

# MANAGEMENT OF CONFLICTS IN TROPICAL FISHERIES

## GHANA FINAL REPORT

### 1.0 INTRODUCTION:

Long before the introduction of mechanized fishery in 1946, Ghana (then Gold Coast) had a long traditional fishery in its coastal waters. In those early days there was a powerful day-out canoe fleet, propelled by oars and sails, which used fishing gears, such as Ali nets, Beach seines, Hook and Line, Cast nets and Set nets, to fish for the then abundant resources close inshore.

The introduction of Outboard engines to the canoes started in the 1950s, four years (1946) after the Fisheries Department had imported two 30-footer motorized fishing boats from the United Kingdom into the country for experimental fishing (Ocran, 1972). The Outboard motors enabled the canoes to move farther out to sea from the coast and to make bigger catches quickly in fewer hours or days than before. The success of the two 30-footer 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; and when the Tema Boatyard was established in 1962, a large fleet of wooden fishing vessels with lengths up to 70-feet were built for the industry. 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.

Commercial tuna fishery started in 1962 when the government of Ghana entered into a long-term agreement with the Star-Kist International of the U.S.A. to develop the tuna industry and to base foreign flag tuna vessels at Tema. Also in 1962, the State Fishing Corporation was established. The Corporation which was based in Tema, imported a large fleet trawlers whose fishing activities occurred outside the continental shelf of Ghana, that is, vessels fished off Angolan, Senegalese and Mauritanian coastal waters on bilateral agreements.

Currently, the different types of fishing crafts in the country have been categorized into the following broad sectors;

- (i) Artisanal (Canoe) fishery (12'-54')
- (ii) Inshore fishery (27'-32')
- (iii) Semi-Industrial fishery (32'-70')
- (iv) Industrial fishery (70'-200')
- (v) Tuna fishery (168'-192')

With the exception of the tuna fishing vessels whose fishing activities are limited to the anchovy fishery (Bait boats only) as baits for tuna fishing outside the continental shelf of Ghana, almost all the other fishing fleet based in Ghana operate within the Ghanaian continental shelf, which is rather narrow with an area of about 24,300km<sup>2</sup>. These fleets exploit the same resources, hence competition is unavoidable with its attendant conflicts.

The Inland fishery is mainly carried out on the Volta Lake. All types of artisanal methods of fishery are practiced on the lake, and are associated with several conflicts of interests among the fishers. Annual fish production from the Inland fishery is about 45,000 m/tons. The marine fish production averages 300,000 m/tons per annum. The contribution by the artisanal (canoe) fishery is about 65-70% of the total annual fish production. The artisanal sector controls about 8,000 canoes operated by about 100,000 full-time fishermen. The artisanal (marine) fishery consists of about six sub-sectors, namely Ali fishery, Poli/watsa fishery, Drifting gill-net fishery, Set net fishery, Hook and Line fishery and the Beach seine fishery. Except for the Drifting gill-net fishery (5%) which operated in offshore waters to look for sharks, Tunas and Billfishes the rest of the canoe fleet concentrate their fishing activities within 5-30m depth zones (0.5-15n.m) where both the inshore and other industrial fleet also maneuver to carry out fishing operations.

The fishery generally operates under the assumption that resources are inexhaustible, as such access to the resource is free and that no single participant in the fishery can prevent others from exploiting the same fishing grounds. Consequently, ever increasing population growth offers new entrants into artisanal fishing. This contributes to depletion of fish stocks, more competition and further conflicts, which are rather widespread.

Decreased catches resulted in increasing poverty of fisher folk. Artisanal fishermen then resorted to the use of larger nets, and mesh sizes less than one inch to harvest juveniles. Explosives and chemicals that assist fishers to catch lots of fish at a go but destroy animal and plant life of the marine ecology were also used. This phenomenon landed artisanal fishermen and their communities into cyclical poverty.

