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Marine Police Training Workshop Proceedings

September 25th –October 4th 2012

Fresh approaches for promoting
compliance and enforcement



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THE
UNIVERSITY
OF RHODE ISLAND
GRADUATE SCHOOL
OF OCEANOGRAPHY



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Description of the cover photos:

Top - Marine Police officers at the Sekondi Harbour; Bottom left – Mrs Patience Klinogo, Chief State Attorney, giving a lecture at the training workshop; Bottom center – Mr Kofi Agbogah, Deputy Chief of Party, Coastal Resources Centre-Ghana, giving speech at the graduation ceremony; Bottom right: A Marine Police Officer receiving his certificate from Deputy Commissioner of Police Ransford Ninson, Western Region Police Commander, at the graduation ceremony.

Cover Photo Credit: Tendayi Mutimukuru-Maravanyika and Kwesi Randolph Johnson.

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List of Acronyms

AG	Attorney General
DDT	Dichlorodiphenyltrichloroethane
EEZ	Economic Exclusive Zone
EPA	Environmental Protection Agency
FAO	Food and Agricultural Organization
FC	Fisheries Commission
FWG	Fisheries Working Group
GNCFC	Ghana National Canoe Fishermen Council
GHc	Ghana Cedis
GOG	Government of Ghana
GDP	Gross Domestic Product
Hon.	Honourable
IEZ	Inshore Exclusive Zone
ICFG	Integrated Coastal and Fisheries Governance
LI	Legislative Instrument
MCS	Monitoring Control and Surveillance
MoFA	Ministry of Food and Agriculture
MPO	Marine Police Officer
MPU	Marine Police Unit
NM	Nautical Miles
SOP	Standard Operation Procedures
USAID	United States Agency for International Development
VMS	Vessel Monitoring System

Executive Summary

To facilitate reforms in the Fisheries sector, Ghana's Parliament passed the fisheries regulations LI 1968 of 2010 to give effect to the Fisheries Act 625 of 2002. The LI 1968 serves to regulate operations within the Fisheries Sector and, among others, to ensure food (fish) security and sustainable livelihoods in coastal and riparian inland communities.

The launch of Fisheries Regulations coincided with the re-establishment of the Ghana Police Service Marine Unit (MPU). The Unit was to collaborate with the Fisheries Commission (FC) in enforcing the Fisheries Regulations on land and, also support the Ghana Navy in maritime policing. In 2011, a task force led by the Ghana Navy attempted to enforce the regulations but this was fraught with many challenges leading to street demonstrations by fishermen.

The Hen Mpoano Initiative discussed with the Fisheries Commission and the Ghana Police Service (GPS) on ways to support aspects of the training of the newly assembled officers of the MPU on the ecological justifications of the Fisheries Regulations. Approval was sought from USAID to organize short training modules for the unit.

A curriculum for the training was approved by the GPS, FC and USAID which paved the way for the training workshop. It consisted of series of lectures, group assignments, presentations and discussions, role plays, and field visits to fish landing sites and fishing communities. The visits were important for the Marine Police Officers (MPOs) as that inducted them into the communities.

Lessons learned from the workshop include:

- Improved awareness on the Fisheries Laws among the MPOs, other stakeholders in fisheries, and the local communities.
- Concrete knowledge on the impact of illegal fishing methods on human health.
- Educating fishing communities on fisheries laws and their ecological justification before enforcement has potential to produce positive impact on fishing communities.
- Some topics that are crucial to fisheries management were not covered adequately. This shows that educating the MPOs on fisheries issues should not be a one-off thing. Occasional refresher courses to cover emerging issues should therefore be part of the training programmes.
- Educate communities on fisheries laws; to promote voluntary compliance was a big lesson for the MPOs.
- The field visits as part of the training made communities take Fisheries Laws seriously. Expectations were raised in communities on the enforcement of Fisheries Laws so this must be met or else the opportunity will be lost.
- MPU should visit all the landing sites in the Western Region to educate fishermen on the Fisheries Laws and their ecological justification.
- The 25 MPOs trained is not adequate for the whole country. Enforcing the Fisheries Laws in the Western Region only will be unfair and fishermen will most likely migrate to other regions where the laws are not being enforced.

Background and Opening Remarks





Introduction

Introduction

Ghana's fisheries sector is in crisis and there are fears of an imminent collapse of the industry. Livelihoods of fishers and food security for the nation are therefore threatened. The crisis in the sector is partly due to over exploitation of the fisheries resources and the use of illegal fishing methods that destroy the ability of fish stocks to regenerate efficiently. Whereas Ghana was mostly self-sufficient in fish production two decades ago, the country is now heavily-dependent on fish imports.

Government of Ghana (GoG) in 2010 passed the Fisheries Regulations (LI1968) to give effect to the Fisheries Act 625 (2002). These regulations are expected to better control fishing practices. The launch of the regulations was accompanied by an announcement that the re-established MPU among others duties, will enforce the fisheries regulations.

