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Four Governance Case Studies and their Implications for Ghana Fisheries Sector



November, 2013

Hen Mpoano



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For more information contact: Coastal Resources Center, University of Rhode Island, Narragansett Bay Campus, South Ferry Road, Narragansett, Rhode Island 02882, USA. Brian Crawford, Director International Programs at Email: brian@crc.uri.edu; Tel: 401-874-6224; Fax: 401-874-6920

Friends of the Nation: <http://www.fonghana.org>

Hen Mpoano: <http://www.henmpoano.org>

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List of Acronyms

| | |
|---------------|---|
| CBFMCs | Community Based Fisheries Management Committees |
| CRC | Coastal Resources Centre |
| DCE | District Chief Executive |
| EEZ | Economic Exclusive Zone aka |
| FAO | Food and Agriculture Organization |
| FC | Fisheries Commission |
| FoN | Friends of the Nation |
| GDP | Gross Domestic Product |
| LBCs | Landing Beach Committees |
| MCE | Municipal Chief Executive |
| MFRD | Marine Fisheries Research Division, |
| MTADS | Medium-Term Agricultural Development Strategy |
| MMDCE | Metropolitan and District Chief Executive |
| MOFA | Ministry of Food and Agriculture |
| NGO | Non-Governmental Organization |
| NDC | National Democratic Congress |
| NPA | National Petroleum Authority |
| NPP | New Patriotic Party |
| STMA | Sekondi-Takoradi Metropolitan Assembly |
| IEZ | Inshore Exclusive Zones |
| IUU | Illegal, Unreported and Unregulated |
| LBC | Landing Beach Committees |
| LPC | Local Premix Committee |
| RCC | Regional Coordinating Council |
| DCE | District Chief Executive |
| DoF | Directorate of Fisheries |
| UNDP | United Nation Development Program |

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SUMMARY

Four governance case studies were commissioned in 2010 as part of the context studies aimed at understanding and profiling pertinent issues in the fisheries sector particularly within the Western Region and the other coastal regions of Ghana. The studies covered issues related to illegal fishing; the premix subsidy; community based fisheries management committees and traditional beliefs and the sea. The contents of the studies are presented as received.

Presented in this report is a compilation of the findings of the four case studies and implications for Ghana fisheries sector. The results informed the approach and interventions of the ICFG Initiative in the Western Region and support for fisheries policy formulation in Ghana.

SECTION A
FISHERIES AND COASTAL ZONE GOVERNANCE IN THE
WESTERN REGION OF GHANA: CASE STUDY OF
COMMUNITY-BASED FISHERIES MANAGEMENT
COMMITTEES



By
Henrietta Abane
Department of Sociology and Anthropology
University of Cape Coast
July 2010

SECTION A: FISHERIES AND COASTAL ZONE GOVERNANCE IN THE WESTERN REGION OF GHANA: CASE STUDY OF COMMUNITY-BASED FISHERIES MANAGEMENT COMMITTEES

By

Henrietta Abane

1.0 BACKGROUND TO THE STUDY

In many parts of the developing world, poor rural people depend on commonly-held resources for their livelihoods and to sustain their socio-cultural identities. These are common pool resources and include forests, grazing lands, fish stocks and water resources. Common pool resources refer to natural resources where one person's use subtracts from another's use and where it is often necessary, but difficult and costly to exclude other users outside the group from using the resource (Ostrom, 2000). Such resources underpin the livelihoods of millions of people throughout the world. In particular they are important to poor people who have few alternative economic alternatives.

Global fisheries production has increased rapidly over the past half century with developing countries being the major producers. Fisheries provide employment for over 38 million people 95% of which live in developing countries (FAO, 2004). Total employment in fisheries and related activities such as trade, input supplies and fish processing probably exceeds 150 million people (IDDRA, 2005; FAO, 2004). Trade in fish products between developing countries and markets in developed countries is a major source of foreign exchange for developing countries (IDDRA, 2005a). Fisheries can also provide a contribution to household cash income. Such household cash income gives access to other benefits such as education and health services as well as allows investment in other assets (land, livestock, fishing gear etc) which in turn can further reduce vulnerability to poverty (IDDRA, 2005). Again, fish is an important food source with 60% of people in developing countries depending on it for at least 30% of their animal protein supplies (IDDRA, 2005; FAO, 2004).

1.1 Marine fishing in Ghana

The fishing industry in the country made up of marine and inland fisheries, plays an important role in its contribution to the GDP (3.9%), employment, livelihood strategies, food security and poverty reduction of participants and their dependants (Bank of Ghana, 2008). Marine fishing in Ghana is done in two main areas. First is the off-shore region up to a limit of about 200 miles (known as the Economic Exclusive Zone aka EEZ); and second in the continental shelf (World Bank, 1995). The EEZ accounts for about 10% of marine fish production. Within the continental shelf, fishing is carried out by artisanal fishers operating from about 200 fishing villages along the coastline, inshore and semi-industrial light bottom trawlers, and large distant water freezer trawlers and shrimpers (World Bank, 1995).

Artisanal fishing in particular contributes about 70 – 80% of the total annual volume of marine fish catch of the country. The main species exploited are anchovy, sardinella, mackerels and burrito. In the Western region a 2004 census indicated that there were 75 fishing villages, 100 landing sites, 3,246 canoes and a total of 27,366 fishermen involved in artisanal marine fishing (Bank of Ghana, 2008).

There is a gender division of labour in the organization of artisanal fishing in the country. Men naturally undertake fish harvesting while women are key in the offshore post harvest activities including processing, storage and trade. Within the fishing communities, whole households undertake one form of activity or the other. While over 150,000 fishers are directly engaged in marine capture fisheries in the country, it is estimated countrywide that between 1.5 million and 2 million people in households are also engaged in the artisanal marine fishing industry. In addition to such fishing households about 500,000 other people get employed in the processing, trade, canoe building, packaging and transport industry all ancillary to the artisanal marine fishing industry (Bank of Ghana, 2008; Mensah *et al.*, 2006).

Fishery-related livelihoods are vulnerable for a variety of reasons. Fish stocks are migratory, the seas provide a hostile environment and the product is perishable. Moreover fisheries are vulnerable to overexploitation of the resource. Fish stocks may have to contend with external shocks and trends that relate to environmental degradation and climate change. Marine fish is a naturally occurring common pool resource with open access. An influential narrative on the degradation or depletion of such commonly held resources has centred on Hardin's 'the tragedy of the commons' (Hardin, 1968). Common pool resources with open access become degraded or over utilized because a great part of the cost of overutilization by individual users is passed on to other users. Individuals thus would increase the utility of an open access resource in so far as they do not bear the full cost of overutilization and in the face of no social control mechanism. Many countries have tried to put in place institutions and management systems in the fisheries sector that deal with the state and traditional arrangements. In the case of marine fishing in Ghana, there is an absence of a well defined property rights and thus access is highly unregulated. It is the recognition of such overexploitation of marine fisheries that the Government of Ghana in its Medium-Term Agricultural Development Strategy (MTADS) discussed with the World Bank, sought to develop resource management plans for the fisheries sector and facilitate a regulatory framework for the management plans (World Bank, 2003).

This document reports on the governance system and issues that relate to artisanal fisheries along the western coast of Ghana. In particular it addresses why efforts by the state to strengthen community based fisheries management to protect the resource and ensure sustainability of the industry failed.

1.2 Governance in fisheries

There has been an apparent and widespread lack of success over the past half century to manage the exploitation of common pool resources in a sustainable manner. Within the fisheries sector, while governments are losing out on the potential benefits, fishing communities recognize the unsustainable fish resources as a threat to their livelihoods. There has been need therefore to better understand the factors that affect fisheries and coastal management performance and to develop new and alternative approaches to the challenges and opportunities presented. Fisheries and coastal governance is the sum of the legal, social, economic and political arrangements used to manage fisheries. It has international, national and local dimensions and includes legally binding rules as well as customary social arrangements (FAO, 2001). It also involves the establishment of institutions, policies and processes to effectively manage fisheries by the state, market and civil society organizations. While institutions are the sets of rules and arrangements as well as the organizations that develop and implement these rules, policies define courses of action of the stakeholders involved (MRAG, 2005).

Global reviews of the current state of fish stocks indicate that prevailing systems of fisheries governance have been largely ineffective at controlling access to fishery resources to ensure

their sustainability (IDDRA, 2005). The failure of centralized arrangement for small scale fisheries and or the economically driven reforms and constraints have increased the interest in the potential of fisheries co-management. Co-management results in the sharing of responsibility and authority for management between resource users, other stakeholders and government. It improves compliance to fisheries regulations by participating stakeholders, reduces the costs of data collection, monitoring and evaluation as well as leads to the empowerment of local communities. Furthermore, co-management provides more locally relevant management plans and assists in conflict management between stakeholders (Arthur, 2005). Co-management arrangements depend on local contexts but their success depends on the creation of an enabling environment that supports local management planning as well as ensuring that the rights of stakeholders to participate and assume responsibility is legitimized.

Arthur (2005) presents some conditions for success in fisheries co-management. These include:

- Specification of broad national sectoral objectives
- Creating an enabling environment through policies and legislation
- Creating nested governance structures – levels of enforcement, planning and co-ordination that takes into account traditional local institutions with a remit covering fisheries management.
- Reducing stakeholder vulnerability through livelihood diversification. This makes stakeholder groups feel that they are able to consider the sustainability of the fishery and engage in co-management.
- Provision of training, communication, conflict resolution and extension services to support co-management.

A community-based management of small scale fisheries involves a decentralization of decision making to the extent that management decisions are made locally. Here, management is considered as a partnership arrangement between government and other stakeholders into which existing informal and customary management systems may have to be integrated. The argument here is that those that are dependent on the fishery have the greatest interest in ensuring its sustainability of the resource system. These also have extensive local knowledge and therefore are best placed to make management decisions. It is important that both authority and responsibility should be devolved to co-managing stakeholders. Any successful co-management arrangement should be guided by the following principles (Arthur, 2005):

Ensuring meaningful participation in the management process. The challenges here are the identification and involvement of stakeholder groups and the commitment to provide the resources to support participation develop capacity and empower the groups.

- Creating transparency of information and options available, the management decisions taken and the basis on which such key decisions have been taken. This contributes to legitimacy and acceptance of decisions and therefore compliance.
- Ensuring accountability. Representatives of stakeholder groups should be legitimate and communicate the views of groups they represent. While local stakeholders should be accountable to government, the latter should also be accountable to the local stakeholders.
- Developing management capability of local stakeholders to contribute to decision making and take on management roles and responsibilities. This will involve financial resources, training and coordination.

-

1.3 Terms of Reference

This consultant has been tasked to assess the overall achievements of the CBFMCs programme overtime and provide lessons learned for the future local governance scenarios. Specifically, this study will

- Describe the evolution of the Community Based Management Fisheries Committee (CBMFC) programme in the Western Region and how it was implemented in each of the six coastal districts.
- Describe the nature and degree of stakeholder representation on the committees.
- Describe how decisions are made on the Committees and the extent to which various stakeholders have had a voice in such decisions.
- Describe the gender representation and participation in decisions in the Committees.
- Assess the extent to which CBFMCs have inputs into various levels of regulatory framework and decision making with regards to the Department of Fisheries and the National Fisheries Commission.
- Present the results of the CBFMC programme in the Western Region and identify communities where such committees are still active.
- Analyze the social conditions and factors that have either facilitated or constrained the operations of the CBFMCs.
- Present the lessons learned from the programme.

2.0 METHODOLOGY

The study adopted a qualitative methodology to generate data for analysis. It relied on both secondary and primary sources of data. Secondary sources of data included reports, publications and internet sources. These sources provided the background information and literature on fisheries as open access common pool natural resources that should be managed to prevent overexploitation and ensure sustainability of livelihoods. They also served as a guide to government's efforts at governance through the provision of a management plan and the formation of the CBFMCs to help implement the plans. Primary data was obtained through field work using semi-structured interviews and focus discussions. Four main groups of respondents were identified and contacted. They were:

1. Members of active and inactive CBFMCs
2. Chief fishermen and their council of elders; Konkohenes (female chief processors/traders)and their council of elders;
3. Officials from the Fisheries Commission, District Assemblies and NGOs working in fisheries.
4. Other fishers and women fish dealers.

Whereas some respondents were selected purposively for inclusion e.g. CBFMC members, chief fishermen, Konkohenes and their respective councils; and officials, the others were contacted through accidental sampling. Respondents thus were selected from the two strata to enable the consultant draw insights from both successful and unsuccessful management committee operations. The officials were purposively selected because they either had invaluable insight into fisheries, had long associations with the establishment and operations of the committees; or were in local government.

Records obtained from Friends of the Nation (FoN), an NGO working in the fisheries sub sector in the Western region, show that almost all the CBFMCs that were established in the region collapsed soon after. A number of CBFMCs including Abuesi, Asanta, Sekondi, Shama and Half Assini committees operated for at least a year before collapsing. The NGO revived five CBFMCs in 2008 and these are still in operation. They are Axim, Sekondi, New Takoradi, Abuesi and Asanta. Out of these five, it is only CBFMCs in Sekondi and Abuesi that are doing well.

The study therefore purposively selected all CBFMCs set up by Friends of the Nation and included Shama and Half Assini, two of the five committees that operated for at least one year. Out of a total of seven committees that had been identified as presently having or having had CBFMCs in the past, five were selected for the study. Also included in the study was Aboadze fishing community not included in the records of Friends of the Nation but highly recommended by the client for inclusion. Table 1 presents a summary of communities visited, categories of respondents and data collection tool used in the field for the study.

Table 1-0-A: Summary of Methodology

| Communities visited | CBFMC ever formed | Categories of respondents | Data collection tool |
|--------------------------|-------------------|--|--------------------------------------|
| Aboadze | No | Chief fisherman and council; Konkohene and council; | Focus group discussion Interviews |
| Sekondi European harbour | Yes | Fishers and Fish traders CBFMC members, Chief fisherman and council; | Focus group discussion |
| Asanta | Yes | Fishers and Fish traders CBFMC members, Chief fisherman and council; | Interviews Focus group discussion |
| Abuesi | Yes | Fishers and fish traders CBFMC members, Chief fisherman and council Konkohene and council; | Interviews Focus group discussion |
| Axim (Apewosika) | Yes | Fishers and Fish traders CBFMC members, Chief fisherman and council Konkohene and council; | Interviews Focus group discussion |
| New Takoradi | Yes | Fishers and Fish traders CBFMC members, Chief fisherman and council Konkohene and council; | Interviews Focus group discussion |
| | | Fishers and Fish traders Forestry Commission, Municipal Assembly, Friends of the Nation | Interviews Interviews/Discussion |

In all six focus discussions were held with chief fishermen and their council members in all the communities visited. Four focus discussions were held with the Konkohene and her council in all but Sekondi and Asanta. While the Konkohene and members of her council were away from base to attend to other activities in Sekondi, at Asanta it was explained that there was no such position as Konkohene but her role was collectively played by wives of the seven canoe owners. These women unfortunately were not in the village as at the time the researcher reached the community. A total of five focus discussions were also held with some members of the CBFMCs in all five fishing communities that had CBFMCs ever established. There was no community in which the consultant had access to the compliment of all CBFMC members. In all, the consultant had a total of fifteen focus discussions and twenty eight interviews (with fifteen fishermen and thirteen fish traders) in the communities visited.

She also conducted two interviews with officials from the Sekondi-Takoradi Metropolitan Assembly (STMA) (1), Fisheries Commission (1) and interacted with another officer of the Fisheries Commission and 2 officers from Friends of the Nation. Table 2 presents the number of interactions with each category of respondent in each community as discussed above.

Table 2-0-B: Number of Focus Discussions and Interviews held in each community

| Community | Chief fisherman & council | Konkohene & Council | CBFMC | Interview Fishermen | Interview Fish Traders | Total |
|------------------|---------------------------|---------------------|-------|---------------------|------------------------|-------|
| Abuesi | 1 | 1 | 1 | 3 | 2 | 8 |
| Aboadze | 1 | 1 | - | 2 | 2 | 6 |
| Sekondi | 1 | - | 1 | 3 | 2 | 7 |
| New Takoradi | 1 | 1 | 1 | 2 | 3 | 8 |
| Axim (Apewosika) | 1 | 1 | 1 | 3 | 3 | 9 |
| Asanta | 1 | - | 1 | 2 | 1 | 5 |
| Total | 6 | 4 | 5 | 15 | 13 | 43 |

Themes and issues for questioning and discussions were guided by the terms of reference given to the consultant. All interviews and focus discussions were recorded with permission, transcribed and analyzed qualitatively with the help of descriptive statistics. In the analysis, trends and patterns were drawn; the strengths, weaknesses, threats and opportunities of the CBFMCs were highlighted, while the voices of respondents were used to convey their hopes, aspirations, concerns and fears. The findings of the case study are presented below.

3.0 FINDINGS

3.1 Moral order of fishing communities

Fishing communities like all other traditional communities in Ghana have a moral code – values, norms and mores- that form the collective conscience of the societies. The moral code emphasizes communal values of interdependence, shared interests, feelings and aspirations as well as reciprocal obligations and social harmony. These values guide and strengthen the type of social relations that ought to exist between community members. When individuals in fishing communities deviate from the community’s moral code, the generality of members unite in their response. Hence opposition to anything that offends the moral code or collective conscience of traditional societies creates opportunities for cooperation that become essential for group survival. Group members then would apply sanctions to regulate the offender’s behavior.

All categories of respondents in the fishing communities indicated that fishing was the basis of their livelihood and hence were prepared to sanction any member whose fishing activities did not promote interdependence, were not in their interest or promote social harmony. They condemned beach fouling and illegal fishing methods (use of DDT, carbide, dynamite, light and small fish net mesh sizes) engaged in by some members of their communities. This was because respondents realized the harm such activities was causing their livelihoods in terms of insanitary environments, the destruction of spawning areas, low catch and poor fish values. Communities had given to themselves laws to guide their fishing activities and protect their livelihoods. Such laws ensured sanitary conditions at the beach, regulated overexploitation of

the marine resource, illegal methods of fishing and ensured the safety of fishers at sea. This position was buttressed by fisheries officials interviewed who cited the interventions the Mumford fishing community put in place when they realized that their ailing chief fisherman was unable to perform his role. The officials intimated that the inability of the ailing chief fisherman to perform his role led to a deterioration of insanitary conditions at the Mumford beach as well as a general breakdown of social order at the beach. The community, confronted with such problems hurriedly came together to draw up for themselves laws to regulate their activities and fines for those who engaged in deviant activities.

3.2 Evolution of CBFMCs

The fisheries sub-sector is important in terms of food and livelihood security, poverty reduction, employment as well as revenue generation. It is however beset with persistent conflicts attendant in the exploitation of the resource either between the artisanal fishers or between them and those engaged in industrial fishing. Conflicts have been over marine space and resources, net dimensions, profits and resource sustainability to mention a few. The fisheries sub-sector in the face of such conflicts has had a long history of attempts at regulating its activities that dates from the colonial period.

A recent attempt at establishing long-term sustainability of the fisheries sub-sector and maximizing its contribution to the Ghanaian economy has seen the Government of Ghana undertaking a restructuring of the fisheries sub-sector. The objectives of the restructuring among others was to increase production for local consumption and export, integrate fishing activities in the farming system through the promotion of aquaculture, strengthen the fisheries department to carry out its mandate and develop a resource management plan for the entire fisheries sector (World Bank, 1995). It was thought that to attain these objectives two important activities had to be carried out among a host of others. These are first to update the fisheries law to facilitate a regulatory framework in which the fisheries management plan would be effectively carried out and second, strengthen the department of Fisheries and related institutions and fishers' groups so they can effectively implement the fisheries management plans (World Bank, 2003). This attempt culminated in the 2002 Fisheries Act (Act 625) to consolidate with amendments all laws on fisheries to date. The Act also provided for the regulation and management of fisheries as well as provided for the development of the industry and ensured sustainability in the exploitation of fisheries resources.

The Community Based Fisheries Management Committees (CBFMCs) were created out of a World Bank-Government of Ghana fisheries sub-sector capacity building programme. The initial phase of the project started in 1997 with a workshop designed to brainstorm issues in artisanal fisheries management and in particular to build on existing fisheries rules and practices. Such rules and practices were manifest in all fishing communities but particularly in Mumford in the Gomoa West District of the Central region where a fisheries management framework had been developed which empowered a local committee with its enforcement. Together with experiences gained from Tanzania and Malawi, models of best practices in co-management were to be formulated and discussed at the stake holder's workshop (Forestry officials, 2010; Braimah, 2009). Stakeholders that participated in the workshop included community fisher representatives from marine and the Volta Lake system respectively, chief fishermen, staff of the fisheries administration (at the district, regional and national levels), District Chief Executives, Paramount chiefs, Village Headmen, Presiding members of the Assemblies, NGOs and churches (MOFA, 2003; Lenselink, 2002). This workshop suggested the following:

- A modification of the concept of chief fisherman and council of elders.

