third point referring to the protection of human communities "against harmful impacts and destructive practices", has little direct bearing on the protection of rural livelihoods. Nor does the mindset revealed in the policy document appear to put poor people first. On the contrary, the logic of presentation and the sequence of words almost always start with physical categories or conditions of degradation. As argued in the general context by Chambers (1987), there is no evidence that analysis, which tends to proceed from physical processes to decisions that will affect people, is balanced by analysis that starts with how people affect physical processes. The policies which support the EAP are therefore biased and incomplete and generally misrepresent the interests of "sustainable development".

The central objective of the national environmental policy, to "...ensure reconciliation between economic development and natural resource conservation", fails to identify some of the more key issues of the environment-development crisis. From the wording of this objective, it is clear that economic growth remains a priority in planning and the "natural resource conservation" is motivated by the need to preserve sources of income. At no point in the EAP document is there a sense that resource "conservation" should be directed towards the needs of the poor to ensure a secure and decent livelihood which provides for physical, environmental and social well being. A responsible set of policies on how to maintain or enhance resource productivity on a long-term basis should concern itself with issues of livelihood security - evaluating the relationships between resources, population, environment and development in problem identification and solution.

Despite official government rhetoric by the EPC, practical responses to the structural relationships exacerbating the environment-development crisis remain limited. Inaction perpetuates maldevelopment practices especially in terms of resource use and its impacts on the rural physical and social landscape. The reason for this lies mainly in the fact that the new EAP fails to promote any significant structural reform of the relationships that cause poor people to degrade the environment. At the most recent national policy conference sponsored by the World Bank and USAID, on coordinated environmental planning, the Executive Chairperson of Ghana's Environment Protection Council (EPC), Lt.-Col. (rtd.) Christine Debrah stated, "One of the basic aims of the government is to integrate economic policy with environmental policy...We have been working to promote the concept of development without destruction of natural resources...We are poised for action" (cited in West Africa, July 1989 p.1126). However, the current ERP and export rehabilitation efforts demand more intense exploitation of the resource base with few financial or other resources directed towards environmental enhancement and preservation.

The contradictions between economic policy and environmental goals are not addressed in the EAP. Avoiding environmental destruction in the context of current structural adjustment does not seem possible.

In summation, the Environmental Protection Council's draft environmental legislation remains an "add-on" to existing normal professional methodologies and analytical approaches. No apparent solution is sought for the problem of Ghanaians exploiting their environment which, as it becomes less productive, diminishes the chances for productive livelihoods and reinforces patterns of human and environmental poverty. The understanding of the "environmental problem" given in the EAP is at best vague and seems to fit few rural realities. The problems of resource exploitation, the simple reproduction squeeze, differentiated access to resources appropriation of surpluses at terms unfavourable to the producer all which contribute to impoverishment, vulnerability and indebtedness among the poor are also at the root of the environment-development crisis in Ghana. Reducing vulnerability among people helps to reduce environmental vulnerability. The "environmental" policy implications of reduced vulnerability are twofold. First, that planning should seek to strengthen and stabilize survival strategies, enabling poor people to secure livelihood resources. And second, that development strategies should strive for a greater understanding of conditions in which poor rural people can and will invest in their environment. Ultimately, people are the solution to the environment-development crisis and therefore should be afforded a greater role in development research, decision making and policy design and implementation.

6.2 African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation

It is an unfortunate fact that throughout the decades since independence Africa's attempts to bring about fundamental socio-economic and structural change have been

constantly frustrated (Economic Commission for Africa, 1989). As I have argued throughout this thesis, neo-classical or "normal professional" solutions to the environment-development crisis have proved unsuccessful in alleviating or solving the problems of human and environmental poverty. Structural adjustment programmes which aim at restoring growth through fiscal and monetary policy, renewed export capacity and the free play of market forces serve to perpetuate historical mechanisms of exploitation and resource degradation that have contributed to underdevelopment in Ghana specifically and Africa in general.

From the economic point of view, the orthodox SAPs assume that classical instruments of control exist (through money supply, credit squeezes, exchange rates, interest rate adjustments, trade liberalization) and will be effective in stimulating productivity increases, manipulating savings and investment, providing incentives to increase growth and control consumer demand for goods. Even if these conditions of control did exist in Africa (which they do not), I have argued that positive results in economic growth do not necessarily translate into long-term environmental benefits. To the contrary, growth oriented market-based strategies institutionalize exploitive relationships and perpetuate unsustainable forms of development. Ghana's post-independence development strategies illustrate that continued reliance on traditional market mechanisms of growth, flows of resources and outlays serves to severely undermine environmental integrity, making "development" both unsustainable and harmful in the long term. Overall economic growth, as experienced in Ghana's first three years of structural adjustment, does nothing to alleviate structural bottlenecks in distribution of wealth or resources, nor does it ensure security in rural livelihoods and well being.

Efforts to bring about fundamental socio-economic structural changes in Africa since the adoption of the Lagos Plan of Action (LPA) and the Final Act of Lagos in 1980 have been constantly frustrated (ECA, 1989) Against a background of deepening poverty

in the 1980s, many countries sought a new set of economic policy reforms. In 1985, the Organization of African Unity and the United Nations Programme of Action for African Economic Recovery and Development 1986-90 (UN-PAAERD) adopted "Africa's Priority Programme for Economic Recovery 1986-90" (APPER). The purpose of these plans was to provide a set of blueprints to guide development efforts. Although the LPA and APPER were significant in terms of emphasizing the need for self-defined development, they had little real impact on practical policy implementation.

Structural Adjustment Programmes (SAPs) which have been adopted by more than 30 African countries as of 1988, differ from both the LPA and APPER in terms of representing a set of implementable policies (ECA, 1989). The social, economic, environmental and financial implications of these programmes have raised serious questions as to their appropriateness for long-term sustainable development objectives in Africa.

It was in this context that the AAF-SAP document was devised as a means of addressing those domestic policy shortcomings and host of external adverse factors particularly the collapse in the process of primary commodities, mounting external indebtedness and decreasing net flows of public and private resources that continue to hamper African development. AAF-SAP offers a set of broad strategies for economic restructuring in Africa through the design and implementation of adjustment programmes which are different from orthodox SAPs. The essential difference is that AAF-SAP seeks to link short term adjustment with long-term transformation of African society. By not limiting itself to a rigid set of financial variables as orthodox programmes do, AAF-SAP aims to incorporate the factors that affect the process of adjustment and the resources that have to be involved in adjustment to satisfy the needs of society (Adedeji, 1989). These include a multiplicity of political, social and economic needs that ultimately determine the success or failure of policy reform. The key long term development goals include socio-

economic diversification, self-sustaining growth and economic restructuring, a much more comprehensive agenda than orthodox SAPs.

