

Policy Process in Coastal and Marine Resource Management in Ghana

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Key Words: Policy process, Sustainability Development, Coastal and Marine Policy

SUMMARY

This paper analyses policy process in the management of coastal and marine resources in Ghana and assesses whether the process involves local resource users and is geared towards sustainable development and integrated management. Degradation and depletion of the world environmental resources, especially coastal and marine resources were identified as key issues in the later half of the 20th century. This identification resulted in the demand for new policy direction for the management of coastal and marine resources. Based on this, an international policy for environmental resource management emerged from the 1992 United Nations (UN) Conference on Environment and Development (Agenda 21). Chapter 17 of the Agenda 21 was devoted to the coastal and marine environment and stresses the need to reach integration, to apply preventive and precautionary approaches and aim at full participation of the public in the coastal zone management (Organization for Economic Co-operation and Development, 1993).

Ghana had rectified (Agenda 21) which requires the country to develop and implement national policies and laws that address issues related to sustainable development. The policy process in coastal and marine resource management is very crucial because coastal resources are vital for many local communities and indigenous people of Ghana. The success of coastal and marine resource management policy is likely to have positive multiplier effects on the entire Ghanaian economy. However, the success of any policy may depend on the policy process.

This paper concludes that based on the multiplicity of users of coastal resources, there has been a general consensus that policy process for coastal and marine resource management must change from being government and top executive activity (Top-down) but rather move towards the following directions: participation, integrated management, cooperation and sustainable development. It therefore urges surveyors and other social scientist to get involved and be part of the changing process.

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1. INTRODUCTION

The total land area of Ghana is 238,533 km². The country has a coastline of 550km. The ocean coast is high-energy type and has some lowlands, which are prone to flooding. The coastal zone in Ghana, defined as the area below the 30m contour represents about 7% of the land area and is home to 25% of the nation's total population of about 20million and a place where about 70% of industries and businesses are located. Available demographic data indicates that 51.5% of the coastal zone is urbanised compared to the national figure of 35.4% (Churcher, 2006).

Ghana has a rich heritage of historical coastal sites. There are about 40 castles and forts, which were developed along the coast between the 15th and 18th centuries by various European countries. These castles and forts which are of historic importance to Ghana and Africans especially, those in the Diaspora were used as trading centres for various goods including slaves. UNESCO has designated three of these, namely Cape Coast Castle, St. George's Castle and St. Jago Fort at Elmina as World Heritage Sites.

The coast of Ghana is fed by large rivers and lagoons, which have enormous drainage basins and thus contributing large volumes of fine sediments to a narrow, low gradient continental shelf. The country has 20,900km² continental shelf and 218,100 km² of Exclusive Economic Zone (EEZ) abound in numerous species of fish that have high commercial value. The river estuaries and lagoons serve as inland fishing grounds and wetlands for migratory birds and other ecological species. However, the marine and coastal resources of Ghana exist within a very fragile ecosystem.

The coastal zone of the country is under intense pressure due to high concentration of human activities. The major industries (Manufacturing, Refinery, Mining, Port and Harbour, Textile and Smelting) are located in the coastal zone. Pollution from both land base and sea activities are also a threat to both human and marine life. Overexploitation of the fisheries has led to extinction of some species and others endangered.

Coastal erosion, flooding and shoreline retreat are also serious along entire coast of Ghana. The erosion of the shoreline is a great threat to historical buildings along the shores of Ghana. Erosion has washed away some of the heritage buildings and others are in complete ruins. Past human impacts, inappropriate management, climate change and sea-level rise have been identified as major contributory factors (Ly, 1980, Collins and Evans, 1986).

The above background information clearly shows that Ghana needs to develop a holistic policy for the management of coastal and marine resources such that the current exploitation and use could meet present development without compromising the future development

needs (sustainable development). Given the numerous resources and the multiple users involved: what process should Ghana use to develop this holistic policy for the sustainable management of its threatened coastal and marine resources? What will make the policy acceptable to all users? How would the policy be implemented? What could be done to ensure successful implementation and achievement of the policy objectives? This paper seeks to provide answers to these questions.

