UNIVERSITY OF CAPE COAST

PUBLIC NATURE CONSERVATION POLICY VERSUS COMMUNITY INTERESTS: A STUDY OF THE MOLE NATIONAL PARK

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this University or elsewhere.

Signature..... Date: 09-10-2012

Name: Theophilus Yigrilaa Nuodio

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

Public policy impact analysis entails systematic, meticulous and objective evaluation of cause-effect relationships. The study presents a historical account of the genesis, processes and impacts of public nature conservation policy practices at Mole National Park (MNP) on peripheral communities. It tries to understand underlying motives for external resistance and outright arson against the Park and discern cause-effect relationships between local communities and MNP.

Data were elicited from three sub-samples, comprising 316 displaced and 264 non-evictees randomly selected from nearby villages. The second, was 38 randomly and four purposively chosen public officials of MNP and the West Gonja District Assembly. The third comprised 98 accidental and purposively selected transient visitors to the Park.

Results showed negligible involvement of the local people in the decision to create the MNP. Comparison of socio-economic variables showed little or no differences between displaced and non-evicted communities regarding effects of the MNP on community social communities. Thirdly, the Park has had both intended and spillover effects with communities closest to it more affected. Fourthly, harassment by park guards and loss of farmlands without compensation were the main complaints of villagers. Fifthly, community participation in the management and activities of the Park is low. Finally, management must act to exploit MNP's potential for increased tourist arrivals and dollars receipts.

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DEDICATION

I dedicate this thesis to the memory of my parents who were called to eternal rest while I was undertaking doctoral studies.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
APA	American Psychological Association
ASIP	Agriculture Sector Improvement Project
CD	Census District
DFID	Department for International Development
GES	Ghana Education Service
GETFund	Ghana Education Trust Fund
GDHS	Ghana Demography and health Survey
GDP	Gross Domestic Product
GTB	Ghana Tourist Board
WTO	World Tourism Organization
GWD	Gonja West District
GWD	Ghana Wildlife Division
HDI	Human Development Index
HIPC	Heavily Indebted Poor Countries
HIV/AIDS	Human Immune Virus/ Acquired Immune Deficiency Syndrome
IDS (M)	Integrated Dynamic Systems Model
IGF	Internally Generated Fund
ILO	International Labour Organization
IUCN	Internal Union for Nature Conservation
LI	Legislative Instrument
MP	Mole Park
MNP	Mole National Park

NGO	Non-Governmental Organization
ODI	Overseas Development Institute
QOL	Quality of Life
SIA	Social Impact Analysis
SPSS	Statistical Product and Service Solutions
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Aid for International Development
WWF	World Wildlife Fund
WTO	World Tourism Organization
WTTC	World Travel and Tourism Council

CHAPTER ONE

INTRODUCTION

Background to the study

All over the world public conservation policies are political, controversial and value laden. State appropriation of land and other environmental resources for bio-diversity preservation and eco-tourism development, for the common good or public interest, are neither new nor peculiar to developing countries. Community aversion for seizure of resources perceived to be the basis of their livelihood and very survival, stem mainly from non-involvement or marginalization of the local people in policy decision making as well as non-payment and inadequate compensation for loss of lands and properties (Gyasi, 1996; Warner & Jones, 1998; Abakerli, 1999).

Governments are, therefore, duty-bound to put in place a framework to govern the way these life supporting environmental resources are used, as well as mitigate any unintended spill over impacts of conservation activities, especially on custodian communities living around the frontiers of nature reserves (Dixon & Shearman, 1990; Garner, 1993; Mbaiwa, 2002).

In Ghana, Legislative Instrument LI.1205, the National Environment Action Plan and issuance of licences by the Ghana Tourist Board (GTB) and Ghana Wildlife Division of the Forestry Commission are among public policy

outputs instituted to ensure sound environmental quality management of tourism and its support services.

Putting aside environmental resources for bio-diversity conservation, tourism and general development for the common good, as already alluded to, is neither new nor peculiar to developing countries. Adverse community reactions to land seizures for public good and ownership stem from the method of resource acquisition, especially where the affected local people have not been adequately consulted and compensated for loss of resources, which constitute the basis of their livelihood (Armbrecht, 1995; Ashley, 2000; Dei, 2000). Similarly, Young 1993) earlier observed that local people perceive the seizure and setting aside of resources for conservation purposes as an alien concept that tends to deny them access to resources they consider fundamentally vital for their survival.

The practice has also been criticized because it is unnatural to separate people from their natural environment. Many scholars have, therefore, cautioned policy makers about the danger of uncritically adopting eco-tourism as a rural development option, without assessing its impact on local community livelihood needs. Pluralists contend that the creation of nature reserves should involve the local people at all stages from project conceptualization to execution and evaluation. Participatory rural development methodology, especially involving vulnerable people and environments, is the preferred option (Goulet, 1989; Boo, 1990; Cater & Lowman, 1994; International Bank for Reconstruction, 2000).

The policy of creating protected areas for bio-diversity and eco-tourism development, through legislation, needs continuous monitoring if

adverse effects are to be avoided or ameliorated and benefits maximized. Apart from protecting the wellbeing of the local people through livelihood retention and improvement of their quality of life it is equally desirable to institute policy impact monitoring mechanisms in order to ensure that tourism product quality and integrity are not undermined by adverse reaction of both hosts and guests (Woodley, 1993; Getz. 1994; Abane, Awusabo-Asare & Kissi, 1999). It is also imperative that the cultures of the local people be treated as integral resources of the destination's eco-tourism or tourism product (Fridgen, 1991; Ap, 1992; Getz, 1994; Lin, 2000).

Resources are the foundations of any nation's wealth, security and opulence or power. That is why the acquisition of resources invariably makes conflict inevitable (Zimmermann, 1964; Brown, 1998). According to Zimmermann, man's wisdom is his premier resource and therefore, the key resource that unlocks the universe. Typical dictionary definitions of ''resources'' include the following:

i. that, which one relies on for aid, support or supply
ii. means to obtain given ends; and
iii. the capacity to take advantage of opportunities or to extricate oneself from difficulties.

The definitions of a resource all centre on the notion that resources are expressions or some reflections of human appraisal. Etymologically, the word ''resource'' relates to ''re-source'' and therefore suggest a kind of dependability or renewing ability, and also carries social implications. Theory of resources appraisal harmonizes the notions of a functional and an operational meaning of a resource. It is also important to note that an

understanding of the concept of a resource goes with an appreciation of the relationship between man and environment.

Man-environment relationship

Though part of nature, man is a supra animal. Man's animal side makes him part of nature but at the supra level, man is represented as the counterpart of nature. The human being is expected to recreate what God has created. Resources are, therefore, classified according to the differentiation of the two levels of man's existence. While some resources are called man-made, others are grouped as natural resources or those resources, which exist without man contributing in any way to their form and reality. Man-made resources refer to those, which have been nurtured and transformed in several ways by man for his convenience or inconvenience. Thus, man-made resources originate from the very consequences of his ingenuity, which have been aided slowly, patiently and painfully through acquired knowledge and experience over the ages.

The use of resources proves a basic fact that resources are not but become (Zimmermann, 1964). Man's perception defines the reality of a resource, which evolves from the trinity of natural, cultural and human factors. The ultimate objective of every resource appraisal and usage has usually been to attain real wealth for man in terms of life, freedom and the pursuit of happiness: what the Philadelphia Manifesto listed as liberty, security and human decency. In pursuit of real wealth, mankind competes for control of resources, and that is why and how conflict of interests becomes an inevitably big issue. Competing for control or possession of resources can be

conceptualized as competition for power, which is the basis of political behaviour. Therefore, the control of any resource is intrinsically political, controversial and has been the root cause of conflict among individuals and groups. For instance, a cycle of apparent feudal killings between the local people and Mole National Park rangers demonstrates the political nature of the struggle for the control of environmental resources.

Therefore, there is an urgent need to take a hard look at the effects of national parks and forest reserves in Ghana on communities living next to such nature reserves. For instance, there is the need to start examining the socio-economic, political and cultural effects of parks or reserves on the welfare of the local people living along the borders of parks and forest reserves. Indeed, many development practitioners advocate a pluralist approach, which should involve local community participation in the initiation of projects right from programme conceptualization and planning to the stages of project implementation, monitoring and evaluation (Lele, 1991; Garner, 1993; Cernea, 1995).

Setting aside vast tracts of land, as nature reserves, for eco-tourism development and legally excluding the local people from accessing the resources which they perceive as community bona fide property, have both socio-economic and political ramifications. It is all about how people are able or fail to achieve group interests in the control of resources. In the literature a substantial number of authorities have criticized this practice of alienating local residents from wildlife resources for a couple of reasons. Firstly, the practice tends to make local people the real bearers of the costs of conservation without any significant benefits (Kiss, 1990; Anders & Solstad,

1996; Abane et al., 1999). In the second place it also tends to antagonize resident attitudes towards both tourist attractions and transient tourist populations (Ap, 1992; Lin, 2000; Mbaiwa, 2002).

On the other hand, there are those like Hardin (1968) who favour state supervision of common resources in order to avoid what they refer to as 'the tragedy of the commons' from occurring through ruthless exploitation. Conservation of fauna and flora resources for the general good through legislation is also grounded on the deterrence theory often used to justify state restraining of individuals and communities from pursuing their selfish interests, as expected under rational choice theory. The deterrence model posits that since crime does not pay, because it is punishable, the criminalization of unauthorized entry and use of environmental resources, set aside for the common good, would for example, lessen the commission of crime. But rational choice theorists counter argue that calculations of costs and benefits of their actions largely shape people's behaviour. Thus, people break the law if the benefits of doing so far exceed the costs of acting contrary (Lamert, 1951; Hagan, 1994).

Rational choice theory, therefore, assumes that the behaviour of people is largely shaped by practically hedonistic calculations. For as long as the opportunity cost of non-action is greater than taking a particular line of action, then it pays the individual to act, however harmful the outcome may be to the larger society.

Past and recent instances of violent conflict between Mole National Park guards and some local communities in the area call for an urgent need to take a hard look at the challenges facing national parks and forest reserves in

Prior to the establishment of the Mole National Park in 1971 consultations were reportedly conducted with the Paramount Chief and elders of the Gonja Traditional Council, at Damongo. Some community opinion leaders have, however, alleged that the local people living in and around the Park at the time of the acquisition of the land were excluded from the decision making process. They argued that the first time the people got to know of the change in policy was when a newly appointed European ecologist and his team of rangers arrested a man for a hunting offence inside the Park (Mason, 1993 cited by Fuseini, 2002). The local people alleged that when they were ordered to vacate their lands for wildlife conservation, and the order was resisted, they were forcefully evicted without compensation. In fact most of the current range camps are original sites of settlements whose inhabitants were evacuated to give way for the creation of the Park. Many of the displaced people either relocated around the Park or migrated to adjoining districts of the four northernmost regions of Ghana

Natural conservation policy makers tend to pay little attention to both programme intended and spill over effects on local people (Ashley, 1995; Gyasi, 1996; Quaye, 1997). In Sub-Saharan Africa, although the creation of protected areas for bio-diversity conservation had enhanced the preservation of wildlife for eco-tourism development, it was argued that if local communities were invited to co-manage parks, the beneficial multiplier effects would have been more Gibson,

Empirical evidence also suggests that successful development and sustainability of eco-tourism facilities require the full co-operation of the local populations living around protected areas (Gibson, 1979; Ashley, 2000). Such

community co-operation would be a function of the people's expectations, perception, and attitudes towards environmental resources, especially the effects of wildlife conservation on their overall quality of life.

This phenomenological study examines how the local people of the Mole National Park catchments perceive the effect of the Park, a surrogate of public conservation policy, on community socio-economic, cultural, political and environmental conditions. It was hypothesized that a people's primary concern would be their economic well-being and that their positions on issues of environmental protection and conservation would be determined mainly by their perception of how proposed or current conservation policies would affect their incomes and general quality of life.

Social conditions in the context of the current study refer to both the internal (subjective and perceptual) and external (social and physical) conditions of human existence in a given locality or community. A major premise of policy making is that policies are instituted to solve or ameliorate problems or lay to rest issues of public concern. Issues are controversial public of interest, while public problems are human needs, however identified, which cannot be met privately (Jones, 1984). The making of some policies may even create more problems than the intended solutions to public problems.

It is also necessary to distinguish personal problems from social problems. The former is one whose causes and solutions lie within the purview of the individual and the immediate environment. On the other hand, the causes and solutions of social problems are usually external to the individual and the immediate environment (Brookfield, 1994; Hont, 1994; Laurer, 1998).

However, in the literature, the diverse conceptual definitions of a social problem all emphasize the public nature of social problems. Rubington & Weinberg (1971) aptly defined a social problem as any socially delirious condition found to be incompatible with values of a group, whose members have succeeded in publicizing a call for action to correct the situation. The condition must also be unacceptable to the quality of life desired by the community. Quality of life is contextually defined here to mean how well people are doing, financially, physically, emotionally, socially, politically and culturally. To the extent that these things are lacking the quality of life is perceived to have diminished (Burger & Luckman, 1996). The study seeks to find out from the local people how they perceive the effect of the Mole Park on their communities' quality of life and the overall prevailing social conditions.

All over the world, the main preoccupation and objective for creating and managing national parks has been limited to defining the legal status of parks, boundary demarcations, provision of visitors or tourist services, fire control and the protection of flora and fauna. Other minor reasons include protecting natural uniqueness for research, education, recreation and earning foreign exchange. The interrelated socio-economic aspects, especially the role parks play in supporting local livelihood systems, has generally been frequently neglected or relegated to the background. Communities living around the park are often perceived as a principal threat to forest reserves and wildlife. The concern and chief preoccupation of park management, is always to curtail the level of ''human interference'' with little regard for the interrelated environmental and social costs of creating and expanding national

parks (Ghimire, 1994; Abane et al, 1999; Boyd, Blench, Drake & Stevenson, 1999).

The establishment of nature parks for recreation, eco-tourism, education and exclusive protection of scenic areas for bio-diversity tended to conflict with existing local sustainable resources use and livelihood practices of local people. While some people complain that the creation of the Mole National Park has been a bane, others are of the opinion that it has been a blessing to the people living beside the park. This bi-polar perceptual dichotomy over the impact of the Mole National Park is not surprising because policy systems usually contain dialectical processes that are characterized by inseparable objective and subjective dimensions of policy making. Therefore, it will not be surprising if some sections of any given community support an issue, while others oppose it. A third group of citizens may even choose to be neutral or apathetic.

In spite of the different stands people take on major public conservation policy issues many countries in the developing world continue to transform more than 10% of their landmass into protected areas. Notable examples in Asia include Bhutan, Nepal, Brunei, Pakistan, Sri Lanka and Thailand, and in Africa, Tanzania has 25% of her land under protection while Benin, Kenya, Botswana, Central African Republic, Malawi, Senegal, Zimbabwe and Madagascar all maintain not less than 10% of their territory as protected areas. The situation is not different in Latin America, where Chile, Costa Rica, Cuba, Dominican Republic and Guatemala all have at least 10% of their lands under protection (Dixon & Shearman, 1990).

In Ghana, not less than 21.4% of the land is under protected area with fifteen of the country's protected wildlife terrestrial areas covering 1,247,600 hectares or 5.2% of the country's landmass. Also, some 3.85 million hectares, representing16.2% of total land is under forest reserves (GWD, 1994). These conversions of arable lands will have both beneficial and negative spill over effects on communities living immediately within the vicinity of those parks.

Converting interest in biodiversity into active conservation practice often faces challenges, especially where state policy and desire to preserve environmental resources is in conflict with local community livelihood interests, and is a reason why many conservation projects created during the last century are already undergoing critical reviews (Banham, 1993; Brown, 1998; West, 2005).

Occasionally, some local people get involved in illegal exploitation of protected natural resources because of 'lack of environmental awareness' and they are also driven by poverty to act that way (McNeely, 1995). The non-involvement of the local people in conservation and management of these protected areas could also be an equally plausible reason for that behaviour. The result has been that considerable sums of money are spent annually in administering and policing of national parks. Ironically, these expenses are incurred to keep off the very people who should have been the protectors of the nature reserves.

In Ghana the underlying philosophy behind the policy creating national parks has been to promote bio-diversity conservation and develop eco-tourism. An adjunct of the policy is to bring in much needed foreign exchange for the socio-economic transformation of the country, in general, and rural

development for inhabitants or settlers living along the borders of parks, in particular. As a result of increased tourist arrivals Ghana's foreign exchange earnings from tourism have been increasing steadily over the years (Table 1).

Table 1: International tourist arrivals and receipts (1998-2009)

Year	Arrivals	Receipts (US $M)	Growth rate (%)
2000	399,000	386.00	7.07
2001	438,833	447.83	16.02
2002	482,643	519.57	16.02
2003/2004	-	-	Not available
2005	428,533	826.09	-
2006	4,997,129	986.08	19.37
2007	587,000	908.00	-7.92
2008	698,069	1,403.10	54.52
2009	802,779	1,615.20	15.12

Source: www.touringghana.org(June 17th 2010)

The Mole National Park, the country's premier park, was described in the Saturday 4th June, 2000 issue of the Daily Graphic newspaper as ''Ghana's gem destination'' and expected to contribute quite substantially to the country's foreign exchange earnings over time. The data on Table 1 indicate that over the past decade or more growth in the tourism sub-sector has, on an average, consistently exceeded the country's GDP growth. Yet people have argued and complained that the creation of parks has generally been a bane rather than a blessing to local people living beside nature reserves (Abane, et al, 1999; Mason, 1993; Fuseini, 2002).

McNeely (1995) has observed that although most eco-tourism facilities are often established in ''remote'' regions, conservation policies on such protected areas have often been conceptualized, planned and implemented by top-down approaches, and have a tendency to disrupt community livelihood needs through conflicts over control and use of natural resources. Quaye (1997), Ashley (2000) and Mbaiwa (2002) observed that efforts of many governments to conserve land and other environmental resources were often resisted by host communities because most communities tended to see their environmental resources as the foundations of their collective security, opulence or power, wealth and survival. The seizure of lands and other environmental resources constitute a violation of the fundamental rights of resident communities. Using the Mole National Park as an example, this study seeks to find out how local people perceive the effect of the Park on their communities.

Usually policies have desired ends, plans and programmes to achieve stated goals. While policies may aim at solving some defined social problems, they can invariably have negative spill over consequences on the society or sections of the society. A major problem facing contemporary conservation policy is the widening gap between policy analysis for public policy formulation and analysis of public policy effectiveness and consequences on the political, economic and cultural life of both targeted and non-target groups (Mbaiwa, 2002;West, 2005).

Objectives of the study

The general objective of the study was to explore, identify and explain both beneficial and unacceptable effects of conservation policy on the local people in the Mole National Park catchments. Specifically, the study sought to:

i. Ascertain the level of involvement of the local people in the decision making processes leading to the establishment of the Mole National Park;
ii. Examine the relationship between public conservation policy and the local community social conditions;
iii. Assess the level of local community participation in the management and activities of the Mole National Park, and
iv. Assess the local community perception of the current numbers of fauna and flora of the Park.

Hypotheses

Social and environmental problems are not given per se. They are socially constructed and are contextually influenced by the prevailing cultural, economic, and political conditions (Liberatore, 1995; Lincoln, & Guba, 1985). That is why an analysis of the effect of public conservation policy on communities around the MNP needed to be carried out within the context of a number of presumed hypotheses or propositions. Based on the objectives of the study the following null hypotheses were tested:

i. There is no significant difference between the local people and public officials' expected and observed scores about the effects of

public conservation policy at the Mole Park on community social conditions.

ii. There is no significant relationship between the local people's residential distance from the Park and their perception of the effect of public conservation policy on community social conditions.

iii. There is no significant difference in the levels of antagonism observed between the local people and public officials.

iv. There is no significant difference between the local people and public officials' expected and observed scores about the effect of public conservation policy on numbers of flora and fauna at the Mole Park.

Policy impacts are the effects a policy has on people and social problems. Policies are goal directed and may include objectives like eradication of poverty and reducing inflation to a single digit. Other policy goals are crime prevention or punishment and improvements in the quality of life of citizens, through improvement in health, education, security and other social services. Public policies may regulate people's behaviour, organize bureaucracies and redistribute benefits through taxation and subsidies. Public policies cover a wide verity of other identifiable areas like defence, housing, social security, police, highways, energy, environment and foreign affairs. Policy analysts want to know how well a policy is achieving its goals at what cost and at whose expense. Policy analysis is political and is all about how people's interests, concerns, and problems are addressed or solved. Policy analysis centres on different social values and objectives.

In the context of the current study the main policy objective of Legislative Instrument L.1.710 and its subsequent amendments, establishing the MNP, is to ensure bio-diversity conservation, for education and tourism. Ghana's revised National Policy for Forestry and Wildlife acknowledges the need for bio-conservation, and provision of rural people with intervening opportunities to share the benefits of sustainable wildlife habitats and population rather than just bearing the costs of conservation (UNDP, 1996).

Significance of the study

There is worldwide dearth of knowledge on the impact of public conservation policy, on local people living along the borders of parks. This knowledge gap is particularly noticeable in Ghana. The study attempts to fill this gap by creating awareness, and making its findings available to as many end users as possible, including policy makers, conservation planners and selected district assemblies in Ghana, where nature reserves are sited.

A study of the Mole National Park also offers one an opportunity to test existing theories and provide in-depth analysis of a specific event. Thus, the richness of detail and explanatory power of an in-depth study was what motivated the investigation into the effect of a phenomenon, such as MNP on communities.

Empirical knowledge about the impact of policy decisions on persons living in settlements flanking the borders of nature reserves may influence future public conservation policymaking in the country. Both private and public organizations may one day also use the research findings to plan for possible intervention projects aimed at alleviating any negative impacts and

further enhance the beneficial aspects of conservation schemes affecting marginalized and vulnerable communities. The study is, therefore, a contribution to policy improvement in the area of agenda setting as well as policy process and impact assessment.

Finally, the study is significant because it is one of the few pioneering works on public policy in Ghana. There have been comparably numerous technical and economic feasibility studies elsewhere, and in this country. The study contributes to scholarly research and literature in the field of tourism policy. It is also expected to enhance our understanding of both policy-making and some intended as well as inadvertent effects of policy on communities around MNP.

Similar studies elsewhere by Dieke (1991), Chiras (1995) and Ghimire (1994) have tended to emphasize issues of tourism definition, institutional capacity building, and prescriptive policy formulation. Others, from the populist camp, like Getz (1994) and Sindiga (1995), have dwelled mainly on issues of democratizing community participation, residents' reactions, and physical impact aspects of tourism. Thus, the economic, geographic and cultural aspects of tourism have received adequate attention. As a relatively new area of scholarly enquiry, what remains to be done is to research into the socio political aspects of eco-tourism.

Research on impacts of tourism public policy, particularly, on local people living around nature reserves has been sketchy. Factors militating against community impact of tourism research include the absence of comprehensive tourism theory, dearth of proven methodologies to measure non-economic impacts, and a lack of strong empirical foundation upon which

to base policy decisions. Other exemplar scholars have emphatically pointed out that there is a lack of theoretical foundation and, therefore, a major impediment to the advancement of research in tourism impact studies (e.g. Ap, 1992; Pigram, 1995; Haralambopoulos & Pizam, 1996; Faulkner & Tideswell, 1997; Lin, 2000). Indeed, efforts on tourism impact research have not led to any substantial progress because of two significant and related limitations. First, existing theory is fragmented and requires integration into a more general framework in order to guide empirical investigation and summative development of knowledge (Faulkner & Tideswell, 1997).

Secondly, as noted by Mathieson and Wall (1982), "the theory developed so far appears to be a series of assertions yet to be systematically and rigorously tested empirically" (p.141). And according to Faulkner et al, (1997), the most popular fragments of conceptual frameworks developed for examination of residents' reactions to tourism are those by Doxey's (1975) Irridex model, Butler's (1993) Destination Life Cycle, and the Social Exchange Theory put forward by Purdue, Long & Allen, (1990) and Ap (1992). Except Doxey and Butler, others have not elaborated on specifics of applying their conceptual models for analysing tourism's social impacts. The frameworks are so sketchy that they are hardly viable analytic models.

Analysis of public conservation policy impact on peripheral host communities at national parks has for some reasons, received little attention at the expense of analysis for policy formulation. Some factors account for this apparent neglect of analysis of policy impact of tourism. First, there is little agreement about how and why tourism public policy should be studied. Yet tourism, especially the eco-tourism sub-sector, is not only a major economic,

social, cultural and environment force to reckon with but is also a 'highly political phenomenon' (Richter, 1989 p.2). Indeed, the nature of tourism in any given community is a product of complex interrelated economic and political factors (Peck & Lepic, 1989). Bromley (1991) agrees that environmental issues are intrinsically political.

Dye (1992) also argued that public policy can and should nonetheless be researched into for three main reasons. Firstly, public policy is studied in order to gain a better understanding of the causes and consequences of policy decisions and indecisions. Thus, policy analysts devote much attention to studies for purely scientific reasons. As a dependent variable the critical focus of public policy will be on what economic and environed forces and political system characteristics usually operate to shape the content of public policy. As a result, political actors with various perspectives, employ base values and strategies to influence both policy outcomes and its effects.

On the other hand, if public policy is viewed as an independent variable the central issue will be on the impact of public policy on society, environment and the political system. Our interest is to understand the how, why or cause-effect of public policy. Knowledge of what impact public policy has on society and its institutions shall help improve our understanding of the linkages between socio-economic forces, political processes, and public policy as the independent variable. An understanding of these linkages will contribute to the breadth, significance, reliability and theoretical development of social science (Dye, 1984), as well offer the social scientist the basis for making pragmatic recommendations for solutions to social problems.

Secondly, public policy may be studied by the social scientist in order to have a clearer understanding of policy for the purpose of solving social problems. There is therefore a legitimate and pragmatic or axiological reason for studying and analysing tourism public policy. Here, it is the utility of action research output to society that becomes the overriding motive and rationale for doing policy research.

Finally, public policy can and should be studied on account of political expediency of ensuring that ''the nation adopts the right policies to achieve the right goals'' (Dye, 1992 p.5). The focus is on the philosophical issue of defining ''what is right'' and who determines'' what is right''. The first and second rationales for public policy research are both in accord with the main objective of the study. The focus is on how and why public conservation policy on bio-diversity and eco-tourism development, has affected the social conditions of the local communities living along the borders of the Mole National Park.

In Ghana, bio-conservation policies made and adopted have not been evaluated to determine their post-policy implementation effect on local people living close to national parks and forest reserves. Conservation of national biological resources has a cost, whose greater proportion is often borne by the local people living next to these resources. Conflicts of interest arise among local people on the one hand, and between local communities and many state institutions in-charge of eco-system conservations.

Exemplar studies on nature and forest reserves of Ghana have tended to deal more with fauna and flora species diversity, taxonomy or classificatory matters, potentials of eco-tourism, export marketing for foreign exchange and

institutional strengthening for the management of these nature reserves. Analysis of how public conservation policies affect the social conditions of the local people residing on the fringes of national parks, have received only scanty attention. For example, studies by Mensa-Ntiamoah (1989), Kissi (1994) and Abane et al, (1999) were either on feasibility assessment and export marketing impact on the forest timber resources or on villagers' use of products in the reserves. The gap that remains to be filled is an analysis of both intended and spill over effects of policy on the economic, cultural, political and social interests of local people, recounted from respondents' own lived experiences.

Limitations and delimitation of the study

Epistemologically, the study is embedded in a mixture of objectivism and subjectivism. It uses both quantitative and qualitative research designs (mixed methods strategy) to attempt an understanding of how community expectations, perceptions, political power distributions, socio-economic status, attitudes, opinions, community understanding and support for tourism development have been shaped by the MNP, a surrogate of public nature conservation policy.

Methodologically, the study initially confined itself to two sets of questionnaires administered to residents of settlements located at various distances from the borders of the MNP, and purposively selected public officials and an accidental sample of tourists. Primary data were elicited from adults of 18 years and above, drawn between April 2007 and May 2008, from forcefully expelled and non-displaced settlements. The fact that it was not

feasible to capture entire populations and so samples had to be selected constitutes both the delimitation and a limitation of the study.

The study was also deficient because it focused on public policy as the independent variable and social conditions as the dependent variable, to the neglect of other probable variables. It was further limited to only specific participants drawn from the MNP and its immediate environs at one point in time. The study was based on only one of several nature reserves of Ghana and so its findings can hardly be generalized. Moreover, some of the anticipated findings of a case study are subject to other interpretations (Bamberger, 2000; Claudini & Connelly, 2000; Allen & Babbie, 2001; Borden & Abbot, 2002). Also, because of logistic constraints, the study had to adopt an ex-post factor across sectional design instead of a time series or panel survey design. All these methodological procedures no doubt adversely affected the study's ability to identify changes in the population characteristics over time, causal patterns and therefore overall quality of the study.

The research site

Mole National Park catchments constitute the focus of the study. The Park is located in the West Gonja District of the Northern Region. About 2,300sq km of the present Park was originally designated as a game clearance zone for tsetse fly control in the 1940s but the policy was abandoned in 1948. The area was then officially designated as a game reserve under legal notification number 31, with a vaguely defined boundary, without specific pillars. A boundary description for the reserve was, however, delineated by the Wild Animals Regulations, L.1.171 of 1962 to cover an estimated area of

1,911 sq. km. The Park was further extended to cover an area of 4,554sq km in 1971 and declared a National Park under Wildlife Reserve Regulations. L.1.710, with the boundaries further extended northwards to the Kulpwan River and eastward over the Konkori Escarpment. In 1992 the Park was again extended to 4,840 sq. km. with the addition of the Gbantala Triangle, when villages around Gbantala were finally compelled to relocate outside the Park. Pillaring of the Park was almost complete by the early 1970s and by the end of the 1990s the Park was extended to its current size of 5,192sq Km (GWD, 1997).

There are justifiable reasons for choosing the Mole National Park for the study. As the pioneer National Park, Mole is attractive to researchers, who are interested in finding out what effect state conservation policy has on social, political and economic conditions of local people living around the Park. Mole Park is the most prestigious and best developed of Ghana's 14 nature parks, with fairly adequate facilities for tourism and visitors. It was adopted and targeted for eco-tourism development, as a strategy for achieving economic goals of the country, especially after tourism was officially declared a priority sector under PNDC Law 116. Thus, the Park's policy objectives are quite compatible with the virtues of eco-tourism and the guiding principle behind the creation of the Park was to establish functional linkages between bio-diversity conservation and local socio-economic development, culture and traditions of local populations (Banham, 1993; IUCN, 1991, 1997; Ghana Wildlife Division, 1994).

Mole National Park is one of the most diversified eco-tourism facilities in West Africa (Ghana Wildlife Division, 1994; Remy, 1972). The Park offers

excellent opportunity for visitors to view pachyderms, (e.g. elephant and hippopotamus) ungulates, (e.g. buffalo and hartebeest) and carnivores (e.g. lion and leopard) in their natural habitat as opposed to a zoo setting. Mole is the largest of the three multi-use nature parks of Ghana, located in the Savannah ecological zone of the country. Lack of disturbance and remoteness, scenic beauty and the considerable variety of wildlife make Mole a prime area for eco-tourism, recreation, education and research (GWD, 1994; Malone, 1996).

As a public policy out-put, the MNP offers a legitimate rationale for students of public policy impact analysis to research into, and assess the retrospective policy effects of the establishment of the Park, especially, its effect on the local people and the very environmental resources that policy is meant to protect. Finally, Mole National Park typifies public appropriation and expropriation of land, for the public good, in Northern Ghana. The study seeks to understand how the welfare and social conditions of the local people have been affected by any ex-post impacts of the policy establishing the Mole National Park.

Many conservation projects, within the last century, are now either undergoing or requiring critical reviews because their very designs tend to reflect an earlier domination of the conservation movement, by natural scientists with limited and defensive goals. Mole National Park was created and revitalized as a National Park, probably because of its high bio-diversity and low level of human settlement. In spite of the area's low population density of only 3.6 persons per sq. km (Ghana, 2000) such a proposed

exclusion zone was in all probability, already a subject of a variety of local land use alternatives and conflict.

Organization of the chapters

The study has been organized in seven chapters. Following this introductory first chapter is the second which provides a geographical or spatial context of the study area. Soils, vegetation, predominant economic activities, some human development indicators, and demographic characteristics of the district assembly area, in which the Mole National Park is situated, are discussed.

Chapter Three carries literature review and conceptual framework. Pre-modernist and post-modernist thinking on man-environment relationship as well as the independent and dependent variables of the study, are discussed. It also covers a discussion of sample of studies, focusing on the conceptual and methodological similarities and differences others have with the current study.

In Chapter Four methodological issues such as the research design, methods and strategies employed to access relevant data to inform the study, the sample frame and size, sample selection procedure, instruments and matters of construct validity and reliability of the research instruments, are discussed. A sample of recent methods used by previous researchers to investigate and find solution to similar problems are also discussed and related to the study. The purpose is to be guides by their methodological and statistical merits as well as shortcomings in order to improve upon the quality of the study.

Chapter Five covers data organization and analysis as well as the description and discussion of the socio-demographic characteristics of respondents captured by the survey while Chapter Six is devoted to a discussion of hypotheses tested and examination of contentious issues of public and community interests.

Finally, Chapter Seven assesses the utility of the conceptual framework chosen to inform and guide the research process. The chapter also contains the summary and discussion of the main research findings, which are followed by the conclusions and recommendations of the study.

CHAPTER TWO

THE STUDY AREA

Introduction

The preceding introductory chapter set the tone of the study by outlining the background issues that led to the identification and the decision to investigate and solve the research problem. Chapter Two describes and discusses the location of the Mole National Park and such biophysical characteristics as drainage, geology, soils and topography, main types of vegetation, and other flora and fauna species. Other relevant issues include population distribution, settlement patterns, land use and economic sector overviews. Finally, the development challenges and prospects of the West Gonja District Assembly, in general, and nature conservation and eco-tourism at the Mole National Park, in particular, are extensively discussed.

The rationale for a spatial and temporal examination of the study site is to establish a basis for analysing what was, and what has been happening to community social conditions since the coming into being of the Park in the 1970s. Also, the prevailing economic, political, cultural and spatial structures, at both regional and local levels, provide a framework for identifying and analysing the impact of any public policy on the social groups targeted by a policy.

Furthermore, relating each of these to the central theme of the research provides a basis for predicting what the place will look like in future under

current conditions brought about by the legislative instruments creating the Mole Park.

Location of the Mole National Park (MNP)

The research site is the Mole National Park and its catchments. The Park is located in the West Gonja District Assembly area of the Northern Region of Ghana and lies between Latitude 9° 12' and 10° 6' North and to Longitudes 1° 25' and 2° 17' West. The Park is about 146 kilometres or two hour's drive from Tamale, the regional capital, and 15 kilometres from Damongo, the district headquarters of West Gonja District Assembly (Fig1).