The new direction in development proposed by AAF-SAP centres on its "...holistic nature in which the macro-economic framework, the policy directions and measures, and the implementation strategies take into account the dynamic relationships existing among all major elements related to adjustment with transformation" (ECA, 1989 p. iii). The alternative framework also focuses on the full mobilization and efficient utilization of domestic resources and empowerment of people as critical to the success of promoting sustainable development. The document recognizes that "An adjustment programme that marginalizes people is doomed to failure" (ECA, 1989 p. iii). In addition to these policy foci, three other major characteristics of AAF-SAP are worth noting. First, that AAF-SAP encourages the design of specific country programmes and selection of appropriate policy instruments and strategies to best fit the conditions and experience of each nation. Second, as a human centred framework, AAF-SAP implies full democratization of all aspects of economic and social activities. And third, the alternative framework stresses greater inter-country co-operation in designing, implementing and monitoring national programmes for adjustment with transformation.

The most challenging aspect of AAF-SAP is the idea of adjustment with transformation as outlined in Chapter four of the document. Briefly, the framework that is being proposed is based on three sets of macro-entities designed to bring about transformation in the African political economy; **operative forces** (which combine political, economic, scientific, technological, environmental, cultural and sociological factors), the **available resources** and the **needs** to be addressed (ECA, 1989 p. 26). With these three macro-entities in mind, policy must be designed to transform the development process so that it is more conducive to the specific social dimensions of each country. According to the AAF-SAP programme, transformation is particularly critical in

the areas of employment generation for the majority of the population, equitable income distribution especially to households and vulnerable groups, and the satisfaction of the essential needs of the people. It is true that in numerous of the neo-classical or normal professional programmes, many important social and economic interactions are often ignored or marginalised. Having identified this problem, the African alternative seeks adjustment using a human-centred (instead of market centred) development process in which "...productive forces are given a prominent role, and resources are used so as to bring about the transformation of the African economy from a primarily exchange economy to a production economy" (ECA, 1989 p. 29). Within the context of strengthening and diversifying Africa's production capacity, AAF-SAP offers the following five major policy directions:

1. **Enhanced production and efficient resource use** - involving the systematic avoidance of constraining productive capacity for the mere purpose of achieving financial balances.
2. **Greater and more efficient domestic resource mobilisation** - reduce the number of financial leakages (fiscal, monetary, external payment, capital flight etc.) to enhance resource mobilisation for investment and budgetary expansion.
3. **Improving human resource capacity** - not compromising social sector expenditure in the effort to reduce budget deficits. It is recognized that inadequate human capital is a limiting factor on the enabling environment for transformation in Africa.
4. **Strengthening the Scientific and Technological Base** - in order to transform national raw materials in the form of agricultural products, minerals, forestry and aquatic resources into consumable goods and services for both local and export markets.
5. **Vertical and Horizontal Diversification** - which entails two dimensions. First is producing essential goods and services to meet the needs of the majority of the population in all sectors. And second, is to lessen mono-culture export dependence and its associated instability in terms of earnings.

A summary of the policy instruments and measures to be modified under AAF-SAP is provided in **Appendix 3**. It is beyond the scope of this section to provide more than a general description of the major aims and assumptions of the African alternative so as to

determine whether it provides a viable new paradigm to address some of the more critical issues of the environment development crisis.

I will begin commentary on the AAF-SAP proposal by saying that at the descriptive level, there appears to be some awareness of and importance placed upon the interrelationships among people, resources and development. The fact that the African alternative stresses transformation as opposed to "adjustment" is a progressive ideological step. There is full recognition that orthodox programmes of development tend to intensify internationalization of the rural environment by increasing external control and exploitation of national resource bases. AAF-SAP also deserves credit for critiquing the standard agenda accompanying orthodox structural adjustment programmes. Not only do these programmes aggravate structural weaknesses in African countries, they provide only temporary relief in solving external balance problems, while providing little attention to the social and human costs of growth-oriented development.

Although AAF-SAP provides an accurate and critical assessment of the current SAPs, the African alternative fails to attack the structural causes of human and environmental poverty directly with specific policy measures. Consider for example that in the entire AAF-SAP report of 60 pages, only two paragraphs (in the first chapter on the Structure of Africa's Political Economy, p. 4) are devoted to "Environmental Degradation". The environmental analysis focuses on physical manifestations of economic development, rather than the historical processes of social, economic and ecological change. For instance, the report argues that, "Since the relationships between the economy and the environment in Africa are more direct than in developed countries - where technology can supplement natural resources - this problem [environmental degradation] emerges not only as an adverse physical aspect of development but, most importantly, as a macro-economic problem warranting urgent policy attention" (ECA, 1989 p. 4).

Despite the fact that AAF-SAP identifies orthodox solutions to non-orthodox economic conditions as an obstacle to African development, no real "alternative" development methodology is being pursued in the sense of starting with poor people first. To label environmental degradation as a "macro-economic problem" is to miss the important structural causes and factors leading to micro- and macro-level misuse of the environment. That there are severe local imbalances in the distribution of access to livelihood resources or that rural poverty is linked to deforestation, overcultivation of land and unproductive use of land cannot be solved simply from "macro" or purely "economic" perspectives. While the first manifestations of ecological stresses are physical - overgrazing, deforestation, soil erosion, these eventually translate into economic stresses - lower output, product substitution, slow growth, stagnation inter alia - as seen in most African countries. Ultimately however, they translate into social stresses - hunger, distress migration, poor health and higher infant mortality. As social stresses in the Africa (and the world) multiply, it becomes increasingly obvious that "alternative" development paths must concern themselves with the priorities of people first and foremost. That enhanced political-economy theory is concerned with human-environmental gains and losses in the development process suggests that a re-orientation away from market mechanisms and toward a more socially centred style of development could begin from a political economy perspective. In this way, the immediate struggles of the poor, related to vulnerability and environmental impoverishment would figure more immediately and directly in the development process.