2. THEORETICAL BACKGROUND OF POLICY PROCESS

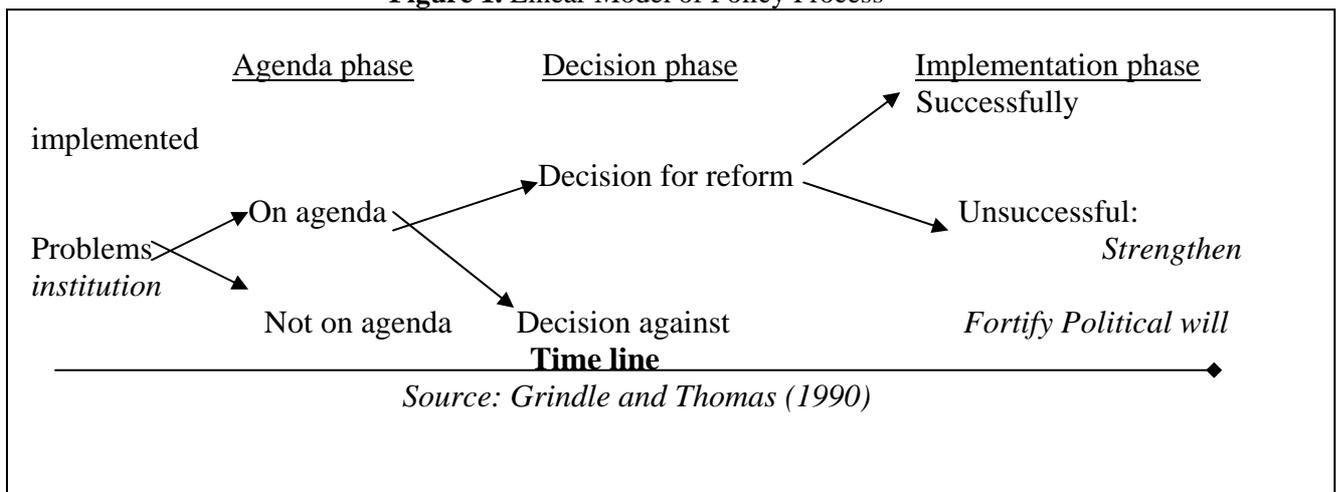
Policy refers to a prescribed course based on guiding principles adopted and followed by government, institution or an individual (Clark 1996). Coastal and marine policy is a set of goals, directives and intentions formulated by administrative persons having some relationship to the marine and coastal environment including all activities relating to the use of the coast and ocean, how decisions are made, and how they are organised to make their decisions (Centre of Ocean Management Studies 1981).

Juma and Clarke (1995) explained that policy is developed through debate between state and societal actors. Participants present claims and justifications, which others review critically. Language not only depicts reality in such arguments, but also shapes the issues at hand in these debates. Juma and Clarke’s explanation implies that, policy process is a means of communication of ideas, but also serves to reflect certain political stance, moulding social reality according to outlook and ideology.

There was an ongoing debate within political science on whether policy-making is a rational, linear process or more chaotic procedure. Various models have been developed to explain policy process. Two models that can be used to analyse coastal and marine policy in Ghana are the linear model and the structural model

The linear model: this model divides policy process into three phases: the agenda phase, decision phase and the implementation phase. The linear model presents policy process as a straight-time line such that the process starts at the agenda phase and ends at the implementation phase.