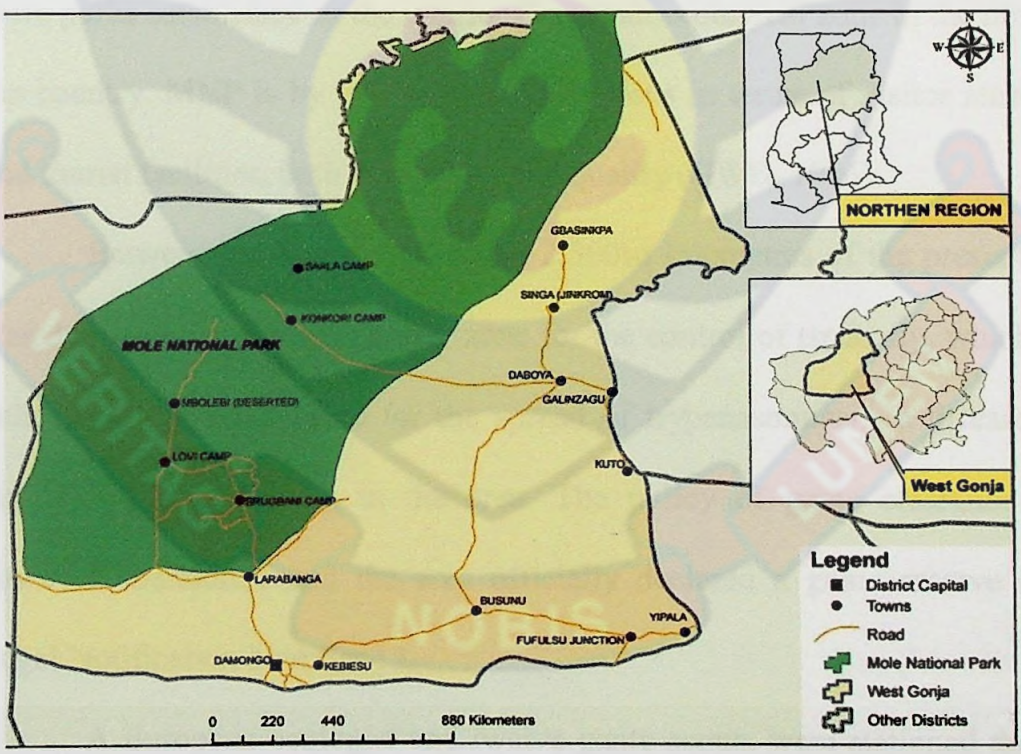

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Figure 1: Map of Ghana showing the location of the Mole National Park

Source: Cartography Unit, Department of Geography and Regional Planning, UCC, 2010

Mole National Park lies mainly in the West Gonja District of the Northern Region of Ghana. The district together with the newly created Central Gonja, accounts for approximately 24% of total landmass of the region and is a strategic link of the region to the southern sector and the two other northern-most regions of Ghana. The District shares borders with Bole, and Sawla-Tuna-Kalba Districts to the West, Wa East and West Mamprusi Districts in the North, Tolon-Kumbungu and Central Gonja Districts in the east. The district shares its southern border with the Kintampo North District.

Currently, the Mole Park has an area of 5,198sq kilometers and together with the Kenikeni and Yakobo Forest Reserves accounts for over 16,706sq kilometers or 30% of West Gonja District (GWD, 1996). The Park is the largest of the seven declared national parks in Ghana. It is also one of the three parks established in the interior Savannah ecological zone in the north of the country. MNP is by far the most prestigious in terms of visitor attraction and tourist facilities, both in quantity and quality (GWD, 1996).

Between 1948 and 1954 about 2,300sq kilometres of the present area was designated a game clearance zone for the control of tsetse fly, which was believed to be responsible for the spread of trypanasomiasis, a disease that hindered animal rearing in the area. The policy of game clearance was, however abandoned and the area officially declared a game reserve under Legal Notification Number 13.

A European ecologist and twelve game scouts were stationed there to take charge of the Park. In 1962 a boundary description of the Park was published in the Wild Animals Preservation (Game Reserves Regulations, L1.171). It also delineated an area of about 1,910sq kilometres with a 171 km

perimeter. More villagers were forcefully evicted in 1964. In 1971 Mole Park was declared a National Park with an enlarged area of 4,554sq km. The boundaries of the Park were extended northwards to the River Kulpwan and eastwards to the Konkeri Escarpment. In 1992 villages around the Gbantala Triangle were forced to relocate elsewhere to attain the Park's size of 4840sq km under Gazette Notification number L.1.1710.

Most of the current camp sites in the Park are at the original sites of settlements which were displaced to give way for the establishment of the Mole National Park. The rationale for chronicling the series of policy changes at the Mole Park is to demonstrate how the policy changes could have an effect on the expectations, perceptions and the resulting attitude of the local people toward the Mole National Park as an attitude object.

Ghana has twenty different categories of protected terrestrial nature reserves which cover a total area of 1.3 million hectares The Ghana Wildlife Division of the Forestry Commission administers these national parks, wildlife sanctuaries, and nature and game production reserves on one hand. The Forestry Commission on the other hand, manages the country's 3.85million hectares of forest reserves, which constitute16.2% of Ghana's total landmass.

In addition, five coastal lagoon sites have been identified for conservation management, and designated as Ramsar sites by the International Union for Conservation of Nature (IUCN).Table 2 (a, b, c and d) shows by type the current designated wildlife areas of Ghana.

Table 2: Wildlife protected areas in Ghana by type

(a) National Park

Type of protected area	Region	Size (Sq. km)	Year created
National Park	Western	305.6	1971
Bui National Park	Brong Ahafo	821.0	1971
Digya National Park	Brong Ahafo	3,478.0	1971
Kakum National Park	Central	356.0	1971
Nuhi Suhien National Park	Western	490.0	1976
Kyakobo Range National Park	Volta	360.0	1993
Mole National Park	Northern	4,840.0	1971

(b) Resource Reserve

Type of protected area	Region	Size (Sq. km)	Year created
Ankasa	Western	Part of NSNNP	1976
Assin Attandanso	Central	Part of NSNP	1991
Bia	Western	Part of Bia Park	1971
Gbele	Upper West	565.0	1995
Kalapa	Volta	325.0	1995
Shai Hills	Greater Accra	48.7	1976

Source: Ghana Wildlife Division (1997)

(c) Strictly Nature Reserve

Type of protected area	Region	Size (Sq. km)	Year created
Kogyae	Brong Ahafo	386.0	1972

(d) Wildlife Sanctuary

Type of protected area	Region	Size (Sq. km)
Agumatsa	Volta	3.0
Bonfobiri	Ashanti	53.0
Buabeng Fiema Monkey Santuari	Brong Ahafo	4.4
Owabi	Ashanti	13.0
Tafi Atome Monkey Sanctauri	Volta	2.7

Source: Ghana Wildlife Division (1997)

Government conservation policy revolved around three measures. First, people were removed from the area with the official explanation that the presence of a growing population of "encroachers" was exerting continuous pressure on the environmental resources of the Park, which posed serious threat to the sustainable use of the resources. Second, where total removal was impossible, government encouraged relocations elsewhere outside parks and nature reserves. Thirdly, on other occasions, it was reported that local people, who defied orders to vacate their settlements, were forcefully evicted without compensation for lost farmlands and other environmental resources and property. Thus, events, before and after the declaration of the Mole area, as national park, may have been a recipe for conflict.

Ghana's public conservation policy was principally directed towards achieving the main objective of defining the park's legal status, boundary demarcation and provision of visitor or tourist services as well as fire control and protection of flora and fauna. Until 1996 little attention was paid to the interrelated socio-economic aspects of the role of management in supporting local community livelihoods retention.

Indeed, all over the world, local people have often been perceived as a principal threat to conservation and ought to be constrained or kept under tight control. Thus, the interrelated social and environmental costs of creating and expanding nature reserves to local people, until recently, were ignored or frowned upon in spite of compelling effects of population growth, degraded lands arising from bad farming practices and poor technology, soil erosion and poverty.

In the face of high population growth, rising demand for food, globalization and the energy crisis among others, one wonders for how long government of Ghana can continue to ignore local community demands being placed on policy agenda of the state. Already, some chiefs, land priests and other local political leaders in the Mole Park catchments have been agitating for a return of community lands acquired by government for the establishment of the Park. They want the land back to enable them produce enough food to feed their families, in spite of the fact that the lands are part of a generally infertile zone.

However, the authorities of the park suspect that the villagers' request for the return of land is a ploy to have access to the flora and fauna in order to plunder those and other environmental resources of the Mole Park area. The

people counter argue that some areas like those around Damongo, and Mpaha, Shama, New Buipe and Buachipe in the adjoining Central Gonja District have similar alluvial sandy soils which are very suitable for the cultivation of millet, rice, and other cereals, yam, cotton and vegetables.

Physical characteristics of MNP

The geology, topography, soils, drainage and vegetation of the Mole Park are discussed in this section. Other issues include the flora and fauna, socio-demographic characteristics and social and economic development of the WGDA.

Geology of the Mole National Park

The Mole National Park lies within two major geological regions. About 65% of the Park lies within the Voltaian Sandstone Basin, while the other third (35%) is within the Savannah High Plains. The area west of the Kananto-Ducie stretch is mainly of the lower Birimain Complexes, with Middle Precambrian schist of more than 2,000 million years old and forms a gently undulating terrain which is more suitable for biodiversity than arable farming.

Discove and Cape Coast granite complexes of between 1,800 and 2,100 million years old are found forming a band along the Park's western border. Shale, mudstone, and sandstone deposits overlie Precambrian rocks in the eastern part of the Park to form the Volta Basin. Lateritic formations of up to 20 meters deep and alluvial deposits are the most common weathered granite (GWD, 1994). In the central parts of the WGD, the dominant soil type

consists of shallow Voltaian shale, which is not suitable for conventional intensive crop cultivation and partly explains why the area was earmarked for nature conservation.

In the Daboya area, there are limestone outcrops and because of their saline conditions, they tend to limit irrigated agriculture. At the extreme western parts of the district soils are of granite material, and therefore, have little agriculture potential. A mixture of granite and sandstone soils is found in a north-south formation and has low ability to support prolonged agriculture. The Konkori Forest Reserve area has brackish and rocky soils, which lack nutrients to support crop production. Therefore, the prevailing soils in addition to vegetation and other environmental conditions have tended to render the Mole Park area only more suitable for forestry and wildlife conservation than arable agriculture.

Topography

The Mole National Park lies on the stern rim of the Volta Basin, and has a generally undulating topography that is characterized by flat-topped hills. The Konkeri Scarp is the most prominent highland running in a north-south direction through the park to attain a height of 250 meters.

Soils of the Mole National Park

Soils at Mole National Park are mostly of plinthic ferrasols in the south while nitisols dominate the northern sector of the Park. Generally, laterite pans of outcrops of between 0.2 and 2.0 meters are common, and are the result of exposure of iron rich horizons due to erosion processes.

Generally, all soil types in the Mole National Park have inherently low fertility, very susceptible to erosion, and are therefore unsuitable for arable agriculture. Thus inherent low soil fertility, geology, topography, low population density, luxuriant vegetation and fairly large and diverse numbers of flora and fauna have justified the policy decision to make the area a national park

Drainage patterns of the Mole National Park

The drainage at the Mole National Park is part of the Great Volta Drainage Basin, characterized by a dendrite drainage pattern. Most of the rivers and their tributaries drain into the White Volta. Major rivers of MNP catchments are the Kulpwan, Mole, Sorre, and Love, which drain the north, central and southern portions of the Park respectively. Both the Black and the White Volta Rivers have potential for small irrigation schemes. The rivers also provide good transport waterways as well as fishing grounds. Elsewhere ground water supplies are very limited as a result of impermeable rock formation, especially in the Upper Voltaian formations. A network of smaller rivers found east of the escarpment drains the eastern part of the park. Except those originating from the Upper Voltaian sandstone east of the escarpment and South-east of MNP, which are perennial, most of the smaller rivers either dry up or develop patchy pools during the dry season and become reliable sources of drinking water to the fauna.

Temperature and rainfall patterns

Like the rest of the Northern Region, and characteristic of the Guinea Savannah, the climate of the MNP is distinctly seasonal, with a mean annual temperature of 27.8 degrees centigrade with little variation of between 21.6 degrees minimum and 30.5 degrees centigrade maximum. The average diurnal range is 13.3 degrees centigrade. The coldest period is December–February, whilst March and April are the hottest months of the year.

The average annual precipitation in the WGD area is 1,144mm. At the northern borders of the Park, around the Kulpwan River, rainfall is as low as 1,018mm per year. The rains fall around April and can sometimes attain a high intensity of up to 300mm per hour and capable of causing considerable flash flooding and erosion of unprotected topsoil. The rains end in August-September and are followed by a long dry spell. Low precipitation, low soil fertility and the annual ritual of bush burning have tended to impose limitations to the development potentials of the area, especially with respect to agriculture and sustainable development of the flora and fauna resources of the Mole National Park catchments, in particular, and the district in general.

Vegetation

The Mole National Park is a fairly undisturbed Guinea Savannah ecosystem with limited human impact through annual bush burning, localized farming and collection of fuel wood and wild fruits. The vegetation type is the Guinea Savannah, a dominantly woodland, with a grass layer that reaches up to three meters during the rainy season. There are also noticeably narrow bands of gallery forests along many streams. All these environmental

conditions make the area most suited to biodiversity conservation and justify the continued existence of the over 742 plant and fauna species of the Park, which are well spread throughout the savannah zone.

The undisturbed Guinea Savannah ecosystem, its remoteness, scenic beauty and tremendous amount of wildlife justified the creation of the Park and make MNP an enviable prime site for eco-tourism, recreation and research.

Grasses grow in tussocks and may attain heights of 2.7 meters or more, especially during the raining season. The area is therefore good for growing cereal crops like millet, maize and sorghum, and rearing of livestock. In spatial context, the larger tree species are found in the forest reserves, but around major settlements like Daboya and Damongo much of the original or indigenous vegetation has been altered and degraded by human activities, especially charcoal burning and fuel wood collection. The district has, however, banned charcoal burning and felling of live trees for fuel wood. These human induced factors have serious environmental problems for now and the future of the Mole National Park and the communities living around it.

Bush burning has been identified as the number one threat to the flora and fauna of the Park. Human activities, such as the slash and burn method of agricultural land preparation, coupled with generally low soil fertility throughout the entire West Gonja District tend to adversely affect the vegetation cover. The Shea tree and dawadawa are by far the major species, which also contribute significantly to household subsistence. The Shea tree for example, provides butter for cooking and soap making, while dawadawa is a source of spice and seasoning.

Fauna and flora concentrations of the MNP

Researchers continued to show remarkably keen interest in the plant and animal wildlife resources of the country's parks since 1916, when an Aberdeen University Expedition was engaged in bulk collection of plants from the present site of the Mole National Park (GWD, 1994)

Plant species

Seven hundred and thirty-nine of the Mole Park's floral species are vascular plants, and include 148 trees, 166 grasses, 61 shrubs, 281 herbs, 5 climber and 8 fern sub-species. According to Hawthorne & Musah's (1993) classification of plants of the MNP, 38% of the plants are also found in the forest zone of Ghana, while 625 are purely Savannah species.

Fauna

The main animal species at MNP include elephant, roan antelope, hartebeest, buffalo, waterbuck, and kob herds. There are also large carnivores such as leopard, lion and hyena. These carnivores and their herbaceous neighbours constitute a major tourist attraction

However, in the area of species population determination and habitats, there is still much to do. Data on the ecological dynamics of both flora and fauna species in the Park as well as knowledge of the socio-demographic characteristics of the communities living along the borders of the Park are vital because they will assist management to plan, educate and involve the local people to promote eco-tourism as well as ensure sustainable use of the resources of MNP.

Zoological surveys of fauna at the Mole National Park

Wilson, Kpelle & Agyare (1993) were first to carry out detailed zoological or faunal survey of the Mole National Park between January and March of that year. The period relates to dry season conditions in the Park and may require another survey, this time during the wet or raining season. The survey was conducted on large animals in the Park in order to determine faunal population and distribution patterns within the Park, and for management planning purposes.

Availability of reliable information on number of species, population dynamics and movement would be necessary for effective wildlife management. Hall (1978), Arlandon (1986) and Komoah (1987), conducted other zoological reports on fauna species of the Mole National Park, but most of the studies also concentrated on large animals and birds. Information on these faunal reports was obtained mainly by visual observation from unpublished records in the files of GWD or staff of MNP. Detailed descriptions of the zoological records were provided in Aerial and ground zoological surveys, which indicated that substantial numbers of various faunal species were available at the Mole National Park.

Wilson et al (1993), for example, presented eight larger species of mammals, including elephant, buffalo, roan, hartebeests, water buck, kob, oribi and baboons. Estimates for various species included the Oribi (>5,000), elephants (500), buffalo (3,000) hartebeest (4,000-5,000), waterbuck (4,000), kob (4,000) and roan antelope (>1,958)).

Dry season ground surveys also showed that substantial numbers of smaller mammals like the baboon, the red-flanked duiker and species of

antelopes were common, while few carnivores like the lion, leopard and hyena were also spotted. A small population of over ten hippopotamus, residing in the River Kulpwan, is being protected by the people of adjacent villages as gods. Periodic surveys are essential for determining animal populations and taking critical management decisions for mutual benefit of custodian communities and state.

Figure 2 displays the dry seasonal animal distribution in the Mole National Park. One would expect animal population to be more dispersed during the raining season because of availability of water everywhere in the Park. On the other hand, animal population distribution during the dry season would tend to be more concentrated at those places where pools of water are more readily available.

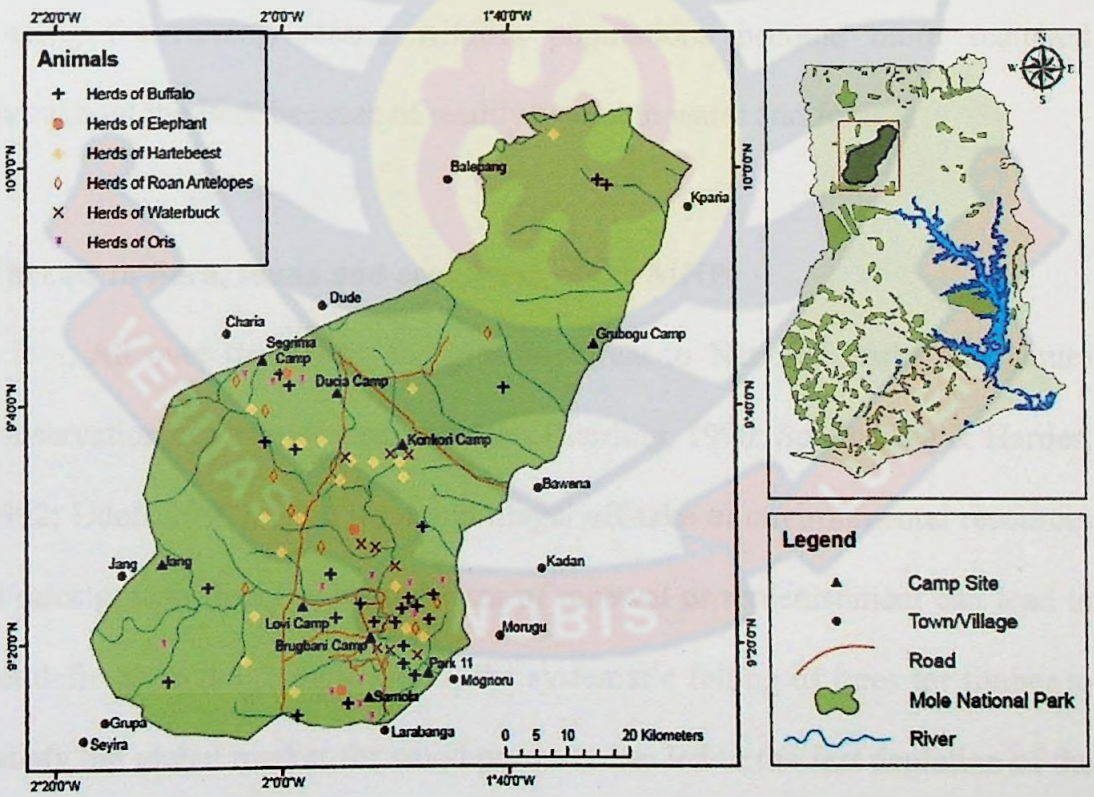

Figure 2: Dry season animal distribution in the Mole National Park

Source: GWD, Management Plan for Mole National Park (1994)

Concentrations of faunal wildlife at Mole National Park

There has been tremendous interest in the numbers of various species of animals at the Mole National Park. Consequently, several systematic dry season zoological surveys of animal populations carried out had identified substantial areas of concentration of ungulates at a time when forage and water were scarce and animals were also at most risk from poaching. Apart from few hartebeest herds all the larger species and more than 95% of all wildlife populations were concentrated within the central section of the Park (GWD, 1994). Elephants were usually not spotted outside the central section of the Park, while 99% of buffalo were found along or near the banks of the Mole River which was clearly vital to the survival of many animals because of the permanent pools of water and riverside vegetation available for the animals. During the raining season wildlife populations become more scattered throughout the Park because of readily available water and forage.

Threats to flora, fauna and ecosystem of the MNP

All over the world, the greatest threat to National Parks and nature conservation has been human activities (Sterling, 1990; Spellerberg & Hardes, 1992; Udoh, 1993). Both legal and illegal off-take of environmental resources at rates greater than the natural rates of renewal or replenishment can lead to net deficits. In the tropical world, the systematic felling of trees for timber to satisfy the global market for wood products has led to the fast depletion of the tropical rain forests in Brazil and the Democratic Republic of Congo.

According to Wongpakdee (1990) illegal land settlement has been regarded as one of the "most serious problems within protected areas" (p.10).

Poaching and other illegal exploitation of park resources have also been a recurrent worldwide problem facing park management, including the MNP. The concomitant effects of high population growth, rising incidence of landlessness, rising demand for food, industrialization and a globalizing market place, pose a serious threat to management of most nature preservation and conservation projects. In the MNP area local people are reportedly agitating for release of land for farming, and if land at Mole were ever given to them then the future of the Park would be in jeopardy.

Another factor that threatens the existence of forests and National Parks is bush fire, which has been having a heavy toll on forests in the United States of America, Australia and Brazil and to some extent in Ghana during the 1983 drought when bush fires engulfed the country. Every year, the Mole National Park continues to be afflicted by bush-burning. Bush fire is an international problem and requires concerted and collective action of all countries in order to minimize its harmful effects on the biosphere. The use of fire belts, institution of early warning systems and education of all sections of communities on how to handle and use fire more responsibly have been suggested.

Demographic characteristics of inhabitants of Mole Park Area

Being part of the greater WGD, border villages of the MNP exhibit same demographic characteristics, and are, therefore, a microcosm of the district. From population growth of 3.1% between 1960 and 1984 the rate rose to 4% in 2000. It has consistently been on the increase over time.

Table 3: Population growth trend for WGD and MNP (1960 - 2000)

Year	Population		Percentage annual increase	
	WGD	MNP	WGD	MNP
1960	29,337	10,000	NA	NA
1970	38,638	18,500	5.7	2.7
1984	69,505	20,832	4.4	3.1
2000	138,329	21,700	11.9	4.0

Source: Ghana, (2000) Population and Housing Census and Mole Park Records.

Besides natural increase in population over the years, the WGDA area has been a net recipient of migrants from Northern, Upper East and Upper West Regions of Ghana, due to the district's relative peace and agriculture potential. Especially, soon after the 1994 ethnic war, the district received many displaced and voluntary migrants from Dagbon and Nanumba areas of the Northern Region. The Ghana Population and Housing Census reports indicate that the rural/urban population split is 85.5% and 14.5% respectively. Although WGD is the largest in the region in terms of landmass, it is also the most sparsely populated, with a population density of only 6.3 persons per sq. km. Population concentrations are, however, found around Damongo, the District capital, and Daboya. An examination of the population structure of the WGD shows that apart from the rural-urban disparity, the very young segment of the population below 25 years of age, accounts for 36% of the population and distribution by sex is 49% male and 51% female. Current population for the 27 villages sharing borders with the Park is 21,700 (Ghana, 2000).

However, with a growth rate of 4% the combined population of these settlements is projected to exceed 100,000 by the year 2046, and land use conflict is likely to be more intense than it is currently. Like many parts of the Northern Region, the WGD has a wide verity of ethnic, linguistic and social groups, which are also culturally diverse. Settlements just around the immediate vicinity of the Park have not less than 10 ethnic groups. These include Gonja, Hanga, Camara, Tampulima, Vagla, Dagarba, Mammprusi, Sissala, Wala, Builsa and Safalba. Most communities immediately behind the borders of MNP live in characteristically northern Ghana compound houses, though the type, size, composition and their architecture tend to depend on the ethnic group. Settlements are, generally, nucleated with compound or family sizes ranging between 8 and 12 persons per household (Ghana, 2000).

Social and economic development

Social infrastructure development in the WGD is both rudimentary and inadequate, and poses a great challenge to the socio-economic transformation of the district in general, and the Mole National Park catchments in particular.

Roads

Except those communities lying on the southern boundary of the Tamale Wa road, the rest of the settlements around the Park are not readily accessible. Road access is limited to only footpaths during the dry season, and is plied by tractors. Movement in the MNP area is mainly restricted to bicycles and walking or hiking. Many of the Park camps and villages get inundated and cut-off from the rest of the region during the peak raining season.

Public infrastructure in the form of schools and markets are generally in poor condition, though in recent times, HIPC (Heavily Indebted Poor Countries) and ASIP (Agricultural Sector Investment Project) funded projects are springing up to improve the situation. Less than 50% of the 27 settlements around the Park are provided with pump fitted boreholes, with the rest totally depending on streams, dams and hand-dug wells for their water supply. Most water sources dry up during the off-raining season, and are often guinea worm infested. Water is a major problem facing many communities, and women and girls can spend up to 5 hours in a day fetching water. The result of drinking unwholesome sources of water is the prevalence of guinea worm and other waterborne diseases which pose a daunting challenge to health of the people.

Health

Health status of the population of WGD area is generally among the lowest in the country. Major diseases in the district are malaria, pneumonia, hepatitis, gastro enteritis and guinea worm. In recent times the menace of HIV/AIDS has been identified as a major health problem at the local regional and national levels. Protein induced malnutrition has also been a very serious health problem in the district, where infant mortality rate as at 1990 is as high as 122 as compared to the national average of 16 per 1,000. A child born in WGD is 8 times at risk of death before attaining age 5. Health facilities are inadequate with shortages of qualified personnel, drugs and transport being the most acute. The only hospital managed by the Catholic Church, has 167 beds, and is reported to be one of the best in the northern sector of Ghana. There are health centres at Daboya, Mole and Busunu. Doctor-population ratio was

1:28,333 as against a national average of 1:15,536, while nurse-population ratio was 1:1,715 as compared with a national ratio of 1:1302.

Health facilities are spatially polarized and skewed in favour of Damongo, Busunu and Daboya in terms of their distribution. Given the poor state of the transportation network, and high levels of poverty in the district, it is obvious that majority of the population cannot access health services. Until the proposed health insurance policy becomes fully and universally operational it would be of interest to find out to what extent the health center at the Mole National Park, a policy output, has been impacting on the health status of inhabitants of nearby villages.

Education

The WGD also has a very high illiteracy rate, with over 87% of children of school going age of 6 years out of school (Ghana, 2000). The situation is worse for females who have an illiteracy rate of 91% and are never in school as compared to 83% for boys. As at October 2008, the WGD district has the following educational facilities.

There is a general lack of educational infrastructure, and the problem has been exacerbated by lack of teachers and teaching and learning materials. Teacher-pupil ratio is 1:90 as compared to national average of 1:40. Thus, pupils of WGD have more than 2 times chance of not having a teacher than their counterparts in many parts of Ghana.

The entire district has only one privately owned kindergarten. Others are public-owned and consist of 75 primary schools, 21 junior high schools and three senior high schools. There are two post senior high school

institutions, namely an agriculture training college and one rural health assistants' training college.

Table 4: Educational facilities in the West Gonja District by type

Type of educational facility	Number
Kindergarten/Primary	76
Junior High School	21
Senior High School	3
Agricultural College	1
Rural Health Assistants' Training College	1
Total	102

Source: West Gonja District [WGD] (2008)

In terms of public-private ownership, only four (4.1%) comprising a kindergarten and three primary schools are privately owned while 98(95.9%) are state or public owned. These public educational facilities are made up of 72 (70.6%) primary schools, 21(20.6%) junior high schools, three (2.9%) senior high schools and two (1.9%) post senior high schools.

These schools all suffer from perennial lack of basic infrastructure, furniture, leaning and teaching materials, teachers and vehicles. The study has also looked at the extent to which local communities in the area are accessing educational and other social amenities at the Mole National Park. Low enrolment figures and high drop-out rates are symptomatic of low levels of patronage of the educational facilities being provided by the government.

In an interview Mr Joseph Bakar Soale, the District Director of Education for WGD, said "there has been a steady rise in both enrolment and pupil retention rates as a result of the introduction of the capitation and school feeding programmes by the New Patriotic Party government" (Interview with Mr Soale on Friday, October 24th 2008). He hoped that further policy improvements in the implementation of the two programmes would sustain the momentum of increased enrolments and retention of children in schools.

Numbers of requests for more potable water supply, electricity and the local people's attendance at health facilities in the area have been on the increase and shows that communities of the Mole catchments patronize the social amenities being provided by the District Assembly, NGOs and the central government, in order to enhance their quality of life. The area still has to grapple with numerous social and economic development challenges.

Economic development prospects and challenges

The West Gonja District has both economic development challenges and potentials. The District is predominantly agrarian with over 68% of the labour force engaged in rain fed agriculture (Ghana 2000). Farming is, therefore, the main source of income for majority of people. Land is family or communally owned, although chiefs act as the custodians of the land and make land allocating decisions. Shifting cultivation is widespread with some crop rotation and mixed cropping commonly practiced. Farm sizes are generally small and are managed by small-scale peasant farmers, who use hoe and cutlass as the main implements for cultivation. Tractor services are patronized by 50% of farmers although a hand full of them uses bullock

ploughs for land preparation and weeding. Low level technology is one of the main impediments to production and productivity

Main crops produced are maize, sorghum, millet, rice, groundnuts, beans and cassava. Agricultural productivity is generally low although maize yield is quite substantial and recording around 15 bags per hectare. The major problems facing farmers in the area include insufficient and timely supply of farm inputs such as fertilizers, inadequate extension services, erratic rainfall, post-harvest losses, and poor marketing facilities, as a result of poor roads, inadequate transport and information services on marketing. Fishing is also an important occupation of communities living along the Volta Lake and the White and Black Volta Rivers. Livestock rearing is not currently undertaken on a commercial scale though the potential exists.

Industry and commerce

Industry and commercial activities employ about 8% of the labour force (Ghana, 2000). Industrial activity is dominated by informal production, and includes agro-based concerns like food processing, as well as soap making, textiles and leather works. Others in the cottage industry category include mat and basket weaving, rope making, metal and wood works to produce household and simple agricultural farm tools. Vehicle repairs and retail of petroleum products have also become important economic activities in the district.

In the handicraft sub-sector, a significant observation has been that nearly 70% of the producers procure their raw materials from within the District, thereby ensuring local benefits through backward linkages. Until

recently, when the national electricity grid was extended to the district capital, and few other settlements, energy used to be one of the major constraints to industrial progress in the District. Other challenges to industrial development include inadequate supply of raw materials, poor marketing and access to credit, and lack of industry extension services. Potentials abound in salt and clay production at Daboya, where limestone deposits are in commercial quantities. Apart from trading in fish, salt, foodstuffs and manufactured goods the WGD is noted for tourism attractions.

Tourism

The Mole National Park is adequately endowed with several species of flora and fauna, whose pull-effect has been luring substantial numbers of tourists to the area over the years.

Available data indicate that visitor numbers to the Mole Park date back to 1964 when 584 visitors were recorded. Of that number 54% were Ghanaians. In 1968, a total of 1,437 people visited the reserve with 70% of them being foreigners (GWD, 1994). After the 1979 coup and the resultant insecurity in the country, international visitor numbers declined sharply. However, from 1985 to date, the majority of visitors to the Park have been foreigners (Table 5). Indeed, while Ghanaian visitor numbers declined between 1990 and 1992 that for foreigners had increased steadily at an annual rate of 16%. With the right marketing and management practices the MNP has the potential to bring in much needed foreign exchange for the socio-economic development of Mole catchments in particular and the nation at large. Table 5 shows cash receipts from tourism, by source between 1989 and 1992.

Table 5: Visitor numbers for Mole Park between 1989 and 1992

Year	Domestic/Ghanaian	Others/International	Total
1989	628	1,046	1,674
1990	822	1,230	2,052
1991	539	1,447	2,118
1992	617	1,858	2,475
Total	2,606	5,581	8,319

Source: Ghana Wildlife Division [Mole Park Records] (1994)

Table 6: Tourism receipts at Mole Park by source (1989-1992)

Source of revenue	Year and amount			
	1989	1990	1991	1992
Gate fees	436,660	212,150	467,650	286,200
Game licences	407,900	240,500	404,900	461,700
Bush meat licences	102,500	58,700	114,900	81,900
Guide fees	356,755	495,125	760,780	750,800
Accommodation	4,518,050	4,669,800	3,313,325	4,743,050
Catering	0	3,250,650	5,503,325	6,746,760
Total	5,821,865	8,926,925	10,565,105	13,070,410

Source: Ghana Wildlife Division (1996)

Other tourist attractions are the Larabanga Mystery Stone, the Ancient Mosque, the Damba and Fire Festivals and the Gonja Kingdom Regalia. Potential exists for water sport activities on the numerous streams and rivers of the WGD.

Summary

The study site's geographic and temporal contexts were described and discussed in the chapter, as basis for tracing any causal links between public conservation and community social conditions. Topical issues covered included location, history, geology, soils, topography, vegetation and demographic characteristics of the West Gonja District, where the study area is situated.

The objective of the chapter was to create a geo-temporal framework for analysing public conservation policy impact on the social, political, cultural, environmental, economic, and other significant effects of the creation of the Mole National Park on community social conditions. The next chapter would be devoted to a literature search and discussion of earlier studies undertaken on public policy analysis in order to guide and inform the current study.

CHAPTER THREE

REVIEW OF LITERATURE

Introduction

Chapter Two described and discussed the spatial, socio-economic and demographic characteristics of the study area in order to demonstrate the link between those variables and the conceptual issues to be raised in the ensuing chapter. This chapter reviews related literature and discusses a sample of conceptual frameworks of policy analysis, and provides a brief historical account of the evolution of the on-going debate on environment-man relationship. The contentious issues of reconciling community and public interests on nature conservation are also discussed.

The rationale for recalling the history and examining the biophysical setting of the research site are to further demonstrate the link between peoples' environmental perception and politics of public natural resources conservation policy. People's perceptions about their physical environment influence their attitude towards environmental issues and management of resources (Higham & Kearsley, 1994; Ingold, 1996; Kearsley, 1997). While the background information aims at contextualizing the extent and significance of the research problem the literature review places the research problem within the on-going literature dialogue or what Marshall and Rossman (1999) refer to as setting the study "within a tradition of enquiry and in a context of related studies" (p: 43). In other words, the literature search provides the theoretical and

methodological base of the study and helps to guide the research to attain its ultimate objective (Borden & Abbot, 2002; Sealle, 2004; Bryman, 2004). Review of related literature puts a study in its proper perspective in order to demonstrate the state of the art of the discipline as well as help the researcher to learn and profit from the successes and shortcomings of others who tackled similar research problems (Walliman, 2006).

State appropriation of resources of communities

Community perception largely shapes its expectations and reactions to the environment. Literature is replete with many eco-sophical theories advanced to explain man-environment relationships. For an example, Hardin (1968) has discussed man-environment relations in terms of carrying capacity of a given area over time, while Mink (1993) identified population growth as the major independent cause of the degradation of environmental resources. This study seeks to find out how public nature conservation policy activities at the Mole Park have affected human populations living along the frontiers of the Park.