On a more positive note, the AAF-SAP document makes an important conceptual connection concerning "...the symbiotic relationship between poverty and the environment" (ECA, 1989 p. 11). Correctly identified was the mutually recursive cycle of human and environmental poverty; "...poverty induces the poor to degrade further the physical environment as they struggle to eke out a precarious living" (ECA, 1989 p. 11). From a

theoretical standpoint, AAF-SAP should be commended for making the link between the underlying processes of environmental degradation (factors causing human poverty) and its physical manifestations - poor productivity, soil depletion, deforestation, desertification inter alia. From a practical standpoint, policy suggestions appear to stop short of establishing "...clear objectives directed towards the management of the environment and the survival and well being of future generations" (ECA, 1989, p.11). Although management is an important aspect of environmental monitoring, the roots of underdevelopment are found in the social, economic, political and historical relationships that shape environmental perception and exploitation. Development policy must take direct action to reform the structural mechanisms reinforcing relationships of poverty. "Management" is not the primary concern as more efficient monitoring of an ever more degraded environment is redundant, and not destined to bring about socio-economic transformation.

From a methodological point of view, it can be argued that AAF-SAP offers few real alternatives to neo-classical strategies, in the sense that it does not suggest specific action to solve the processes which contribute to underdevelopment. Although "human empowerment" is mentioned in terms of the political sphere and more democratic decision making, the policy framework does not outline specific measures to achieve structural reform as a means of promoting empowerment. It appears that the human and environmental focus of AAF-SAP stops at the normative level. Empowerment is a key concept in the struggle against human and environmental poverty. Therefore, policies aimed at real structural reform could concentrate on reducing mechanisms of exploitation, appropriation at unfavourable terms, improving conditions of access to livelihood resources.

On Africa's political economy, AAF-SAP concludes that "...structural bottlenecks and factors constitute the issues that must be addressed by appropriate strategies, policies

and programmes" (ECA, 1989 p.8). I do not agree with this assessment of the African situation. Rather, it is structural relationships, not simply production "bottlenecks" that are at the heart of Africa's environment-development crisis. In identifying physical and efficiency obstacles to development, AAF-SAP is no different than other normal professional evaluations of the development problem. The articulated structure of the African political economy has critical implications for the relevance of programmes aimed at increasing output, regulating internal and external shocks, improving financial balances and improving macro-economic "indicators" of growth. Orthodox market mechanisms have proven to be unsuccessful in creating sustainable gains in economic growth, not to mention the costs these temporary increases exact on people and the environment. One gets the sense that while environmental degradation is considered to be a significant development problem, the emphasis on macro-economic policy may be counterproductive to environmental enhancement goals. A legitimate concern arises therefore over the possible failure to treat environmental issues as a focal point in the AAF-SAP, thus limiting the chances of realizing socio-economic transformation in Africa¹⁹.

Concern as to the practical orientation of the AAF-SAP is reinforced through the five major policy directions outlined in the document. Each recommendation has a strong commercial-economic bias. There is a strong similarity between the AAF-SAP directives and the policy recommendations made in Ghana's Forestry Sector Review in terms of technological, macro-economic and "top-down" solutions to problems that require an examination of the processes of exploitation and poverty and the structures which

¹⁹ The conflict between real as opposed to rhetorical concern with human and environmental factors is especially clear in the World Bank's most recent publication on Sub-Saharan development, From Crisis to Sustainable Growth (1989). In this book, the Bank adopts the "environmentally aware" and "human-centred" language used in the AAF-SAP while continuing to advocate structural adjustment programmes and neo-classical solutions to underdevelopment problems. There is a clear contradiction between the Bank's real development agenda and its strictly superficial coverage of the importance of socio-cultural and ecological aspects of sustainable development.

perpetuate these conditions. For example, mono-culture in Ghana, like many African countries, is the single most important source of cash income and foreign exchange. Cocoa farming is at the same time the backbone of the Ghanaian economy and contributing to neo-colonial dependency relations, environmental degradation and non-sustainable development practices. Applying AAF-SAP's principle of "Vertical and Horizontal Diversification" to the Ghanaian situation, it is not evident how mono-culture export diversification will be lessened simply by "...widening the narrow range of exports and export markets to include an increasing share of processed commodities and manufactured goods, and refocussing on African markets" (ECA, 1989 p. 34). If Ghana "refocussed" its export orientation of cocoa to African countries (instead of the international market) the relations of production and appropriation governing the cocoa economy would not automatically change. Nor would the "simple reproduction squeeze" experienced by rural farmers suddenly disappear because of export reorientation. The mechanisms of resource allocation and use would also likely remain consistent as market forces continued to dictate the pattern and level of income distribution and the dynamics of production. It cannot be stressed enough, that without an examination of the **relationships** that govern any country's political economy, it is doubtful (as the history of underdevelopment in Africa has shown) that "progress" in alleviating human and environmental poverty and degradation can occur.

6.3 An Environmentally Sound Alternative Agenda - Fact or Fiction?

Based on the preceding analysis of Ghana's Environmental Action Plan for sustainable development and the AAF-SAP two sets of conclusions can be drawn. The first set deals with the fact that there seems to be a change in policy orientation towards strategies that profess environmental and human oriented programmes as key objectives in the development process. AAF-SAP in particular places importance on the human-social aspects of development. In this way the "African alternative" progresses beyond the

standard agenda that accompanies orthodox structural adjustment programmes. The African framework also referred to human welfare, poverty and the need for "transformation" of the African political economy. However, these comments were still at a general level and where people were mentioned they were usually considered as a whole and not differentiated into levels of rural poor, gender or ethnic groups. Although one of the transcending themes of AAF-SAP is human centred-development and raising welfare of the people, the policy prescriptions and analysis of Africa's political economy reflect little understanding of the historical processes of change in terms of people's relations with one another, the economy, the environment and the evolution of constraints and opportunities that have evolved as individuals react to change. The same criticism could be levelled at Ghana's EAP, which displays analytical ignorance of the interaction between ecological and socio-economic change.

The AAF-SAP document, for example, assesses the principles and policies of orthodox structural adjustment programmes and their impact on Africa's development process. In the evaluation, no mention is made of the environmental costs of these export-oriented programmes. Criticism is restricted to economic and financial categories, with a "social impact evaluation" following a detailed macro-economic critique. The preoccupation with economic analysis is reflected in AAF-SAP's largely macro-economic policy framework. This appears to be contradictory to the stated objectives of AAF-SAP which are supposed to place people first. Using the case study on Ghana as an example, it is clear that an effective "alternative" development theory and methodology must emphasize the importance of historical, socio-cultural, economic and political factors as significant elements in the development process. Otherwise, development strategies (as seen in Ghana) tend to complicate further the structural causes and processes leading to underdevelopment.

