

# **IDENTIFICATION OF EFFECTIVE STRATEGIES FOR THE ENFORCEMENT OF THE FISHERIES REGULATION, 2010 (LI 1968)**

**Report Prepared For Ghana National Canoe Fishermen's Council  
(GNCFC) –Western Region**

December 2012

Report by: Kyei Kwadwo Yamoah  
N.R. Programmes Coordinator  
Friends of the Nation  
Sekondi

## Table of Content

List of Abbreviations .....	4
<b>CHAPTER ONE</b>	
1.0 Introduction and Background.....	6
1.2 Terms of Reference.....	7
1.3 Methodology.....	8
1.3.1 Desk Top Study.....	8
1.3.2 Questionnaire Preparation and Administration.....	8
1.3.3 Focus Group Discussions.....	9
1.3.4 Validation Meetings.....	9
1.3.5 Data Analysis.....	9
1.4 Structure of the Report.....	10
<b>CHAPTER TWO</b>	
2.1 Profile of Ghana Fisheries.....	11
2.1.1 The Fishing .....	11
2.1.2 Inland Fisheries.....	11
2.1.3 Aquaculture.....	12
2.1.4 The Marine Sector.....	12
2.1.5 The Artisanal Sector.....	13
2.1.6 The Semi-industrial or Inshore Sector.....	14
2.1.7 The Industrial Sector.....	14
2.1.8 Number of Vessels and Areas of Operation of Fishing Fleets.....	15
2.1.9 Tuna Processing and Production.....	15
<b>CHAPTER THREE</b>	
3.1 Fisheries Management System in Ghana.....	16
3.1.1 Marine Fisheries Management Systems.....	18
3.1.2 Fisheries Administration in Ghana.....	19
<b>CHAPTER FOUR</b>	
4.0 Regulating Ghana's Fisheries Industry in Colonial Times.....	22
4.1 Post-Independence Regulation of the Fisheries Industry.....	26
4.2 Analysis of the Fisheries ACT, 2002 (ACT 625).....	28
4.3 Analysis of the Fisheries Regulation (LI 1968).....	33
4.3.1 Highlights of the Fisheries Regulation.....	34
4.3.2 General Outlook of the Fisheries Regulation of 2012 (LI 1968).....	39

## **CHAPTER FIVE**

5.0	Challenges of Fisheries Regulation and Management.....	41
5.1	Situational Analysis of Ghana's Fisheries Sector .....	42
5.2	Triggers of a Collapsing Fisheries Industry .....	43
5.2.1	Open Access .....	44
5.2.2	Weak Governance.....	44
5.2.3	Overfishing and Overcapacity.....	45
5.2.4	Loss of Ecosystem Productivity and Resilience.....	45
5.2.5	Low Voluntary Compliance and Weak Enforcement .....	45
5.2.5.1	Why Do Some Fishers Break the Rules.....	46
5.3	SWOT Analysis.....	47

## **CHAPTER SIX**

6.0	Conclusion and Recommendation.....	51
6.1	Conclusion.....	51
6.1.1	Collaborative Fisheries Management (Co-mgt).....	51
6.1.2	Co-mgt Concept .....	52
6.1.3	The Community-Bases Fisheries Management Committees (CBFMCs) .....	53
6.1.4	The Way Forward.....	53
6.2	Recommendation.....	54
6.2.1	Advocacy for the Institutionalization Co-mgt Regime.....	54
6.2.2	Community Level Co-mgt Structure.....	55
6.2.3	Territorial Boundaries for fisheries Co-mgt committees.....	57
6.2.4	Mandate of Co-mgt Committees.....	57
6.3	Advocacy Strategies for the Institutionalization of Co-mgt Regime.....	58
6.3.1	Stakeholder Relationship for an Effective Advocacy Strategy.....	59
6.4	Sources of Funding to Support the Co-mgt Process .....	61
6.5	Cost effective Actions by Community Level Fisheries Groups.....	61

<b>Reference .....</b>	<b>63</b>
------------------------	-----------

## List of Abbreviations

AFRCD	-	Armed Forces Revolutionary Council Decree
BUSAC	-	Business Sector Advocacy Challenge
CBFMCs	-	Community-Based Fisheries Management Committees
CCRF	-	Code of Conduct for Responsible Fishing
CCRF	-	Code of Conduct for Responsible Fisheries (FAO)
Co-mgt	-	Collaborative Fisheries Management
CREMA	-	Community-Resource Management Area.
CSOs	-	Civil Society Organizations
DCD	-	District Coordinating Director
DCE	-	District Chief Executive
DoF	-	Directorate of Fisheries
ECOWAS	-	Economic Community for West African States
EEZ	-	Exclusive Economic Zone
EU	-	European Union
F&AD	-	Finance and Administrative Division
FAD	-	Fish Aggregation Device
FAO	-	Food and Agriculture Organization
FBOs	-	Faith Based Organization
FoN	-	Friends of the Nation
GAFCO	-	Ghana- Agro Foods Company
GDP	-	Gross Domestic Product
GEPC	-	Ghana Export Promotion Council
GIFA	-	Ghana Inshore Fisheries Association
GNCFC	-	Ghana Nation Canoe Fishermen's Council
GoG	-	Government of Ghana
GSS	-	Ghana Statistical Service
HoD	-	Heads of Department
ICCAT	-	International Commission for the Conservation of Atlantic Tuna
IEZ	-	Inshore Exclusive Zone
IFMD	-	Inland Fisheries Management (and Aquaculture) Division,
IFMD	-	Inland Fisheries Management Division
IUU	-	Illegal, Unreported and Unregulated fishing
Km	-	Kilometre
LI	-	Legislative Instrument
MCS (D)	-	Monitoring, Control and Surveillance (Division)
MDTP	-	Medium Term Development Plan
MFMD	-	Marine Fisheries Management Division
MFRD	-	Marine Fisheries Research Division
MoFA	-	Ministry of Food and Agriculture

MoFI	-	Ministry of Fisheries
MPs	-	Members of Parliament
MT	-	Metric Tonnes
NGO	-	Non-Governmental Organization
NRCD	-	National Redemption Council Decree
PFC	-	Pioneer Food Cannery
PNDC	-	Provisional National Defence Council
SWOT	-	Strength Weakness Opportunities and Threats
ToR	-	Terms of Reference
UBC	-	University of British Columbia
UNCLOS	-	United Nation Convention of the Laws of the Sea
WARFP	-	West Africa Regional Fisheries Program

## **CHAPTER ONE**

### **1.0 Introduction and Background**

Ghana's fisheries sector contributes significantly towards the nation's economic development objectives relating to food security, employment, poverty reduction, GDP and foreign exchange earnings. The importance of fish in the Ghanaian diet cannot be overemphasized. It provides the Ghanaian consumer with about 60% of his or her animal protein needs (DoF, 2004).

Flowing from the above, fish has always had far-reaching implications for food security in Ghana. Fish supplies naturally augment food availability; ensuring good nutritional outcomes particularly of the poor and rural populations; and, the vast number of people engaged in the fishing industry earn incomes that improve upon their access to food (Seini et al, 2002).

It is estimated that, the country's total annual fish requirement is about 820,000 metric tons (mt), while annual production averages 400,000 mt. This leaves an annual deficit of 420,000 mt which is made up through the importation of over US\$200million worth of fish into the country yearly.

Ghana has a long tradition of a very active fishing industry that 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. However the sector is faced with the challenge of declining fisheries resources culminating from weak governance that has tolerated wasteful over-capacity, conflicts and widespread unsustainable and harmful fishing practices among others. Some fishermen have adopted the use of unsustainable fishing methods including but not limited to; light fishing, Carbide, Cyanide, Dynamite fishing, insecticides and other obnoxious substances.

Government's approach at addressing this challenge has been to strengthen the management of the sector through regulations and enforcement mechanisms. Towards this, a Fisheries Regulation (LI 1968) was passed in 2010 to support an existing Fisheries Act, Act 625 of 2002. However with the passage of this law effective mechanism have not been put in place to promote voluntary compliance and effective enforcement of the law. The sections of the law that seek to regulate fishing gears have seen fierce resistance from some fishers, yet adequate communication

channels and platforms has not been created for stakeholders and fisher folks and to participation in the implementation of the laws.

The Ghana Nation Canoe Fishermen's Council (GNCFC) being a major stakeholder in the fisheries sector and with financial support from the Business Sector Advocacy Challenge (BUSAC) Fund is implementing an advocacy action titled "Enforcement of the Fisheries Regulation 2010 (LI1968)". The objective of this action is to advocate the adoption and implementation of effective strategies to enforcement the Fisheries Regulations. It is against this background that this study has been commissioned to identify and recommend effective Strategies for the enforcement of the Fisheries Regulation 2010 (LI1968) in the Western Region.

## **1.2 Terms of Reference**

The objectives of this study as set in the ToR were therefore to:

- Produce a general background of the fisheries industry outlining the economic significance and the governance structure.
- Identify the various actors in the sector and produce a relationship mapping.
- Develop a SWOT analysis of the fisheries sector.
- Conduct an analysis of the Fisheries Act 625, of 2002
- Conduct an analysis for the Fisheries Regulation 2010 (LI 1968)
- Ascertain the challenges to compliance and enforcement of the Regulations.
- Recommend strategies for effective enforcement and compliance of the Regulations.

The expected output the study was to produce a report that:

- Informs stakeholders on appropriate strategies for the enforcement of the fisheries regulations.
- Produce information to inform and improve governance relationship in the sector.
- Produce strategies for advocacies to improve fisheries governance.
- Produce information for the improvement of grassroots and fisher folks' participation in fisheries management.

### **1.3 Methodology**

For this study both quantitative and qualitative survey methods were used to capture the diversity of issues associated with enforcement of fisheries laws and their effectiveness in the study areas. Wide range of literature was also reviewed to analyze the background of fisheries governance at global and local level. Formal structured interviews were held with fishers, District Assemblies Officials, Chief fishermen, traditional authorities, fisheries experts and researchers. In addition, focus group discussions were held with community fisheries stakeholders including women fishers, fish workers among others. Validation meetings were held with selected fisheries stakeholders to refine the recommendations.

#### **1.3.1 Desk Top Study**

The literature review was necessary to understand the background of government efforts towards sustainable fisheries resource management such as policies and implementation arrangements and experience. Some of the documents referred to include the CBFMCs manual referred to earlier, Fisheries Management Plans, Fisheries Act 625 of 2002, Fisheries Regulation 2012 (II1968), FAO Code of Conduct for responsible Fishing, etc. References were also made to global experiences from other parts of Africa and Asia.

#### **1.3.2 Questionnaire Preparation and Administration**

Two sets of questions were prepared. The one was a pre-coded and structured questionnaire that was pre-tested and later administered to thirty (30) fisher-respondents and other fisheries stakeholders. The second was a checklist used as semi-structured interviews, focus group discussion which involved a total of 185 people and informal discussion with chief fishermen, traditional leaders, fisheries commission staff, Fisheries Alliance members and women fishers. In all 30 of such respondents were interviewed.



### **1.3.3 Focus Group Discussions**

Focus group discussions were held with various fisheries stakeholders in twelve (12) selected communities in the six coastal Districts of the Western Region, namely: Shama, Sekondi-Takoradi, Ahanta West, Nzema East, Ellembelle and Jomoro. In all twelve (20) focus group discussions were held and included women fishmongers groups, canoe owners, Local leaders, youth groups, fish processors, premix fuel dealers and fish workers groups. The focus group discussions elicited information on compliance and enforcement of fisheries laws and suggestions towards improving stakeholder participation in fisheries governance.

### **1.3.4 Validation Meetings**

The findings of the study were validated in a 1-day validation meeting with fisheries stakeholders to further refine the recommendations. Plenary discussions and group work sessions were used to elicit detail inputs from participants including; Fisheries experts, chief fishermen, fish workers, fisheries Technical officers and others. Final consultations were also done with fisheries researchers and legal luminaries to get legal perspective of the subject matter.

### **1.3.5 Data Analysis**

Data from Fishers' questionnaire was analyzed using SPSS-4 program on the basis of fishing community then summarized for the entire sample districts. In the focus group and informal discussions, the research teams in addition to structured discussions used the Appreciative Inquiry technique for analysis in which respondents reflected on the present status and the future for sustainable management of fishery resources in the various districts. Another level of analysis was the thematic analysis of informal discussions and focus groups for similar and divergent themes.

## **1.4 Structure of the Report**

The report is structured into six chapters. The first chapter gives the background and justification for this study. It also highlights the terms of reference and the methodology used for data collection. Chapter two gives a general overview of the fisheries resources of Ghana and highlights on the two main types of fishery (inland and Marine), fish production from these sources.

The chapter three outlines the fisheries management systems in Ghana and discusses the governance framework for fisheries management. Chapter four gives an analysis of fisheries laws and highlights the fisheries Act 625 and the fisheries regulation (LI 1968.)

Chapter five explains the challenges for fisheries management and shares the global experience and the Ghanaian context. It also discusses the triggers for fisheries management and a SWOT analysis of the sector stakeholders. The sixth and final chapter concludes and makes recommendation for advocacy for the GNCFC.

## **CHAPTER TWO**

### **2.1 Profile of Ghana Fisheries**

Ghana is a developing coastal State bordering the Atlantic Ocean. The fisheries subsector of agriculture in Ghana is based on resources from the marine, inland (freshwater), and lagoon environments as well as from aquaculture. Fishing activities in the marine sector range from artisanal, through semi-industrial fishing, to industrial operations and exploit both pelagic and demersal fishery resources. Volta Lake, reservoirs and fishponds are the main sources of freshwater fish.

#### **2.1.1 The Fishing Industry**

The fishing industry in Ghana is based on resources from the marine and, to a lesser extent, inland sector. The fisheries activities in the marine sector range from artisanal to industrial, exploiting both pelagic and demersal fish resources up to 200 nautical miles (EEZ) from shore. The Volta Lake, reservoirs, fish ponds and coastal lagoons are the main sources of inland fisheries.

#### **2.1.2 Inland Fisheries**

The Lake Volta, reservoirs associated with irrigation and potable water projects and fish ponds are the main sources of freshwater fish. The Lake Volta has a surface area of 8,480km<sup>2</sup> and 5,200 km shoreline. There are about 310 landing beaches along the very long stretch of Lake Volta. The Lake contributes about 90% of the total inland fishery production, which is around 90,000 MT (MoFA, 2004a).

According to the Volta Lake Frame Survey completed in 1999 by the Directorate of Fisheries (DoF), there were over 1,200 villages along the Lake, over 24,000 planked canoes and over 70,000 fishermen engaged in the Lake Volta fishery. It is also reported that, 20,000 fish processors and traders also depend on the lake for their livelihood. The gears used are cast and gill nets, hook and line and traps. The species exploited are mainly Cichlids (38.1%), *Chrysichthys* spp. (34.4%) and *Synodontis* (11.4%) (MoFA, 2004a).

Artisanal fishers are also facing dwindling catches due to overfished inland resources. Concern had been raised, among others, over artisanal fishers using small mesh sizes, and trawlers operating close inshore, destroying coastal habitats as well as the gear of artisanal fishers

(Koranteng 1998; Overå 2002). The fishing sector, especially the artisanal and semiindustrial fisheries, used to be a prime source of employment, primarily for unskilled young men (Pauly 1976). Employment in the sector has been decreasing over the years. The number of fishers, processors, traders, boat builders and maintenance personnel declined from 13500,000 in 1992 (IOC 1997) to 400,000 in 1996 (FAO 1998). Although there are no reliable data on the number of persons currently employed in the sector, one may not be wrong to assume that the numbers have come down due to, among others, dwindling fisheries resources.

### **2.1.3 Aquaculture**

Aquaculture (fish farming) is relatively new to Ghanaians but its practice is becoming widespread in many parts of the country. There are about 1,000 fish farmers and over 2,000 ponds with a surface area of about 350 hectares. The total production from fish farming currently stands at about 1,000 MT only (MoFA, 2004b). Fish culture is mainly semiintensive in earthen ponds either as monoculture of tilapia or polyculture of tilapia and catfish. Cage culture in ponds has recently been introduced and is being practiced on one commercial fish farm in the Volta Region. Pen culture with tilapia, recently introduced in the Keta lagoon, has been very successful. In all these years, the Lake Volta contributed 85% of total inland fish production.