In December 2011, the Hen Mpoano Initiative received the green light to train the first batch of MPOs. This training aimed at building the capacity of selected police officers on fisheries issues including: the status of fisheries in Ghana; the ecological justification of the Fisheries Regulations; the sociology and culture of fisher folks; and approaches for promoting compliance. The training took place over a period of 8 days (25th September to 4th October 2012), at the VRA Club House at Aboadze in the Western Region. **(See Annex 2 for the full list of participants)**

This report begins with an executive summary, the background to the training and opening speeches and followed by records of presentations, discussions, group activities and field visits.



Welcome Statement
Mark Fenn,
Chief of Party
Coastal Resources Centre, Ghana

Mark Fenn

Mark Fenn welcomed participants to the workshop.

Highlights

- Fish catch in Ghana was going down.
- 45% of fish consumed was imported. Food security and poverty were critical issues in coastal communities in Ghana.
- Fisheries regulations were passed based on sound scientific evidence. Delayed and selective enforcement of the regulations led to resistance by fishermen.
- Hen Mpoano Initiative negotiated and got approval from USAID, Fisheries Commission and Ghana Police Service to train the MPU.
- The training and the field education of the MPOs will serve as a novelty in promoting voluntary compliance in the fisheries sector.
- It was important to have education program that will make fishing communities aware of the laws and why they were passed.
- A fisherman will comply with the law if everyone else does.
- It was important to understand fishermen and develop strategies to work with them to promote compliance.
- The introduction of Premix and Landing Beach Committees and Zoil Eco Brigade has diminished the role and powers of the Chief fishermen.
- The strengthening of institutions along the prosecution chain has led to successful prosecution of fisheries violations.
- The good work started in the Western Region should be replicated in other Coastal Regions.
- The MPU should be fair and just in applying the law.



Opening Remarks *David Asante-Apietu* Deputy Commissioner of Police

David Asante-Apietu

Highlights

- It was a privilege for the selected personnel to attend this workshop. The Marine Police Unit (MPU) was formed in 1916, but was later disbanded and transformed into the Custom Excise and Preventive Service in 1962. Therefore, MPU was only being reactivated.
- The discovery of oil and gas had brought prospects of benefits and challenges and that illegal activities were bound to increase in the region.
- The police were going to enforce the Fisheries Laws. He acknowledged USAID for providing funding.
- Various capacity building programmes in relation to marine and coastal policing for Ghana Police Service are on the drawing table.
- The core function of the police was to protect life and property through enforcing laws and that “*You can’t enforce laws if you do not know them*”. The trainees were urged to take the programme serious and participate fully in all the activities. (See **Annex 2 for detailed speech**)



Opening Remarks *Hon. Mike Akyeampong* Chairman, Fisheries Commission

Hon. Mike Akyeampong

Highlights

The different political parties in the country supported the Fisheries Laws. The LI 1968 (2010) was therefore passed to give effect to the Act 625 (2000). The LI was developed through stakeholder consultation process.

The (FAO) in Rome developed the International Code of Conduct on fisheries to “regulate fisheries everywhere” as fish stock were dwindling worldwide. He mentioned his regret that in Ghana, fishermen were still using illegal fishing methods. He appealed to the participants to deal with the subject with urgency. He was pleased that **‘today we have a Marine Police Unit’**. The Fisheries Commission had translated the fisheries regulations into four key local languages (*Fante, Ewe, Ga and Nzema*) and these were to be launched soon. (See **Annex 3 for his detailed speech**).

The Situation of Ghana's Fisheries Today





The Current Crises in the Fisheries

Kofi Agbogah
Director
Coastal Resources Center- Ghana

The Current Crises in the Fisheries

Take home messages

- Ghana is fisheries dependent country with consumption of about 23-25kg/ person per annum. The world average is 6kg/ person/ year).
- Ghana consumes about 450,000 metric tons of fish per annum. Half of this is imported.
- Fishing fleet in Ghana includes the artisanal, inshore/semi-industrial and industrial vessels. There are about 14,000 artisanal boats in Ghana, creating fisheries related employment for about 2.5 million people. Of the total landings in 2009, artisanal fishermen contributed about 70%.
- Fish contributes about 60% of animal protein in the diet of Ghanaians. It also contributes to macro economy (GDP) and employment. It is a major contributor to the revenues of shorefront District Assemblies.
- The main sources of fish in Ghana are the oceans, rivers, lakes, lagoons and ponds. The exclusive economic zone (EEZ) or 200 nautical miles covers an approximate area of 203,500km². This marine area provides the bulk of the fish landed in Ghana. There is a near-shore Inshore Exclusive Zone (IEZ) (**6nm or 30m depth whichever is nearer shore**) reserved for the artisanal fishermen. Within the 200nm, there are resident fish stocks which do not migrate, a straddling stock shared by neighbouring countries and a highly migratory stock.
- Over the last 20 years all categories of fleet has increased in number. The increase is not matched with an increase in fish catch but rather a decline.
- A study conducted in Dixcove in the Western Region by the Hen Mpoano Initiative shows that fishers are travelling about 3 times in distance to reach fishing grounds and spend more days at sea than previously. This means more fuel, more food, more ice, and a lot more logistics. (One fishing trip in the year 2000 cannot be compared with one trip in 2010).
- When few people are involved in fishing, bigger fish are caught. With more persons involved in fisheries, fishermen are now “fishing down the food chain”. The mesh size used is getting smaller. Fishery is ‘open access’ and heavily subsidized. “Fishers are racing to catch the last fish”.
- Currently, stocks are overfished and there is fear of the imminent collapse of fishery in the country. This is mainly because of the open access regime, over capitalization and subsidies (premix and outboard motors). This is further compounded by the use of inappropriate fishing practices including:
 - Industrials and Semi industrials fishing within the IEZ or 30m depth (6nm)
 - Use of dynamite and other obnoxious chemicals
 - Use of fish aggregating devices such as light
 - Use of undersize mesh and unapproved nets
 - Beach seining around the mouth (estuaries) of lagoons and rivers