The second set of conclusions involving the AAF-SAP and FAP proposals concerns their theoretical content. Does the level of analysis and types of policy recommendations contained in either of these documents really suggest that an "alternative" form or direction of development is being suggested? At the rhetorical level there are a number of apparent differences between the "African alternative" (AAF-SAP) and the orthodox structural adjustment programmes. As mentioned previously, these differences include the human focus, the use of the word "transformation" (implying reform) instead of merely "adjustment", the desire to promote greater African co-operation and reduce external (international) dependency and the aim of promoting economic diversification. These are all important steps in a more appropriate "African-oriented" development process. However, is the theoretical and practical orientation of the policy mechanisms proposed very different from the those of the normal professional agenda? I would suggest that neither the orthodox SAPs nor the AAF-SAP fully take into account the processes contributing to the structural characteristics which shape the long-term development objectives of African nations. The roots of the economic, social, political and environmental crises must be addressed directly through a practical logic that starts with poor people, and examines the processes which perpetuate their conditions of poverty. Definitions of poverty that are concerned with income or outlays are indicative of normal professional thinking and problem solving. In this way, both the AAF-SAP and EAP present few ideological alternatives to orthodox, market-oriented theories.

The basis of a real "alternative" to present development theories and strategies lies in moving the most important development priorities closer to people, especially in terms of empowering vulnerable groups. The grounds for putting poor people first are not only ethical, they are also practical. Unless the concerns of the poor are addressed (starting with a re-evaluation of the processes which contribute to their poverty) the objectives stated for the environment and development in Ghana's EAP or the AAF-SAP will themselves not be

attained. Practical and self-critical (on the part of development practioners) analysis of the environment-development crisis needs to start with establishing what the priorities for the poor entail. Necessarily, this differs among countries, regions, communities and individuals. This reality makes a strong argument for enhanced political-economy theory as a starting point for the analysis of the processes of change. There is little evidence that this line of theoretical and strategic thinking has been explored either by international development agencies, governments or development practioners. I have argued in the interests of sustainable development, livelihood security and environmental preservation that a re-orientation of theory and methodology is paramount as a precursor to more appropriate development in Ghana (and other African nations). It seems unlikely that the maintenance or enhancement of resource productivity on a long-term basis can be achieved without addressing micro-level processes involving land tenure, access to resources, patterns of exploitation and appropriation, socio-cultural responses to change, mechanisms perpetuating socio-economic disparities and inequities, inter alia.

Analysis of micro-level processes in the context of macro-level problems (mass poverty, distress migration, resource depletion, declines in land productivity etc.) will require flexible theoretical tools. To this end, I have presented a theoretical argument for "enhanced political-economy" as a starting point for renewed debate in development studies. Not only is this framework flexible and sensitive to the specific socio-cultural, economic and historical experiences of a specific area or country, it also examines the processes involving change. Rather than conceptualizing the environment as an "add-on" to development efforts, environmental change becomes a significant analytical element in understanding how the development process has evolved. There is a critical link between social and environmental factors in the study of underdevelopment. The challenge, which can be started through an enhanced political economy perspective, is to make the conceptual connection between the physical manifestations of the processes and their root causes

(which entails an understanding of potentially related social, historical, cultural, economic, political and ecological factors). Some theorists have also argued that in the absence of a single, clearly defined alternative theory of development, there is room for methodological pluralism (the implications of which will be discussed in the conclusion in Chapter seven). This would at least ensure that practioners are conscious of the advantages and disadvantages of their own methodologies while being tolerant of the use of different methodologies use by others. Whatever the theoretical tool, the point is that people, processes, relationships and their mutually recursive impact on the environment must be the emphasis of renewed theoretical study. In the absence of such progressive change, stabilising use of the environment, enhancing productivity and reaching "sustainable" levels of development will not be possible.

CHAPTER SEVEN

A Theoretical Re-Think of the Environment-Development Crisis

The purpose of this final chapter is to comment on the need for a theoretical and methodological "re-think" of the environment-development crisis. In light of the main theoretical points of each chapter, I will draw attention to some key issues that have been repeated throughout this thesis. The first involves conceptualizing underdevelopment in Ghana and Africa as an "environment-development" crisis rather than a crisis of primarily economic proportions with environmental factors included as "add-ons". Necessarily, this has important implications for new directions in development theory. The second issue concerns the concept of an enhanced political economy methodological framework that could be used as a guide in assessing sustainable development actions. The emphasis in this framework is not on analytical methods per se, rather it provides alternative logic for evaluating development initiatives and assessing the type (level) of sustainability based on three systems of interest; socio-cultural, political-economic and ecological. The underlying importance of the assessment framework is that it challenges "normal professional" methodologies in terms of conceptualization, analysis, appraisal and practical response to development problems. Also, it attempts to draw a connection between the theoretical and practical in development studies.

7.1 Reconceptualizing the Crisis - An argument for enhanced political-economy

The struggle against poverty and for improved human conditions of life, by and for poor people, is not a new one. That this struggle is commonly accepted as one with momentous and global environmental implications is on the other hand a somewhat more recent phenomenon. However, there remains a significant theoretical gap between

integrating environmental issues with changes in historical, political, economic and social structures. Enhanced political economy attempts to address this "gap" by re-orienting its theoretical focus to centre on poverty and oppression as outcomes of the relationships between the natural environment and socio-economic and political structures.

Environmental ideas which currently lack a coherent political direction can be given conditional focus if poverty is conceptualized in the context of "social-environmental" interaction through time. In other words, societal and environmental change are fundamentally linked in the development process, each representing constraints and opportunities for the other in the context of human, political, cultural and economic change.

Any country's development is the result of cumulative decisions through time. That these affect societal relationships (political, economic, cultural) has important implications for environmental change and development. Decisions involve a complicated series of relations that affect people in terms of how they use, allocate, distribute and derive benefit from resources and the environment. The course of development and the state of the environment are inseparably connected, with mutually recursive feedback mechanisms constantly shaping and reshaping development potential over time. There have been few attempts to address the fundamental links between human action, institutional structures and processes of environmental change in development theory. Enhanced political economy theory argues for a fundamental revision of both neo-classical and orthodox Marxist political economy to reflect the urgency of Africa's environment-development crisis. Underdevelopment can no longer be explained or solved by concentrating solely on labour exploitation or technical productivity and management issues. Rather, unremitting pursuit of economic growth strategies systematically exploits the environment in a way which exacerbates livelihood struggles among the poor. The costs of development are expressed through socio-economic differentiation and deepening poverty in addition to

decreased viability of the natural resource base on which poor people depend for survival (Redclift, 1984).

There is increasing evidence that neo-classical responses to development challenges are inappropriate and may even be a significant part of the environmental problem.