Figure 1. Linear Model of Policy Process



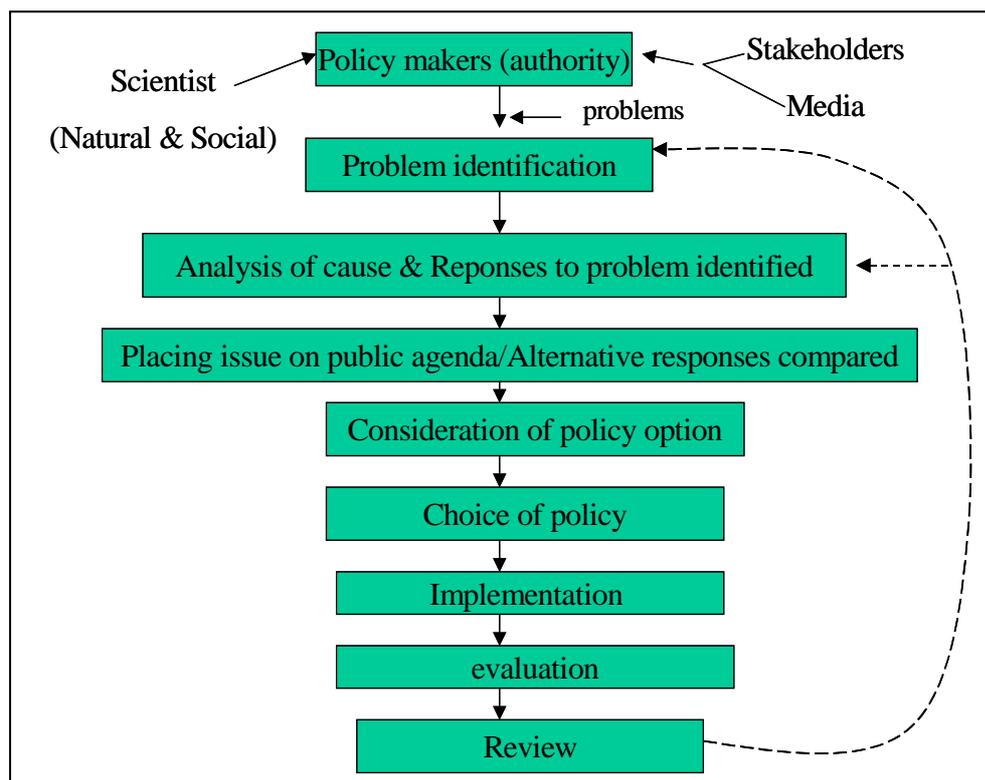
The underlying assumptions of this model can be outlined as:

- Policy makers approach issues rationally,
- Each logical stage of the process is followed,
- All relevant information are carefully considered before decisions are made,
- Unsuccessful policy is caused by lack of political will, poor management or shortage of resources, and
- The assumption of a straight-timeline suggests implementation as achievement of policy objectives and hence the end of the process.

The limitation of the linear model is that policy process is a complex system of overlaps, interactions, interdependences and discontinuities over time (Dudley, 1984). This implies that there might be time overlaps in policy process. Hence, the assumption of a straight-timeline may not be wholly true.

The structural model: this model on the other hand sees policy process as a sequence of stages in the development and pursuit of goals, beginning with thought, moving through action and with solution (Colebatch, 2002). The stages are presented in a form of a circle, indicating that there is a natural progression from one stage to another as well as suggesting that it is an unending process.

Figure 2. Structural Model of Policy Process



The following assumptions have been identified with the structural model:

- Policy as exercise of authority to achieve collective purpose,
- Policy as the pursuit of goals,
- Policy process as a sequence of stages in development and pursuit of these goals
- Stages as a circle not a line
- Circle implies natural progression from one stage to the next.

In a nutshell, the two models of policy process explained above have clearly indicated that policy making starts with a problem. The problem must be substantial and may be put into the public domain for debate and consensus building. This will be followed by the choice of the how the problem is going to be solved. Then the selected choice is implemented. This would be followed by evaluation to assess the performance of the policy. For the evaluation and review of policy, there is a problem as to either go back to problem identification or to start at the analysis of causes and responds to the problem identified.