- Trans-shipment (going fishing without nets and returning with fish - also called *saiko-saiko*)
- Women dominate downstream trade in fish.
- Small-scale fisheries employ more people than the large-scale; consumes less fuel and lands more fish (almost twice) than large-scale fishing.

Discussion

Question: How long will it take us to replenish our fish stock?

Response: It could take 30-40 years if there is complete collapse; 3-5 years if right measures are put in place now.

Question: We just learnt about the depletion of fish stock and lack of enforcement of the law –is there political will to revive the industry? If yes, why was the FiC silent for such a long time?

Response: Honourable Mike Akyeampong responded saying he had met with the Minister for Defence and the police to discuss how best to enforce Fisheries Laws. The task force was constituted to enforce the LI. It has also been translated into 4 main local languages for easy comprehension by fishers. The FiC had secured funding from the World Bank and the Global Environmental Facility of the UNDP for an upcoming fisheries management project. There was the need to do more education and at the same time beef up enforcement. Subsidies were necessary Social Interventions by Government and cannot immediately be stopped. There is need for all fish landing sites and activities to be inspected by the police to ensure that fishermen comply with the law.

Question: How do banned nets enter the country?

Response: Synthetic nets are not entirely banned. But small mesh of 3¹/₂ inches is not allowed in the country. All bigger ones are allowed in the rivers and lakes. Synthetic or monofilament nets of whatever size are however not allowed on the marine waters.



Fisheries Ecology

Godfred Ameyaw Asiedu
Fisheries Adviser, WorldFish

Fisheries Ecology

Mr. Godfred Ameyaw Asiedu introduced participants to Fisheries Biology. He described the main fish resources in Ghana (coastal demersals, deep sea demersals, small pelagics and large pelagics), and the current status of fish resources, the marine environment, upwelling systems, importance of lagoons and estuaries on fisheries as well as the ecological justifications for the fisheries law and regulations.

Take home messages

- Fisheries Ecology is the study of ecological processes that affect exploited aquatic organisms such as fish
- Upwelling areas account for only 1% of the ocean surface, but they support 50% of the world's fisheries.
- Lagoons and mangroves are important for supporting fish production, contribute plant materials to the estuarine food web and support the continued existence of fish stocks in coastal waters.
- Mangrove habitats serve as nursery grounds for fish, prawns, crabs and mollusks.
- There is an ecological justification of the fisheries law and regulations.
 - Monofilament nets are banned because they are not bio-degradable and continue to fish (ghost fishing) when parts are torn and lost in the sea.
 - Light fishing attracts all sizes of fish including juveniles.
 - Undersized nets harvest all fish including juvenile fish.
 - Chemical fishing kills all fish, contributes to pollution of the marine ecosystem, increases post-harvest losses and renders fish unsafe for human consumption.
 - Beach seining is prohibited near river estuaries.
 - Pair trawling is very efficient in fishing for everything and destroying critical sea bed habitats that are used as spawning and nursery grounds for fish.
 - Marine Protected Area is a fisheries management tool or strategy for rebuilding fish stocks.

Discussion

Question: What is the difference between estuary and brackish water?

Response: Estuary is an area where a river or freshwater joins the sea. When freshwater from the river mixes with seawater which is more salty, the resulting mixture is what is referred to as brackish water which is moderately saline.

Question: If monofilament nets that banned by the law, how do they get into the country? The government once confiscated the monofilament nets in the communities and promised to bring into the system the legal nets but up until now this has not happened. When will the legal nets be brought into the communities?

Response: A lot of fishermen use monofilament nets because it is cheap – It is smuggled into the country. The law however allows large size (3¹/₂ inches) monofilament on the inland water bodies. The government has imported the

correct nets to replace the monofilament nets. Unfortunately, the government will continue to give them subsidies until they can stand on their own.

The monofilament nets can be used in the river or freshwater systems as it is small and calm compared to the sea and hence when parts of the nets are lost, they are not likely to do ghost fishing for a long time.

Question: We have heard that there is “a race of fishermen to catch the last fish”, is something being done about this? Do we have a law that bans new people from buying boats and sending them to sea?