"Normal professional" problem identification and solutions, as proven by the history of maldevelopment and environmental degradation in Ghana, do not address the structural conditions which perpetuate exploitive and harmful relationships governing resource use. Neither stabilisation nor structural adjustment is an economic approach used to attack poverty directly. As proponents of these tools, normal professionals usually argue, however, that each is an essential step to create the conditions within which poverty reduction is possible and that by reducing economic distortions and scarcities they will automatically alter income distribution in favour of poor people (Green, 1986).

Structural adjustment (both in theory and in practice) fails to consider issues of redistribution. An examination of Ghana's political economy has shown that the poor bear unacceptably high costs in "adjustment" programmes (ie. reduced control and viability of productive resources). Despite some initial success in terms of its own macro-economic production and trade balance objectives in the first four years of adjustment, the poverty trends in Ghana have continued in the wrong direction (Green, 1986). Real cuts in health and education have cut per capita public health service in half since 1981. Real food grower prices are above 1982 levels, but in the poorest regions outputs between 1985-87 remain below the already depressed 1982 levels (Green, 1986 p. 21). This prompts debate over whether or not those rural poor who most desperately require help have benefitted from structural adjustment. Inputs and supporting services relevant to poor farmers' ability to increase production are not being given any priority - in fact, no coherent framework exists for rural economic or resource empowerment. Deforestation trends continue in the face of export rehabilitation programmes (of timber, cocoa and gold) and the plight of

cocoa producers has intensified as they struggle against highly variable terms of trade. In short, the effects of Ghana's SAP has been unsatisfactory in human, environmental and developmental terms.

"Development" is a long-term process which requires sustained improvements in the broader political economy. Without structural reform, adjustments remain only temporary which does nothing to promote development, let alone "sustainable development".

The issue, then, is that normal professional conceptualization of and response to development problems is inappropriate given the presently unacceptable trends in human, environmental, political and economical maldevelopment. Issues of enhanced productivity, redistribution of resources and poor peoples' survival priorities demand a restructuring of the development process - one that places primary emphasis on issues of empowerment and long-term welfare. Enhanced political economy seeks to clarify the importance of the *relationship* between underdevelopment and the environment by concentrating on underlying *causes* as they are reflected in conditions of poverty. Therefore, relationships are the root of the "problem" and poverty is the effect. To alleviate poverty, relationships must be changed to establish social, political, productive, legal and economic conditions that are conducive to non-exploitive, equitable and sustainable resource use.

Clearly, the environment-development crisis is in large part attributable to broader political-economic relationships, not simply the quality of the resource endowments on which poor people depend. "The environment" therefore, needs to be looked upon as a distributive issue which entails an examination of class or interest group structure, and political, ideological and socio-cultural factors that create obstacles to implementing more resource-conscious development strategies in Africa. The key to renewed theoretical efforts lies in establishing the specific ways in which structural processes alter resource endowments (Redclift, 1984). Our current capacity to meet basic human needs of poor

people is being undermined by the economic and social systems under which we live. Without changing these systems radically (starting with changing the way development/underdevelopment is conceptualized), efforts aimed at resource conservation and ecologically appropriate development strategies will continually be undermined. Enhanced political-economy theory therefore can play an crucial role in initiating a theoretical "rethink" of current normal professional ideologies given a position that sees "development" as being sustained by resources rather than by economic ideology.

7.2 Sustainable Development - Methodological Issues

While the term "sustainable development" has become very familiar, its meaning and methodological implications remain vague. It is agreed however, that if (economic) development is to be sustainable, the ecological systems on which economic production ultimately relies also need to be sustainable (Tisdell, 1988). What has not been a prominent theme so far in the general debate on sustainability is the issue of its evaluation and assessment (Cocklin, 1989). Enhanced political-economy theory, which moves away from traditional references to technical and economic efficiency concerns alone, implies a much broader (more holistic) methodological base. This section develops an assessment framework in light of some of the key points emphasized through enhanced political economy theory. Rather than attempting to provide 'answers' to the numerous problems that measuring sustainability involves, the framework shows the general logic of enhanced political economy theory as it could be applied to development planning. Discussion highlights major issues involved in planning development initiatives and evaluating their impacts.

Recall that **development** refers to a realization of potential whereas **growth** concerns increases in size through addition or assimilation of material. In short, growth is a quantitative concept, whereas development concerns qualitative change and ideally,

improvement. In terms of economics therefore, it is possible to have growth without development, development without growth, both together or neither (Daly, 1990). Given these general characterizations of economic "states of being", the concept of sustainable development most closely approximates that system which experiences qualitative change over time within a finite limitation (the earth). In the broadest sense, the ultimate aim of sustainable development is to ensure long-term maintenance of the full range of human and natural systems; to guide processes of change in which the exploitation of resources, institutional change and the orientation of investment enhance current and future potential to meet human needs and maintain ecological balance.

Because the criteria underlying sustainable development differ so radically from the conventional economic consensus, planning and decision making become a difficult and highly complex task. Some of the difficulties include:

1. **problem definition** - how to define the nature and magnitude of the problem and how to invite the participation of those people affected in that definition.
2. **plan design** - assuming that a problem is identified, various alternative strategies should be available in the anticipation that trade-offs between various sustainability goals are inevitable.
3. **strategy review (impact analysis)** - how to evaluate the effectiveness of the strategy in a "post-development" appraisal. And how to incorporate different time horizons and spatial (hierarchical) scales into an assessment framework.

The methodological implications at any one of these planning stages (which by no means represent a complete set of planning concerns) are momentous. Questions concerning the suitability of existing procedures and methods in relation to the evaluation of sustainable development options are immediately raised given the significant shift in ideology, research focus and analysis.

Working from the enhanced political economy perspective, the "assessment problem" can be approached by designing a conceptual framework where at least three major systems of interest exist: socio-cultural, political-economic, and ecological. These

systems theorize development as resulting from cumulative political and economic decisions through time as reflected in the processes and structures that govern human, social and cultural relations with the environment. Although the systems are not discrete, they embody significant institutions representing pivotal points of change in the broader political economy. Each system has a set of goals and limitations as defined by humans, each system operates within the context of other systems and all systems have an impact on one another, influencing the direction and type of change. Clearly, there are limitations to representing complex societal relationships through systems and models. However, from the enhanced political economy perspective it is necessary to conceptualize social-environmental relations in a way which allows for the historical analysis of group conflicts as they relate to institutional and ecological change. The three systems chosen facilitate the study of changing relations and forces of production in terms of how they alter structural processes and distributive mechanisms in society. Consistent with the theoretical and analytical themes of this thesis, I will propose and discuss an enhanced political economy framework for assessing sustainable development actions.