3. HOW AN ISSUE GETS ON THE PUBLIC AGENDA

It can be identified from the two models that policy process starts with a problem. It is an undisputed fact that social problems are numerous such that policies cannot be developed for all of them at a time. Hence, how does a problem get on the policy agenda? All things being equal, substantial and pressing social problems should get on the policy agenda first. However, this does not always happen due to the difficulty in identifying the actual pressing problems. The difficulty occurs because pressing social problems may be subjective. Thus, one social group may view a particular problem as substantial and pressing but another social group might see the same problem as trivial.

Political authorities, influential groups, media support and to some extent scientific proof that a given problem receives, determines how quickly it gets on to the policy agenda. The following have been identified as ways problems get on to the policy agenda:

- Lobbying of insiders and outsiders
- Powerful interest groups
- Activities of other agenda setters
- Research and dissemination of information
- Shifts in public perception
- Perception of crisis/ public panic
- Occurrences of disaster
- Election results/ change of authority
- Change of key personnel

4. COASTAL AND MARINE POLICY PROCESS IN GHANA

The evolution of coastal and marine policy in Ghana dates back to the 15th century when the coast and the sea were at the centre of trading between Europeans and their Ghanaian Partners. However, international policy for environmental resource management that emerged from the 1992 United Nations (UN) Conference on Environment and Development

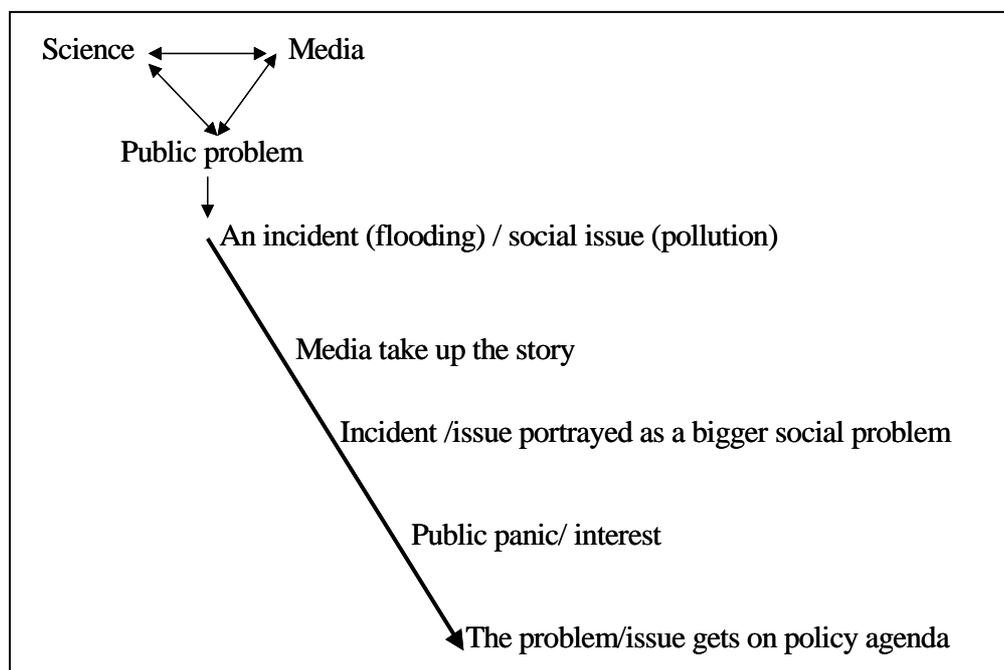
(Agenda 21) and United Nations Convention of the Law of the Sea (UNCLOS) (UN, 2006) among others have influenced the current coastal and marine policy in Ghana

After the emergence of Agenda 21 in 1992 integrated coastal and marine policy was motivated internationally and was recognised by governments, international agencies and donor communities as the way forward to sustainable management of coastal and marine resources. The issue of sustainable development was consistent with Ghana government's development plan (vision2020), which has a target of making Ghana a middle-income country by 2020. Due to this and other factors, the current coastal and marine policy was initiated based on clear understanding of the complexities of the relation between coastal resources and coastal population that subsists on them (World Bank, 1998). It also relates to how specific economic, political, social and technical parameters links. Below is the outline of Coastal and marine policy process in Ghana.