- An inclusion of minority groups in the council of elders.
- An expansion of fisheries rules to reflect environmental concerns.
- Documentation of community ‘bye laws’ on fisheries and these should be made consistent with national, regional and district laws.
- An endorsement of community laws by the District Assembly.

The CBFMCs and their ‘bye laws’ hence formed the basis of fisheries management in the country. The workshop also recommended the strengthening and sharpening of skills of field officers of the department of Fisheries in terms of social mobilization, education and training of fishing communities and community–based artisanal fisheries resource management.

The overall idea was to establish governance structures at all levels- community, zonal, district and national (Team Consult, 2004). This was to be undertaken in a series of steps that involved the following:

- Putting in place, an implementing team,
- Community sensitization and committee formation,
- Capacity building in terms of orientation, roles, responsibilities and rules for operation,
- Establishment of zonal committees with orientation and rules; and
- Establishment of a post implementation management scheme that would oversee monitoring and evaluation, financial and institutional sustenance, organizational development interventions and conduct training and learning sessions.

According to the Ministry of food and Agriculture MOFA (2003), the formation of the CBFMCs were justified in the sense that first, it was a means to empower the traditional rulers and chief fishermen to enforce the fisheries law and bye-laws. Second, the CBFMC was a means to involve local people in the enactment and implementation of the fisheries law and bye-laws. Third, the committee was also a means to educate all stakeholders on appropriate methods of fishing from the sea and the lakes and to encourage them to support fisheries laws and regulations. Fourth, the committees were again a means to assist the traditional rulers and the District Assemblies in ensuring the adoption of sustainable fisheries management practices. Finally, they are a means to reverse the decline in fish landings, fish size, and extinction of certain species illegal fishing methods and environmental degradation that leads to loss of natural breeding grounds. A total of 133 CBFMCs were established between 1997 and 2002 in 300 landing sites (Development Institute, 2008; Braimah, 2009).

3.3 Organization of the CBFMC in the Western Region

A team of facilitation and animation officers from the then Department of fisheries (now Fisheries Commission) visited all the forty landing sites and engaged in a process of social mobilization, sensitizing and educating varied groups of community people. This was done with opinion leaders, fishermen, women fish traders and other stakeholder groups. Such sensitization and education was done over a period of time after which the membership of the CBFMC was put together. In the Western region, forty (40) of such committees were created with nineteen (19) more committees expected to be added. These were created in four districts namely Shama Ahanta East, Ahanta West, Nzema East and Jomoro (MOFA, 2003).

3.4 Stakeholder Representation and Decision Making

According to the model constitution for operating the CBFMC, the membership shall comprise the following (MOFA, 2003):

- Chief fisherman or his representative;

- Representatives of all ethnic groups involved in fishing in the community (one each);
- Representative of fishmongers/leader of fish processors;
- Representative of Inland Canoe Fishermen Council/Ghana Canoe Council;
- Two representatives of Unit Committees of the respective District Assembly, including one woman.

A review of the members of the CBFMCs in the case study highlighted a number of responses. Below are few of them:

There were a lot of people who sat on the committee. They included me as chairman, the konkohene and council, the assemblymen, other prominent people in the community and even the footballers.

New Takoradi Chairman, FDG 2010

The membership of the committee includes me as chairman, the assemblyman, Konkohene, the chairman of the canoe owners association and all opinion leaders whose work is related to the fishing industry. There are two women on the committee, the konkohene and her secretary.

Abuesi Chairman, FDG 2010

We have the seven net owners in this community represented on our committee. We also have me as a representative of our chief fisherman who is indisposed, the secretary, assemblyman and three women.

Asanta Chairman, FGD 2010

The stakeholder representation on CBFMCs in the case study depended on the community in question but it became apparent that all the CBFMCs had the Chief fisherman as chairman, members of the chief fisherman's council, Assembly member for the fishing community and at least two representatives from the women fish traders as members. The other members of the committee differed from community to community although they were all identified as community leaders/opinion leaders and or chairpersons of identifiable private and state institutions. Apart from the CBFMC at Sekondi whose membership included an official from the fisheries commission and law enforcement agency, the other communities did not have any such people.

Stakeholders played an important part in the activities of the management committees. The following responses from the focus discussion indicate the extent to which members were involved the committee activities.

We were meeting on the first Tuesday of every month. We now have a new chief fisherman who must chair the committee. He is putting things right and as soon as that is done we shall resume our meetings. The last time we had a meeting was in January. On a typical meeting day all stake holders present their problems for us to discuss the way forward. Again we discuss development issues pertaining to the fishing harbor. Then we consider welfare issues. The Assemblyman also briefs us on what is happening. If there is the need to take a decision,

we do not vote but we agree by consensus after fruitful deliberations have taken place.

Sekondi CBFMC Secretary, FGD, 2010

Women on the committee participate fully in our discussions. They also bring to our attention the problems they have in the fish trade so that we all discuss them. The women help with the implementation of our decisions. This is because they are also leaders in their own group and carry along whatever decisions we take here to the group.

Sekondi CBFMC Member, FDG, 2010

The women participated fully in the work of the committee. They attended meetings with us outside this community

Abuesi, CBFMC Chairman FGD, 2010

I and my secretary were on the CBFMC. We were motivated by the chief fisherman to work very hard. We cleaned the beach and did other work. Now the ZOIL people have taken over our work. We the members of the CBFMC interacted with a lot of officials including white people and the chief fisherman, who is enlightened, was at the forefront of all our interactions. The inauguration of the committee never came off and since then no meeting of the committee has been called.

Abuesi Konkohene, FGD, 2010

It appears then that almost all stake holders participated in the activities of the management committees in communities where such committees were formed. Stakeholders were encouraged to present problems confronting them in the fishing industry and decisions were taken only after fruitful discussions had been held.

3.5 Capacity Building

After the committee had been formed, members needed to receive training in group dynamics, development planning and enforcement of bye-laws. They were also to be trained in effective communication and minutes taking to build their capacity to work effectively (Fisheries Officer, 2010). Besides the CBFMC manual addresses governance issues such as participation, gender, equity reporting channel, accountability and leadership (Team Consult 2004). These aspects of committee empowerment were never carried out by MOFA (Fisheries Officer, 2010; Team Consult, 2004). The CBFMCs were also not resourced to do any effective work; they lacked offices and stationary to work (CBFMC FGD, 2010).

All respondents agreed that the Fisheries Commission in particular should facilitate the work of the committees. A chairman had this to say about the nature of support his committee had from the Fisheries Commission after it had been set up.

The committee worked for about a year before it collapsed. After its inauguration, officials never visited this community. We were left to run the committee on our own. No official gave us any direction or encouragement; no allowances were paid to us. Why should people who have no jobs work free of charge?

CBFMC Chairman, FGD, 2010

The following issues came up in subsequent discussions with CBFMC members as well as Chief fishermen and council.

- There is need for the fisheries Commission to inaugurate all CBFMCs so that they would be accepted in their respective communities. Such an inauguration would also enhance collaboration with the community.
- Committee members also called for support to set up a monitoring, control and surveillance unit with the state providing logistics in the form of canoe, outboard motor and communication gadgets. They believed that that support would enhance surveillance at sea to check illegal forms of fishing. The surveillance team would liaise with the Ghana Navy and Air Force for this purpose.
- Support should also be in the form of incentives for the committee members. In particular the issues of honoraria payments and serving of refreshments during meetings were raised in all the communities visited. Respondents felt that these will compensate them for the time lost to other livelihood activities as well as encourage them to commit to the committees activities. They believed lack of incentives is a major factor constraining the effectiveness of the committee’s operations. A female member of the committee at Abuesi commented that
- If this committee is to be revived, I will suggest that some incentive package is given to the members. Most of us are out of business and it will be good if we received something for our efforts.
- Konkohene, FDG, 2010
- The regional Fisheries Commission indicated that they were constrained by unreliable and infrequent budgetary allocations for services from their Head Office. In spite of this, officials managed to attend meetings whenever they were notified. They also used the FM stations in the region as media to communicate with the fishing communities.
-

3.6 General Community Sensitization

All communities visited indicated that the CBFMC put in place by the Fisheries Commission have collapsed but an NGO, Friends of the Nation, has tried to revamp them. Members indicated that the NGOs effort fell short of an inauguration to effectively present them to their respective communities and to solicit the cooperation of fishers in the committee’s work. Individual interviews conducted with fishers and fish traders in the communities visited showed that out of a total respondent of 24 (excluding 4 respondents from Aboadze where no CBFMC has ever been set up), 33% had heard about their management committees and the remaining 67% had not heard anything about the committees. The breakdown of the responses is as follows:

Table 3-0-C: Community Fishers and Trader Conversant with the CBFMCs

| Responses | Fishers | Fish Traders | Total |
|-----------|---------|--------------|-----------|
| Yes | 4 | 4 | 8 (33%) |
| No | 9 | 7 | 16 (67%) |
| Total | 13 | 11 | 24 (100%) |

Source: Field interviews, 2010

Sorted by gender and occupation, 69% and 64% of fishers and fish traders respectively had not heard anything about the work of the CBFMCs either since the inception of the concept

or their revival in 2008 by the FoN. The 33% of respondents who indicated they had heard about the committees however claimed either that the committees activities were not visible or that they existed some time back but had collapsed. The next table presents responses according to communities visited.

Table 4-0-D: Knowledge of CBFMCs by Community Individual Respondents

| Community | | Yes | NO |
|------------------|--------------|-----|----|
| Abuesi | Fishers | 1 | 2 |
| | Fish Traders | - | 2 |
| Asanda | Fishers | - | 2 |
| | Fish Traders | 1 | - |
| Axim (Apewosika) | Fishers | 1 | 2 |
| | Fish Traders | - | 3 |
| Sekondi | Fishers | 2 | 1 |
| | Fish Traders | 1 | 1 |
| New Takoradi | Fishers | - | 2 |
| | Fish Traders | 2 | 1 |
| Total | | 8 | 16 |

Source: Field interviews, 2010

The four respondents in Aboadze indicated that they had never heard of any such committee even in neighbouring fishing communities. The non visibility of the CBFMCs in the communities visited was confirmed when 89% of interviewees claimed that they saw the chief fisherman and council handling all issues relating to the fishing industry. This position of respondents is not surprising since they are not aware of the existence of the CBFMCs and therefore do not know that the chief fisherman and council members are all members of the management committee. Again, this portrays that of all the members of the CBFMCs it is only the chief fisherman and council who are either active or have decided to carry out their traditional functions.

3.7 Roles and Legal Backing of CBFMCs and Chief fisherman

The CBFMCs were set up in communities that already had chief fishermen working to promote the fishing industry in their various communities. There was general consensus among respondents on what they perceived the work of a chief fisherman to be. This included the following:

- Liaising with institutions to ensure that fishers could access outboard motors, nets, fuel, and other equipment/gear for their fishing businesses;
- Setting up arbitration courts to deal with disputes and conflicts among fishers both at sea and on shore;
- Seeking the welfare of fishers, disciplining them and ensuring that fishers obey fishing regulations;
- Mobilizing community members to engage in beach cleaning activities to promote good sanitation.
- Liaising with the priests of the Sea god and other gods to perform rituals that ensure good fishing.

Chief fishermen could perform these roles because they had traditional authority to do so. In the past, their activities were supported by the traditional military (Asafo companies) who had powers of arrest. Currently, chief fishermen are recognized by the regional 'House of Chiefs' – the traditional chieftaincy institution, various fishers associations such as the Ghana Inshore fishers and Ghana Line Hook Canoes fishers associations. They are also recognized by the various communities they represent as well as colleague chief fishermen from other fishing communities.

The CBFMCs on the other hand draw their authority from the state through the District Assemblies and the Fisheries Commission. Some committee members indicated that they were recognized by the traditional rulers of their respective fishing communities. CBFMC members in Axim claimed that the chief did not support their activities while those in Sekondi indicated that they had not appealed to their chief for the legal backing for their activities. In communities where CBFMC activities are visible, the committees have the support of community members. Fishing regulations used by the committees have been adapted from a proto-type issued to the District Assemblies by the Fisheries Commission; the proto-type having been put together at a workshop with stakeholders. The District Assemblies are expected to ensure the gazetting of the fisheries bye-laws so adapted from the proto-type for use by communities. An investigation into the kinds of regulations instituted by the chief fishermen and the committees showed that they worked with the same set of rules.

In the organization of the various CBFMCs, a number of sub committees had been set up to facilitate work. At the stakeholder workshop, three main sub committees had been recommended (MOFA 2003). These are:

- Enforcement of bye-laws sub-committee;
- Conflict management sub-committee; and
- Development sub-committee

Within the case CBFMCs two main sub committees had been formed to assist with work. First was the 'arbitration sub-committee' whose membership was made up of the chief fisherman and council of elders. Their roles were in line with conflict management, welfare of fishers and ensuring law and order at the beaches. Second was the 'sanitation sub-committee' charged with overseeing beach cleaning but whose work has been taken over by ZOIL (a waste management company). It came up during discussions that the committee could not enforce its bye-laws because these had not been gazetted and as such the police and courts could not prosecute offenders. Discussants raised issues relating to lack of support on the part of the Fisheries Commission and the District and Metropolitan Assemblies. The presence of the Assembly member for instance, was pointed out to be strategic by all respondents. He/she was expected to be a conduit, liaising between the CBFMC and the District or Municipal Assembly and ensuring that issues of concern were brought to and discussed at the Assembly while sending feedback to the committee. However, most CBFMC members claimed that the Assembly member on their committees was non-functional and did not even attend meetings when invited. An officer of the Fisheries Commission explained that the Assembly representative on the committee should be a member of the Social Services sub-committee of the Assembly. This is the only way that CBFMC issues could be brought to the attention of the Assemblies for discussion.

3.8 Contribution of CBFMCs to National Regulatory Framework

Respondents from the management committees claimed that they had a voice in shaping the fishing regulations of the country. The chairmen of the committees (the chief fishermen)

indicated that the chief fishermen's participation in the first workshop that recommended the setting up of the CBFMCs was the beginning of their involvement in national fisheries regulations. Since the first stakeholder's workshop chief fishermen have been consulted on a number of issues that pertain to the fishing industry, the latest being the issue of canoe registration and their chairmen's participation in a Doduwa workshop to review the fisheries legislative instruments for the country. These interactions have been done at the national level and results decentralized to the regional and district levels.

3.9 CBFMCs - Stakeholder Institution Relations

On a personal level however, not much had been achieved by way of the CBFMCs relating to state institutions such as the Fisheries Commission, the District/Metropolitan Assemblies. A number of management committees visited indicated that their District Assemblies did not show any interest in them or the fishing communities. These are Asanta, New Takoradi, Abuesi and Axim. In Sekondi, it came up that although the committee itself had no dealings with the Metropolitan Assembly, some stakeholder groups such as the inshore group interacted with the assembly as members paid some levies to the latter. The Sekondi CBFMC discussants claimed that they would resist any attempt by their Metropolitan Assembly to oversee the licensing of their canoes as the Assembly had not shown any interest in their fishing activities.

We have no dealings with the Assembly. They have not come to the beach to find out how dirty or clean our beaches are. Why should they leave everything to the Fisheries Commission? The assembly representative should be up and doing. His inactivity is creating a gap between the CBFMC and the assembly.

Sekondi CBFMC member, FGD, 2010

Apart from the Sekondi CBFMC that continues to interact with officials from the Fisheries Commission, the other committees have long ceased to have any such interactions with the Commission. The fisheries sub-sector capacity building was a project that lasted for five years. The end of the project meant that the Fisheries officials withdrew all support from the CBFMCs and this triggered the collapse of all the management committees in the region.

Some civil society organizations have become interested parties in coastal resources management and hence the operations of the CBFMCs. In the Western Region these include Friends of the Nation and Coastal Resources Centre (CRC). Some committee members claimed that FoN has attempted to revive their activities. This assertion has been supported by officials of FoN who claim that in 2008, five of such committees were revived but not inaugurated. Together with CRC, the FoN has held a number of meetings and organized workshops for key members of the management committees. Officials of FoN claimed that since the beginning of 2010, they have had not less than ten meetings and/or workshops with the five CBFMCs involved in their programme. In these interactions with committee members, attempts have been made at building the capacity of members using resource persons from the Navy, Fisheries Commission and the District Assemblies.

Committee members claimed that they also interacted with the police and cooperated with them on a number of issues. Such issues related to fishers dying at sea or bodies washed ashore. Here they cooperated to find relatives of the deceased fisherman and also to send the body to the mortuary. CBFMC members however complained that although they are aware that it is the responsibility of the police to convey such bodies to the mortuary, the police usually demanded bribes from them all in the name of hiring vehicles to convey the bodies.

3.10 Results and Strengths of the CBFMC Programme

3.10.1 Current status of CBFMCs

The initial forty CBFMCs set up by the Fisheries Commission have all collapsed, most of them becoming inactive after one year of operation. In the Western Region the CBFMCs in Axim, Sekondi, New Takoradi, Abuesi and Asanta were revived by the FoN in 2008. Apart from Sekondi, where a number of stakeholders are still at post, the other communities have the chief fisherman and council and few of the women leaders carrying on their traditional functions and attending meetings and workshops organized by FoN in the name of the CBFMC. Members of Sekondi CBFMC had their last meeting in January, 2010. The CBFMC here may be described as relatively active in the sense that most of the members are representatives of fisher associations and deem it fit to present their association's problems to the management committees for deliberations. Hence they are regular in attending meetings. Representatives on the Sekondi management committee appear to have a total understanding that the co-management concept is in their own interest and hence their continued participation.

Discussions at Axim (Apewosika) revealed that they had a total of four landing sites. Each landing site had its own chief fisherman and Konkohene and councils. In spite of these four landing sites, Axim had only one CBFMC whose membership was drawn from the different landing sites. All four chief fishermen were joint chairmen of the CBFMC. This, discussants claimed, was a problem because some chief fishermen did not agree that problems in their area should be handled by other chief fishermen. It appears then that Axim should have CBFMCs to manage each landing site and between which there should be collaboration if regulations could be successfully enforced.

3.10.2 Blending state with traditional authority

The inclusion of the chief fisherman as chairperson of the CBFMCs has ensured that the state always has a focal person in the fisher community through which discussions could take place and information channeled to fishers. This is appropriate as traditional societies recognize and acknowledge traditional authority.

3.10.3 Using traditional religious mores

The chief fisherman also draws on his traditional authority to use traditional religious sanctions to implement decisions on illegal fishing methods. Here there have been success stories told at Axim and Abuesi where fishers were asked to swear an oath in the name of the Sea god not to engage in illegal fishing practices (using dynamite, DDT, carbide and light). The belief among fishers was that those who swore but went back to use these illegal practices would be struck at sea by lightning. Oath swearing became popular along the west coast but fishers went back to illegal fishing practices when they realized that colleague fishers from other parts of the country came into their waters and used illegal methods to fish. The use of traditional religious mores to prevent fishers from using illegal fishing practices has worked better than using fisheries bye-laws. The idea will be to ensure that this means of sanctioning offenders will be instituted in all fishing communities along the coast.

3.10.4 Execution of community projects

The insanitary conditions at the beaches that necessitate regular clean ups had become another point of contact for CBFMC members. Beach cleaning was done regularly when the CBFMCs were very active. Presently this has either been left to the chief fisherman to organize or to the ZOIL beach cleaners. In areas where ZOIL has taken over beach cleaning,

management committee members, although appreciating their work, have also complained that this was their function.

The CBFMCs have embarked upon community electrification projects particularly to light up the beaches at night. They have also organized search and rescue operations for fishers in distress at sea and helped in locating relatives of bodies washed onto their beaches. CBFMCs have also set up arbitration panels to resolve conflicts between fishers both at sea and at the beach. In addition, they have helped school going children found loitering at the beaches to get back into the classrooms.

3.10.5 Existence of bye-laws

All CBFMCs studied had developed bye-laws on fishing through community interactions and had presented them to their respective District/Municipal Assemblies for processing and onward transmission to the Attorney General's office for gazetting. As already indicated elsewhere in this document these laws cover among others beach fouling, loitering of school children at the beach, illegal fishing, social order, fishing taboos and equipment to take to sea. Although implementing the bye-laws has been difficult because they have not been gazetted, fishers are aware of them.

3.11 Constraints of CBFMCs

3.11.1 False understanding of the CBFMC concept

The study revealed that only a few members of the CBFMCs have a total understanding of the CBFMC concept. These were the active members of the management committees who were always invited to participate in governance workshops and were regularly consulted on issues relating to the fishing industry. The active members of the CBFMCs were cardinal in the adaption of the bye-laws to suit local conditions and are eager to see these laws gazetted by the state. Active members included some chief fishermen and leaders of fishing associations.

The other members of the CBFMCs do not have a total understanding of what the whole concept is about. It became clear during the study that these members felt the committees should also be in charge of distributing fishing equipment and pre-mix fuel. Apart from the chief fishermen of Abuesi, Aboadze and Sekondi who could make a clear distinction between the traditional work of chief fishermen and that of the CBFMCs, those of New Takoradi, Axim (Apewosika) and Asanta could not differentiate the roles of the two. The women representatives on the committees were also of the opinion that the committees were a conduit to offer loans to improve the businesses of the fish traders. It appeared that the governance function of the CBFMC has not been fully appreciated and all members would need re-orientation on a regular basis.