### **2.1.4 The Marine Sector**

The fisheries activities in the marine sector exploit both pelagic and demersal fish resources. The marine fishing industry in Ghana consists of three main sectors, namely, small scale (or artisanal), semi-industrial (or inshore) and industrial sectors.

In 1997 the marine fisheries accounted for about 85% of the total annual fish production. The four categories of fleets exploiting the fishery are: artisanal (canoe), inshore/semi industrial, deep-sea/industrial and tuna fleets. The artisanal fishery has wooden dugout canoes operating from 293 landing beaches in 189 fishing villages. There are about 101,700 fishermen and 150,000 processors and traders. There are 8,895 canoes, of which 56.2% are motorized. The sector produces between 70% and 80% of the total annual marine catch and accounts for over 95% of the annual landings of about 250,000 of small pelagics. The main species exploited are anchovy, sardinella, mackerel and burrito.

The inshore fleet consists of locally built wooden vessels using inboard engines. They are between 8.2m and 37m long and are used for purse seining during the major and minor seasons, and trawling during the off season.

The annual landings for the 149 vessels in 1997 was 4,920 mt. The types of fish predominantly exploited by the inshore fleet are sardinella, mackerels and burrito. The deep-sea fleet consists of imported steel vessels used for trawling and shrimping. These vessels are more than 35m long and have engines of more than 600hp. At present, there are 62 trawlers operational in Ghana.

Fourteen trawler vessels have obtained fishing rights to fish in Senegal, Sierra Leone, and the North Sea. The fish landed by these vessels are regarded as local catches.

Some of the landed species are sardinella, chub mackerel and horse mackerel. The 13 operational shrimpers are limited to 1°49'W to 2°20'W longitude from Eikwe to Adjua in the Western Region, and 1°14'E to 1°5'E Ahiwan to Aflao in the Volta Region. About 80% of the fish landed are demersal species. Other demersal species landed as by-catch are sea bream, cuttlefish, cassava fish and burrito. The shrimp landed are mostly exported to Europe and the Far East. Shrimp production has been in decline over the past few years. Some of the companies are converting their shrimp vessels into trawlers.

All tuna vessels are operated on join-venture basis with Ghanaians owing at least 25% of the shares as decreed in the Fisheries Law PNDC Law 256 of 1991. The vessels are over 30.5m long with engines of 400 hp or more. Thirty of the vessels are pole and line and three are purse seine. The main species caught are skipjack, yellowfin and big eye. About 67% of the landed tuna is processed into loins or canned and exported; the rest is sold at the local market. In 1997, estimated tuna landings were 36, 044 mt.

#### **2.1.5 The Artisanal Sector**

The fishing craft for the artisanal sector is the dug-out canoe. The canoes range in size between about three and 18m long and from 0.5 to 1.8m wide depending on the type of fishery that it is used for. The canoe is propelled by an outboard motor of up to 40hp, or sail and oars depending upon the fishing operation that it is used for.

The nearly 10,000 dugout canoes used in the marine artisanal sector operate from 304 landing centres in 189 fishing villages located in 17 coastal administrative Districts of Ghana. In the

latest canoe frame survey conducted in 2001, the number of marine artisanal fishermen was listed at over 123,000.

In the artisanal fishery several types of fishing gears are used; these include a wide variety of gilling and entangling nets, seine nets (purse and beach seines), handlines, and castnets.

#### **2.1.6 The Semi-industrial or Inshore Sector**

The semi-industrial or inshore fleet consists of locally built, wooden-hulled vessels, which measure between 8 and 22m long (at present). They are used for purse seining during the upwelling (or sardinella fishing) seasons, and trawling during the off-season.

The vessels are powered by inboard engines of between 90 and 400hp. They operate from seven coastal landing centres, namely: Tema, Apam, Mumford, Elmina, Sekondi, Takoradi and Axim. The number of inshore vessels decreased over the past 15 years due to the decline in the stock size of target species and high cost of operation and maintenance.

#### **2.1.7 The Industrial Sector**

The industrial sector comprises large, steel-hulled foreign-built trawlers, pair trawlers, shrimpers and tuna pole-and-line vessels (baitboats) and purse-seiners. They operate only from Tema and Takoradi where there are suitable berthing facilities.

The first industrial trawlers were acquired about four decades ago principally for fishing in more productive distant waters (mainly off Angola and Mauritania). From mid-1970s these vessels started fishing in home waters when countries claimed 200 miles of exclusive economic zone in accordance with relevant provisions of the Third United Nations Convention on the Law of the Sea (UNCLOS III).

In 1986, commercial shrimping was resumed in Ghanaian waters nearly 12 years after the collapse of an earlier fishery. The numbers of vessels increased rapidly reaching a peak of 17 vessels in 1995 and declining thereafter. The earlier fishery collapsed around 1975 for various reasons including over-exploitation and the impact of the Volta dam at Akosombo on the hydrology of the Anyanui estuary and the Keta lagoon. It is believed that the operation of the shrimp vessels, especially in shallow waters, is not conducive to the sustainability of the resources and conflicts with activities of artisanal fishers.

Industrial tuna fishing in Ghanaian waters started in 1962 by Messrs Star Kist Foods Inc. of. Until 1996, the tuna fishing fleet was made up of pole-and-line vessels, some of which were of foreign nationality. Since 1986, no foreign-flag vessels have operated in the tuna fishery. All tuna vessels are operated on joint-venture basis in which Ghanaians are to have 50 per cent shares as required in the Fisheries Act 625 of 2002. The vessels are all registered in Ghana. The Fisheries Act also allows licenses for foreign fishing vessels to be issued if there is an access arrangement, but so far none have been issued in this manner.

### **2.1.8 Number of Vessels and Areas of Operation of Fishing Fleets**

Table 3 shows the number of operational vessels in each fleet in 1997-2003. With the exception of the tuna fishing fleet, all vessels operate in about the same area in Ghanaian waters and target similar species. This generates conflict among the fleets, especially between the artisanal and industrial sectors with the latter often destroying nets set by the former. Tuna baitboats use anchovy as bait, thus competing with the artisanal fishers for the same resource.

### **2.1.9 Tuna Processing and Production**

About 40 per cent of the sustainable annual tuna catch of the Eastern Atlantic can be taken in Ghanaian waters. Tuna processing and preparation of fishmeal from tuna offal are the main industrial fish processing activities carried out in Ghana. The quantity of deep frozen tuna exported from Ghana was drastically reduced when Star Kist established the Pioneer Food Cannery (PFC) in Tema in 1994. PFC purchases and processes all exportable tunas landed in Ghana into loins and fully-canned products. PFC and Ghana- Agro Foods Company (GAFCO), the other major tuna cannery, process tuna both for export and the domestic market. About 70 per cent of the landed tuna is processed into loins or canned and exported.

## **CHAPTER THREE**

### **3.1 Fisheries Management System in Ghana**

Fisheries management in Ghana has over the year been the responsibility of the Department of Fisheries operated within the Ministry of Food and Agriculture (MOFA). In 2004, the GoG created the Ministry of Fisheries with a cabinet status to give more attention and direction to the management of the resources. Since the creation of the ministry and the coming into force of the Fisheries Act of 2002, fisheries management has been the responsibility of the Fisheries Commission with the Directorate of Fisheries as its implementing agency/secretariat. However in 2009 the Ministry of Fisheries was dissolved and the new fisheries commission formed to work under the MOFA. According to FAO 2004, fisheries in Ghana has over the years been managed with the following sector objectives:

- Increasing domestic food supply, particularly protein sources, through more effective use of available fisheries resource at the regional and local levels as a means of satisfying national protein needs.
- Creating employment opportunities, particularly for the rural population, to address the problem of urban drift.
- Improving the living and working conditions of fisher folk.
- Contributing towards Gross Domestic Product.
- Contributing towards foreign exchange earnings under the Non-Traditional Export Programme.
- Assisting in the alleviation of rural poverty.

In achieving the above mentioned objectives, management systems have been developed for marine and inland fisheries resources. The marine fisheries and the Lake Volta (inland) fisheries have separate management systems. Together, the two management plans attempt to respond to ecological, socio-economic and institutional issues related to the development of the national fishery. To conform to the global policy environment, the national fisheries management plans draw heavily on the:

- FAO Code of Conduct for Responsible Fisheries (CCRF) policy matrix;
- Integrated development strategy models; and



- Coastal area management models. (FAO, 2004).

According to FAO 2004, a number of cross-cutting concepts run through the two management plans. These are:

- Process, concerned mainly with adaptive management in response to fluctuations in the fishery (bio-physical stocks) allowing for adjustment in fishing pressure in the short term while ensuring fishery system sustainability in the long term.
- A precautionary approach entailing a combination of multi-disciplinary strategies and effective monitoring systems to respond to the multifaceted concerns related to abundance fluctuation in fish stocks; different interest groups; and trends and variation in gear and technology use.
- Partnerships in pursuit of co-management to increase local involvement in resource use decision-making so as to engender ownership among stakeholders and commitment in implementing regulatory mechanisms.
- Proprietorship, which proposes the appropriation of territorial fishing property rights to communities or zones (groups of communities), in contrast to the current open access system, which has presented difficulties in terms of control, and has resulted in overexploitation.
- A policy of effective monitoring control and surveillance (MCS) that relies heavily on the collection and analysis of accurate and relevant data and information.
- Integration and resolution of conflicts arising directly from competing demands for use of the aquatic resource base, or indirectly from externalities generated by nonfishing activities.
- Promotion of public awareness of resource conservation and management needs, taking advantage of economic, social and cultural values associated with different resources.
- Legislation related to gear type, mesh size, licensing, levies, and close seasons to regulate effort and sustain stocks.
- Economic policy related to energy, credit and promotion of measures that ensure efficient exploitation of the fishery resource to meet the nutritional needs of the people and for export.
- Institutional capacity strengthening.

- For the purpose of this work, attention will be given to the marine fisheries management system.

### **3.1.1 Marine Fisheries Management Systems**

In the marine fisheries sector, there are separate management subsystems for small pelagics, large pelagics, demersals, shrimp and lobsters. The main elements of the management regime are:

- limiting industrial vessel fishing effort (especially trawlers and shrimpers) by limiting entry into the fishery through a licensing regime; and
- prescribing the mesh sizes to be used in any particular fishery in order to limit the exploitation of juvenile or immature fishes (including shellfish and molluscs).

For the small pelagic fishery, management rules and regulations have been formulated with the intention of protecting juveniles of sardinella. These regulations are primarily intended to work through input limitation, such as mesh size limits. There is also an attempt, to the extent feasible, to identify and take actions with the support of interested parties to forecast and reduce the often high variability in the recruitment, abundance and availability of small pelagic fish resources.

An important component of the large pelagic management regime is to ensure compliance by all Ghana-based vessels with the standard regulations issued by ICCAT. Of particular concern is the enforcement of regulations that ensure the escape and survival of juveniles from nets and the combined use of purse seiners and Fish Aggregation Devices (FADs).

The demersal fisheries management plan confronts major culprits for stock depletion: shrimpers and trawlers. The aim is to allow stocks to recover to a sustainable level, where they could be harvested in perpetuity. According to the plan, issuing permits for the importation and replacement of trawlers and shrimpers is to be discontinued in the short term while a closed season is to be imposed on the shrimp and trawl fisheries for 3 years, after which trawling and shrimping will be banned for 5–10 years if the 3-year close season regime does not result in the expected recovery of stocks. No trawling activity would be permitted within the Inshore Exclusion Zone (IEZ), and the IEZ is to be amended, from the 30-m depth line to 12 nautical miles. Beach seining will be prohibited and existing mesh size regulations will be vigorously enforced.

There are a few traditional management systems, which tend to regulate access to marine fisheries in Ghana and thereby conserve the fish stocks. Those identified during the study include:

- In every fishing village there a non-fishing day is observed each week (mainly on Tuesday, but sometimes on Wednesday or Sunday), which fishers use to maintain gear and equipment, rest and for social activities.
- In some communities, there is a total ban on fishing activities for various periods (up to two weeks) prior to and during annual festivals.
- In other areas, there is a ban on a particular fishery for a period, e.g. in the Greater Accra Region there is ban on *Dentex* spp. for a period before the Homowo festival of the Ga people of Accra.

### **3.1.2 Fisheries Administration in Ghana**

The Directorate of Fisheries of the Ministry of Fisheries is responsible for policy formulation and implementation, management and control of the fishing industry under the general guidance and direction of the Minister of Fisheries and the Fisheries Commission. The Fisheries Commission advises the Minister in all matters pertaining to the industry. The current Fisheries Law (Act 625 of 2002) provides for the integration of the Directorate of Fisheries and the Fisheries Commission into a more robust Commission for the regulation and management of the utilization of the fisheries resources of Ghana and the coordination of the policies in relation to them.

The mission of the Fisheries Directorate is to promote sustainable exploitation and responsible utilization of fishery resources of Ghana through sound management practices, research, appropriate technological development for both culture and capture fisheries, effective extension and provision of other support services to fish farmers, fishermen, fish processors and traders for improved income and fish food security. (DoF, 2004). The directorate is under the leadership of a Director, and has five operational divisions namely;

Marine Fisheries Management Division (MFMD), Inland Fisheries Management (and Aquaculture) Division (IFMD), Marine Fisheries Research Division (MFRD), Monitoring,

Control and Surveillance Division (MCSD) and the Finance and Administration Division (F&AD). Figure 3.1 below shows the administrative hierarchy of the fisheries sector.

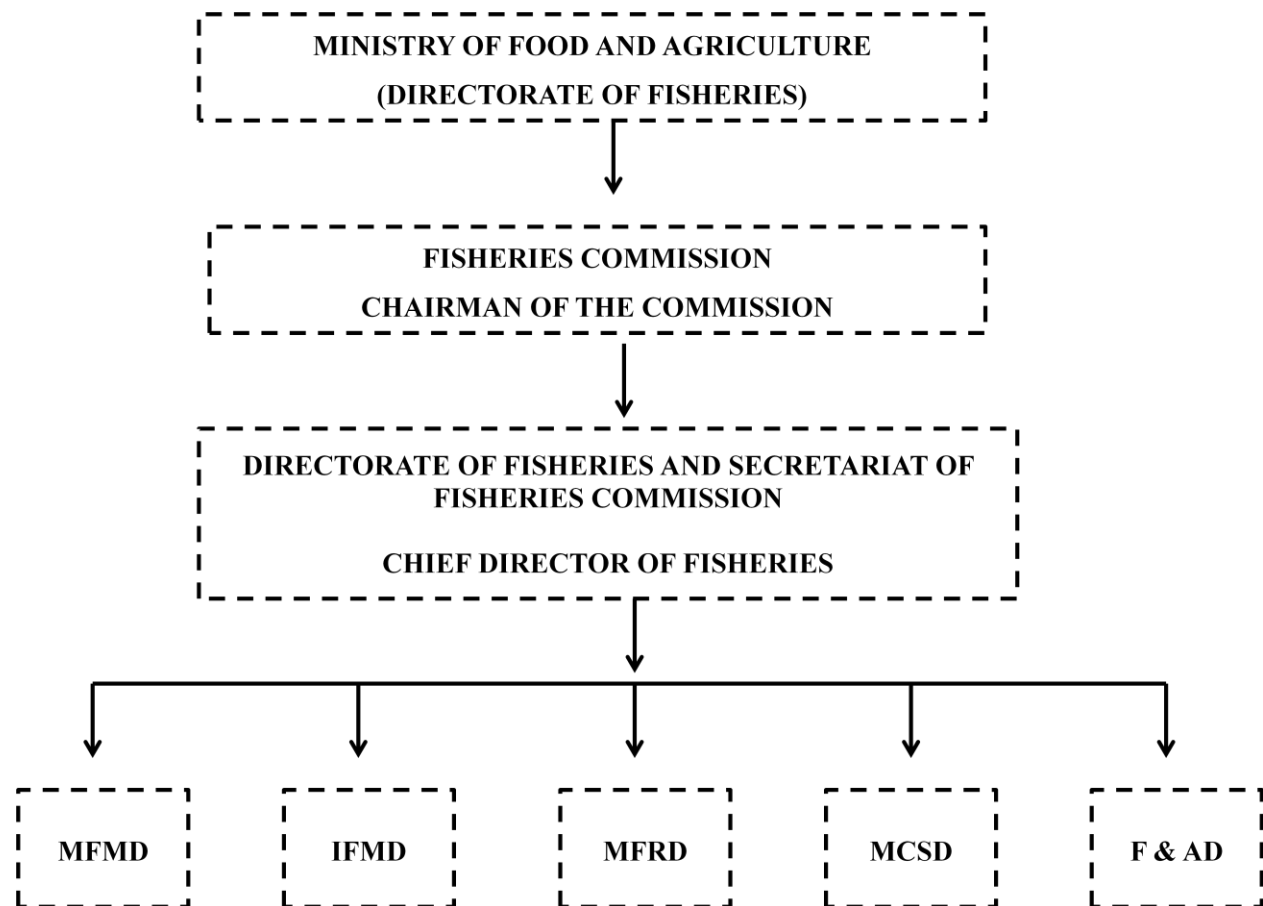


Fig. 3.1 Organisational Chart for Fisheries Administration in Ghana at the National Level.