4.1 Identification of Problems

- Environmental degradation of coastal areas, overexploitation and pollution of marine resources (especially fisheries) were identified in the early 1990's as key issues in Ghana (World Bank, 1998)
- Coupled with scientific findings of climate change, sea level rise, Agenda 21 and media hype on the issue lead to public Panic (figure 3), and
- This resulted in the public demand for sustainable interventions and projects in the coastal zone and marine environment that will improve the prospect of human development.

Figure 3. Public Panic / Interest and Policy Agenda



4.2 Consideration of Causes and Intervention Options

- Highly participatory approach, a requirement of Agenda 21 was adopted in problem planning and intervention identification,
- Input was sought from stakeholders at the national, regional, district and community level in a series of workshops under the auspices of Environmental Protection Agency (EPA) of Ghana, and
- Based on stakeholders input a draft report was made identifying priorities and potential intervention to remedy them.

4.3 Choice of Policy

- Cost effective analysis was used to identify the least cost intervention,
- Sustainability of identified intervention was also considered,
- Preliminary findings were submitted for discussion to a range of stakeholders including those at local level,
- Final report incorporating comment of stakeholders was release by the Minister of Environment, Science and Technology (MEST) at a national work shop in Accra in June 1997, and
- Integrated Coastal Zone Management and full claim and management of Exclusive Economic Zone (UNCLOS) were selected as the policy for implementation.

4.4 Implementation

- Government provided direct investment, which comprise capital, education and finance,
- MEST and EPA supervised the implementation and provided expertise and consultations, and
- Local authorities, traditional chiefs, developers, Non-Governmental Organisations and unit committees were partners for implementation.

4.5 Evaluation and Review

In 1999, two years after the implementation of the policy, it was identified through evaluation that there has been an improvement in community participation, community sense of ownership and problem awareness in the management of coastal resources. Evaluation results revealed that the policy has led to the development of the following programmes (United Nations: sustainable development, Ghana):

- Ghana Environmental Resource Management Project – Coastal Wetlands Management Component;
- Gulf of Guinea Large Marine Ecosystem Project;
- Fisheries Sub-sector Capacity Building Project;
- Establishment of a Protected Wetland Ecosystem on the coast;
- Development and Implementation of Oil Spill Contingency Plan;
- Monitoring of fish stock levels and associated oceanographic parameters;

- Institution of a program of Monitoring, Compliance and Surveillance of the marine environment;
- Development of industrial pollution standards;
- Development of a University course on Coastal Zone Management; and
- Increased public education on sound coastal and marine environmental practices.

However, the following challenges were also found:

- Lack of adequately trained manpower;
- Inadequacy of existing legislation;
- Inadequacy of facilities for monitoring and enforcement of policies and legislation;
- Lack of awareness, especially among coastal communities, on the interaction between various development actions and the environment, particularly biological resources;
- Inadequacy of data on near-shore oceanographic processes;
- Inadequacy of financial resources for activities in the marine and coastal environment.

According to the Minister of Environment (Christine Churcher, 2006) a review of the coastal and marine policy in Ghana had identified that most of the problems are international in nature. Hence, Ghana is collaborating with the other countries sharing the trans-boundary environment within the Guinea Current Large Marine Ecosystem. The collaboration policy direction has paved the way in formulating a project proposal referred to as: *"Combating Living Resources Depletion and Coastal area degradation in the Guinea Current Large Marine Ecosystem through ecosystem-based Regional Actions"* The long-term development goals of the project are:

- To recover and sustain depleted fisheries,
- To restore degraded habitats, and
- To reduce land and ship-based pollution by establishing a regional management framework for sustainable use of living and non-living resources in the Guinea Current Large Marine Ecosystem.