Thus, the multiplicity of different sectors of the artisanal fishery, all searching for fish in competition with other fishing crafts naturally brings about some considerable amount of conflicts among the fishers occasionally. The incidence of conflicts quite often occurs among fishers operating with the same fishing gears, i.e. canoe viz canoe, canoe viz inshore boat, canoe viz industrial/ commercial vessel, and inshore boat viz inshore boat, inshore boat viz industrial/commercial vessel etc.

Conflicts arising out of fishing operations result from either all the different types of fishing crafts struggling to fish in the same fishing ground and for the same species of fish or lack (on the part of both the industrial and artisanal operators) of respect for the traditional and industrial fishing norms and ethics. Consequently, with such an enormous size of the artisanal fishing fleet (over 8,000 canoes), plus the inshore and industrial fleet – all competing for the exploitation of the same depleting resources within the same limited fishing grounds (up to 60m

depth zone), the incidence of frequent fishing conflicts tends to the natural causes, and cannot be over-emphasized.

This report is a summary of studies carried out during 1999 – 2000, on the identification of the different types of conflicts emanating from the coastal and inland fishing operations in Ghana; their causes, resolutions, analysis and recommendations aimed at the improvement and development of the management system of the fishing industry in Ghana.

## 2. CONFLICTS IN THE WEST AFRICAN SUB-REGION WITH PARTICULAR REFERENCE TO GHANA

The Marine fisheries in the sub-region have been characterised by the existence of artisanal and industrial fisheries over a period of time. Both fisheries tend to interact not only in a biological sense but also have an inter-twined relationship technically, institutionally, economically and environmentally. Conflicts in the exploitation of fisheries resources in the sub coastal region are due primarily to the common property characteristics of the resource being more or less localised and the phenomena of open access regimes. With modernization of the fisheries, it is now possible for some small-scale fisheries to fish in deeper areas thus heightening or contributing to the number of conflicts.

## 3. IDENTIFICATION OF THE DIFFERENT TYPES OF CONFLICTS (TYPOLOGY OF CONFLICTS).

Conflicts arise when the action of one fishery tends to undermine that of another in such a way as to make it less efficient. With the advent of various types of fisheries targeting both common and shared stocks within the same fishing grounds, conflicts between these various groups are eminent. In the sub-region it has been established that two main fisheries exist; namely Canoe (artisanal) and Industrial. Between these two fisheries are the semi-industrial fisheries. Conflicts occur amongst these fisheries at sea and also on land.

### 3.1 CONFLICTS WITHIN THE ARTISANAL FISHERY

Coastal tribes or ethnic groups are widespread and their main preoccupation is fishing and farming. Fishing off fishing villages is usually carried out as a form of territorial use rights. Traditional or Cultural norms govern fishing within such communities. Due to the large number of canoes operating within the narrow continental shelf of most countries, rampant conflicts in the form of collisions and struggles over fish schools are evident.

Conflicts at sea amongst canoe fishermen mainly arise due to:

- Struggling for the same stock of fish;
- Fishing within limited areas causing collisions;
- Running into nets of others or casting of nets over others;
- Poor visibility often on foggy days;
- Improper markings on nettings;
- Lack of adequate training for coxwains in maritime operation;

- Lack of enforcement of fisheries laws and regulations;

On land however, conflicts are due to :

- Rampant stealing of inputs e.g. rope, twines etc.
- Fishermen defaulting payment of credit facilities
- Violation of bye-laws of fishing communities;
- Misunderstanding amongst fish mammals over the purchase of fish (i.e. Fish pricing);
- Loss of beach landing sites due to sand-winning (land degradation), poor sewerage disposal and tourism;

### 3.2 CONFLICTS BETWEEN THE ARTISANAL FISHERY AND INDUSTRIAL

Majority of conflicts between the artisanal and industrial including the semi-industrial fishers are due to the competition for the same fishing grounds and or common resources. Conflicts arise in the form of collisions of fishing crafts and vessels, which at times leads to loss of life.

Other forms of conflicts are:

- Running over nets of the artisanal fishers by industrial vessels;

On land the major problem causing conflicts or perhaps inconveniences is the undue delay in disposing off cases attributed to conflicts.