3.11.2 Livelihood status of CBFMC members

A number of CBFMC members particularly in the smaller fishing communities indicated that they did not have any sustainable livelihoods. As a result these members had to travel regularly or sometimes relocate to other fishing communities to work for long periods. It was claimed by some CBFMC members and some officials that this was one major reason why meetings could not be held.

3.11.3 Lack of a constitution to regulate CBFMCs

The case study revealed that CBFMCs did not have constitutions that guided and regulated their activities. Members indicated that the Fisheries Commission gave them guidelines for

the formation of the CBFMCs but these were not in documented form. It became clear that the CBFMCs operations were haphazard and not geared toward any laid down regulations.

3.11.4 Community sensitization and perception

Members of fishing communities have not been made aware of the CBFMCs through their inauguration. This makes it difficult to solicit their cooperation for effective governance of the industry.

3.11.5 Lack of institutional support and political will

The study has identified the fact that state agencies such as the Fisheries Commission and the District/Municipal Assemblies have not done much in terms of offering support to the CBFMCs. In addition, the state itself set up parallel committees such as the Landing Beach Committees (LBCs) to manage the fishing industry at the landing sites. This committee deals with channeling of fishing equipment and gear and pre-mix fuel to fishermen, and is expected to use profit from the sale of premix fuel to undertake development activities in the communities. As it stands the LBCs are duplicating the development roles of the CBFMCs. It may be prudent to bring the activities of the LBCs under the ambit of the CBFMC. Management committees indicated that these added functions would motivate them to work. They also suggested that the state should provide offices for use by committee members as well as offer some incentives.

3.11.6 High turnover of District Assembly Staff

There has been a high turnover of Assembly staff such as community representatives and Chief Executives to the extent that it has been difficult sustaining the momentum gained with the CBFMCs (Fisheries Commission Official, 2010). New sets of Assemblymen and Chief Executives have to be briefed on the CBFMC concept time and again. The Chief Executives have to find out the state of CBFMC bye-laws, which keep on changing, and follow up to the Attorney General's office for gazetting. Such process has been unduly delayed because of the frequent change in local government personnel.

4.0 CONCLUSION AND LESSONS LEARNED

The general consensus among active and non- active members of the CBFMCs is that the concept is novel and likely to bring about the much needed improvement in the livelihood of fishers. When properly implemented, CBFMCs with logistics and support from state agencies will seek the welfare of fishers, maintain social order in fishing communities and ensure that fishers abide by fishing regulations. In spite of these expectations, the concept has not been properly understood and therefore badly implemented. Members expect the management committees to be clearing houses for fishing gear, fuel and loans and they expect to receive some honorarium for the work that they do. The CBFMCs will function as expected if fishing bye-laws would be gazetted and this will need the active cooperation of state institutions such as the District/Metropolitan Assemblies.

This case study has unearthed some lessons that should guide any future co-management project in the fisheries subsector of the economy.

4.1 Institutional Sustainability

- There should be periodic re-orientation of members on the CBFMC concept. In addition, there should also be capacity building efforts geared towards training of committee members in the areas of group dynamics, enforcement of bye-laws, development planning, conflict resolution, accountability and skills training to

effectively communicate and take minutes. These periodic workshops would adequately prepare members to perform their roles effectively. They would also inculcate in members awareness and ownership of the project.

- Members who sit on the CBFMCs should be ordinarily resident in the fishing communities and also should be willing to find time to serve their communities. Co-management is a serious activity that cannot thrive on absentee members. The background of committee members is also very important. These should be leaders of fishers associations or other stakeholder groups and thus are already in positions of authority. Where the social standing of individuals is contested within communities, they become ineffective as members of the committee.
- Generally, there should be community involvement and endorsement of the CBFMCs.
- CBFMC members should also meet regularly and keep records of all their activities. They should not operate in isolation but link up with all committees along the coast for effective implementation of regulations. For example, the use of oath swearing to check illegal fishing will yield the expected results when this is done in every landing site along the coast. Linking with other CBFMCs along the coast will also enable exchange of best practices and ideas.
- There is need to have functional offices to operate from. CBFMC members should have identity tags.
- The activities of all CBFMCs should be guided by a constitution. It should be the responsibility of the Fisheries Commission to provide hard copies of such constitutions and explain these guidelines for use by members.

4.2 Financial Sustainability

- Co-management initiatives should be self financing. Braimah's (2009) report on evaluation of co-management initiatives in Ghana suggested that such initiatives could be financed from levying fish landings, itinerant fishers and net owners. In addition, management committees could get some money from the sale of fishing gear and fuel. However, fishing bye-laws should spell out the percentage shares of the revenue generated from any given activity to the committees.
- Traditionally, all canoes landing fish at the beach are expected to give fish to the chief fisherman as representative of the fishing community. This is mostly sold and the proceeds used as state expenditure on community development and fishers welfare. This source of raising revenue should be activated and enforced. In addition, canoe owners could be asked to make monthly payments towards the coffers of the CBFMCs.
- CBFMCs should open and operate community bank accounts into which all levies raised would be placed. They would need to invest part of monies raised to raise added resources for community development. In this direction there will be the need to promote strict accountability of all monies raised.
- Resources raised could be used to rent and operate offices, offer refreshment during meetings, pay monthly stipends to committee members as well as execute community development projects.

4.3 Community Participation and Cooperation

- CBFMCs should reach out to the general fishing community through meetings and durbars. They need to continually sensitize community members and involve them in

decisions that affect the community. This way, communities would appreciate the concept, own it and cooperate towards ensuring its success. The issue of illegal fishing would be resolved if community members appreciate the gravity of the problem at hand and the effects on their livelihood.

- Participation and cooperation would be achieved also when the state is seen to care about the numerous problems fishers identified in the study. These include:
 - High cost of fishing equipment and gear
 - Non-availability and high cost of premix fuel
 - Attraction of fish to oil rigs that have exclusion zones
 - Use of illegal fishing methods by other fishers
 - Periodic growth of sea algae that interrupts fishing activity– Asanta
 - Seepage of oil into drag nets - Asanta

4.4 Year Round Support from State Institutions and Civil Society Groups

- There should be serious monitoring of CBFMCs. They should not be left alone at any point in time. Although fishing communities own the project and it is in their own interest to ensure sustainable livelihoods, state institutions and some civil society groups must be seen to partner and offer advice and support on a regular basis.
- State institutions such as the District/Metropolitan Assemblies should be educated about the CBFMC concept. They should be made to commit resources to the operations of the management committees. The District Assemblies should provide the legal and administrative support for the gazetting of bye-laws.

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APPENDICES

Appendix A

(I) Focus Discussion Themes

A CBFMC Members

- Membership - number, stakeholder representation, gender composition, satisfaction with level of representation of various stakeholders
- Pressures- Which problems necessitated the setting up of the committee (social, economic, livelihood), what other problems would make you pool together to resolve them?
- State -How did/will these problems affect the operation of fishing industry
- Identify legal backing for committee's operation- state, chiefs etc
- Talk through typical committee meeting, how are decisions taken, to what extent do women and other stakeholders on the committee have a voice in decision making?
- Role
- i) Area of operation/jurisdiction (offshore/onshore)
 - ii) Which rules/laws are enacted, what social norms, and values impact on rules and regulations enacted
 - iii) Conflict management- nature of conflict, how managed, recount of cases dealt with, satisfaction of parties involved
 - iv) Conflict between committees and other stakeholders e.g. other fishermen, traders, District Assembly officials.
 - v) Any role conflict
 - vi) What is the particular role of women on the committee, what is the extent of their participation in meetings? How and to what extent do they participate in the enforcement of regulations? What support do women need to make their work more meaningful?
 - vii) How different is role of committee from role of chief fisherman and council; where do they draw their authority? Is it possible for two (committee/council) to come together in discharge of duties
- Relationship with state regulatory frameworks (Dept of Fisheries/National fisheries Commission. Any other institutions and organizations.
Nature of relationship/interaction, at what level of interaction (district/regional/national)
Does the committee contribute to decisions (laws/regulations) affecting fisheries and at what level of decision making
- Enabling environment
What factors have facilitated/constrained your work at community, DA Regional and National level?
In what ways can your work be facilitated – by committee itself, community and other stakeholders?
- What will this committee do anew if given the opportunity, what revisions will be introduced into the committees work and how will these enhance your work. What

support will be need and from which quarters to make improvements in committees work?

B Chief Fisherman and Council

- Why such a position and council in fishing community
- Membership of council – representation of any stakeholders
- Legal backing – source of authority to work
- Awareness of existence of CBFMCs and thoughts on what they represent
- Any duplication of duties, possibility of merging roles in one committee?
- What should CBFMCs be doing if they are to perform separately from chief fisherman and council
- Areas of conflict in roles

C Konkohene and Council

- Why such a position and council in fishing community
- Membership of council – representation of any stakeholders, Legal backing – source of authority to work
- roles
- Awareness of existence of CBFMCs and thoughts on what they represent
- Thoughts on gender representation and role of women on the management committee
- How can women be made more visible on the committee, what should women on the committees do to make their impact felt, what support should be given to committee members generally but women in particular to make their work meaningful
- Are CBFMCs necessary given the work of chief fisherman and council
- How can the work of the CBFMCs be improved

(II) Interview Themes

A Fishers and Fish Traders

- Problems of the fish industry from their perspective
- How these could be solved
- Comparison between work of chief fisherman and council and CBFMCs – visibility, effectiveness, acceptance and co-operation, perceived constraints and enhancers to work of management committee, how work can be improved, preference for one of the two and reasons

B Officials

- Why governance in fishing industry
- Why co-management in governance
- Why CBFMCs and not traditional management system of chief fisherman/council
- Any perceived/actual conflicts between the two systems? How managed
- Documented role Vs actual role of CBFMCs – any success stories
- Officials relationship/interaction with management committees – meetings, workshops, how often, who supervises, input into state fisheries governance issues (at what level),
- Bye laws on fishing in district – level of cooperation on enactment
- Enabling environment provided for work of CBFMCs
- Why failures by some committees? What could have been done better

Appendix B
Field Pictures



Plate 1--A: Axim (Apewosika) Joint Chief fisherman, Konkohene and Councils



Plate 2--B: Aboadze Chief Fisherman and council



Plate 3--C:Aboadze Konkohene's council



Plate 4-D: Fishermen at the beach

***SECTION B: THE CONTROL OF ILLEGAL, DESTRUCTIVE
AND NON-SUSTAINABLE FISHING PRACTICES IN THE
CENTRAL REGION OF GHANA***



**By
Mr. Edgar Takyi Akonor**

SECTION B: THE CONTROL OF ILLEGAL, DESTRUCTIVE AND NON-SUSTAINABLE FISHING PRACTICES IN THE CENTRAL REGION OF GHANA

By

Mr. Edgar Takyi Akonor

1.0 BACKGROUND TO THE STUDY

The importance of the fisheries sector to Ghana's economy cannot be overemphasized. It provides about 60% of the animal protein (Atta-Kesse & Atuguba, n.d.). There are over two million Ghanaians who earn their livelihoods through artisanal fishing sector. Thus, any activity that affects artisanal fishing positively or negatively could have tremendous impact on those who depend on it for their livelihood. It is in view of this that any effort or activity geared towards a better understanding of the operations and issues affecting the sector are deemed worthwhile.

In recent times, decreasing world fish stocks has led to industrial fishing vessels and semi-industrial vessels from Europe and elsewhere looking outside the continent of Europe for fishing to supplement local supply via fishing in international waters and import of fish from developing countries like Ghana. This has led to increasing demand for export fish and a shortfall in local fish supply. Already, Ghana has been experiencing fluctuations in marine fish production since 1995 (Marine Fisheries Research Division, (MFRD) 2007). In 2007, the total fish requirement for the country was pegged at 720, 000 metric tons while annual production was about 400, 000 metric tons. This leaves the country with deficit of 320, 000 metric tons per annum (Atta-Kesson & Atuguba n.d.). Coupled with this problem, Ghana is also experiencing other illegal, destructive, unreported, unregulated and non-sustainable fishing practices in our international waters- Exclusive Economic Zone (EEZ) of 200 nautical miles. It has also increased competition among the artisanal fishing groups, the semi-industrial and the industrial fishing fleets, with the artisanal fishing folks accusing the industrial operators of unorthodox and illegal fishing practices including pair trawling and fishing within the Inshore Exclusive Zones (IEZ). The IEZ of 12 nautical miles is reserved for the exclusive use of the semi-industrial vessels, canoes and recreational fishing. For instance, in the month of December, 2009, two industrial trawlers MV Awoyaa 8 and MV Zhong Lu Yu 1004, were arrested by the Ghana Navy for fishing within the IEZ of Cape Coast and Winneba respectively (www.illegal-fishing.info...7/22/2010).

In order to survive this fierce competition in the fishing industry, the artisanal fishing folks have also introduced their own unconventional, illegal, destructive and unsustainable fishing methods into the fishing sector. This includes light fishing, the use of explosives, and poison. The control of these illegal fishing practices forms the bane of this study.

Historical accounts point to the fact that Illegal, destructive and a non-sustainable fishing practice is not a new phenomenon in fishing in Ghana. The country has had its fair share of problems associated with illegal fishing practices long before the country attained independence from the colonial administrators in 1957. According to Atta- Kesson & Atuguba (n. d) the colonial masters got involved in fisheries governance when new fishing gear (net) was introduced on the Fanti coast somewhere in 1850. The introduction of new improved nets triggered a number of conflicts among the fishers. This made the British to introduce legislation into the sector. In the view of Atta- Kesson Atuguba (n.d), that act

undermined the local governance of the fisheries sector significantly.

Lawson (1968) reports that Fanti fishers started the use of a rectangular net labeled 'Ali' fishing nets that measured four hundred by 18 yards from about 1850. *Ali* was very efficient in catching fish and sometimes caught the fish indiscriminately including juvenile fish. The use of *Ali* generated conflict over the coastal area of the Gold Coast mainly because those fishers who were using the *Ali* were catching more fish and they made more profit than those who were not using *Ali*. Conflict over the *Ali* got to its peak when the Supreme Court of the Gold Coast had to make a ruling in 1899 to determine the legality or otherwise of *Ali*.

Nowadays, as a result of improvements in technology and innovations, the problem of illegal, destructive and non-sustainable fishing practices have been compounded. Dwindling world fish stocks, environmental changes, and competition among the various interest groups namely the artisanal, semi-industrial and the industrial vessels have pushed the fishers to adopt all manner of practices in order to survive in the sector. It is in the light of these developments, that this study was conducted to attempt to explore the issue of illegal, destructive and unsustainable fishing practices in the Central Region of Ghana.

1.1 Objectives of the study catalyze

The main objective of the study is to describe the evolution of illegal fishing practices in the Central Region as well as the successes and failures to halt the practice. Specific objectives include:

1. Define the main types of illegal fishing such as dynamite, carbide, light fishing, DDT and the use of monofilament nets.
2. Provide detailed description of each of these practices.
3. Provide detailed account of those engaged in these practices and generally where and when they do take place.
4. A historical perspective on attempts to control illegal fishing practices
5. Provide an assessment of the enabling condition and governance system that facilitates control of illegal fishing
6. Assessment of the breakdown in respect and application of social norms, and government regulations that govern illegal fishing practices
7. The probable ecological impact of illegal fishing practices
8. The social impact in communities where there is abundant use of banned fishing method
9. Recommend measures to address them.

1.2 Desk Review

Illegal fishing according to Falaye (2008), refers to fishing activities conducted by local or foreign vessels, boats or canoes in waters under the jurisdiction of a state, or in violation of its laws and regulations. Furthermore, fishing activities conducted by vessels, boats or canoes from states which are signatories to regional fisheries management organizations conventions or agreement, but operate contrary to the conservation and management measures adopted by the organization and are considered illegal. Similarly, illegal fishing may include fishing activities that violates national laws or international obligations, including those undertaken by cooperating states to relevant regional fisheries management organizations.

Fishing activities which have not been reported, to the relevant national authority in violation of national laws and regulations is also known as *unreported fishing practices*. It also refers to fishing practices undertaken in the area of operation of relevant regional fisheries

management organization which has been misreported, in violations of the reporting procedures of that organization.

Fishing conducted by vessels, boats or canoes without nationality or those flying the flag of a state not party to a fisheries management in a manner that is not consistent with or contravenes the conservation and management measures is deemed *unregulated fishing*.

Furthermore, unregulated fishing refers to fishing activities in areas or for fish stocks in relation to which there are no application of conservation or management rules and where such fishing activities are conducted in a manner inconsistent with state responsibilities for the conservations of living marine resources under international law.

1.3 Types of illegal, unreported and unregulated fishing practices

Evidence shows that illegal, unreported and unregulated (IUU) fishing exists in Ghana and Nigeria (Falaye, 2008). IUU practices in Nigeria and Ghana vary. In Nigeria, the problem largely hinges on foreign vessels fishing in the country's territorial waters without authorization. These unauthorized vessels which fish in Nigeria's territorial waters belong to countries such as Italy, Cameroon and Togo. In the case of Ghana, vessels, boats and canoes involved in destructive practices are licensed, but employ destructive fishing gears and fish inside prohibited areas. Destructive fishing practices identified by Falaye (2008) and Ghana's Fisheries Act, 2002 include:

- Fishing without procuring license or authorization from the relevant state agency. For instance in Ghana, the fisheries Act (Act 625) provides that persons who use local industrial vessels or semi-industrial fishing vessels for fishing without license in the country's fishery waters commit an offence.
- Falsifying or hiding the markings, identity or registration of a vessel is also considered an offence. Article 49(2) of Act 625 provides that a person who operates a vessel which does not bear identity markings commit an offence.
- Using unacceptable fishing methods and gears. It is an offence under the fisheries Act (Act 625) for an individual to use or attempt to use an explosive or a poison with the intent to kill, stun, disable or easily catch fish
- Fishing in a closed area, fishing during a closed season or without or after attainment of quota. Act 625 provides that it is an offence to engage in fishing during closed season
- Refusal to keep an accurate records of catch and other catch related data
- Willful damage to fishing, vessels, boat or canoe or gear belonging to another person
- Directed fishing for a stock which is subject to a moratorium or for which fishing is prohibited. Act 625 for instance provides that gravid, juvenile fish and juvenile lobster should not be taken during fishing
- Failure to comply with vessel, boat and canoe monitoring systems requirement.

1.4 Origin of illegal destructive fishing practices

Economic historians have not been able to clearly indicate when fishermen in Ghana began using destructive fishing gear and methods. However, Lawson (1968) reports that Fanti fishermen used new net popularly called *Ali* in 1850 in the Gold Coast. According to Lawson, this new net measured about four hundred yards in length and eighteen yards wide. It was basically a hand-made cotton twine with a mesh size of $\frac{3}{4}$ inches. This kind of net was imported from Europe and used widely by the fishermen along the coast of the Gold Coast.

1.5 Control of illegal destructive fishing practices

The responses of the colonial administrators and the indigenous community leaders during the colonial era to the new fishing practices, particularly the *Ali* varied. The fisher folks' attitude towards the new fishing practices also varied. Some of the fishermen and their leaders in fishing communities such as Teshie, Labadi and Nungua were opposed to the new fishing net. They protested against the use of the *Ali* by their colleagues and also attempted to enact bye-laws to prohibit its usage. The colonial administrators did not see the *Ali* as destructive. Indeed, they considered it as very effective and harmless to the fishing industry in the Gold Coast. They therefore decided not to "countenance any attempt to prevent the use of the *Ali* nets merely

because the fishing population who employ them have advantages over their neighbours"(Atta- Kesson&Atuguba, n.d.)

The posture of the central government with respect to regulation of fishing industry changed after independence. All the post independent governments have passed a number of laws to regulate the fisheries sector of our national economy. The most recent of all the laws is the fisheries Act, 2002(Act 625) which provides the framework for the regulation and management of fisheries and also the development and sustainable exploitation of fishery resources in the country. As stated earlier, the Fisheries Act 2002 (Act 625) is the most recent legal regime that regulates the fisheries industry in Ghana. In particular, Act 625 provides a unit to be established under the Fisheries Commission, which will monitor, control and enforce the rules in the Act and any other rules relating to fisheries.

2.0 METHODOLOGY

The primary goal of this research is to gain thorough understanding of the subject at stake- the control of illegal, destructive and non-sustainable fishing practices in Ghana. Such understanding requires in part, critical review of related documents and literature on the subject. Specifically, the literature review will describe types of illegal practices common in artisanal fishing, its evolution and previous attempts to halt the practice in Ghana.

2.1 Site exploration

As a matter of importance, the researcher undertook site exploration in order to establish personal familiarity with the research sites and the people who were involved in the study before commencement of the formal fieldwork. This helped the researcher to acquaint himself with socio-cultural dynamics of the communities and to establish good rapport with potential respondents. According to Binder and Geis (1993, p.51) "there is no substitute for personal familiarity with research site and the persons who are involved in what is being examined". Respondents may not find it too easy talking to a "stranger" about their involvement in an activity considered illegal or deviant unless they can trust the researcher. It also helped to reduce or remove any form of trepidation on the part of the respondents.