4.6 Policy Collectivity

It is relatively stable aggregations of people from a range of organisations who find themselves thrown together on continuing basis to address policy questions 'camped permanently around each source of problems' (Davies, 1964). These groups play a very significant role in the policy process whether they are formally recognised or not. Below are the policy collectivities that emerged from the policy process of coastal and marine resources management in Ghana:

- Fisheries Commission of the Ministry of Food and Agriculture;
- National committee for the implementation of Agenda21 of the MEST and
- Steering committee of the Gulf of Guinea Large marine ecosystem

Though a broad based participation of stakeholders, local resources users were involved in the policy process the contribution of the three groups above were overwhelming. The groups came out strongly and purposely to ensure formulation of policy that will conform to Agenda 21.

A question one may ask here is where were the surveyors? Did they contribute to the policy process at all? Nothing was said about Ghana Institute of Surveyors (GhIS) in the policy process. This indicates that possibly, there was no or limited contribution from GhIS to the policy process. The reason could be attributed to the low development of the environmental faculty of GhIS, which has led to the lack of skilled environmental surveyors in the country. There is the need therefore, for GhIS to broaden the scope of surveyor's profession to cover all faculties, so that surveyors will have the capacity to help shape the changes in the various sectors of the economy where their professions apply.

5. HOW COASTAL AND MARINE POLICY PROCESS IN GHANA RELATES TO THE POLICY PROCESS MODELS

5.1 Linear Model

The policy process for the coastal and marine resources management in Ghana relates to the linear model of policy process in this respect. Firstly, coastal and marine issues were rationally approached. Secondly, all relevant stakeholders and information related to the problems were carefully considered in the process. Finally, the policy process in Ghana followed logical stages/phases. However, Ghana's policy process contradicts the linear model in the following ways: the policy process in Ghana did not follow a linear pattern but rather a cycle (the policy review re-state the process). Ghana's policy process does not have a timeline (the timeline implies a beginning and an end to the process of policy development). It does not also apportion praise or blame for the success or failure of policy.

5.2 Structural Model

Critical analysis of the policy process for the coastal and marine resources management in Ghana reveals that the process conforms to the structural model of policy process. Ghana's policy process satisfy the following assumptions of the structural model of policy process:

- Policy process as a cycle but not a line
- Policy process followed a sequence of stages
- Policy as exercise of authority to achieve collective purpose
- Development/goal direction of policy
- Recognise scientist, media and stakeholders involvement

6. AGENDA 21 AND COASTAL AND MARINE POLICY IN GHANA

Agenda 21 advocates for sustainable development and integrated management approach to the development and management of environmental resources. Coastal and marine resources (environmental resources) have multiplicity of users, and due to that there is a general consensus worldwide that policy for coastal and marine resource management must move towards the following directions:

- Integrated management and sustainable development of coastal areas, including exclusive economic zones;

- Marine environmental protection;
- Sustainable use and conservation of marine living resources of the high seas;
- Sustainable use and conservation of marine living resources under national jurisdiction;
- Addressing critical uncertainties for the management of the marine environment and climate change;
- Strengthening international, including regional, cooperation and coordination; and
- Sustainable development of small islands.