In Ghana, the destruction of artisanal fishing gear by semi and industrial trawlers transgressing the 30 metre depth contour which is exclusively reserved for canoes appears to be the major cause of conflicts between canoes and industrial vessels. It is easy to identify trawlers during the day but in some cases vessels hid their identity by hanging over their vessel markings making it difficult to solve cases after reporting. This typical case has been observed in the Western coastline of Ghana.

From the ecological and biological point of view, fishing in inshore areas is more profitable with a high fish density in tropical shallow waters of depths of between 15-45 metres. However, the insurgence of industrial vessels within the 30 m zone and its effects have been detrimental to canoe fishermen and the resources at large. Considerable loss of fishing gears occurs. Surveys and an inventory of accident at sea cases in the past decade indicate that over 60% of complaints by canoe fishermen indicate gear destruction as the prime problem with industrial vessels.

Cases involving merchant vessels often are difficult to resolve since they tend to leave port before formal complainant is sent to the appropriate agency. In many cases, when complaints are sent to them through their agents, these merchant vessels deny responsibility and the fisher losses.

### 3.3 CONFLICTS BETWEEN THE ARTISANAL FISHERS AND FISHERIES ADMINISTRATION.

The Government of Ghana has enacted the Fisheries Law, PNDC Law 256, 1991 which has detailed the management systems and also made provisions for the establishment of a

Monitoring, Control, surveillance and /Enforcement Unit, whose function is to enforce the fisheries law;

Enforcements are carried out in areas where violations of regulations, which sometimes bring about conflicts where some fishers refuse to abide by laid down principles. Regulations which are agreed upon by a majority of fishermen in a community can act as a peer pressure on the social front for all to adhere to laid down rules, be it from the state or at the local level (Orth, 1987). However, differences in why some fishermen are more successful than others, sometimes emanate and are rootly embedded in the socio-economic problems of the society. Even if all fishermen have promised to abide by laid down rules or regulations, some are still tempted to withhold their contribution for the common good, hoping others will do the job for them. Potential disagreements will always exist but then institutional arrangements go a long way to mitigate and resolve conflicts among fishermen.

Differences among fishermen by way or by means of cultural and social characteristics such as clan or religion creates conflicts. These differences are common and impact some important situational variables that affect fishermen everywhere. Conflicts of interest tend to be limited to fishermen alone but spread to affect also their dependants. These conflicts mostly inhibit communication, and hence co-operation amongst fishermen.

The fishing community of coastal villages has a myriad of social groups mainly based on vocations. Within vocations, fishermen associations are formed based on the types of gears used, however all the fishermen belong to an association affiliated to the Ghana National Association of Canoe Fishermen which used to be input distribution based. A pre-mix committee sees to the acquisition and sale of fuel for out-board motors while the committee for the fishery resource management, sees to surveillance, rescue operations, and landing beach management. Fresh fish-mongers and processors also have their associations.

Each group aims at promoting the welfare of its members. The strength of these groups is often weakened by poor compliance to meeting financial obligations. Being unable to pay dues, members do not attend meetings, as they ought to, bringing about minor conflicts.

### 3.4 CONFLICTS BETWEEN SEMI-INDUSTRIAL/INDUSTRIAL FISHERS AND CANOE FISHERMEN

Conflicts related to industrial trawlers and canoes are basically due to the non-compliance or enforcement of coastal regimes reserved for the artisanal fishery.

Distinct depth zones are reserved for canoe fishers in most coastal states in the West African sub-region.

- In Ghana, the PNDC law 256 zones out areas up to the 30 metre depth contours restricted solely to the artisanal fishery (ie non-trawling fishing operations).
- Cameroun : Area restricted to the artisanal fisheries is up to the 2 nautical mile from shore;

- Cote d'Ivoire : Trawling is forbidden in coastal waters in the first mile. Trespassers are fined between FCFA 36- 360,000 and imprisonment range up to 6 months.
- Senegal: Industrial fishers are prohibited within the six nautical mile limit, which is a protected zone. However the artisanal fishery is not liable to any legal territorial limits (Marine Fisheries Law 87.27 of August 1987).
- Gambia: The established artisanal fishing zone is up to the 20 metre depth contour which has been allocated as 7 nautical miles from shore. The industrial vessels are limited beyond the 12 nautical mile radius.
- Gabon : The delimited zone for artisanal fishery is within the 3 nautical mile radius.