Response: We are now trying to move from open access to managed access. The FiC will soon evoke section 84 of the LI and so declare closed seasons to stop people from fishing in certain areas at certain times of year. Management of fleet has started and soon all canoes will be licensed.

Question: How feasible is it to scrap some of the boats. I am sure politicians will not want to do this.

Response: This will not be difficult as some of the canoes have not been operational for a long time. An example is the Tuna fishing vessels that follow international laws. Each country is given a limit as to the number of vessels they can licence. Ghana has been given a maximum number of 13 and this was smaller than the vessels that were already operating. A meeting was organised to help identify the vessels to be removed from the system. This seems to be working well.

Question: How can we tell a vessel is illegally operating in an area? What devices should be used?

Responses: For artisanal fishermen, they can go anywhere – the sea is free. Semi-industrial and industrial vessels have gadgets that detect the depth where they are fishing. Big boats must have Vessel Monitoring Systems (VMS) on board. The Navy should also be partnered as they are better equipped with technology to locate boats on the sea.



Fish and Food Security for Ghana

Kwadwo Kyei Yamoah
Friends of the Nation

Situational Facts about Fish and Food Security for Ghana

Mr. Kwadwo Kyei Yamoah presented the importance of fish resources for food security and nutrition and pointed out that overfishing was a threat to food and livelihood security.

Take home messages

- In Ghana, fisheries are important in supporting livelihoods creation, income generation, poverty reduction, foreign exchange earnings, **food security and nutrition**.
- In Ghana, fish is a preferred source of animal protein and contributes to 60% of animal protein intake and average consumption of fish is 23kg per person per annum.
- 75% of fish produced is consumed locally.

- Ghana's dependency on fish for nutrition is amongst the highest in the world and is highest in Africa.
- Fish has omega 3 oils that are good for reducing heart diseases. However, eating fish contaminated by chemicals (e.g. carbide and DDT) or caught using dynamite is hazardous to human health.

Discussion after Kyei's presentation

- Question: Should the use of plastic bags also be banned in the country as the plastics end up in the sea and can also do ghost fishing?
- Response: Fisheries Commission and MoFA on their own cannot ban the use of plastics. Other key stakeholders like the EPA and the Assemblies must come in.
- Question: Is it legal for people to go and dump things in the sea?
- Response: The Environmental Protection Act prohibits dumping of waste that destroy fish habitat. Dumping of refuse at sea is therefore an offence (see the Shipping Act)
- Question: Is Aquaculture an answer to the problem of declining fish catch in Ghana? What are we doing as a nation to promote aquaculture?
- Response: Hon. Mike Akyeampong responded by saying that Ghana's aquaculture production has so far gone up and doubled in two years. It was easy to reach 100 000 tonnes/year in the coming 5 years if the right measures and proper investments are made.

Field visit to Abuesi community

The participants visited the Abuesi fishing community as part of the training where, Nana Konduah, the chief fisherman of Abuesi and his fisherfolks received them warmly. He explained that the Marine Police Unit was there to take part in education and enforcement of Fisheries Laws. He encouraged the fishermen to voluntarily comply with the laws and that the police were not enemies but were coming to ensure that fishermen do the right thing. The MPU emphasized that they had come to learn from the fisher folks and that they needed their cooperation and support. After these introductions, the fisher folks and the MPOs got opportunities to discuss various issues. Questions asked and the responses given are presented below¹. After the discussions, the participants visited the following communities; Abuesi, Shama-Apo, Shama-Bentsir and Aboadze communities to interact and get in-depth information from the fisher folks.

Discussion at Abuesi

- Question: Why do the fishermen still use illegal fishing methods to catch fish when they know that it's not good?
- Response: They use the dynamite because it is a cheap way of fishing and they are able to catch a lot of fish.
Multifilament nets are too expensive.
- Question: How many people sit in a canoe and how many days do they spend at sea?
- Response: It depends on the size of the canoe but mostly bigger ones take 15-20 fishermen. They spend a minimum of two days at the sea.
- Question: What cases does the Arbitration Committee settle?
- Response: They settle misunderstandings and normally hand over cases beyond their capacity to the police.
- Question: Do the fishermen use life jackets when fishing?

¹This is the same process that was followed for all the community field visits.

Response: No. When accidents occur, they attach strings to the canoe, turn it up and bail the water out of the canoe.

Question: Are fishermen's canoes insured?

Response: No. The canoes however are marked to distinguish them from each other.

Question: At what age can a person start fishing?

Response: At the age of 18.

Question: Why do the fishermen obey rules and regulations in other countries like Ivory Coast but not in Ghana?

Response: The law in Ivory Coast works.

- Suggestions from the police
- If someone dies at sea, fishermen should report the case to the police before taking any other action.
- The fishermen should stop using the chemicals in catching fish.
-
- Advice from the Chairman, Fisheries Commission
- Using poisonous substances for fishing impact human health and advised fishermen to use life jackets when they go out to fish.



The Principal Fishes in Ghana's Marine Environment

Emmanuel Ohene Marfo
Fisheries Commission

The Principal Fishes in Ghana's Marine Environment

Mr. Emmanuel Ohene Marfo gave an overview of the different kinds of common fish species found in Ghanaian coastal and marine waters. He demonstrated this with the use of coloured photos of the different species of marine fish and highlighted features that make species adapt to their environments.