SOURCE: DoF, 2004

The following are the functions of the Directorate of Fisheries:

- Facilitate the formulation and implementation of appropriate policies in support of a sustainable fishing industry;
- Ensure the implementation of the Fisheries Law and regulations;
- Provide technical support to fishers, fish farmers, fish processors and traders on improved fisheries practices, efficient utilization and management of fisheries resources;
- Play a facilitating role in development of fisheries infrastructure, input acquisition for fishers, fish farmers, fish processors and traders;

- Initiate, coordinate, monitor and evaluate national programs and projects in the fishing industry;
- To collaborate with international organizations in the study and management of shared fish stocks;
- To collaborate with the Human Resources and Management Division of MoFA in the development of skills of fisheries staff; and
- To generate socio-economic data and information as a basis for improving the human capacity of the fishing industry.

## CHAPTER FOUR

### 4.0 Regulating Ghana's Fisheries Industry in Colonial Times

The first Fisheries Department was established in Ghana in 1946 by the British Government in the then Gold Coast. Before then colonial administrators were involved in the industry from the turn of the nineteenth century when new kinds of fishing equipment began to appear on the Fanti Coast. New technologies, particularly the introduction of improved nets, precipitated a host of new conflicts over marine space and resources. At the same time, local governance over fisheries was undermined by legislation from British administrators who were beginning to see Ghana's fisheries as a potentially lucrative industry for the colony. Meanwhile a number of conflicts emerged between villages, within villages, between young and old, and between fishermen and the colonial administration (Ocran 1973:8).

According to one scholar, Lawson (1968:91), Fanti fishermen were using rectangular nets measuring four hundred yards in length and eighteen yards wide from about 1850 onward. These nets were called *Ali*, and were hand-made of imported cotton twine, with a mesh size of only 1 3/4 inches. Set in the water for hours at a time with cork floats and stone weights, these nets caught substantially more fish than were previously caught with cast nets. They also caught fish indiscriminately of size. Many conflicts arose up and down the coast over *Ali* nets and other new nets similar to the *Ali* net. Primarily, conflict revolved around issues of unfair competition, profits, conservation, sustainability, and equal distribution. Because these new nets caught previously unseen volumes of fish, fishing crews who used these nets were able to reap greater profits. In addition, the localized market price of fish fell due to the increased supply. Apparently, those unfortunate fishermen who did not use these nets began losing profits and began complaining to their chiefs and government representatives.

Along with these conflicts over profits and sustainability, other localized political and economic considerations played into the disputes. For instance, in one case it appears that old fishermen were behind the passing of bye-laws to prohibit the use of new nets. It was thought that these men could not afford to purchase, and were too old and weak to operate these new nets, and were therefore losing profits to younger and stronger fishermen who could afford them.

According to Barbara Walker (1998:105-139), the archival record describes at least thirteen cases of net conflicts, which are too numerous to mention here. The earliest case, however, that established the precedent for the ensuing conflicts was the case of *Akwufio and Others v. Mensah and Others*. This was a case brought to the Supreme Court of the Gold Coast in Cape Coast in 1898 between two groups of fishermen in Teshi. An anonymous colonial document reports that the *Ali* net came into use among the Ga at Teshi in 1897 and in a short time most of the Teshi people used them without hindrance but later the majority of the fishing population became dissatisfied with them as they found that these nets injured their fishing so much that their families were starving. Their chief objection to the net was that it ruined the herring fishery by driving away the fish (Anonymous 1919:1). In response, a fisherman named Mensah and other fishermen at Teshi passed a law prohibiting the use of the *Ali* net. When a fisherman named Akwufio and others continued to use these nets, they were attacked by Mensah's group, their canoes were upset, and their *Ali* nets were damaged. After deliberations, in 1899, Chief Justice Sir W. Brandford Griffith decided that the law made by Mensah could not be enforced because it did not exist at the time of the Supreme Court Ordinance 1876.

Earlier in February of 1890, a disturbance took place between the previously mentioned groups of fishermen, in which they quarreled again about the use of *Ali* nets. The town was fined £5 by the colonial police. This disturbance compelled the *Manchemei* (chiefs) of Accra and Christiansborg and Chief Nii Kotey of Teshi to co-sign a formal agreement to prohibit the use of the *Ali* net, which in the agreement was called "a most enormous and alarming construction apt of taking both young and large fish". The governor, F. M. Hodgeson, agreed to refund half of the £5 fine to Teshi if the Chief of Labadi would also sign the agreement. Although a "solatium" of £5 was offered to the Chief of Labadi, he refused to become a party to the agreement. Therefore, when in June of 1900 the Chief Fisherman of Accra (John Kofi Abrah) complained to the authorities that Labadi and Teshi fishermen were using "long fishing nets," neither the government nor the police would do anything to stop these fishermen. In February of 1901, Manche Tackie of Accra pleaded with the Governor to stop the fishermen of Labadi and Teshi from using *Ali* nets, again to no avail. Finally, when in March of 1901 the Manche of Osu reported an impending breach of peace in Teshi over the use of *Ali* nets, the District Commissioner traveled to Teshi to make an inquiry. He reported that there was no disturbance; that in Teshi as in Labadi and Ningowa he found the people were split up into two parties, one in

favour of and the other against the use of the *Ali* net, but at all the three places it was being freely used. The net had a mesh of 3/4 inches and is "similar to that used for centuries round the English coast". He did not believe that its use would have any detrimental effect upon the future "fish supply, and imagined that the Kings of Accra and Christiansborg had other reasons than those alleged for wishing its prohibition".

In 1901, the Governor, in view of the Chief Justice's and the District Commissioner's judgments, decided not to interfere further in the matter. Despite this, in 1901 and again in 1903, disputes between these parties went again before the courts. As a result of this long-running dispute and many others similar ones throughout coastal Gold Coast, Judge Sir Hugh Clifford ruled the following in 1916: "*i. That the Government cannot countenance any attempt to prevent the use of the Ali nets merely because the fishing population who employ them have advantages over their neighbors. ii. That each fishing community must be allowed to decide for itself whether it will or will not use these nets...iv. That no bye-laws imposing any restrictions, other than those above set forth, upon the users of Ali nets should be approved* (Davis 1923:10-11)." In sum, these cases illustrate a variety of tensions precipitated among fishermen by the introduction of improved fishing nets into Gold Coast fishing communities during the colonial era. While competition over profits appears to be the principal source of conflict, these conflicts are simultaneously embedded in other patterns of local politics of the period. As noted earlier, disagreements over the suitability of the new nets also occurred between older and younger fishermen, between neighboring villages, and between those in pursuit of profits, and those concerned with preserving the fisheries resource base.

Attendant to conflicts over new nets, struggles ensued between local leaders (Chiefs and Chief Fishermen) and Colonial leaders over who had the authority to legislate fisheries policy. In the first recorded case (*Akwufio v. Mensah* above), Chief Justice Sir W. Brandford Griffith decided that local leaders did not have the authority to prohibit the use of nets, and this decision was used as a precedent throughout the history of net conflicts in the Gold Coast. Instead of prioritizing existing village hierarchies and local knowledge about the capacity of the marine environment, Griffith's decision turned on a European concept of "freedom of the seas" and a British model of fishing practices. We re-revisit the Case of *Akwufio and Others v. Mensah and Others* which securely established Colonial policy on net conflicts. Instead of being resolved at the local level,



this case went to the Supreme Court. It was decided by Judge Griffith that the colony would not support a law prohibiting nets, citing Section 19 of the Supreme Court Ordinance 1876, which decreed that “...*the Supreme Court shall enforce the observance of any law or custom existing in the Colony not being repugnant to natural Justice equity and good conscience and not incompatible directly or indirectly with any local enactment then existing*” (Porter 1916:3). No law against the use of the *Ali* net was “existing in the colony” in 1876, so Mensah was caught in a dilemma where his rights to enact local laws were no longer recognized because local lawmaking and litigation procedures were becoming obsolete, and the colonial court would not hear cases involving new “native” laws. Chief Justice Griffith's decision was evidently based on an ethnocentric conception of fishing, inasmuch as he commented that the *Ali* net was “*similar to that used for centuries round the English coast*”. Although Griffith was not a fisherman or a fisheries scientist, he concluded that the *Ali* net would have “*no detrimental effect upon the future fish supply*”. Furthermore, Griffith remarked that: “...*if [I] thought for a moment that the use of the Ali nets did tend to injure a fishing industry [I] would advise the defendants to apply to the Government to legislate, but with the experience of practically the whole civilized world against that view, [I] did not hesitate to say that the Government should rather encourage than discourage the use of the Ali net.*”

With Griffith's interpretation of Section 19, Gold Coast's fishing customs of 1876 were effectively rendered static. This interpretation did not account for the possibility of any changes in the fishing industry or environment which would necessitate conservational regulations. Griffith's ruling rather reflected the European perception that the sea was an unlimited resource, and that Africans were not doing enough to capitalize on its bounty. In another case in 1934, that explicitly referred to and expanded upon Griffith's original decision, the Colonial Secretary of Agriculture ordered the Chief of Winneba to withdraw a set of bye-laws prohibiting the use of three types of nets. The Chief of Winneba claimed that these nets were the cause of over fishing and scarcity in the local fish supply. In a communication to the Provincial Commissioner at Winnebah, The Secretary stated that he could not agree that the Chief's objections to the nets were “*sound*” because “*the best fishing net is the net which catches the most fish*”. This comment again implies that the Colony perceived European fishing methods to be superior. It also implies that marine fisheries were considered an infinite source of food and profit, to which a “more is better” strategy ought to be applied.

The foregoing was the regulatory framework that paved way for the importation by the Fisheries Department in 1946 of 30-footer motorized fishing boats from the United Kingdom into the country for experimental fishing and the introduction of outboard engines to canoes in the 1950s, four years later (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 boat used by the Fisheries Department was such that in 1952, the Government of Ghana set up a Boatyard Corporation which started building similar boats at the Sekondi Boatyard. In no time, several in-board engine wooden vessels with length ranging from 27'-32' were built. In 1962, five years after independence, the Tema Boatyard was established.

#### **4.1 Post-Independence Regulation of the Fisheries Industry**

With the establishment of the Tema Boatyard in 1962, a large fleet of wooden fishing vessels with lengths up to 70-feet were built for the industry. Most of the vessels engaged in dual-purpose fishery, that is, bottom trawling and purse seining. Later, individual entrepreneurs imported steel boats with sizes ranging from 30'-120' into the country to carry out fishing in both trawling and purse seining for fin-fishes and shellfishes.

The regulatory policies (in the fisheries sector) of the various governments we have had since independence can be seen in the various legislative interventions they made in the sector. In the early 1960s, the Fisheries Act and the Fisheries Regulations, 1964 (L.I. 364) were enacted. The existing laws, as shown in the above analysis, did not expressly deal with the fisheries industry because of the particular free-for-all attitude adopted by the colonial masters towards the industry. In that period, and at best, there were pieces of legislation that touched on water use and or its management. Among these were the Rivers Ordinance, 1903 (Cap. 226), the Forests Ordinance, 1949 (Cap. 157) and the Mosquitoes Ordinance, 1951 (Cap. 157 Rev). These dealt with the fishing industry only tangentially.

Post independence, and in addition to the Fisheries Act and Regulations, many other enactments affecting the fisheries industry were enacted. These included:

1. The Wild Animals Preservation Act, 1961 (Act 43);

2. The Volta River Development Act, 1961 (Act 46);
3. The Ghana Water and Sewerage Corporation Act, 1965 (Act 310);
4. The Oil in Navigable Waters Act, 1964 (Act 235);
5. The Irrigation Development Authority Decree, 1977 (SMCD 85);
6. The Minerals and Mining Law 1986 (PNDCL 153);
7. The Environmental Protection Agency Act, 1994 (Act 490);
8. The Ghana Highway Authority Act, 1997 (Act 540);
9. The Timber Resources Management Act, 1998 (Act 547); and
10. The Minerals and Mining Act, 2006 (Act 703).

Back to laws directly dealing with the fisheries industry, in 1972 the government of the National Redemption Council (NRC) promulgated the Fisheries Decree, 1972 (N.R.C.D. 87). In 1977, the Fisheries (Amendment) Regulations 1977 (L.I. 1106) were passed by the same government to amend the Fisheries Regulations, 1964 (L.I. 364). In 1979 the government of the Armed Forces Revolutionary Council (AFRC) also promulgated the Fisheries Decree, 1979 (A.F.R.C.D. 30). In that same year, the Fisheries Regulations, 1979 (L.I. 1235) were promulgated. In 1991, the government of the Provisional National Defence Council (PNDC) promulgated the Fisheries Law, 1991 (PNDCL 256) to repeal the AFRC 30 whilst saving the Fishing Boats (Certificate of Competency as skipper and Second Class Engineers) Regulations, 1972 (L.I. 770) and the Fishing Boats (Certificate of Competency First Class and Second Class Engineers) Regulations, 1974 (L.I. 988). In 1993, the Fisheries Commission Act, 1993 (Act 457) was passed amending PNDCL 256. In 2002, the Fisheries Act, 2002 (Act 625) was enacted by the present government to consolidate with amendments all the foregoing laws on fisheries; to provide for the regulation and management of fisheries; to provide for the development of the fishing industry and the sustainable exploitation of fishery resources and to provide for connected matters.

The point being made here is that virtually every government, post-independence, passed a number of laws to regulate the fisheries industry.

There is also in the Fisheries Regulations 2010 (LI 1968) and the Fisheries Act of 2002 (Act 625) and to streamline activities and bring about uniformity in the fishing industry. Perhaps, the

various issues and complaints from the fisher folk need find expression in the context of these current developments.

## **4.2 Analysis of the Fisheries ACT, 2002 (ACT 625)**

The existing regime for the regulation of the fisheries industry, as in many areas of Ghanaian jurisprudence, is a mixture of customary rules and statutory enactments in consonance with Article 11 of the 1992 Constitution which mentions both as sources of law in Ghana.

Article 11 of the Constitution provides that the laws of Ghana shall include "Customary Law" which is defined to mean the rules of law which by custom are applicable to particular communities in Ghana. Whilst raising the customary law to a high pedestal, the Constitution also preserves the body of laws existing before the coming into force of the Constitution (the Existing Law) and generally subsumes Customary Law under the Constitution and the Existing Law. The Existing Law, according to the Constitution comprise the written and unwritten laws of Ghana as they existed immediately before the coming into force of the Constitution, and any Act, Decree, law or statutory instrument issued or made before that date, in as much as they do not conflict with the Constitution.

Flowing from the above, the fisheries industry in Ghana is regulated by the Fisheries Act of 2002, Fisheries regulation 2010 (LI 1968), all other Acts, Decrees, laws, Legislative Instruments (and other subsidiary/subordinate legislation) on or relating to the sector that are still in force and not inconsistent with the Constitution (the Existing Law); and Customary Laws that are not inconsistent with the Constitution or the Existing Law.

The purpose of the Fisheries Act is to consolidate with amendments the law on fisheries; to provide for the regulation and management of fisheries; to provide for the development of the fishing industry and the sustainable exploitation of fishery resources and to provide for connected matters. We propose to discuss the provisions of this law in the light of the issues raised by the fisherfolks and noted in section 3 above. These issues generally border on the role, functions and power of the fisheries institutions, harmful fishing methods such as light fishing

and pair trawling on artisanal industry, quality control of fish products, and equity in access to fishing logistics provided by government.