### 3.5 ADMINISTRATION AND INSHORE/INDUSTRIAL

Conflicts do occur occasionally between vessel owners and fisheries administration in the areas of renewal of licences and change of ownership. Most often vessel owners deliberately refuse to renew their licences and insure their vessels and crew under section 3 of the Fisheries Law PNDCL 256. Most vessels do not inform fisheries administration of a change in ownership at the appropriate time. This creates lapses in administrative records for effective management of the fleet.

## 4 OTHER CAUSES OF CONFLICTS

### 4.1 MISUNDERSTANDING IN SHARING OF FISH PROCEEDS

Misunderstanding in sharing of fish proceeds, are rampant amongst all categories of fleets. This also creates disharmony and mistrust in the leadership positions entrusted to some fishermen. These are often temporarily solved, if it does occur at sea, however these are resolved amicably on land by welfare unions of the respective fishermen's organisation/companies.

### 4.2 PETTY QUARRELS

Petty quarrels not related to fisheries among foreigners and local residents have occasionally spread to affect fisherfolks and their dependants. Ghanaians are indigenous fishermen establishing themselves in most West African coastal states. Migrant fishermen are highly organised and abide by strict rules on how to behave in relation to the host community. A quarrel over a football match between a Ghanaian club and Ivorian club in early 1990's led to a widespread attack on migrant Ghanaians including a lot of fishermen and their dependants.

4.2.1 The belief by some foreign officers onboard industrial vessels especially tuna bait-boats that their positions are at stake often leads to conflicts. Hasty attitudes, shouts and often fights have occurred often discouraging and undermining local officers from taking up more responsible positions.

#### 4.3 THE USE OF FADS IN TUNA FISHING

In the tuna fishery, the recent innovation with the use of fish aggregating devices(FAD's) has led to some conflicts. Rampant stealing of radio buoys attached to these devices by other tuna operators has led to accusations amongst themselves. On sighting these devices, which sometimes do not belong to their sister vessels, captains often fish around these FAD's and later remove them changing their frequencies and markers (colours) which will no longer be tracked by its rightful owner. Occasionally some of these FAD's drift close inshore and are stolen by canoe operators, who resell them to other operators,. From observers at sea there have been incidences where radio buoys have been tracked to be within miles off land and around coastal hamlets. On the part of the canoe fishermen, they claim that these tuna vessels whilst baiting destroy their nets and deliberately refuse to pay for them and so in retaliation they also steal their buoys as a form of compensation.

The inshore fleets have often complained about the destruction of juvenile pelagic fish by the use of FAD's by the tuna purse-seiners. Petitions calling for its ban have been sent to the Fisheries Commission (Ghana) which is being addressed.

#### 4.4 LAND USE AMONGST COASTAL FISHERFOLKS.

The lack of involving fishing communities in decisions pertaining to tourism along the coastline where fishing activities also take place have been observed in parts of the Central Region. Acheampong (1996) has noted that some effects are that farmers and fishermen are displaced as land is reallocated for tourist activities. There is land degradation in the form of sand winning, poor sewerage disposal all leading to environmental problems affecting the fishing community at large.

#### 4.5 DEFORESTATION OF THE LAND

Deforestation of the land for farming has adversely affected the rainfall pattern and agricultural production. Trees for canoe carving are also difficult to get as a result of deforestation. The issue of difficulty in permit acquisition for tree felling and harassment and seizure of new canoes from the hinterland by security agencies of the Forestry Department (Ministry of Lands and Forestry), also plague most fishermen who travel to the hinterland to purchase dug-out canoes

#### 4.6 LACK OF ACCESS TO CREDIT

The level of poverty in most fishing villages does not make the fishermen and fish processors credit worthy (Bempong,1996). Majority of them in the past decade refused to pay back loans from the commercial banks creating some form of conflicts and a lot of problems. Presently it is extremely very difficult if at all for fishers to obtain loans from the banks for their fishing activities.