An argument often advanced to justify state legislative takeover of common pool resources is to achieve a dual mandate: Firstly, to protect and conserve bio-diversity, as a heritage, for society and the development of eco-tourism (Morvaridi, 1997). The second reason is to prevent resources from degenerating into what Hardin (1968) calls the ''Tragedy of the Commons'' through ruthless exploitation. A 'commons' is any public area or resource over which no single individual or community has sovereign, and so the

resource tends to be ruthlessly plundered by individuals motivated by greed and selfishness.

Tragedy of the commons and its relevance to the study

The idea that common property has an affinity to cause trouble is an age-old and persistent part of western thought. For example, Milton (1993) recalled that Aristotle recognized it over two thousand years ago, when the latter said that resources which are common to the greatest number, tended to have the least care bestowed on them (Milton, 1993). The concept, later popularized by Hardin (1968), basically hypothesized that all resources owned in common, inevitably get over-exploited, because they belong to everybody, and nobody is responsible for protecting and nurturing such resources. Thus, the "freedom in the commons brings ruin to all" (Hardin, 1968, p.1247).

Most conservation legislation in the past was based on this powerful and controversial parable of the tragedy of the commons (McCay & Acheson, 1990; Warner & Jones, 1998; Imandar, Brown & Cobb, 1999). The tragedy of the commons was an over-simplified abstraction based on a number of assumptions. For the tragedy to occur, at least three conditions must be fulfilled. Firstly, a group of people must own the resource (common property). Second, the users must be rationally selfish individuals, who are able to pursue their selfish interests at the expense of the general or collective good. Users must also be able to override social pressure from the community, and must be maximizing their short-term gains without regard to the long-term viability or sustainability of the resource and their community's welfare. In the third place

the resource must be so ruthlessly exploited that its rate of exploitation must be greater than the natural rate of replenishment.

The tragedy of the commons is, therefore, simplistic, unidirectional and deterministic, and is grounded on humanism or the thesis that the human being should be at the center of all development interrelationships. For this reason many Benthamite utilitarian advocates tend to support projects, which bring larger gains and lesser pain to society. They argue that project beneficiaries or principals must be involved in all phases of a project, right from project conceptualization and implementation processes to its monitoring and evaluation (Cernea, 1995; International Bank for Reconstruction, 2000).

It also fails to distinguish between common property as a theoretical condition without relevant institutions (open access) and common property as a social institution (the commons). As a matter of fact, common property is not the same as open access (Warner & Jones, 1998; Boyd et al 1999). As Bromley (1991) has pointed out that Harding's argument ignores the point of open access. Not all commons belong to everybody or can be accessed at will without restriction. So, it is not the common property that creates the problem of the commons but a situation of open access. Since rights are the institutionalism by which society controls and orders human interdependence and resolves the problem of who gets what, an institutionalized system of rights has the tendency to restrict open access and thereby prevent the tragedy of the commons from occurring (Schmid, 1987; Benhke, 1992; Imandar et al, 1999).

There is also a temptation to restrict problems of common pool resources to external or state intervention on the one hand, and privatization and control of property rights, on the other. Such a dichotomous model ignores the presence and potentials of other solutions, like user groups and community management of common resources (Brown, 1998: Warner & Jones, 1998). The parable of the tragedy of the commons reduces the causes of environmental degradation and economic loss to the nature of property rights and fails to recognize the role of more complex features of socio-economic systems (Lele, 1991; Kendie, 1995).

Given the preceding premises there can hardly be a logically consistent solution to the riddle of the commons, since by the very nature of its assumptions, the theory is a tautology. Therefore, any attempt to solve the problem of the tragedy within its parameters is doomed to failure. For the same reason O'Riodan (1971) says the fascination of the tragedy of the commons lies in its insolubility.

The concept's popularity emanated from its ability to generate both conservative and liberal political solutions, when government takes a stronger role in dealing with problems of population growth, society and conservation of environmental assets. That appears contradictory because while advocating the institution of private property ownership, the concept at the same time, calls for state intervention of some kind, to direct issues of resources conservation, allocation and consumption. Empirical evidence indicates that the adoption of survival strategies, such as practices found among nomads, including careful choice of species, selective harvesting and intimate

environmental knowledge and applied science, have subverted the hypothesis of the tragedy of the commons.

Indeed, many traditional societies have evolved effective and efficient systems of sustainable management of resources in the common long-term interest of members of the community (Chiras, 1995; Warner & Jones, 1998; Boyd et al, 1999). One, therefore, wonders whether the local communities around the Mole national Park would be in a position to manage the resources of the Mole National Park on a similar sustainable manner if the Park lands and other resources were returned to the people.

The dichotomous model of man-environment and poverty linkage was not only linearly simplistic but also ahistorical because it failed to acknowledge the presence of a myriad of deeply rooted causative factors in the relationships (Lele, 1991), which would certainly be influenced by institutional factors, micro-economic circumstances (Kendie, 1995) and sociological variables (Morvaridi, 1997). Resources usage decisions would therefore be influenced by these factors.

In the context of this study the tragedy of the commons could be viewed from two perspectives. Firstly, the seizure of farmlands and other environmental resources by the state for biodiversity conservation was a tragic event to the local communities because of some negative cultural and socio-economic consequences usually associated with land dispossession or landlessness. Secondly, as predicted by the concept of the tragedy of the commons, if lands of the MNP were returned to the local people, the chances would be that its flora and fauna resources would be ruthlessly exploited to a point of extinction of most species unless appropriate common community-

based resources management systems could be put in place to regulate the use of the resource on a sustainable basis.

There are other lessons to be learnt from the tragedy of the commons. Firstly, the concept of the tragedy of the commons has brought to the fore the desirability of always examining the implications of state appropriation of lands for forests conservation. In the second place it also offers one the opportunity to analyse what effects conservation policies can have on social conditions of local communities living beside forests and other nature conservation sites.

Public nature conservation policy and community social conditions

The study identified public policy as the predictive variable, and therefore the probable causative factor affecting the local community social conditions, the criterion variable. Public policy has been variously defined by different authorities. A policy is a set of guidelines which provide a framework for action in achieving some purpose, on a substantive issue. Thus, a policy is established to achieve some purpose, which invariably reflects a set of beliefs, values or philosophy on the issue concerned.

Dibiski (1993) identified three basic problems of policy making. He saw policy analysis, "as a subject or field of study, which is broad in scope, complex, and relatively undeveloped theoretically; the terminologies and definitions are varied and, therefore confusing; and the journal literature on the subject deals mainly with substance not process" (p.1).

Dibiski (1993) went further to identify eight models but two of the commonly used models in policy analysis are the stages heuristic and the

domains models. The heuristic model is based upon the observation that policy development often progresses through steps or stages which 'evolve overtime in a generally sequential and cyclical manner'' (p.3). These stages vary in number according to a particular writer but Dibiski's five stages model comprised the existing or no policy formulation, policy enactment, policy implementation, and policy evaluation. The domain models, on the other hand, tend to examine the contextual meaning or level of policymaking. Gunn & Hogwood(1982) have suggested that the term policy has meaning at three levels, which they identified as ''policy-in-intention, policy-in-implementation, and policy-in-experience'' (p 11). They have further posited that those levels of policy imply the presence of domains or areas of administrative responsibility in which any policy can exist.

Policy-in-intention is the domain of policy framers or legislators, and refers to work done by persons whose responsibility is to develop and put forth policies as well as actions which those policies are designed or intended to address. According to Simeons (1976), "at any point in time, policymakers work within a framework that defines a set of problems considered to be important, with sets of acceptable solutions or policy responses, and procedures and rules by which they will be considered'' (p 555). Policy-in-implementation consists of policy implementers and agencies that carry out particular programmes or treatments undertaken in the name of policy (Lincoln & Guba, 1994). At the third level is policy-in-experience. This is the domain of putative "beneficiaries" and unintended "victims" (p.11). Policy-in-experience refers to the effects of policy decisions on those the policy is intended to affect, as well as the spill over effects on the non-targeted.

The common denominator in the various conceptualization of public policy is the idea that it refers to the regular and patterned actions or inactions of government personnel. It is an analytical category, the contents of which are identified by the analyst rather than the policy maker or piece of legislation.

Whatever the choice of model for policymaking an organization chooses would depend upon the model's ability to effect target group behavioural change with a minimum of resistance (Dye, 1992). For purposes of the study public policy is contextually defined and construed to mean all government statements of intent, Legislative Instrument L.1.710, which established the Mole National Park and its amendments. It also includes state delineation of powers of authority, methods of resource allocations, regulations, strategic plans and administrative practices directed towards attainment of objectives and solution of social problems. With regard to the MNP, such public policy outputs like anti-poaching laws, administrative processes and practices, district assembly by-laws and practices enacted or designed to realize the objectives for creating the Park for bio-diversity conservation and eco-tourism, collectively constitute public policy.

Other independent variables include demographic characteristics like sex, age, ethnicity and religious affiliation. Social conditions, on the other hand refer to both the external (social and physical) and internal (subjective and perceptual) contexts of man's existence in a given community or society.

Tourism is not only the world's largest industry, with associated economic, environmental and cultural impacts, but is above all "a highly political phenomenon" (Richter, 1989:2). According to Peck & Lepic (1989), the nature of tourism in any given area would be a function of interrelated

economic and political factors as well as particular geographic and recreational features that attract outsiders. Some form of tourism public policy would, therefore, be required to direct the conduct of tourism in order to minimize its harmful effects.

Public policy is first and foremost, a political activity that is greatly influenced by society's economic, social and cultural characteristics as well as the formal institutional structures of government. Policies affect and are in turn influenced by the political environment, ideology and values, power distribution, institutional frameworks of the decision making processes (Simeons, 1976). By virtue of the multiplicity of interacting forces that shape any policy making process, it should not be surprising that there is very little agreement on what public policy is, and therefore, how to identify or clarify it (Pal, 1992; Ritchie, Brent, & Goeldner, 1994).

A policy is deemed public not by virtue of its impact on the society but by virtue of its source. Dye defined public policy as "whatever governments choose to do" (Dye, 1992 p.2). Such a definition is elastic and provides a blanket that covers all government actions, inactions, decisions and non-decisions, and implies deliberate choices from among alternatives. For a policy to be labelled public, it must have been processed, authorized or ratified by public agencies. Public policy is, therefore, conceptualized as "the regular and patterned actions and inactions of government personnel'' (Manheim & Rich, 1991, p.348). It also means that some policies may not necessarily have been significantly developed within the framework of government (Gunn & Hogwood, 1982; Erthridge, 1990, and Edward III, & Lineberry, 1996).

For Cunningham (1963) "a policy is like the elephant- you recognize it when you see but cannot easily define it'' (p.229). This implicitly recognizes the numerous approaches that policy studies can take. Pal (1992) defines public policy as "a course of action or inaction chosen by public authorities to address a given problem or interrelated problems'' (p.2). The term 'policy' is thus used to refer to diverse sets of activities or decisions that are taken to address social welfare problems (Cunningham, 1963). In a Weberian context, a policy is a construct, whose bearing is to the general purpose, as well as means used to attain it for the good of all (Weber, 1949). But admittedly "what is" welfare'' for some people may be ''ill-fare'' for others (Titus, 1979 :p. 30).

At its core, public policy is normally designed to accomplish some end; however, there is always a certain ambiguity as to whether or not a policy is greater than its intended course of action. By implication policies have effects and one can hardly be certain, in advance, that they will have the intended effects and only those effects. Policies very often fail on one or both counts (Manheim, 1991), and although policies are aimed at improving human welfare they sometimes fail to do so. Policy analysis involves thinking and theorizing about what contents policies carry, how they are developed, administered, and implemented and what effects they produce. Policy analysis is also about why policies exist or do not exist. Policy carries a welfare image that is bound up with societal values, as well as critical evaluation of the impact of policies on people's lives. Policies aim at providing services for citizens. They have economic and non-economic objectives and involve some measure of redistribution of benefits and burdens between the rich and the poor (Titus, 1979; West, 2005).

Public policy may also be conceptualized and studied as a veritable constellation of perceptions, receptions, and pressures, demands and responses that one could use to describe or explain and evaluate a policy process (Heclo, 1972; Jones, 1984). Policies are aims, goals, or even statements of what ought to be (Blakemore, 1998:pp.1-2). Wildavsky (1979) concurred when he described a policy as'' hypothesis containing initial conditions and predicted consequences'' and just as policy has no universally accepted definition, so is there no single definition of tourism public policy.

Tourism public policy

The absence of a unitary or generic definition of tourism public policy demands that tourism "practitioners must learn to accept the myriad of tourism definitions and to understand and respect the reasons for those differences'' (Smith, 1989, p.180). On the other hand, Leiper (1979); and Mathieson et al (1982) have argued for the development of a single, comprehensive and widely accepted definition of tourism. However, Hall and Jenkins (1995) opined that there was very little hope of such a possibility, as the tourism industry had been diversely fragmented and dynamic. For them at least tourism could be studied at many levels and from multiple perspectives.

For purposes of the study, McIntosh & Goeldner's (1990) definition of tourism as the sum of the phenomena and relationships, arising from the interaction of tourists with business suppliers, host governments and host communities in the process of attracting and hosting tourists and other visitors has been adopted. Tourism public policy can then be defined as whatever public entities choose to do or not to do with issues and problems of the

tourism industry and the consequences that follow from there. Such a definition leaves much room for tourism public policy students to choose researchable topics they perceive to be problems of the tourism industry. Every public policy, including tourism public policy, has a genesis and can be analysed through a variety of approaches to public policy analysis.

Origins and approaches to public policy studies

As a distinct academic discipline of its own right, public policy has been an important arena of scholarly enquiry and capable of generating much debate, argument, research and literature (Dunn, 1994; Hall and Jenkins, 1995). Public policy research grew out of the need for socially relevant, multi-disciplinary, problems-directed and integrative policy analysis, especially after World War II and the failure of many economic development initiatives to attain their intended results. Policies imply theories, and as Wildavsky & Pressman (1993) put it, "whether stated explicitly or not, policies point to a chain of causation between initial conditions and future consequences. If 'Y, then X' (xv).

Similarly, Majone (1989) has argued that policies may be viewed as theories from two related but different perspectives, which can be seen as an analyst's rational reconstruction of a complex sequence of events or reality. Thus, public policy sets the basis for explaining decision-making and policymaking processes and also identifies the causal links between and among events. In their extensive study of city politics and policies, in the San Francisco Bay region, Heinz &Prewitt (1973) opined that a theory is a strictly theoretical construct inferred from the patterns of rational choice behaviour,

which should be distinguished from policy goals, intentions and choices. Public policy is therefore, "a standing decision characterized by behavioural consistency and repetitiveness on the part of both those who make it and those who abide by it" (p.28). For Brooks (1993) public policy would provide the basis for explanation of decisions and policymaking procedure, and therefore identifying causal links between events and distinguishing the significant phenomena from the irrelevant.

Public policies are formulated from and through the philosophy and worldviews of policy analysts who more or less tend to determine policy outcomes. Therefore, different theoretical perspectives, like pluralist, Marxist, and critical theory may act singularly or in concert to conceptualize public policy process. Theories are also differentiated from the levels of analyses and methods typically employed in studying public policy (Heclo, 1972; Brooks, 1993).

The foregoing sample of theoretical perspectives has no doubt been a contributory factor accounting for the lack of a dominant, coherent and unified approach to public policy studies (Brooks, 1993; Davis, Wanna, Warhurst & Weller, 1993). In spite of this shortcoming scientific research can still be built on two well defined kinds of theory. Firstly, there is the class of theory, which adopts fact-value prescriptions on the one hand, and that, which adopts descriptive models (Hall & Jenkins 1995).

Prescriptive or normative models seek to show how policymaking ought to occur relative to some predetermined standards and so these models are meant to guide policy making towards an ideal. Descriptive models on the other hand, strive to document in detail, how and why policymaking actually

takes place. From whatever theoretical perspective one looks at public policy it is clear that policy decision-making entails value choices. For example, by declaring an area such as the MNP a national park rather than permitting farming or hunting implies the dominance of environmental conservation values over economic ones. Values reflect the needs, goals, interests, attitudes, biases, beliefs, morals and ideologies of individuals, groups, an organization or a nation. Values and ideologies significantly influence important social issues and structure our thoughts and actually function to legitimize, and define particular attitudes and interests in a socio-political issue like forest conservation. Policies have distinguishable outputs and impacts or outcomes, which arise from policy actions and inputs.

Policy output and impacts

Policy actions are the behaviours, which are directed at regulating and allocating resources required for public policy implementation. While a regulative policy action is one, which ensures compliance to standards, rules and procedures, an allocation policy action requires making available inputs like time, money, machinery, equipment and personnel. Policy inputs are, therefore, the resources (time, money personnel and materials) used to produce public policy activities, attitudes and behaviours that convert policy inputs into policy outputs and impacts. In public policy analysis it is important to distinguish between two kinds of policy impacts, policy output and policy outcome.

A policy output refers to things actually done by the state agencies to implement policy decisions. These include regulations, statutes, funds, laws

procedures, strategic plans and government statements of intent (Heclo, 1972; Reinhardt, 1998). Other policy outputs are the goods, services, benefits and resources that go to targeted beneficiary groups or individuals. Variables like kilometres of highway constructed, taxes collected, teachers, lawyers, doctors, nurses, engineers, agriculturists and security personnel produced by training institutions are examples of policy outputs. Thus, policy outputs usually refer to those quantifiable aspects of policy implementation, and could be tangible and/or merely symbolic activities. Policy outputs may affect social-aggregates in several different ways. Policy outcomes, on the other hand, are the consequences of public policy and include both intended and unintended effects of public policy outputs on the policy targets and non- targets.

Policy impacts by contrast, are the aggregation of policy outputs and outcomes. They are the actual changes in attitudes and behaviours resulting from the policy outputs. While the number of hospitals and doctors per 10,000 persons is a measure or indicator of policy output, the total numbers of patients or people who actually use the facility constitute the policy impact. While public policy outputs and outcomes are easier to identify, policy impact causality is an intractable aspect of public policy analysis.

Problem of causality in public policy analysis

Pinpointing and tracing links in public policy studies is a fairly Herculean task, because of the nebulous or amoebic character of policy analysis as a discipline. Operational definitions specify procedural requirements that would enable one to experience and measure policy indicators or variables like inputs, policy processes, outputs and outcomes.

Besides, there are usually many alternative indicators of a concept or variable, which create problems of interpretation and validity. For instance it may not be easy to tell whether one or several or all of the following indicators adequately measure the impact of anti-poaching legislation: crime control, number of arrests made by officers, number of convictions, or ratio of false arrests to number of arrests.

It is, therefore, desirable to construct an index by combining multiple social indicators of a policy process, action, or policy outcome variable (Carley & Bustelo, 1984; Katzer & Crouch, 1991; Tashakkori & Teddlie, 2003). Social indicators are statistical, measures of social conditions within identifiable segments of a population and their changes over time. Social indicators can be both objective and subjective. The search for policy outcome or impact indicators may alert us to areas with insufficient information or ever hitherto unnoticed data. Secondly, policy indicators provide the basis for policy and programme modifications. Social indicators may also help structure policy problems as well as modify known policy alternatives.

However, the use of social indicators also has a number of limitations. Choice of a set of indicators may reflect particular social values rather than others or even be converging the analyst's political biases. Policy makers who face very practical choices of political expediency may not find some particular set of social indicators useful. Most social indicators reflect prevailing objective social condition and, therefore, tend to downplay the significance of conducting new information search. Finally, social conditions hardly provide adequate information about various ways policy inputs are transformed into policy outcomes or impacts, because measuring both policy

inputs and outputs and correlating them may not be saying much about the situation on the ground.

The greater the internal validity of the measurement of a social indicator of policy the more confidence there will be about its corresponding policy outputs and impacts. The main threats to internal validity in policy impact analysis include history, maturation, instability, instrument and measurement sensitivity, mortality, regression artefacts, ethics, and selection of subjects or participants for an experiment. Historic events such as strikes, civil disturbances, shifts in public opinion and force de jure may present rival plausible explanation of causes and consequences of policy outcomes. Membership changes in family and large social units or groups may exert independent effects on policy change with the passage of time (Baussell, 1994).

Maturation also involves change in subjects' attitudes, while peoples learning and geographic relocations tend to make it difficult to explain a policy outcomes or impacts. Fluctuations over time produce unstable conditions in variation in policy outcomes and impact as a result of random errors or procedures, which were used to gather information. Since time series is usually unstable, causal inferences about policy effects or overall outcomes based on them are likely to be highly controversial. Mortality through participant dropouts during experiments and measuring outcomes may also sensitize subjects of both experimental and control groups, and result in biased inferences about the population. Also, random selection of subjects, for an experimental research design, which may not totally eliminate biases, is likely to adversely affect the research outcome.

Finally, when both experimental and control group members are selected on the basis of extreme characteristics there is a tendency for these characteristic to regress, statistically, towards the mean. Therefore, in order to increase internal validity of social and quasi-experiments, there is the need to carefully design the research through random selection, repeated and multiple measure of outcomes overtime (Cook, 1993). Social experimentation is very weak in the areas of external validity or the generalization to causal inferences outside of the particular setting in which, the experiment has been conducted. All threats to internal validity and artificial or unrepresentative conditions under which an experiment may have been conducted must be carefully handled.

Community social conditions

Social conditions of communities located not more than twenty kilometres from the Mole Park frontier constitute the dependent variables of the study. The study was, therefore, to examine how respondents perceive the effect of public conservation policy on community educational, health, quality of life and level of participation in the activities of the MNP. Also, to be examined are the local people's perceptions of how their traditional political power structures, physical environment and biomass, culture and economic well-being have been affected by government conservation policy practices at the Mole National Park. In order to assess the effects of forests conservation at the Park on community social conditions it would be desirable to isolate from the variety of models, an appropriate conceptual framework to guide the process.

Conceptual frameworks for policy analysis

Policy analysts have over the years evolved models for analysing public policies. Samples of these theoretical approaches to public policy analyses that hinge on the issue of community interests and relevant to the research problems, are briefly discussed in this section of the chapter. The structure, underlying assumptions, functions, merits and disadvantages of the conceptual framework chosen to guide and direct the present study have also been outlined.

Models are simplified ideal-type representations of some aspects of the real world. They may be physical, diagrammatic, and mathematical or flow-charts, and are essentially, mental constructs. Conceptual models are often used in policy analysis to do one or a combination of the following:

i. Simplify or clarify thinking about public policy and politics
ii. Identify aspects of important policy problems.
iii. Facilitate easy communication between people by concentrating on essential features of public policy.
iv. Identify the relevant from the unimportant policy issues
v. Suggest plausible causal explanations for public policy and predict policy consequences. There are specific models, currently in use, for public policy analyses. These models may be grouped under institutional, process, group, elite, comprehensive rationale, incremental, game theory, and systems models. This is not a mutually exclusive classification of models in public policy analysis. On the contrary, it represents one of numerous approaches to public policy studies. Of these frameworks the Institutional model has been

a pet of political scientists, who usually make copious use of the model in public policy studies.

Institutional model

The study of government institutions has been a central focus of political science. Institutionalism is about the close relationship between public policy and government institutions. Policies only become public when government institutions have adopted, implemented and enforced them (Dye, 1984). These institutional or state agencies usually give public policies three institutional characteristics. First, they lend legitimacy to policies by making them to be regarded as legal obligations that ought to command the loyalty of the citizens. Secondly, only government policies are universalized and, therefore, cover and demand compliance of all citizens. Thirdly, state agencies project government as the monopolist of coercion in society. It is government alone that can legitimately imprison violators of its policies, and that is why government alone commands loyalty, enacts policies and laws for the whole society.

Government alone monopolizes the legitimate use of force, which influences individuals and groups to lobby for enactment of policies of their preference. Some policy analysts, therefore, rely on the roles and relationships among prevailing institutional arrangements to describe, explain and even predict, policy implementation processes and consequences in a political system. Thus, an input-process-outcome framework is used in analysing policies.

Process model

A central focus of political science has for decades been on political behaviour or activities of voters, interest groups, political parties, presidents, judges, legislators and other political actors. Studies in political behaviour usually aim at unearthing identifiable patterns of processes of activities, and consequences arising from that behaviour. In brief, the policy process model depicts a series of activities that range from problem identification, legitimization and implementation to policy monitoring and evaluation. The process framework for analysing political behaviour, therefore, consists of functional activities, which are characterized in government as systems with outputs. These functional activities range from problem perception, definition and organization to representation. Other functional activities include problem formulation, its legitimization and appropriation, organization, interpretation and final application.

The process approach allows policy analysts to study how decisions are made and perhaps even how they ought to be made. However, it does not permit students of political science to comment on the substance and content of public policy, especially on the issue of "who gets what and why" (Dye, 1984: 250). In the context of the present study, our value free concern has been on whose perceived interests public conservation policy serves at the MNP catchments.

Thus, it is not the content of the policy, which is to be studied, but rather the processes, by which public policy is to be developed, implemented and altered or modified. The usefulness of the process model lies in its ability to help one to understand the varied activity sets involved in policy making.

This, does not however, downsize the relevance of investigating the linkages between policy process and content, as well as between groups.

Group theory of political behaviour

The group model proposes that interaction among interest groups is a cardinal fact of politics. Persons with common interests tend to bind together, either formally or informally, in order to press home their demands to government. Truman (1965) defined an interest group as "a shared-attitude group that makes certain claims on other groups in the society'' (p 37). Under these conditions, it becomes clear that politics is all about the struggle among groups to influence public policy. So the task of a political system is to manage group conflict by establishing rules of conduct for the game of group struggle, arranging compromises and balancing interests, enacting and enforcing compromises through policy making.

The group model focuses on how the political system goes about balancing conflicting group interests to achieve equilibrium in power relations via the process of policymaking. Group theory describes all meaningful activities in terms of group struggle, and so policies are seen as merely engaging in constant responses to group pressures, balancing, negotiating, and compromising among competing demands of influential groups (Zeigler, 1980). In the context of the current research problem one might want to see the struggle between the local people and Park management, in terms of both group theory and a duty bound desire on the part of park employees to maintain a kind of social stability according to elite theory.

Elite theory

The elite conceptual framework for analysing political behaviour posits that public policies should be conceptualized as the preferences of the governing elite (Cunningham, 1963; Dye, 1984). It suggests that the people are apathetic and ill-informed about policies and that in reality it is the small group, consisting of the elite of society, who actually shape mass opinion on policy issues rather than the masses shaping the opinion of the elite. Public officers merely carry out the policies decided upon by the elite. According to the model, policies flow downward from elite to the masses, and do not emanate from the demands of the masses (Figure 3).

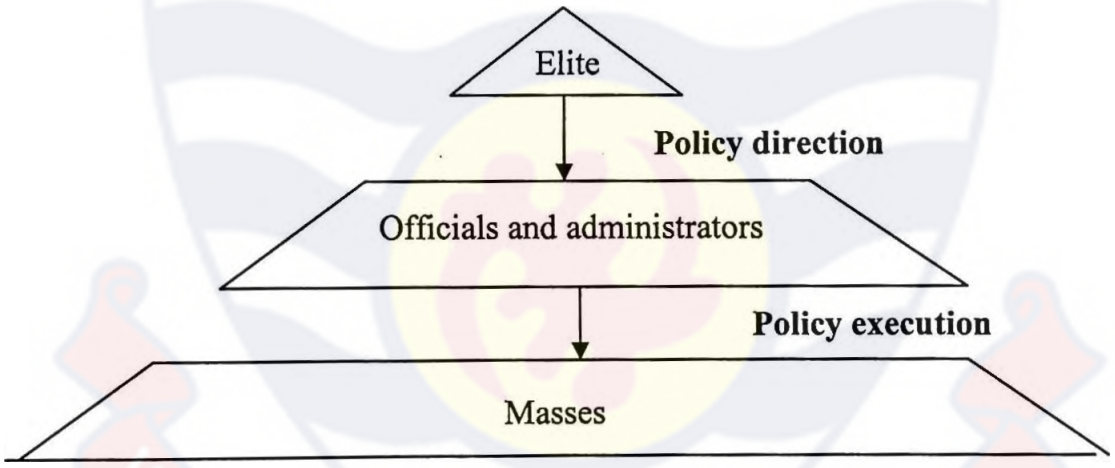

Fig 3: The elite model

Source: Dye (1984)

In sum, the elite model asserts that society is divided into two: the few who have power and the majority who are powerless. The powerful few are atypical of the masses that are ruled, and the elite tend to be disproportionately drawn from the upper socio-economic strata of society. Movement of the non-elite to the elite positions must be slow and continuous, in order to maintain

stability and avoid revolution. Non-elite who manages to be admitted into government circles consists of persons who accept the basic elite consensus. Also, the elite share consensus on behalf of society's basic values, such as sanctity of private property, limited government and individual liberty. Public policy does not reflect the demands of the masses but those of the powerful elite and so changes in public policy tend to be incremental rather than revolutionary. Finally, active elite or the powerful are relatively little subject to the direct influence of the apathetic and ignorant masses.

The implications of the elite model for public policy analysis are that policies do not reflect the demands of the masses but those of the elite. Changes in policies are merely redefinition of elite interests and values. Policies are also hardly replaced but only frequently modified to serve elite interests. Whenever changes threaten the stability of the political system, the elite, acting on the basis of enlightened interest, carries out reforms to preserve the status quo. Elitism ensures that the ruling class is responsible for the welfare of the masses. With communication between the masses and the elite flowing downward to the masses from the elite, the masses are often manipulated.

The main strength of the elite model is that it enables one to identify power structures in society. The powerful are differentiated from the powerless. It highlights the oligarchic tendency of the few to monopolize power and resources at the expense of the powerless majority. Elitism also tends to preserve conservative political systems and ensures stability and social coercion.

However, the elite conceptual framework has a number of fundamental flaws. The division of society into two classes of the powerful and powerless is both simplistic and artificial. It ignores the presence and role of interest groups and institutional arrangements in decision-making and policy formulation. The masses may not be as ignorant and apathetic, as the model wants one to believe. In fact the information revolution, improved access to educational opportunities, urbanization, industrialization, and the political and legal awareness of most egalitarian societies, hamper the dichotomous split of society into two camps of powerful and powerless citizens.

The study was, therefore, unable to adopt the elite conceptual analytical model because the framework is hardly congruent with real social reality of community politics and public conservation policy at the Mole Park area. People with diverse cultural, religious and political systems have inhabited the area for decades. For example, while the Gonja, Camara, and Mamprusi communities tended to have centralized political organization, the Tampulima, Sissala, Vagla, Chakali and Safalba, have non-cephalous devolution of political power. The absence of sharp socio-economic and class differences further renders the application of the elite model an inappropriate framework for analysing the issue of community and public conflict of interest in the Mole Park area. Another conceptual framework, often in public policy studies, is the comprehensive rational model, which is next outlined and discussed.

Comprehensive rational model

A policy is rational if it achieves maximum social gain. Assumptions of the rational theory are that analysts know all weights and preferences of society as a whole. There is also complete knowledge of all social values. Thirdly, information about every policy alternative, policymakers, analysts and their predictive capacity, intelligence and ability to calculate costs and benefits must be unquestionably accurate.

Governments are, therefore, expected to institute policies whose gains or benefits far exceed their social costs to society. By implication, comprehensive rational theorists argue that government should not make policies, which harm society. If government has to take a decision over two policies, the rationalists prefer a choice of the policy, whose benefits far exceed costs, and are also far less than the cost of the alternative policy. A policy is deemed rational when its achieved values are far greater than the sacrificed values, and greater than any other alternative policy. Therefore rationally is not only about saving in money but is used to cover all economic, social and political values sacrificed or achieved by a given policy.

Rationalism in public analysis requires comprehensive knowledge of all preferences of society and their alternative weights, all available policy alternatives, and all consequences of each and every policy alternative in order to be able to calculate the entire benefits-costs ratios and select the most efficient policy alternative. Comprehensive rationalism, in policymaking and analysis, requires two approaches. The first involves objective setting and examination of options designed to fulfil those goals. Under this approach apprehensive rational policymaking will involve intelligence gathering, and

identifying all options, assessing consequences of the alternative options, and then relating consequences to values (Gunn & Hogwood, 1982). The second approach is to set up an ideal type model of rational decision making, where values are defined and ranked, objectives compatible with those values identified, consequences of options calculated and compared and finally, choosing the exact set of options, which will maximize the defined values.

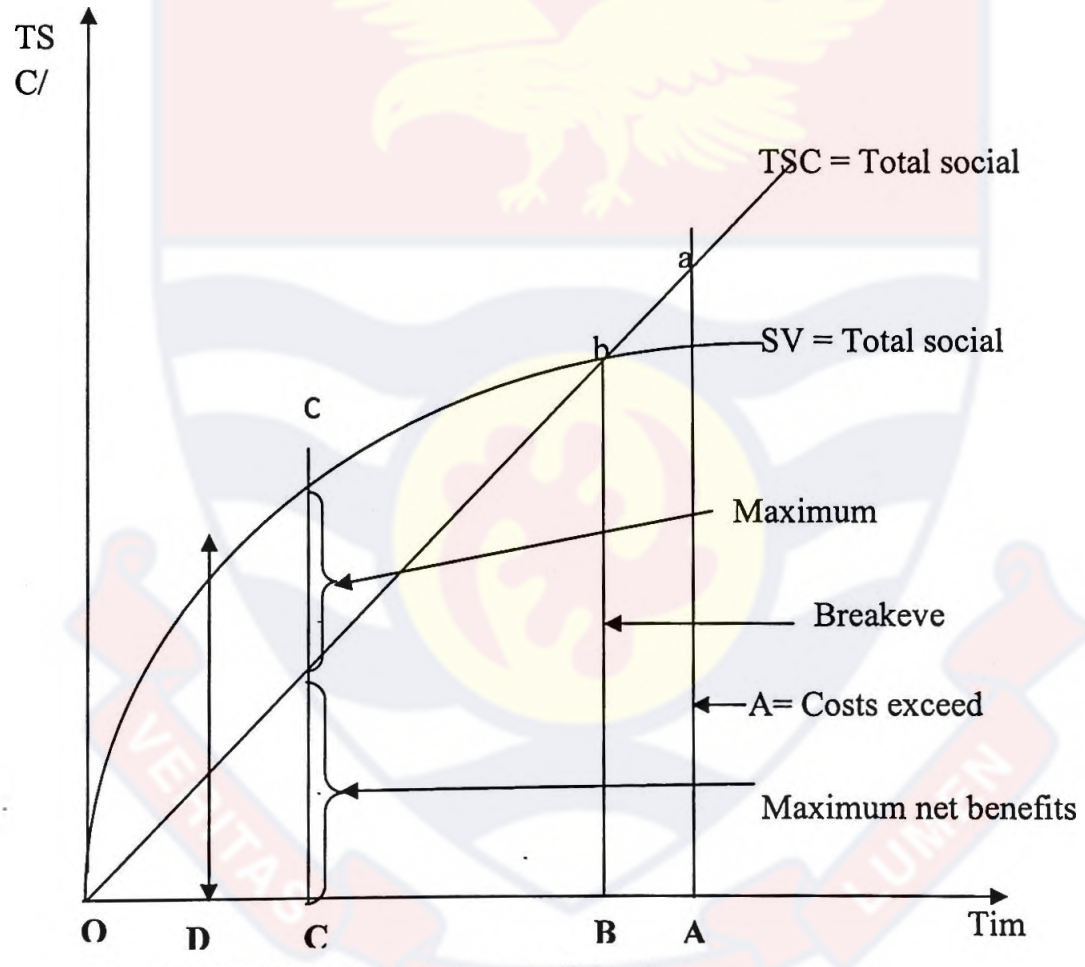

Fig. 4: A Model of maximum social gains

Source: Dye (1984).