The Fisheries Act (in its section 1) establishes a Fisheries Commission as a body corporate to regulate and manage the utilization of the fishery resources of Ghana and co-ordinate the policies in relation to them. The Commission's functions among other things are to ensure the proper conservation of the fishery resources through the prevention of over fishing.

On the above point it is an offence, according to section 89 of the Act, for a person to knowingly take any (a) gravid lobsters; (b) crustacea; or (c) any juvenile fish during fishing. Therefore, where any of the aforementioned fishes is caught accidentally, or caught as a by-catch, it shall immediately be returned to the sea, river or lake. On summary conviction, one is liable to a fine of not less than \$50,000 and not more than \$1 million in respect of a local industrial or semi-industrial fishing vessel or a foreign fishing vessel, and not more than 250 penalty units in any other case. In addition to these, the catch, fishing gear or other apparatus or any combination of them used in the commission of the offence may be forfeited to the State. Again another conservation measure provided in the law is to make the fishing of marine mammals an offence in section 90. Thus no person shall fish for marine mammals in the fishery waters and any marine mammal caught accidentally shall be released immediately and returned to the waters from which it was taken with the least possible injury. The punishment for this offence is also a fine of not less than \$50,000 and not more than \$1 million in respect of a local industrial or semi-industrial vessel or a foreign fishing vessel; and 500 penalty units in any other case. The Minister of Fisheries may on the advice of the Commission and after consultation with the Minister for Science and Environment; owners of the adjoining land and the relevant District Assembly declare any area of the fishery waters and the seabed underlying the waters to be a marine reserve, according to Section 91. A person who, engages in fishing; dredges or takes any sand or gravel; or otherwise disturbs the natural habitat within any marine reserve, except with the written permission of the Minister, commits an offence and is liable on summary conviction to a fine of not less than \$50,000 and not more than \$2 million in respect of a local industrial or semi-industrial fishing vessel or a foreign fishing vessel and not more than 500 penalty units in any other case.

The Fisheries Act also provides in section 92, that where a person directly or indirectly introduces a deleterious substance into the fishery waters which adversely affects the habitat or health of the fish or other living aquatic resource, he commits an offence and is liable on summary conviction to a fine of not less than (a) \$50,000 and not more than \$2 million where a local industrial or semi-industrial vessel or a foreign fishing vessel is used in the commission of the offence; and to 50 penalty units and not more than 500 penalty units in any other case and the person may be ordered by the court to pay such additional amount as the court may determine in compensation for any loss suffered as a result of the introduction of the deleterious substance and any related clean-up costs.

The Fisheries Act also proscribes in Section 88 proscribes the used of any explosive, poison or other noxious substance for the purpose of killing, stunning, disabling or catching fish, or in any way rendering fish more easily caught; or the carrying on board or having in one's possession or control without lawful authority at any place within a two kilometre radius from any shore or river, any explosive, poison or other noxious substance in circumstances indicating an intention of using such substance for any of the purposes referred to. It is therefore an offence for any person to land, sell, receive or possess fish taken by the prohibited methods mentioned above. The punishment for such an offence is fine of at least \$250,000 and not more than \$2 million in respect of a local industrial or semi-industrial fishing vessel or a foreign fishing vessel, and at least 25 penalty units and not more than 500 penalty units in any other case, and in addition, the catch, fishing gear or other apparatus or any combination of them used in the commission of the offence shall be forfeited to the State.

As one of its duties, the Commissions is to strive to minimize, as far as practicable, fishery gear conflict among users. This is contained in section 10 which clothes the Commission with powers to appoint from among its members a Fisheries Settlement Committee composed of not less than three and not more than five members to hear and settle complaints from persons aggrieved in respect of matters arising from or related to the fishing industry. This, however, does not limit one's right to access justice in the regular courts. The function of the Commission in ensuring the monitoring, control and surveillance of the fishery waters is contained in Section 94 which establishes and provides for the functions of the Monitoring, Control, Surveillance and Enforcement Unit.

One laudable function of the Commission is to promote co-operation among local fishermen and advance development of artisanal fishing. Section 51 mandates the Commission to take such action as it considers necessary to protect and promote artisanal and semi-industrial fishing including the following:

- (a) the provision of extension and training services;
- (b) the registration of artisanal fishing vessels and any class of related fishing gear;
- (c) the exemption for such period as it may recommend to the Minister of such fisheries activities as it may determine from any requirement concerning licensing and the payment of fees under the Act;
- (d) the promotion of the establishment and development of fishing, processing and marketing co-operative societies;
- (e) the promotion of the development of artisanal fishing landing facilities;
- (f) the establishment of reserved areas for fishing activities of artisanal and semi-industrial fishing vessels;
- (g) the giving of priority to artisanal and semi-industrial fishing in the allocation of fishing licenses or quotas; and
- (h) the promotion of joint venture arrangements, technology transfer agreements and transfer of technology and experience.

In any the foregoing actions to be taken by the Commission, it shall not establish concessionary areas within the Inshore Exclusive Zone (IEZ) for activities not permitted under this Act. The IEZ according to the Schedule to the Act is the coastal waters between the coastline and the 30-metre isobath or the 6 nautical miles offshore limit whichever is farther. In Section 81(2) this areas is for exclusive use by small semi-industrial vessel (SIV), canoes and recreational fishing vessels.

Indeed, the Act may be described as a progressive piece of legislation in terms of creating a framework for the growth and sustainability of the fisheries sector and of artisanal and small semi-industrial fishing.

Despite the strengths of the Fisheries Act, there are shortfalls in two broad respects. For example, the Act does not contain explicit provisions on fish health, quality assurance or product safety. By virtue of the provisions of Section 77 of this Act, however, it is possible to draw on other laws addressing these issues and these may apply with the same force as if they were enacted as part of the Fisheries Act. Section 77 provides that a fishing licence or other authorisation issued under this Act shall not relieve any licensee, or the master or crew of a fishing vessel of any obligation or requirement imposed by law concerning navigation, health, customs, immigration or another matter. For example, in exercise of the powers conferred on the Minister responsible for the Environment under section 28 of the Environmental Protection Agency Act 1994 (Act 490), and on the advice of the Environmental Protection Agency Board, Regulations were made for the conduct and submission of environmental reports and impact statements. Schedule 2, regulation 3 of the Environmental Assessment Regulations, 1999 (L.I. 1652), prescribes land-based aquaculture as one of the undertakings for which an Environmental Impact Assessment (EIA) is mandatory. In the same legislative instrument, schedule 5, regulation 30(2) contains the provisions to regulate the activities associated with fish cage culture. It characterizes water trapped for domestic purposes, water within controlled and/or protected areas and water which supports wildlife and fishery activities as environmentally sensitive areas the use of which is governed by EIAs. Another example is the role of the Food and Drugs Board. The Food and Drugs Law, 1992 (PNDCL 305B), prohibits the sale of unwholesome, poisonous or adulterated and unnatural substances and lays down penalties for breaching the law. Yet, beyond drawing on legislative provisions from other sectors to better regulate the fisheries sector, it is advisable for the Ministry of Fisheries to enact a comprehensive Legislative Instrument to regulate the sector.

The second shortfall relates to the enforcement of the provisions of the Fisheries Act. It is clear from the analysis of the provisions of the Act that the issues currently bordering canoe fishermen are addressable under the Act, that is, if the provisions of the Act are enforced.



### **4.3 Analysis of the Fisheries Regulation (LI 1968)**

The Fisheries Regulation LI (1968) was passed in the year 2010 to support the Fisheries Act 625 and spells out detailed directive for prohibited fishing. It also provides directives on the following: licensing of fishing vessels, importation of fish, fishing in foreign waters, markings on fishing gears and many others. The Fisheries regulation (LI 1968) is predicated on section 139 (1) of the Fisheries Act (Act 625), which prescribes that the Minister responsible for Fisheries may, on the recommendations of the Fisheries Commission, by legislative instrument, make Regulations;

- a) prescribing measures for the conservation, management, development, licensing and regulation of fisheries or a particular fishery, including total allowable catch and quota system as the Minister considers appropriate;
- b) for licensing a vessel or class or category of vessels to be used for fishing and related activities or any other purpose pursuant to this Act;
- c) for licensing or registration of fishing gear and any other equipment or devices used for fishing;
- d) prescribing the types and sizes of fishing gears and other fishing devices including the sizes of fishing nets that may be used for fishing, where they may be used and prohibited fishing nets;
- e) in respect of the manufacture, importation and sale of fishing nets;
- f) indicating landing requirements for a vessel or class or category of vessel or licence;
- g) on catching, loading, landing, handling, transshipping, transporting, possession and disposal of fish;
- h) relating to tuna fishing or a specified species of fish;
- i) on the importation, export, distribution and marketing of fish and fish products;
- j) on the licensing, control and use of fish aggregate devices and the rights to the aggregated fish, and prescribing times and the minimum distance from the devices that a vessel may fish;
- k) prescribing standards and measures for the safety of artisanal fishing;
- l) prescribing matters relating to satellite monitoring of fishing activities;

- m) relating to aquaculture, to recreational fishing or to canoe fishing including markings and identity of canoes;
- n) requiring the provision of statistical and any other information related to fisheries;
- o) relating to the control, inspection and conditions of operation of fish processing establishments;
- p) on returns concerning fishing operations required to be submitted to the Commission by licensees;
- q) on licenses and logbooks to be carried on board motor fishing vessels;
- r) for further conditions for fishing licenses;
- s) prescribing conditions for the approval of charter agreements; and
- t) generally for the achievement of the purposes of this Act.

#### **4.3.1 Highlights of the Fisheries Regulation**

The Fisheries Regulation is divided into eight main parts: The first part gives directive for the preparation of fisheries plans, licensing, registration and marking of fishing vessels. The second part prescribes the use of fishing nets, prohibition of fishing methods and fishing gears. The third part prescribes the kind of fishing equipments required in the Ghanaian waters. The fourth part deals with processes for fishing licenses. The fifth part looks at compliance measures. The sixth part prescribes monitoring mechanisms. The seventh part provides detail regulation for aquaculture operation. And finally the eighth part make provisions for miscellaneous matters including sanitary conditions of fish landing sites.

In general the strength of the Fisheries Regulation (LI 1968) is the regulation of fishing gears. It provides clear guideline for the types of gears that are prohibited in the Ghanaian fishing waters.

Section 8 of LI 1968 prescribes the use of fishing nets and bans the use of the following nets;

- a) multifilament set-net the mesh of which is less than fifty millimeters in stretched diagonal length in the marine waters or a riverine system,
- b) a monofilament set-net the mesh of which is less than seventy-five millimeters in stretched diagonal length in a riverine system, or
- c) a monofilament set-net in the marine waters.



•Multifilament set-net of mesh size less than 50mm (2 inches)



- monofilament set-net of mesh size less than 75mm (3 inches) in a riverine system
- monofilament set-net in the marine waters

Section 9: Prohibits the use of a beach seine in estuaries and areas designated as Marine Protected Areas by the Commission.



Beach Seine

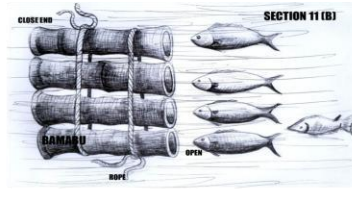


An Estuary

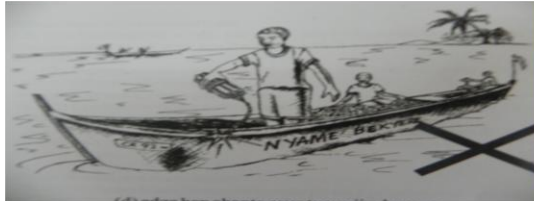
Section 11, Prohibits the use of Light aggregated method of fishing, trapping of fish with bamboo, use of explosives and obnoxious substances to tame fish. It also bans the operation Pair-trawling and fishing close to offshore oil installations.



**Light Aggregation Fishing**



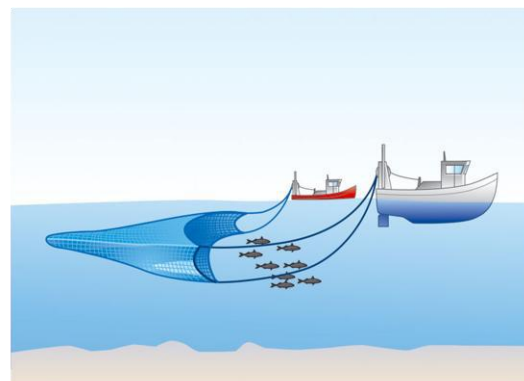
**Bamboo Trapping**



**Dynamite fishing**



**Fishing in designated oil and gas E&P areas**



**Pair Trawling**

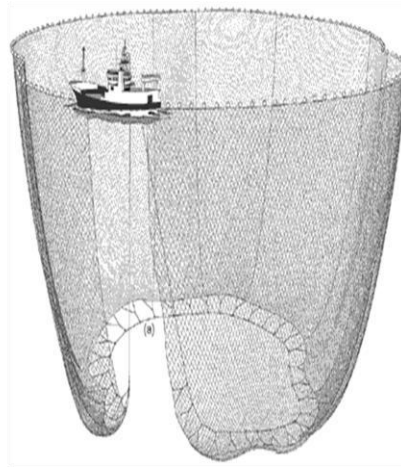
Section 12 prescribes the type of nets to used on board a motor fishing vessel;

- (a) a trawl net the mesh of which is less than sixty millimetres in stretched diagonal length in the codend, or
- (b) a shrimp trawl net, the mesh size of which is less than fifty millimetres in stretched diagonal length in the codend.
- (2) The minimum mesh size for small pelagic purse seine-net is twenty-five millimetres.
- (3) The minimum mesh size for large pelagic purse seine-net is hundred millimeters.





**Shrimp trawl net of mesh size less than 50mm (2-inches)**



**Large Purse seine net of mesh size less than 100mm (4-inches)**

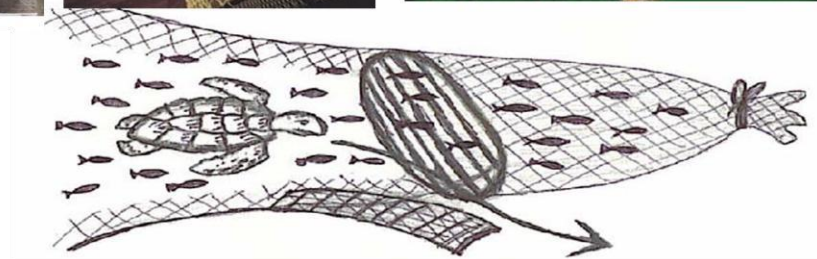


**Trawl net of mesh size less than 60mm (2.4 inches)**

Section16; Prohibits the use of Shrimp net without a Turtle Excluder Device. And also prescribes that any turtle accidentally caught shall be released into the sea.