Table 1. A Framework For The Evaluation Of Coastal And Marine Policy

THEME	Evaluation			
	A	B	C	D
Evaluation criteria				
KEY CONCEPT				
Does Policy demonstrate holism?	√			
Is sustainability a fundamental principle of policy?	√			
Is the policy explicit about uncertainty?			√	
Does the policy deal with risk and its mitigation?		√		
THE POLICY PROCESS				
Is the policy process transparent?	√			
Is the policy process open to all stakeholders at all levels?		√		
Does the policy process include mechanisms for conflict resolution?	√			
Has the policy process allowed for the incorporation of sound science?		√		
Has the policy process improved co-ordination and consultation between policy makers and stakeholders?	√			
Do the policies provide a framework for adaptive management?		√		
Do the policies provide a framework for monitoring and review?		√		
ASPECTS OF POLICY				
Do appropriate institutions exist for policy to be implemented?	√			
Does the policy have the status it requires for success?		√		
Are sufficient resources available for implementation?				√
Do compliance instruments exist?		√		
Is the policy consistent with higher-level policy?	√			
Does policy provide a framework for interaction?	√			
Does policy promote co-operation?		√		
Are there indicators that interaction exists?		√		
Does policy promote stakeholder participation?	√			
Does the policy promote education?		√		
Is the policy implemented?			√	
Has the policy improved the management of resources?		√		
Has the policy reduced conflict of use?		√		
Are the public satisfied?			√	
Have indicators of success been identified and are they being used? e.g. comparison with known (baseline) situations: Improvements to water quality Improved biodiversity Improved habitat protection		√		

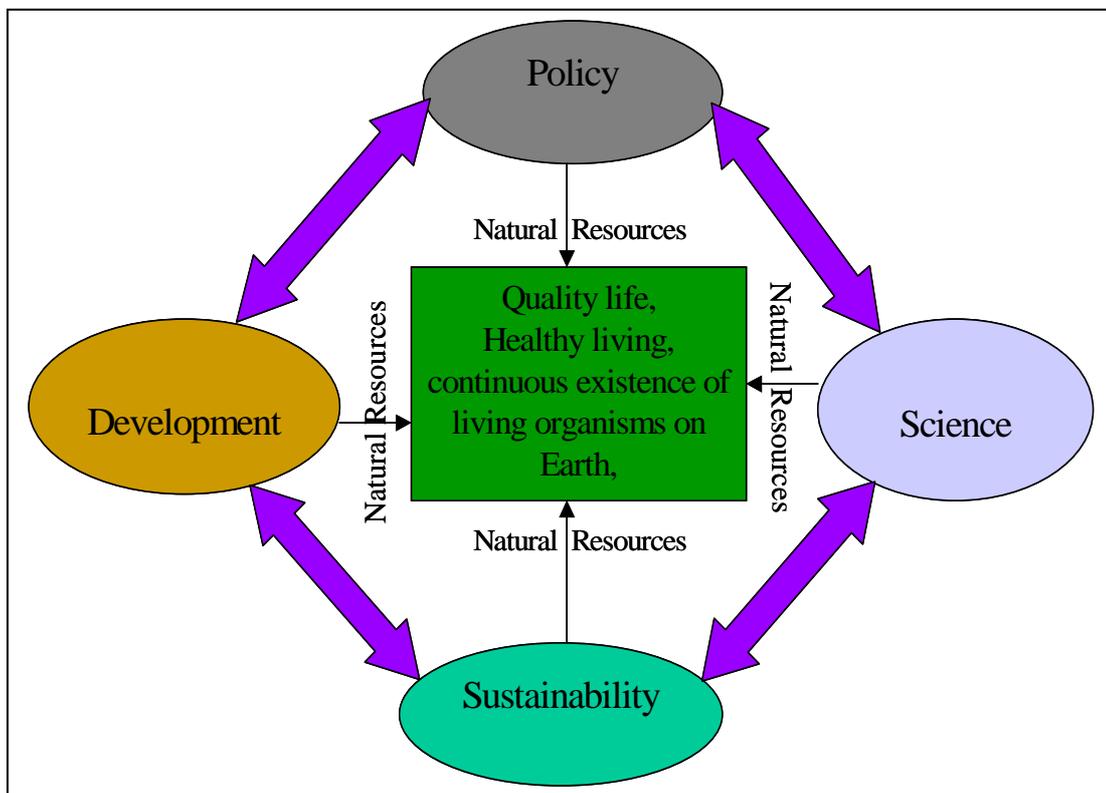
The evaluation criteria were scored from A (criteria is achieved completely) to D (criteria not achieved).