Based on a new discourse about development, one that is more holistic, places priority on human needs, concentrates on sustainable resource use and seeks to establish more equitable relationships in society through mechanisms other than the market economy a number of fundamental systemic changes are required. These changes have been identified through an analysis of Ghana's environment-development crisis to include:

I. Socio-Cultural Factors:

1. poor peoples' priorities, including the specific struggles of women, should be the primary consideration in development "problem definition"; (ie) priorities concerning livelihood enhancement and access to critical resources

2. that "empowerment" refers to the ability of poor people, including women, to participate in the development process at all stages (planning, implementation and management)

3. culture plays a key role in peoples' acceptance of and reaction to change which has significant impact on the development process. An understanding of socio-cultural institutions is also crucial to evaluating what factors may influence access to and use of productive resources

4. environmental use is socially constructed in the sense that a dialectic exists between environment and social change

II. Political -Economic Factors:

1. economic goals must include provision for basic needs (defined in terms of access to productive livelihood resources and the ability to maintain sustained use of them) in addition to placing primary importance on equitable distribution of wealth

2. "wealth creation" deals with improved access to livelihood resources as much or more so than increases in national per capita income

3. environmental degradation reflects the cumulative effects of political and economic decision making through time

III. Ecological Factors:

1. the viability of Nature's Economy (biophysical processes) must be maintained and/or enhanced through human action

2. ecological conditions cannot be separated from socio-cultural or political-economic conditions (relations and forces of production, social formations, ecological change and opportunity, and resource use are all fundamentally related concepts).

These conclusions make the basic assumption that if development is to be sustainable, productivity (of land), equality and stability are essential. Equally important is that institutional and societal relations must be restructured so that these opportunities are available to those groups that presently do not enjoy political, resource and social empowerment. The "development problem" therefore can be understood by observing the dialectical interaction between major social (political), cultural, economic and ecological systems.

7.2.1 Conceptual Framework for Assessing Sustainable Development Actions

Figure 9 shows a framework for assessing sustainable development actions in the context of enhanced political economy theory. Given the conceptualization of Africa's

crisis as an "environment-development" problem and the importance of understanding **relationships** between human-social factors, ecological factors and the political economy, the framework provides a guideline for planning and evaluating development policies and projects. The schematic framework is designed to initiate discussion on the implications of enhanced political economic theory in development studies, by connecting the theoretical with the practical. Central to enhanced political economy theory is the need to evaluate **processes**. These processes refer to macro level changes in relations between society and the environment (eg. the change from subsistence farming to cocoa farming in Ghana during the colonial occupation), in addition to micro level processes within systems (eg. factors governing the forces and relations of production within the sphere of economic exchange). Historical development experience and institutional structures within the political economy are also central elements shaping development constraints and opportunities.

Figure 9 is organized into five general planning stages: problem-identification, plan design, strategy review, implementation phase and finally the achievement of the defined sustainable development objective. Drawing on lessons learned in Chapters five and six of the thesis from a critical review of CIDA's forestry plans in Ghana, sustainable development initiatives should start with defining and evaluating poor peoples' priorities. Hence, in the first planning stage problem identification, poor peoples' development priorities are afforded paramount importance. Naturally, these needs change depending upon the spatial scale, socio-cultural factors, historical development experience, resource endowments and defined social (community, personal etc.) goals. Realize that the participation of those affected by the proposed initiative is critical in the identification of needs to improve conditions for planning and practical success (measured in terms of effectiveness in meeting peoples' needs).

Figure 9 Enhanced Political Economy Framework for Assessing Sustainable Development Actions

The importance of "poor first" ideology cannot be overlooked. A better understanding of survival strategies and livelihood priorities can help clarify reasons **why** people react to various situations in the ways that they do and **how** this affects the environment. This becomes especially important in the context of plan design in the second stage of the assessment framework. Any proposed development initiative, if it is to be sustainable, must help create conditions which allow poor people to adapt to change, meet contingencies and overcome conditions which force a short-term view of survival and enhance long-term productivity of the environment.

The third stage, strategy review embodies a number of complex relationships in the "environment-development" crisis. All development initiative is conducted within the context of the historical experience of a particular area and/or group of people. This development experience, according to political economy theory, can be partially understood in terms of changes or processes that affect pivotal structures in society. Institutional structures therefore mediate, shape and partly determine the type and direction of development opportunities and alternatives available. Note however that institutional structures are also linked to cultural values and social organization which in turn are connected to natural environmental constraints and opportunities. It is important to clarify that monocausal relationships do not exist between any of these institutional, cultural, social, ecological or economic factors. Rather each element shapes and is shaped by other forces in a complex whole. That is why "sustainable development" initiatives cannot be concerned solely with "economics" or "the natural environment" - account must be taken of the complex relationships that exist between major systems in greater whole. No model can accurately portray all of these relationships: however, some indication of the multivariate nature of sustainable development planning is essential in order to create a more holistic analytical approach to the environment-development crisis.

Observe that in the assessment framework, institutional mechanisms and environmental constraints and opportunities are conceptually linked. As argued throughout the thesis, "development" is the result of cumulative decisions through time. The natural environment necessarily performs a critical enabling function in these decisions. Rather than conceptualizing "the environment" as a form, enhanced political economy theory evaluates environmental change as a process linked to relations between physical space, natural resources and constantly fluctuating socio-economic patterns. Environmental and institutional factors combine therefore to shape the context within which development initiatives are designed, conducted and monitored.

A greater understanding of the structural roots of the environment-development crisis must be sought through human relationships governing allocation, distribution and use of resources (human, natural and technological). Access to productive resources is determined by natural environmental endowments in addition to institutional structures (ie. the type of economic system, government policies affecting distribution etc.) and social relations. Herein lies the advantage of an enhanced political economy framework as applied to development problems. Its theoretical treatment of essentially related concepts like social formations, processes governing the forces and relations of production and environmental change allow exploration of the conditions under which people gain access to resources. The distribution and use of resources necessarily has important implications for sustainability in any number of major systems within the political economy. The systems most crucial to enhanced political economy analysis in this thesis have centred on human-social (political and social organizational factors), cultural, economic and environmental systems. Each of these analytical categories is characterized by and shares specific institutions and structures (processes) that reflect and shape human decisions and goals. That the controlling interests in the current political economy landscape have tended to perpetuate structural disadvantage and systemic exploitation of people and the

environment is clear given Africa's history of maldevelopment. Renewed development theory and practice must ensure that relations causing disadvantage and exploitation are changed to reflect the needs of the poor. Defining these needs at the outset of the framework will make development planning sensitive to survival priorities - resource empowerment and productivity enhancement. In the strategy review therefore, "success" is determined measured in terms of whether priorities have been met, how they have been met and the costs of sustaining improvements.