#### 4.7 ROLE OF MIDDLEMEN

Another area of conflict seen in our studies is the role of middlemen in the fishing industry. Obligatory sales, diversion of catch proceeds, without the knowledge of boat owners and pilfering have been noticed as part of activities leading to conflicts which more or less hinder the smooth operation of a fishing business (Yeboah, 1999).

#### 4.8 EVASION OF TAXES

Evasion of taxes have occurred creating conflicts between the state and fishing companies. In the Daily Graphic of October 1999, investigations by the Serious Fraud Office have established that some Ghanaian fishing companies and individuals have connived to evade taxes running into several billions of cedis which would have accrued to the state. The Ghanaian companies, for example fronted for the foreign group to operate 10 fishing trawlers in 1994, an area reserved for Ghanaians, while others provided their tax waivers on imported fish to the group to evade duties to the tune of billions of cedis.

#### 4.9 LACK OF TRANSPARENCY IN FISHING AGREEMENTS

The Ghanaian Chronicle Volume 3 of November 22-25,1993 reported a court case in which a prominent Ghanaian is claiming ownership of a vessel from another company. In this instance the court was pleaded to seize a fishing vessel and to perpetually restrain the other partner from rescinding their agreement to sell a vessel to his company on hire purchase for \$1.5 million over 60 months. This lack of transparency in signing hire purchase agreements led to other court cases still pending.

#### 4.10 STORMY SEAS

Some landing beaches along the coast are not safe, due to swift currents near shore and stormy nature of the sea, especially in August and September, the peak of the fishing season. Many vessels capsize at such places even leading to loss of life. Calls to relocate the fishing communities have yielded no results as fisherfolk residing there claim to have stayed there over centuries and cannot move out.

#### 4.10 IRREGULAR SUPPLY OF FUEL

The pre-mix committee set up by the Ministry of Food and Agriculture in 1996 to see to the regular supply of subsidized fuel have had problems leading to conflicts with the National Fishermens Council. Some fishermen claim the committee members are corrupt leading to some service stations being provided with fuel once in six months instead of bi-monthly. Fuel supply hence at times becomes irregular, thus affecting fishing expeditions resulting in so many hardships and conflicts in repayment of loans to especially fish mammals.



#### 4.11 GENDER ISSUES

Gender issues are not adequately considered and factored in the livelihood of fisherfolks. According to Graceland consultancy (1998), men think that giving fresh fish to their wives, they have completed their deal in childcare. It is then the responsibilities of their wives to add value, with prudence, to gain incomes for providing health care, educational needs, nutrition etc. for the children. The incomes of the men are theirs. Interestingly, while the women in Tema (20 km East of Accra) believe that education and the acquisition of technical skills for the young generation are the means for sustainable livelihood for the community, the men perceive further provision of fishing inputs as the key. These notions often create conflicts as more is expected of men in discharging their civic responsibilities. Gender must then play a significant role in poverty alleviation.

### 5 TRADITIONAL ORGANIZATION OF ARTISANAL FISHERY IN GHANA

Since most conflicts exist between the artisanal fleet and others it is important to understand how the traditional setup of the fisheries helps in combating conflicts within the fisheries *inter alia*. Traditionally, each fishing community has a Chief Fisherman who governs the fishermen. He is assisted by a Council of Elders. The roles of the Chief Fisherman include coordination of rescue operations in the event of accidents at sea, participation in religious rituals connected to the sea, and settlement of disputes. Furthermore, he is involved in mediation with migrant fishers, and represents their fishermen's association in the affairs of the National Association of Canoe Fishermen.

There is a head of the women mongers and processors, called "Konkohene." She also has a Council of Elders. The "Kokohene" is involved in settlement of disputes in the fish trade, represents women in negotiations to set daily prices of fish, and oversees occasional cleaning of landing sites.

The two Councils co-exist and generally work together for the mutual benefit of their members. The Councils handle rescue operations at sea, and a level of cleanliness at the landing sites. In communities where women processors have received external support in terms of credit, technology, and functional education, they often contribute to community development activities.