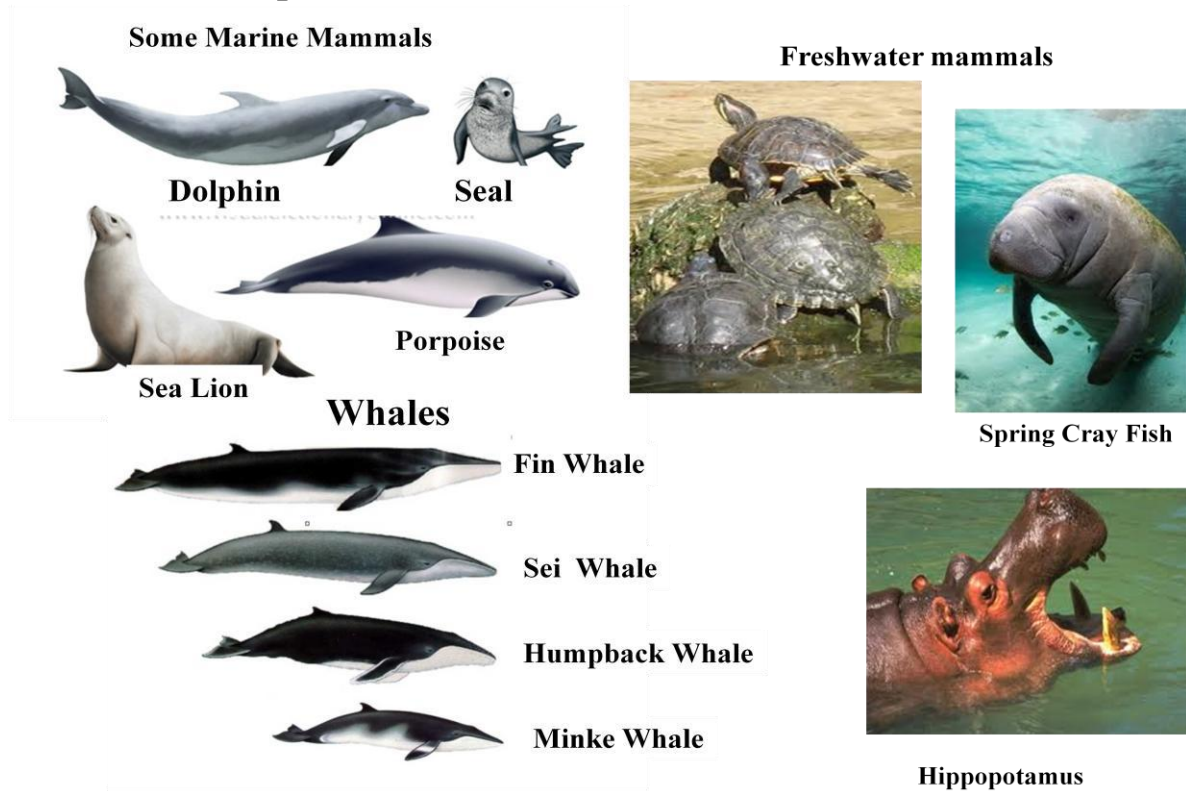
**Shrimp net .**



**Shrimp net with a Turtle Excluder Device**

**Section 17.** Prohibits the fishing of marine or freshwater mammals in the fishery waters of the country without prior written approval from the Director of Fisheries.

### **Examples of marine and fresh water mammals**



**Section 19.** prescribes equipments to be carried by motor fishing vessels and a small fishing vessel, these equipments include the following; anchor, chain cable, compass, horn or other instrument for producing sound signals, fire extinguishers

other equipments include the following;

- Life Jackets sufficient to support the members of its normal crew, lifebuoys or other buoyant apparatus sufficient to support all the members of its normal crew,
- An inflatable Life Rafts of a size to accommodate all the members of the vessel's normal crew,
- Flares or other pyrotechnic distress signals of a type and in quantities that the Licensing Officer may specify, and a tow rope, chain or wire suitable for towing a vessel.

### Some of Equipments to be carried by Fishing Vessels



#### 4.3.2 General Outlook of the Fisheries Regulation of 2012 (LI 1968)

On the whole the Fisheries Regulation 2010 (LI1968) and the Fisheries Act 625 is forward looking and seeks to conserve the ecological functions and services of the marine resources, hence there is enough ecological justification to support the implementation of the laws.

The laws also protect the artisanal fishers through several measures including the establishment of an Inshore Exclusive Zoon (IEZ) as areas of fishing for solely artisanal fishers.

The challenge has been the weak enforcement of these laws largely due to the fact that inadequate structures have not been put in place to facilitate communities' participation in the implementation of the laws. Maybe there is apathy and resistance to the laws because of low knowledge and understanding of the law.

When Fisheries Regulation (LI 1968) was being formulated there were plans for widespread community-level communications programs on the how and why the new regulations and the “roadmap” that would guide the implementation process. This was to be completed in parallel with the training of marine police enforcement units that would work with the Fisheries Commission Monitoring Control and Surveillance teams to improve enforcement. For a variety of reasons, neither the communications programs nor the training of marine police units have progressed to date. Inaction on these preparatory measures is one of many factors contributing to the recent difficulties for its implementation.



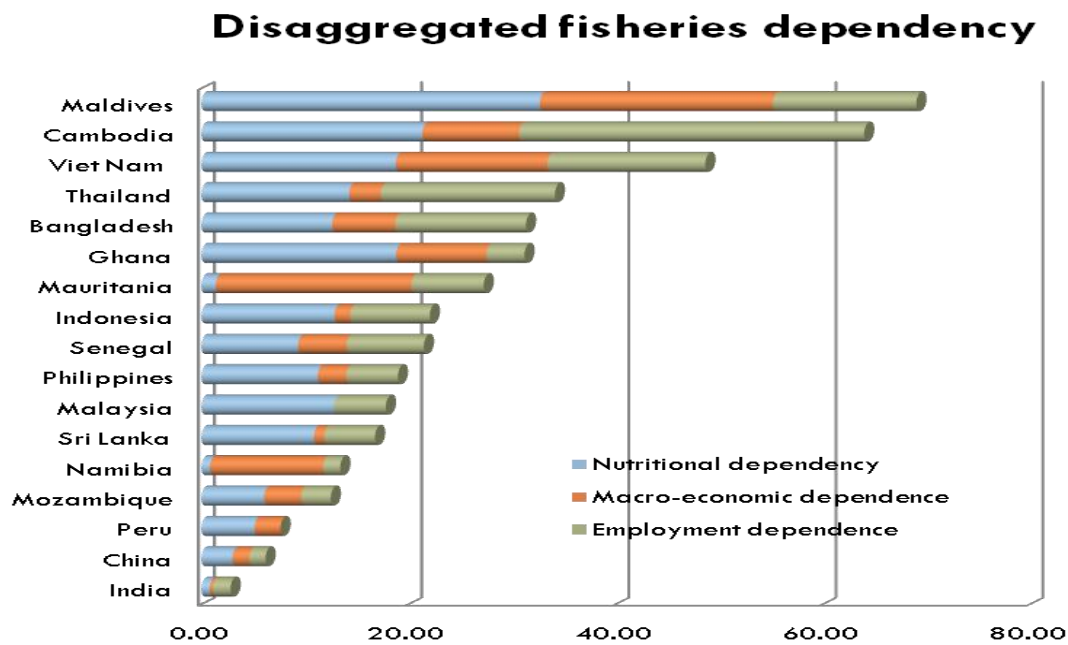
## CHAPTER FIVE

### 5.0 Challenges of Fisheries Regulation and Management

Globally, “Fishing” is the capture and removal of fish and other animal such as; clams, oysters, crabs, lobsters, and squid from the natural environment. It can be considered a form of hunting of wild animals from aquatic environments.

In most countries, fisheries production from wild harvests has leveled off or decreased. The reasons include overfishing, poor management, the open access nature of the resources, loss of critical habitats, removal of immature animals, and the use of destructive fishing techniques such as bomb fishing. Ecosystem integrity and productivity has also been compromised by removal of key species in the food chain, pollution from poor land use practices, and the poor quality and quantity of water flowing into wetlands. In essence, fisheries governance has not kept pace with fishing technologies, nor the increasing numbers of fishers attracted to these “open resources” and “common goods.” Because fishing often serves not only as a food source, but as a last resort for income for the poor. There is high dependency of fisheries as food, macro-economic dependency and employment dependency as indicated in fig 5.1 below.

**Fig. 5.0: Disaggregation of Fisheries Dependency**

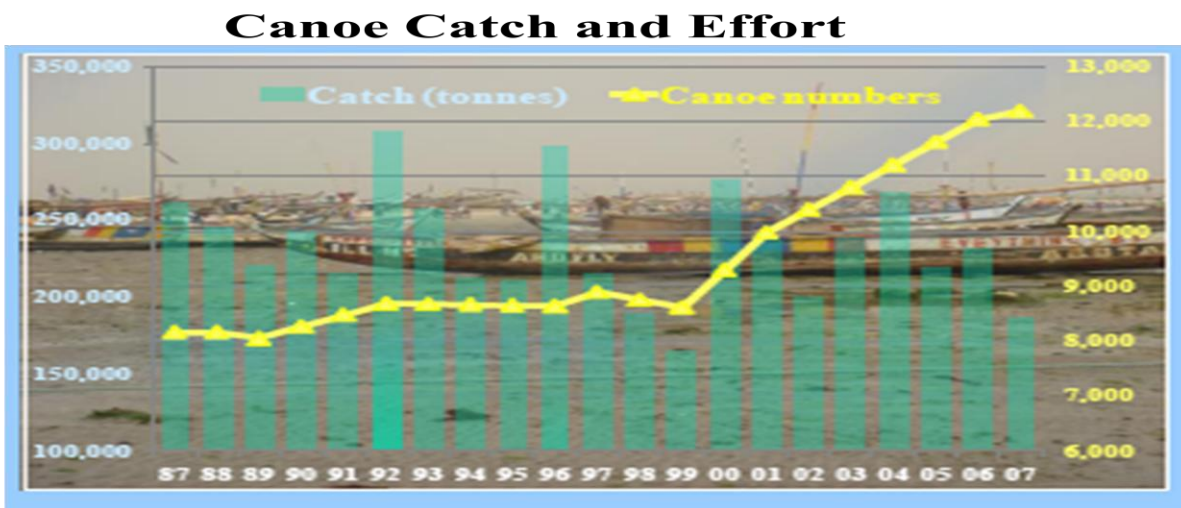


Source: the World Fish Center (WFC)

## 5.1 Situational Analysis of Ghana's Fisheries Sector

The situation in Ghana is not different, the country's marine fishery is open access with little or no controls, i.e., individuals enter and exit the trade at will. Increased numbers of fishers over time has led to too many fishers chasing fewer and fewer fish in the sea. These and other facts have contributed greatly to the overexploitation of nearshore fisheries resources and harm to marine ecosystems. This is reducing the overall ability of the ecosystem to sustainably produce an important high quality food source for the world. These same issues also present significant threats to aquatic biodiversity. The poor economic health of fisheries is caused by too many boats and fishers (overcapacity of fishing fleets). Improved harvest technologies, increases in marine pollution, and habitat degradation are other contributing factors. Already data available from the Ghana's Fisheries Commission indicates a significant increase in effort. See Fig 5.1 Canoe catch and effort data.

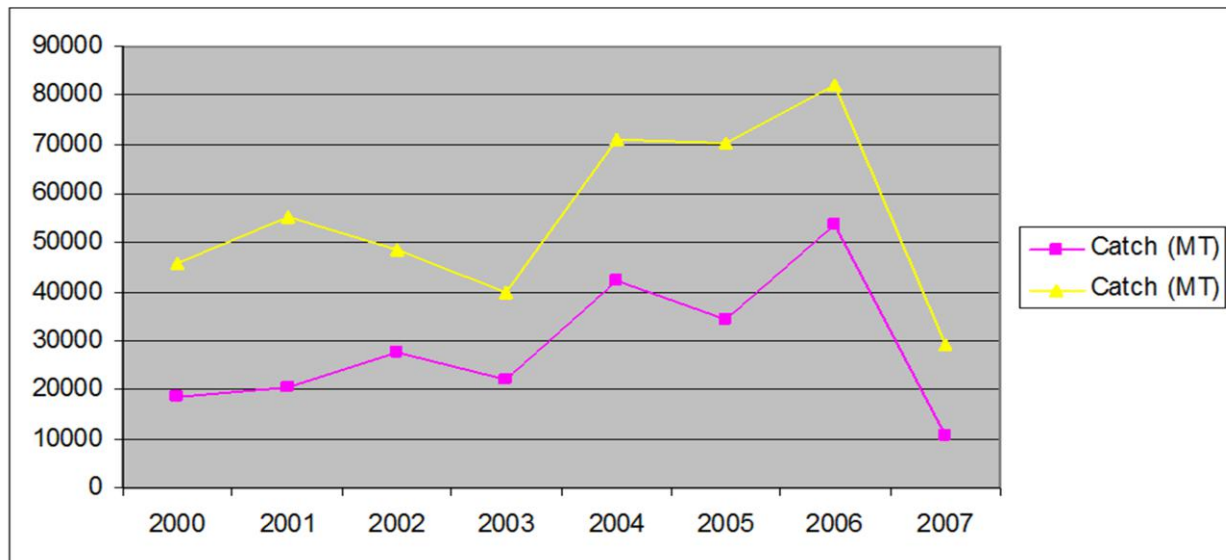
**Fig. 5.1: Canoe Catch and Effort in Ghana**



Even though effort is increasing there is evidence of declining catches per fishers and decreasing sizes of fish caught; these are typical signs of overfishing. If fish sizes become too small, they cannot reproduce resulting in recruitment overfishing and the danger of fish stock collapse. Already fish landings has decline substantially data gathered indicate an alarming decline; the case of Sekondi-Takoradi (STMA) in the Western Region is a reflective example. See below Fig. 5.3 fish production in Western Region.

**Fig.5.1.1: Fish Production in Western Region**

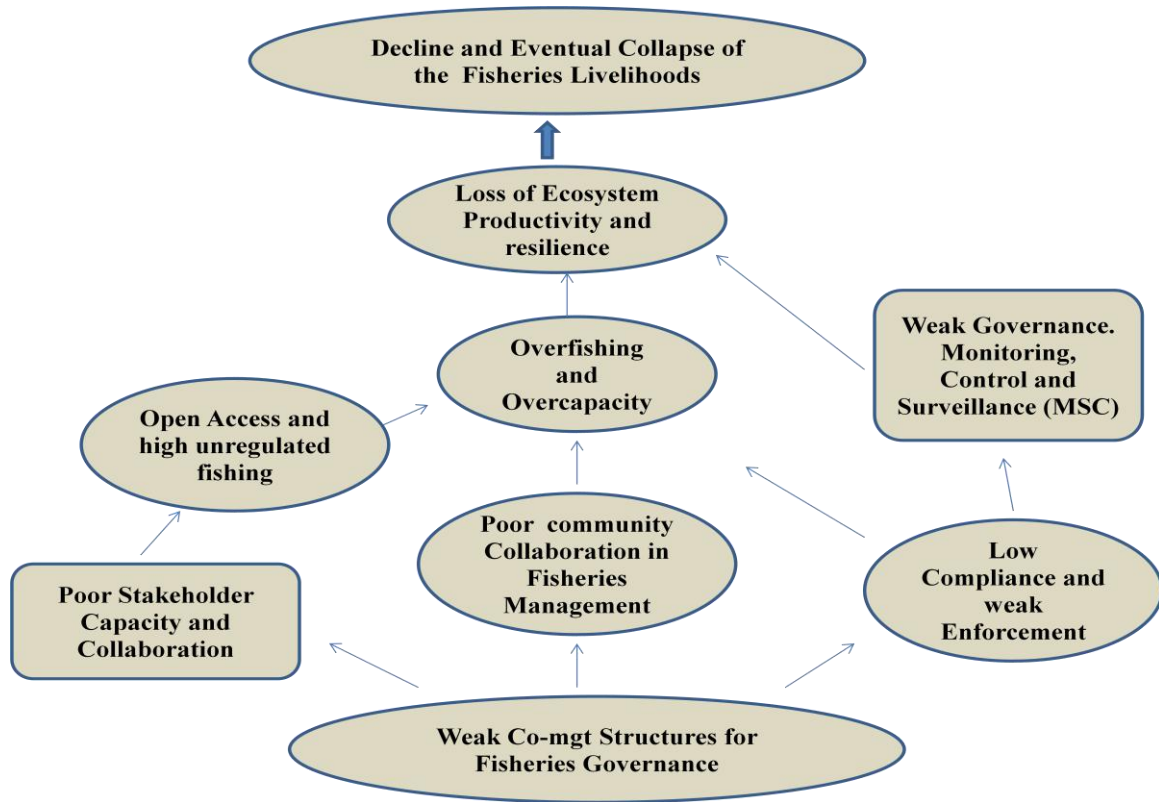
**Fish Production in STMA and Western Region**



## **5.2 Triggers of a Collapsing Fisheries Industry**

Triggers of a declining fisheries industry include evidence of declining fish catches which is normally fueled by over fishing and widespread use of unsustainable fishing methods, over capacity due to Illegal, Unreported and Unregulated fishing (IUU). The underlying elements for this are an open access regime and weak fisheries governance. Fig. 5.3 below builds a relation triggers.

**Fig. 5.2: Fisheries Triggers**



### **5.2.1 Open Access**

Open access and the resulting tragedy of the commons has been a universal feature of fisheries. The historical view of an inexhaustible fish supply became the blueprint for open access. Open access offers no incentives for long-term conservation practices. This has led to overcapitalization, excess effort, degraded habitat, and depleted resources worldwide. This ethic is slowly changing. New approaches to management involve secure access privileges, community-designated fishing areas, zoning, national access agreements, licenses and permits, and other forms of use rights or tenure.