2.2 Data collection

The study relied heavily on qualitative methods of data collection. They included ethnographic interviews such as key informant interviews, expert interviews and observation where it was feasible to do so. The application of these methods engendered open discussion of issues with the respondents. Thus, an unstructured interview guide was the tool used to elicit responses from the interviewees. This ensured flexibility much needed in research works bothering on criminality. To ensure that the responses provided by the respondents

were not ‘learned’, the respondents were encouraged to express their views in a less structured manner. The interviewer had to adopt good listening skills because of the way most fishers talk or speak. However, on a number of occasions, the researcher had to probe the respondents for clarity and consistency in their submissions. All the interviews and interactions were captured on tapes in order to reduce the time spent with the respondents and for manually recording interviews.

2.3 Sampling techniques

In view of the peculiar nature of the issue under investigation, respondents were purposively sampled for the study. The sampling was based on respondents’ knowledge and expertise with respect to illegal and destructive artisanal fishing practices. The snowballing method was applied in order to reach other respondents in addition to those who were purposively identified to take part in the study. In all, 65 respondents took part in the study. (Please see table one for the details).The following fishing communities were sampled for the study. The communities are major artisanal fishing centers in the Central Region of Ghana. These communities were, Cape Coast, Elmina, Ekon, Apam, Mumford and Moree all in the Central Region of Ghana.

Table 5-0-A: The number and type of people sampled for the study.

| Chief fishermen & elders | No. | Fishermen | No. | Fishery Department (FD)& REP from industrial fishing Representatives of fisheries Department | No. |
|--------------------------|-----|--------------|-----|--|-----|
| Ekon | 4 | Abrofompoano | 6 | Field Reps | 3 |
| Moree | 2 | Moree | 8 | Director | 1 |
| | | Apam | 8 | | |
| Elmina | 8 | Mumford | 4 | Reps. Industrial fisheries. | 2 |
| Apam | 4 | Ekon | 8 | | |
| Cape Coast | 2 | Elmina | 5 | | |
| Total | 20 | 6 | 39 | | 6 |

Source: Field Report, 2010

2.4 Data analysis

The data collection process was merged with the data analysis. A basic descriptive content analysis was employed. Attempts were made to establish commonalities, patterns, themes and

eliminate negative cases. All the interviews captured on tapes were transcribed to facilitate the data analysis. The descriptive data generated provided detailed measures of indicators for all the major areas covered in the study. Part of the qualitative data was transcribed and analyzed with the help of computer software.

3.0 TYPES OF ILLEGAL FISHING PRACTICES

In all the locations visited for the study, all the respondents admitted that they were aware of illegal and destructive fishing practices going on along the coastal areas of the Central Region and beyond. Mention was made of carbide fishing, light fishing, the use of explosives like dynamite, pair- trawling, use of monofilament net are fine mesh (net) and D.D.T.

Monofilament net- also known as *Tinga* was sited in all the communities where samples were taken especially in Cape Coast and Moree. The fishers did deny the illegal use of the **tinga** but tried to rationalize its usage. Most of the fishermen said that, officials of the Fisheries Commission have been coming round from time to time to educate them on the monofilament net and fine mesh and other development in the sector. The monofilament net is used to catch fingerlings. From the point of view of the fishermen, and the chief fishermen, the monofilament is most preferred. This is because it is efficient in catching fish and very common on the market. As noted by the chief fisherman of Ekon:

“Nowadays, the only net you find on the market is the tinga or monofilament net and I cannot blame my people for using tinga. If it were not good the Whiteman will not have manufactured it ... so the government should ask the manufacturers to stop and that will be all”.

A gentleman who claims he travelled to other countries including Gambia said that

“It is only in Ghana that he has seen this net being used”. He said in Gambia; “it is illegal to use the monofilament net”.

This assertion was corroborated by the fisheries representative of Apam. Although some of the monofilament nets found on the beaches were less than the three inches set by the Fisheries Commission the fishermen were not worried or bothered about its likely ecological impact. According one of the Director of Fisheries, monofilament net of about three inches is allowed where it is used to catch “*big fish but not small fish*”. He opined that the monofilament net is efficient in catching fish. But he was quick to add that one danger associated with the net is that it can tear easily and result in ghost fishing. That is, the torn net will be catching fish without control.

The use of **light in fishing** is indeed a major development in the fisheries sector. In the words of a respondents

“As far as the use of light in fishing is concerned, it is now a free-for- all affair for the in shore vessels, all the artisanal and then even the semi-industrial vessels”.

The phenomenon is so wide spread that “*everybody uses lights*” says a fisherman from Cape Coast. Most of the fishers are aware that the use of light in fishing is illegal but they believe it is not destructive. Some argued that without light in fishing, it is difficult to have a good catch

and make profit.

Those who use lights in fishing have electric generators and specially designed bulbs for fishing -about three of them in number which have been welded to cone-like metal with electric wires connected to the generator. It is the same wire which is connected to the generator. The heavy metal makes it easy for the bulbs to sink. Then as the generator is sparked, the bulbs are lit up. The lit bulbs are lowered into the water at reasonable depth with the metal. When the light is in the water, it attracts the fishes all over the place. When they notice that enough of the fish have encircled the lights, the fishers then pull the bulbs out of the water gradually, one after the other. While this is going on, the fish follow the light as it is being pulled out of the sea, the net is made ready so that immediately the light is completely pulled out of the water, and the net is cast to catch as many of the fishes that got attracted to the light. It should be noted that, the generator is placed in smaller boats called “bar boat” to free the main canoe or vessel for those standing by to cast the net unhindered.

One other illegal fishing method that has become so pervasive in Ghana is fishing involving the use of explosives and poison like *dynamite*, *carbide* and *DDT*. Fishing with explosives, sometime called blast fishing, has been around for a while. Normally, when the fishermen locate a shoal of fish or schooling reef fishes, the canoes or boats move within a close range of about 7 meters and the explosives is released into the middle of the school fish. Sometimes the explosive is set off under water. When the fishes are stunned by the explosive action, those in the capture boat cast the net to harvest the fish. Once the fish are demobilized by the blast the fishermen quickly harvest them by circling the net around them. The problem majority of the respondent have with this method is that, the explosion normally kills both the target fish and destroys other aquatic life indiscriminately. The fishers hinted that there are several cases where errors of manipulation have led to injuries and death to some of the fishers who were involved in the practice. According to the respondents, the explosives are often obtained from miners and stone quarry workers.

The *carbide* is used as light explosive and it works on the same principle as dynamite. The carbide is packed in beer bottles and a rope is tied to the necks of the bottles to make it easy for them to lower it into the sea. The lock on the bottle is deliberately punctured so that water will seep into the bottle gradually. Once the water comes into contact with the carbide, it triggers a chemical reaction and explodes. The explosion stuns fishes near-by and forces them to come to the surface. This makes it easy for fishers to harvest them.

The second method or practice is for the carbide to be put in small polythene bag (locally called takeaway) and tie them around the edges of the net especially, the base. The net is then cast or lay. According to respondents, the foul odour emanating from the carbide somehow disturbs the biological and physiological mechanisms of the fishes; make them weak and easily catchable by the fishermen. It is used to bring fish to the surface for netting, passing on a health hazard.

With regards to the use of *DDT*, respondents did not agree much on whether it is being used in fishing in the marine waters. Rather, some of the respondents asserted that it is used in inland waters like the Volta Lake. Others however, disagreed and hinted that *DDT* is used in marine fishing. Those who use *DDT* in fishing put the chemical in beer bottles which is then lowered into the sea. Once in the sea, it poisons the immediate environs making the fish uncomfortable or stunned and then compels them to leave the coral reefs for fishermen to

harvest them. Once in the water, DDT also poisons the fish causing some to float and killing others.

3.1 Pair trawling and Bottom trawling

One of the complaints that the fishers kept drumming about was the problem of pair trawling and bottom trawling. According to one of the chief fishermen,

“The inability of President Kuffour’s administration to check this phenomenon upon several complaints from the fisher folk and their leaders was a major reason they lost votes in all the coastal areas of Ghana”.

Although, the artisanal fishers are not the culprits, they are concerned because it has debilitating effects on their operations and livelihood. Pair trawling is a form of fishing in which two boats with the same or similar speed or power are used to fish in pairs. In the course of fishing, the dragging net traps all manner of fishes that come into contact with them. The by-catch or what is known as “logo” in local parlance is dumped into the sea thereby polluting the water. The fishers were much worried about the impact the activities had on sustainability of marine fishing. It is documented that by-catch constitute over forty percent (40%) of global marine catch. The fisher folk condemned the activities of the ‘Saeko’ operators. That is, those canoes which go to buy the logo or by catch from the industrial vessels. According to the respondents, formally, logo was dumped into the water or was given to the artisanal fishers free of charge. But currently, they have people registered with the industrial vessels who have the right to bring the by-catch to the shore for marketing. They called for an immediate ban of the “saeko” operation. The Saeko dealers who were interviewed were of the opinion that their operations prevent the dumping of the logo into the sea with its ecological effects on marine life. In addition, they are now the main suppliers of fish to the rural communities. Thus, their work is rather helping the poor so they should be commended rather than condemned.

One development that is of a bother to the fisher folks which they think needs urgent attention is the issue of industrial vessels or fleets trawling within the 30m depth to 12 nautical miles - Inshore Exclusive Zone (IEZ) reserved for the artisanal fishing folks and by so doing ploughing through their nets. They intimated that some times when they are able to identify the vessels responsible, they report to the Fisheries Commission for arbitration and they are compensated for the loss. Yet, the major problem is that sometimes they are unable to identify the exact culprits.

In a response to the accusation, a respondent from one of the industrial operators admitted the offense. He said that sometimes they plough through the nets of the artisanal fishers and pay compensation when the issue is brought to their attention. He indicated that this particular problem has arisen because of the regulatory regime the country has at the moment. He said while they cannot fish within the IEZ, the artisanal fishers are allowed to operate beyond the 12 nautical miles and lay their nets especially, the in- shore vessels with propellers.

Secondly, the nets are normally laid without signs or indicators to warn the bigger vessels or the industrial vessels. That account for why their nets are destroyed. To him, part of the reason for this development is that artisanal fishers do not have the instruments to determine nautical miles or range within which they are operating. On the accusation of their vessels straying into the reserved areas for the artisanal fishers, he said some times it is due to the movement of the fish. Sometimes they track the fish from the high seas. It may not be prudent

for them to leave them just because they have entered the IEZ. He admitted that sometimes fishing in the IEZ is deliberate because the fish is normally found in the exclusive zones.

3.2 Who is engaged in these practices and generally when and where they take place?

The artisanal fishers admit that illegal fishing practices are mostly committed, by the in- shore vessels, canoes, and some of the semi- industrial vessels. From the Fisheries Commission, an officer pointed out that,

“the semi- industrial vessels and industrial vessels need not resort to these practices because they have sophisticated gadgets like fish- finders which help them to locate shoal of fish with ease”.

An officer of Mass Fisheries also stressed the point that,

“The use of carbide, dynamite, DDT and light fishing are predominantly the crime of the artisanal and the in-shore vessels which are in competition with the semi- industrial and the industrial vessels”.

He hinted that the artisanal groups have resorted to these destructive methods because they think that the industrial vessels have made it difficult for them to get fish in commercial quantities. That is, they fish below the 12 nautical miles In-shore Exclusive Zone (IEZ) reserved for the artisanal fishing.

“The fishing industry is in crisis....., there are no fish stocks to sustain those making a living from fishing. As a result, the fishermen have resorted to all these illegal and destructive methods in order to make a living”.

According to the FAO (1998), there are four main fishing fleets in Ghana namely, artisanal (canoes), in-shore, industrial and tuna fleets. The artisanal sector is reckoned to be the most dominant and important in terms of fleet, employment and quantum of fish catch and direct and indirect employment (Koranteng, 1992). These illegal fishing methods and practices are not limited to the major fishing areas or landing beaches dotted along coastal Ghana rather, they have a broader spread. From some of the respondents, the illegal fishing activities take place when the fishermen embark on their fishing expeditions and anytime they deem it prudent especially, when such methods could help them have a good catch. Some of the fishers said that these days with the light fishing especially, it is difficult for them to make good catch in the night. Places which were mentioned being predominantly involved in light fishing include Elmina, Axim, Sekondi, Moree, Mumford and Apam. According to the chief fisherman of Moree light fishing is far easier to detect;

“You normally find a generator, bulbs and electric wires in the main vessel and bar boat hooked to the vessel. That should immediately tell you that they are going to do light fishing. But that is not same with dynamite, carbide, or DDT. These materials can be concealed so unless you catch the person in the act”

3.3 The evolution of these practices

One of the areas where information was difficult to assess was the evolution of these practices

overtime. The fishermen gave conflicting stories about the origin of illegal fishing methods or practices in the coastal regions of Ghana. Some of the fishermen attributed the introduction of the light fishing by the Korean and the Chinese semi- industrial fishing fleet. Local stories have it that, these vessels started using light in fishing in Tema and Takoradi harbours. This practice was then adopted by the in-shore vessels in Axim, Tema, Takoradi and Elmina and until some of the canoe adopted the practices to the point that it has become a free- for-all affair. A gentleman from the Fisheries Commission intimated that,

“An attempt to ban light fishing is likely to be resisted because it has virtually become part of artisanal fishing practices so entrenched and pervasive. To the point that, majority of the fishermen believe banning light fishing will throw them out of business.

Information gathered from some of the chief fishermen indicated that in the year 2000, all the fishers in the Central and Western Region were made to swear an oath to the sea goddess that none of them will use dynamite in fishing. Should they breach this oath, the sea goddess should kill them by capsizing their canoe. In the course of taking the oath, they did not include light fishing which they did not see as a problem.

Other fishermen were of the opinion that, these innovative but illegal practices were introduced into artisanal fishing by people who have worked with the industrial and tuna vessels in Tema and Takoradi as far back as 1969. In the view of a respondent ,

“ those who do not use the light in fishing, I think even most of the artisanal fishers are poor and thus do not have the money to buy the bulbs and the generator or money to rent one that is why they have refrained from using generators. Light fishing is mainly done by the young men who do not know how to paddle a canoe and yet call themselves fishermen. In Tema for instance, most of the older fisher folks are not using light.’

According to a respondent from Elmina when they were asked to stop with the dynamite fishing, because of the oath, that was the time they started using carbide in place of the dynamite.

In sharing his views about the evolution of illegal and destructive fishing, an official of the Fisheries Commission (FC) had this to say,

“Illegal fishing is something I can say, has been with us for a very long time. But as the years go by, a lot of innovations have come. People keep on doing things because of scarcity of fish. I think illegal fishing comes about as a result of the ingenuity of the human beings and scarcity which is the mother of invention. So immediately you are not getting something, then you find other means of doing things. People do all sort of things to survive including the use of illegal and destructive fishing practices”.

Again, the fishers mostly complained that the costs of their operations have increased. That is, the costs of the net, outboard motor and the premix fuel are dear. To them, it is economically unwise to go to sea and come empty handed.

“Some of our people are now in debt crisis because they were relying on the old methods of fishing, not wanting to use light. In fact, without light for instance you

cannot survive in the fishing business these days. Fishing is lighting and lighting is fishing. The Koreans and the Chinese started these light and other illegal fishing especially pair trawling in Asia. Their countries saw the danger with them and banned it. Now they are here to do the same thing. Go to these countries today, illegal fishing has almost depleted marine fish stocks”.

This was the response of a young fisherman from Elmina when he was asked whether artisanal fishing could be carried out without light these days.

3.4 Attempts to control illegal fishing

It is difficult to fathom why illegal, destructive and non- sustainable fishing practices have plagued artisanal fishing in Ghana. Some attributed the problem to the type of control and ownership pertaining in the country.

Ghana’s marine resources are an open access resources which means that it does not have ownership or control (Ostrom, 2000). Although by law all natural resources are vested in the state-Ghana. Marine resources are therefore state property. As such, the state must have the prerogative to enforce the rules of access and sustainability (Helberg, 2001). Yet a precedence set by the colonial administration in the then Gold Coast might have sent a very bad signal to the fisher folks in the country. When *Ali* was introduced to artisanal fishing in the then Gold Coast around 1850, some forward- looking fishers opposed its use. The main concerns of these fishers were that it breeds unfair competition and cannot guarantee sustainability of marine fish (Walker, 1999). In reaction, a fisherman named Mensah and others passed a law banning the use of *Ali*.

Later, when they learnt that some people were still using the *Ali*, Mensah mobilised some men who destroyed the fishing gear and canoes of those who were flouting their rules. The matter became the subject of a Supreme Court decision in 1899 in which the Chief Justice ruled that the law promulgated by Mensah and his cohorts were illegal, consequently, it could not be enforced because it did not form part of the Supreme Court Ordinance of 1876. Walker (1999) stressed that in view of the Supreme Court ruling, the Colonial Secretary of Agriculture in 1934 sent a memo to the Provincial

Commissioner of Winneba, to inform him that he did not see anything wrong with *Ali* and further ordered the withdrawal of all bye-laws prohibiting the use of *Ali*. To him, he stressed

“The best fishing net is the net that catches the most fish”.

This unfortunate decision might have opened the floodgates for illegal and destructive fishing practices in the then Gold Coast and now Ghana. The refusal of co-managements regime taking by local chiefs and leaders by the government might have informed traditional beliefs, knowledge and practices about artisanal fishing in Ghana.

This is not to say that nothing at all has been done or is being done to control illegal fishing practices in Ghana. The government of Ghana over the years especially, the post independence era, has enacted several laws to regulate artisanal fishing. Prominent among these laws are:

- ✓ Fisheries Decree, 1972(N.R.C.D. 87)
- ✓ Fisheries Amendment Regulations, 1977(L.I. 1106)

- ✓ Fisheries Regulations, 1964(L.I. 346)
- ✓ Fisheries Decree, 1979 (A.F.R.C.D. 30)
- ✓ Fisheries Regulation, 1979(L.I.1235)
- ✓ Fisheries Law, 1991(P.N.D.C.L 256) Repeal (A.R.C.D. 30) Fisheries Commission Act, 1993(Act 457) and recently,
- ✓ The Fisheries Act, 2002(Act 625)

These numerous laws and regulations provide the legal framework for fisheries management in Ghana. The key aspects of the law are with, development of artisanal fishing, license for canoes and qualifications for license, fishing by foreign vessels, license for foreign fishing vessels etc. The law also proposes fishing zones, gear, methods and manning of motor fishing vessels, conservation measure, monitoring, control and surveillance and enforcement, and prohibited fishing methods, fishing activities, close season, net for fishing and driftnet fishing.

In spite of these lofty ideals stipulated in the Fisheries Act of 2002, Act 625, much has not been achieved in terms of eradicating illegal fishing practices. According to the fishers, government through the Fisheries Commission and other extension officers have been coming to the shore to educate them about the consequences of illegal and destructive fishing methods. They claimed that their chief fishermen have been instrumental in the education and awareness creation. It is as a result of this collaboration made that forced the chief fishermen to compel all the subjects along the Gulf coast to swear an oath that they will not use explosives especially, dynamites in the year 2000.

The introduction of the Community Based Fisheries Management Committees (CBFMC) was a major step which sought to co-manage marine fishing in Ghana. The CBFMC was a local committee formed in the fishing communities, based on existing traditional leadership authority and local government set up. The committee was empowered by common laws and was made up of all the stakeholders. Their core mandate was to oversee the management and development of the fishing industry. It has the responsibility to enforce national fisheries law at the community level, as well as to enact and enforce their bye-laws. This arrangement was part of the measures by the Department of Fisheries to ensure a more sustainable national fishery resource through co-management (FC, 2004). Ironically, all the committees are not functional if not moribund. From the views of a representative of the Fisheries Commission, he is not aware of any landing beach fishing community in the Central region where the CBFMC in working. He said,

“They have all collapsed because most of the fishers did not want it. This was because it was a form of a check on their illegal fishing practices”.

Some of the fishers are of the opinion that the control of illegal fishing practices have not been dealt with very effectively because of lack of logistics on the part of those who are supposed to enforce the laws. The Fisheries Commission lacks the personnel, and the resource to deal with the problem. An officer of the Commission intimated that basic tools for monitoring and research are not available. The Department of Fishery also made the attempts to register the canoes and the artisanal fishers and embossed special numbers on their vessels for easy tracking and identification. Sadly, the whole process was politicized as an attempt by government to impose tax on the fishers. They did not cooperate with the department. One major reason why controls of these practices have been difficult is the issue of “open access”.