#### 5.1 THE LEGAL FRAMEWORK

Concerns for extractive fishing practices, destruction of a renewable resource, and consequent endangering of the health of the state, by virtue of dependence of people on fish protein necessitate a legal framework for a fishing industry. The legal framework of Ghana is embodied in the Fisheries Law of 1991 (PNDC 256), under the purview of Directorate of Fisheries (DOF) of the Ministry of Food and Agriculture (MOFA). Tenets of the framework included the construction or importation, licensing, seaworthiness and manning of fishing crafts. It also provides guidance for the regulation of mesh sizes, specifications of fishing

zones, protection of gravid lobsters, imposition of closed seasons, and marking of all fishing craft and submerged gears.

Lack of clear assignment of responsibility for fisheries management, control, surveillance, and enforcement; and the power of government to restrict the size of catch, through the imposition of Total Allowable Catch were some of the weaknesses of the law. Others were on minimum landing Size, and power to control fishing effort.

A revised draft law, the Fisheries Bill, awaiting promulgation has redressed the weaknesses to strengthen the fishing industry. However, the establishment of a Monitoring, Control, and Surveillance (MCS) Division created under a Fisheries Sub-sector Capacity strengthening project is providing administrative support for MCS activities, and thus a level of management of the resource.

## 5.2 DEVELOPMENTS IN FISHERY RESOURCE MANAGEMENT

The legal framework provides guidance on fishing regulation yet the extractive practices and use of chemicals and explosives endanger the industry, and the more important role of contributing the daily animal protein intake of the average Ghanaian. Although fish and fish products are the cheapest sources of protein for the average Ghanaian, per capita consumption of animal protein in Ghana was among the lowest in sub-Saharan Africa. Government therefore took some initiatives to address problems of the industry. These steps indirectly tackled livelihoods of fishing communities.

With assistance from the International Development Association, and operating within the broad guidelines of the National Planning Commission, the government formulated a Medium Term Agricultural Development Strategy in 1990, to accelerate agricultural growth. The objectives of the fisheries sub-sector were to increase production for local consumption and export, develop management plans for the sector as a means to alleviate poverty in fishing communities, and strengthen DOF to effectively carry out its mandate. To achieve these objectives for the sub-sector, among others, a capacity building project was instituted.

These strategies were further given credence in the current national development policy of Ghana embodied in the document, Ghana -Vision 2020 (The First Step: 1996-2000). This is a 25-year perspective coordinated programme of economic and social development policies, which identifies basic objectives to increase employment and average incomes, and to reduce poverty and inequities. For the fisheries sub-sector, the document affirmed the fact that the sub-sector is adversely affected by excessive exploitation of the resource. For the way forward, fishing operations will be more effectively monitored to promote the conservation of fish stocks. Fishing infrastructure such as harbours, jetties, landing grounds, storage facilities and markets were to be improved and extended. These were to contribute to a foundation of

accelerated economic growth through a major increase in agricultural productivity (Government of Ghana, 1995).

### 5.3 THE FISHERIES SUB-SECTOR CAPACITY BUILDING PROJECT, MCS.

The Fisheries Sub-sector Capacity Building Project (FSCBP) was identified and prepared by Government, and is being implemented since 1997 for a five year period. The project has an important objective to establish the long-term sustainability of the fisheries resource and thereby maximize its contribution to the economy. Among others, it focuses on capacity for formulating a management plan and its implementation; and monitoring, control, and surveillance, and enforcement. An elaboration of the fisheries management plan in the project appraisal report stated categorically that the plan would be a blueprint for the effective management of the fisheries law. The plan was also to cover extension activities, and an effective MCS system backed by a judicial system to deal with breaches of the law

The MCS Division of DOF, formed under the FSCBP, is responsible for the direct and effective conduct of all maritime and land-based marine fisheries MCS operations. In recommending a longer term measure for the resource management "community involvement" is recommended - such as in the control of types of gears, and to limit the numbers of canoes in the future. It was recommended that MCS should also focus on public relations leading to dialogue with fishers on the need for conservation. The Division was also to convince the Chief Fishermen that it would be in their communities' long-term interest to adopt reasonable fishing practices (World Bank, 1995).