Take home messages

- The Marine fisheries comprise of **pelagics**(surface dwellers) and **demersals** (bottom dwellers) species.
- Pelagics can be divided into small and large pelagics
 - Small pelagics are found mostly within the IEZ (30m depth or 6 nautical miles) and caught with encircling net (purse seine net). High catches of small pelagics are mainly during the upwelling periods. Examples include:
- flat sardinella [Adruku (*Ewe*), Antebo (*Ga*) and Eban (*Fante*)] and round
- sardinella [Vetsimu (*Ewe*), Kankama (*Ga*) and Eban (*Fante*)]
 - Large Pelagics are mostly caught by drift gill nets that operate within the 200 nautical mile (EEZ). These are highly migratory species (HMS) that include:
- Blue marlin/sword fish [ekyinkyin kwaatwe (*fante*)] and Yellow fin tuna [Geku (*Ewe*), Odaa (*Ga*) and Edae (*Fante*)]
- Current status of fish resources
 - Small pelagics and demersals are influenced by environmental conditions
 - They are overexploited

- There is low abundance of shrimps resources
- Skipjack Tuna is in good state whilst Bigeye and Yellow fin tunas are at optimal levels of exploitation.

Discussion

Question: What are we doing to protect the fishes in our wetlands?

- Response: By-laws are being developed for some rivers and lagoons.

Question: Is mangrove stands the only place for the fishes to hide and lay their eggs?

- Response: No, some of the fishes lay their eggs in the rocky areas in the sea; others hide in the estuaries and in deep sea.

Question: Why do fish migrate? Can some fish lay their eggs on land?

Response: No, fish is aquatic and only lays eggs in water.



An Overview of Fishing Gear, Fleets and Markets

Alex Sabah

Director, Fisheries Commission, Western Region

An Overview of Fishing Gear, Fleets and Markets

Mr Alex Sabah gave an overview of the fishing gear, fleets and markets for fish in Ghana.

Take home messages

- Fishing fleet refers to the various crafts used in fishing. These are classified into three: Artisanal; Semi-industrial and Industrial.
 - Artisanal crafts were over 12,000 as at 2004 census and there has been a huge increase in numbers in the last 10years.
 - Canoes are made from local wood “wawa” (*Triplochiton scleroxylon*). There are of four types of canoes: small size (one man canoe: 4-5m long & 40-50cm wide), medium (line & setnet: 6-11m and 70-100 cm wide), large (*alipoliwatsa* : 12-18m long 1.3-1.8m wide) & large (beach seine canoes).
 - Inshore vessels have a wooden hull with in-board engines and are locally built. They are multi-purpose vessels (purse seiners and trawlers). Their length range from 8-37m. There are two types of inshore vessels: Small inshore vessels that are 8-10m long and are mostly purse seiners and fish within the IEZ (30m zone) and Large inshore vessel: with length that is more than10m. They are mostly trawlers and cannot fish within the 30m depth. The inshore fleet operates from 7 centres namely; Tema, Apam, Mumford, Elmina, Sekondi, Axim and New Takoradi.
 - Industrial vessels are made from steel and consist of trawlers, shrimpers and tuna vessels. They mainly operate from Tema and Sekondi.

Fishing Gear

- A fishing gear is a device used in catching fish. There are two types of gears: passive and active gear.

- Passive gear is set at a definite place with anchors or allowed to drift with the current e.g. gill net, long line, traps, and pots.
- Active gear is used to chase fish. Examples include ring net or purse seine, cast net, beach seine and trawl. Illegal gears include monofilament nets.
- Illegal methods include pair trawling, dumping of fish, harvesting marine/fresh water mammals without permission; trans-shipment and light fishing.

Discussion

- Question: What is a flare used for?
- Response: A device used to call for assistance when there are complications at sea.
- Question: How do you know if fish has been in contact with chemical?
- Response: There are devices that can be used to check for chemicals in fish. In Tanzania they have a device that is used to do this: - fish caught by dynamite changes from its original colour to yellow when the fish comes into contact with the device. Also, when turned mouth-down, blood oozes out and the fins easily fall when touched with colour turning light green when refrigerated.
- Question: Does light have any effect on the fish?
- Response: Light used in fishing attracts both adult and juvenile fish which could have been left in the sea to grow bigger, mate and reproduce.

Presentation and discussion on Biribireba Radio Drama Episode

The Hen Mpoano Initiative has developed a 52 weekly serial drama which is both educational and entertaining and aimed towards behaviour change in fishing communities. It is played on 3 radio stations at Shama, Sekondi-Takoradi and Axim. One of the episodes was played at the workshop and discussed. Participants identified the following as key lessons from the drama.

- Fishermen were smart at blaming others so the police should be aware of this.
- Police should go about their duties politely during patrols.
- If the police cannot easily arrest fishermen they are familiar with, they should rather take time to educate them on the implications of illegal fishing methods and their effects on the fishery.
- Fishermen use portable generators at sea not for lighting their boat but for aggregating fish (light fishing).