According to Helberg (2001), common property denotes resources that are owned by a community and the rules of access to the resources are defined by the community that owns the resources. This is true of marine fishing in Ghana. It is important to emphasize that common property is regulated where there are laws or rules governing the utilization of such resources. It is unregulated when there are no rules to regulate the utilization of such resources (Baland & Platteau, 1996). Unregulated common resources have two main characteristics; one, there is high cost of excluding potential users or it is virtually impossible (Ostrom, 1990). This character of common pool makes it easy for potential users to over-exploit such resources because of the lack of appropriate regulating usage. One problem with this open access or common pool is that the use of the resources by each individual deprives other people of the total benefit which would have accrued to them (Ostrom, 1990). According to a gentleman from the FC,

“In Ghana, everyone gets up one morning and says I am a fishman and goes out there and do whatever he likes all in the name of fishing. There is a mentality with fishermen... That I was born into it, my parents were fishermen and I cannot do any work apart from fishing. So, when you try to make them diversify their way of doing fishing it is not easy. We have tried to get them into culture fishing or fish farming but they did not cooperate.”

Some of the fishers said it has been difficult checking and regulating artisanal fishing because of politics which has engulfed the artisanal sector. “Every action or decision is given a political interpretation”. A gentleman who has been selling by-catch lamented that,

“Politics is destroying this country; because of that people do not think about the future. If we tell the truth, we shall all be free. Politics has made our country a place where law and order doesn't work.... In Mauritania they have about three months that they ban fishing each year. If you flout the rule and you are arrested, your boat could be destroyed... Because of the strict enforcement of the laws, people do not flout their laws. But in Ghana, the laws are not strictly enforced..... This is all because politicians will not allow the laws to work. When you arrest people doing illegal fishing the politicians will come and defend or make political gains out of it... you just look at the premix... full of politics. There is this notion among the fishers that our party is in power so we can do anything”.

One thing that the fishers were unanimous about was how the breakdown in respect to the application of social norms and traditional practices that governed fishing in the past has contributed highly to the pervasiveness of illegal fishing practices. For instance, in every fishing community, they had non-fishing days especially Tuesdays on which the fishers used to maintain their gear. In some were communities Wednesdays and Sundays were included. In some other places they had a period within the year where they place a total ban on fishing activities mostly prior to their annual festivals. These traditional norms were rigidly enforced in the past, but today, some of the fishers go to fishing on Tuesdays. These traditions are no longer being observed says a fisher from Mumford. To the fishers, these developments were partly due to the activities of the industrial vessels. They have been violating these traditional practices with impunity. These gave indication to the canoe operators that, after all, fishing could be done on any day at all without any repercussions. That is why they have not been observing these local norms, thus, undermining them. According to one of the chief fishermen,

“For instance, when I was growing up, we were told that the sea goddess does not like light so we were not sending powerful light to sea. But when it was discovered that the industrial people were using very powerful light in several ways to fish and guide the vessels the artisanal people also started using light for fishing”.

All the traditional practices and rituals that were performed before the fishing season are no longer being performed by the chief fishermen and the chief priest or priestess. Again, some of the local gods have been abandoned because of the influence of Christianity. Nowadays, if you call for such rituals to be performed, you are labeled as an unbeliever or evil. Some refuse to be involved because they do not want to be called names by their peers.

In Edina, we have our culture and rituals, our forefathers swore an oath to the lagoon god so that everything they need, they ask the lagoon god through the priest of the lagoon, but today, it is not so, everybody has made his vessel and go out as and when they like without any respect to these rituals. Every year, there are places in this town where we used to sprinkle mashed yam to feed the gods so that we could have fish in abundance but, all these rituals have been abandoned.

This was the reaction of a chief fisherman. Hardly do the violators of these traditional norms get sanctioned by the chief fishermen and his elders. Most of the cases they handle these days are problems emanating from the activities of the industrial vessels.

3.5 Effects of illegal fishing practices

From the perspective of the respondents sampled, illegal fishing has physical and ecological effects on the sea. Most of them believe it has resulted in pollution of the sea, decreasing fish stocks, destruction of coral reef and rare fish species. It has decreased fish stocks because of the harvesting of juvenile fish and use of fine mesh net. These practices to them, undermine conservation practices and measures.

The major social concern of the fisher folk about illegal fishing is that it affects them economically. They are not getting fish as they used to, some spend money on premix but they do not get any catch. The fishing season has also become unpredictable especially, in August when they get herrings. One of the groups seriously hit by this problem is the fishmongers or the women who process these fish. The women interviewed indicated they find it difficult to preserve such fish; they are losing their capital because in the past it was possible to preserve fish for months but today the fish go bad easily making it difficult to preserve. Even the taste of such fish is bad. They are also losing their customers, now they prefer saeko or by-catch from the industrial vessels than artisanal vessels.

4.0 CONCLUSIONS

Illegal, destructive and non-sustainable fishing practices abound in the Central Region and for that matter the coastal areas of the country. Notable among these practices are, light fishing, use of explosives like dynamite and carbide, use of poison such as D.D.T. and the use of inappropriate net sizes and monofilament net. The practices of industrial vessels ploughing through the cast net of the artisanal fishers, fishing within the IEZ and selling off by-catch to artisanal canoes were considered destructive and illegal by the artisanal fishers. It was not easy to trace the roots of these practices as the fishers gave conflicting accounts and years in which these practices emerged or began.

In spite of these difficulties, one thing was certain and that is illegal fishing and attempts to deal with it had been documented as far back as the 1850s, when a new fishing gear called Ali was introduced in the then Gold Coast. Ever since then, different activities have been labeled

and are being labeled as illegal, destructive and non-sustainable in fishing. From my discussions with the respondents the most pervasive illegal practices at the moment is light-fishing which has virtually become synonymous with artisanal fishing. As a result, attempts to deal with it might not come cheaply. It will require a great deal of tact, diplomacy, lobbying and education, by- partisans and a well coordinated approach.

4.1 Recommendations

1. The Fisheries Commission (FC) which has the mandate to regulate and manage the utilization of fishery resources must ensure the full implementation of the Fisheries Act, (Act 625) 2002. The Act has certain provisions that if implemented could help stem the tide of illegal and destructive fishing practices in Ghana.
2. Government should equip the FC with personnel and essential logistics so that the Commission will become visible on the ground. Lack of personnel and logistics seems to hamper the Commission's ability to implement the legal provisions and policies governing fishing in general and artisanal fishing in particular.
3. The FC and other law enforcement agencies like the Ghana Navy and the Air Force should be equipped with patrol boats, and aircrafts to monitor, control and conduct surveillance over the fishery waters so that those who carry out illegal and destructive fishing and deliberately flout the fisheries regulations could be apprehended for prosecution.
4. Government through the FC should embark on education and awareness creation to high-light the dangers associated with these practices and their long term impacts on their livelihood. Civil Society, NGOs, the Media and all other stakeholder must be tasked to be involved in this awareness creation especially local and traditional leader.
5. The FC government, the Ghana Standards Boards, and Foods and Drugs Board should collaborate to set fish quality standards for Ghana. The standards must be enforced at the various landing beaches. So that fishes that are harvested through illegal means could be seized, and destroyed and the offenders punished with the appropriate sanctions.
6. The FC should collaborate with the chief fishermen, the fishers, District Assemblies and the Fishing Communities to enact bye-laws regulates artisanal fishing and enforce them. This will require immediate reinvigorations of the community Based Fishing Management Committees (CBFMC).
7. Controlling illegal, destructive and non-sustainable fishing will be near impossible if the Government and FC do not find a way to restrict or regulate access to fishery resources. Registration and certification could help to achieve this goal.
8. Cultural norms and values that could help conserve fishing resources and make artisanal fishing more sustainable should be enforced. For instance, the fishing holiday and ban could be reinitiated.
9. Issues regarding fisheries management in Ghana should be approached from non-partisan basis. This will help reduce the over-politicization of policies in the sector and ensure compliance.
10. Government and FC should find a way of excluding illegal fish products from the market and the consumers should be encouraged not to patronize illegal fish products. This will encourage compliant to appropriate fishing methods and standards. Landing beaches which are noted for illegal fishing should be named and shamed.

SECTION C: PREMIX FUEL CASE STUDIES IN THE CENTRAL REGION

By

Dr. Emmanuel K. Ekumah

1.0 BACKGROUND TO THE STUDY

- Ghana has a long tradition of a very active fishing industry and fish provide an important source of animal protein for most Ghanaians. Ghana's fishing industry has made tremendous strides over the years, developing from a predominantly traditional canoe fleet to a mix of traditional and modern fleet, including industrial trawlers. Bounded on the south by the Gulf of Guinea, Ghana has a 550 km coastline and a total continental shelf area of about 24,300 square kilometers that support a marine fishing industry (Mensah and Antwi, 2006).
- Marine fishing is an important traditional economic activity of the coastal communities in Ghana and contributes over 80 per cent of the total fish catch (Mensah and Antwi, 2006). The traditional sector accounts for over 75 per cent of the marine catch. The small-scale artisanal marine fishing communities are predominant and are generally characterized by low levels of production, low incomes, poor living conditions and chronic indebtedness (Mensah and Antwi, 2006).

Due to the poor living conditions of these fishermen along the coast of Ghana the premix fuel was introduced in the fishing industry in 1994 to power outboard engines. This was expected to help artisanal fishermen increase their catch and hence raise their living standard through increased incomes and also augment the fish stock in the country. To further help these fishermen the government subsidized the product to make it cheap and accessible to artisanal fishermen in the coastal and lake regions of Ghana.

1.1 Problem

Majority of Ghanaians who live along the coast are fishermen and engage in the fishing business, therefore, depriving them of the premix fuel is as good as starving them and their dependants (Ghanadistricts.com). Ever since the product was introduced into the fishing industry, its distribution has always been fraught with corruption and diversions (Mbir, 2008). The problem about the diversion of premix fuel and the resultant shortage of the commodity on the market surfaced once again. The problem got to its peak four years ago, when some politicians in the management and distribution of the product were diverting the fuel with their close collaborators (Mbir, 2008). These nation-wrecking activities such as diversion of the commodity, smuggling to neighbouring destinations, and adulterating the product to facilitate usage by vehicles and chainsaw machines, defeated the notion of subsidy and equally made the commodity costly to fishermen. The government put mechanisms in place to check the malpractices that happened in the sector although that did not resolve the matter. Mbir (2008) noted that the management structure of the committee was what crooked politicians and oil magnates sought to destroy to make way for the continuation of their criminal activities.

Against this backdrop the premix has always been characterized with inadequacies, diversions, political interferences and corruption. In the midst of all these complexities this research on the premix fuel is a necessary concern in the governance of the coastal areas of the country with respect to their living conditions.

1.2 Objectives of the Study

The research was conducted based on the terms of reference so the objectives for the study were formulated to:

1. Trace the historical bases of the premix,
2. Identify the policy objective of the premix fuel,
3. Examine some political issues in the management of premix in the country,
4. Examine the social impact of premix on local livelihoods and fishing efforts,
5. Determine the social impact and management of premix at the local level
6. Identify the possible scenarios of maintaining the subsidy

2.0 METHODOLOGY

2.1 Introduction

The issue of premix fuel continues to pose a challenge with daily reports of shortages, diversion, corruption and smuggling to neighboring countries. The methodology helped to elicit possible causes of the current situation of the premix fuel in the country. Following from this, the methodology looked at the research design, the sampling techniques, the data collection methods to be applied and the analysis of the data.

2.2 Research Design

The research is a case study so it was approached from point of view of the qualitative methodology. Since the activities of the fishing industry in the various communities were almost similar few of the communities were chosen for in-depth study. The pre-mix issue is well known especially along the coast of Ghana. As much as possible, the stories connected with it were transcribed and the major themes used to narrate and discuss issues bothering on the premix fuel.

2.3 Sampling of Respondents

To be able to get all shades of opinions that would enrich the research and also provide a rich source of data, the research made use of the purposive and snowball sampling techniques in getting respondents. The basis for these types of sampling is because the research is basically qualitative in nature where there is the need for an in depth investigation of the social impact of the premix on local livelihood, and also identify problems regarding the distribution and management of the premix. These techniques were also justified because the population involved in the study move from one beach to the other and therefore could not be defined. Purposively respondents were identified based on the relevance of the information they provided and identified through snowball procedure. The research also required data from the local people in order to determine the impact of the premix on local livelihood, from the fishermen in order to examine the problems they encounter getting premix and how often they get it and whether shortages occur. From the members of the premix committees to unmask how the distribution of premix is done. Heads of the landing beach committees in charge of premix were charged to observe how premix is supplied and the executives of the national premix committee to assess whether the subsidy was sustainable and how the premix was managed at the national executive level. It was also interesting to investigate whether there were any political influences on the distribution of the premix fuel.

Information was collected to meet all the objectives by selecting people or respondents purposively. Effectively key informants were identified through their status/positions in the premix committees in the landing beaches. Therefore to ensure that information collected was valid the key informants were selected from among the local people who directly dealt with the premix fuel. However, other people who were not also from the community but command enough information concerning premix in Ghana were used as key informants.

2.4 Data Collection Methods

The major instrument was interviewing and the tool used was in-depth interview guide played a significant role because of the use of the key informants in a case study situation. The in-depth interview guide was used for respondents at the national, regional and the landing beach committees in order to establish possible political influences. Additionally where circumstances allowed, a focus group discussion was conducted among some members of the community to obtain their views about the impact of pre-mix on the livelihood of the people, its sale and the benefits accruing from the pre-mix to the community.

2.5 Limitations to Data Collection

Basically, there were challenges to the data collection because of the sensitive nature of the politicized issues on pre-mix. This meant researcher had to be sure of who the key informants were and did not allow any other persons to assume to be key informants but only to spread falsehood about pre-mix. It further meant information obtained had to be cross-checked for their validity.

2.6 Data Analysis

The data obtained with field notes and tape recorders were transcribed and categorized into themes. These themes and sub-themes were developed and made the basis for the narration of the stories and issues connected with the pre-mix. The narrations were mindful of direct expressions from respondents not necessarily to make reading interesting but also to provide focus to specific issues that respondents drew attention to.

3.0 FINDINGS AND DISCUSSION

3.1 Introduction

The introduction of premix fuel into the country in the 1990's has seen different focus and attention depending on the government in power and the demand prevailing at each time. Various governments therefore have tackled the premix issue differently and with different outcomes. The burning desire for fishermen to constantly have premix fuel at their disposal for their fishing operations have also contribute to the inertia on governments to fulfill fishermen's demands at any cost. Meanwhile the fishing communities have also added to the debate on premix fuel as their livelihoods strongly depend on whether they can go fishing or not. These communities rely heavily on the premix because that is the sole fuel that can power their outboard motors to a greater distance for effective fishing and improved quantities of fish catch. Nonetheless the quantities of premix supplied at each time also depended on the availability of crude oil to the Tema Oil Refinery which is the sole agency in charge of mixing the product and giving it the right combinations suitable for the outboard motors.

3.2 Historical Justification of the Premix

Long before the introduction of mechanized fishery in 1946, Ghana (then Gold Coast) had a long traditional fishery in its coastal waters. In those early days there was a powerful dug-out canoe fleet, propelled by oars and sails, which used fishing gears, such as ali nets, beach seines, hook and line, cast nets and set nets, to fish for the then abundant resources close inshore (Ocran, 1972). This was largely the nature of fishing along the coast of the country. This form of fishing continued for some time until the introduction of outboard motors.

The introduction of outboard engines to the canoes started in the 1950s, four years (1946) after the Fisheries Department had imported two 30-footer motorized fishing boats from the United Kingdom into the country for experimental fishing (Ocran, 1972). The outboard motors enabled the canoes to move farther out to sea from the coast and to make bigger catches quickly in fewer hours or days than before. The success of the two 30-footer boats used by the Fisheries Department was such that in 1952, the Government of the Gold Coast (Ghana) set up a Boatyard Corporation which started building similar boats at the Sekondi Boatyard. Without delay, several in-board engine wooden vessels with length ranging from 27'-32' were built. When the Tema Boatyard was established in 1962, a large fleet of wooden fishing vessels with lengths up to 70-feet were built for the industry. Later, individual entrepreneurs imported steel boats with sizes ranging from 30'-120' feet into the country. There was therefore a drastic shift in fishing activities from the earlier use of canoes propelled by paddling and in the luckier situations propelled by oars and sails.

With the introduction of such outboard motors there was then the need to fuel these outboard motors and the need for premix became necessary. The outboard motors introduced by the fisheries department were powered with fuel prepared under the guidance of the then fisheries department and the Oil Marketing Companies. This fuel was a blend of regular gasoline and normal lubricating oil based on the manufacturer's instructions. This was the first introduction of premix into the fishing sector in the country. This combination of the fuel was in use until the early 1990's. It must be noted that at that time only regular gasoline was being sold before the introduction of the premium. The premix prepared during this period was subsidized by the government of the time.

The blend of gasoline and normal lubricating oil with a low octane rating of 87 was used for these outboard motors which proved suitable. With time from 1991 to 1994 the subsidy for the government was too high to the tune of about ₵2.1 billion and therefore the government withdrew the subsidy and then this left fishermen with no option than to obtain premix at a high cost. However with the proliferation of outboard motors for fishing, there was then the need to obtain premix suitable for the two-stroke outboard motors used by the fishermen along the coast of Ghana. Since the fishermen could not determine the right combinations of this fuel they were arbitrarily mixing the gasoline and lubricating oil in proportion that was suitable to them first and could make the outboard motors function effectively to them.

In 1991 regular gasoline was withdrawn from the market and in place was super-premium with an octane rating of 90/91 and fishermen have no option than to use the super- premium. But the use of super-premium and gasoline proved unsuitable to the fishermen when they mix it for fishing because of the octane level and furthermore the premium was costly which also posed a problem to fishermen.

As the fuelling of the boats became more difficulty, the fishermen through the Ghana National Association of Farmers and Fishermen and the Ghana National Association of Fish

farmers pleaded with the then Government to re-introduce the premix which was suitable for their outboard motors. After a year of research by the Ghana National Petroleum Co-operation and Tema Oil Refinery they came out with a fuel combination with an octane rating of 82/84 and a blending rate of 22:1 volume of lubricant. This new product was finally announced on the 9 May 1995 and this was subsidized meant solely for canoe fishermen. After its introduction a ministerial committee was set up to see to its distribution and effective management. Again this product was equally subsidized and was sold at designated centres which were called service centres and these service centres operated like co-operatives. Premix was sold to fishermen through associations formed by these fishermen such as the Ghana National Association of Canoe Fishermen, and Ghana Inland Canoe Fishermen.

3.3 Objective for the Programme

Before the official introduction of the premix in 1995 and after the withdrawal of regular gasoline in 1990 fishermen were using super premium with lubricating oil as the fuel for powering their two stroke engines. This combination was most unsuitable for two reasons. First the premium petrol was expensive and secondly the high octane rating (90/91) of premium and the excessive heat generated out of the outboard motors rather shortened the lifespan of the outboard motors and consequently increased cost of operations to these fishermen. It necessitated the introduction of a suitable fuel at an affordable price to fishermen. The objective for the introduction of premix was to make the fuel available to fishermen at an affordable cost. The fishermen along the coast largely depend on premix for their fishing operations and therefore to make them have access to premix at a reduced cost meant improving their livelihoods and constantly keeping them in their jobs as fishermen. This meant that the product was to be subsidized at a greater cost so that it can be affordable to fishermen. The government at the time asked the oil marketing companies supplying the product to subsidize the product and overtime the government took over the subsidy component because the oil marketing companies did not see it as profitable. For instance in 1991 when gasoline was sold at ¢9,000 the cost of premix was ¢45,000 a subsidy of about 100 percent. Even in 1993 when petrol price went up to ¢1900 the price of premix remained at ¢45000. There was also a premix fund set up by government where a percentage was added to the price of premix and this margin was put into a premix fund meant for taking care of the needs of fishermen such as buying of nets, outboard motors and others. Again the purpose of introducing premix was to have a system of premix supply that can generate enough funds to cater for the critical needs of the fishermen.

3.4 The Policy on Premix Subsidy

The introduction of premix was basically meant to power the outboard motors used by fishermen and as the use of these outboard motors became common there was an increased demand for premix. Therefore the National Democratic Congress's government introduced premix and officially announced it on the 9 May 1995. Since the inception of the product there has always been a subsidy on the product first owing to the high cost associated with the blending of the product and secondly the desire of the government at the time to make the product available to fishermen at a reduced cost. Therefore the margin of the subsidy has also undergone change depending on the political demands of the time. The first introduction of the premix in 1991 saw a subsidy of 100% because while gasoline was sold at ¢9000 that of premix was sold at ¢45000. In 1993, when petrol went up to ¢1900, that of premix remained at ¢45000 a subsidy of 150%. The percentage was just a government intervention to make the product affordable to the fishermen. But interestingly, there was no government white paper or legislation that mandated the introduction of the subsidy and how it should be controlled.

The subsidy therefore existed until in the year 2000 when the New Patriotic party came to power. During the era of the New Patriotic Party the subsidy still existed. Though the focus of the premix in terms of structure changed the subsidy continued to be there and during this time the subsidy was pecked at 50% which is a reduction from the National Democratic Congress party. The subsidy still remained a decision by the government of the day. Though the National Premix committee was in existence they did not take decisions regarding the subsidy. In two such cases a member of the national premix committee maintained this position that there is no legislation to the effect that premix should be a particular focus. This was also confirmed by the office manager of the National Premix secretariat. According to the manager the subject of the policy is not the remit of the National Premix Committee; the subsidy is a political decision that a government promised the people to make premix affordable and available. Following from the foregoing, for the regime of every government, the component of the subsidy depended on how government wanted to reach out to the fishermen as the availability of premix meant fulfilling campaign promises.