As a matter of fact, and in terms of Arrow's impossibility theorem, it is simply impossible to rationally resolve all individual and group conflict of interests by aggregating the various values placed on such interests.

Figure 4 portrays a rational approach to resources allocation. The diagonal, TSC, represents total social cost and increases in direct proportion to the benefits provided by policy. The curved line, TSV, or total social value, shows that the initial policy costs buy more than later costs (that is, as costs increase over time, benefits increase at a less than proportionate rate to costs) This is in consonance with the notion of "marginal" value in economics. Beyond OB, TSC is greater than TSV. Lines A, B, C and D represent the policy alternatives available to the policy decision-maker. For alternative A, costs exceed benefits and, therefore, it is not rational. Alternative B, on the other hand, gives the greatest amount of benefits but is very costly, and is the breakeven point because total costs are equal to amount of benefits but it is very costly, and is the breakeven point because total costs are equal to total social value or benefits.

Finally, alternative C is the best because it provides the maximum net benefits of 'ce' or Ce minus Ce' (that is total social benefit minus total social costs). Rational approach to public policy analysis is an important analytical tool, because it helps one to identify barriers to rationality, and tries to question why a particular policy should not be rational.

However, there are a number of hypothesized obstacles to the application of rationalism in policy analysis. First, there are no generally agreed upon social benefits but rather specific group interests and benefits which may often conflict with one another. For example, the interest of labour unions may conflict with those of employers over wage increases and better conditions of service. Second, most benefits and costs can hardly be compared or weighted. It may, for example, be difficult, if not impossible, to compare or

weigh the value of individual dignity against a tax increase. Moreover, policy makers are hardly motivated to take decisions on the basis of societal goals.

On the contrary, many decisions are taken on the basis of the need to maximize personal rewards, such as power, status, re-election, money and what have you. Policy makers are not necessarily motivated to maximize net social benefits or gains, but are merely motivated to satisfy demands for progress. They will stop the search for the best alternative as soon as they struck on what will work. "Sunk costs" in large investments tend to prevent policy makers from re-considering alternatives.

The sheer mass of data required to enable analysis of policies discourages policy makers from relying on the rational model. Policymaker's ability to predict the future of human, biological and even some physical sciences is limited and, therefore, future predictions are hardly possible. Even with the most advanced computer analytical techniques, it is still impossible to determine all the social, political, economic and cultural values to be able to make perfect policy decisions. Rational policymaking models are, therefore, unrealistic because of their impracticability in trying to apply them to real world situations. Uncertainty about the future consequences of a policy change, make policymakers to stick closely to previous policies, which are less likely to produce anticipated disturbing consequences

Finally, policymaking is so segmented that it is pretty hard to bring together all state institutions to co-ordinate smoothly for policy alternative analyses and choices to be made in the face of conflicting values in a social or political system. The applicability of comprehensive rational model in public policy analysis is therefore limited by psychological, conflicting or multiple

values, organizational limitations, costs, resources scarcity, and situational circumstances and contexts.

Incremental theory

According to incremental theory, public policy making is a mere continuation of previous government activities but with only modifications. Incremental theory was an alternative suggested by Lindblom (1980) in his critique of the traditional rational model of decision making in policy analysis. According to Lindblom (1980), policymakers do not annually review the whole range of policies in vogue, and propose new policies. Neither do they identify social goals, research for benefits and costs as a basis for taking decisions.

On the contrary, what policy makers do is to revise or modify existing policies, because of the constraints of time, intelligence, the need to prevent costs and often for political expediency. Incremental theory recognizes the conservation and impracticability of the rational model of policy making. Policy makers, therefore, tactically accept the legitimacy of the existing programmes, because they do not have time, intelligence and funds to carry out new investigations of alternatives to the existing policies. Apart from costs and difficulty of generating enough information, there is the problem of uncertainly about predicting the consequences of completely new policies. Also, sunk costs in investment preclude choices which involve radical decisions. Investments or sunk costs could also be in the form of administrative practices.

Incremental modelling of policy analysis is politically expedient. Shifts in policy involve shifts in relative positions of losers and winners in inter-group conflict over resources of all kinds. These political tensions do influence policymakers' decisions on whether to create new ones or continue with the old policies with tactical modification here and there. Instrumentalism reduces conflict, maintains stability and preserves the political system. Human beings hardly act to satisfy all values but rather act to satisfy particular demands. Usually, policymakers, by their nature, tend to search for "ways that work" rather than "one best way" policies. Finally, there are no agreed social goals and values, and a pluralist government is more likely to continue with existing programmes than starting new ones that will address social goals more effectively. Conflicting demands of groups will have to be processed in a context of game playing in order to achieve some semblance of order and stability among groups.

Game theory

Game theory was developed during the Second World War as part of the strategy by the military to distribute materials and equipment. Game theory is now used in public policy analyses to study rational decision making in conflict situations that involve two or more people.

The choice of participants and the outcome of decisions will depend upon the choices made by the opponents. In game theory each participant must adjust his or her conduct to reflect both his/her own desire and the expected action or and reaction of others. The theory of games is applied in war or serious conflict situations, international diplomacy, as well as bargaining and

coalition building, at the United Nations and other political situations. Game theory describes how people in competition or conflict would go about making decisions and not how people actually go about making decisions. The theory is abstract and uses deduction in the analysis of decision making. It is like the rational model but differs because it is applied in competitive circumstances, with the outcomes dependent upon what two or more other people do.

Strategy is the key concept in game theory and refers to decision-making that is based on rationality. Another term used by game theorists is "minimax", which refers to the rational strategy that is taken to either minimize the maximum loss or maximize the minimum gain for a competitor regardless of what the opponent does. The ideas of game theory are used in the social sciences as an analytical tool, rather than a guide to public policy decision making. Perhaps the utility of game theory lies in its ability to provide concepts that can be applied in public policy making and decision taking. Policy may also be viewed as a system with outputs in policy analysis and is next examined.

Systems modelling

A system refers to two or more persons or institutions engaged in patterned or structured interactions that are guided by shared values and directed toward the attainment of some defined goal or set of goals. A policy system refers to the overall institutional framework within which policies are made. It involves interrelationships among three elements of policy making, namely, public policies, policy stakeholders, and policy environment.

A system is usually characterized by a definite, identifiable population, boundaries (defined by shared values and goals), patterned behaviour, and direction. Conceptually, the word ''system'' as used in political science and policy analysis, implies identifiable set of institutions, interrelationships and activities in a society, which function to change demands into authoritative decisions that require support of the whole of society. The system responds to its environmental forces in order to preserve itself.

Public policy may be studied for three purely scientific reasons. Firstly, public policy is studied in order to understand the causes and consequences of policy decisions and determine the linkages between socio-economic forces, and political system characteristics that operate to shape the content of policy. If public policy is viewed as an independent variable we could improve our understanding of the linkages between socio-economic forces, political processes and public policy. Public policy can also be studied for professional reasons in order to apply social science knowledge to solve practical problems. Factual knowledge helps in prescribing treatment for the ills of society. Finally, for political expediency public policy has to be studied to enable a nation to adopt the 'right' policies to achieve the 'right' goals (Dye, 1984).

The systems approach in the study of public policy enables one to examine the impact of policies on social and economic conditions of a country, community or an interest group. Policy analysis helps to answer descriptive questions about what policies can or cannot do. For example, what promise does the National Health Insurance Scheme have for the people of Ghana and what are the powers and functions of the Environmental Protection Agency, are some descriptive questions that policies seek to answer. Through

policy analysis one gets to learn about and describe what government does or is not doing. Thus, public policy may be conceptualized as a production system that receives inputs and processes them to produce outputs or outcomes (Fig.5)

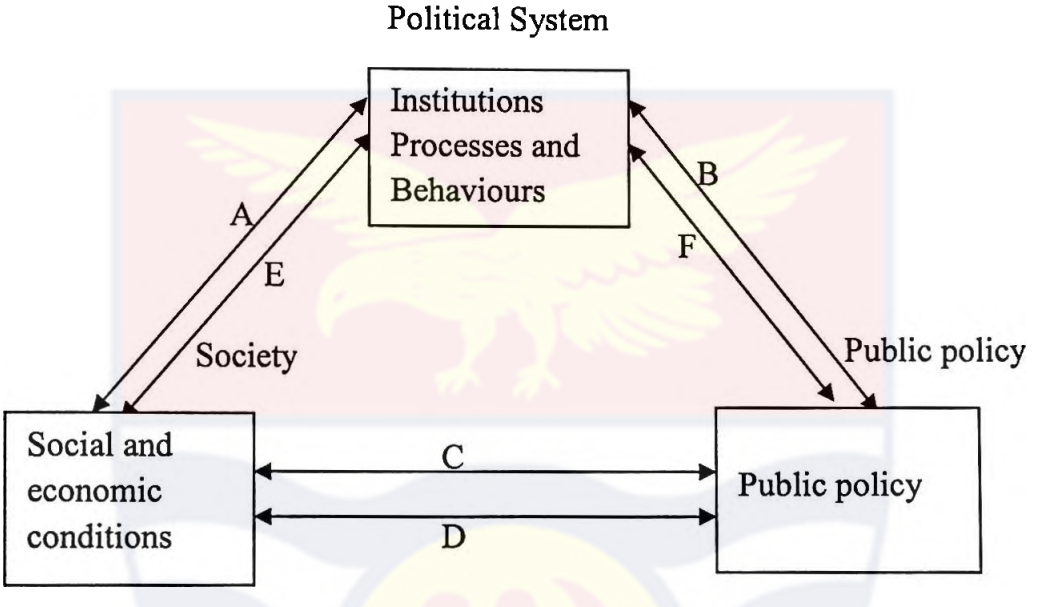

Fig. 5: Elements of a policy system

Source: Dye (1984).

The diagram shows that there are six identifiable linkages among social and economic conditions, characteristics of the political system and the content of public policy. Linkage A tries to enquire into the effects of environmental forces and conditions on political and institutions of government, processes and behaviours. Linkage B seeks to examine the effects of political system and institutions of governance, processes and behaviours on public policies, while Linkage C looks at the effects of environmental forces and social conditions on the public policies. Interrelationship D tries to answer questions about the feedback effects of public policies on

environmental forces and conditions, while Linkage E provides answers to the feedback effects of political and government institutions, processes and behaviours on environmental forces and conditions. Finally, Interrelationship F examines the feedback effects of public policies on political and governmental institutions, processes and behaviours. The broader policy environment consists of the community, social conditions and institutions of the political sub-system and their interrelated linkages (Dye, 1984).

Thus, public policy analysis essentially tries to describe and explain rather than prescribe socially desirable activities or non-activities of government. Policy analysis also tries to rigorously search for the causes and consequences of policies, and aims at developing and testing propositions about causes and consequences of public policies.

The action of a system is known as a process, which is a dynamic concept that applies to any number of patterned activities in a system. Components of a social system may also include population, social structure, interaction, shared values and goals (Jones, 1984). Community demands for solutions to public problems constitute the raw inputs. These public problems are in the form of publicized issues, protests, petitions and demonstrations, which require attention of the institutions of the political sub-system.

Policy inputs are processed through the political system into outputs and outcomes, which may be desirable or unwanted impact effects on community social conditions of living. Every input and its output or outcome shall be mediated by prevailing community ethics or social values and ideology. The whole business of getting public problems on the agenda table and processing them is characterized by forward and backward feedbacks.

Thus, public policy may be viewed as a response of a political system to forces or policy inputs upon government. Conditions or circumstances that are external to the political system make up the broader environment. The political system on the other hand, refers to the group of interrelated structures and processes that function authoritatively to allocate values for society. Outputs of a political system are those authoritative value allocations of the system, which allocations also constitute public policy.

Systems theory presents public policy as an output of the political sub-system. Usually, demands arise whenever individuals or groups, in reaction to perceived or real environmental forces, act to influence policy. When individuals and groups accept an outcome of elections, pay taxes, obey laws and generally conform to policy decisions, then they are said to lend support for the political system. According to systems theory, the political system mediates to arrange co-operation and compromises among the conflicting interests of groups.

The value of systems modelling in public policy analysis lies in its ability to identify significant variables of the environment, which generate policy inputs into the political system. On the reverse side, it helps in the identification of those variables of the policy system, which enable it to transform demands into policy outputs and impacts. Systems modelling also facilitate analysis into how environmental inputs affect the political system, how political system characteristics affect public policy and finally, how public policy affects both the environment and the political system, through system feedback.

Out of well over eight conceptual frameworks on public policy analysis encountered during the review of related literature, Dye's (1984) political systems model was identified and adapted as an appropriate model that would serve as a lighthouse to the current study.

Conceptual framework chosen for the study

Public policy conceptual frameworks are usually employed to identify, simply, describe and clarify otherwise complex analytical issues, in order to facilitate focused communication on the essential aspects of social life. Public policy models direct the analyst's efforts at better understanding the causes, processes and consequences of policies by filtering the essential from the irrelevant and to suggest explanations. Depending upon the nature of the policy issue under investigation, any or a combination of the eight conceptual frameworks discussed in the preceding sections could be adopted to describe, explain and even predict outcomes and consequences of policies.

The choice of any particular or set of models will, however, all depend upon the explanatory and predictive power of the selected model (s). A good model must be axiological or pragmatic and parsimonious enough for others to understand what is being discussed. The choice of the political systems model (SM) for the study was motivated by its potential to guide the description, analysis and explanation of community perception of the impact of public conservation policy, on the social conditions of residents of villages living along the borders of the Mole National Park.

The political systems conceptual framework was adapted from Dye's (1984) systems model, and was preferred over all others because of its

flexibility or versatility and compatibility with other models. It can be applied virtually at every stage of policy analysis, right from the agenda setting, policy processing, and policy decision making to implementation, monitoring and evaluation.

Besides sharing the weaknesses of models in general, arising from the process of abstraction, selection and simplification, the major drawback of systems modelling lies in its omnibus or complex character, with a potential for resulting in information overload and analytical complexity. The ever changing and forwards and backwards feedback character of policy analysis, at each and every stage of the policymaking process, is partly to blame for the shortcoming.

Structure and functioning of the Policy Systems Model

The policy systems model has a structural functionalist and, therefore, a teleological character, and is depicted in Figure 6. First, it has a policy environment, which is made up of both physical and social elements (Box1). The policy environment encompasses any conditions, policy problems, events or issues identified as being external to the boundary of the political system. So broadly conceptualized, the policy environment includes geographic or physical variables such as the topography, climate and natural resources; social structure; political culture; the economic sub-system and such demographic variables as population size and it's spatial and age distribution. Policy environment is contextually specific and usually refers to those events surrounding a policy issue. The policy environment, therefore, influences

policy stakeholders and policies, which also affect the policy environment in turn.

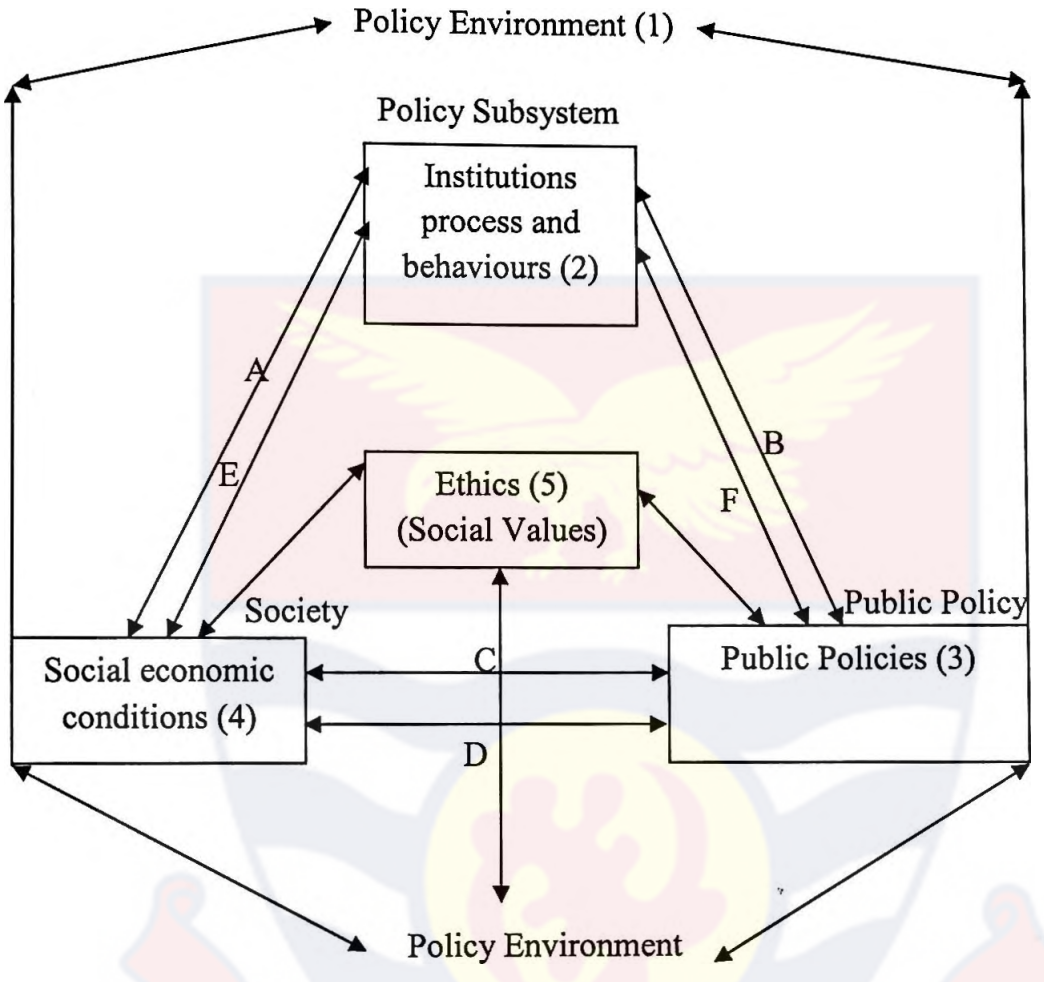

Figure 6: The Policy Systems Model

Source: Adapted from Dye, (1984).

Box 2 represents the political subsystem or the input processing component of the model. It is from the policy environment that policy inputs are derived and supplied to the political system. In the context of the study inputs are in the form of the demands made for return of lands, compensation, petitions, demonstrations, media publicity and what have you by the communities and other identifiable interest groups in the Mole catchments. These inputs must be public problems or issues of public interest and capable

of eliciting the support of the society or some significant section of the community.

The political system consists of sub-structures like the constitution, the executive, legislature, judiciary, bureaucracy or governmental institutions, power structures, civil society interest groups, the elite and the mass media.

On the other hand, box 3 contains the public officialdom, policy decisions, laws, administrative directives, which are collectively designated public policies. The fourth box, which is actually a subset of the broader environment, represents the social and economic conditions components of the policy system and has elements such as wealth, urbanization and industrialization, economic sub-system, educational levels, health and nutrition status, class structure, ethnic composition and religious make-up as well as defence, energy, taxation and spending policies of government. Like all models, the systems model is structure-functionalist in character and operates on the basis of a number of assumptions.

Box 5 represents the social values and community. It highlights the interrelationships and interactions among the policy environment, political system, public policies and the community social conditions, which are mediated by the ethics or social and ideological values of the public policy system. The model functions on the basis of a number of assumptions.

Assumptions of the Policy Systems Model (PSM)

From the structure and functioning of the PSM a number of assumptions may be deduced. First, the policy systems model assumes the presence of sets of identifiable institutions and activity centres, which function

to transform demands into authoritative decisions requiring the support of the whole society. These demands emanate from individuals, private and public officials and interest groups in response to real or perceived environmental problems, pressing issues, conditions and events that are of social significance.

On the basis of these real or subjective problems and issues of social importance, various stakeholders in several ways seek to affect and are affected by public policy. Support on the other hand, refers to when individuals and groups accept outcomes, such as election results, obey laws, pay taxes, and generally conform to policy decisions or directions on the basis of their mutual acceptance of rules of the game.

The systems model also assumes that the elements of the system are functionally interrelated and have the ability to resolve conflicting demands, through coalition building, compromises and co-operation in order to guarantee the stability of the system.

Another assumption of the systems model is that systems are, always invariably always, capable of reacting appropriately to their environmental forces. Thus, the political, public policy, economic and social systems tend to function smoothly to attain systematic equilibrium via the mediation of shared ethnics or social values and ideologies.

Finally, the framework assumes that every system is always capable of reacting and accommodating even conflicting demands of different groups and other environmental challenges, in order to preserve not only the status quo, but also its structures and functioning as well.

Merits and demerits of the Policy Systems Model

The policy systems model has both merits and demerits, when it is applied in public policy analysis. The PSM framework has a number of shortcomings, in spite of its analytical power and superiority over some other conceptual models used in public policy analysis. Models are in general, abstractions or representations of real life situations. The PSM is an over simplification of reality. The dynamics of the policy making process, output and policy outcomes or impacts are so complex that it is difficult, if not impossible, and even pointless, to attempt structure-functionalist analyses of policies. The processes of policy formulation and implementation are inseparable because as policy is being formulated, it is at the same time being implemented (Hall & Jenkins, 1995).

Since the PSM lays more emphasis on structure-functionalist theorizing, it can be said to be teleological because it analyses the result rather than the causes of actions or events. Indeed, actions are analysed in terms of their contribution to systemic stability and survival. Structure-functionalism is based on an organic paradigm, which tends to view society as a systematic, interrelated, evolving and equilibrium oriented whole.

Although the systems model is often described as being dynamic, a closer look also reveals that it has an equally conservation perspective, in the sense that it emphasizes systematic equilibrium, and fails to answer the question, what is functional and what is not.

The PSM is also deficient in its attempt at explaining and analysing regular occurring patterns of institutional behaviour. There are many informal groups and modes of behaviour, which are hardly institutionalized and

nevertheless affect many social actions, including policymaking and policy implementation with attendant consequences in several ways.

Another fundamental flaw of the systems model emanates from its heroic assumption that the policy stakeholders and other subsystems operate to attain stability for the common good of society. Merely aggregating individual and group values and levels of satisfaction with the outcome of an event will not necessarily achieve universally accepted resolution of conflicting social demands and values. Even in cases that involve two or three persons or alternate lines of action, there is still the difficulty of choosing or satisfying everybody under all conditions. This is what has been referred to as Arrow's impossibility theorem. As a matter of fact individual and group interests may appear to exhibit some degree of characteristic permanence but in truth values change over time and under various circumstances.

Moreover society's support for a policy could come about as a result of other variables, like threat and the use of state monopolized force, ability to produce reasonably satisfying outputs, and a deeply rooted attachment and belief in the system's ability to eventually satisfy stakeholders. It is equally plausible to expect system failures, as exemplified in conflicts, civil wars and rebellions, which demonstrates that it is an illusion to assume a system's stability or tendency to achieve stability and equilibrium without disagreements, violence and unintended consequences.

In spite of the foregoing difficulties associated with the PSM framework, its utility, as a powerful analytical tool, is not in doubt at all. The utility of the PSM lies in its ability to assist analysts to identify the significant dimensions of the environment from, which demands are generated, and the

support for the political system are enlisted. Systems modelling enable analysts to trace and keep track, in describing problem issue, agenda setting, and problem structuring. Thus, the model depicts an input-output-outcome framework that enables one to follow and understand the genesis and the process of decision-making and series of actions, which take place to convert policy inputs into outputs with their accompanying impacts.

Another merit of the PSM is that it enables the latter to transform demands into public policies and also preserve the political system overtime. The model also enables one to conceptualize policymaking from a structure-functionalist perspective. Sets of institutions, policy stake-holders, and activities in society collectively function to iron out conflicting demands and transform such demands into authoritative decisions, which require the support of the whole society, and are identified through the application of the integrated dynamic systems framework of policy analysis. The concept of a "system" portrays a structure with interrelated parts. Policy inputs, in the form of demands and support are received into the political system from individuals, groups and other stakeholders, in response to real or subjective environmental conditions. These stakeholders act in various ways to affect and are influenced by public policy. Support occurs when individuals or groups accept such policy outcomes like election results, meet tax obligations, obey laws and generally comply with policy decisions.

Furthermore, the integrated dynamic systems model facilitates examination of how environmental inputs affect the core characteristics of the political system. Availability of resources and the resulting socio-economic, cultural and value systems have been found to be capable of significantly

influencing a political system's ability to make and enforce public policies. In addition, the systems framework helps analysts to find out how a political system's characteristics affect context of public policies. Various systems of political organization tend to exhibit differences in relation to what, how, where and even who decides which policies to make or enforce.

In the tourism context, the policy framework for a community's tourism policy may differ among different political systems. It can, therefore, be hypothesized that tourism public policies emanating from pluralist democratic regimes, are more likely to significantly differ from those emerging from totalitarian political system, if at all such political systems still exist. Indeed, following the demise of the Soviet Socialist system and the fall of the Berlin wall and the wind of change currently blowing all over the world, one doubts whether there is a place to totalitarian regimes any longer.

The systems model enables policy analysts to trace public policy effects via feedbacks from the policy environment, the socio-economic, cultural and political system. Systems modelling enable theorizing forward and backward.

Summary

This chapter provided a brief historical overview of the trajectory of the conceptual debate on man-environment interface, and also discussed the contentious issue of public forest conservation and community interests. The study' independent and dependent variables re also identified and discussed.

The purpose was to distinguish between pre-modernist and post-modernist thinking on man and environment relationships. It looked at man

both as a part and parcel of the environment, and as an agent or modifier of the same environment. Apart from giving a sense of where we are coming from, where we are, and where we are going the review tried to demonstrate the link between community perception of the environment and forests conservation politics as an avenue for realizing group interests.

A conceptual framework was chosen for the present study in order to inform, guide and assist in the description, analysis and explanation of causes and consequences of public policy that created the MNP, on the social conditions of communities living along its frontiers. The structure, assumptions, functioning, merits and demerits of the conceptual framework were also discussed.

CHAPTER FOUR

RESEARCH METHODOLOGY

Introduction

Chapter Three reviewed current theory on nature conservation and discussed a sample of analytical conceptual frameworks on public nature conservation policy in order to choose a suitable model to guide the study. The literature search identified and cited and discussed examples of methods employed by other researchers in their attempts to solve similar problems. The objective was to give additional background information and further contextualize and highlight the significance of the current research problem.

This chapter provides a detailed description of the research design and strategies employed to carry out the study in order to allow for reasonable replication. The data collection methods adopted are intended to maximally capture the experiences, opinions, feelings, predispositions, attitudes and demographic characteristics of respondents towards various aspects of public nature conservation policy practices at the Mole National Park catchments. The chapter also discusses a sample of public policy research designs and incorporates some essential features of those designs into the current study's research design.

Research design

The general objective of the study suggested the need to explore, describe and explain cause-effect of a retrospective event. Therefore, a research design that uses multiple forms of data collection and analyses was adopted. Though relatively new, mixed methods research designing is fast gaining popularity, especially in the social and human sciences (Creswell, 1999, 2000 & 2002; Punch, 2000; Rubin & Babbie, 2001; Bryman, 2004). The study was also phenomenological and intended to identify 'lived experiences' of people, particularly the need for a subjective understanding of how the local people lived, felt and perceived their environment. The research methods were specifically designed to permit collection of data from a spatially dispersed population of settlements around the MNP area, staff of some relevant government agencies, and a transient population of tourists to the area at the time of the survey.

The use of the mixed methods research design, however, had its challenges. It required greater effort and expertise to sufficiently study one or a set of separate events with many methods. It was equally difficult for the team to compare results of two analyses that used different forms of data collection, while at the same time being able to resolve discrepancies in the findings (Green, Caracelli & Graham, 1997). For instance, during some focus group discussions with the local people, it was apparent that there were discrepancies between what they said about the high levels of antagonism between the local people on the one hand and the Park staff on the other.

On the balance the quantitative approach was used conjointly with qualitative strategy because of the quantitative method's positivist or empirical claims to knowledge acquired through experimentation, surveys and collection of data via a predetermined instrument. On the other hand, the qualitative approach which emphasized the constructionist perspective provided opportunity to access multiple meanings of individual experiences as well as facilitating the possible development of theory (Crotty, 1998). Finally, the mixed methods research strategy was adopted for the study because of its technical feasibility and maximal effectiveness under the prevailing research setting and constraints. The research design for the study is diagrammatically shown in Table 7.

Table 7: Mixed methods research design

Research:	Mixed methods that concurrently use quantitative and qualitative approaches to data collection and analysis
Knowledge claims:	Based on pragmatic assumptions, which combine both positivist and constructions claims to know-ledge.
Strategy of enquiry:	Multiple research design methods consisting of some experimentation and narrative.
Methods:	Use both open-ended observations and closed-ended questions obtained from a sample of a population

Source: Creswell (2003)

Table 7 shows that four major considerations shaped the decision on what kinds of mixed methods strategy to use. The first decision had to do with the implementation sequence of the quantitative and qualitative data gathering

strategies proposed for the study. The next decision centered on whether quantitative or qualitative information collection and analysis of information should be given priority. The study gave equal priority to both types of information collection and data analysis. The third decision was at what stage in the research process the two forms of information gathering and findings should be integrated.

Finally, a concurrent mixed methods research strategy consisting of both open-ended and closed-ended measures was used to obtain fairly large samples of populations. It was these considerations that informed and shaped the collection of the two main types of data needed by the study.

Types of data

Primary data were gathered to supplement secondary information obtained from official documents and publications of a number of state institutions, including the Ghana Wildlife Division of the Forestry Commission, Ghana Tourist Board, Ghana Statistical Service, the decentralized Ministries of Health, Food and Agriculture, Education, Science and Sports of the West Gonja District.

Information was collected through an application of both quantitative and qualitative methods of data gathering. Collection of primary data usually poses a challenge to researchers who have to deal with respondents residing in widely dispersed settlements with equally heterogeneous characteristics, such as those in the Mole catchments. The exercise required that appropriate sampling methods be employed and rigorously adhered to. Since a survey of the entire population was impossible, it was imperative to draw samples. Prior to detailing how the sampling process was carried out there was the need to

clearly define and delineate the target population as well as its sample frame and size.

Target population

The study's target population was defined to encompass the following:

i. All residents, 18 years of age or above, living in settlements not more than five kilometres from the Mole National Park boundary, and who have stayed in a community for not less than ten continuous years

ii. All public officials (employees) of Ghana Wildlife Division, the West Gonja District and its decentralized departments.

iii. Tourists to Mole National Park who were there for the specific objective of viewing wildlife or seeking some form of leisure, recreation, pleasure and to consume the eco- tourism support services at the Mole National Park.

The Ghana 2000 Population and Housing Census was the main source of information about the population of the over 27-settlements living around the MNP. Contacts were made to access and assess staff strengths as well as other relevant particulars of public sector employees of both the WGD and GWD. As a prelude to the identification and description of the study's sample frame and size the target population needed to be precisely defined.

Sample frame and size

The sample frame for the study comprised all residents of the over 27 settlements scattered around the boundary of the Mole National Park, and not

more than five kilometres from the frontier. A candidate should have had at least ten years continuous stay in the area and be 18 years of age or above. The ten year minimum residential threshold exposure to the effects of the creation of the park was considered long enough for subjects to be sufficiently subjected to the impact of public conservation policy, the treatment variable. It was also hypothesized that distance from the Park and length of stay are variables likely to influence respondents' feelings, opinions, expectations, experiences and attitude about effect of the MNP (a surrogate of public policy impact) on communities. The basic requirements for participation of public officials and tourists were the minimum age of 18 years, distance from the park, residential history, length of stay at the Park's catchments and other pieces of information on socio-demographic characteristics of GWD staff and tourists. Table 8 shows both planned and achieved sub-samples for the study

Table 8: Planned and achieved sample for the study

	Sample frame				
Type of sample	Number selected		Sample size		
	Villages	Households	Respondents	Planed	Actual
Displaced	11/27	10	3	330	316
Public officials	-	-	-	50	42
Non-displaced	9/12	10	3	270	264
Tourists	-	-	-	100	98
Total	20/39	20	6	650	622

Source: Fieldwork, 2008

Out of a planned total of sample of 650 subjects, 622 (95.69%) respondents were successfully covered by the survey. Non-response was 28(4.31%). Having outlined the sample frame and sample size it was also essential to detail the sampling design and sample selection procedure.

Sampling procedure

The population of the area was found to be culturally and linguistically heterogeneous and spatially dispersed. The accuracy of findings was therefore going to be largely determined by the sampling methods used and a sufficiently large sample size. Indeed, the greater the heterogeneity of the population, the larger the sample necessary to achieve an acceptable level of reliability. Both probability and non-probability sampling techniques were used to select respondents for the study. Mole Park currently has four administrative range zones but for the convenience of the study the area was rather divided into three geographic zones: the Samole-Lovi Basin, the Mole-Kulpwan Basin, and the Gbantala Triangle or the Eastern Watershed. Sample households were chosen on the basis of a clustered, stratified and proportional random generator, which were designated grid locations within each census district (CD). As there were generally, a near equal number of households in each CD, the approach permitted equal probability of including every household in the sample. Eleven communities were selected from out of 27 villages, and from each village, 10 households with three respondents on an average were then selected and informed in advance of the intended visits of the survey team.

To give the selection exercise a touch of gender equity, at least one female, was to be included in each household. An achieved sample of 286 respondents was randomly chosen from 10 villages from in geographic areas.

Specifically, multi-stage-stratified cluster sampling techniques were used to select group of local residents. Settlements were clustered according to size of population, distance from the frontier of the Mole Park, ethnicity, sex and length of stay in the community. After listing households in each village, a proportional random lotto selection process followed. The study achieved a sample of 580 Local community members and another 42 purposively and randomly chosen public officials of GWD and WGD. An accidental sample of 98 tourists was also covered by the survey Table 9 shows achieved samples of local people per zone.

Table 9: Achieved sample of local people by zone, type of community, sex and proportion of sub-sample

Zone	Displaced		Non-displaced		Total	Percent
	Male	Female	Male	Female		
Samole-Lovi Basin	62	35	25	15	137	23.62
Gbantala Triangle	92	35	82	45	254	43.79
Mole-Kulpwan Basin	60	32	68	29	189	32.59
Total	214	102	175	89	580	100.00

Source: Fieldwork, 2008

Choice of the sample selection procedures for the resident population of the area was dictated by the type of research design. It was also intended to reduce data collection costs in terms of interviewer travel time and expenses,

as well as the need to list elements from a widely dispersed population. Additionally, clustering reduces costs by allowing the listing of only selected clusters instead of the entire population. By increasing the number of clusters the intent was to reduce sampling error at an early stage of the survey (Henry, 1990). Stratification and random selection of respondents does not only contribute to sampling efficiency, but would in addition, increase precision of estimates by systematically introducing variability or homogeneity into a sample from the population. Moreover, blending stratified random sampling with clustering is comparable, in precision, to a larger simple random sample, so long as the stratifying variables are related to the constructs under observation.

There were other compelling reasons for adopting a multi-stage stratified random sampling technique. Persons who have actually experienced an event are in a more excellent position to evaluate and report about the event than persons not affected by it. Victims of an event usually have their own feelings, perceptions and opinions about their experiences. Persons who actually experience an event are also likely to be more knowledgeable about the current socio-economic cultural and political effects or consequences of the event than those who have not experienced the event. Clustering was, therefore, meant to ensure that such persons were not left out.