### 5.4 THE COMMUNITY-BASED FISHERIES RESOURCE MANAGEMENT COMMITTEES

To operationalize the concept of community involvement in resource management community-based fisheries management system were formed (Community-based Fisheries Management Committees (CBFMCs)). A model constitutional framework for the operations of CBFMCs, and draft bye-laws have been drafted and operational in some districts.

A national policy on decentralization made the administrative districts, called District Assemblies, the basic planning units in the decentralized system with the power to enact relevant bye-laws to manage developments in their areas. As such, they are responsible for all development programs, other than those which, by their very nature, can only be implemented at the national level - e.g. programmes on natural resource management (Government of Ghana, 1995). To ensure integrated development of the hundred and ten DAs, overseen by the Ministry of Local Government and Rural Development (MOLG), twenty-two sectoral/technical ministries and departments at the national level have been decentralized to the Assembly level. For example, MOFA is decentralized to become District Department of Agriculture to plan and implement programmes at the community level.

It is against this background that DCEs being the Chief Executives of the DAs and acting as the representatives of Government, are given oversight responsibilities for fishery resources in their

areas of jurisdiction. Exercising their power to enact bye-laws, the DAs could pass community-level bye-laws on fisheries resource management. Lastly, DAs need to show interest in the welfare of their fishing communities since some are located in their areas of purview, are more prone to poverty, and they have the power to coordinate integrated development through the technical departments. At the regional level, there are ten Regional Coordinating Councils (RCC) coordinating the activities of the districts under them, and specifically, the bye-laws will have to be cleared at the RCC. They in turn report to MOLG at the national level.

#### 5.5 FORMATION OF CBFMCS

DOF staff and collaborators at the district level assisted the DCEs for community animation for the resource management, and the formation of the CBFMCs. Membership of the committee comprises representatives of stakeholders. Fashioned along traditional arrangements, the Chief Fishermen are the chairmen. Others are representatives of all ethnic groups involved in fishing in a community, representative of fishmongers/leader of fish processors, representative of Ghana National Canoe Fishermen Council, and two representatives of Unit Committees of the DAs, one being a woman. A model constitution with community specific bye-laws was provided to them. Upon adoption, a copy of the constitution is passed by the DAs and deposited at the RCC.

The aim of the CBFMC is to manage the fisheries resource to ensure sustainable exploitation. This is with a view to achieve a protection of the fish stocks, the use of appropriate fishing methods, and to seek the welfare and socio-economic development of the community. The thrust of the CBFMC is that the management of the fisheries resource is the responsibility of the entire community. This is held in trust by the committee.

#### 6. TYPES OF SPECIFIC MANAGEMENT MECHANISMS IDENTIFIED SO FAR TO CURB CONFLICTS

- **Where the conflict is between the fisheries administration and the Fishers:**

The Government has enacted the Fisheries Law, PNDC Law 256, 1991 which has detailed the management systems and also made provisions for the establishment of a Monitoring, Control, surveillance and /Enforcement Unit, whose function is to enforce the fisheries law;

Enforcements are in areas where violations of regulations bring about conflicts, some occurring in zonations for specific types of fishing crafts, excessive exploitation of juvenile fin-fishes by shrimp vessels, the use of illegal meshes etc.

- **Imposition of levies:** Traditional rulers (Chief fishermen) impose levies on any act detrimental to the state and health of the fishery within their environs such as the use of unorthodox methods of fishing i.e. chemical, dynamites etc.

- **Compensation:** Compensation is at times paid to culprits who usually damage netting of other crafts etc. This is usually settled outside courts.

- **Settlement in courts**

At times cases are settled in courts where the 2 parties cannot agree to settle such cases out of court.