3.5 Political Issues and Management of Premix

The much debated premix from its inception has always been characterized with issues of diversion, corruption and political influence. The political influence in the premix business spans from the distribution of the product to the sale of the product to fishermen along the coast. From 1995 after the official announcement of the sale and distribution of premix it has been characterized by different premix operational structures and committees. The structures of premix operations differ with each government in power and this equally affect the sale of the product to the fishermen. When the sale of premix started in 1995 there was a ministerial committee tasked with the responsibility of working out a suitable distribution mechanism. The committee was also supposed to eliminate the corruption and diversion that characterized the earlier sale of the product between 1991 and 1993. However, more importantly the committee was meant to implement government announcement of the sale of the product, at what price and the level of subsidy.

However, the mandate was to sell the premix to only registered co-operatives formed by these fishermen. Meanwhile, there was a political dimension where the ministerial committee was undermined. Through the regional ministers service centres were created which also sold premix to the fishermen. These service centres were made up of political appointees either from government or from the regional ministers and these service centres acted in place of the National committee. For instance, in the Central Region the regional minister actually encouraged the formation of these service centres. Nonetheless these service centres over time were issuing licences to individuals to deal in premix creating the diversions and corruption that plagued the premix business. Again these service centres acted ultra vires and usurped the powers of the national committee because it was only the national committee that had the right to issue licences to groups or individuals to supply premix to fishermen. Therefore the subsidy put on the product was exploited by these politicians because the individuals sold the premix at a higher price making extra profits and this defeated the purpose of the premix and hence the subsidy. It further made cost of operations to fishermen expensive. Again with time there was a proliferation of private individuals dealing in premix and that further exacerbated the premix problem as this created shortages and cheating government as the subsidy was undermined. In addition, private businessmen connived with some fishermen to buy the product and this was sold at exorbitant prices with higher profits at the expense of government and equally defeating the purpose of the subsidy. Over time it was therefore difficult to identify which private individuals could deal in premix and those who could not.

From 2000/2001 there was a change of government and the structure of premix also changed focus nationwide. There was a new structure in place of the ministerial committee that dominated the previous government. Nationwide there was the national premix committee, the regional co-ordinating committee on premix and the local premix committee. The national committee was made up of people appointed by government and the regional co-ordinating committee was also made of members appointed by the regional minister with the authority of the national premix committee. However, the local premix committee had membership drawn from all sectors of the premix business at the local level. It was made up of eleven (11) members in all and the breakdown is as follows;

- The chief fisherman of the landing beach as chairman
- Five (5) Canoe owners
- Two (2) fish mongers
- Three government appointees made up of MCE/DCE representative

The local premix committee was in charge of the sale of premix and sold the product directly to fishermen. However there was a margin of profit put on every gallon of premix sold and this margin was put into the premix fund which was used by the community for its own development. The money was managed by the LPC and the profit deposited at a bank of their choice and when the community deems it fit, it used the money for the development of the community.

Meanwhile each of these committees was bedeviled with political issues ranging from the national committee to the regional and local levels. For instance there was indiscriminate dissolution of committees by regional ministers. In 2001 in the Central region, the regional co-coordinating committee was made up of two representatives of the regional minister, two chief fishermen, the Ministry of Food and Agriculture representative and representative of the Department of Co-operatives. This composition of the committee was later under the authority of the regional minister increased and seven additional political appointees were added giving the committee the political muscle to take critical decisions. They equally gave directives as to how premix could be supplied or ordered and what should happen at the local premix committee level. This meant that due to the political pressure from the RCCP the local premix committee came under influence. The regional committee also usurped the powers of the national committee and was taking decisions unilaterally and could determine how premix is supplied and in what quantities. For instance from an interview conducted with a member of the national premix committee at the time (2000/2001) it was confirmed that within a very short time the RCCP had supplied premix to the tune of ¢400 million and diverted the product to the tune of ¢5billion. Another problem created by the RCCP was the proliferation of outlets to deal in premix and the research confirmed that between 1995 and 1999 there were 127 outlets owned by private individuals dealing in premix and in 2006 these had increased to 600 outlets and before the immediate past government left office there were 900 outlets owned by private individuals dealing in premix.

Another critical issue gathered in the course of this research which created more political pressures on the local premix committee was the involvement of the Municipal Chief Executive /District Chief Executive representative. As part of the two political or government nominees on the LPC was the MCE/DCE representative and evidence suggest that these MCE/DCE representatives were interfering with the running of the LPC which further creates more political problem for the committees. This is because in deciding projects some DCE's

representatives attempt to influence the decisions of the community through the chief fisherman.

The political issues relating to the premix business did not come to an end as more political pressure was brought to bear on the premix committees with time. One other critical political issue that confronts the LPC in some of the landing beaches was the selection of the chief fishermen to head the LPC. In some landing beaches this also took political lines and therefore the party in power selected obviously a party man and when government change then the chief fishermen also changes. The term of office or mandate ended with the term of the party in power. In some cases traditional chiefs of the various fishing communities were part of this politicisation of the election of members to the LPC. These political issues that confronted the structures of premix distribution from 2000 to 2008 again underwent change with the change of government in 2008. The new premix structure now operational is made of a three-pronged structure as the National Premix Committee, the National Premix Secretariat and the Landing Beach Committee.

3.6 The National Premix Committee

The functions of the national premix committee include

1. Review all existing premix sale points
2. Set up procedures for receiving or approving applications and for the establishment of new outlets
3. Examine all licenses given for the purpose of selling premix fuel.
4. Set out guidelines and modalities for establishment of outlets, purchasing procedures, transportation of fuel to stations and sale to beneficiaries in consultation with stakeholders
5. Determine the minimum and maximum quantities to be supplied depending on the needs of fishermen and the season
6. Determine price build up of the commodity in consultation with the national petroleum authority (NPA)
7. Discuss any other issues relevant to the administration of premix fuel.

3.7 The National Premix Secretariat

The functions of the national premix secretariat include

1. The premix secretariat will categorise the Landing Beach Committees into groups and estimates what their lifting should be.
2. The secretariat will reconcile fuel supplied and lifted with fuel received
3. The secretariat will receive complaints and other matters from beneficiaries.
4. The secretariat monitor and evaluate all premix lifting from the Tema oil refinery to ensure their safe arrival at various retaining points
5. The secretariat will serve as a link between the national premix committee, oil marketing companies and other stakeholders.
6. The secretariat will also undertake all financial transactions of the National Premix committee and report to and advise the National Premix Committee on all matters concerning premix administration.
7. The secretariat will also arrange for annual technical and financial audit by an external auditor.

3.8 The Landing Beach Committees

The landing beach committee was to be composed of the following representatives

- a. Chief fisherman
- b. Representative of Canoe owners
- c. Representative of fish mongers
- d. One ordinary fisherman to be nominated by MOFA
- e. One other person appointed by Metropolitan /Municipal and District Chief Executive

However, the political issues pertaining to the management of premix have been explained using the various landing beaches in the Central region.

3.8.1 *Elmina Case*

The first case of identifying which political issues dominate the management of premix along the coast was obtained from the Elmina beach in Cape Coast. This data was collected by an interview conducted among fishermen and the chief fisherman at the Elmina beach. The LBC at the Elmina beach was made of five members as outlined in the policy for the creation of the LBC in 2008 and the membership is as follows:

1. Chief fisherman
2. Representative of canoe owners
3. Representative of fish mongers
4. One ordinary fisherman to be nominated by ministry of food and agriculture
5. One other person appointed by Municipal Metropolitan and District Chief Executive
6. Pump attendant
7. Secretary

This composition was fairly represented in the case of the Elmina beach. However, issues were constantly been raised regarding the way membership to this committee was selected. In the case of Elmina as gathered by the study there was a struggle between the then chief fisherman and the current chief fisherman over cases of politicisation. The Local Premix Committees were in place and in charge of the premix business but there were some places where the chief fishermen were boycotted.

3.8.2 *Moree Case*

The second case of the political issues affecting the management of premix and the aspect of the subsidy was gathered from another interview conducted among fishermen and the chief fisherman of Moree. This fishing community, Moree, is situated east of Elmina. Just like the case of Elmina the composition of the committee was fair in terms of representation. According to the Chief fisherman, there was a 5-member committee, plus a pump attendant and a secretary. The criteria for the representation came from the top. They are:

- The Chief Fisherman
- Fish Monger
- Boat owners Representative
- D.C.E. Representative
- MOFA Representative
- Pump Attendant
- Secretary

However nagging political interferences occur with the committee members and between the committee and the fisherman. For instance, according to the fishermen there is favouritism at the sale of premix. At the sales point in the view of fishermen premix is sold to party

affiliated fishermen and when there is excess left then it is sold to the rest of the fishermen. Those who do not get at all are forced to buy from outside. Buying from outside meant either the blended premix is bought at exorbitant price or the blending is done by individuals. While the self-blending cost the fishermen between GH¢4.00 - GH¢5.00 to be able to go fishing the subsidised premix cost GH¢2.70. Meanwhile the chief fisherman has compiled the names of all canoes and their owners in the beach and uses it to sell the premix. Using the list one expects a fair distribution and sale of premix but instead there is a struggle during the sale of the commodity at the landing beach. Therefore the fishermen do not feel the effects of the subsidy and aside that they do not also see the product as being available to them. For some of the fisher therefore the premix was only available when a particular political party is in power to favour certain individual fishermen.

Another pertinent political issue that plagued the premix distribution at Moree is the storage facilities used by the committee in the area. During the previous administration they had bought some storage tanks placed at vantage points and the premix was sold at three dumping places. When the new government came into power in the year 2000 there was confusion over these storage tanks and therefore the committee was compelled to sell premix at two dumping sites and this adds to the already precarious nature of premix supply in the area. In the words of one fisherman:

“Before the year 2000 the premix was sufficient because Moree had three (3) dumping sites but now only two (2) dumping sites are used because when any Political Party comes to power it does not want the losing party to use its premix dumping site. It happened in the NDC time and the NPP time too”.

However on the side of the committee it was confirmed from the chief fisherman that the Municipal, Metropolitan and District chief executive’s representatives who are supposed to facilitate the work of the committee try to influence decisions of the committee which makes the work of the committee difficult. For instance in deciding projects the MMDCE representative try to decide for the committee through the chief fisherman by putting pressure on the chief fisherman to execute a particular project instead what the community have decided on. Furthermore according to the chief fisherman party members have taken over the duties of the Chief Fishermen. Notable party members in the area have usurped the powers of the chief fisherman by carrying out duties that are done by the chief fisherman. To make the committee competent and work to perfection the party members should be warned because it is the chief fishermen who knows the fishermen and understand their problem. For instance, in terms of supply Moree received 3000 gallons (ie 13500 litres) of premix at a price of GH¢6,989.00. During the lean season the supply is once a week but in the peak season the supply is 3 times a week.

3.8.3 *Bantuma Case*

- Bantuma is a community very close to Elmina but it is not part of Elmina. The fishing activities are carried out separately from Elmina. A case of political wrangling at the LBC level was identified at the Bantuma beach where the distribution of premix posed a problem to the fishermen. According to the chief fisherman of Bantuma the allocation is not always sufficient and also not regular. Fishermen sometimes travel as far as to Accra in search of premix at high price. Premix is supplied to big canoes 50 gallons and to small canoes 25 gallons a week. All the canoes in the landing beach have been registered and pay a fee of GH¢20.00 for big canoes and GH¢10.00 for small canoes. But the premix supply is woefully inadequate because at the time of the

study premix had not been supplied for the past two weeks. In situations when the premix is supplied canoes which have not been registered cause a lot of trouble because they struggle with those who have registered since they also want to be served. The committee's price per gallon of premix is GH¢2.50. In the view of the chief fisherman before the year 2000 there was no problem in premix supply and distribution but with the coming in of a different government the distribution of premix became a hurdle hence associating the distribution and sale of premix to which political party is in power. The chief fisherman concluded that from the year 2000-2008 premix supply was not regular and profits went into some few individuals.

- Meanwhile another issue that arises within the committee was interference from other chief fishermen and other political leaders such DCE from other landing beaches for instance from Mumford and Apam. According to the chief fisherman of Bantuma any time they received premix they get calls from other chief fishermen of neighboring fishing communities and landing beaches instructing them to sell premix to other fishermen from other areas that are stranded at sea. This seriously interferes in the business of the committee as this unnecessarily creates shortages.

3.8.4 *Nyayarno Case*

Since the research covered the whole Central region of Ghana the researchers further conducted research at Nyayarno a fishing community in the Gomoa East district also in the Central region. The results also revealed some nagging political issues that confronted the management and distribution of premix and the effects on the subsidy. Major among these politics is selection of the fishermen representative. The data collected through an interview with an opinion leader of Nyayarno who has got in-depth knowledge on premix issues. It was gathered that the fishermen representative who was always selected from the association of fishermen in the case of Nyayarno there was no association of fishermen and therefore the fishermen representative took political party lines. In other words the political party in power will directly select a party person as the fishermen representative on the LBC. This openly makes the membership to the committee party- based and all other members may be directly or indirectly influenced by this trend of events. In the words of this opinion leader:

“Because there is no Fishermen Association, the selection of Fishermen Representative on the Premix Committee is based on political affiliation of the person. It happened during the NPP regime and now the NDC regime”.

Again there is also an open political dispute between the fisherman and his clan head. The two belong to different political parties. The clan head interferes with the way the chief fisherman runs the LBC though it is not the clan head that chooses the chief fisherman but it is ascribed by lineage. The truth of the matter is that they belong to the two different opposing political parties making it difficult for the chief fisherman to execute his duties. Apart from the fact that party politics have influenced the work of the chief fisherman the premix situation in the case of Nyayarno, politics have also directly controlled the running of landing beach committee and does not augur well for the distribution and management of premix at the local level.

3.8.5 *Mumford Case*

The search for a true solution to the premix inequalities and political involvement further took the researchers to Mumford another fishing community in the Gomoa West district which relies heavily on premix for their fishing activities. At Mumford the researchers conducted interviews with the secretary to the premix committee and the DCE representative

all in an attempt to find out what political issues confront them as members of the committee and to what extent this affects the management of premix and the government subsidy on the product. The normal composition of the committee was confirmed that a five (5) member committee runs the affairs of the Premix here. They are:

- Chief fisherman
 - MOFA representative
 - Fishmonger
 - DCE Representative
 - two (2) pump attendants
 - one (1) act's as secretary
-
- The allocation of premix for Mumford is 3000 gallons every two weeks but for the past two (2) months before the interview was conducted no supply had been received. A major critical issue that confronted the committee was interference with the work of the committee by supposed party men who have been appointed to serve on the national premix committee. The case of Mumford revealed that some of these party men attempt to influence how profit should be shared and what percentage each group should get. Again in the distribution of premix some of these party men also attempt to direct as to how the premix should be sold and some demand a share of the profit. The interview also revealed that some members of the committee demand a percentage of the profit with the view that it is meant to support the activities of the party. However, in an interview with a member of the National premix committee it was argued that this has not come to the notice of the national committee and that the new policy document that spell out how premix should be distributed and how the profit should shared there is no indication that any share of the profit goes to the party in power. Indeed if this is the case it clearly defeats the purpose of the subsidy and also puts the efforts of the community to develop themselves using the premix profit in question.
 - Further analysis indicated that some party members were using the name of the party to interfere in the distribution and administration of premix. Such cases were quite evident in the case of Mumford. According to the new document the profit from the sale of premix should be shared in the following format and percentages.
 - The community takes 53%
 - The chief fisherman takes 12%
 - The secretary takes 7%
 - The Committee takes 18%
 - The fuel attendant takes 10%

3.9 Social Impact of Premix on Local Livelihood

- This aspect of the research tackled the social impact that the subsidies have had on the lives of fishing committees. Again data for this aspect of the research was also obtained through interviews conducted among chief fishermen, some fishermen of the various landing beaches, opinion leaders, members of the national premix committee as well as members of the landing beach committees. The social impact therefore takes a look at how beneficial the premix has been to them and what concrete improvements have this brought in to the lives of fishermen.

3.9.1 Case One: Elmina

The first case investigated to identify the social benefits of premix was carried out at the Elmina beach. By premix allocation the Elmina beach gets four (4) trucks of 3000 gallons each equivalent to 13500 litres a week in the lean season and within the later part of the lean season it was increased to 8 trucks a week. Elmina has a very vibrant fishing industry. However in the peak season the number of loads increase from 8-12 trucks per weeks. There are over 300 canoes in Elmina, excluding migrant canoes. Each canoe is allocated 50 gallons but if migrant canoes infiltrate then the quantity is reduced to 35 gallons per canoe. The cost per gallon is GH¢2.48 (¢24088.00 old cedis) per invoice price. The selling price per gallon is GH ¢2.60 (¢26,000.00). There is a list of all canoes at the beach which is used in the sale and distribution of premix. According to the fishermen premix is distributed strictly according to that list. However in the lean season when there is little fishing activity it poses grave consequences for the people including the fishermen. In the exact words of one interviewee “there is no other job apart from the fishing so when the season is over we really suffer”. This explains the seasonality in the fishing business. Seasonality includes recurrent changes throughout the year that influence people’s access to assets and livelihood outcomes. Seasonal change in weather is an example.

The major fishing season may occur during the rainy season, thereby limiting the cash income to a relatively short period per year, imposing a strain on the household cash flow and household food security during the lean season. Transport of fresh fish might be more unreliable in the rainy season as roads may become flooded. Other aspects of seasonality include fluctuations in prices, marketing opportunities, health and availability of alternative employment opportunities (Koranteng, 1998). This seasonality in the nature of fishing was equally confirmed in a research conducted by Ulrich et al (2003) which ascertained that the trend of increasing seasonality in Bangladesh seriously affect the income and supplies of fish in the six villages that the research was carried out. The declining fish catches as a result of the seasonality are not only felt in smaller quantities caught but also in reduced quality in that the fishes become smaller. This is also because increasing numbers of people are engaged in fishing with different types of nets. Number of nets per fisher also increased to a substantial extent (Ulrich, 2003).

The first challenge these fishermen face is that during fishing they invest as much as GH¢200-300 in only the cost of fuel and when there is no sufficient catch it becomes difficult for them to feed themselves as all the money is used to defray cost of fuel. This makes the job difficult because people are seen to be working but they are unable to take care of their families. This also increases their poverty levels as well. Fishing communities the world over faces similar problems.

According to a research carried out in Bangladesh in the villagers’ own judgment, the proportion of the poor within the fishing communities is of the order of 50 – 70% (Ulrich, 2003). This situation is better in the peak season where the catch is enough and fishermen can pay their debts. According to another interviewee “life is better in the peak season everybody is active and engages in some fishing. Even the cost of fish is cheap and people travel from other areas to buy fish for instance people come from Cape Coast, Kumasi, Takoradi etc”. This meant that if there is enough premix in the peak season every fisherman will be self-sufficient because there will be enough catch and enough money and people generally see an improvement in their living standards. The standard of living during the lean season is not high as people cannot afford basic needs such as food. In the case of India during the lean season fishermen recognise that declining fish supplies have led to an increase of selling prices also at their level. As for the net impact of “lower supplies and higher prices” for them, the answers were mixed, in that some fishermen stated that the price increase has somehow

compensated for smaller catches, whereas others indicated that the decline in supply was so sharp that a price compensation was not possible (Campbell,2002). This was evident in the inability of fishermen to feed their families due to the unavailability of fish. There were no alternative job avenues for the youth in the lean season and this also posed grave social consequences for the people in the community.

The interviews revealed that only a few people were engaged in petty trading such as “kiosk and table top” trading while the majority of the people were virtually jobless. The ladies also become engaged in hairdressing, and dressmaking aside this. They were also virtually unemployment during the lean season compared to the peak season when they could sell fish throughout the day to supplement family income. Furthermore, during the lean season the cost of premix is higher because the supplies decrease during this period and those who still want to go fishing struggle to get premix. Though fishing activities were not generally brisk there was difficulty getting the premix. Though some interviewees do not share the same view it was however agreed that the supplies should increase to an appreciable level in the lean season to even motivate others to go fishing because some people complained that the unavailability of premix explained the lackadaisical attitude of some the youth.

On the contrary if the premix is available nobody can complain and that can ameliorate the harsh conditions that characterises the lean season. Nonetheless, the impact of premix is serious to the extent that in the lean season there is an increase crime such as stealing and pilfering. This explains the extent of deprivation that people enter into in the lean season. It was further confirmed that during such period families sell their valuable belongings such as clothes and jewelry just to be able to feed their families.

Another impact of the premix particularly in the lean season was that stocks of fish preserved during the peak season were sold during the lean season to buy basic needs such as food. However, the challenge this poses is that due to the limited supply of premix in the lean season some of the money was used to procure premix and this was sometimes done by buying the premium and mixing it with lubricating oil .This they said lasts longer and travels better. However, admittedly this mode of procuring premix is more costly than the premix supplied by the government.