In a very simplified version of the assessment framework, assume that each system had identified one goal that would help facilitate the realization of a particular set of human development priorities. These goals could be:

1. **Socio-Cultural** - more accurate definition of poor peoples' development priorities;
2. **Political-Economic** - greater equity in distribution and access to productive resources;
3. **Environmental** - enhancing the viability of the production base (eg. soil quality).

The appropriateness of a specific development initiative therefore would be assessed in terms of whether or not it had a positive impact on the realization of priorities within each system and whether or not the cumulative impacts of development priorities in all the systems combined were acceptable in terms of meeting the original human development priorities defined in stage one of the framework. In terms of analysis, the basic objective of sustainable development would be the optimization of goals across all four systems, recognizing the trade-offs that must inevitably be made. Based on the impact assessment of identified priorities, altering or adjusting elements of the original plan (or original priorities) may be necessary before proceeding with the development initiative.

It is recognized that certain evaluation problems exist at this point in the strategy review, which is partly a function of the newness of the enhanced political economy

paradigm in addition to difficulty in developing tools to measure non-quantitative elements (eg. cultural factors). The immediate solution to this problem could lie in methodological pluralism, employing a number of analytical techniques to provide a series of possible alternatives in the impact analysis. An area where further research is required includes developing the tools necessary to analyse the trade-offs among the systems, and to apply these tools to interacting systems at different levels of scale (hierarchy), over various time-scales and locations and under different social, cultural, environmental and economic conditions (Cocklin, 1989). Realistically, it is likely that the realization of one set of system goals may compromise the ability to achieve sustainability with respect to some other goals. Moreover, allocations of resources that promote sustainability may be inconsistent with other important societal goals and objectives. However, these conflicts and trade-offs can be minimized through the enhanced political economy paradigm as the framework is oriented to meeting the survival needs of poor people and is designed therefore to promote equity, empowerment and enhancement as fundamental development guidelines. I have argued that these guidelines must be the basic criteria in project identification and assessment wherever considerations of poverty, environment and development apply. In the context of this thesis, "sustainable development" is linked to questions of who gains and who loses, and therefore it is expected that results from this assessment framework will differ radically from normal professional strategies.

Stages four and five of the assessment framework, plan implementation and the realization of the sustainable development objective(s) include a number of feedback "reassessment" loops. Given that no system is static, development priorities and sustainability conditions will necessarily be in a state of constant flux. Ongoing evaluation and monitoring of conditions within each of the four major systems and of the relative state of sustainability will necessitate a reassessment of development priorities and the appropriateness of initiatives over time. Reassessment at various stages is crucial in order

to expose the inevitable trade-offs between human-social, cultural, economic and environmental goals as a basis for defining acceptable compromise strategies that are sustainable and meet human development priorities (this again draws attention to the challenges of improved evaluations methodology).

Although **Figure 9** does not attempt to provide solutions to these methodological questions, it does attempt to offer a conceptual understanding of the logic and potential techniques that are involved in an enhanced political economy framework for designing, implementing and evaluating sustainable development initiatives. Clearly much work remains to be done in the areas of applied analytical techniques and conceptual modelling of highly integrated and complex "human-environmental" systems. Establishing and evaluating the links between processes of change (ie. environmental change in the context of socio-economic and political change) is another area requiring more theoretical and methodological study.

There are many factors which presently limit the likelihood of this particular assessment framework from becoming fully operational. To begin with, the model requires considerable amounts and types of data that may be difficult to obtain, especially in the Third World. Secondly, it is difficult to incorporate and display the various non-linear relationships inherent in enhanced political economy theory. This is especially confounding when translated into the already complex problems of analysis and measurement. Finally, the concepts of time and spatial scales in terms of defining and achieving "sustainable development" remain obscure. At what point is something "sustainable"? How long will these conditions persist given rapidly changing human and environmental systems? Can something be sustainable at one spatial scale (say locally) and inappropriate or non-sustainable at another (say regional) spatial scale? These questions although difficult should not be considered as insurmountable obstacles to renewed development planning. Alternatives to present development theories and strategies are

urgently needed in the interests of preserving and enhancing global livelihood resources. The purpose of the enhanced political economy framework presented here is twofold. First to represent visually some of the important theoretical connections and conclusions made throughout this thesis in the interests of conceptualizing Ghana's (and Africa's) problems as related to an "environment development " crisis. Second, to initiate a "rethink" of normal professional methods of addressing underdevelopment issues. A more holistic, integrated and process oriented approach is necessary to understand the links between human and environmental poverty.

More general criticisms of this approach are anticipated in two areas. The first relates to social agency in enhanced political economy development theory. Who or what is to be the catalyst facilitating empowerment among the rural poor? Presumably not the IMF or the World Bank, as they have a considerable economic stake in the current order. The poor on the other hand, who have the most to gain from changing the current order, have the greatest number of obstacles in effecting change. Given the magnitude of the problem, it is more likely that the catalyst for change will come from a number of sources in developing and developed nations - local solidarity organizations, resource interest groups, co-operatives, women's organizations, international development agencies, political activists, inter alia. Developed and developing countries alike must challenge inequitable power structures (political, social, economic) in the interests of human focused sustainable development. An important part of enhanced political economy's model of social agency requires institutional restructuring at all organizational levels to alleviate relations of exploitation causing poverty and powerlessness.

The second point of debate involves the eclectic nature of enhanced political economy development methodology in sustainable development planning. This is a valid concern given the problems associated with "ad-hoc" development strategies. However, it is too early to limit the methodology used in enhanced political economy at this time as

selecting a narrow a set of tools would eliminate (or reduce access to) the wealth of analytical methods developed in other disciplines (eg. economics). Therefore pressure to define "enhanced political economy" by narrowing its methodology (at these beginning theoretical stages) should be resisted.

Moreover, some element of pluralism makes sense. If enhanced political economy is to address the complex interplay of global economics, local interests, technology, cultural systems, the environment and social controls on the use and accessibility of limited resources it is unrealistic to suggest that one, all encompassing methodology can be designed for understanding and managing all of these problems (Norgaard, 1989). Multiple problems demand multiple answers depending upon the trade-offs and issues involved. Single method solutions can lead to inappropriate action which is likely to complicate development activities even further. Multiple insights on the other hand, are constant reminders of the complexity of the human-social, ecological, economic and political systems involved.