However, people who are emotionally crushed by an event tend to have impairments, which hinder their ability to recall or rehearse their sordid experiences. Other respondents may even decline to co-operate as a result of the fear of public disclosure of personal information. Indeed, at the start of the survey the research team realized that some community members were

suspecting the team members to be criminal investigators who were trying to track down poachers for the Department of Game and Wildlife. For example, At Kabampe village a group of four young men, who were not in the village when a meeting was called by the chief to inform residents about our identity and purpose of visit, almost beat up two research assistants because the young men suspected them to be spies working for the Mole National Park. A 25-year old male participant had this to say after responding to the research questionnaire: "I have tried to be honest. I hope I won't lose my job or be arrested and victimized''

Thus, during times of litigation and agitation there are fears of victimization and suspicion about a researcher's true motives for requesting personal information (Foddy, 1993). Apart from the local people, the staffs of two government agencies were important sources of information because they are well trained, knowledgeable and privileged to have access to vital pieces of information. It was, however, possible for them to be biased and deliberately give misinformation about some aspects of the phenomenon under investigation.

As a necessary part of a mixed-methods strategy, the study made use of relevant secondary data, especially official records and publications of GWD, regional and national agencies like the Statistics Department, Ministry of Tourism and Diaspora Relations and Ghana Tourist Board. They were invaluable sources of data to complement primary data sources. Indeed, there were adequately reliable social indicator data in those secondary information sources, which were profitably organized, analysed and used to describe and explain some causes and effects of public nature conservation policy outcomes

on community social conditions. The process of selecting samples then followed the sampling design.

Every individual in each household and office was contacted first to be screened to ensure that the potential respondent qualified according to the study's definition of a local resident, public official or a tourist. The subject was then told of the purpose of the exercise, and politely requested to react to a battery of open-ended and closed-ended questions being filled out by the research team. Residents of every household were at least visited three times before interviewers could be referred to replacement households. Where appropriate, especially for public officials and tourists, the questionnaire was left with respondents for self-completion, and picked up at an appointed time during the same day.

Five hundred copies of questionnaires were administered to the sample of local people and public officers. Another 120 forms of questionnaire II were given out to tourists. The overall response rate of 92.6% had generated an adequate aggregate sample of 426 respondents. Both the sample size and response rate were therefore sufficient to assume that they were representative of the survey population. Mixed methods of collecting data call for multiple measuring tools. The next section describes the instruments developed to obtain the required primary data to inform the study.

Instruments

The research design required triangulation at both instrument design and data collection phases of the research process. Two instruments were developed to measure and record relevant data elicited from respondents.

The first instrument consisted of a face-to-face interview protocol containing both open- ended and close- ended questions run on a four-point Likert scale. The purpose of the research was to measure or observe the demographic characteristics, behaviour and attitudes of the local population towards tourists and tourism development at the Mole National Park. The same questionnaire was self-administered or filled out by officials of the GWD and the WGDA, and collected back by research assistants. The second instrument was also a self- administered questionnaire, completed by an accidental sample of tourists at the Park. Of the 500 forms printed, 460 were distributed for the survey. While 426 copies were retrieved and accepted, a total of 34 forms representing (7.4%) were declared either incomplete or not returned.

The instrument captured respondent's demographic characteristics, opinions, perceptions, expectations, beliefs, experiences or knowledge and feelings about various aspects of the effects of the MNP on community social conditions. It contained the following broad issues:

i. Perceptions and expectations of the local people about the impact of the MNP.

ii. Views on further eco-tourism development vis-à-vis other regional development options and public funding of MNP for bio-diversity conservation and eco-tourist promotion.

iii. Socio-economic and demographic questions (including incomes, occupations, residential history, marital and employment status, and the level of involvement in tourism activities).

Subjects were requested to react to series of positive and negative statements about various aspects of public policy on a four- point Likert scale (very strongly agreed, strongly disagreed, very strongly disagreed and very strongly disagreed). A four-point instead of the conventional five-point Likert Scale was adopted because it did not encourage respondents to refuse to take a categorical stand on the issues by feigning ignorance.

The battery of statements was derived from previous published papers in the field of public policy analysis and tourism studies but modified to meet requirements of the study. For enhanced validity and reliability, colleagues and senior academic members of the Department of Geography and Regional Planning and the Department of Hospitality and Tourism Management of the University of Cape Coast, were solicited to moderate the questionnaires

The observations and instrument measures cover 8 general areas or issues:

i. Community involvement in policy decision to create the Mole Park
ii. Economic and employment impacts
iii. Impacts on cultural and traditional authority
iv. Fauna and flora growth or bio-conservation impacts,
v. Community development,
vi. Quality of life (QOL) impacts,
vii. Level of community involvement in Park's management and activities
viii. Public funding and future development options for the MNP.

Data analysis

Since quantitative and qualitative techniques were employed to generate the required data for the study, both parametric and distribution free statistical analyses were used to analyse the data and to test the hypotheses of the study. Factor solutions, using varimax rotation methods had accounted for the total variance, while Cronbach alpha of 0.5 and above was deemed to be an adequate measure of strength of reliability and internal consistency of such factors as economic and employment benefits, quality of life (QOL), increases in flora and fauna numbers, community development and cultural and traditional authority/political impacts.

Adequacy or otherwise of sample size of the groups were also assessed in terms of the statistical significance, amount of power required and the effect of size or level of difference in the means between public officials and the local people and among the three geographic areas from which the local communities' sample was chosen (expressed in standard deviations). Statistical measures of significance set by the three are 0.5 for alpha, 0.5 for power and 0.80 for effect.

Descriptive statistics, which involved organizing, presenting and summarizing of data, were undertaken as a prelude to the analyses and generalization of results of the study. Some of these descriptive statistics included measures of central tendency like the means, median, mode, variance, standard deviation and range, which were calculated, tabulated and diagrammed to display various socio-demographic characteristics of respondents. Lipsey (1990), Gordon & Gordon (1994) and Gravetter & Wallnau (2000) recommend the use of parametric inferential statistical

measures for the social and human sciences. Therefore, some of the inferential statistical measures adopted by the study to test the hypotheses included Chi-square statistic as well as F and t-tests. Since the research design was intended to measure an ex-post facto event, it was also appropriate to use t-tests, chi-square and analyses of variance (ANOVA) in order to determine any differences, especially among the groups of local people from three geographic areas of the Mole National Park.

Validity and reliability procedures

The procedure for checking the accuracy of findings involved identification and adoption of a number of commonly used strategies. The study used a prolonged period of 14 months in the field in order to develop an in-depth understanding of the phenomenon under investigation. It was equally important to convey details about the site and the people in order to lend credibility to findings and the narrative. At least 4 months were spent in each of the three geographic areas designated for the fieldwork Peer debriefing was another method adopted to ensure accuracy of findings. This involved getting someone to review and ask questions for further clarification in order to ensure congruence with others and the author's findings. Respondents were asked to recheck the accuracy of their findings after the survey.

A merger of different sources of data also made a strong case for the validity of findings of the study. Finally, making available to others the sample items from the instrument, types of scales used, introductory letters and items on demographics, attitudes and behaviour were some of the measures taken to ensure the validity and reliability of findings of the study. Studies by

Tashakkori and Teddlie (2003) and David and Sutton (2004) have recommended the adoption of similar steps to ensure validity and reliability in a study.

Independent and dependent variables

A variable or construct refers to any measurable or observable attribute or characteristic of an individual, phenomenon, organization or event. Examples include age, socio-economic status, gender, attitude and behaviours like political power, economic deprivation, social control and racism (Neumann, 2000; Creswell, 2002; Sealle, 2004). Variables have two distinguished characteristics in terms of their temporal order and measurement or observation.

Temporal order refers to how one variable precedes the other in time. It is the time order that is used to designate one variable as the probable cause and another as the effect. Variables may be described as independent, intervening, or mediating, and dependent. An independent variable is one, which probably causes influences or affects another variable and is responsible for an outcome. Sometimes independent variables are referred to in the literature as treatment, antecedent, manipulated or predictor variables.

A dependent variable, on the other hand, is a variable that depends on an independent variable for an outcome, a result or effect. Dependent variables are also variously referred to as outcome, criterion and effect variables. A third class of variable is the intervening variable, which stand between the predictor and the effect variables, intervening variables tend to mediate the effect of the independent variable on the dependent variable.

There are also two other types of variables usually referred to as control and confounding variables. Control variables are a special kind of independent variables usually measured in a study because they have the potential to influence the dependent variable. It is for this reason that statistical procedure like analysis of variance are used to control for these variables. Control variables may demographic or personal variables that must be controlled in order to determine the true influence of the independent variable on the dependent one or ones.

Confounding or spurious variables are another type of variables not usually measured or observed in a study even though they exist. This is because the influence of confounding variables can hardly be detected although they may influence both the independent and the dependent variables.

Independent variable(s)

The predictor or presumed variable identified for the study is public policy. This has been contextually defined as government statements of intent, legislative instrument L.I 710 and its subsequent amendments, state delineation of powers of authority, regulations, strategic plans, methods of allocating resources as well as administrative processes and practices, which are directed towards the achievement of stated objectives and solution of social problems. With reference to the MNP, policy outputs like anti-poaching laws, establishment of GWD, local and regional administrative structures all constitute public policy. Other independent variables were identified to include demographic characteristics like age, ethnicity, sex, gender and

religious affiliation. Their interrelationship with or causal links to such dependent variables as respondents' incomes, attitudes and behaviour patterns would be traced in the section devoted to hypotheses testing.

Dependent variables

The dependent or criterion variables of the study were community social conditions. According to Dunn (1994) the concept 'social conditions' refers to both ''the internal (Subjective and perceptual) and the external (social and physical) contexts of human existence'' in a given locality and defined in terms of social indicators (pp. 346-405). Some social conditions identified by the study are annual income, level of education, nutritional status and access to pipe-borne water, social mobility, agricultural productivity, health and education services, phone lines and kilometres of motor-able highways, per capita and life expectancy. Others were public safety, employment, housing, social values and attitudes, level of technology development, character of the economy, extent of urbanization, occupational structure and ethnic diversity and quality of life dimension of community social conditions.

The research design for the study was derived from previous and commonly used designs encountered in the literature. In order to operationalize and measure the effects of public policy on communities in the Mole National Park catchments it was appropriate to identify and describe some public policy impact research designs commonly employed in policy impact analysis.

Public policy impact research designs

In order to significantly overcome some of the intractable problems of establishing and assigning causal links between a policy's outcomes and impact on intended and untargeted beneficiaries various types of research designs are available. The study, however, chose to focus on three of such relevant designs, namely, the experimental, non-experimental, and quasi experimental.

Experimental research designs

There are several variants of experimental research designs, but the general rationale for conducting an experiment, is to test a hypothesis, which asserts that one variable causes a change in another variable (Baker, 1994; Allen & Babbie, 2001; Creswell, 2003). The pre-test-post-test control group involves a random assignment of participants or subjects into two groups. Both groups are subjected to pre-test and post-test conditions, but the treatment group is exposed to a presumed independent variable as depicted in Fig. 7.

Group A R……O……X……..

Group B R……O……..……..

Fig 7: Pre-test post-test only control group research design

Source: Singleton (1991)

In the diagram, R represents randomly assigned groups (A and B). The pre-test observed O represents conditions to which both groups have been subjected prior to implementation of MNP. But X, which only group A, has been subjected to, represents the people affected. The infamous ''Tuskegee Study'' reported in Jones (1981) is a classic example of an experimental research design although it raised eyebrows because of its serious unethical and racist underpinnings. The experiment basically, involved two groups, made up of an experimental group of 399 and a control group of 201 black male syphilis patients. The experimental group was given treatment, while the control group was denied treatment of any kind. It was unethical to subject human beings to that type of experiment, and was a serious indictment on the United States Public Services, which carried out the experiment between 1932 and 1972.

Non-experimental designs

Though not commonly used in studies of public policy analysis, the non-experimental research design is based on the researcher's simple assumption that there exists some connection between the availability or level of a programme and a condition in a target population. For example, the result of adequate nutritional status of children, who receive school lunches through an NGO or government School Feeding Programme, cannot be necessarily attributed to the introduction of the school lunches.

Related to this research design is the pre-programmed analysis, where the condition of the target group prior to the introduction of the programme is compared with the conditions after the implementation A serious problem with such a research design is that without additional information, findings will be

inconclusive because confounding factors such as demographic, economic and attitudinal changes could partly account for the results or conclusions. One way to improve upon the pre-programme-post-programme design is to carefully establish parameters of change before the introduction of a new policy, though its vulnerability to confounding or extraneous variables can hardly be avoided. This study has adopted by the class of quasi-experimental research designs that can overcome some of the shortcomings of both pure experimental and quasi-experimental research designs.

Quasi-experimental research designs

A third class of research design, which has gained much popularity with public policy analysis, is the quasi-experimental research design. For legal, ethical and pragmatic considerations, it may be impossible to employ a true experimental design in certain research settings. Difficulties of random assignment of groups and control of subjects' experiences call for adoption of quasi-experimental design: so-called because they take an experimental approach without exercising full experimental control. Under this design the researcher tries to determine policy impact by contrasting performance between an exposed group and a non-equivalent control group (not exposed to the policy or treatment). Fig.8 depicts a post-test only control group research design.

	X	O^1
R		O^2

Figure 8: The post-test only control group research design

Source; Singleton (1991)

The post-test only research design is the simplest of true experimental designs and incorporates random assignment of subjects to both treatment and control groups, introduction of the independent variable to the treatment sample and a post-treatment measurement of the dependent variable for both groups. The post-test only research design has two advantages: firstly, it is more economical; in the second place it eliminates possibility of interaction between the pre-test and the experimental manipulation (Shadish, 1993; Conrad, 1994; McNeille & Chapman, 2004).

The study adopted an ex-post facto quasi-experimental design. Post-testing of only the control-group design is a popular quasi-experimental design, which controls any confounding effect of pre-test. Basically, it entails random division of subjects into two groups. A treatment is given only to the experimental group and post-test measurements taken of both groups. Two survey instruments, consisting of face-to-face interviewing of two sets of local people, but self- administered to public officials, on the one hand, and a second was self-administered to an accidental sample of 98 tourists to the Mole National Park.

One group represents the treatment sample, which has been significantly exposed to conservation policy outcomes (the treatment variable). The group had experienced forced evictions and currently stays less than five kilometres from the frontier of the MNP. Most of its members stayed in their communities for not less than twenty years and were subjected to anti-poaching and other restrictive laws enforced to prevent members from accessing resources of the Mole National Park.

A second group has never been displaced and stays in communities which are located between five and twenty kilometres from the Park boundary. In addition, there were two self-administered questionnaires; one for purposively selected public officials and the other for an accidental sample of tourists.

Apart from the questionnaire for visitors to the Park, that for public officials was similar, in content and structure, to the one for the experimental and control groups of local people. Both public officials and the experimental groups were to react to the same statement sets relating to seven impact dimensions. These were the economic and employment, cultural, environment, quality of life, community development, level of community involvement in activities of the Park, and public funding for future development of the Mole Park. For example, a sample of statement sets, which respondents were asked to react to had included the following:

(i) Creation of Mole National Park has not increased the numbers of plants and animals in the area.

(ii) Public funding/development of MNP is not a waste of the taxpayer's money.

(iii) Mole Park has made the local people economically better off.

(iv) Tourists, coming to the Park, contribute to increased crime in the area

(v) Serving visitors from different cultures undermines our own culture.

Respondents were then expected to react to these statement sets by including their degree of agreement or disagreement which ranged from

strongly agree, agree to disagree and strongly disagree. Content of questionnaires included respondents' expectations, perceptions, attitudes, feelings, opinions and their socio demographic characteristics. The questionnaire for visitors to the Park also covered suggestions to management for enhancing the satisfaction and experience of visitors at the MNP, and socio-demographic profiles of tourists.

The rationale for adopting an ex-post factor quasi-experimental research design was to circumvent the three strict methodological requirements of a pure experimental design: firstly, evidence of concomitant variation between public policy, the presumed independent variable, and social conditions as the collective dependent variable. Secondly, the evidence that the dependent variable did not occur prior to the independent variable(s), and thirdly, evidence ruling out other plausible causal factor (Neumann, 2000; Punch, 2000; Robson, 2002).

Quasi-experimental designs involve experiments, which have treatment outcome measures and experimental units, but do not necessarily use random assignment to create the comparisons from which treatment caused change is inferred (Cook & Campbell, 1979; Dunne, 1995; Creswell, 2003). According to Manheim & Rich (1991) if properly executed, the result is a research design that allows one to proceed "as if we have exercised all the control characteristics of a true experiment, and....provide a sound logical basis for causal inferences" (p.78).

Basically, there are three main types of quasi-experimental research designs: non-equivalent group designs, time series designs and ex-facto designs. In a non-equivalent research design, one group receives an

experimental treatment, while a comparison group does not. Time series design involve a series of observations both prior to and following the introduction of the independent variable before and after the experiment. External influences are assumed to be constant. Essentially, time series experiments involve comparing predicted values of the dependent variable to the actual observed values in the course of the study. Any observed differences in the two sets of values can then be interpreted as indicative of the effect of the independent variable (Cook & Campbell, 1979; Salman, 1992). There are many variants of time series experimental designs but in general, such designs require that the researchers attempt to determine what variables, other than the independent variable, may have caused changes in the values of the dependent variables. Researchers then devise a method of estimating the proportion of any observed changes that each accounts for.

The ex-post facto designs are "efforts at causal inferences based on measures taken all at the same time with different levels of both effects and exposures to presumed causes, being measured as they occur naturally, without any experimental intervention" (Cook & Campbell, 1979, p.6).

The use of ex-post facto quasi-experimental research design for the current study was dictated by the nature of the research problem and inadequacy of resources, in terms of time, money, personnel and materials. The design was also meant to establish internal validity, as well as determine treatment effects by eliminating plausible rival causal explanations of results of the experiment (Allen & Babbie, 2001; Creswell, 2003; Walliman, 2006). An ex-post facto quasi-experimental design allows the researcher to proceed as if he or she has set up an experiment many years ago, in which people have

been assigned to experimental groups. Members of one sample have been exposed to the independent variable, such as public conservation policy, while those of a control group, who are similar in several aspects, have not been exposed to the independent variable. In order to minimize respondent bias no pre-test is conducted but additional data are gathered in the survey and used to cancel out any plausible rival hypothesis. Moreover reliance on random selection of samples can also cancel out the effects of extraneous variables the researcher has not been able to control for during the process of data analysis.

Summary

The chapter dealt with the research design, the tactics or strategies adopted and instruments developed to gather relevant information for the study. It provided detailed and accurate description of the research design, data types, target population, sample frame and size, sampling design, sampling procedure, data collection tools, research site, participants and methods of data analysis used to present the research findings. Others were the measures taken to ensure validity and reliability of findings of the study, and the specification of independent and dependent variables.

CHAPTER FIVE

SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Introduction

The tactics or strategies adopted and instruments developed to obtain relevant data for the study were described in the preceding methods section. The research design, target population, sample frame and size, sampling design, sampling procedure, data types and measuring instruments, research site, respondents and methods of data analysis used to present the research findings were described in detail. Other issues dealt with in the previous chapter were measures taken to ensure validity and reliability of findings of the study, and the specification of independent and dependent variables of the study. The chapter also provided a historical overview of the trajectory of the debate on man-environment relationship and examined man both as part and parcel of the environment and as an agent or modifier of it. The review of related literature was intended to demonstrate the link between community perception of environment and politics of forest and nature conservation. Finally, the issue of clash of interests between public and community interests was examined.

The aim of the present chapter is to discuss the data collected in relation to the socio-economic and demographic characteristics of three sets of respondents captured by the survey instrument. They comprised 580 local

people, 42 public officials and an accidental sample of 98 tourists to the Mole National Park. The socio-economic and demographic variables of respondents discussed are sex, age and length of stay in the community, marital, educational, occupation, income, and employment statuses, normal place of residence, visit duration, country of origin, and level of satisfaction with facilities and major activities undertaken.

Sex of respondents

The study also analysed the sex distribution of respondents. Table 10 shows the composition of respondents by sex and category of sub-sample.

Table 10: Category of respondents by sex

Type of respondent	n	Male		Female		Total
		%	n	%	n	
Displaced communities	214	29.7	102	14.2	316	43.9
Public officials	29	4.0	13	1.8	42	5.8
Non-displaced communities	175	24.3	89	12.4	264	36.7
Tourists	58	8.1	40	5.5	98	13.6
Total	476	66.1	244	33.9	720	100.0

Source: Fieldwork, 2008

The group of local people drawn from communities located in the Mole Park catchments numbered 580 (80.56%) of the entire sample for the study, comprising 191 females and 389 males. The local community group was made up of persons residing in 10 randomly selected villages, most of which had to give way for the establishment of the MNP (Figure 9). Of the public officials who accounted for 5.83% of the sample, there were 29 males

and 13 females. The 98 tourists accounted for (13.61%) of the sample, and comprised 58 males and 40 females. Among the 98 international tourists were 59 males and 39 females. The socio-economic and demographic profiles of these three sub-samples are discussed next. The local community group was made up of persons residing in 10 randomly selected villages, most of which had to give way for the establishment of the MNP (Figure 9).

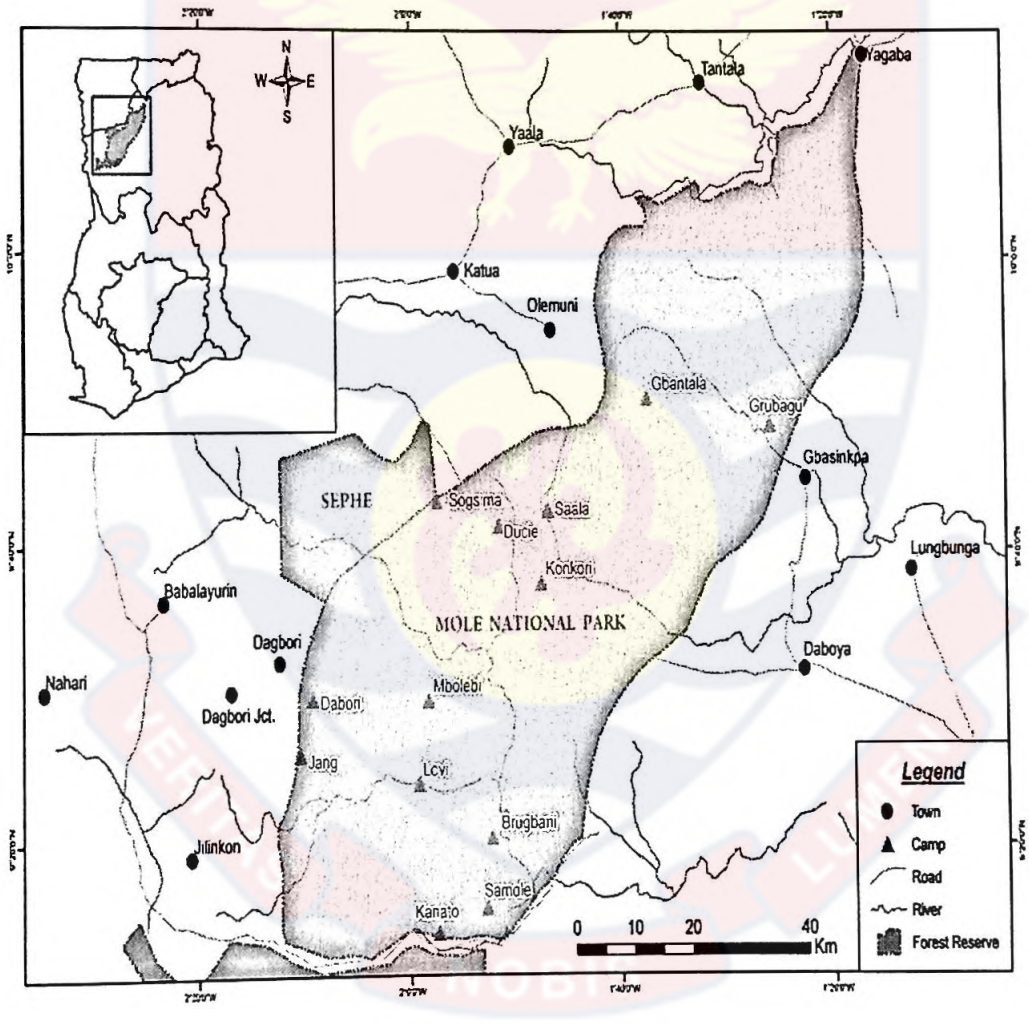

Figure: 9: Location of some villages in the Mole Area covered by the survey

Source: Ghana Wildlife Division, (1994)

Demographic profiles of the local people

The survey tapped responses of samples of residents from the villages of Kabampe, Larabanga, Murugu, Kparia, Bawena, Wawato, Grubago, Dabori, Holomuni and Belebeli. Table 11 displays the breakdown of the respondents by geographic zone and sex.

Table 11: Local community respondents by zone and sex

Geographic zone	M	F	Total	Percent
Samole-Lovi Basin	87	50	137	23.6
Gbantala Triangle	174	80	254	43.7
Mole-Kulpwan Basin	128	61	189	32.6
Total	389	191	580	100.0

Source: Fieldwork, 2008

The local community sub-sample was made up of 389 males and 191 females. One hundred and seventy four (44.7%) of the males were from the Gbantala Triangle Zone, 87 (22.4%) from the Samole-Lovi Basin and 128 (32.9%) from the Mole-Kulpwan Basin area. Females constituted about 33% of the entire group of local residents in spite of the research design's deliberate plan to have some form of gender balance in the sample selection process. It was generally difficult to get women to answer the questionnaires because they either appeared to be always busy performing domestic chores or were not sure of the reaction of their husbands if they had to spend much time conversing with people they perceived to be strangers in town. At least 50 (26.18%) females were from each of the three geographic zones.

Settlements from which the group of local people was drawn within the Samole-Lovi Basin are on an average 2.33 km away from the Park border, while those of the Gbantala Triangle and Mole-Kulpwan are 4.25 km and 3km respectively, to give a mean of means distance of 3.19km from the Park frontier. Thus, in terms of relative access one could say that persons residing in villages closer to the Park were more likely to have intense interaction with the Mole Park than those living farther off its borders.

Sex, age, marital and educational statuses of the local people

Tables 12, 13 and 14 contain summaries of sex, age, marital and educational statuses of the two local community sub-samples.

Table 12: Age and sex distribution by communities

Age	Type of community							
	Displaced				Non-displaced			
	Male	Female	Total	%	Male	Female	Total	%
18-27	34	11	45	14.2	24	11	35	13.2
28-37	40	21	61	19.3	30	19	49	18.6
38-47	45	22	67	21.2	41	20	61	23.1
48-57	45	17	62	19.6	42	20	62	23.5
58-67	50	31	81	25.7	38	19	57	21.6
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

Table 13 displays the marital status of the local Community sub-sample by sex. Along the marital status variable fairly substantial differences were observed between members of both displaced and non-evicted communities.

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Age	Type of community							
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18-27	34	11	45	14.2	24	11	35	13.2
28-37	40	21	61	19.3	30	19	49	18.6
38-47	45	22	67	21.2	41	20	61	23.1
48-57	45	17	62	19.6	42	20	62	23.5
58-67	50	31	81	25.7	38	19	57	21.6
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

Table 13 displays the marital status of the local Community sub-sample by sex. Along the marital status variable fairly substantial differences were observed between members of both displaced and non-evicted communities.

For example, while about 15% of respondents from the displaced group were single those from the non-displaced communities recorded 21.2%. There were also relatively more married persons in the non-displaced group than their counterparts in the displaced communities.

Table 13: Marital status of local people by sex and type of community

Marital status	Type of community							
	Displaced				Non-displaced			
	Male	Female	Total	%	Male	Female	Total	%
Single	33	13	46	14.6	45	11	56	21.2
Married	117	59	176	55.7	101	63	164	62.1
Separated	12	4	16	5.1	6	6	12	4.6
Divorced	22	13	35	11.1	8	0	8	3.1
Widowed	24	10	34	10.7	9	8	17	6.4
Cohabiting	6	3	9	2.8	6	1	7	2.6
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

For instance, while 176 (55.5%) members of the displaced communities were married the non-displaced group had 164 (62.1%). The displaced group had 35 (11.1%) divorcees as against 8 (3.1%) for the non-displaced communities. Generally, the data suggested that marriages among members of the non-evicted group were more stable than their displaced counterparts. For instance, while as many as 34 (10.7%) respondents from the non-displaced communities lost their marital partners, only 17 (6.4%) persons from the displaced communities lost their partners. However, for the few that

lost their partners due to death, one could see that as a normal demographic phenomenon in the country (GDHS, 2003). Cohabitation, mainly through betrothal, was the least marital arrangement between couples of both groups. There was no substantial difference between male cohabitation 9 (2.8%) and females 7 (2.6%). Similarly, in absolute terms, 16 males in the displaced group and 12 in the non-evicted group were separated from their spouses but in relative terms both groups had pretty close rates of separation of 5.1% and 4.6% respectively.

The study also examined the educational levels and occupational activities of the local community sub-sample (Table14).Educational levels of the displaced communities and non-displaced groups were not substantially different. While 284 (89.9%) of respondents of the displaced communities' group had no formal education, those from the non-displaced sample were 241 (91.3%). Similarly, while 14 (4.4%) displaced group members had basic primary education, only 9 (3.4%) of their non-displaced counterparts had primary level education. Also, as many as, 32 (10.1%) displaced group members had above basic primary but below university education. Their counterparts in the non-evicted sample reported only 23 (8.7%). Significantly, no group member was educated up to university level. Education levels were generally low in the area.

Examination of the data on educational attainment revealed that illiteracy among the group members was as high as 89.9%. Further probing revealed that most of those with primary education were also school dropouts. If that was taken into account then the illiteracy rate would be 94.3% which is comparatively similar to the district illiteracy rate of 90% (West Gonja District

Assembly Medium Term Development Plan (1990-1994). Comparison of education levels in both groups of local communities by sex also showed a similar trend.

Table 14: Educational level of local communities by type and sex

Level of education	Type of local community							
	Displaced				Non-displaced			
	M	F	Total	%	M	F	Total	%
No formal education	192	92	284	89.9	161	80	241	91.3
Primary	9	5	14	4.4	6	3	9	3.4
Middle/J-H School	7	3	10	3.2	4	3	7	2.7
Senior High School	4	2	6	1.9	2	2	4	38.1
Post-SH (non-varsity)	2	0	2	0.6	2	1	1	1.1
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

While 90.2% of females in the displaced communities had no formal education at all, their colleagues in the control group returned 89.9%, indicating that there were more females in the non-displaced sample with no formal education than those in the displaced communities. Only 4.4% of male subjects from the displaced category had basic primary education compared to 3.4% males in the non-displaced group. This should be compared with1.6% and 1.1% females in the displaced and non-evicted groups respectively with basic primary school education. The picture was not different from the national picture as females tended to have low levels of education than their male counterparts (GDHS, 2003). Such a situation could have serious socio-

economic, demographic, health and overall development implications for the area in particular and the district at large, since females form over 51% of the population.

Occupational activities of communities in the Mole catchments

Inter-zone and within zone comparisons of the occupational activities of the communities indicated that farming was the predominant occupation. In general, farming, housekeeping and foodstuffs selling were observed to be the main activities of the local people. Agricultural-processing was also a fairly important activity in the whole area while tourism and hospitality services and teaching were the least patronized. About 60% of the community members were engaged in farming. The figure tallies with the district average of 60% of the labour force engaged in farming. Indeed, farming and its related activities accounted for about 75% of the occupational activities, suggesting that there was little or no negative impact of the Park on farming activities of the communities of the Mole National Park area. Women in both groups tended to be more predominantly home keepers than any other occupational grouping.

There were few occupational activity differences between female and male members of the local people. The ratio of persons engaged in teaching between men and women was 5:1 compared to 3:1 for the petty trading and non-participation of women in the tourism sub-sector.

The comparative figures for hospitality and tourism suggest that there were substantial differences between male and female respondents in terms of their accessibility to and levels of interaction with the Park and tourists and the associated contact effects. Female members of the local community groups

were predominantly engaged in housekeeping and agro-processing. Similarly, the female counterparts, who engaged in foodstuff selling, were one and half times their male counterparts.

Table 15: Occupational activities by type of community and sex

	Displaced				Non-displaced			
Occupation/activity	M	F	Total	%	M	F	Total	%
Farming	167	27	194	61.4	123	1	154	58.3
Agro-processing	6	14	20	6.3	12	7	19	7.2
Housekeeping	0	41	41	13.0	0	40	4	15.1
Teaching	5	1	6	1.9	1	0	1	0.4
Petty trading	18	6	24	7.6	27	4	31	11.7
Foodstuff selling	10	13	23	7.3	12	7	19	7.2
Hospitality/tourism	8	0	8	2.5	1	0	1	0.4
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

Since most public officials are usually not engaged in farming and other agriculture-based economic activities for a living it meant that the local people depended on the public officers for market for their products. One could assume that the Park had some positive impact on the economic life of the local people.

Income distribution of local communities

Income distribution was another variable that exhibited substantial differences between the two groups of local communities in the Mole National

Park area. Income distribution within the two groups of local communities indicated that 429 (74%) respondents earned less than GH¢250 per annum while only 151(26%) respondents in the communities earned above GH¢250 (Table 16). Eighteen (3.1%) members of the communities said they earned GH¢550 or more a year. If annual income were taken as a crude measure of one's ability to provide the basic needs of life then it could be inferred that the majority of the local population experience extreme income poverty. If all those who earn less than 250 are deemed poor then the poverty level in the area translates to 74%, which compares with Northern Region's figure of 70% (GPRS II, Ghana, 2006).

Analysis of the data along sex variable showed that out of 389 males in the sample only 64 (16.5%) earned annual income of GH¢250 and above, while 115 (29.6%) of the rest hardly ever earned GH¢250 per year. Only 36 (19%) out of 191 females in the communities earned GH¢250 or more with the majority of 155(81.2%) earning far below GH¢250 a year. Mean income for the entire sample was 177.86 as against 189.49 for the males and 154.22 for females. Their median incomes were 117.49 for males and 94.16 for females, while the modal incomes were 133.75 for men and 174.74 for women.

To determine the level of exposure of respondents to the effect of public policy, it was necessary to find out how long subjects had been living in their current places of abode in the Mole National Park catchment. An arbitrary minimum of ten years continuous residence in any of the selected communities was set as the threshold, which was presumed to be long enough for effects of public-policy on subjects to be noticeable. Table 17 provides a

summary of periods of continuous stay of the local community sample by zone and sex.

Table 16: Income distribution of local people by sex

Income level (100s of GHC)	Displaced group				Non-displaced group			
	M	F	Total	%	M	F	Total	%
50.00-149.99	129	67	196	62.0	85	62	147	55.7
150.00-249.99	26	9	35	11.1	34	17	51	19.3
250.00-349.99	25	6	31	9.8	26	7	33	12.5
350.00-449.99	17	10	27	8.5	16	2	18	6.8
450-549.99	10	7	17	5.4	6	1	7	2.7
550.00-649.99	7	3	10	3.2	8	0	8	3.0
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

Length of stay in the community

A condition for participation in the survey was that a respondent should have stayed in the community for not less than ten continuous years. It was hypothesized that persons who had stayed longer in the community were likely to be more knowledgeable and greatly exposed to the effect of public conservation policy than persons who had lived in the villages for shorter periods of time.