Field Visit to Sekondi Fishing Harbour

The MPU visited the Sekondi fishing harbour. Various issues were discussed. The chief fishermen took the trainees to inspect a semi-industrial boat. They went to the canoe landing site where they interacted with canoe fishermen. The discussion is captured below.

Discussion

- Question: Are fishermen charged for landing at the harbour?
- Response: Yes, they are charged, just like airport tax or private vehicles using a public facility like a lorry station. The money is used for maintenance of the facility as well as paying for sanitation services, utilities, security etc.
- Question: Do fishermen use juju (voodoo) themselves?
- Response: Yes. Juju in fishing is real said one fisherman).

Question: Why Do Fishermen break the law?

Response: The fishermen break the law because:

- There is no deterrence.
- Traditional rulers and chief fishermen do not work hand-in hand.
- Favouritism & sympathy on the side of both traditional rulers and chief fishermen.
- Leadership is weak.
- There is partiality/ favouritism and selective enforcement of the law.

Suggestions / Comments from the fishermen

- The politicisation of fisheries issues should stop.
- The Fisheries Commission should educate and organize their personnel to help solve problems of the fishermen. At the moment fishers have to go to the head-office in Accra to report conflicts.
- The police officers should use the law fairly to prevent misunderstandings. The police must use appropriate entry approaches, to win the confidence of community.

The traditional council & chief fishermen should unite & work hand-in-hand.

Fisheries Management: History and Challenges





History of Fisheries Management in Ghana

George Hutchful

Coastal Resources Centre, Ghana

A History of Fisheries Management in Ghana

Mr. George Hutchful gave an overview of the changes in fisheries management in Ghana, from the pre-colonial, colonial and post-colonial era.

Key messages

- Fish is a source of livelihood for fishing communities and contributes to food security
- Colonial era
 - Fishing was mainly based on open access, and was largely unregulated.
 - In 1946, a Department of Fisheries was established.
 - In 1952, boatyard was established in Sekondi to promote construction of semi-industrial mechanised boats
- Post-independence
 - Fisheries regulations were put in place to guide the Department of Fisheries whose responsibilities included monitoring and enforcement
 - Fisheries remained open access and largely unregulated
- Late 1980s
 - The task of managing fisheries was given to the newly formed District Assemblies with the responsibility to formulate and adopt by-laws and to promote responsible fishing. However, district personnel had no background in fisheries and hence nothing was done
 - Fisheries Department retained the role of policy formulation, monitoring and enforcement
- Late 1990s
 - Community Based Fisheries Management introduced to spearhead management activities.
 - Individual communities were to be responsible for managing their fisheries.
 - However management was focused mainly on the artisanal sector and did not include semi-industrial and industrial trawlers and hence was not successful.
- Current trends
 - Transition towards regulated and managed fisheries to sustain livelihoods of many coastal communities
 - Moving towards co-management



Challenges for Management in the Sector

Donkris Mevuta

Director, Friends of the Nation

Challenges for Management in the Sector

Mr. Donkris Mevuta presented the key challenges in managing fisheries. He described the two management systems for fisheries (top-down and co-management) as well as the role of MPU in the management of fisheries.

Key messages

- Fish is not just food but a natural resource that needs to be managed sustainably.
- Fisheries management refers to ways of maximizing benefits obtained from sustainable use of fishery resources.
- Challenges in the fisheries sector include:
 - Dwindling catches
 - Open access for artisanal fisheries
 - High incidence of illegal fishing e.g. Trans-shipment
 - Over-exploitation of fishery resources due to high demand for fish
 - Insufficient and irregular supply of pre-mix fuel
 - High cost of fishing inputs such as outboard motors and fishing nets
 - Lack of inboard engines for inshore vessels
 - Wetlands degradation
 - Conflicts with Oil & Gas Production (loss of fishing grounds, net destruction by bigger vessels and inshore vessels)
 - Low compliance and inadequate enforcement of regulations
 - Poor coordination with other Ministries and the Metropolitan, Municipal and District Assemblies.
 - Heavy political polarization & interference.
 - Erosion of local traditional authority structures (the chief fishermen and his council of elders)
- Two management systems for fisheries exist in literature: the classical top down management and adaptive co-management.
 - In top-down management, rules are made and enforced by central government that only considers the fish (and ecosystem) but excludes people. There are many examples of **failure of such system** - where strong centralized management exists
 - In adaptive co-management, fishers and other **stakeholders** are involved in rule setting and implementation, and focus is on creating supportive legislation. For co-management to work, building the right **institutions** is critical.
- The principal goal of marine resource management should be a sound fisheries policy founded on long-term thinking, profitability and sustainable harvesting of marine life

- The role of the MPU is critical in preventing illegality to ensure sustainability and food security.

Discussion

Question: How do the fishing and 'oil-and-gas' explorations co-exist?

Answer: There are several conflicts between fishers and the oil and gas personnel. The earlier an arrangement is found to accommodate fishing and 'oil-and-gas' issues, the better.