Source: This generic framework is based on 2004 MSc students of university of Portsmouth Coastal and Marine Policy course discussion. The author was part of the year group

The evaluation framework (table 1) was used as an evaluation tool to assess how policy process for coastal and marine resource management in Ghana satisfies the condition and objectives of Agenda 21. The result of the evaluation indicated that Ghana coastal and marine policy contributed to the achievement of the objectives of Agenda 21. The integrated policy and decision-making approach used in Ghana is one of the objectives of the Agenda 21 policy document. Agenda 21 identifies the interactions of coastal resources, which Ghana's policy process effectively considered. Ghana used participatory approach planning and policy process, which is also a requirement of Agenda 21. Sustainable development and interventions considered in Ghana policy process were the basis of Agenda 21.

However, one important revelation that emerged from the evaluation is that, the implementation of Ghana coastal and marine policy was saddled by inadequate funding. In fact, certain aspect of the policy has not been implemented as at now due to lack of funds. This has affect the over all achievement of the policy objectives. Despite this setback, the policy has achieved some amount of success (table 1).

Figure 4: Interactions for Sustainable Development



Development cannot be achieved without policy frameworks or goals. Sustainable development requires scientific investigations into certain parameters and issues in order to formulate appropriate policies that will lead to the realisation of sustainable development. Without policy, certain scientific inventions and innovations could possibly put the world in a state of chaos and turmoil. This means that Policy, Development, Sustainability and Science

does not need to function in isolation but rather must be linked to each other to ensure effective and efficient sustainable development and management of environment resources, improved quality of life and healthy living as well as continuous existence of living organisms on Earth (figure 4). The policy process for coastal and marine resources management in Ghana had these interactions. However, the linkages need to be strengthened so that any policy option selected for implementation would be based on informed decisions and understanding of the complexities of managing environmental resources.

7. CONCLUSION

Population growth, urbanisation, pollution, global development concentrations in the coastal zone and climate change are threats to the carrying capacity of coastal systems and marine resources in Ghana. There is therefore the need to ensure sustainable use and management of coastal and marine resources so that current development will not compromise the future needs. To achieve this goal of sustainable development there must be a policy.

Due to the complexities of managing environmental resources and the fact that coastal and marine resources have multiple users, any policy for their management must be holistic. Quite apart from this, to make coastal and marine policy holistic and acceptable by the multiple users and also for it to achieve the sustainable objective, the policy process must involve all the stakeholders and users (participatory) and co-operate with local institutions.

The policy process must also explore both the vertical and horizontal interactions and integration of policy, science, and development (figure 4). This will ensure that coastal and marine policy is holistic, research lead and have the highest potential to achieve sustainable development. This required that scientists; research institutions, policy experts and other professionals (especially, surveyors) must be involved in the policy process so as to shape the change towards achieving sustainable development.

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BIOGRAPHICAL NOTES

Isaac Boateng is a founding member and chief executive officer of CoastNet-Ghana, a Non Governmental Organisation involve in Coastal Zone Management in Ghana. He is also a Part-time Lecturer at the University of Portsmouth where he is undertaken a PhD research on the topic, 'Integrated Shoreline Management and Adaptation of Ghana Coast to Climate Change' at the Department of Geography, University of Portsmouth. Isaac holds MSc. Degree in Coastal and Marine Resource Management from the University of Portsmouth, MA. Level research study in Scandinavian Welfare Model at Roskilde University, Denmark and also B.Ed degree in Social Studies at the University of Cape Coast, Ghana. Isaac has also work as a Lecturer at the Liberal Studies Department of Kumasi Polytechnic in Ghana.

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