- **Arbitration**

i The Fisheries Administration often takes on the function of an arbiter assisted by the Chief fisherman in settling some conflicts at sea/land.

ii Conflicts within the artisanal fleet are resolved by the local CBFMC if the Canoes are based at the same village. However when the opponents originate from different villages then the District Director of MOFA is supposed to resolve the conflict.

iii Conflict between the artisanal and semi-industrial fleets are resolved either at the District level or Regional level depending on where the crafts are based.

iv Conflicts between the industrial and Semi-industrial or industrial and artisanal fleet are resolved mainly at the Regional level i.e. Western Region (Sekondi-Takoradi) and the Greater Accra Region (Tema). These two regions handle the conflicts because the industrial vessels are based at the two (2) named sites.

v Apart from conflict management any other measures laid down for the management of the industrial and semi-industrial fleet are enforced at the national level. While management of the artisanal fleet is at the District level.

vii The arbitration committees that handle conflicts between the artisanal and industrial or semi-industrial vessels do not have any legal backing therefore the law courts are the final point of conflict resolution. This creates a lot of delays and frustration. The new Fisheries law is trying to address this issue.

The effect of decentralization on levels of conflict resolution is not quite clear but since the number of trained fisheries personnel in the various districts is woefully inadequate enforcement of fisheries regulation is non-existent in certain areas. Effort is being made to train Extension personnel in the various districts to help enforce the relevant regulations with the help of the CBFMC's. The decentralization programme is being evaluated and any effects shall be revealed.

Enforcement of national legislation at the local level has been minimal. So far only the enforcement on the ban on the use of chemicals and dynamite in fishing is being enforced. The use of under-sized mesh in fishing is still going on.

## 6. RECOMMENDATIONS & CONCLUSION

Having noted the major factors contributing to conflicts being :Depletion of resources (local), Loss of fishing grounds in international waters, Lack of enforcement of laws and regulations, Economic reasons (e.g. struggling for schools of fish to make ends meet) the following recommendations are hereby given to curtail the incidence of conflicts.

### 1 Upgrading of the human resource in fishery resource management concepts.

Training programmes on concepts of fishery resource management should be organized for DOF staff to enhance their understanding of fishery resource management in general, and the application of the concepts to the Code of Conduct for Responsible Fisheries (CCRF). Indirectly, these programmes will sharpen their skills for diffusion of the fisheries resource management concepts and the CCRF to the community level.

### 2. Harmonization of 30 metre depth with distance

Canoe fishers often assess the legal minimum limit of 30 metre depth for the other fleet by how far a vessel is from the shore. If the vessel is perceived to be close to the beach, they often believe that relevant institutions are not enforcing compliance with the directive. This taints the image of DOF and hence its credibility in handling MCS issues with the fishers not to mention the conflicts it generates. Mechanisms should be put in place to harmonize depth with distance.

### 3 Enhancing the capacities of CBFMCS for MCS activities.

The involvement of fishing communities in co-management of the fisheries should be enhanced. A systematic programme of nurturing and grooming the CBFMC'S for MCS activities is, therefore, needed. This should include training in management of fishermen's organisations, fisheries management concepts in the light of responsible fishery practices. Government should therefore be committed to providing sufficient means for fishery monitoring control and surveillance.

### 4. Collaboration

On a wider scale, government should collaborate with other countries in the sub-region on aspects of monitoring and surveillance activities, as well as on matters relating to the reduction of fisheries conflicts.

## Appendix

### CONFLICT MANAGEMENT IN GREATER ACCRA 1993-1996

Number of Conflicts reported	1993	1994	1995	1996
Canoe & Inshore	10	10	16	5
Canoe & Industrial	8	11	12	8
Canoe & merchant	17	20	12	5
Inshore & Inshore	4	1	1	1
Inshore & Industrial	2	1	0	0
Canoe & others(buoys etc)	2	2	1	0
Inshore & merchant	0	0	1	0

1993- 80% were due to collisions leading to damage of nets. 20% of cases solved and compensation in the form of cash paid after a lengthy period.

1994- 82 % were due to collisions leading to damage of nets. 11% of cases solved.

1995- 78% were due to collisions. Only 5 cases were solved with compensation paid.

1996- 75% of cases were due to collisions between industrial and merchant vessels. Only 6 cases solved

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