Erosion of Cultural Norms and the Powers of Chief Fishermen

Nana Adam Eduafo

Chief Fisherman, Aboadze

The Erosion of Cultural Norms and the Powers of Chief Fishermen

Nana Adam Eduafo explained how chief fishermen were installed in Ghana. He described the traditional roles of chief fishermen in fisheries management in their communities. These he noted have changed over time, pointing out that fishers had edgy relations with the police and this need to be addressed if the two are to work together.

Take home message

- There are three methods of appointing chief fishermen.
 - By hereditary system. This category of leaders is very well-respected.
 - By appointed by the 'traditional chief' but they are not well-respected by the generality of fishers.
 - Fellow fishermen nominate and appoint their leaders.
- The chief fisherman has to be an experienced fisherman. He is an administrator and leader. A properly installed chief fisherman has a sceptre of office (*called akofena in Fante*)
- 90% of fishers in Ivory Coast are Ghanaian and they stringently abide by the fisheries laws of that country. They listen to their chief fishermen who orient new arrivals from Ghana on the fisheries and the Ivorian enforcement system. Yet in Ghana, fishermen do not respect the authority of the chief fisherman. This is partly attributable to political interference.
- In Ghana, traditionally, the chief fisherman enforces laws and regulations. He is the one who controls the fishermen from indulging in illegal activities; for example.
 - Observance of taboo days (usually Tuesday and Sundays).
 - These days are used for maintaining one's own gear
 - Sand winning etc.
- As a chief fisherman and being responsible for enforcing traditional laws which were ascribed to deities, the former was greatly revered. Refusing to obey any summons by him could be reported to the police.

- Interference from politicians has contributed to the erosion of the chief fisherman's authority. Connected fishers (as well as chief fishermen) break the law with impunity and are not accountable to anyone in the community.
- Good intentions or programmes by government (e.g. subsidies on premix fuel or outboard motors & education) have divided the ranks of fishers along partisan political lines.
- Fishers have a cat-and-mouse relationship with the police and only come to them when there is trouble. This is not a healthy situation for potential partners in enforcement of good fishery practice.

Discussion

Question: Who has the right to select or install a chief fisherman?

Response: The traditional chief in some instances. Some are also nominated by the fishers themselves. The position is hereditary in some instances.

Question: What can be done to children who do not attend school but go to sea?

Response: Laws to protect children must be enforced.

Question: How long can a canoe last?

Response: It can last between 8-20 years depending on the type of wood it is made from and maintenance.

Question: Who is the final authority in the fishing community?

Response: It is usually the chief fisherman where there is no traditional chief. However assault, murder or death cases are reported to the police.

Question: How do we as MPOs do our work efficiently without stepping on the toes of any "chief"?

Response: To reduce conflict, the chief and the chief fisherman are both to be recognized. However, the chief is superior to the chief fisherman, especially where the fishers are mostly migrants.

Field visit to Ngyeresia fishing community

Like all the other visits to communities, the MPOs were welcomed by the chief fishermen who explained why the police were visiting the community. This was followed by a speech by the leader of the unit, DSP Laar Baaman, who told the gathering about the work of his unit. Discussions and interactions between the MPOs and the fisher folks followed. Though it appeared majority of the gathered community members received the news with joy, there were a few who evidently did not receive it well. One fisher, who seemed to be involved in illegal activities, clearly stated that he was not happy that the police were now coming to stop the illegal fishing methods and gears in his community because "he had invested into his work". When the police were explaining why the use of illegal methods should be stopped, the fisherman walked out of the meeting. This shows that not everyone will welcome the work of the MPU, and there is therefore critical work for enforcement of the law to be done.

Discussions

Question: Are the issues of banned practices targeted at all categories of fishers or only certain categories?

Response: The ban is targeted at everyone.

Comments: In Ivory Coast, the law deals with everyone fairly. Yet right here in Sekondi, the security agencies arrest some groups and turn a blind eye on illegal activities by others. In

the past, young fishers listened to their elders. Today anyone who is well-connected can be appointed as chief fisherman.



International Monitoring Control and Surveillance

Mr. Papa Yaw Attobrah

**Director, Fisheries Commission,
Central Region**

International Monitoring Control and Surveillance

Mr. Papa Yaw Attobrah explained that the Monitoring Control and Surveillance (MCS) Unit is a Department of the Fisheries Commission. As the name suggests, MCS is responsible for monitoring and surveillance activities in fisheries within all Ghanaian territorial waters.