Furthermore the education of pupils in the fishing community is also seriously affected particularly in the lean season. During this period as revealed during the interviews paying of school fees become a problem and this lead to high dropout rates. It was further revealed that children were not allowed to go fishing so during this period they just loiter around the beach and some do petty trading to supplement their family income in the home. Moreover, the elderly people depended on their children for survival and where the person did not have children then some elderly men mended the nets and got some money or equivalent of fish catch for survival.

Another aspect of the social impact of the premix on fishermen was that in the past fishermen during the lean season were borrowing monies from their canoes owners to buy fuel for fishing and this exacerbated their economic situation. Now some save purposely for fishing during the peak season and this savings depended on the amount of fish catch within the three months of the bumper season. This new way of saving helps them to fish for some time in the lean season.

Meanwhile the introduction of light fishing was helping to minimize the extent of deprivation that went on in these communities particularly during the lean season. Since 1999, light fishing was adopted as a means to realize economic returns. The light fishing technique was started by the Fisheries Research Unit, now the Marine Fisheries Research Division (MFRD)

of the Directorate of Fisheries (DoF), under the FAO / UNDP Technical Assistance Programme (MFRD Statistics, 2003). This was aimed at raising the production and earnings in the fishing business. This is a new technology introduced into the fishing operations where light is used to determine where the fish is concentrated in the sea and hence it aids the fishermen in the getting the fish was helping fishermen. Obviously this help increases the quantity of catch. Therefore in lean season fishermen can still fish without fear of lean season. This can also help bring improvement their livelihoods since they will still be engaged in business throughout the period. Therefore the popular demand from all the beaches that the quantity of premix supplied during the lean season should be looked at.

3.10 Social Impact and the Management of premix at the Local Level

- This aspect of the research looked at what the social impact of the management of premix was on the fishing communities in general. This discussion was done using the various landing beaches as case studies.

3.10.1 Case One: Elmina

Elmina is one of the category “A” landing beaches in the country and has a large number of canoes in the area. The allocation for Elmina was formally four (4) trucks of 3000 gallon – 13500 litres a week. This allocation has now been increased to 8 trucks of 3000 gallons – 13500 litres per week as at the time of the research. However in the peak season the number of loads increases from 8-12 loads per week. There are over 300 canoes in Elmina, excluding migrant canoes. Each canoe is allocated 50 gallons but if migrant canoes infiltrate the allocation is reduced to 35 gallons per canoe. The cost per gallon is GH¢2.48 (¢24088.00) per invoice price and the selling price per gallon is GH ¢2.60 (¢26,000.00). The committee made a profit of GH¢ 1,100.00 (¢11,000,000) per week. The beach also has the landing beach committee which governs the distribution of the premix and the distribution of the profit was done according to the laid down policy of the national premix committee. Since the coming into being of the Elmina landing beach committee they have called for a community meeting once where they declared the profit of GH¢ 1,100.00 to the fisher folks in accordance with the national premix policy that profit should be declared every six months to the community. The profit sharing according to the national premix committee should be done as follows:

- The community takes 53%
- The chief fisherman takes 12%
- The secretary takes 7%
- The Committee takes 18%
- The fuel attendant takes 10%

The percentage of the community was used for the community’s development and this was done by convening a meeting every six months to declare the profit made to the community through community assemblies and then in turn the community decides which priority projects within the community should be carried out. With specific reference to Elmina there has been several development projects carried out within the community. For instance, they have procured nets for fishermen. According to the chief fisherman a total of 100 different nets were procured since fishermen do not use the same kinds of nets. These were distributed to fishermen according to the lists of canoes at the beach and the type of nets used. Additionally the community has through the profit equally procured anchors and hooks for fishermen to use off shore and to serve as proper landing site for fishermen.

Through the premix fund scholarships have been instituted to pupils in the area. This accordingly was done to make sure that children are motivated to go to school. The criteria

for selection, however, was a problem as well as the number of pupils to be selected was also a big problem. Although some of the children have benefitted from the scholarship scheme the issue of the criteria for selection is expected resolved.

It was also established that through the premix they have been able to build their own dumping site for the premix where distribution and sale is done easily. The research further confirmed that the chief fisherman's palace was refurbished with proceeds from the sale of premix. These are projects that the whole community has decided on which would benefit the entire community. The impact of the subsidy can be seen as useful if the community will continue to play an active part in the decision making with regards to which projects should be carried out.

3.10.2 Case Two: Moree

The case of Moree with regards to this aspect of the research was quite similar to that of Elmina however the demands were different and the approach was also different. Moree is a category "B" landing beach with approximately 350 canoes. In terms of premix allocation Moree received 3000 gallons ie 13500 litres of premix at a price of GH¢6989.00 per week. During the lean season the area receives one (1) load or truck of supply a week and during the peak season the supply increases to three (3) trucks of supplies a week. In terms of distribution 30 gallons are supplied to each canoe for a fishing expedition (one trip). Just like in Elmina names of canoes are also used during distribution. According to the chief fisherman "we serve according to the list and those who do not get premix from the first supply get from the next supply. We also consider migrant fishermen who happen to be around."

There landing beach committee as usual is made up of five members, plus a pump attendant and a secretary. They are:

- The Chief Fisherman
- Fish Monger
- Boat owners Representative
- D.C.E. Representative
- MOFA Representative
- Pump Attendant
- Secretary

The profit sharing is done according to the formula provided by the National Premix Committee where the Community gets 53% while the Committee gets 47% which is shared as follows:

- 12% goes to the Chief fisherman
- 18% goes to the Committee
- 7% goes to the Secretary
- 10% goes to the Pump Attendant

Since the start of the operation of the landing beach committee in July 2009 two accounts have been rendered to the community. In the 1st and 2nd accounts a total of GH¢18,100.00 was realised. After deducting expenses the net amount was GH¢16863.00. In the case of Moree there was a development subcommittee formed by the landing beach and this committee helped in the execution of projects. The study findings revealed that profits from the premix were used to construct a drainage system in the town which the people thought was of top priority. They also undertook a street light project along the beach which fishermen said would stop people from stealing their equipment at the beach. There was also

a regravelling of the town roads and building of culverts which was also done using profits from premix. In terms of the social impact it can be said that the amount generated from the premix at the community is actually been put to use by the community and projects executed were those designed by the community themselves. This also meant that there was participation in decision making regarding the sale and distribution of premix and more importantly the projects that were carried out benefitted the entire community. It thus be concluded that since some practical results benefits have accrued to the people in the distribution and sale of profit there should be efforts to monitor the execution of project so that projects are properly executed and to prevent shoddy works.

The study equally revealed some social benefits have also accrued to other landing beaches in the Central region. For instance, in Biriwa another beach west of Cape Coast proceeds from premix was used to also under take a street lighting project and a community health post. In Komenda a community centre and a filling station were built out of premix profits. These projects demonstrate the relevance of the involvement of the community in the premix distribution and sales. Bantama also a fishing village close to Elmina they have bought fifty (50) electric poles meant for an electrification project in the town. The community also supported canoe owners whose fishing business had collapsed to recover, and supported needy school children with the profit they make. The immense advantages of the subsidy were used by the people in the various fishing communities for a common good of the community.

It can therefore be concluded that on the part of the social impact on the community the research results have revealed an active involvement of the community as to how the profit is shared and how the community manages its share of the profit. The several projects carried out by various communities would further improve the livelihoods of such communities.

3.11 Probable scenarios of maintaining or removing the subsidy

The question that preoccupied the study was whether the subsidy for the premix needed to be maintained or removed. Results for this aspect of the study were obtained through interviews with the office manager of the national premix committee secretariat, a member of the national premix committee and some fishermen in some landing beaches. The research revealed that the subsidy component of premix comes from the government. According to the office manager of the national premix secretariat, the national premix committee does not deal with the subsidy component of premix but it comes from the government. When the question was asked as what would be the consequences if the subsidy was removed the manager explained that it is a promise that the government made to the people and it would be difficult for government to renege on that promise. The product is 50% subsidised and the communities are benefiting because now they have some money to develop their own communities. Furthermore when the question was put to the member of the national premix committee it was clearly explained that it would make the product too costly for fishermen and it equally has the potential to collapse the fishing industry hence the total livelihoods of the fishing communities. This adds to the reason why the subsidy has been maintained since the inception of premix fuel in the country. It was further revealed that it could also trigger migration within the fishing community to neighbouring countries such as Ivory Coast and Liberia where the trade may be cheaper. It suffice to say that the removal of the subsidy would not be in the interest of the government of the day as it would be politically suicidal and again it has the potential to collapse the fishing industry and more importantly the profits that the landing beaches make for community development. In the words of the chief fisherman for Moree “if the subsidy is removed we will go back to the early days where people were diverting the product, again the price would be so high that fishermen would

incur more cost fishing and people's lives depend on fishing; that is the work we do and if this is made too costly life will be difficult for us. But the government also made a promise so I think it would not happen.”

3.12 National Premix Committee

There were several challenges revealed in the research starting with the national pre-mix committee, the landing beach committee and the general operations of pre-mix in the country. From the national pre-mix committee the major challenge they face is the number of loads to supply to each landing beach. The demand for supply keep fluctuating and though the operational officers of the national pre-mix committee keep monitoring the fishing activities and fish movement which informs them as to how much to supply to each landing beach. It is still a challenge though there are occasional cases of shortage getting the accurate numbers to satisfy each beach. Again this is also a problem because Tema Oil refinery gives the National pre-mix secretariat limited quantity of supply for a period and the onus now lies on the national pre-mix secretariat to distribute it to every beach. Therefore the amount of supply also depends on Tema Oil Refinery. A member of the national pre-mix committee revealed that at the time of the research Tema Oil Refinery was supplying 80 trucks per week for the lean seasons and when there are any short falls it affects the distribution pattern. However the 80 trucks can be increased to 100 during the bumper fishing season.

Another challenge that affects the operations of the national pre-mix secretariat was the destruction of the loading trucks at the TOR by fire. Due to this, the loading process has become slow and the time that it takes for pre-mix to reach the landing beach is also delayed causing panic among fishermen. Again to the national pre-mix committee there is also financial problem. They lack the appropriate logistics which would ensure proper monitoring and supervision of the landing beach committee and the operations and sale of pre-mix at the various landing beaches.

There is not much clarity in the functions of National Pre-mix Committee, Tema Oil refinery and the National Petroleum Authority. According to a member of the national pre-mix committee who granted interview to the researcher when the colour for the pre-mix arrived in the country there was a confusion over which organisation has the duty or responsibility to go for the colour citing the latest instance of how the colour arrived at the airport for some weeks before the rightful organisation went for it. It created a shortage of pre-mix within that period.

Furthermore because Tema Oil refinery did not import crude there cannot be a constant guarantee of pre-mix because TOR also depends on the bulk suppliers who bring in crude oil for TOR to refine and from the pre-mix can be obtained therefore the guarantee for pre-mix all the time depends on the availability of crude oil to TOR.

Still to there are vestiges of diversion of the product which poses a problem to the national pre-mix committee. At the time of the interview with the member for the national pre-mix committee they were investigating a case of diversion at Abeka Lapaz in Accra.

3.13 Challenges of the National Secretariat

The challenges were not limited to only the national pre-mix committee, the national secretariat which has the function of serving the national pre-mix committee and placing orders for supplies also faces some nagging challenges. For instance according to the office manager the quantity of pre-mix supplied to the lake regions is a challenge. The lake region which includes parts of northern region and the large part of Volta region do not get the normal quantity they deserve. The reason however that was these areas use pre-mix largely for

transport across the rivers for trading. In the Lake region there about 90 landing beach committees and because the focus of the premix is on fishing communities the secretariat is unable to supply the required quantity for their transport. This implied that there was over concentration of the premix on fishing communities to the disadvantage of other areas which also needed premix for the legitimate business. Another challenge that the secretariat faced is how to manage the numerous shortages that are normally recorded during the lean season at the landing beaches. This creates problem for the secretariat because the orders that the secretariat makes to Tema Oil Refinery are fixed quantities and therefore reconciling these becomes a problem. Again sometimes in the lean season the demand is indeed high but because Tema Oil refinery gives as a limited quantity it is difficult to keep up with the increase in supply which is actually genuine and that the real need the fuel for fishing.

Furthermore there is some problem between Oil Marketing Companies and Landing Beach committees over payments which the National Secretariat must manage and explain to both parties. There was an agreement by the National premix committee and the Oil Marketing Companies that Landing Beach Committee should pay their respective oil marketing Companies within ten (10) days of receipt of premix and the oil marketing companies also have the same time period to pay Tema Oil refinery. This time period is so short that it sometimes creates problem between the oil marketing companies and the landing beach committees. Other problems gathered from the research also included inability of the oil marketing companies to meet the minimum money threshold demanded by Tema oil refinery, the problem of monitoring, logistics and finance.

4.0 RECOMMENDATIONS

- The following recommendations if properly attended would provide an effective and efficient management of premix in the country.

Creation of Alternative Livelihood Programmes

The lean season in the fishing communities is usually characterized by high unemployment, poverty, high crime rate and general deprivation due to a reduction in fishing activities. Therefore there is the need for alternative livelihood programmes or activities that can still engage majority of the youth during the lean season. This would not only reduce the level of unemployment during the lean season but also reduce the state of deprivation that confronts these fisher folks during this season. Therefore the introduction of light fishing which does not necessarily depend on the fishing season should be examined for closely and made more productive and useful to the communities. Therefore government should carry out a more comprehensive research into the prospects of this light fishing and make it more affordable so fisher folks can be employed throughout the year.

Institutionalization of the Sale, Distribution and Management of Premix in Ghana

The distribution and sale of premix is a chain starting from the National Premix Committee to the Landing Beach Committee and the Oil Marketing Companies. Therefore government should create an elaborate institution in charge of premix in the country. This would stop the situation where every government comes into power and tackles premix differently and more importantly dissolve earlier committees created by previous governments. This would help such an institution to fashion out comprehensive ways of dealing with malpractices in the premix business such as corruption, diversion and political interferences.

Centralization of the Distribution of Premix

The process of distributing premix should be centralized as it is currently been done. This will allow for monitoring of the number and quantity of premix supplied to the various

landing beaches and this would minimize if not eradicate the number of diversions and corruption that characterized the premix business. The situation where orders are raised from the national premix based on demand should also be done in consultation with the landing beaches and not just through the operational officers alone since they may not have time to visit all landing beaches or call them by phone. This would also reduce the work load of operational officers and time spent going round landing beaches or making phone calls. Again this will also link the national secretariat to the landing beaches for effective communication and monitoring at the grass roots.

De-politicization of Landing Beach Committees

The creation of landing beach committees encourages grassroots participation. However efforts should be made to prevent the influence and control of the committees by politicians. Therefore instead of the involvement of politicians there should be experts in the field of community development who can give independent advice to the committees on how to manage the premix profits.

Education of Chief fishermen

Chief fishermen selected should be taken through some refresher courses on financial management, general management practices and some development issues so that this would inform them on how to manage the landing beach committees since they are the chairmen of such committees.

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SECTION D: TRADITIONAL BELIEFS AND THE SEA

By

Joseph Kingsley Adjei

1.0 TRADITIONAL SOCIETY AS BACKGROUND TO THE STUDY

The nature of society in which research takes place is of prime concern to researchers. This is because there is a link between the nature of a society and the belief system held by its people. As the theme for this study implies, this research was conducted in traditional societies. It is imperative therefore to describe in general but briefly, the basic characteristics of traditional society and their beliefs as a profile of the study area to sharpen the focus of the study.

Jary and Jary (1999) delineate traditional society as a non-industrial, predominantly rural society which is presumed to be static and contrasted with a modern, changing, industrial society. No doubt, this definition is in close affinity with Durkheim's mechanical solidarity or simple society. Members of such (traditional) societies live similar lives, with little specialisation or division of labour beyond that associated with age and sex. In other words, the social organisation of a traditional society is highly undifferentiated, characterised by similarity of functions, resemblances, and a common consciousness (Hale, 1990)

Religion permeates the society and it is critically important because it tends to regulate all details of social life. In fact, in typical rural communities of Ghana, the choice of a marriage partner, where to make a farm, and where and when to engage in fishing and hunting activities, among others, are all determined by the spirit world through their representatives or mediums. Thus nonconformity in such communities constitutes a threat precisely because uniformity of beliefs is the basis of solidarity. If such beliefs are allowed to weaken through tolerance for nonconformity, then the very cohesion of the community is threatened.

Consequently, law is repressive or penal, expiatory and diffuse, functioning not through specialised institutions such as law courts and public tribunals but the whole society. Durkheim (1964) puts it in a rather brief but powerful style: "In primitive societies..... law is wholly penal; it is the assembly of the people which renders justice." Again, Durkheim (1964) uses the collective pronoun to good effect in summing up the essence of repressive law in traditional societies " ... when we desire the repression of crime, it is not we that we desire to avenge personally, but to avenge something sacred which we feel more or less confused by outside and above us." This statement indicates, without an iota of doubt, that the collective decision to punish those who deviate from the norms of the traditional (mechanical solidarity) society is not only to bring justice to bear on the offender but also to give credence to the collective conscience and maintain the status quo. So when an offender is made to provide a sheep, for example, or banished from the community for breaking a taboo, it is to appease both the living and the spirit world.

Traditional authority characterizes traditional society. This is a type of domination based on the belief in the sanctity of tradition and custom. It is based on age-old rules and inheritance. Those who rule belong to a special group of people (royals). Their commands are legitimate because they are in conformity with wisdom. In the most elementary form of traditional authority, those who rule have no administrative skills of political administration. In many small rural communities, the village elders serve as advisors to power holders; those who are oldest are considered most steeped in traditional wisdom.

In traditional societies children learn from their forebears, and the past of the adult is the future of the child (Nukunya, 1992). In other words, the wealth of knowledge of older

generation of the community is imbibed hook, line and sinker by the younger generation. This is because socialisation in traditional societies takes place without recourse to external cultural traits and influence

Communication is predominantly verbal in the absence of written records. History is transmitted through oral tradition and the people have extraordinary powers of memory. Ways of transmitting important messages include, but are not limited to sending emissaries, bonfires, gunshots, beating of drums and singing war songs, dirges and many other traditional ways.

In traditional societies though population density is low; fertility rate is very high because of pro-natal socio-cultural beliefs. To a very large extent, one's worth and wealth in society is measured by the number of children one has. Indeed, the pro-natal belief is epitomized in Akan societies by the presentation of a fully grown bearded sheep from the family of a woman who delivers tenth child to the husband virtually to thank him and say "Ayekoo" (well done), "for having performed our desired duty; for having sired the tenth child (Badu) for our family; you've helped perpetuate our lineage and stock; indeed, you are a strong man and your manhood is confirmed." As mentioned earlier, the general environment or geographical location of traditional societies is rural. Correspondingly, the major occupation is farming. Others are fishing, lumbering, quarrying, weaving and carving, pottery, and many others. In short, traditional societies thrive on primary occupations. Homogeneity or similarity of such social and psychological characteristics in the populations as language, beliefs, mores, and patterns of behaviour are firmly rooted.

In conclusion, it is revealing to understand that in spite of its wide usage in the social sciences, the term 'traditional society' has come to be seen as very problematic over the past few decades. Consequently, many sociologists have, and continue to avoid it. Jary and Jary (1999) see the following as the major problems associated with its usage:

- First, it is a term which has been used to describe a wide variety of societies which in fact differ markedly from each other or one another. For example, agrarian society, tribal society, ancient society and feudal society are societies with varying characteristics and yet they are all lumped together as traditional without recourse to their differences.
- Secondly, whilst the rates of social change in such societies are slower than in industrial societies, it is erroneous to accept that no change occurs at all in traditional societies given the fact that "the only thing that does not change is 'change' itself".
- Thirdly, the term gained usage or currency within sociology when systematic knowledge of non-industrial societies was weak, and increased knowledge no longer made its usage unpopular.
- Fourthly, it is associated with modernisation theory which has been criticized for delineating an oversimplified contrast between traditional and modern.
- Finally, the oversimplifications involved in the term lead either to a romanticised or a pejorative view of such societies. Notwithstanding these problems, the concept has come to stay particularly among writers from the western world who usually classify societies of the third world as 'traditional' in development discourse perhaps derogatively.
- In our enterprise, we consider the term 'traditional' to mean age-old norms and values that continue to influence fishing activities along the coast of Busua, Axim and Apewosika in the Western Region of Ghana. This is because these societies portray a mixture of both traditional and modern. The fishing communities practice subcultures that are embedded in traditional beliefs.

2.0 METHODOLOGY

2.1 Introduction

This is a purely qualitative research. The methodology was therefore designed to strive for in-depth information about purposeful samples without special regard to the issue of generalization. This is reflected below in the research design, sampling technique, instruments for data collection, and data analysis procedures.

2.2 Research Design

The descriptive sample survey design was used for the study. This is because the design offered the opportunity to observe phenomena as they happen or exist in their natural state and report what is, not what ought to be.