### **5.2.2 Weak Governance**

Weak governance and the implications of such for changing open access policies, is widely acknowledged as one of the largest and most common problems within the sector. Factors characterizing weak governance in fisheries include: corruption, inadequate resources available

for management (physical, human, and financial), poor enforcement, illegal fishing, unclear traceability of point of origin, lack of stakeholder participation in decision-making, lack of clear vision, and user conflicts. The inclusion of fishers in management can strengthen governance infrastructure by creating responsible, economic incentives for conservation, and reducing the need for extramural enforcement. A stronger, corruption-free institutional framework will allow for capture of economic rent and reinvestment in management.

### **5.2.3 Overfishing and Overcapacity**

Overfishing and overcapacity are a consequence of a short-term view of fisheries in an open access structure. When incentives to conserve are introduced, a longer-term strategy can be put into place. This can move fisheries from subsistence level harvest to a more profitable economic activity that generates increased value per pound of fish harvested. This will help to encourage the use of less harmful gear types, reduce fishing effort, benefit ecosystem health, and preserve valuable habitats and ecosystem relationships.

### **5.2.4 Loss of Ecosystem Productivity and Resilience**

Loss of ecosystem productivity and resilience are two of the consequences of poor governance and overfishing activities. The coastal marine and freshwater environments are some of the most stressed ecosystems worldwide. They are being weakened by increased human populations and subsequent coastal alterations, loss of critical spawning habitat, changes in water flow, and runoff that includes suspended solids, pesticides, herbicides, and other chemical and biological waste products. Destructive fishing practices such as bomb fishing and cyanide, or the use of fine mesh nets can also cause long-term ecological damage and reduce the productive potential of estuarine and marine ecosystems. The use of bottom trawls and dredges on sensitive bottom types can also affect biodiversity and essential habitat. These problems will be exacerbated by the effects of global climate change, including sea level rise, increased sea surface temperatures, and increased ocean acidification.

### **5.2.5 Low Voluntary Compliance and Weak Enforcement**

Low levels of enforcement and limited compliance with national fisheries laws have been features of Ghanaian fisheries for many years and fishers did not expect that this would change.

Trawlers frequently operate in the inshore zone reserved for non-industrial vessels, and illegal light fishing has been widely practiced for several years. Banned gill (mono-filament) nets with smaller meshes than permitted are used by many fishermen and, several particularly damaging methods such as fishing with dynamite and poisons have become widespread.

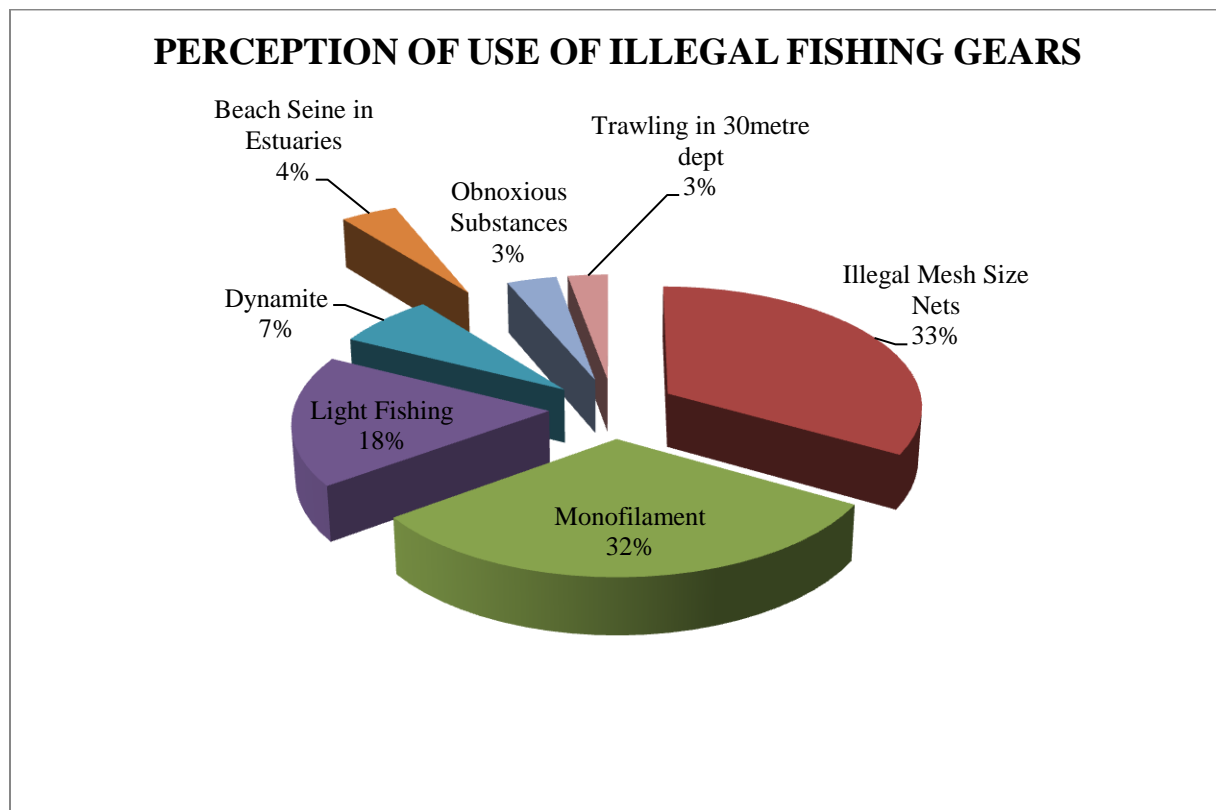
#### **5.2.5.1 Why Do Some Fishers Break the Rules?**

In every fishing industry, there are those who are tempted to break the rules. Research in many countries has shown that fishers decide whether to comply with a rule or regulation by weighing four factors:

- the amount of illegal gain or benefit that may result from violating the rules
- the size and severity of the expected penalty
- moral obligation; most fishers comply with rules that they perceive to be fair and necessary, and
- social influence; the rewards and punishments that a fisher's peers and community exert upon them.

Compliance with fisheries rules and regulations will be low when the profits from breaking the rules are high, the punishments are non-deterrent or nonexistent and individuals who would normally wish to conform to the rules conclude that such conformance is foolish when "everyone else is breaking the rules". Already there is wide-spread use of illegal fishing methods, a perception survey conducted in the Western Region ranked seven illegal fishing activities by fishermen in western region see Fig. 5.2.1 below.

Fig: 5.2.1: Perception of Use of Illegal Fishing Gears



This has been the situation in Ghana's marine fisheries over the past several decades. Breaking this well established pattern will be a major challenge that requires a carefully designed set of strategies to increase voluntary compliance while apprehending those who violate the rules in an even handed manner and punish offenders appropriately.

### 5.3 SWOT Analysis

A SWOT analysis of the fisheries sector reveals that fisheries stakeholders have some Strengths, Weaknesses, Threats and Opportunities towards effective fisheries governance, see Table. 5.3 below.

**Table 5.3: SWOT Analysis Of Some Fisheries Stakeholder Institutions**

<b>Fisheries Commission &amp; MOFA</b>			
<b>Strengths</b>	<b>Weaknesses</b>	<b>Threats</b>	<b>Opportunities</b>
<ul style="list-style-type: none"> <li>• Constitutionally established body to manage the fisheries sector.</li> <li>• Its Strength comes from the law (fisheries Act 625, an Act of the Parliament of Ghana and supported by the Ghana's Constitution.)</li> <li>• It has Mandate to conserve fisheries as a natural resource.</li> <li>• It has Legal provision of funds to work (Fisheries Development Fund-FDF).</li> <li>• It has the Capacity to generate revenue or funds internally.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of a political will be government to support the commission.</li> <li>• Limited capacity and competency to carry out MCS activities (no speed boats, light Aircrafts, etc)</li> <li>• There are bureaucracies and Implementation rigidities (not thinking outside the box).</li> <li>• Non disclosure of the utilization of funds (Fisheries Development Fund).</li> <li>• Insufficiency and omission of budgetary allocation. (for the 2011 National budget fisheries sector had no allocation)</li> <li>• Poor collaboration between the District Assemblies and the fisheries Com- mission.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Vulnerability complex for political influence (too much political influence and control).</b></li> <li>• Selective enforcement of the LI.</li> <li>• No implementation strategies for the LI and</li> <li>• Functional overlap between the Ministry of Agric and the fisheries Commission makes.</li> <li>• No secured tenure for the commission (as it faces dissolution when new government come to power)</li> </ul>	<ul style="list-style-type: none"> <li>• The fisheries ACT 625 is forward looking considering and making provisions for MPAs, Close seasons, etc.</li> <li>• The Act 625 establishing the Commission supports voluntary compliance and enforcement of the fisheries laws.</li> </ul>
<b>Districts/Metro Assemblies</b>			
<b>Strengths</b>	<b>Weaknesses</b>	<b>Threats</b>	<b>Opportunities</b>
<ul style="list-style-type: none"> <li>• Legal mandate to enact bye-laws to support fisher folks association (co-mgt/ CBFMCs).</li> <li>• They develop Medium Term Development Plans for the districts which include fishing communities.</li> <li>• They provide of developmental infrastructure (roads, education, etc).</li> <li>• They have the mandate to support CBFMC bye-laws gazetting.</li> </ul>	<ul style="list-style-type: none"> <li>• There is Weak communication to fisher folks from the assemblies.</li> <li>• There are no fisheries sub-committees in the Assemblies to discuss fisheries issues and provide support.</li> <li>• The Assemblies have Inadequate resource mobilization (they are not able to generate much internally generate funds for developmental projects to benefit fishing communities).</li> <li>• Inadequate knowledge of fisheries management (there is limited knowledge and interest in fisheries issues by the assemblies).</li> </ul>	<ul style="list-style-type: none"> <li>• The assemblies' inability to mobilize adequate revenue could lead to slow development of fishing communities.</li> <li>• Lack of interest by the assembly in fisheries issues could lead to the neglect of the sector.</li> <li>• Political party agenda influences assembly's developmental plans and this could lead to limited attention to some fishing communities.</li> </ul>	<ul style="list-style-type: none"> <li>• The assemblies have the mandate to implemented Special developmental projects for fishing communities.</li> <li>• There is an opportunity for the assemblies to support voluntary compliance campaign in fishing communities.</li> <li>• The assemblies could Support the formation of fisher folks associations (co-mgt) in the communities.</li> <li>• The assemblies</li> </ul>



			could host a district fisheries forum for sustainable fisheries mgt in the district.
<b>Security Agencies (Navy, Police, State Attorney, MCS, Etc)</b>			
<b>Strengths</b>	<b>Weaknesses</b>	<b>Threats</b>	<b>Opportunities</b>
<ul style="list-style-type: none"> <li>• They have the Legal mandate to provide security.</li> <li>• They are Skilled and qualified personnel in the security agencies to do effective work.</li> <li>• The security agencies have representatives on the fisheries Commission so they participate in the fisheries governance.</li> </ul>	<ul style="list-style-type: none"> <li>• They have poor knowledge of fisheries laws and this affects their role to enforce the fisheries laws.</li> <li>• Complexity in security especially the navy have to defend the national borders, check narcotics, human trafficking provide security for the oil companies as well arrest illegal fishers, this makes their work difficult .</li> <li>• There are challenges in implementation of the LI. (setting up of Ad hoc task force and influence of politicians, etc hamper the sustainable enforcement)</li> </ul>	<ul style="list-style-type: none"> <li>• Limited budget and resources for the Implementation of the LI may lead to poor enforcement and compliance.</li> <li>• Poor knowledge of the complexities of fisheries governance balancing enforcement and voluntary compliance may lead to enforcement over compliance that is unsustainable.</li> </ul>	<ul style="list-style-type: none"> <li>• The new fisheries regulation (L I 1968) provides adequate legal support for enforcement and proper fisheries management.</li> <li>• Presences of the fisheries commission provide institutional collaboration for fisheries management.</li> <li>• The security agencies have the capacity to capacity building to fisher folks association on MCS.</li> </ul>
<b>Civil Society Organizations</b>			
<b>Strengths</b>	<b>Weaknesses</b>	<b>Threats</b>	<b>Opportunities</b>
<ul style="list-style-type: none"> <li>• CSOs have strengths in the use of social tools to provide solutions in the fisheries sector.</li> <li>• CSOs have presence at the community level and the use of grassroots mobilization satisfies a bottom-up approach to development.</li> <li>• Fisheries Alliance of the CSOs made up NGOs and others have a mandate and are engaging in the fisheries sector.</li> <li>• CSOs implement independent initiative to support government's vision for the fisheries sector.</li> </ul>	<ul style="list-style-type: none"> <li>• There are only few CSOs in fisheries.</li> <li>• There is generally Lack of knowledge in fisheries.</li> <li>• Limited resources (financial/logistical) in CSOs to better engage in the fisheries sector.</li> <li>• Limited number of CSOs advocating for political commitment from government to the fisheries sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited funding for CSOs to engage in the fisheries sector could lead to general disinterest.</li> <li>• Limited support from stake holders especially the fishers could lead to disengagement of CSOs in the sector.</li> </ul>	<ul style="list-style-type: none"> <li>• CSOs have capacity to conduct social surveys and technical research and can build the can transfer some of these knowledge to fishers.</li> <li>• CSOs could provide support for co-mgt scenarios for fishing communities.</li> <li>• CSOs could support the government better manage the sector.</li> </ul>
<b>Fishers (Fishermen, Fish Mongers, Fishers Associations, etc)</b>			

Strengths	Weaknesses	Threats	Opportunities
<ul style="list-style-type: none"> <li>• They have practical knowledge of the fishing industry.</li> <li>• They have livelihoods rights on the marine space.</li> <li>• They have adequate knowledge of the marine and coastal areas.</li> <li>• They have occupied the marine space over the years and have gained traditional management experiences.</li> </ul>	<ul style="list-style-type: none"> <li>• They are not mobilized through an effective co-mgt structure,</li> <li>• They lack scientific knowledge to improve their fishing technologies.</li> <li>• They are highly porous with political interferences.</li> <li>• They have limited participation in fisheries governance (policy formulation and implementation)</li> </ul>	<ul style="list-style-type: none"> <li>• They have adapted to wide spread use of unsustainable fishing practices.</li> <li>• Political influence in fisheries in increasing over time.</li> <li>• Over dependence on subsidies (premix fuel, nets, Outboard motors,</li> <li>• Open Access regime promotes more entry.</li> </ul>	<ul style="list-style-type: none"> <li>• They have good knowledge of traditional fisheries management that can be transformed through and effective Co-mgt regime.</li> <li>• Their presence on the marine space could be exploited for improved compliance and enforcement.</li> </ul>

## **CHAPTER SIX**

### **6.0 Conclusion and Recommendation**

#### **6.1 Conclusion**

It is possible to reverse the decline of individual fisheries in Ghana. There are an increasing number of examples where local fisheries are being managed wisely and sustainably. These examples show it is possible to improve fisheries productivity, ecosystem health, and ensure more sustainable and profitable livelihoods for the millions of people dependent on fishing.

When Ghana's fishery is managed correctly it can make stable contributions to food security, livelihoods, and revenues. Reforming the governance and the management of this critical natural resource is also essential to maintaining stable and long-term economic development and conservation of biodiversity. It even may also be essential to the overall peace and security of the country.

There are global examples of innovative approaches that have led to long-term solutions for sustainable fishing. The key is having sound governance structures, proper economic incentives, secure tenure, and access rights. This includes conserving critical fish habitat, reducing destructive fishing techniques through the institutionalization of an effective collaborative fisheries management (Co-mgt) regime.

##### **6.1.1 Collaborative Fisheries Management (Co-mgt)**

Over the pass years fisheries authorities have not been able to enforce the existing fishing regulations despite quite good knowledge of the fisheries laws at least at the central level. Coastal communities have also not been empowered to contribute to the management of the resources at the local level. Seemingly, there is apathy on the part of communities to participate meaningfully in and enforcement of the fisheries laws.

Globally, the conventional management techniques where central government leads the enforcement of laws have been ineffective in conserving the natural resource such as fisheries, because enforcement of the law will not be effective due to the wide area of fishing activities and the level of efforts and resource required to monitor and patrol the marine space.