The final argument for methodological pluralism deals with the desire to promote ecological and cultural diversity through greater participation and decentralization. The use of a single framework, without modification for regional differences can create a situation where the technical processes must be managed by well-informed "experts" familiar with specific methods of analysis. What can result (as seen in the GFSR) is a "top-down" development strategy in which there is little understanding of micro-level processes and conditions which ultimately have a great bearing on the success of any plan. The adoption of a single form of knowledge (for example based on market solutions), technological intervention and social organization has reduced the opportunity for development solutions based on alternative cultural and ecological perspectives. This in turn, excludes poor people from participating in their own development process, while encouraging centralised decision making and reaffirming normal professional structures and values. Openness to

multiple frames of analysis is a prerequisite to democracy and decentralization (Norgaard, 1989). In sum, enhanced political economy is more likely to evolve into a useful theoretical body of knowledge if it maintains some methodological breadth in terms of analytical guidelines developed in other disciplines (economic, sociology, natural sciences etc.).

As a concluding comment, I would like to reiterate that enhanced political economy theory and development methodology seek to study and modify mechanisms perpetuating relations of human poverty and over-exploitation of resources. Renewed theoretical research into human behaviour and priorities in the context of an ever changing environment and resource base is necessary if development practioners hope to create conditions that are conducive to sustainability. Creating conditions of secure rights and ownership, guaranteed access to livelihood resources and social equity is the most appropriate and immediate way to ensure that peoples' development needs are met in the course of giving them a greater stake in preserving, enhancing and sustaining their environment.

APPENDIX 1**List of Working Documents Appending the Ghana Sector Forestry Review****APPENDIX NUMBER :**

- I - RULE OF FORESTRY AND THE FOREST INDUSTRY SECTOR IN GHANA
- II - THE FOREST RESOURCE BASE
- III - FORESTRY SECTOR INSTITUTIONS
- IV - FOREST CONCESSIONS
- V - FEES AND TAXES ON THE FORESTRY AND THE FOREST INDUSTRY SECTOR
- VI - FOREST POLICY AND FOREST MANAGEMENT
- VII - FORESTRY FOR RURAL DEVELOPMENT
- VIII - FOREST INDUSTRIES
- IX - FOREST PRODUCTS TRADE AND CONSUMPTION
- X - WILDLIFE MANAGEMENT
- XI - FORESTRY RESEARCH
- XII - FORESTRY EDUCATION AND TRAINING

APPENDIX 2

Sustainable Development in Country X: CIDA's Program Plan for 1990

1. Trends and the Growth Imperative

1.1 Population and Urban Development

1.2 Economic Conditions and Trends

- resource-based sectors
- non-resource based sectors

1.3 The Country's Growth Imperative

- to keep up with population growth
- to reduce poverty

1.4 Sustainability

- trends in the stocks of natural capital
- the likely impact of required growth on stocks

1.5 The Regional and Global Setting

2. The Sustainable Development Agenda

2.1 Population, Human Resources and Women's Programs

- education and sustainable development
- equity and sustainable development

2.2 Increasing Jobs and Improving Livelihoods

2.3 Achieving Food Security

2.4 Maintaining Biological Diversity

2.5 Securing Energy Resources

2.6 Harnessing Water

2.7 Increasing Industrial Production

2.8 Improving Shelter and Human Health

3. The Transition to Sustainable Development

3.1 Integrating Environment in Economic Decision Making

- strengthening the institutional framework
- modifying central economic, fiscal policies
- modifying trade and debt relief policies
- modifying key sectoral policies

3.2 Strengthening Environmental and Resource Management

3.3 Strengthening Relevant Laws and Enforcement

3.4 Mobilizing Science and Technology

3.5 Increasing Democratization and Human Rights

3.6 Increasing Financing for sustainable Development

4. CIDA's Operational Guidelines and funding Priorities

5. Opportunities for Donor Co-operation

note: According to CIDA, the table of contents outlined above is indicative of what the scope of any particular country's programme plan may entail. While no two plans are identical, each country could use the same organizational framework indented to "...identify and formulate specific goals, guidelines and priorities for sustainable development" (MacNeill et. al p. 62). CIDA maintains that with the use of this outline and the preparation of few key background documents *, sustainable development could be a highly obtainable goal.

* these background reports include:

- summary overview of trends in the state of human and financial resources
- stocks of natural capital and the state of the environment
- analysis of population and urban growth and of key economic conditions and trends
- a discussion of the nation's growth imperative and its likely impact on stocks of natural capital and the state of the environment
- information systems for economic decisions (including resource accounting)

APPENDIX 3

Orthodox Structural Adjustment Policies to be Modified Under AAF-SAP

Description of Policy Instrument and Measures	Effects for adjustment with transfor- mation
1. Drastic budgetary reductions, especially with respect to expenditures and subsidies on social services and essential goods.	Undermines the human conditions, the enabling environment and the future potential for development; necessitates massive retrenchment in the public sector.
2. Indiscriminate promotion of traditional exports through price incentives offered only to the "tradeables".	Undermines food production and self-sufficiency, and can lead to undesirable environmental degradation; could result in over-supply and fall in prices (fallacy of composition).
3. Across-the-board credit squeeze.	Leads to overall contraction of the economy; declines in capacity utilisation and closure of enterprises; and an accentuated shortage of critical goods and services.
4. Generalised devaluation through open foreign exchange markets, currency auctions and large and frequent currency depreciations.	Leads to socially unsupportable increases in prices of critical goods and services; raises the domestic cost of imported inputs and undermines capacity utilisation; triggers general inflation; diverts scarce foreign exchange to speculative activities and exacerbates capital flight; worsens income distribution patterns; undermines growth and can result in structural entrenchment of traditional exports through price incentives for such commodities or "tradeables".
5. Unsustainably high real interest rates (inflation-adjusted nominal rates of interest).	Shifts the economy towards speculative and trading activities by becoming a disincentive to productive investment; fuels inflation.
6. Total import liberalisation.	Leads to greater and more entrenched external dependence; intensifies foreign exchange constraints; jeopardises national priorities such as food self-sufficiency, breads capacity of infant industries and the reborn industrialisation.
7. Excessive dependence on market forces for getting the "prices right" in structurally distorted and imperfect market situations.	Worsens inflation through sharp rises in production costs and mark-ups; causes deviations from desirable production and consumption patterns and priorities, and may derail entire process of transformation.

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