2.3 Sampling Technique

Both non-probability and probability sampling procedures were used in selecting the sample.

Under non-probability sampling the **purposive sampling** technique was employed in selecting:

- (i) Chiefs and their elders
- (ii) Chief Fishermen
- (iii) Chief Priests and Priestesses
- (iv) Canoe Owners
- (v) Boatswains
- (vi) Christian Religious Leaders

- Probability Sampling
- **Simple random sampling** was used in selecting subjects from the population of ordinary fishermen. The basic characteristic for selection of subjects was six months and above of continuous fishing experience.

Sample Size

A total of 132 respondents were interviewed. The categories of respondents are as provided in the table below.

Table 1- 0-D: Categories of respondents by communities

| Categories | Communities | | | | Total |
|-------------------------------|-------------|------------|------------|-----------|------------|
| | Busua | Lower Axim | Upper Axim | Apewosika | |
| Chief | 1 | 2 | - | 1 | 4 |
| Elders | 3 | 2 | 5 | 3 | 12 |
| Chief Fishermen | 2 | 4 | 1 | 1 | 8 |
| Traditional Priest/ Priestess | 1 | 1 | - | 1 | 3 |
| Canoe Owners | 3 | 4 | 2 | 2 | 11 |
| Boatswains | 6 | 15 | 1 | 1 | 23 |
| Ordinary Fishermen | 20 | 30 | 10 | 5 | 65 |
| Christian Religious Leaders | 2 | 2 | - | 1 | 5 |
| Total | 38 | 60 | 19 | 15 | 132 |

Source: Fieldwork, 2010.

A total number of 132 respondents were interviewed. Ordinary fishermen form almost the majority (65 out of 132) of respondents interviewed. However, only three traditional priests/

priestesses were interviewed. As many as sixty of the 132 respondents were interviewed in Lower Axim alone, whereas the remaining were distributed among the other three communities, with Apewosika recording the least of 15 respondents (See Table 1).

2.4 Data Collection Procedure / Instruments

- Face-to-face in-depth interview (recorded).
- Focus group discussions (recorded).
- Non-participant observation.

2.5 Research Questions (Themes)

A. The Sea

- What constitutes the sea?
- Is the sea male or female? How did we come to know the sex of the sea?
- What are the key traditional beliefs relative to the sea?
- What are the key traditional beliefs relative to sea creatures?
- How important is the sea to the people?
- What are the traditional requirements for one to enter the sea as a fisherman?
- Do women go to sea? If no, why and what is the history behind?
- Do people often violate the taboos of the sea?
- What sanctions are there for violators of sea taboos and prohibitions?
- Which traditional institutions have the power to implement sanctions?
- What are the spiritual implications of violations?
- What happens if sanctions are defied by violators?
- Are sanctions graded according to the type and nature of the offence?
- Have the sanctions changed overtime? If yes, what changes affected the sanctions and their implementation?

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B. Sea Creatures

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- Mention as many sea creatures as you know.
- Are there sea creatures that are totems?
- With regard to traditional religious beliefs, which sea creatures come into focus?
- What beliefs are there regarding these sea creatures and diet, that is, which ones are not to be eaten and why?
- How do people express their beliefs regarding these creatures?

C. Sea gods/goddesses

- Which sea creatures are gods?
- How did they evolve to become gods?
- What role do they play in fishing?
- What are some of the taboos associated with sea gods/goddesses?
- What punitive measures are there for those who break the taboos related to the gods/goddesses?
- What communication channels are there between humans and the sea gods/goddesses?
- How do the general activities of the sea gods/goddesses manifest in the lives of fishermen and their communities?

- Have there been any significant changes in the traditional beliefs about the functions and powers of the sea gods/goddesses?
- What factors may have accounted for these changes?

2.6 Data Analysis

- Recorded data was transcribed and added to or compared with those written on the field to make meaning for conclusions to be drawn.

3.0 FINDINGS

The findings of this study are divided into three main parts to reflect the themes and sub-themes that informed the interviews. The themes include but are not limited to the description and traditional beliefs about the sea, sea creatures and sea gods and their influences on fishing.

3.1 The Sea

3.1.1 Nature of the Sea

Respondents were asked to describe the sea. The responses varied from one category of respondents to another. For most fishermen at Busua, Aixm and Apewosika, the sea constitutes a 'big' or mass of water with fish. It is the sea god along the coast called Nana Bosompo. For some opinion leaders, the sea is a big river where fishermen go for fishing. On the other hand, both traditional and Christian religious leaders were agreed in their independent responses that the sea was the creation by God and is different from rivers. However, Christian religious leaders added that the sea was named by Adam and they also referred to Genesis 1:1-3 as evidence of the sea having been created by God.

3.1.2 Sex of the Sea

Most of the respondents (over 90%) believed that the sea was a male. This belief had been handed down to them by oral tradition from their ancestors. According to the chief of Busua, their ancestors once went to sea on a Tuesday and the sea revealed itself physically to them in the form of a male. According to him, it is because the sea is male that only males go to sea. A fisherman in Axim however, believes that the sea is a female. For him, it is females who reproduce children and since the sea harbours children in the form of fish which it gives to fishermen and the public, it is a mother. On the part of both traditional and Christian religious leaders, the sea is neuter, that is, it is neither male nor female.

3.2 Importance of the sea

All the respondents indicated the economic importance of the sea to them. They reported that the sea provided employment and therefore a source of income to them. This employment included fishing, salt business and tourism. Some fishermen and traditional believers also believed that the sea offers spiritual protection to the people along the coast.

3.3 Preparation before Going to Sea

Respondents said anybody going to sea needed physical as well as spiritual preparations. The material preparation included securing a fishing boat, outboard motor, nets, lanterns, food and a number of fishermen relative to the size of the boat. On the nature of spiritual preparation, respondents were divided. Whereas Christian fishermen said they seek prayers from their church pastors, priests, and elders, traditional religious believers seek fortification in the form of amulets. All respondents however were of the view that these preparations were

exclusively for the protection of fishermen and had no influence on the amount and type of fish caught.

3.4 Taboos of the Sea

To most fishermen, traditional rulers and traditional priests, the sea is a sacred and unblemished entity with many taboos. Among the taboos are:

- Going to sea on Tuesdays. Some fishermen and traditional leaders reported that the selection of Tuesday as a day of rest is part of the laws regarding fishing. It is a day when fishermen mend their nets and boats and replenish their depleted resources. Fishermen in Axim added that if a fisherman or fishermen go to sea on any day before Tuesday and stayed on the sea on a Tuesday, there was no violation. Such fishermen could return to land on a Tuesday. However, it is a violation to sell their catch on that day. A chief fisherman at Busua mentioned that at the time the laws regarding fishing were being discussed, the first chief fisherman of all time, Farnyi Kwegyan, was in his kitchen somewhere preparing a sumptuous soup with the best of his catch that day. Consequently, the sacred Tuesday law and other laws were passed in his absence.
- Going for fishing after sexual intercourse without having had a thorough bath.
- Going for fishing after committing adultery. Most fishermen agreed that it was a common practice among fishermen but they were quick to add that it had no effect on the victim at sea until the husband of the woman gets to know and curses the victim.
- A person on whom a known curse has been placed.
- Fighting on the sea during a fishing venture.

3.5 Women and Fishing

The name 'fisherman' or 'fishermen' translated 'Afarfo' 'Farnyi' respectively or 'Apokofo' (those who go to sea) seems to portray the fact that fishing is the preserve of men. The researcher wanted to know why this was so. In response, respondents, particularly fishermen and traditional religious leaders found the answers in history and greed. They all reported that in the past women used to go fishing. One day some women who had gone fishing had a bumper catch which their boat could not contain. The basic rule in fishing is that they should have thrown part of their catch into the sea to free their boat of the heavy weight for a safe passage back home. Unfortunately, because of greed, they kept all their catch in the boat. Consequently, the boat capsized under the heavy weight and all the women got drowned. Since then, women are not allowed to go to sea even though there are no strict rules prohibiting them. A fisherman from Axim was of the view that fishing is a very difficult and exacting venture which requires muscular strength and courage. Generally, women are not as strong and courageous as men; hence they do not go to sea.

3.6 Effects of Violations on Violators

Violators of any of the taboos risk dying on the sea. Chief fishermen, ordinary fishermen and traditional rulers were unanimous in reporting independently that the first person to invoke punishment on violators was the area where the offence had been committed. With particular reference to Tuesday fishing violators and those who engage in fighting on the sea, they are made to pay specified fines. These fines vary from one fishing area to another. However, all fines include drinks that are presented to the chief fisherman. The chief fisherman then invites the chief of the pacify, the sea gods. All other fines the violators are suspended from going to sea for a period of time determinable by the chief fisherman and his elders.

When violators fail or refuse to comply with these sanctions the case is sent to the chief's palace for redress. If this also fails the victim is then sent to the police. There is also the possibility of a total ban of recalcitrant violators from going to sea in the area. Such a violator can however leave for another fishing area to continue his fishing activity. A chief fisherman at Busua reported that spiritually, the sea can deny a violator from getting fish or missing on the sea. If one is cursed, the sea can kill the victim. Such victims jump mysteriously from their boats and get drowned. Traditional rulers and most fishermen agreed that the same sanctions were imposed irrespective of the victim's age and status in society. All the respondents noted that generally, the sea hates and frowns on uncleanness, particularly spiritual violation.

3.7 Changes in Traditional Beliefs about the Sea.

All the respondents were emphatic that traditional beliefs and practices about the sea had changed with time. They reported that the sacred Tuesday taboo had been violated. At Axim, fishermen reported that some fishing groups go to sea on Tuesdays and are prepared to face the required sanctions when found out. They also reported that these days many fishermen disregard the sea as sacred or holy. A Christian religious leader at Apewosika, Axim mentioned that in the past no machine technology (outboard motors and fishing light) were allowed on the sea. Today, these equipments are used extensively. Respondents blamed these changes on modernization and the spread of Christianity. They pointed out that for many fishing groups, Christian prayers have replaced the traditional libation that was poured to acknowledge and invoke the protective powers of sea gods and spirits.

3.8 Accidents on the Sea

Respondents from all the communities in this study acknowledged that fishermen get involved in accidents on the sea. They believed that these accidents are caused by three major factors: curses, inadequate preparation and poor maintenance of boats, and carelessness on the sea. They believed however, that the most common causes are curses. They explained that most of the curses are pronounced on some fishermen who fail to fulfill obligations to their wives and concubines (girlfriends). They further explained that the boat in which the victim works would face the wrath of the sea gods in the form of turbulent waves and winds while on the sea. The boat capsizes and rather mysteriously, only the person on whom the curse is placed drowns. Respondents also blamed some of the accidents on inadequate preparation and lack of maintenance culture. According to them, some fishermen do not mend cracks on their boats and this could result in leakages into the boat while on the sea, sinking the boat. They reported that at other times, accidents are due to carelessness on the sea. A boatswain reported that sometimes fishermen run their boats into other boats when they compete to have control and cast their net into a portion of the sea where they believe that fishes are concentrated. Some of the accidents result into deaths.

3.9 Deaths on the Sea

If someone dies at sea, what do you do? This question was posed to fishermen, chief fishermen, traditional leaders and boat owners. Each of these responding categories reported that if a fisherman dies in a boat, the corpse is brought ashore immediately. The chief fisherman is immediately informed by the leader of the group that experienced this mishap. The chief fisherman in turn informs the traditional ruler, family members of the deceased, the chief traditional priest or priestess of the community shrine. Traditionally, the corpse is not removed from the boat until a ritual is performed by either the traditional religious leader or the chief fisherman. The ritual involves sprinkling of sea water on the corpse three times followed by the pouring of libation. This symbolizes a warm welcome of the community to

the deceased. In the past, the corpse was taken to the family house after this ritual for funeral arrangements and burial. However, today, the police are informed as soon as death is reported to the chief fisherman. Thus after the ritual, a police report is issued before the corpse is either buried immediately or taken to the morgue. Some Christian fishermen reported that they object to this ritual. As a result, when any of their members dies and the corpse is brought ashore, they say Christian prayers before taken it from the canoe or boat. A variation of death on the sea that was reported was when the victim gets drowned and the body is not immediately found.

A report of the incident to the chief fisherman and other stakeholders as mentioned above culminates in putting together a search party. This group is made up of very versatile swimmers and divers. While the search party is out at sea a ritual is performed at the shore by traditional priests and priestesses to attract the corpse to float back home. This ritual involves hanging a dress or cloth belonging to the victim on a pole at the beach. Libation is then poured to spiritually invite the corpse to the shore. Apart from this rite, friends and relatives seek spiritual explanation to the death of the victim and whether the body would be retrieved from the sea. If the body is not recovered within a period of time (determined by traditional priests, the chief of the community and his elders and chief fishermen), then a funeral is organized for the victim. On the other hand, if the body is retrieved, a report is made to the police and depending on the degree of deterioration it is either buried immediately or deposited at a mortuary for autopsy and consequent burial. A canoe owner and chief fisherman at Axim revealed that in the past these accidents were not reported to the police. The situation was managed by chiefs, elders and fishermen of the local community where the fatal accident occurred. It was also revealed that Christians do not allow their victims to undergo the traditional rites. Instead, they offer Christian prayers and Christian burial.

3.10 Sea Creatures

The rationale for this theme was to explore respondents' depth of knowledge about the varieties of creatures in the sea and traditional beliefs associated with them. The general view was that the sea is full of various creatures. They mentioned the whale, shark, salmon, herrings, lobsters, crabs, sea horse and sea snakes as some of the creatures that readily came up for mention. Are all sea creatures edible? The general response to this question was that all sea creatures are edible except the whale. This is because the whale is a sea god. A traditional leader at Axim told the researcher that anybody who eats the flesh of the whale (Bonsu) suffers the wrath of the sea gods. It is an abomination. He reported however, that a traditional priest or priestess could intervene by performing specific sacrifices on behalf of the culprit. The nature of the sacrifice is determined by the spirit of the dead whale. Man has no hand in it. He also mentioned that whenever a dead whale is discovered, the whole community organizes a funeral for it. Traditional leaders and priests perform special rituals which involves libation and an inquiry into the spirit world to find out the cause of its death.

3.10.1 Sea Creatures as Totems

This question was informed by the fact that some animals on land are totems for clans in Ghana. Only one fisherman at Axim revealed that a fish by name 'Entui' is a totem of a clan among the Nzemas. He however could not mention the particular clan. Apart from him, all other respondents said there was no sea-creature totem among the clans in Ahanta and Nzema.

3.10.2 Knowledge of Sea gods

All respondents were quick to mention the whale, also known as Bonsu in the local dialect. The chief of Busua, who bears the stool name Nana Badu Bonsu recalled to the researcher that oral tradition from his ancestors indicate that his clan came from the whale. In other words, members of his clan are descendants of the whale - they are the children of the whale. As a result, his clan holds the whale in high esteem as a powerful god. To him, the whale can capsize boats on the sea if it discovers that a fisherman in a boat has been cursed.

3.10.3 Knowledge of the Goddess “Maame Wata” (Water)

All respondents had heard of the name *maame wata* before but only a few had seen the goddess physically. A queen mother at Apewosika, Axim who also couples as a fisherman’s wife, said she and her brother had had an encounter with *maame wata* before. According to her, the upper part of this sea creature is human and very beautiful whereas the lower part is fish. Thus it is a minotaur. A fetish priestess of the royal clan at Busua recounted her experience with *maame wata* about forty years ago when she was an adolescent. She said that one Wednesday afternoon she went to a secluded part of the beach at busua in search of crabs – a seasonal economic activity of the youth at Busua. On her arrival at the beach she saw a beautiful white woman sitting on a stone and holding a small stick in her left hand. She had very long hair with part of it hanging loosely and covering both her face and back. According to her, wherever the woman touched with her stick crabs came out. The woman beckoned her to catch all of them. She filled two buckets and decided to take one home. When she returned to convey the second catch home, she saw the strange creature had retreated into the sea. On her return again, the beautiful woman had resumed her original seat. Through some understandable sign language the beautiful white woman expressed her love for her and promised to visit her at her house.

A few months later, she was visited by a white lady at about 8 pm who demanded food from her. After serving her, the white lady told her that she had many children and would send two to stay with her. The fetish priestess said two of her daughters bear so much resemblance with the white lady that she sought spiritual explanation to it. The children are not only fair but have as much hair as the white lady who had visited her some time back. The spirits revealed to her that it was the woman she met at the sea shore while looking for crabs who visited her home and that the two children were a fulfillment of her promise to send two of her children to her (the priestess). This was a testimony to the existence of *maame wata* - a sea goddess. Respondents at Axim and Apewosika also mentioned *maame wata* as a sea goddess but rated the whale as being more powerful. Asked whether they knew the abode of *maame wata*, the general view was that the exact location of the sea-goddess was unknown though a few said her abode was deep down the sea.

3.10.4 Knowledge of Other gods

The study revealed that apart from *maame wata* and the whale other gods varied from community to community. Respondents at Busua believed in a Nana Bokwa – a god (bosom) that lives on an island about 200 meters from the seashore. Annual rituals are performed to honour and thank Nana Bokwa. In these rituals the core element is the sacrifice of a monkey (Efuor) to Nana Bokwa for having protected fishermen and the entire community of Busua. The chief and his elders together with the traditional priestess and chief fishermen lead in the annual rites. What sets apart Nana Bokwa (the island god of Busua) is the fact that while all other gods receives a sheep or cow to pacify or honour them, Nana Bokwa takes a monkey. The people of Axim and Apewosika believe that the closest god to them is Nana Bebo Arizi who also is believed to live on an island of about 150 meters from the main fishing beach.

The name derives from an encounter a native of Axim by name Arizi had with the god. According to respondents, Arizi defied the order not to go to the island on a sacred day. As soon as he entered the island, he was beaten mercilessly by dwarfs – believed to be invisible little creatures – who serve as security and messengers to the god on the island. Since then the island god has come to be known as Bebo-Arizi literally translated in Nzema language as ‘They have beaten Arizi’, that is, Arizi has been beaten by dwarfs on the island. Respondents were agreed that the gods hate the following:

1. a woman in her period of menstruation.
2. stealing
3. adultery
4. murder and lying

3.10.5 The Influence of sea gods on Fishing

Beliefs on the influence of gods on fishing again varied. A chief fisherman at Apewosika, (Axim) reported that gods can give fishermen a catch way beyond what they expect. In the same vein they can deny or limit how much fish fishermen catch. A fisherman at Busua (a Christian) debunked this and said the gods had no influence on God’s creation. According to him, luck is the decider of success or failure on the sea.

3.11 Findings from Observation

The study discovered some serendipitous phenomena and activities which could offer space for further research. The first is autism which was quite common in the study area. Autism is a disturbance in psychological development in which use of language, reaction to stimuli, interpretation of the world and the formation of relationships are not fully established and form unusual patterns. It may be apt to investigate the relationship between coastal settlements and autism. The second has to do with physical deformities which followed a particular pattern. These deformities affected the hand or legs or both. It was quite common. It was also noticed on the sidelines a subculture of adultery among fishermen. For some fishermen, their ability to woo another man’s wife is a mark of superior sexual potency. Finally, in spite of the coverage of this study which was limited to traditional beliefs and the sea, the question of inadequate premix supply to fishermen came up quite often.

4.0 CONCLUSION

The main objective of this study was to investigate the influence of traditional beliefs on fishing along the coast of the Western Region. The study focused on Busua in the Ahanta-West District and Axim and Apewosika in the Axim District. From the findings, the following conclusions can be drawn. The first conclusion is that traditional beliefs are very prominent in fishing communities and among fishermen. Consequently, fishing activities are influenced to a very large extent, by these beliefs. The beliefs are constituted in the norms that have shaped the values and taboos of the society. For example, Tuesdays are sacred days for the sea and no fishing activity takes place on the sea.

The second conclusion is that the communities studied can be described as a mixture of traits of traditional culture and modernity. This has resulted in remarkable changes in the social organization of the fishing communities. In the past social control and sanctions for violation of norms and values regarding fishing were the preserve of traditional authorities. Laws were repressive and reflected the collective conscience. Today, the introduction of Christianity and Islam, the legal-rational justice system and classroom education into fishing communities

have provided two worlds in which tradition and modernity either compete or complement each other in some situations. The result is that many traditional beliefs and practices have crumbled under the weight of modern traits. For example, the Tuesday fishing taboo is often broken. In addition, people now go to sea with outboard motors which in the past, was not allowed. The police have now become a major player in the social control especially in cases of accidents and deaths on the sea. Many traditional rites are also ignored or seen as uncultured by Christians, Moslems and other modern religious believers. Some notable examples are the rites associated with accidents and deaths on the sea.

Thirdly, the study also discovered that in spite of the many changes, fishing communities have a subculture of marital infidelity, distorted dialect of their languages and general outlook of life. Finally, though the study was carried out across different communities and ethnic groups, it was discovered that a common subculture which manifested in accent, dress, songs, eating habits, sexuality, world view and general outlook of life existed among all fishermen.