Recently with the passage of the Fisheries regulation 2010, LI 1968, several attempts has been made to strengthen the enforcement of the fisheries laws, one of the commendable steps include the establishment of the Marine Police Unit and the procurement of patrol vessel and Air-crafts to monitor, control and enforce the fisheries laws. However these efforts would only be successful if communities collaborate with the enforcement agencies to encourage high level of compliance and effective enforcement of the laws.

Collaborative resource management (co-mgt) has proved to be the effective method of resource management and for these reasons efforts must be made by; GNCFC, government, fishers CSOs, Traditional leaders and other stakeholders to institutionalized a well-functioning co-mgt regime in the fisheries sector.

### **6.1.2 Co-mgt Concept**

The co-mgt concept by virtue of its dependence on communities has objectively the greatest interest of promoting sustainable resource use through constructive compliance and enforcement of laws by locals. A co-mgt committee is defined as a local committee, formed in a community, based on existing traditional leadership authority and local government structures, legally empowered by Common Law, and comprising all stakeholders, to oversee the management and development of the resource. The principal responsibility the committees are to enforce national fisheries laws and also serve as communities' structure for improve resource governance.

Ghana's forestry sector has seen substantial improvement in enforcement of forestry laws in the pass 20years since the institutionalization of forest co-mgt committees known as the CREMA.

### **6.1.3 The Community-Bases Fisheries Management Committees (CBFMCs) Experience**

Though, attempts to encourage co-mgt of the fisheries resources with fishing communities through the establishment of Community-Based Fisheries Management Committees (CBFMCs) about ten (10) years ago, did not meet expectations; there is a still the opportunity to institutionalize a new co-mgt regime learning from the mistakes of the CBFMCs.

A critical analysis revealed that the formation of the CBFMCs were strictly a top-down approach and did not involved most fisheries stakeholders, Furthermore, it is on record that members of the CBFMCs were hand-picked by the Technical Officers of the then Fisheries Directorate and this did not make the committees representative enough. Other factors of the failure of the CBFMCs include but not limited to the following;

- Low involvement of CSOs, District Assemblies and other Stakeholders in the formation and operations of the CBFMCs. This did not allow the work of the CBFMCs to be fully integrated into the local governance system and also the CBFMCs could not attract support from CSOs and other stakeholders.
- There was weak legal framework to support the functioning of the CBFMCs, their bye-laws not gazette, no co-mgt legislation, etc
- No sustainability strategy was planned for the CBFMCs to ensure their continuous existence beyond the Project. E.g. there was inadequate sensitization during the formative process of the CBFMCs to ensure that communities understood the co-mgt process.
- Introduction of local premix committees and the new Landing Beach Committees to manage the pre mix fuel, outboard motors and other fishing inputs eroded the powers of the CBFMCs.
- The capacity of CBFMCs was not built towards internal and external revenue generation.

### **6.1.4 The Way Forward**

Since a top-down approach for the formation of the CBFMCs failed is it important that any new co-mgt structure should have a bottom-up approach combined with a top down approach.

## **6.2 Recommendation**

The fundamental approach to achieving effective enforcement of fisheries laws, high compliance of the law and effective regulation and management of the fisheries sector is through the institutionalization of an effective collaborative fisheries management (co-mgt) regime that will ensure that fishing communities, government and all other stakeholders participate meaningfully in the fisheries governance.

### **6.2.1 Advocacy for the Institutionalization Co-mgt Regime**

For any co-mgt framework to be sustained it should be fully integrated into the decentralized system to ensure effective communication and active fisheries engagements with the District Assemblies at the district and community scale. The Co-mgt groups should be strongly linked with the Fisheries Commission, where the commission would provide technical services through the fisheries offices. (at the district, regional and nation level). Local stakeholders (NGOs, service providers, etc) should to be part of the Co-mgt structure at the community, district, regional and national level where applicable.

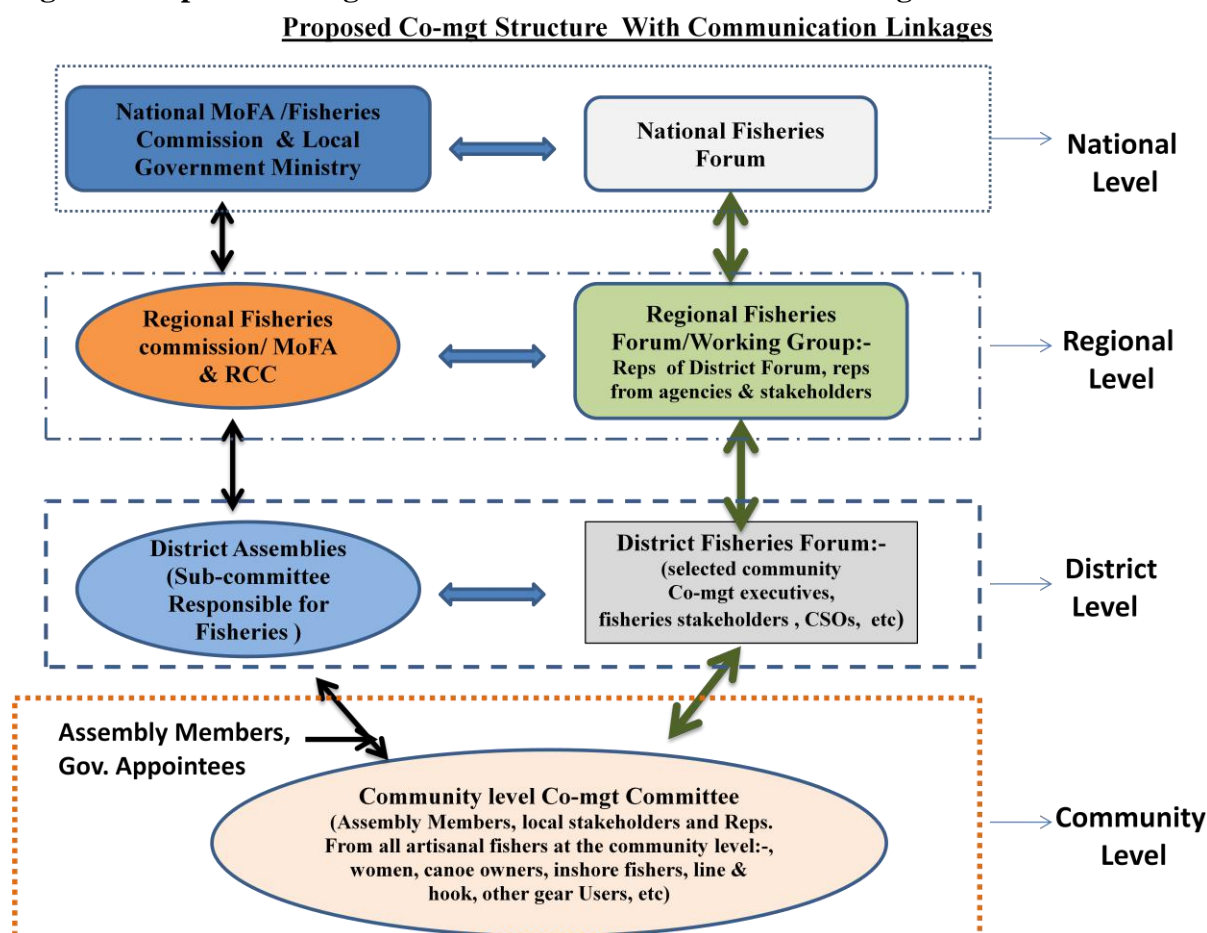
It is recommended that the co-mgt structure should have four levels; Community, District, Regional and National platforms. Strong vertical and horizontal communication among the four levels is necessary to engender effective coordination and function of the Co-mgt structure as indicated in **Fig 6.2 below**.

This proposed co-mgt structure will have to be built on a stronger collaboration of MoFA/ Fisheries Commission and the Ministry of Local Government. This collaboration should flow from the national level through to the community level, where unambiguous roles and responsibilities are outlined for the various institutions.

Catalyzing a District, Regional and National Fisheries Forum/Working Groups would be relevant to provide communication and engagement platforms at the various levels. Each forum would meet regularly to discuss fisheries issues and make recommendations to the aligned institutions. The forums would also engage at each level for improved fisheries governance. The District fisheries forum for example would have representatives from the community co-mgt committees,

NGOs, Assembly Members, Local Chiefs, fisheries officers and other selected stakeholders. The Presiding Member of the District Assembly, the Chairman of the District Sub-committee responsible for fisheries and few other officers in the District Assembly could be invited to the forum to encourage proper communication and linkage with the District Assemblies.

**Fig. 6.2: Proposed Co-mgt Structure with Communication Linkages**

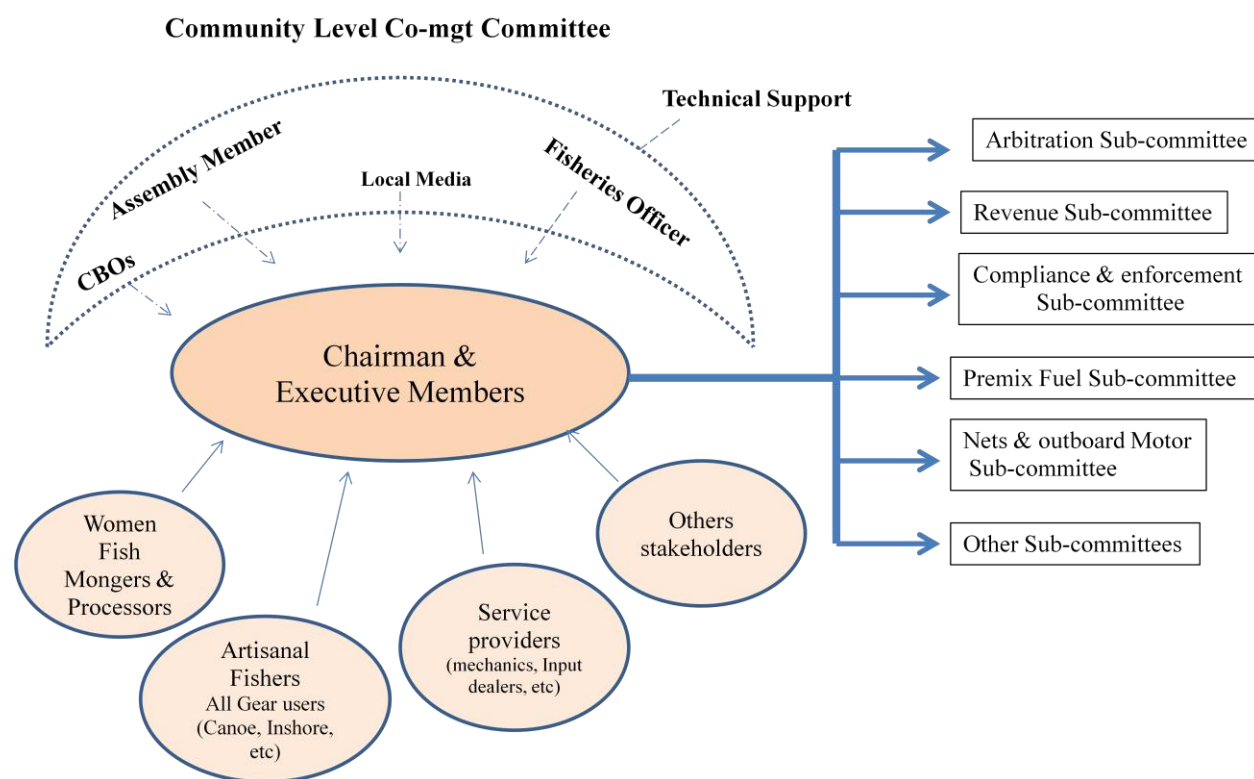


### 6.2.2 Community Level Co-mgt Structure

At the community level the co-mgt structure should be built around the existing traditional system (chief fishermen, elders and konkohene, etc) and possibly the Chief fisherman should chair the committees. This would strengthened the traditional system and integrate the co-mgt process to avoid conflict of functions. Representatives of all the fishing gear should be represented on the co-mgt committee, especially the women fish mongers. Women fishmonger

and processors are major fisheries stakeholders; for a better management and development of the fisheries sector, these women, though vulnerable and marginalized, but resilient, must of necessity and by right be empowered by friendly policies to work within this new co-mgt framework. Fig 6.2.2: indicates the structure and membership of the Co-mgt committee at the community level.

**Fig. 6.2.2 Structure of Community Level Co-mgt Committee**



It would be relevant for the community co-mgt committee to control fisheries input such as sale of premix, outboard motors and net distribution among others, for the generation of revenue from those sources. The Co-mgt may have sub-committees including but not limited to: Arbitration committee, Premix committee, enforcement task force, Revenue Generation and Development committee. Etc.

For effective functioning of the co-mgt committees' technical support from fisheries officers, CBOs, Assembly members and other local stakeholders is relevant.



### **6.2.3 Territorial Boundaries for fisheries Co-mgt committees**

The territorial boundaries of the community and district Co-mgt should be structured in the District Assembly system. The area of control could be from the shore/ landing Beach to 6 nautical miles/ 30 meter depth Inshore Exclusive Zone (IEZ). The IEZ has been demarcated by the fisheries Act, as an exclusive zone for artisanal fishing only, so it there easy to manage fishing activities within this zone.

### **6.2.4 Mandate of Co-mgt Committees**

The Co-mgt committees at the beach level should have some defined mandate to guide their operations, the mandate of the new co-mgt committees could include but not limited to the following:

- Registration of canoes (stock taking and documentation of all canoes at the landing sites and keeping an up-to-date register of canoe, Part of the registration fees could be retained by the committee for their work)
- Management of fisheries inputs (distribution and sale of Nets, premix, outboard motors, etc) levels on these inputs could be used support their work.
- Power of arbitration: to arbitrate simple fisheries issues, including low level conflicts and violation of bye-laws.
- Powers to enforce fisheries laws. (ensure that fishermen do not use unsustainable fishing methods at the community level)
- Enforcement of traditional norms/ regulations, local bye-laws, etc (non-fishing days, etc) – especially the bye-laws that are azette and do conflict with national laws.
- Manage fishing and fisheries related activities in the community especially of the Artisanal fishers (Inshore, Canoes, fish mongers, service providers/ fish workers, etc.)
- Manage/ monitor the health of the wetlands with the support of relevant agencies, e.g. EPA, FC, WRC, MMDAs, Traditional Authorities.
- Manage activities at the shore line with relevant agencies including; sand winning, sea turtle nesting ground, mangroves, fishing, etc

### **6.3 Advocacy Strategies for the Institutionalization of Co-mgt Regime**

The GNCFC should concentrate efforts into building strong regional, district and community co-mgt structures. GNCFC could initiate this Co-mgt process through mobilization of stakeholders at the community level (landing beach level) to form the co-mgt committees. The Chief fishermen who are already members of the GNCFC council could lead this action and engage the various District Assemblies, the fisheries commission and other institutions to support the Co-mgt structures.

Already, opportunities exist among development partners and CSOs for support for this co-mgt process, the Fisheries Alliance and other CSOs are already advocating for such a co-mgt process, also the World Bank WARFP project to be implemented in 2013 hopes to pilot some co-mgt interventions. The Hen Mpoano project supported by USAID in the Western Region has also initiated an advocacy for the development of a fisheries co-mgt legislative.

The GNCFC should therefore engage these available opportunities to identify possible linkages and support for the institutionalization of a well functioning fisheries co-mgt regime.

It is also important for this process that the GNCFC develop a well tailored engagement strategy to engage the various stakeholders to ensure their collaboration and support for the process.

It was recommended that some actions including the following are relevant to feed a new co-mgt process:

- A comprehensive study of the decentralized governance system to outline how a new co-mgt could be integrated in that system and be sustained.
- A study of the traditional system –ethics, authorization and communication (paramount chiefs, local chiefs) to make proposals to improve communications between Chief fishermen and local chiefs. And also insulate chief fishermen and the co-mgt committees from undue traditional influences.
- Study the functions for the Commissioners of Fisheries Commission to make proposals for improved functioning and institutional collaboration.
- Development of district level bye-laws on fisheries and have them gazetted.
- Development of incentive mechanisms for the Co-mgt committees.