The combined mean length of stay of the local community sub-samples was 36.62years, while males had a mean length of stay of 35.09 as against 39.76years by their female counterparts. The mean lengths of stay by zone

were found to be 33.33 years for the Samole-Love Basin, 35.37 years for the Gbantala Triangle and 31.24 years for the Mole-Kulpwan Basin.

Table 17: Stay duration in the community by zone and sex

	Geographic Zone						
	Samole-Lovi Basin		GbantalaTriangle		Mole-Kulpawn Basin		
Duration	Male	Female	Male	Female	Male	female	Total
10-19	19	5	27	5	31	18	98
20-29	9	6	24	14	20	4	77
30-39	37	6	34	15	35	17	143
40-49	4	9	37	17	31	8	98
50-59	8	22	48	21	9	12	120
60-69	0	2	4	8	2	2	18
Total	87	50	174	80	128	61	580

Source: Fieldwork, 2008

The modal and median lengths of stay of the displaced and non-displaced groups were 32.93 and 30.8 years respectively. These were comparatively similar to the group's mean age of 44.10 years which suggested that respondents had spent much of their life in the area. Persons who lived in their communities for between 10 and 19 years numbered 98 (16.9%), while 77(13.3%) had stayed in a community for between 20 and 29 years. The largest number of respondents from the group, who had lived in a settlement for between 30 and 39 years, was 143(24.6%). Only 18 (5.2%) members of the group said they had lived in their communities for 50 years or more.

Another 43(7.4%) females had lived in a community for more than 50 years. Thus, the lengths of stay for both types of communities were sufficient to have had them exposed to effects of the Park.

Socio-economic and demographic characteristics of public officials

The survey also covered 42 public officers, drawn from 204 members of staff of the Mole National Park and 25 workers of the decentralized departments of West Gonja District Assembly. Four senior management members were purposively selected while a total of 38 junior staff were randomly chosen to respond to the questionnaire. In terms of representation by sex, there were 29 males and 13 females in this sub-sample. Contribution by organization was 31 for the Mole Park and 11 for West Gonja District Assembly. Specifically, the survey also examined such socio-demographic characteristics as age, sex and marital status, level of education, religious affiliation, occupation and income of public officers as per Table 18.The main socio-demographic characteristics of public officials captured by the instrument included sex, age, marital status, occupation, religious affiliation, educational level and income. Table 18 conveys a summary of respondents' socio-demographic characteristics.

Age and sex distribution of the public officers

About 69% (29) of public officials captured by the survey were males. Thus, there were more than twice as many males as females. There were more young workers than elderly ones.

Table 18: Socio-demographic characteristics of public officials

Factor/variable	Response category	Frequency	Percentage
	Male	29	69.1
Sex	Female	13	30.9
Age in years	18-27	3	7.1
	28-37	31	73.8
	38-47	4	9.5
	48-57	2	4.8
	58-67	2	4.8
	Single	10	23.8
	Married	27	64.3
Marital status	Divorced	1	2.4
	Separated	3	7.1
	Widowed	1	2.4
Occupation	Wildlife official	31	73.8
	Civil servant	11	26.2
Level of education	Primary/JHS	6	14.3
	Senior High School	25	59.5
	Post-S H S	7	16.7
	University	4	9.5
Religious affiliation	Islam	13	31.0
	Christianity	19	45.2
	Traditional	6	14.3
	Other	4	9.5

Source: Fieldwork, 2008

The population of public sector workers at both the Mole Park and the West Gonja District showed that 34 (81%) were aged above 38 years although members of the cohort group 28-37years were the majority.

Marital status of public officials

The marital status data showed that 27 of the respondents were married while 10 were single. Three (7.1%) public officers were found to have separated with their partners.

Religious affiliation of the public officials

An examination of respondents' religious affiliation showed that the two dominant religions were Christianity and Islam which had membership strengths of 19 (45.2%) and 13 (31%) respectively. Those with traditional religious inclination accounted for 6 (14.3%) while various other religions had a combined membership of 4 (9.5%).

Educational and income levels of public officials

Level of education of public sector employees at the MNP and the West Gonja District Assembly showed that there were twice as many females (6) with basic primary and junior high school education than the males (3). But at higher levels of education males tended to be between three and four times more than their female counterparts, probably suggesting that there may be a higher drop-out rate among girls than boys as they climb higher on the academic ladder. For instance, the data per Table 19 shows that at the senior high school level male employees with that qualification were about four

times greater than females. The situation was not different when educational levels of public sector employees with post-senior high school and university education were compared.

The study went further to examine the relationship between level of education and income of public sector employees. The data suggested a positive correlation between level of education and income. Officers with higher levels of education were placed on higher levels of responsibility and income. On the other hand persons with lower levels of education tended to occupy lower grade positions and correspondingly low levels of income. Public officials' levels of education and income were displayed in Table 19 and analysed by sex in the next section of the chapter.

Table 19: Level of education and annual income of public officials (100s GHC)

Educational level	Sex	0-999	1,000-1,499	1,500-1,999	≥2,000	Total
Primary/	Male	2	1	0	0	3
JHS	Female	6	0	0	0	6
S.H.S	Male	1	12	0	0	13
	Female	3	0	0	0	3
Post-S.H.S	Male	3	2	5	0	10
	Female	2	0	1	0	3
University	Male	0	0	0	3	3
	Female	0	0	1	0	1
Total		17	15	7	3	42

Source: Fieldwork, 2008

Persons with higher levels of education also tended to earn higher incomes. Nine workers, comprising 3 males and 6 females with primary and junior high school, and several years of service earned incomes of between GH¢1,000 and GH¢1,499.Those with senior high school education who earned below GH¢1,500 per annum were 16, and there were 4 times as many males in that income bracket than females. Similarly, 6 officials with post senior high school but below university education, earned between GH¢1,500 and GH¢1,999.

Socio-demographic characteristics of tourists to Mole National Park

Prior to the discussion of respondents' socio-demographic profiles it was desirable to define some pertinent conceptual issues of who a visitor is in the context of the study. In 1963, the United Nations Conference on Travel and Tourism defined a visitor as any person visiting a country other than that in which he has his usual place of residence for any reason other than following an occupation remunerated from within the country visited.

The word ''visitor'' refers to two distinct types of travellers: tourists and excursionists. Tourists are temporary visitors who stay for at least 24 hours in the country visited, and whose purpose of journey can be classified as being for pleasure (recreation, holiday, health, religious or sport), business, visiting family and relatives, mission and meeting. Excursionists, on the other hand, are temporary visitors, who stay for less than 24 hours in the destination visited making an overnight stay (including travellers on board cruise ships). In this study the words 'visitors' and 'tourists' are used interchangeably to stand for any person who went to the Mole National Park during the time of

the survey for pleasure, sightseeing, game viewing and stayed overnight for a minimum of 24hours.The socio-demographic profiles of tourists to MNP captured during the survey are discussed in the sections below. The discussions centre on respondents' age, sex and marital status, level of education, income level, nationality and country of residence as well as main purpose of visit, main tourist activities at the Park, length of stay, suggestions for improvement in development and quality of services and tourists' overall rating of facilities at the Mole National Park.

Age, sex, and marital status of tourists

Of the 98 respondents covered by the survey, 29 (29.6%) were aged between 25 and 34 years and closely followed by 26 (36.5%) tourists, whose ages fell within the 35-44 years bracket. The number of tourists, however, declined as the age variable increased from 19 for cohort 45-54 years, then to 8 and 5 for age brackets 55-64 and 65-74 years respectively. There was an inverse relationship between age and the number of visitors to the Park. For instance, beyond age 44 years the numbers of tourists declined to 11 for cohort 45-54 years to 8 and 5 for age brackets 55-64 and 65-74 years respectively.

The data also indicated that the numbers of foreign visitors consistently out-numbered domestic tourists for all cohort groups, indicating a dominance of international tourists over domestic visitors, which also indicated that there was potential demand for eco-tourism at the MNP. Young people were apparently more adventurous and tended to visit the Park more than older persons, and were, therefore more allocentric than their older counterparts. It

could also mean that because the young usually have little or no families to take care of they have more disposal time to travel for tourism purposes.

In terms of sex, the situation was not different. Male and female international tourists virtually out-numbered their domestic counterparts by far at all age levels. Similarly, male visitors for all ages tended to visit the MNP more than their female colleagues for both domestic and international tourists. Visitors to the Park were differentiated as either domestic or international. Domestic tourists were 39 and comprised 11 (11.2%) females and 28 (28.6%) males. International or foreign tourists on the other hand, were made up of 30 (30.6%) males and 29 (29.6%) females. Except two Cubans resident in the country, all the domestic tourists were Ghanaians. International tourists on the other hand came into the country from Europe and the Americas. While Ghanaians accounted for almost 40% of the number of visitors to the Mole Park, 38(38.8%) had come from Europe, and 21(21.4%) were from United States, Canada and the Caribbean. The findings appeared to correlate with the visitation records of the Park and also indicated that there had been steady growing numbers of foreign visitors (see Table 4).There is foreign demand for eco-tourism and its support services. What remains to be done is to develop and sustainably manage the resource in order to attract more tourists.

The data on both domestic and foreign visitors to MNP indicated that there were more foreigners (22) who reported being single than all others with different marital arrangements. Another striking feature was that cohabitation was more common with foreign visitors than with the domestic tourists. Most of the foreign visitors had come on holiday with their fiancées; making cohabitation was the second highest form of marital arrangement after single

or unmarried persons. Generally, there were more married domestic tourists than foreign visitors. The numbers of divorcees tallied for both types of tourists but there were more domestic than international tourists who had separated with their spouses.

Occupation and educational level of tourists

The occupational background of tourists ranged from non-workers (students) to consultants, medical practitioners and business people. One could assume that a person's level of education and type of occupation would have a bearing on the level of income earned. Some jobs, with associated high levels of income, are for persons with equally higher levels of education. The educational backgrounds of tourists to the MNP as captured by our survey ranged from basic school to university education. Tourists' occupations and levels of education would be discussed further in the sections below.

Table 20: Educational level of tourists to MNP by type of tourist

	Type of tourist					
	Domestic		International		Total	
Educational level	n	%	n	%	n	%
Primary/JHS	6	6.1	0	0	6	6.1
SHS	5	5.1	10	10.2	15	15.5
Tech/Vocational	9	9.2	13	13.3	22	22.2
Non-university	8	8.2	11	11.2	19	19.4
University	11	11.2	25	25.5	36	36.7
Total	39	39.8	59	60.2	98	100.0

Source: Fieldwork, 2008

Persons who had basic school education were 6(6.1%) and were all domestic tourists. Those with senior secondary or high school education were 15 and comprised 5 domestic tourists and 10 (10.2%) international visitors to the Park. For those with technical and vocational education category, there were nine domestic and 13 foreign tourists. International tourists were twice as many as their domestic counterparts in the senior secondary or high school education category.

Table 21: Annual income of international tourists by sex and occupation

	Annual income before tax in thousands of GH¢												
	4-14.9		15-24.9		25-34.9		35-44.9		45-54.9		55- 64.9		
Occupation	M	F	M	F	M	F	M	F	M	F	M	F	T
Driver	-	-	-	-	2	-	-	-	-	-	-	-	2
Consultant	-	-	-	-	-	-	-	-	3	3	1	1	8
Engineer	-	-	-	-	-	-	1	-	2	1	3	1	8
Med. Officer	-	-	-	-	-	-	-	-	-	-	2	1	3
Bus. person	-	-	-	-	-	1	2	-	3	1	3	1	11
Dev/worker	-	-	-	-	1	-	4	-	2	-	1	-	8
Student	6	-	5	2	1	2	1	2	-	-	-	-	19
Total	6	-	5	2	4	3	8	2	10	5	10	4	59

Source: Fieldwork, 2008

There were 19(19.4%) visitors with tertiary non-university education. Out of this number foreign tourists accounted for 57.9%. Thirty-six (36.7%) out of the 98 tourists had university education including 25 foreigners. Foreign

visitors to the Mole Park also tended to have higher levels of education than their local counterparts.

Generally, the data showed a positive relationship between level of education and tourism participation at the Park. That is, as the level of education increased so did the level of participation or number of tourists to the Park. Theoretically, one expects that incomes would also positively correlate with higher education since persons with higher education were more likely to obtain higher income jobs than those with lower levels of education. With higher discretionary incomes at their disposal such people could participate in tourism.

Based on the visitor typology, travellers to the MNP, captured by the survey were labelled as either tourists or excursionists, with the former staying overnight and for at least 24 hours and the latter spending less than 24 hours at the Park without staying overnight. Both categories of visitors were subdivided and categorized as domestic and international.

In line with the methodological requirement of the research, the study used the 24 hour and overnight stay criterion to screen and select respondents to fill out the survey's second questionnaire. Thus, every single respondent covered by the survey was either a domestic or international tourist.

However, the terms visitor and tourist have been used in the study interchangeably. The socio-demographic profiles of tourists to the MNP captured by the survey are discussed in the sections below.

Occupations and income levels of tourists to Mole National Park

Data on annual incomes of tourists were analysed by type of tourist, occupation, and sex as per Table 22.

Table 22: Annual income of domestic tourists by sex and occupation

	Income in thousands of Ghana Cedi (GH¢)												
	1-1.999		2-2.999		3-3.999		4-4.999		5-5.999		6-6.999		
Occupation	M	F	M	F	M	F	M	F	M	F	M	F	T
Public officer	-	-	-	-	-	2	3	-	1	-	1	-	7
Businessman	-	-	-	-	-	-	-	-	4	-	2	-	6
Accountant	-	-	-	-	-	-	-	1	1	1	-	-	3
B. Contractor	-	-	-	-	-	-	1	-	4	-	4	-	9
Rel. worker	-	-	3	2	2	-	-	-	-	-	-	-	7
Med. Officer	-	-	-	-	-	-	-	-	1	-	-	1	2
Student	1	3	-	-	1	-	-	-	-	-	-	-	5
Total	1	3	3	2	3	2	4	1	11	1	7	1	39

Source: Fieldwork, 2008

On the average, domestic tourists to the Park earned an annual income of GH4, 397 with an income variance of 47.3, a standard deviation of 6.88, and median income of GH¢4,750. When income level was analysed in relation to occupation, it was found out that 9(23.1%) building contractors were the highest income earners with between GH¢39, 999 and GH¢69,999 per annum.

Table 23: Statistical summary of annual income by type of tourist

Statistic	Domestic tourist	International tourist
Mean	4,370	4,119
Median	4,750	4,450
Mode	5,555	4,212
Variance	47.30	47.80
Standard deviation	6.88	6.90
Covariance	15.7%	16.8%

Source: Fieldwork, 2008

Seven (17.9%) public servants earned between GH¢29, 999 and GH¢69,999 while another 7(17.9%) made up of religious/social workers earned between GH¢19,999 and GH¢69,999 per annum. The mean income of the public officers was GH¢40,710, an income variance of 6.2 and a 2.49 standard deviation.

Among the visitors were 6(15.4%) business persons and 5(12.8%) research students. Accountants were 3(7.7%) and earned annual incomes of between GH¢49,999 and GH¢59,999. There were only 2(5.1%) medical officers, with incomes between GH¢49,999 and GH¢69,999 per annum. Males tended to earn more incomes than their female counterparts. For example, while male domestic visitors earned a mean income of GH¢4,821, their female counterparts earned GH¢3,318 on the average, and while males had a median income of GH¢5,199 the female median income was GH¢4.499.

Table 24: Income level of tourists by sex and type of tourist

Income level	Domestic tourist			International tourist		
	Male	Female	Total	Male	Female	Total
100-1,000	1	3	4	5	-	6
1,100-2,000	3	2	5	-	-	-
2,100-3,000	3	2	5	5	2	7
3,100-4,000	4	1	5	4	3	7
4,100-5,000	11	1	12	1	1	9
5,100-6,000	7	1	8	10	5	15
6,100-7,000	-	-	-	4	4	14
Total	29	10	39	30	29	59

Source: Fieldwork, 2008

In terms of income variability, domestic male visitors scored a variance and standard deviation of 76.95 and 8.77 respectively as against a corresponding variance of 184.45 and a standard deviation of 13.58 for females. Income distribution of female tourists was substantially more spread than males.

The trend was not different when income levels were compared with those of international tourists. International male visitors had a mean income of GH¢59,239 as against GH¢39,610 for females. Males had a higher median income of GH¢50140 than their female counterparts whose median income was GH¢42,872. However, when the spread of incomes of international tourists were compared females tended to score a lower variance of 97.01 with a standard deviation of 9.85 as against males, who scored income variance of

16.67 and a standard deviation of 10.80 respectively. Table 25 displays the income distribution of domestic and international tourists.

Comparison of incomes of domestic and international tourists revealed that on the average, foreign visitors tended to earn between 6 and 14 times as much as their domestic counterparts. For instance, while the mean annual income of domestic tourists was GH¢4,397, that for international visitors to the Park stood at GH¢38,000. Domestic visitors also had a median income of GH¢4,750 as against GH¢40,940 for international tourists.

Table 25: Income level by sex and type of tourist

	Type of tourist				
	Domestic		International		
Income level GH¢	Male	Female	Male	Female	Total
100 – 1999	1	3	6	1	11
2000 – 2999	3	2	-	-	5
3000 – 3999	3	2	5	2	12
4000 – 4999	4	2	4	3	13
5000 – 5999	10	1	1	8	20
6000 – 6999	7	1	10	5	23
7000 - 7999	-	-	4	10	14
Total	28	11	30	29	98

Source: Fieldwork, 2008

Besides using raw income data for comparison of income variability there are other reliably useful methods but the variance and the standard

deviation statistics are the most commonly used because both techniques are amenable to mathematical manipulation and statistical analysis.

Co-efficient of variation (CV) is a statistical measure of the relative magnitude of dispersion of a variable and is expressed as a percentage of an appropriate ratio. The CV equals the standard deviation divided by the mean and multiplied by 100. The CV is both a technique for determining data dispersion as well as a measure of homogeneity of the population or a sample. Co-efficient of variation shows what percentage of the standard deviation is of the mean.

When the CV is not greater than 33% we conclude that the data set is homogeneous. On the other hand, when the CV is greater than 33% then the data is heterogeneous or more variable than the other. Thus, with a mean income of 43.97 and a standard deviation of 6.88, the CV of income of domestic tourists to Mole Park was 15.65%, while that for international tourists was calculated to be 16.75%. Although income dispersions were generally homogeneous within the two groups of tourists, one could conclude that the 16.75% for international tourists was more spread than the score of 15.65% for domestic tourists.

When income data were analysed along sex, males and females of the domestic tourists had CVs of 18.19% and 40.9% respectively, indicating that income variation was more spread or heterogeneous among females than males. The CVs for the international male and female tourists were 21.6% and 24.1% respectively and again indicating that female incomes were more spread than those of males. Income spreads between males and females tended to be more heterogeneous for domestic tourists than international tourists.

Nationality and place of residence of tourists

Statistical data on tourists' places of residence and nationalities are important for planning and marketing purposes. Visitors to the Park came from Ghana, European Union and the Americas (Table 26).

Regarding visitors' nationality, there were 15 from Britain, 13 from France, six from Italy, and 4 from Holland. For those from the Americas, 10 were from the United States, seven from Canada, and four from Jamaica and Cuba. The study also examined tourists' country of residence (Table 26).

Table 26: Nationality and residence of tourists by sex and visitor type

	Country of origin and residence						
Type of tourist	Origin	M	F	Residence	M	F	Remarks
Domestic	Ghana	28	11	Ghana	28	11	
	Cuba	2	1	Ghana	2	1	On Nat. service
	Sub-total	30	12	Sub-total	30	2	
International	Britain	6	9	Britain	7	10	
	Italy	4	2	Italy	4	2	
	France	8	5	France	6	4	3 live in Canada
	Holland	3	1	Holland	3	1	
	USA	4	6	USA	3	5	2 live Britain
	Canada	3	4	Canada	5	5	3 from France
	Cuba	0	1	Cuba	0	1	
	Sub-total	28	28	Sub-total	28	28	
	Total	58	40	Total	56	40	

Source: Fieldwork, 2008

Table 26 shows that visitors to the Park and resident in the country were 39 Ghanaian nationals and three members of the Cuban Medical Brigade on voluntary service in Ghana. Countries of origin and residence of the international respondents were also examined. There were 15 British and two Americans who were resident in Britain. The six Italians were all resident in their homeland, while three out of 13 French citizens were resident in Canada. All Dutch, Canadian and Cuban nationals were living in their respective countries of origin.

Purpose of visit

Purpose of visit of tourists was another factor that was examined As per Table 27 respondents gave various reasons for visiting the Park. These included seeking pleasure, holidaying, recreation, religious trip, for education and leisure.

Wildlife viewing was the most dominant motivation for visiting the Park. As many as 53(54.1%) of the visitors to the Mole Park indicated, during the survey, that wildlife viewing was their main reason for coming to the Park. Majority of visitors to the Park could therefore be described as eco-tourists because they went there to view wildlife in their natural environment. The next most important reason tourists gave for visiting the Park was leisure. There were 30(30.6%) leisure seekers including persons who had come for religious retreat, honeymooning, recreation and meditation. Business visitors were 7(7.11%), followed by 4(4.1%) educational tourists. The least score was 3(3.1%) each for research and other purposes.

Table 27: Purpose of visit by type of tourist and sex

Purpose of visit	Type of tourist					
	Domestic		International		Total	
	Male	Female	Male	Female	n	Total
Pleasure, recreation and leisure	12	6	4	8	30	30.6
Business	3	0	2	0	5	5.1
Educational tour	2	0	1	1	4	4.1
Wildlife viewing	9	4	22	18	53	54.1
Research/study	0	0	1	2	3	3.1
Other	2	1	0	0	3	3.1
Total	28	11	30	29	98	100.0

Source: Fieldwork, 2008

Comparison of motives for making a tour to the Mole Park by type of tourist also revealed that 40(41%) international as against 13(13.3%) domestic tourists were there for wildlife viewing. Similarly, 12(12.2%) international as compared to 10(10.1%) domestic tourists said they were at Mole Park to seek pleasure and leisure. However, except for research or study tours, there were more domestic than foreign tourists to the Park, for all other purposes. No foreigner was at the Park for honeymooning and religious retreat as compared to 4(4.1%) and 7(7.1%) domestic tourists respectively.

Number of visits to the Mole National Park

The study also disaggregated the data in terms of the number of times they had visited the Park. The findings are tabulated in Table 28. Except for the 5th, 6th and more than 6th time-visitors the study found that the frequencies

of visits of domestic tourists were consistently lower than those of international visitors to the Park. One would have expected domestic visitors to interact more frequently with the Park than foreigners, who lived farthest from it. Some plausible reasons could be that domestic tourism has not been adequately developed. It was observed that Ghanaians constituted the majority of domestic visitors and were probably not sufficiently resourced in terms of discretionary incomes, time, and information to enable them patronize the eco-tourism facility at Mole National Park.

Table 28: Number of time(s) tourist visited the Mole National Park

	Type of tourist by sex					
	Domestic		International			
Number of visitors	Male	Female	Male	Female	Total	%
1	7	4	13	10	34	34.8
2	9	2	8	12	31	31.6
3	2	3	4	6	15	15.3
4	1	1	3	1	6	6.1
5	5	0	2	0	7	7.1
6	4	1	0	0	5	5.1
Total	28	11	30	29	98	100.0

Source: Fieldwork, 2008

An examination of the data showed that generally, lower numbers of visitors were associated with higher visitations. There is, therefore, the need for more information, advertisements and a vigorously sustained marketing

campaign to attract more tourists to MNP. Ghanaians should be motivated to show interest and participate in their environment's attractions and tourism support services.

Tourists' overall rating of facilities at the Mole National Park

The study also delved into visitors' overall rating of current tourist facilities at Mole Park (Table 29). The rationale was to assess, from the points of view of tourists, the adequacy or otherwise of tourism facilities at MNP in order to recommend proactive management actions to meet the demands of tourists.

Table 29: Tourists' overall rating of facilities at MNP

Overall rating	Type of tourist					
	Domestic		International		Total	
	Male	Female	Male	Female	n	%
Very poor	2	1	2	0	5	5.1
Satisfactory	4	2	8	6	20	20.4
Good	7	5	11	13	36	36.7
Very good	5	0	4	6	15	15.3
Excellent	10	3	5	4	22	22.5
Total	28	11	30	29	98	100.0

Source: Fieldwork, 2008

Visitors were asked to express their overall rating of current facilities and services at the Park. Their ratings per Table 29 ranged from very poor, satisfactory, good, very good and excellent. While 24(24.5%) tourists rated

facilities and services at the Park as being good 14(14.3%) said that services were generally satisfactory. Ten (10.2%) tourists considered facilities at the Park as being very good with 9(9.2%) others describing the services as excellent.

Table 30: Tourists' level of satisfaction and experience at MNP

Level of satisfaction	Type of tourist by sex					
	Domestic		International		Total	
	Male	Female	Male	Female	n	%
Not at all satisfied	3	2	2	2	9	9.2
Somehow satisfied	4	1	6	5	16	6.3
Satisfied	14	3	16	13	46	5.9
Very satisfied	7	5	6	9	27	27.6
Total	28	11	30	29	98	100.0

Source: Fieldwork, 2008

The need for more vigorous internal marketing to raise the quality of facilities cannot be over-emphasized. Improvement of service quality would undoubtedly entice more tourist arrivals and dollar receipts for the local communities, to justify the continuous existence and further investments in activities at the Park. It was also important to delve into tourists' perceptions about their levels of satisfaction or experience of tourists' facilities at the Park.

Visitors' level of satisfaction with facilities and experience at MNP

The respondents were also asked to indicate their level of satisfaction or experiences derived from using facilities and consuming services at the Park during their visits. Nine visitors said they were not at all satisfied, while

16 were somehow satisfied with the quality of facilities and experiences at the Park. However, as many as 27 tourists, including 15 foreigners, opined that they were very satisfied with services and facilities provided at the Park.

Theoretical characterization of tourists to the MNP

Psycho-graphic studies carried out in the late 1960s and early 1970s suggested that people vary in several systematic ways with their propensity to travel (Plog, 1974). Plog (1987) went a step further to develop a scale that sought to correlate and measure the relationship between personality traits and lifestyle preferences of travellers. Stanley Plog then theorized that travellers could be classified as either psycho-centric or allocentric with immediate categories in between these two extremities of a continuum. Theoretically, visitors to the Park could be characterized as being either allocentric or psycho-centric with intermediate categories. A combination of visitation frequency, purpose of visit and needs of tourists would be a proximate measure of peoples' propensity to travel to participate in tourism.

The allocentric were those travellers found at the extreme right of the scale who were essentially adventuresome and also willing to travel to exotic destinations. Allocentric were also more likely to travel by air and tended to spend more when travelling. On the other hand, psycho-centric tended to be at the extreme opposite end of the allocentric end of Plog's scale. Psycho-centric were persons who travelled less often and usually by car. They tended to seek safer and more familiar destinations and ended up spending less in the process. Unlike the allocentric, the psycho-centric tended to travel less and are less venturesome, less self-confident and more anxious in daily life. Plog's

allocentric and psycho-centric characterization of travellers is depicted in Figure: 10.

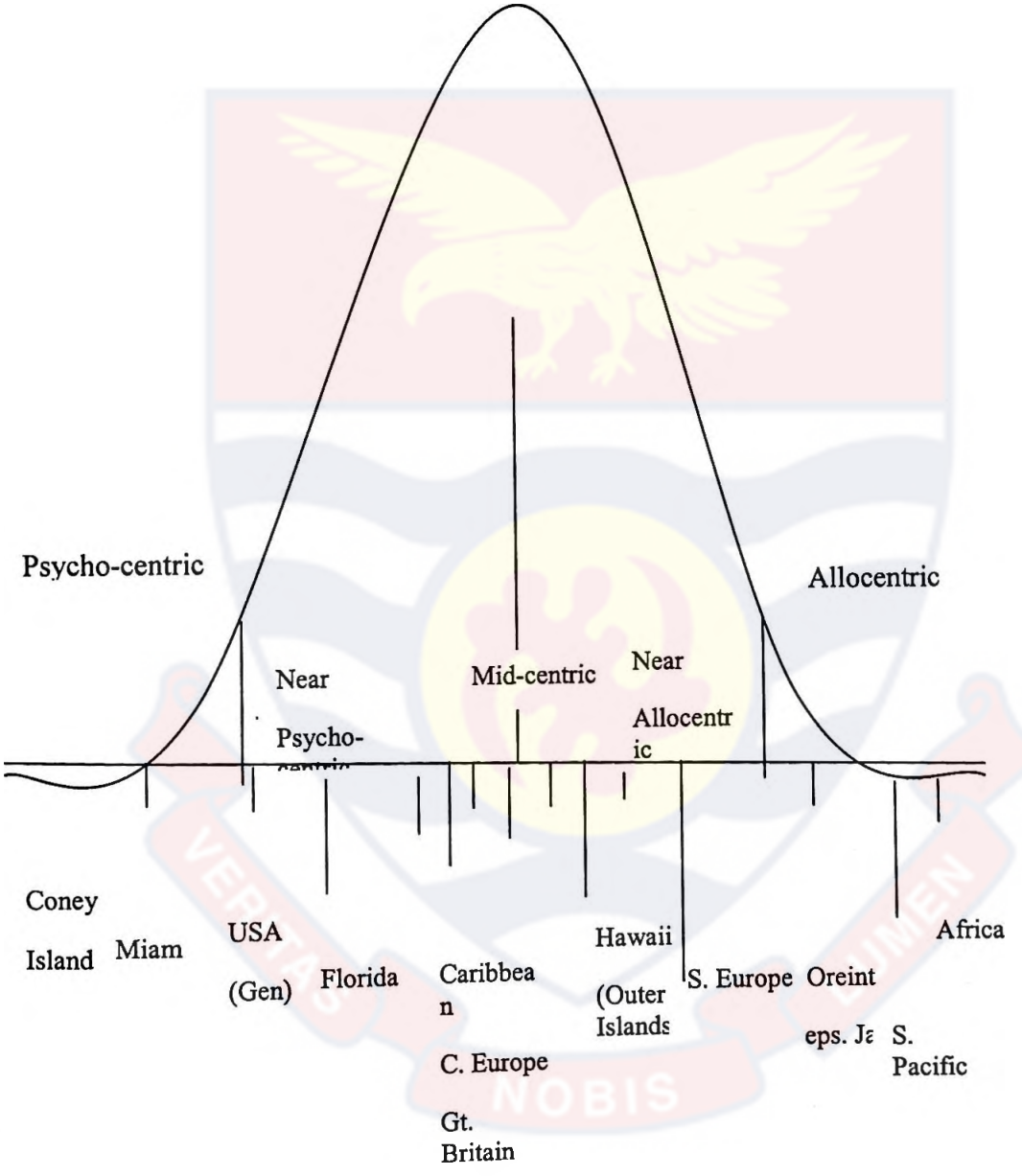

Figure 10: Allocentric-psycho-centric characterization of travellers to MNP

Source: Plog (1987)

For instance, new destinations tended to have appeal for allocentric, who would usually seek out novel, exiting and exotic places of scenic beauty. As others are told of these exotic attractions, and the destination grows in popularity their allocentric status reduces in favour of an increase for the psycho-centric. Such a neat bi-polar categorization of travellers could, however, run into difficulties because it did not take the existence of intermediate personality traits into consideration.

Going by Plog's (1987) characterization of travellers, those tourists who had made three or more visits to the Mole National Park were placed in the allocentric category, while first and second time tourists were labelled as psycho-centric. The same analytic characterization of travellers could be extended to travel destinations, where destinations, whose appeal change, could be plotted along the allocentric-psycho-centric scale as illustrated in figure 10.

Visitation records at the Park and the study's observations suggest that tourist' arrivals and repeat visits to the Park were steadily increasing and eventually falling within the mid-centric section of Plog's travellers-typology graph. With time, the Park would become more popular and draw fewer psycho-centric, who spend less. The best position for Mole National Park or any destination would be the mid-centric section of the graph, where the largest percentage of travellers would usually be located. Mid-centric are neither allocentric nor psycho-centric, but a blend of both types .The mid-centric exhibits elements of the traveller behaviour patterns of the two bi-polar classes of travellers. Both tourist travels and revenues would normally be maximized at the mid-centric section. Therefore, in planning for tourism

development at the Mole National Park, the ultimate objective should be to get the destination to attain sustained growth and development that would place it within the mid-centric section of the graph. Marketing strategies aimed at drawing in tourists to make Mole Park the preferred destination should take due cognizance of such important lifestyle value items as safety, reasonable pricing, good accommodation, availability of restaurants and drinks bars, friendly and hospitable hosts and scenic beauty.

An equally important factor to note would be an examination of the stage of tourism development in a destination. Like product development tourism development goes through life cycles. It may start slowly with a few tourists but continue to expand as the destination grows in popularity. This typifies the first two cycles of tourism development: a start-up stage, followed by a growth period. Growth is of course not without end. Tourist numbers level off to a plateau stage, which is also referred to as the maturation stage. Eventually, numbers of tourists begin to drop and tourism development may then go through a decline stage. Ultimately, if nothing is done to rejuvenate the process, tourist development may go bankrupt and dissolve.

However, the latter stages of tourism development could be averted through effective proactive planning and marketing. For example, new attractions could be added, while remoulding may take place and entirely new tourists could be persuaded to visit the destination. The development of attractions should be an on-going process, which might be designed to bring back loyal tourists and new visitors. Long term quality planning should offer guidance on how to systematically improve, remould and add to tourism development in order to head-off its potential demise (Fridgen, 1991).

Summary

The chapter described and discussed the socio-economic and demographic profiles of the four sub-samples of respondents selected to respond to the study's survey instruments. The main characteristics discussed and compared were respondents' socio-economic, marital and educational statuses. Others included age, length of stay in the community, occupation, religious affiliation and how these attributes had helped in shaping respondents' opinions and overt behaviour towards, the MNP, as the attitude object, that was created by public conservation policy or laws.

A number of assertions were put forward by the study and relevant statistical tests needed to be conducted to determine the veracity or otherwise of those hypotheses. The study's null hypotheses, types of statistical tests and the results, as well as decisions taken for each specific null hypothesis were discussed. These tests were conducted as a prelude to a discussion of respondents' attitudes towards tourists, tourism development and the Mole National Park, the attitude object of public conservation policy.

CHAPTER SIX

COMMUNITY ATTITUDES TOWARDS TOURISTS AND TOURISM DEVELOPMENT AT THE MOLE PARK

Introduction

In the preceding chapter data were analysed and socio-demographic characteristics of respondents described and discussed. The purpose was to create a basis for examining community attitudes toward tourists and tourism development at the Mole National Park.

This chapter has two sections with interrelated objectives. The first discusses the concept of attitude and testing of the four null hypotheses of the study. Part two discusses and relates the hypotheses test results to the objectives and main findings of the study.

The study's hypotheses were also tested through the application of basic statistical rules and concepts. Each hypothesis test outcome was then evaluated in relation to a number of specific characteristics and attitudes of the local communities towards tourists and tourism development at the Mole National Park. The tests involved decision-making or choices among alternative states of nature. Conclusions on the various tests were based on outcomes of sample observations. Thus, with a given level of confidence and statistical significance, a particular null hypothesis was rejected if the sample data showed little evidence to support it. Results of the hypotheses tests were

then discussed, evaluated and related to the experimental groups' attitudes and overt behaviour towards tourists and tourism development at the Mole National Park, the attitude object of public conservation policy.