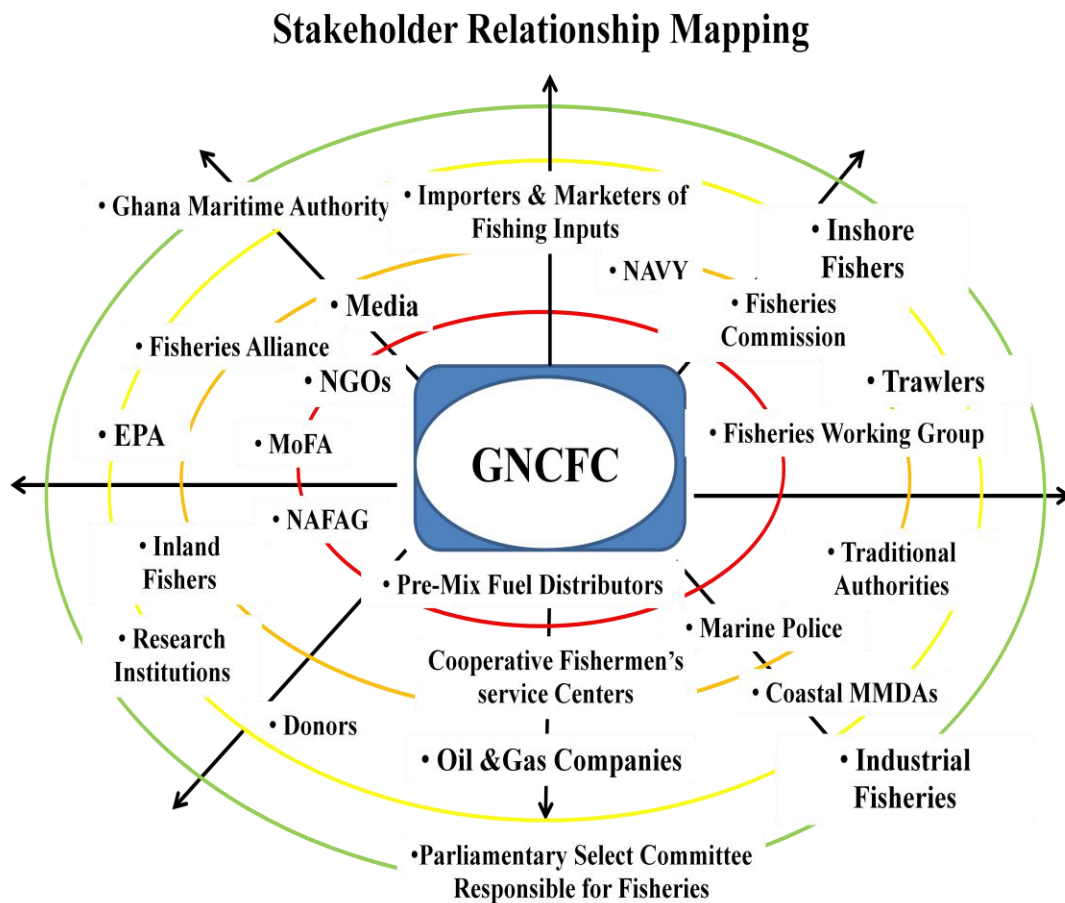
- Engagement with tradition leaders to gazette chief fishermen involved in the Co-mgt system to insulate them from political influences.

### 6.3.1 Stakeholder Relationship for an Effective Advocacy Strategy

To implement an effective advocacy strategy the GNCFC should build a data base of the stakeholders and understand the relationships that exist with these stakeholders. This will provide some basis to develop a well tailored engagement strategy for the co-mgt structure.

Fig. 6.3 below draws the stakeholders mapping with the GNCFC.

**Fig 6.3 Stakeholder Relationship Mapping**



**Table 6.3: Advocacy Strategy and Actions**

Strategies	Actions	Key Target
1. Communication and sensitization in coastal community level for improved understanding of the fisheries laws to encourage compliance and support for a fisheries co-mgt regime.	<ul style="list-style-type: none"> <li>• Organize community sensitization durbars of the fisheries laws at the beach level.</li> <li>• Design and use communicative posters and other materials to aid the communication of the laws.</li> <li>• Use community drama groups to communicate compliance messages to communities.</li> </ul>	Community fisher folks, women fish mongers, Assembly members, Artisanal fishers, Local leaders, local chiefs, etc.
2. Mobilization and formation of fisheries Co-mgt committees in communities.	<ul style="list-style-type: none"> <li>• Sensitize all chief fishermen and engagement them to mobilize community level stakeholders for the formation of the co-mgt committee.</li> </ul>	Chief fishermen, community leaders, etc
3. Engagement with District Assemblies, Fisheries Commission and other agencies/Institutions for technical support for the co-mgt committees.	<ul style="list-style-type: none"> <li>• Hold meeting with District Assembly officials including, the Presiding Members, DCEs, DCDs, Planners, Community Development Officers, the Chairman of the Sub-committees responsible for fisheries and all relevant Head of Department at the district level to discuss the importance of Co-mgt and to solicit their support for the process.</li> </ul>	District Assembly Officials, DCD, DCE, HoDs, Planners, Sub-committees chairmen, etc.
4. Engagement with development partners for support to institutionalized the co-mgt framework	<ul style="list-style-type: none"> <li>• Identify the available partners, the funding opportunities and their interests.</li> <li>• Develop and submit proposals for funding</li> </ul>	The Hen Mpoano Project, DFID, Star Ghana, Kasa, the World Bank WARFP project, Oil Companies, etc.
5. Networking and partnership with CSOs and other partners for assistance for the co-mgt process.	<ul style="list-style-type: none"> <li>• Identify CSOs interested in fisheries.</li> <li>• Initiate contact with them and lobby for their support.</li> </ul>	Local & international NGOs, CBOs, FBOs, Oil Companies, etc.
6. Engagement with government, policy makers and other stakeholders for policy formulation and implementation in support on improved fisheries management.	<ul style="list-style-type: none"> <li>• Develop and present policy briefs to the policy makers,</li> <li>• Organize dialogue meetings with MPs and minister responsible for fisheries.</li> <li>• Use electronic and print media to constructively engage the attention of government, through press conferences, publishing of articles in print media, use of political radio programs and call-in programs.</li> </ul>	MPs, Ministers of State, the President of the Republic, etc.

7. Engage the security agencies for improved collaboration towards compliance and enforcement of the fisheries laws	<ul style="list-style-type: none"> <li>• Hold dialogue meetings with the security agencies and agree of enforcement procedure,</li> <li>• Engage the security agencies for support for the co-mgt structures.</li> </ul>	Marine Police unit, Ghana Navy, Air Force and Fisheries MCS Officers
---	--	--

#### **6.4 Sources of Funding to Support the Co-mgt Process**

It is relevant that the GNCFC explore various avenues to generate financial support for the implementation of the actions toward this process. Some avenues to generate funding include but not limited to the following:

- Internally generated funds from GNCFC members e.g. payment of membership dues, contributions, profit from sale of fishing inputs (premises, nets, outboard motors, etc.) and fines.
- Oil and Gas industry could be target for support for the implementation of fisheries related mitigation activities especially communication and engagements for improve co-mgt. also oil the CSR department of the companies could be targeted for supports.
- District Assemblies: the MTDP of coastal districts include activities for the promoting of fisheries livelihoods this could be a
- Fisheries Commission's mandate includes education and sensitization of fisheries laws, the GNCFC could exploit the possibility of partnering with the Commission for the implementation of education campaigns.
- The Fisheries Act 625, establishes the Fisheries Development Fund to promote artisanal fisheries among other things, however the utilization of the fund has not reflected the expected support for the artisanal sector. GNCFC could engage the fisheries commission and other stakeholders for support from this source.
- Other opportunities exist for support from CSOs through project grant; the GNCFC could seek partnerships and support from these CSOs.

#### **6.5 Cost effective Actions by Community Level Fisheries Groups**

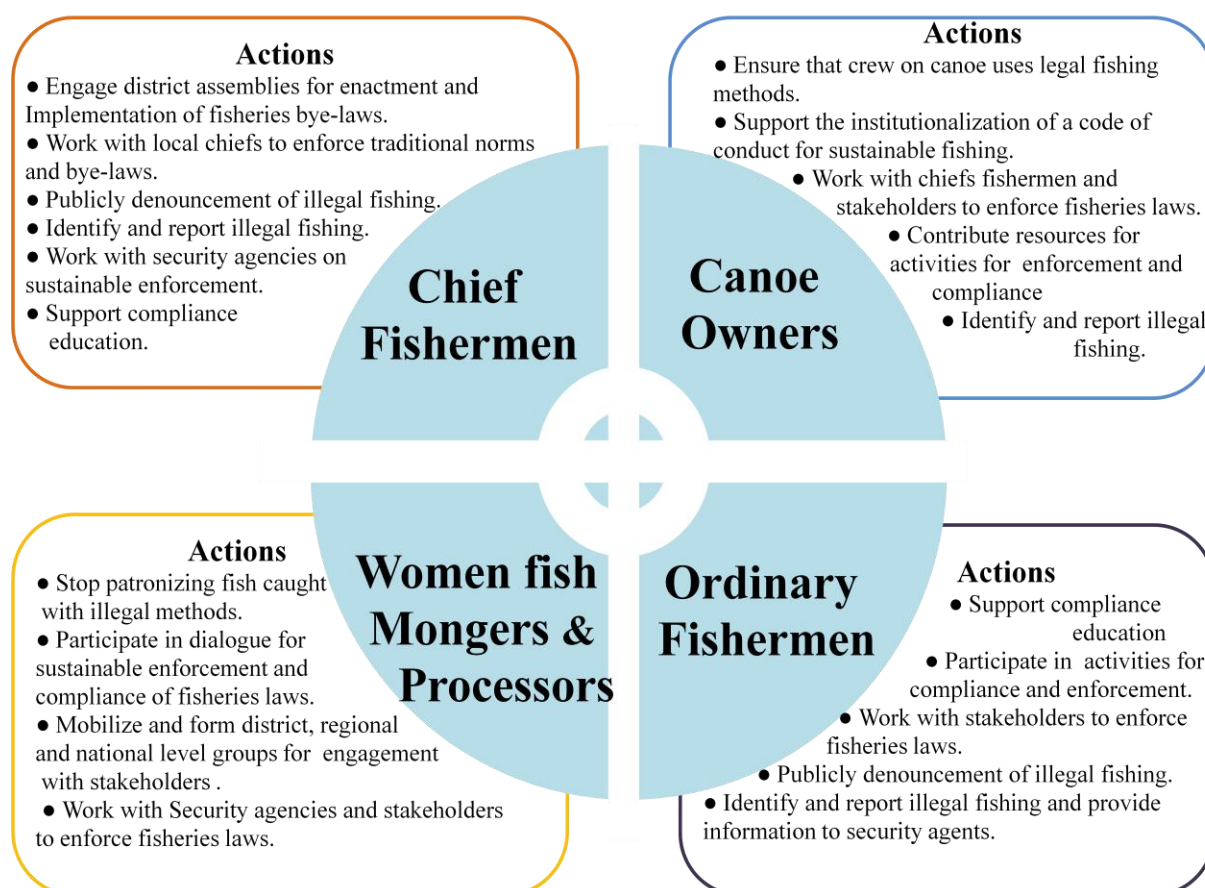
The various fisheries groups/ Association within the GNCFC could initiate parallel actions to support the process. For example the Chief fishermen, the Canoe owners, the Ordinary fishermen and the Women fish mongers could initiate specific actions to contribute to sustainable

compliance and enforcement of the fisheries laws through a co-mgt effort. Some the actions include but not limited to:

- Self compliance of the fisheries laws and public denouncement for illegal fishing methods.
- Support compliance education and expose illegal fishing.
- Reject all fish caught with illegal fishing methods.
- Engage district assemblies for the enactment and implementation of fisheries bye-laws at the district levels that support co-mgt.
- Etc

Such actions are cost effective but very efficient towards the ensuring effective engagements at the community-level towards improve fisheries governance. Refer to **Fig 6.5** for detail actions prescribed for the various fisheries groups.

**Fig.6.5: Specific Actions by members of GNCF for Co-mgt Process.**



## Reference

1. Atta-Mills, J; Alder J; and Sumaila U.R (2004); ‘The decline of a regional fishing nation:
2. Barbara Walker (2002) Engendering Ghana’s Seascape: Fanti Fishtraders and Marine Property in Colonial History.
3. Barbara Walker (April30-May 1999)(1999, Regents of the University of California) Dividing and Conquering the Sea the Colonial History of Marine Fishing and Property Rights in Ghana, paper presented at Marine Environmental Politics in the 21st Century Conference under the auspices of the MacArthur Program on Multilateral Governance, Institute of International Studies, UC Berkeley (available at <http://globetrotter.berkeley.edu/macarthur/marine/papers/walker-1.html> as of 14th April 2005).
4. Directorate of Fisheries, (2005a); ‘Compilation of National Fish Production, Imports,Exports and Consumption in Metric Tonnes (2001-2004)’. Directorate of Fisheries, MoFI Technical Report. Accra, Ghana.
5. Directorate of Fisheries, (2005b); ‘Support for Pro Poor Fisheries Development in Ghana’. Directorate of Fisheries, MoFI Technical Report. Accra, Ghana.
6. Fisheries Act, 2002 (Act 625), Government of Ghana Publisher.
7. Food and Agriculture Organization (1998); ‘Country Profile: Ghana. FID/CP/GHA Rev.3.
8. Food and Agriculture Organization (2004b); ‘Fishery Country Profile: Republic of Ghana’. Food and Agriculture Organization of the United Nations Organization, March 2004. [www.fao.org](http://www.fao.org).
9. Food and Agriculture Organization (undated); ‘Ghana – General Economic Data’. Internet material available at [http://www.globefish.org/files/GHANA\\_141.pdf](http://www.globefish.org/files/GHANA_141.pdf)
10. Food and Agriculture Organization of the United Nations (FAO), Rome. Document available at [http://www.fao.org/fi/dcp/FICP\\_GDA\\_E.asp](http://www.fao.org/fi/dcp/FICP_GDA_E.asp).
11. Food and Agriculture Organization, (2004a) ‘Information on Fisheries Management in the Republic of Ghana’. Food and Agriculture Organization of the United Nations Organization, March 2004. [www.fao.org](http://www.fao.org).
12. G. A Sarpong, Customary Water Laws and Practices: Ghana available at [http://www.iucn.org/themes/law/pdfdocuments/LN190805\\_Ghana.pdf](http://www.iucn.org/themes/law/pdfdocuments/LN190805_Ghana.pdf) as of 14th April 2007.

13. Ghana Statistical Service (2000), 'Ghana Living Standard Survey Report (GLSS 3 &4)', Accra, Government of Ghana.
14. Ghana Statistical Service, (2002); '2000 Population and Housing Census: Summary
15. Koranteng K. A. (1992), The Marine Artisanal Fishery in Ghana, Recent Developments and Implications For Resource Evaluation, A Paper Presented at The World Fisheries Congress, Athens, Greece, May 3-8, 1992.
16. Koranteng K. A. (1997), Marine Fishery Resources of Ghana's Coastal Zone, in Evans S. M., Vanderpuye, C. J. and Armah, A. K. (eds), The Coastal Zone of West Africa: Problems and Management, Proceedings of an international Seminar 23-28 March, 1996, Accra, Ghana.
17. Lawson, R. 1968. "The transition of Ghana's fishing industry from a primitive to a mechanised industry," Transactions of the Historical Society of Ghana 9:90-104.
18. Lawson, R. and E. Kwei. 1974. African Entrepreneurship and Economic Growth: A Case Study of the Fishing Industry of Ghana. Accra: Ghana Universities Press.
19. Lawson, R. M. and Kwei, E. A. (1974), African Entrepreneurship and Economic Growth: A case study of the fishing industry of Ghana, Ghana Universities Press.
20. Ocran, R. 1973. "Impact of the fishing industry on the national economy, in The Ghana Fishing Industry. Tema, Ghana: Fishery Research Unit.
21. Report of Final Results'. The Ghana Statistical Service Publication. Accra-Ghana
22. Seini, A.W., Nyanteng, V.K, Ahene, A.A. (2002); 'Policy Dynamics, Trends in Domestic Fish Production and Implications for Food Security in Ghana'.