Concept of attitude

"Attitude" is a social construct that is bereft of a universally accepted definition. Attitudes are man's intellectual, emotional and behavioural responses to events, things and people over time through experience. Generally, an attitude refers to certain regularities of an individual's feelings, thoughts and predispositions to act towards some aspect of his environment (Weiten, 1994).

Attitudes are, therefore, characterized by regularity and consistency of people's thoughts and the resulting tendency or predisposition to behave either positively or negatively towards an event, phenomenon or some aspect of the social or physical environment (Ettinger, Crooks & Stein, 1994; Lahey, 1995). Attitudes may be labelled as being affective, cognitive and behavioural.

Components of attitude

Attitude has three distinct components: affective, cognitive; and behavioural. The feelings a person may have for or towards something is referred to as the affective component of attitude, while one's thoughts, knowledge, opinions and beliefs constitute the cognitive component of attitude. A person's predisposition to act in response to environmental stimuli is the behavioural component of attitude. Thus, an attitude is usually thought of as a hypothetical construct which is not directly open to observation but

rather inferred from verbal expressions of an individual's thoughts or overt behaviour.

Two main factors usually influence the three levels of attitude. One major factor which has potential to influence the affective, cognitive and behavioural aspects of attitude is the mass media. What we see, hear, read and experience through the electronic media significantly influences the attitudes we may form about an event, issue or phenomenon (Wimmer & Dominik, 1997). The second factor is face-to-face interaction with parents, siblings, peers, teachers and persons of authority provide a rational basis for shaping the individual's feelings, thoughts and predisposition to act in particular ways toward events or any aspect of the environment. Through socialization our attitudes and opinions are formed.

It is also essential to distinguish between attitude and opinion, value systems and perception. An opinion is a belief held by a person about an object or event in his environment. Opinion differs from attitude by being relatively free from emotion and, therefore, lacks the affective component, which is central to attitude. The cognitive or knowledge component is predominantly an opinion. All matters or statements of fact to the individual constitute the individual's opinion or belief domain.

Attitudes also differ from value systems. A value system is an orientation towards whole classes of objects or collectivities and tends to be stereotypical in characterizing events or objects. For an example, a person whose value system has a humanitarian orientation tends to have favourable attitude toward democratic governments, social welfare, labour unions and equitable distribution of wealth. A value system with a humanitarian

orientation may also exhibit unfavourable attitudes toward war, dictatorship, monopoly and capital punishment.

There is also a thin line of difference between perception and attitude. Perceptions are the processes whereby the brain interprets sensations it receives, giving them order and meaning (Wortman & Marshall, 1992), or the selection, organization and interpretation of sensory input (Ettinger, et al, 1994; Weiten, 1994). Perception is, therefore, more appropriately defined in terms of experiences stemming directly from sensory stimulation. Perception is also antecedent to attitude. Thus, a person's attitude toward an event or the environment is preceded by that person's perception of the event, or phenomenon.

When perception is reinforced by experiences wrought by an event, such as public conservation policy at the Mole National Park, it tends to predispose the individual to form attitudes towards the attitude object. A person's actual or intended behaviour toward an attitude target shall, therefore, be influenced by his beliefs, opinions and feelings about that object, event or phenomenon. One could hypothesize that experiences, feelings, opinions, beliefs and perceptions of respondents about public conservation policy practices at the MNP would largely shape their attitude toward tourists and tourism development at the Park.

As a prelude to assessing the attitude of respondents toward tourists and tourism development at the Mole Park, it was essential to test a number of hypotheses, and use the results as a basis for such an evaluation exercise.

Form of population distribution

It was essential to specify the assumptions about the nature of the study's population distribution. The research design required that both parametric and non-parametric forms of tests be carried out. A parametric statistical analysis would be an approach, which required the specification of the probability distribution of the population. On the other hand, a non-parametric statistical procedure would be defined in the study as a distribution-free approach, which would not require any specification of the underlying population distribution.

The parametric approach has assumed the normality of the population distribution and homogeneity of variances. Therefore, F and t-tests were used to verify some of the hypotheses because unknown parametric values could not be estimated from quantities that were computed from randomly selected samples of the specified population.

Non-parametric statistical analyses were employed in situations when there were no assumptions about the population distribution or did not require very rigorous specification of the underlying population distribution. Since the research design and the population samples were adequately large and had random variables that were continuously distributed, any non-parametric or parametric tests could be used to test some of the hypotheses.

In general, each of the following null hypotheses of the study asserted that no differences existed between subjects in respect of specified predispositions:

- Hypothesis I: There is no significant difference between expected and observed ratings by the local people and public officials

regarding the effects of public conservation policy on community social conditions.

- Ho II: There is no significant relationship between the local people's residential distance from the Park and their perception of the effect of public conservation policy on community social conditions.
- Ho III: There is no significant difference in the level of antagonism observed between the local people and public officials of the Mole Park.
- Ho IV: There is no significant difference between the local people and public officials' expected and observed scores about the effect of public conservation policy on the density of flora and fauna at the Mole Park.

There was also the need to select the study's level of statistical significance and region of rejection of the hypotheses. A small probability of rejecting a true null hypothesis, or what is commonly referred to as the level of statistical significance, was set.

Hypotheses test outcomes

As a prelude to testing the main hypotheses of the study it was desirable to carry out tests of some selected major characteristics of the samples. The rationale behind the sample selection technique adopted was to control extraneous variables through random assignment of participants to treatment and control groups. The technique ensures that pre-experimental differences were neutralized or distributed approximately evenly among

groups. Moreover, the samples were adequately large, and in accordance with the central limit theorem, it was assumed that both samples were drawn from normally distributed populations. Thus, the equality of the sample means, variances and medians were specifically assumed.

Among the key variables chosen for preliminary tests were age, length of continuous stay in the community, and income levels of both the treatment and control groups. It was hypothesized that significant differences existed between sampled respondents, in the magnitude of these variables, which could influence subject's perceptions and expectations about the issue under investigation as well as their overt behaviour:

Null hypothesis I (Ho i) assets that there is no significant difference between the local people and public officials' expected and observed scores about the effect of public conservation policy at the Mole Park on community social conditions. Observed and expected (in brackets) scores per Table 31 were used.

Table 31: Public officers and local people's scores about effect of MNP

Type of respondent	Observed and expected outcomes				
	Response category				
	SA	A	DA	SDA	Total
Displaced communities	60(63)	74(77)	107(103)	75(73)	316
Public officers	11(8)	16(13)	10(14)	5(7)	42
Non-displaced communities	44(49)	97(79)	92(89)	31(47)	264
Total	115	187	209	111	622

Source: Fieldwork, 2008

Chi-square (X^2) computed value of 24.0957 was significantly higher than 12.5916, the critical table value with 6df. Even if we had set the alpha or significance level at 0.01 the critical chi-square table value of .22.4580 would be lower than the X^2 observed value of 24.0957. We therefore reject the null hypothesis (Ho) in favour of the alternative hypothesis that there is significant difference between the local communities and public officials' expected and observed ratings about the effect of public conservation policy on communities.

Focus group discussions had actually confirmed that substantial differences existed between public officials and the local people. While members of the local communities saw no justification for the continued existence of the Park the public officials thought otherwise. The attitude of members of the displaced local communities tended to be more negative than those of their non-evicted colleagues and the public officials.

Hypothesis II states that there is no significant relationship between the local communities' residential distance from the Park and their perception of the effect of public conservation policy on community social conditions. Data per Table 32 were used to test the hypothesized relation between residential distance from the Park and the local people's perception of the effect of public conservation policy on their community social conditions.

The X^2 computed value of 6.8866 was significantly lower than the critical X^2 table value of 12.5916 with 6df at $\alpha = 0.05$. The null hypothesis (Ho) was, therefore, rejected in favour of the alternative hypothesis (Hi) that there is significant relationship between residential distance from the Park and

Local People's perceived effect of public conservation policy on their social conditions.

Table 32: Local people's scores on the effect of MNP on their community

Mean distance	Observed and expected scores					
	Response category					
	Zone	SA	A	DA	SDA	Total
3.00km	Mole-Kulpwan Basin	15(18)	20(21)	36(31)	21(22)	92
2.30km	Samole-Lovi Basin	26(19)	24(22)	26(33)	21(23)	97
4.25km	Gbantala Triangle	21(25)	28(29)	45(43)	33(30)	127
Total		62	72	107	75	316

Source: Fieldwork, 2008

Theoretically the test result is consistent with the gravity model of distance decay, which posits that the closer two or more bodies are the higher the level of interaction between or among them. Thus, communities, which were living closer to the Park and met often with the Park employees and tourists tended to display higher levels of resentment and open hostility towards employees and law enforcement and patrol efforts at the Park.

The third hypothesis (Ho iii) says that there is no significant difference in the level of antagonism observed between the local people and public officials of the Mole Park. Data gathered on questions 9, 12, 15, 16, 24, 40 constituted a surrogate measure of degree of conflict or antagonism between the local communities and Park officials.

Table 33: Observed and expected antagonism scores of respondents

Type of respondent	Observed and expected scores				
	Response category				
	SA	A	DA	SDA	Total
Displaced communities	99(85)	78(105)	88(84)	51(42)	316
Public officers	12(12)	13(14)	12(11)	5(7)	42
Non-displaced communities	57(71)	116(88)	65(70)	26(35)	264
Total	168	207	165	82	622

Source: Fieldwork, 2008

The computed X^2 value of 25.8715 was found to be significantly higher than critical table value of 12.5916 with 6df at $\alpha = 0.05$. Since the critical X^2 value is far below the observed X^2 value of 25.8715, the null hypothesis was rejected in favour of the alternative, H_1, that there is significantly high level of antagonism between the local communities and public officials at the Mole National Park. A test on respondents' perception of numbers of flora and fauna at the MNP was also conducted (Table 34).

The fourth, and final null hypothesis (Ho iv) also asserts that here is no significant difference between the local communities and public officials' expected and observed scores about the effect of public conservation policy on numbers of flora and fauna at the Mole Park. Table 33 carries respondents' observed and expected scores about numbers of fauna and flora at the MNP now.

Table 34: Respondent's perception of fauna and flora numbers at MNP

Type of community	Observed and expected scores				
	Response category				
	SA	A	DA	SDA	Total
Displaced community	105(71)	94(77)	89(136)	28(32)	316
Public Officials	22(18)	8(11)	7(8)	5(5)	42
Non-displaced communities	26(60)	48(65)	161(114)	29(25)	264
Total	153	150	257	62	622

Source: Fieldwork, 2008

Chi square (X^2) computed value was 82.3399, and critical table value at a 0.05 alpha with 6df was 12.5920. There was significant evidence therefore, to reject the null hypothesis that there is no significant difference between the local communities and the Park officials'' observed and expected effect of public conservation policy on the numbers of flora and fauna at the Mole National Park. Accordingly, the Ho was rejected in favour of the (H_1) that there is significant difference between the observed and expected perception scores of the local communities and public officials on the effect of public conservation policy on the numbers of flora and fauna at the Mole National Park.

Also, in this chapter, some contentious issues that usually come up in public policy and community interest debates would be discussed and then related to the objective of discerning the effects of the MNP on the socio-economic, cultural, political and overall quality of life of its peripheral communities.

Any contentious public problem requiring urgent attention becomes an issue of public interest. Major policy impacts of the creation of the Mole National Park on the communities' environmental, quality of life, socio-economic, cultural and political conditions were then analysed and assessed from the phenomenological perspectives of the local people. The discovery of perceptual differences between conservation officials and the local or indigenous people about the impact of the Park on community social conditions had brought to the fore the issue of community versus public policy interest.

Community versus public interest: the issues

Contemporary political systems appropriate environmental resources with the formal aim of achieving what is in the public interest. Even regimes, whose overt aim might be to enrich a small group and perpetuate a despot, tend to establish their legitimacy and solicit the support of the citizenry by presenting and portraying policies in terms of the public interest. The public consists of all those who are affected by both the direct and indirect consequences of transactions deemed necessary to have those consequences systematically cared for in order to grant relief to those negatively being affected.

It would be pretty difficult to tell precisely what the 'public interest' concretely connotes. Nonetheless, the term conveys the idea of a 'general' or 'common' as against a sectional or egocentric orientation. Public interest is, therefore, synonymously used to mean 'the common good' or 'the general good', and may be defined as the best response to a situation in terms of all the

interests, and the concept of a generally accepted social system. One element, in the idea of public interest, is that of a broadly inclusive or widely shared interest called variously as "general", "common or public interest" (Kingdom, 1996; Warner & Jones, 1998). Public interest differs from individual, group, institutional and organizational interest, and is conceptualized as a generality rather than being particularistic or sectional. While individual and community interests may be parochial and selfish, public interests tend to be non-consequential, duty bound and supposedly in the supreme wellbeing of the entire populace. Consequently, policy makers would usually evoke the concept of public interest to exert tremendous influence on the policymaking process.

The 'public interest' has, therefore, become an operational tool for the study of public policymaking. Public policy does not only aim at achieving what is the best public interest but also doing so by the best means. At least, at an abstract level, public policymaking aims at achieving the maximum net benefit (total social benefit less total social cost). It is, therefore, imperative to view the consequential and deontological aspects of policy decisions and actions within the wider context of social responsibility of state institutions, which are charged with the role of protecting public interest.

Environmental resources conservation, for the general good, is one of such responsibilities of some state agencies. But like an individual, a public institution must act responsibly and be equally mindful of the socio-economic, cultural and political consequences of its actions. An institution is adjudged socially responsible if, and only if, it acts to promote the quality of life (Davis, 1986).

Yet the attainment of any public policy interests, invariably, involves subsuming individual, community or group interests. Sometimes, the attainment of public interest conflicts with the requirement of equal treatment. It has been further argued that at other times expediency requires that the common good be served only at the expense of individuals. But what is expedient may not necessarily be just. It is not at all certain whether what is can be equated with what ought to be by pure reliance on expediency. Moreover, there may be nothing just about making one or several persons to carry the burden of ensuring the majority's welfare. As an alternative to utilitarianism Rawl's (1971) maximum principle proposes a social theory of justice, which contends that inequality is permissible if, and only if, it improves the lot of the worse-off in society. A discussion of clash of interests between the public and the individual, group and community, naturally calls for a brief excursion into the theory of ethics and an examination of the interplay between self-interest and utilitarianism, both of which border on theory of justice.

Self-interest and utility

Many theorists traditionally argue that the rightness of any action can be determined by examining its consequences. If the consequences are right it follows that the action is right and vice versa. Moralists who argue along such lines are called consequentialists or teleologists. They are persons preoccupied with the study of purposes or ends of actions. Since teleologists tend to measure the morality of actions on the basis of non-moral consequences, they are in a way also utilitarian. Consequentialists differentiate between what is

right and what is not right by evaluating the ratio of good to evil that an action produces. Thus, the utilitarian would justify wildlife conservation if human beings derive significant direct or indirect benefits from it (Banham, 1993; Hollis, 1994).

A natural question that arises from this Bentham's 'felicific calculus' is whose viewpoint should be taken in assessing the consequences of actions? An answer to this question hinges on two distinct principles of consequential ethics, namely self-interest and utility. For example, should we consider consequences for the individual or everyone affected by actions? Going by Bentham's felicific calculus, every single action should be assessed and approved if and only if it brings the greatest happiness for the greater number (Hollis, 1994).

Consequentialism is the direct opposite of non-consequential or the deontological approach to the study of ethics, which is based on the theory of duty. The non-Consequentialists maintain that the concept of duty is independent of the concept of good. What one ought to do is independent of the moral consequences of an action of self-interest. Therefore, the socio-economic, cultural, environmental and political consequences of public conservation policy are secondary to the deontological imperative of bio-diversity conservation by the state. Whereas the Consequentialists would judge the appropriateness of a public conservation policy in terms of the benefits it brings to citizens, a deontologist would argue that public conservation policy is right because it is the duty of the state to protect community environmental resources. The state is duty bound to protect life, property and other resources of its citizens. The deontologists' argument in

support for resource conservation is that the state must be duly bound to act in order to prevent the resources from being ruthlessly and irresponsibly plundered by individuals, whose actions are mainly motivated by self-interest or greed, and if unchecked would lead to deterioration of environmental resources.

Self-interest is ordinarily referred to as egoism, which contends that an action is moral if it promotes the individual's long-term interest where 'individual' here means a single person, a group, organization, a corporate entity, community, society or comity of nations. Actions of individuals or corporate entities do often conflict with other group interests because most actions are motivated by self-interest. State appropriation of environmental resources for the establishment of forests, national parks and game reserves, for the general good, is an example that runs counter to individual and community interests.

Some distinctive features of wildlife resources have tended to account for and justify the tendency to subsume personal or group interest and do detach local people from their natural biological resources. Low levels of ownership are further worsened when the state takes over the conservation and management of wildlife resources. The practice frequently undermines the capacity of indigenous institutions and organizations to manage common pool resources by transferring authority to government agencies and imposing tight controls, which conflict with traditional use patterns (Leader-Williams, Alban & Berry, 1990). Secondly, national park faunas are so mobile that an individual or single community can hardly claim ownership of them. Consequently, the non-recognition and subversion of community user eights

and the criminalization of use of wildlife resources may partly account for poaching and other illegal modes of exploiting biological resources, and any negative attitudes held by members of communities living near the reserves. Sustainable and equitable use of these resources require that some mechanism or social engineering be put in place to involve local communities in the conservation and management of these resources, within the broader context of conflict of interests management.

Concept of conflict of interest

Although conflict is a recurring daily phenomenon it often conveys a negative connotation, and is usually thought of as the direct opposite of co-operation and peace. Conflict is, therefore, commonly associated with violence and the absence of peace (Benhke, 1992; Canary, Cupach, & Messman 1995; Warner & Jones, 1998). Viewing conflict from such a negative perspective is not helpful. After all, conflict is inevitable in life. It exists whenever any two persons wish to carry out mutually inconsistent acts (Nicholson, 1970; Ashley, 2000). An individual could even experience conflict when she or he wishes to carry out any pair of mutually inconsistent and competing actions or decisions.

Earlier writers on conflict theory tended to emphasize the win-lose nature of it. Coser (1967) has asserted that conflict is a struggle over values and claims to scarce status, power and resources, in which the aims of the opponents are to neutralize, injure or eliminate the rivals Coser's definition is in line with the western earlier approach to conflict analysis, and has a win-lose perceptive. This is not surprising because it also came out at the time of

the cold war between the United States of America and the erstwhile Soviet Union.

For Deutch (1973) conflict exists whenever incompatible activities occur. Conflict entails taking 'an action which prevents, obstructs, interferes with, injuries or in some way makes it less likely or less effective' (p.156). Conflict is conceptualized to connote the desire of each contestant to over-power the opponent and control resources of all kinds. Contemporary conflict definitions have an affinity to focus more on interdependence than entrenched positions.

Donohue & Kolt (1992) define conflict as a ''situation in which interdependent people express (manifest or latent) differences in satisfying their individual needs and interests, and they experiences interference from each other, in accomplishing thee goals'' (p3). Conflict exists whenever any two people wish to carry out acts, which are mutually inconsistent. Conflict is an activity, which takes place between two transient, though not necessarily rational beings (Nicholson, 1970). For Kolb & Putman (1992) "conflict is a stubborn fact of organizational life and where there is no conflict then the organization cannot exist'' (p.311). Conflict is, therefore, an inevitable and recurring phenomenon that must be managed or contained by first endeavouring to identify its causal origins.

Theoretically, every conflict has a casual genesis or beginning, a process and a terminal end, and, therefore, has a historical perspective. Conflict theory basically tries to explain how and why conflict starts, how it proceeds, and finally, how conflict ends. Conflicts may be classified according to whether they occur at the micro-micro or micro-macro levels. Micro-micro

conflicts are those that occur between, within or among the same community groups or members (Kolb & Putman, 1992). Micro-macro conflicts, on the other hand, are those conflicts, which occur among groups, communities or between a community and outside organizations (Kolb & Putman, 1992).

Conflict of interest, in the context of the study, has to do with the growing rift over ownership and use of environmental resources, between groups of communities living around the Mole Park, on the one hand, and state agencies such as the Ghana Wildlife Division of the Forestry Commission, Ghana Survey Department and West Gonja District, on the other. These are some of the state agencies jointly responsible for the protection of the biomass and geological resources of the area currently supporting the Park.

Although conflict analysis can be carried out at the individual event level, social scientists are usually more interested in the generality or broader categories of similar events. The emphasis is on the interconnectivity between similar events rather than the idiosyncrasies of a particular individual event. In many settings, conflict can become a potential force for positive social change, since its presence is a visible demonstration of society in transition, and is, therefore, adapting to new economic, political or physical environmental forces. Conflict is like a midwife of conscientization, which helps people to grow and develop a deep sense of awareness of problems of injustice (Warner & Jones, 1998). Conscientization is the acute or sharp awareness of a real world situation, a social problem, and can motivate people to action for justice and promotion of peace at every level of social organization.

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In group and inter-group conflicts often occur over natural resources and can be a barrier to equitable and sustainable rural livelihoods. However, if proactively well managed, conflict can reduce existing conflicts as well as prevent new ones from emerging. Disfranchised stakeholders can also be brought into equitable and collaborative negotiation for mutual benefit. Careful management of conflict can help to prevent the capture of resources by the elite and thereby promote pro-poor resources management and usage at local level of governance.

Many government agencies charged with ensuring sustainable management of national parks and forest reserves face the problem of reconciling particular community interests with those of the general society. Some social mechanism is, therefore, required for conflict prevention, management and resolution. As a result, various wildlife management models have been proposed to replace the traditional win-lose system with a win-win approach to sustainable community resources development and management of conflicts of interest.

Models of community resources management

Concerns about the disruptive effects of conflict over ownership, development and use of environmental resources have engaged the attention of governments and conservation practitioners worldwide. Various natural resources management models have been proposed in order to minimize conflict among users of these environmental resources. Two commonly cited types of community resources management frameworks are the populist and rights-based models

Under the populist framework of resources management, active local participation is overtly encouraged. It is a comprehensive democratization of the development process. Indeed, development populism recommends an onset and active involvement of project principals from the project conceptualization, planning and implementation to its monitoring and evaluation stages. It has been argued that projects, which are of the people, for the people and by the people usually, have greater chances of success and sustainability than the traditional top-down centralized resources management approach to development, which also tends to marginalize local people.

However, simply assigning authority and responsibility to local communities without assessing the full range of users of a resource, the diversity of individual interests and the capacity of existing local institutions to take on additional responsibility, may not be enough. That may only complicate rather than solve problems associated with appropriation and management of environmental resources.

After all, most wildlife resources have multiple functions and are often exploited by wide variety of interest groups. These heterogeneous interest groups often have quite different objectives and resource usage priorities. If the devolution of power over access to natural resource use should be effective and equitable, it must take into account the multiple functions and heterogeneous user groups. It is also imperative that strengthening and training be provided by government agencies in areas of management, technology, leadership and project planning skills. Most state agencies tasked with formulating and implementing public conservation policy, are often confronted with the challenge of devising governance arrangements, which are

supportive of the diverse livelihood needs of numerous users, while at the same time protecting the long-term productive capacity of resources.

Experience shows that central government agencies often resort to regulation and control of resources and are ill-equipped to regulate and manage multi-product, multi-participant resource systems. Yet effective management of wildlife resources requires an appropriate mix of local and state institutions and organizations, which would balance public policy interests with local community expectations and aspirations.

An alternative arrangement proposed to either replace or complement the populist approach is the rights-based system of sustainable development and management of resources at the local community level. Under the rights-based model, indigenous communities living in and around conservation sites are recognized, and accorded respect as owners of these natural resources (Fry, 1992; Imandar et al, 1999; Ashley, 2000).

These communities, therefore, have an inalienable right and the greatest stake and responsibility in the development and sustainable use of the resources. State agencies are only expected to play a facilitating, mediation and supportive role in educating, resolving disputes and reconciling the interests of different user groups and providing appropriate legal frameworks to support and reinforce resource use agreements reached among various community interest groups.

For the management of wildlife resources, state agencies must provide adequate scientific knowledge to complement local people's own indigenous know-how. Community long-term sustainable livelihood retention depends upon local people's access to information on resource conditions and the

effect of different resources use patterns. Under the rights-based framework, alternative income generation and livelihood retention activities are also encouraged and supported by state bio-diversity conservation agencies and non-governmental organizations, in tandem with public conservation policy. That would moderate or mitigate some adverse effects of policy on community social conditions.

Public policy impact assessment has always been an intractable task to many evaluation researchers because of the intrusion of extraneous variables, which are traceable to methodological deficiencies. Dibiski (1993), for example, asserts that policy analysis, "as a field of study, is broad in scope, complex and relatively undeveloped theoretically" (p.1). As a result, policy analysis lacks the analytical and explanatory power and ability to pinpoint policy cause-effects with a high degree of certainty. Though an important exercise policy analysis is nevertheless a daunting task

Nonetheless, there was the need to evaluate the study's main objective of exploring, identifying and explaining any causal links between community social conditions and conservation policy in terms of the latter's beneficial and unacceptable effects that are traceable to the Mole National Park. The main public policy and community issues of interest to be assessed and discussed include the level of community involvement in the creation of the Park, as well as its environmental, economic and employment, socio-cultural, traditional socio- political authority, community development impacts and the overall quality of life of communities living along the fringes of the Park. Other issues discussed centered on public funding and future development of

the MNP and the extent to which some specific objectives of the study were realized.

Level of community involvement in creation of MNP

First objective of the study was to let respondents indicate their communities' level of involvement in the policy decision making processes leading to the creation of the Park as per their responses in Table 35.

The enquiry was in line with modern populist theory of development, which posits that development being homocentric should begin and end with the human beings who would affect and be affected by every development project. For this same reason development practitioners have often been advised to endeavour to actively involve project principals from project conceptualization, planning, through to implementation, monitoring and evaluation.

From the non-displaced communities only four respondents, comprising a chief, two elders and a woman leader said they were slightly involved in pre-establishment discussions about government's intention to create the Mole Park. Further probing at a focus group discussion revealed that they had actually attended a couple of meetings of the Gonja Traditional Council when they were living at Kabampe Village prior to their transfer elsewhere on promotion. The three were also members of the local community sub-ample. Not surprisingly, however, 258(97.7%) of male respondents in the non-displaced group indicated that their communities were never involved in any preliminary discussions leading to the creation of the Park.

Table 35: Level of community involvement in the creation of the MNP

Level of involvement	Type of community							
	Displaced				Non-displaced			
	M	F	Total	%	M	F	Total	%
Very much involved	3	1	4	1.3	1	0	1	0.4
Much involved	7	1	8	2.5	0	0	0	0
Slightly involved	9	2	11	3.5	3	1	4	1.5
Not at all involved	195	98	293	92.7	171	88	258	98.1
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

The non-displaced groups of communities were those not directly affected by the decision to evict villagers from the area to give way for the establishment of the Mole Park. Only one 65year old female member of the same group said she was slightly involved in at least one preliminary meeting, when the issue of creating the Park was discussed.

The level of involvement of the displaced group of communities in preliminary discussions about government intentions to establish a national park in the area, ranged from 4 (1.27%), who were greatly involved to 293(92.7%) males who said they were not at all involved in any discussions prior to the establishment of the MNP. Eleven (3.48%) subjects, comprising 9(2.53%) males and 2(0.6%) females said their communities were only slightly involved in decision-making processes that led to the creation of the

Park. As many as 8(2.53%) of the community elders of the displaced group indicated that they were very much involved in prior discussions on the establishment of the Park, which sharply contrasts with the non-displaced group's score of zero.

Although the level of involvement was generally low, when the data were segregated along the sex variable, it became clear that females tended to have single-digit scores for both the displaced and non-evicted groups. Again, the findings bring to the fore the recurrent phenomenon of female marginalization and non-participation in decision-making in spite of the fact that they constitute 51% of Ghana's population and about 50% of the West Gonja District.

On the whole more than 550 (95%) of all communities were not at all involved in the decision making processes that led to the creation of the Mole National Park. The finding supports Mason's (1993) observation that the only time the local people got to know about the policy change was when a newly appointed European wildlife specialist and Park guards arrested a man for unlawful entry on suspicion of intent to poach wildlife in a restricted area.

To determine the extent to which the study had achieved its basic set of objectives and hypothesized relationships, it was necessary to further conduct another series of statistical tests on the relationship between public policy and various aspects of community social conditions. The tests were intended to assess the impact of public conservation policy on the following seven dimensions of social conditions:

i. Economic and employment benefits.

ii. Socio-cultural and political impacts.

iii. Community development dimension.

iv. Environmental effects, defined in terms of flora and fauna numbers

v. Quality of community social conditions.

vi. Public funding and future development of the Park

vii. Level of community participation in management and activities of the MNP.

The responses of subjects were dichotomized into the two categorical responses of 'Yes' and 'No'. The strongly agreed and agreed responses were lumped together to obtain the 'yes' category while the strongly disagreed and disagreed responses constituted the 'no' category.

Economic and employment impact of MNP on communities

Questionnaire items 1 to 6 captured local people's opinions, feelings, perceptions and expectations about the economic, employment and tourism related business impacts of the MNP on communities. Table 36 displays the local people's opinions about the impact of MNP on their communities.

Only 17(5.38%) members of the displaced communities answered in the affirmative that their communities had been benefiting from the Park, through direct employment and tourism support business start-ups. Ten of them were males while 7 (2.2%) were females. As many as 299 (94.6%) subjects of the, comprising 204 (64.6%) males and 95 (30%) females said that their communities never got employment or had chance to enter into businesses as a result of any opportunities arising from the presence of the Mole National Park in the area.

Table 36: Economic and employment impact of MNP

Type of community	Dichotomised response							
	Yes				No			
	M	F	Total	%	M	F	Total	%
Displaced communities	10	7	17	9.5	204	95	299	61.6
Public officers	22	5	27	15.1	7	8	15	4.0
Non-displaced communities	90	45	135	75.4	72	57	129	34.4
Total	122	57	179	100.0	283	160	373	100.0

Source: Fieldwork, 2008

A hundred and thirty five (51.1%) members of the non-displaced communities, comprising 90 (34.1%) males and 45 (17%) females thought that some local people got employment and business opportunities from the Park. Of that number, 72 (27.3%) were males while 57 (21.6%) were females. Seventeen members of the displaced group got or were gainfully employed in tourism related business ventures as a result of the Park.

Some 27(64.3%) public officials said that communities living along the borders of the Park got employment and other economic benefits from the Park. Fifteen (35.7%) of them, however, said that local people in the area never got jobs from the Park. Members of the displaced communities tended to downsize the economic and employment benefits derived from the Mole Park. For example, while 27 (64.3%) of public officials contended that local community members were enjoying employment and economic benefits, only

17(5.38%) members of displaced communities shared that shared the same opinion.

The differences in responses between the displaced and non-displaced groups of local communities and the public official could be explained in terms of their relative levels of deprivation from accessing the resources of the Park. Thus, economic adversity or the inability to provide for one's family with the basic necessities of life, and persons most hurt by joblessness, poverty, loss of political power, farmland, fishing and hunting grounds would be more likely to hold extremely negative views, and become more militant opponents of public policy, such as the conservation laws, which were enacted to preserve and control bio-mass of the Mole National Park, than persons least hurt or significantly benefiting from the laws.

Socio-cultural and political impact

The impacts of public conservation policy on community socio-cultural and traditional political authority were also examined. Statistical tests on the socio-cultural and political dimensions of community social conditions indicated substantial differences were observed in responses between groups, regarding benefits derived from the Park. Two hundred and forty (76%) subjects of the local communities' group disagreed, while only 76(24%) members of the group agreed that their socio-cultural and political life and institutions were positively affected by the conservation policy in force at the MNP catchments.

A segregation of responses by sex showed that there were 209 (65.5%) males and 31 (9.8%) females disagreeing that public conservation policy

actions at the Mole catchments had positive influence on community social, cultural and political life. Only 5 (1.6%) males and 71(22.5%) females agreed that the establishment of the Park had had beneficial impacts on the living conditions of the local people in the area.

Loss of control over hunting grounds and shrines in the Park by traditional political leaders, such as chiefs and earth priests was also an issue and an indication of loss or reduction of their socio-cultural and traditional political authority over the control and use of the common community resources of the area. Indeed, results of focus group discussions confirmed an earlier finding by a planning team report that 'the chiefs have lost control over traditional hunting grounds, even for those outside the Park since enforcement of hunting laws is now vested in the Department of Game and Wildlife'(GWD, 1994: P.9).

Perception scores of the Local people indicated that 113 (39%) of them, including 52 females answered in the affirmative that their community social conditions, had been positively affected by the public conservation policy practices at the Mole Park. Those who did not think that public conservation policy had any impact on their community socio-cultural and political life were 161 (61%), comprising 114 males and 37 females. Here again, many of the local people tended to hold more extreme negative attitudes towards MNP than those of the affirmative category. One would expect that residents' attitudes could influence how the local people perceive the impact of public conservation policy on their community development.

Community development impact

Development is fundamentally a process of change involving the whole of society's economic, socio-cultural and political structures, as well as the value system and way of life of a people. Development involves improvements in the lifestyles and quality of individuals, who as a result become better-off, happier and generally freer than before and have wider choices (UNDP, 1996). According to Seers (1981), development ought to be conceptualized as a "condition for the realization of the human personality" (p.21). Thus, development ought to be evaluated with respect to its effects on poverty, unemployment and the extent to which it bridges inequality in a society. For the IUCN (1997), development is an attempt to modify the biosphere and apply human, financial and living and non-living resources to satisfy mankind's needs and improve quality of life. Therefore, the concept of development is homocentric, and has often been conceptualized as amalgams of desirable socio-economic and cultural changes that are intended to add greater value to societal welfare and significant improvements in the overall quality of life of people (Kendie, 1987; Goulet, 1989; Todaro & Smith 2009).

Post World War II economics literature tended to define development as a rapid and sustained rise in real output per head and attendant shifts in the technological, economic and demographic characteristics of society. Development was at that time mainly operationalized in terms of such quantifiable economic variables like per capita income, gross domestic product, low inflation rates and other micro-economic indicators (Lele, 1991; Alexander, 1993). Rostow (1960) and Smith, (1989) belong to the highly controversial historical stages development model, a variant of the

development school. They present a linear development path that is mapped from a society's past and present history. Smith, (1989) for example, argued that development implied welfare improvement and suggested that development meant a better and equable resource distribution.

In a review of development literature Mabogunje (1981) drew our attention to the shift from purely economic-based indicators of development to a broader perception of development with an ever widening frontier to include social, psychological and political processes of economic growth, distributive justice, socio-economic transformation, modernization, and spatial re-organization. For Seers (1980; 1981) there is development if the levels of poverty, unemployment and inequality in an economy have been declining consistently.

Besides economic indicators some authorities are of the opinion that development should incorporate sociological and political dimensions. Life expectancy, infant mortality and literacy have also been identified as three universal components or indicators of development. UNDP (1996) even formulated a human development index (HDI), which shifted emphasis from both economic and physical quality of life indexes. The UNDP (2003) defines development as a process of enlargement of people's choices, including longevity and healthy life, acquisition of knowledge and access to resources needed for a decent standard of living, formation of human capabilities, and being empowered to take part in the economic and political affairs of one's community or country. Thus, the United Nations Development Program's human development index focuses on longevity of life, level of knowledge, and level of living.

It is significant to note that development as a concept, has over time assumed a broader meaning and is now used to encompass ideals like right to life and property, access to education, sound health, clean drinking water and sanitation, food security and adequately nutritious meals, unrestricted participation in the body politic of one's country, fundamental human freedoms, peace/security and human decency (World Bank, 1996; UNDP, 2003).

Respondents were asked to react to a series of statements conveyed by questionnaire items 17 to 21, which were crafted to measure subjects' understanding of development indicators and how their communities' development was being affected by the creation and continued existence of MNP.

One hundred and forty-one displaced local people, including 45 females, indicated that conservation activities at Mole Park had positively impacted on their communities' development. Those who thought that public conservation policy at Mole Park had a negative impact on community development were 175 (55.4%), including 57(18%) females. Environmental effects of the creation of the Mole Park were also an issue that had to be observed.

Environmental impact

Environmental impact of pubic conservation policy on community social conditions was narrowly defined and limited to only respondents' perception of current flora and fauna numbers at the Mole National Park and its immediate environs. Other physical elements like soil erosion and land

degradation were left out. Questionnaire items 22 to 29 measured subjects' perception of some effects of the outcome of the creation of the MNP on flora and fauna numbers in the area. As many as 199 (63%) displaced local community members had either strongly agreed or agreed that flora and fauna numbers at the Mole National Park had substantially increased as a direct result of conservation policy actions and outputs at Mole National Park. As much as 37% of them, however, did not support this view, and added that their quality of life was never better than ever.

Only 74 (28%) of the non-evicted community members said that the flora and fauna numbers had increases substantially over the years as a result of the creation of the Park But as many as 190 (72%) of the same group disagreed that plants and animal numbers at the Mole National Park catchments had increased as a result of the presence of the Park.

These perceptual differences were further confirmed by the results of the X^2 statistical test result of 82.3399 against the critical X^2 table values of only 7.815 and 11.345 with 6df at alpha levels of 0.05 and 0.01 respectively. Results showed that those perceptual variations and impacts were due mainly to differences in levels of exposure to public conservation policy

Impact of MNP on community quality of life

Longevity, access to knowledge, information and education as well as command over resources to ensure decent living would be crude measures of a person's quality of life. Resources appraisals and usages are usually directed at attaining real wealth for man in terms of life, freedom and the pursuit of happiness. The Philadelphia Manifesto lists liberty, security and human

decency as ideals worth striving for. They are also prerequisites for a good quality of life.

In pursuit of real wealth, people often compete for control of resources, and that is why and how conflicts of interest have become an inevitably big issue. Competition for control or possession of resources tantamount to a struggle for power, which is the basis of political behaviour. Indeed, the struggle for control of any resource is intrinsically political, and the major root cause of conflict among individuals, groups or even nations for the control of all manner of resources.

Questionnaire items 30 to 39 were used to capture the local peoples' perception of the social impact of the creation of the Mole National Park on the quality of life of communities living along the Park's borders. While 93 (29.4%) out of 316 respondents agreed that the creation of the Mole Park had a positive effect on communities' quality of life, as many as 223(70.6%) of them said that the Park either had negative or no impact on their communities' quality of life.

Table 37: Effect of MNP on quality of life of its communities

	Type of community							
	Displaced				Non-displaced			
	Male		Female		Male		Female	
Response	n	%	n	%	n	%	n	%
Yes	61	28.5	32	31.4	83	47.4	43	48.3
No	153	71.5	70	68.6	92	52.6	46	51.7
Total	214	100.0	102	100.0	175	100.0	89	100.0

Source: Fieldwork, 2008

Thirty-two (43.4%) of those who agreed that their communities quality of life had been positively affected by the creation of the Park were females. Seventy (31.4%) said the Park had either no-effect or a negative impact on their Communities' quality of life.

On the other hand, while 126 (47.7%) of the non-evicted community members agreed that the quality of community life chances had substantially improves as a direct result of the creation of the MNP, some 138 (52.3%) opined that the MNP had been a bane rather than a blessing to their communities.

The trend was the same when the data were analysed along the sex variable. In both groups the 'No' category for female responses were half that of their male counterparts Mean percentage responses in favour of the positive impact of the Park were 23.85% and 14.75% for non-evicted and the displaced groups respectively. For the 'No' effect or the negative category, the mean percentage response was 26.14% for the non-displaced and 35.3% for the displaced group.

Public funding for future development of the Mole National Park

Respondents were asked to indicate their level of agreement or disagreement with a battery of statements on the issue of public funding for future development of the Mole National Park. Questionnaire items 40 to 43 captured subjects' stand on whether or not more public spending for future development of the Park would be justified (Table 38).

Only 156 (49.4%) members of the displaced group supported any decision on future funding for development of the Park. In fact, the breakdown

by sex showed that 106 (33.5%) males and 50 (15.9%) females from group supported public funding for future development.

Table 38: Community stand on public funding for development of MNP

	Type of community							
	Displaced				Non-displace			
Response	Male	Female	Total	%	Male	Female	Total	%
Yes	106	50	156	49.4	144	68	212	80.3
No	108	52	160	50.6	31	21	52	19.7
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

Surprisingly, opposition to future public expenditure for enhanced facilities at the Park was stronger with the displaced communities than the non-displaced ones. For example, 108 (34.2%) males and 52 (16.4%) females from the displaced group opposed additional funding to further upgrade facilities at the Park. In fact, 64(20%) of them had advocated the return of lands being occupied by the Mole Park to the original land owners. For such persons, additional developments in the area would tantamount to seizure of more of the local people's farmlands. Focus group discussions revealed that most community members had a perception that in the past shifts of the boundary demarcations of the Park were merely clandestine policy moves to dislodge them from their settlements and farmlands.

Community resistance to increased eco-tourism development at the MNP, as exemplified by attitudes and overt behaviour of some community

members may be explained in terms of Doxey's (1975) Residents' Irritation index (Iridex), which measures host community reaction and resistance to tourism development. Doxey has predicted that communities become more hostile to tourists and tourism development with prolonged exposure and intense tourist activities at a destination. Thus, higher levels of tourist and resident interaction tend to generate conflicts between hosts and guests, as exemplified by the attitudes of the displaced communities.at the level of antagonism between park officials and the local people was high and could be explained in terms of Doxey's (1975) Residents' Irritation theory.

Community participation

A final objective of the study was to measure the level of community participation in the management and other activities of the Mole National Park. The assumption was that active involvement of the local people would ensure their willing cooperation in the protection, management and sustainable use of the environmental resources of the Park. When people own and manage a resource there would be greater chances of such a resource being better managed rather than being ruthlessly plundered, according to Hardin, (1968).

Moreover, some argue that the Mole National Park like all other environmental resources would always remain part and parcel of the people's total environment and it would be unnatural to separate the local people from that environment. Peripheral communities should be viewed as part of the problems and solutions to environmental issues because they would affect and be affected by the environment It would be expedient to ensure that there is

always maximum involvement and cooperation of the local people in the management and other activities at a national park or nature resource.

Table 39: Local level participation in management and activities of MNP

	Type of community							
	Displaced communities				Non-displaced communities			
Response	Male	Female	Total	%	Male	Female	Total	%
Yes	67	31	98	31.0	37	16	53	20.1
No	108	52	160	50.6	31	21	52	19.7
Total	214	102	316	100.0	175	89	264	100.0

Source: Fieldwork, 2008

While only 98 (31%) of the displaced group said they were participating in the management and other activities of the Park, as many as 218 (69%) of them answered in the negative. Non-participants were three times as many of the active participants in the running of the Park. These figures contrast sharply with 53 (20.1%) participating and 211 (79.9%) non-participating members from the non-displaced communities. People from the non-displaced communities group were understandably least involved in the management and activities of the Park than those in the displaced category. The Park's new policy of incorporating the local communities in the management and sustainable use of resources of the MNP may improve upon the level of community participation in activities of the Park.

Nevertheless there have been generally low levels of local people's participation in the running of the Park. Mean level of participation by sex was

52 (9%) for males and 24 (4.1%) for females. Levels of participation for both males and females were no doubt very low. Such a high rate of non-participation in the running of the Park would have serious implications for future sustainable management and exploitation of resources of the Park.

Discussion of main findings

There was negligible involvement of the local people in the series of government's policy decisions that culminated in the establishment of the Mole National Park. The finding was replete in development economics literature and typified the top-bottom approach to project formulation and implementation. The practice was criticized in the literature by exemplar works of Ekins (1992), Chambers (1993), Abane et al, (1999) and Ashley (2000), who advocated for the democratization of development project processes right from project conceptualization, planning and implementation to monitoring and evaluation.

The establishment of the Park has had both intended and inadvertent effects on communities although those closest to it have been more affected. Respondents from the two local community groups amply exhibited differences in their perception of public conservation policy intents and practices. Persons who stood to gain from eco-tourism development activities at the Park tended to downsize the negative effects of the policy on their community social policy, an attitude that is consistent with Cunningham's (1994) concept of altruistic surplus, which posits that there is a tendency for beneficiaries of an event to play down on bad effects of the event because they stand to gain for as long as the event continues to exist. The finding could also be explained in terms of mobilization theory in political sociology, which

posits that persons much hurt by landlessness and economic adversity are more prone to militancy than those least hurt or not hurt at all (Budowsky, 1976; Dixon & Shearman, 1990; Mbaiwa, 2002).

Most communities living around the Mole National Park and several similar places in the world are subsistence farmers who traditionally depend on wildlife resources for such basic needs as food, shelter and clothes. Exemplar studies by Ghimire, (1992), Kissi, (1994) and Abane et al (1999), and Boyd, Blench, Drake and Stevenson (1999) all point to the fact that peasant farmers often bear the cost of public conservation policies in terms of land dispossession and havoc caused to crops and domestic animals by problem fauna like elephants, lions, monkeys and birds.

There were high levels of resentment, antagonism, and negative attitudes towards tourists and tourism development because residents are legally barred from entering the Park for whatever reason. There is no employment and other intervening economic opportunities for the residents Similar to studies somewhere have indicated that there are perennial agitations for the return of lands appropriated for bio-diversity conservation projects as a result of non-involvement or marginalization of the local people by governments in decisions to establish such reserves. In many instances the call for return of farmlands and compensations are motivated by the political consciousness of the people and desire to hunt the fauna for meat and other valuable parts of the animals, especially elephant tusks and hides. Sometimes the real motives are hard to find. In any case it would be irresponsible to make the Park an open access facility. Such a policy change would create the tragedy of the commons often encountered in public conservation policy

literature as exemplified by Hardin (1968), Leader-Williams et al (1990) and Gyasi (1996).

The study's findings had resonated similar exemplar studies by McCay and Acheson (1990), Anders and Solstad (1996) and Abakerli (1999). Local residents' resentment might further be explained in terms of Doxey's (1975), causation theory of visitor-irritants which posit that progressive tourism activities that fail to accommodate the interests of host communities eventually generate ills that cause residents to react negatively towards tourism and tourism development. Residents' resentment and negative attitudes towards MNP could be inferred from the responses of the displaced local communities' sample who feel alienated. Indeed, they were critically vocal about tourists and tourism development activities at the MNP. The displaced group accused tourists of subverting or polluting the local culture. Illegal exploitation of flora and fauna resources of the Park and occasional instances of exchange of gunfire between game guards and local poachers are symptomatic of conflict of interests between the public policy interests and that of the local residents.

Finally in terms of Plog's (1987) classification of tourism destinations and tourism development the MNP could be placed beyond the allocentric but below the mid-centric stages of tourism development. The observation that majority of visitors were more foreigners than domestic tourists appears paradoxical and inconsistent with the gravity model. The model posits that the closer two or more bodies are the higher the level of interaction between or among them. The expectation or prediction of the model would, therefore, be that because the Park is physically nearer and assessable to citizens of this

country they would visit the Park more often than international tourists. Visitation records were also expected to portray greater patronage of the MNP eco-tourism facility by domestic tourists than international tourists. Yet the opposite was the case.

Summary

The main issues covered in the chapter were, public versus community interests, the issues; level of community involvement in the government's decision to convert the Mole area from a tsetse control zone into a national park; discussion of the study's main objective of assessing community perception of effects of the creation of the Mole National Park on specified social conditions; support for future public funding for development of facilities at the Park, as well as local community participation in management and other activities of the Park.

Both parametric and distribution free statistical tests were conducted to ascertain the veracity or otherwise of a number of assertions made about the effects of the creation of the MNP on specific social conditions of local people living along its frontiers.

On the whole, significant differences that could not be attributable to sampling error or chance, were found to exist between the local communities and public officials' expected and observed scores about effects of public conservation policy on a number of specific community social conditions. Aspects of community social conditions of communities investigated included economic and employment impacts, socio-cultural and political impacts,

community development, quality of life, and level of community participation in the management and other activities of the Park.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

Utility of the policy systems model (PSM) and its contribution to the achievement of the study's ultimate goal are discussed in this chapter. The conceptual framework's basic assumptions are recapped and its structural elements, disadvantages and merits briefly outlined. The model's contribution to the realization of the objectives of the research are also discussed and evaluated in relation to the more significant difficulties encountered when it was applied. The second part of the chapter covers the summary of the thesis, and discusses the main findings in relation to existing literature and the conceptual framework. Finally, these are followed by the conclusions, limitations and recommendations of the study.

The Policy Systems Model (PSM)

Essentially, models are ideal-type mental constructs representing some aspects of the real world. The PSM model was chosen and adapted for the study because of its ability to guide the study in the observation, description, analysis and explanation of local community perception of the effects of public conservation policy on their social conditions.

The PSM was expected to simplify and facilitate our understanding of sources of public policy, the process of policy-making, policy implementation

and its outputs and effects. The model was also expected to facilitate understanding of politics of conservation activities at the research site. The identification of some important policy problems, policy actions and local community attitudes and behaviour at the Mole National Park catchments were intended to facilitate communication between people, as the essential features of the policy, were highlighted and discussed. A disaggregating of the basic policy issues from the irrelevant and the application of appropriate inferential statistics also helped the study to suggest plausible cause-effect explanations of some public conservation policies and provided the basis for predicting some policy impacts on local communities living in the vicinity of the Mole National Park.

Application of the Systems Model enabled the study to zero in on aspects of the political jigsaw and horse-trading that take place among various interest groups as they struggle to influence outcomes of public policy making in their favour. From the perspective of systems theory, the political sub-system becomes a mediating agent that arranges cooperation and compromises among the various conflicting and competing interests of individuals and groups.

Usefulness of the conceptual framework to the study

An important contribution of the conceptual framework was its ability to facilitate our understanding of human behaviour and stand on issues in terms of losers, winners or neutralists. The model enabled the research to identify both issues and individuals or groups, who were involved in the politics of policymaking, policy implementation and evaluation at the research

site. One should be able to predict the outcome of a public policy with a high degree of certainty if one knew the stands of the various competing groups involved in a public issue. Whenever social conditions were perceived to be deliriously inconsistent with social values, community gurus and protectors of its ideologies and social values would begin to seek ways and means, in the name of enlightened self-interest, to get the political sub-system to respond favourably to their cause or interests.

Another important contribution of the model was that it enabled the study to identify public policy as a cyclic process, with forward and backward feedbacks, which start with individuals/community in the policy environment, whose inputs are sent to the political system for processing. The policy process would usually be filtered by the prevailing ideologies and social values. Policy decisions are then taken, which could produce both desirable and unintended outputs and outcomes or impacts.

The systems conceptual framework is a hotchpotch or hybrid model derived from a combination of institutional, theory, process modelling, and group theory, incremental and comprehensive rational models for describing and analysing public policy. Application of the model showed that policymaking was not only just a process but could also be contextually conceptualized and analysed through the application of several of the frameworks enumerated above. The systems model, therefore, provided the current study with the necessary theoretical foundation and a sense of direction for observing, measuring, describing, explaining and predicting public forests conservation policy effects on attitudes, opinions, feelings and overt behaviour of local people living along the frontiers of the Mole National

Park In short, the model made it possible for the study to realize its main objectives.

Problems encountered in the application of the model

Although the model contributed substantially to the attainment of the objectives of the study, a number of difficulties were also encountered when the model was applied. The fundamental paradigm assumptions of the systems modelling are the source of most of the difficulties the study had to grapple with. The analytical difficulties were traceable to the political nature of policymaking.

Social relationships, including those of the political system, tend to be so complex that systems modelling might not adequately describe and explain the web of interrelationships in a manner that would sufficiently approximate real world conditions. For example, this study zeroed down on community perceived impact of public conservation policy on social conditions of the local people living around the Mole National Park. What sufficiently constitutes a social condition and what condition is not social? Indeed, the concept, "social condition" is so all inclusively nebulous a variable that its conceptualization and operational definition could be a Herculean task. The retrospective thrust of the investigation sometimes got lost or fused with the process of policymaking, policy implementation, evaluation and analysis. As an input-process-output/outcome conceptual framework, the model was also characterized by back loops and feedbacks. For these reasons the study had to adopt a difficult task of using multidisciplinary and multi-methods investigative approach

Furthermore, the systems model appeared to be functionally mechanical. As it was being applied to dynamic phenomena, such as social relationships and unpredictable human behaviour, many difficulties arose For example, in real life situations, there are many informal groups, whose modes of behaviour are hardly institutionalized and yet they affect many social actions, including policymaking and policy implementation with attendant consequences. In spite of these weaknesses attributable to the model's paradigm assumptions, the systems conceptual framework contributed much to the realization of the goal of the study.

The systems model also enabled the study to conceptualize the policy process from a structure-functionalist perspective, and identified the social institutions and policy stakeholders, which interrelate for purposes of reconciling conflicting demands and arriving at authoritative decisions that would require the support of most citizens. In the context of the study the model had identified the elements of the political system involved in public conservation policy formulation to include bureaucratic institutions, like the Forestry Commission, Regional and District Coordinating Councils and the Mole National Park. These elements of the political system were those which received demands of citizens for further processing and policy formulation. The ability of the systems framework to meet most of the criteria required for a good model motivated its choice and adoption for the study. In the following final section of the chapter the main findings of the study are discussed in relation to existing literature.

Main findings of the study

The following were the main findings of the study:

1. Most communities living around the Mole National Park are subsistence farmers, who traditionally depend on wildlife resources for the basic necessities of life (food, shelter and income/clothing).
2. There was negligible involvement of the local people of the Mole catchments in discussions leading to the creation of the national park. However, there is now a policy modification by government to involve the local people in the management and sustainable use of the resources of the Park. A management board is in place with the aim of improving upon the living conditions of the Park communities.
3. The creation of the Park has had both intended and spillover effects with communities living closest to the Park having been more affected than those further off its borders. Responses of the two local community groups showed that the displaced and non-evicted groups perceived the effect of public conservation policy intentions and practices at MNP area differently.
4. There were no substantial socio-economic and demographic differences (age, religious affiliation, marital, education, occupational statuses) between and within the two groups of local people whose responses were captured by the survey
5. Loss of farmlands and property without compensation, harassment of local people by Park guards while enforcing anti-poaching legislation and lack of employment opportunities were some of the

main complaints of the local people against management of the Park.

6. There existed fairly high levels of resentment and negative attitudes, especially, by the displaced communities' group, towards tourists and tourism development at the Mole Park, the attitude object, and a public conservation policy output.
7. Going by Stanley Plog's (1974) typology one could say that tourism development at the MNP is beyond the allocentric but below the Mid-centric stages on the scale of tourism development.
8. Major challenges for management and eco-tourism development included the absence of well-defined objectives, lack of local community support and involvement as well as poor infrastructure and lack of re-investment of IGF.
9. Inadequate investment, coupled with dilapidated infrastructure and poor GWD-Community relations and antagonism made it difficult to attract higher numbers of visitors to the Park in order to contribute substantially to the local economy.
10. Foreign or international tourist arrivals at the Park were surprisingly more than domestic visitors, which collaborated with the Park's past visitation records.
11. Wildlife viewing was the most dominant purpose of visit to the Park, and accounted for 54% of visitors.
12. Visitors wanted to have air services, improved access roads and accommodation at vantage points inside the Park.

13. There is potential for increased patronage of eco-tourism and its support services at the Park. What remains to be done is to improve the infrastructure and make the extra effort at marketing the facility.

Conclusions

Ghana's conservation philosophy tallies with the traditional western practice of putting aside vast tracts of land for bio-diversity preservation and excluding the indigenous communities from natural resources. The Management Board must re-engineer current public conservation policy to address and accommodate the rights and encourage active involvement of custodian communities.

The MNP has had both beneficial and unintended negative effects, especially on the local communities living closest to the Park's frontiers. There are high levels of conflict of interests and antagonism between the local people and officials of the Mole National Park as a result of legal restrictions and non-payment of compensation for lands taken by government during the process of establishing the MNP.

Substantial numbers of local people have negative attitudes towards tourism development and visiting tourists at the MNP. Notwithstanding, the Park has potential for increased tourist arrivals and dollar receipts but will require various managerial actions to upgrade tourism support facilities in order to effectively market that eco-tourism attraction.

Recommendations for future research and policy

The study focused on only one of Ghana's twenty different categories of protected terrestrial nature reserves with an aggregate land area of 1.3 million hectares to which the Mole National Park contributes only 5,198sq kilometres. Moreover, as a case study, its findings can hardly be generalized without caution. Methodologically, the study had confined itself to gathering information via questionnaires or instruments applied to residents of villages both near and farther off the frontiers of the Mole National Park as well as public officials and tourists. The fact that the study did not capture the entire population, but had to select samples, was both a limitation and delimitation for the research.

Also time, logistical problems and funding constraints did not only delay the completion of the research but had also compelled the study to opt for an ex-post facto cross-sectional research design instead of time series or a panel survey. Those methodological procedures and resource constraints would have adversely affected the study's ability to identify changes in population characteristics over time, delineating causal patterns and a delay in the completion of the research. All these problems could have negatively affected the overall quality of the study.

In future scholars intending to undertake further research on social impact of the creation of nature reserves in Ghana would be advised to take note of shortcomings of this study. It might also be appropriate to follow-up this study in future with panel surveys, which would monitor socio-cultural, economic, political and demographic changes over time that could be traced to the creation of parks and forest reserves. To this end, the combined resources

of the Ghana Forestry Commission, Ghana Tourist Board and expertise of universities and polytechnics of the country could be tapped for further research undertakings.

There was also the need to conduct comparative studies, which would involve several national parks, in order to provide a solid basis for generalization, since the results could be a microcosm of Ghana's wildlife sanctuaries as well as their effect on custodian communities living around them. A study that would involve Kakum, Mole, Bia and Digya National Parks would be a good beginning. For as Kiss (1990) opines, Africa's rural people will ultimately determine the fate of the continent's wildlife, and since local communities affect and are in turn affected by the presence of forests and nature parks, the pluralists' prescription of the democratization of the management and sustainable use of Africa's natural resources would be relevant.

The creation of a Management Board for the Mole National Park was, therefore, welcome news since the board would institute measures to improve the quality of life of the local people living within the Mole catchments, As well as improve salaries and conditions of service of the staff of the GWD. If communities were sensitized to perceive the Park as theirs, and would benefit from it, they would most likely hold more favourable attitudes towards tourists and further funding for eco-tourism facility development at the Mole National Park.

Ghana's conservation philosophy was largely shaped by the traditional western concept of setting aside tracts of land for bio-diversity preservation and excluding the indigenous communities accessing the Park and its natural

resources. The Management Board should re-engineer current public conservation policy and address the rights and ensure involvement of custodian communities.

The annual ritual of bush burning was identified as one of the major threats to the existence of the Mole National Park. The study recommends that a fire policy be instituted and burning practices made to reflect contemporary understanding of the phenomenon. Fire monitoring and controlled early burning of identifiable blocks would minimize some of the negative effects of rampant bush burning.

Another relevant policy issue identified by the research was the need to train and equip local community women and the youth in income generating activities. Ventures like beekeeping, grass cutter rearing, food processing, rabbit and rat rearing, tour guiding and other tourism support services would be in line with the objectives of the Ghana Poverty Reduction Strategy II Policy Document. Domestic tourism should be encouraged as envisioned in Ghana's 15-Year Integrated National Tourism Development Programme (1996-2010) and the National Strategic Development Frame-work, dubbed Vision 2020.

In addition to income generating activities, local communities could individually or collectively be engaged to establish their own cooperative woodlots to provide future housing material and fuel wood requirements and leave the Park's flora and fauna alone. The local people could also be permitted to pick-up remains of dead trees inside the Park for their fuel wood needs in the interim, but should be encouraged to cultivate woodlots as a long term solution to their fuel wood requirements. Management could also

consider, allocating resource utilization rights for collecting sheanuts and dawadawa, hunting grass cutter, and honey production.

There was also the need to institute a compensations fund to cater for crops, animals and other properties destroyed by predator fauna of the Park. Such a compensations scheme for local community members, who fall victim to the Park's predatory and foraging animals and birds, would go a long way to reducing tension and probable open conflict between local people and park officials.

The findings also indicated that some other management actions were required to further enhance the Park as a prime eco-tourism facility. For instance, international tourists tended to visit the Park more than domestic visitors. By implication there was currently a larger potential international market for the Park's wildlife and other services. A more vigorous marketing and advertisement strategy would be required to further exploit that international market potential. Management also needed to provide walking trails, acquire vehicles, air links and improve upon access roads in a number of selected vantage points in the Park. Other amenities to be provided should include accommodations, establish a research center and 'friends of Mole Park' endowment fund, radio communication services, handicrafts and gift shops, introduction of Ghanaian cuisines on menu of the restaurant and World Wide Web internet connectivity

As part of an overall human resource development policy plan of the Mole National Park there is the need to recruit professional ecologists. There is, now more than ever, a compelling need to put in place a multidisciplinary

professional think tank to run affairs of the Park in order to achieve the objectives for setting up the Mole National Park.

Visitors to the Park should be enticed to spend longer days and spend more money while there. Recent growth trends in tourism have tended to support the view that destinations which provide high quality tourism products and support services, in an environmentally friendly and sustainable manner, would remain in business to reap the benefits of tourism. For purposes of proactive marketing, visitor ratings of facilities and other tourism support services at the Park should be periodically assessed to inform management of changing trends in tourism supply and demand.

Finally, effects of creation of nature reserves should be closely monitored to ensure that the communities near them are not negatively impacted. To this end, relevant policies and regulations, governing the creation and running of national parks and other nature reserves, should be rigidly enforced with the willing cooperation and involvement of custodian communities living along the frontiers of these environmental assets.

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APPENDICES

APPENDIX A

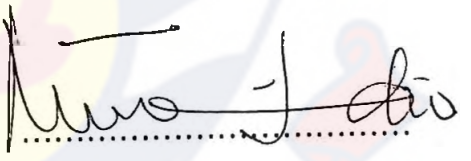
QUESTIONNAIRES FOR PUBLIC OFFICIALS AND RESIDENTS

Introduction

The study is being undertaken in fulfilment of a thesis requirement at the Department Hospitality and Tourism of the University of Cape Coast in Ghana.

Your kind participation in the exercise is absolutely voluntary, and your opinions and answers to the questions will be kept completely confidential. Please fill out the questionnaires, and remember that your views are extremely crucial for the success of the study.

Thank you sincerely for the kind cooperation, please.



TheophilusYigrilaaNuodio

SECTION 1

(To be filled by public officials and residents of displaced and non-evicted communities in the Mole National Park area)

Please tick [ ] only one of the alternatives to each statement.

Note: SA = strongly agree; A = agree; DA = disagree; SDA = strongly disagree

No.	A). Economic and employment impacts	1	2	3	4
	Statement set	SA	A	DA	SDA
1	Tourism benefits the local people at Mole economically				
2	The Park offers employment to the local people				
3	Local people sell handicrafts/souvenirs to visitors				
4	Tourism promotes trade between locals and tourists				
5	The Park does not benefit government workers only				
6	Mole makes local people unable to care for families				
7	Tourists to Mole intrude on local residents' lifestyles				
8	Serving foreigners undermines our people's culture				
9	MNP causes conflict between local people and staff				
10	Mole Park Makes the area internationally known				
11	Tourism at Mole corrupts local cultures and youth				
12	Tourism at MN P contributes to increased crime				
13	Policing by rangers make local people law abiding				
14	Local people resent continued existence of MNP				
15	Chiefs /leaders control use of resources of the Park				

No.	A). Economic and employment impacts	1	2	3	4
	Statement set	SA	A	DA	SDA
16	Chiefs/elders punish people for unlawful activities				
17	Villages develop when tourist facilities are provided				
18	Local people now protect animals and plants better				
19	The Park has taken over sources of water of people				
20	Creation of the Park has underdeveloped villages				
21	MNP has made Local people more rights conscious				
22	Locals protect historic buildings & attractions				
23	Tourism development at MP improved sanitation				
24	MNP conserves environmental resources for future				
25	Conservation law increases plant numbers at Mole				
26	More wild animals are in the area because of MNP				
27	Mole preserves natural assets for future generations				
28	MNP encourages responsible use of natural assets				
29	Lands of the Park should revert to their owners				

No.	E) Quality of life	1	2	3	4
-	Statement set	SA	A	DA	SDA
30	Visitors provide market for handicrafts & souvenirs				
31	Local people get income from tourism employment				
32	Mole Park has made the local people poorer				

33	MNP gives nearby village children education				
34	Villagers receive services from Mole Health Centre				
35	Quality of life of local people is better than before				
36	There are conflicts between Park staff and locals				
37	Local people get electricity/other utilities from MP				
38	Community sanitation/health improved due to MNP				
39	Local people hunt outside the Park for bush meat				
40	Public funding of Mole Park is not waste of money				
41	Further development at Mole Park is bad for locals				
42	Lands at Mole should revert to original owners				
43	MNP gives jobs/businesses to justify its existence.				
44	Communities collect medicinal herbs from the Park				
45	People cut poles and grasses to roof their buildings				
46	Community members also hunt and fish in the Park				

47	Communities do not engage in tourism activities				
48	Women pick wild fruits & fuel wood from the Park				
49	The local people get bush meat from the Mole Park				
50	Compensation is paid to victims when MNP animals/birds damage their crops and property				
51	Communities enter the Park to harvest wild honey				

SECTION II

In this section, I like you to share any unforgettable experiences and problems with me as well as some major uses of the environment by communities in the area prior to the creation of the Mole National Park.

52. Please list major complaints of the communities about the creation and continued existence of the Mole National Park.

.....

53. Please list main benefits communities in the Mole Park area expect from the creation of the Park.

.....

54. Please, list any unforgettable experiences you have had as a result of the presence of the Mole National Park.

.....

Please list main uses of the area to the local communities before government took over the land to establish the Mole National Park.

.....

.....

SECTION III

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Here, I like to know more about you. Please be assured that the survey is absolutely anonymous and the information you give will be kept strictly confidential. Remember that the exercise is purely for academic purposes. Kindly fill out the questionnaire by ticking only once at the appropriate box that applies to you.

56. Which of these best describes your sex? Female [ ] Male [ ]

57. In which of these age groups do you place yourself?

a). 18-22 [ ]. b). 23-27 [ ] c). 28-32 [ ] d).33-37 [ ]

e). 38-42 [ ] f). 43-47 [ ] g) 48-52 [ ] h) 53-57 [ ]

i). 58-62 [ ] j) 63 and above [ ]

58. Which of these best describes your marital status?

a) Singe [ ] b). Married [ ] c) Separated [ ]

d) Divorced [ ] e) Widowed [ ] f) Cohabiting [ ]

59. Which of these best describes your employment status?

a) Part- time employed [ ] b) Full time employed [ ]

c) Unemployed [ ] d) Housewife [ ]

60. If employed state the work you do for a living.....

61. Which of these is your level of education?

a). No formal education [ ] b). Primary/basic [ ]

c) Middle/Junior High [ ] d) Senior High School [ ]

e) Post Senior High (non-tertiary) [ ] f) University Education [ ]

62. Which of these income levels best approximates your annual income before tax? Please tick one only.

a) Less than GH¢99.99 [ ] b) GH¢100.00-149.99 [ ] c) GH¢150.00-199.99 [ ]

d) GH¢200.00-249.99 [ ] e) GH¢250.00- 299.99 [ ] f) GH¢300.00-349.99 [ ]

g) GH¢350.00-399.99 [ ] h) GH¢400.00-449.99 [ ] i) GH¢450.00- 499.99 [ ]

j) GH¢500.00 -549.99 [ ] k) GH¢550.00-599.99 [ ] l) GH¢600 and above [ ]

63. How many years have you lived in this village? .....

APPENDIX B

QUESTIONNAIRE FOR VISITORS TO MOLE NATIONAL PARK

SECTION I

TRAVEL INDICES

1. What was your main purpose of visiting the Mole National Park?

.....

2. How many times have you visited the Mole National Park?

a) 1 time [ ] b) 2 times [ ] c) 3 times [ ]

d) 4 times [ ] e) 5 times [ ] f) 6 times or more [ ]

3. If you are a repeat visitor which one of these motivated your return to Mole Park?

a) Accompanying friends or relations [ ]

b). Attending conference (business, workshop, retreat etc.) [ ]

c). Satisfaction from previous visit [ ]

d) Other (specify).....

4. How many nights will you spend at the Mole Park?

SECTION II

STAY/ACTIVITIES AT THE MOLE NATIONAL PARK

5. List three main activities you undertook/will undertake while at the Mole Park:

a).....

b).....

c).....

6. Which of these is closest to your rating of facilities at the Mole National Park?

a) Poor [ ] b) Satisfactory [ ] c) Good [ ] d) Very good [ ]

e) Excellent [ ]

7. How satisfied are you with facilities at the Park?

a) Somehow satisfied [ ] b) Not satisfied [ ] c) Very satisfied [ ]

d) Satisfied [ ]

8. Please; list any suggestions that you think management could do to enhance visitor satisfaction and experience at Mole National Park:-

.....

.....

.....

SECTION III

SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF MOLE NATIONAL PARK TOURISTS

I like to know a bit more about you. Please, you are reminded that the exercise is purely academic and that your privacy or anonymity would be guaranteed. You may, therefore feel free to provide the following information to enable me know more about you.

9. Which is your sex? a) Female [ ] b) Male [ ]

10. Which of these brackets does your age (in years) fall within?

a) 16-20 [ ] b) 21-25 [ ] c) 25-30 [ ] d) 31-35 [ ] e) 36-40

f) 41-45 [ ]g) 46-30 [ ] h) 51-55 [ ] i) 56-60 [ ] j) 61 or more [ ]

11. What is your nationality? .....

12. Where are you normally resident? .....

13. Which of these best describes your marital status?

a) Single [ ] b) Married [ ] c) Divorced [ ]

d) Separated [ ] e) Cohabiting [ ] f) Widowed [ ]

14. Which of these describes your highest level of education?

a) Primary/Junior High School [ ]b) Senior High School [ ]

c) University [ ] d) Post High School non-university [ ]

e) .Other (specify).....

15. State your employment status

a). Unemployed [ ] b). Employed [ ] c) Student [ ]

16. If you are employed, please state your occupation.....

17. Which of the following is a closer estimate of your income before tax in Ghana cedi?

a) Less GH¢10,000 [ ] b) GH¢10,000-19,999 [ ]

c) GH¢20,000-29,999 [ ] d) GH¢30,000-39,999 [ ]

e) GH¢40,000-49,999 [ ] f) GH¢50, 000-59,999 [ ]

g) GH¢60, 000-69,999 [ ] h) GH¢70,000-79,999 [ ]

i) GH¢80,000 and more [ ]

Thank you very much for your kind cooperation. Have a pleasant tour of Ghana, and please come back some other day.

.....

Nuodio, Theophilus Yigrilaa