Key Messages

- Fisheries Act 625 of 2002 established the Fisheries Commission whose functions include:
 - Administration of the secretariat of the Commission
 - Setting up of a Fisheries Development Levy
 - Fisheries management and development and
 - Establishment of MCS Unit that consists of secretariat of the FiC, Navy, Air Force
- Main functions of the MCS include:
 - Monitoring, control and surveillance of all fishing operations within the fishery waters by whatever appropriate means. These include management and running of a satellite base station for using satellite communication for data transmission relation to the activities of foreign fishing vessels licensed to operate within the Exclusive Economic Zone (EEZ) of Ghana.
 - The enforcement of Fisheries Act and Regulations and enactment of regulations related to fisheries
- The 1992 Constitution Article 200 states that Ghana Police Service shall be equipped and maintained to perform its traditional role of maintaining law and order.
- MCS officers were given powers of arrest just like police officers and can stop and search any vessel; examine and endorse any license or authorization; examine and test where relevant, any satellite tracking device; and question the master or any crew member on board about fish cargo.
- Core activities of the MCS include
 - Inspections and licensing of fishing vessels
 - Inspection at port and enforcement of the Fisheries Act

- Fish import monitoring for compliance
- Observer programme on both trawlers and tuna vessels
- Dedicated fisheries patrols with the Navy for the enforcement of the Fisheries laws and the protection of the fisheries resource
- Beach combing and Volta Lake patrols
- Monitoring of fisheries related gears and equipment imports
- Inspection of net manufacturing factories
- Running of Vessels Monitoring Systems (VMS) station
- The Fisheries Commission has three vessels for MCS activities.. However, because of inadequate personnel to man these vessels and offer technical support, two of these are with the Navy and the other is on the Volta Lake.
- It is quite prudent to check illegal activities on land before it gets to sea. However, fishers are able to drop their illegal gear and equipment (e.g. generators) into the sea to outwit the Navy. It is unfortunate that fishers think only about how to increase their catch and not the implications of illegal fishing on human health and fish ecology.

Discussion

Question: Is dumping of human faeces at sea an offense?

Response: This is an Environmental Protection Agency (EPA) issue. However, the faeces must be treated before being dumped into the sea.

Question: Do canoes have license?

Response: According to international regulations, canoes do not need licenses.

Question: For those who are required to obtain licenses, is the document for people or for the vessel?

Response: In our case, we give a licence to a vessel to fish

Question: You said a boat was given to the Ghana Navy as part of equipping them for their work? Why didn't the Fisheries Commission give a boat to the Ghana Police Service?

Response: The police did not have an MPU at that time.

Question: Can you explain the difference between flag of state and flag of convenience?

Response: When a vessel has a flag of state, it flies its country's flag. When a vessel has a flag of convenience, it is given the flag of the nation where it is fishing so as to enable it to fish in that country's waters. However, some people are better equipped and can poach and fish in other countries' waters and hop to nearby countries when they see patrol vessels coming their way.

Question: Are two patrol boats not too few for the entire coastline of Ghana?

Response: Yes, they are few but currently there is not much that could be done. However the Air Force may be called to assist in policing using their aircrafts.



Challenges in prosecution in Fisheries and Environmental cases

Mrs. Patience Klinogo

Chief State Attorney, Western Region

Challenges in prosecution in Fisheries and Environmental cases

Highlights:

- The Attorney General's office works with investigators and prosecutors.
- Prosecution depended on evidence gathering, effective investigation and arrests.
- Need for evidence gathering to support prosecution of cases.
- The Fisheries Laws are relatively new in our legal system and most lawyers were still not familiar with them.

Take home messages

- Effective prosecution depends on communication and documentation of the case. It starts with an arrest. It is therefore crucial for the police once in a while to refresh their minds about the arrest and prosecution procedures.
- Fisheries infractions includes, for instance, possession of items such as:
 - portable generators,
 - bulbs of 500 watts and more,
 - switch boards,
 - explosives,
 - undersize nets and
 - obnoxious substances among others.
- This is clearly outlined in Section 135 of 1968 Regulation. Other infractions include,
 - fishing without licences,
 - fishing beyond the 30m depth for semi industrial and industrial
- vessels and possession of illegal fishing gear.
- Possession of "prohibited" items within 2 kilometres from the sea is a crime as it is presumed that it will be used for illegal purposes. Enforcing officers have power to conduct a search and arrest upon reasonable suspicion. When apprehended, the arrested person has to prove that the prohibited items were meant for a legal purpose.
- An arrest should be made when there are reasonable grounds that an offense is being, or has been committed. When a vessel is arrested, the master or chief engineer on board is the one taken to court and the ordinary crew members are left free.
- When an arrest has been made, written documentation must be handed over to the court and the arresting officers are required to come and be witnesses in the prosecution. Without the witnesses and evidence, prosecution will not be successful

and arrests made are a waste of time as those arrested cannot be successfully prosecuted.

- Prosecutors face many challenges as in most cases arresting officers hardly come to witness cases they submitted to the court.
- When gathering evidence, it is important to take photos especially when dealing with fish as this is a perishable item. The police should make sure they get exhibits e.g. cut a piece of the net, put it in a sealed envelope and signed. Both the police officer and the arrested person must sign on the sealed envelope so that the arrested person will not deny the accusation when taken to court.

Discussion

Question: One of the problems we face in prosecution is jurisdiction. Some people move to other places after committing a crime and it becomes difficult to arrest them.

Response: If you commit an offence you can be arrested anywhere. However, prosecution happens where the offense was committed. Cases involving foreign vessels are handled in the High Court.

Question: Who is prosecuted when a vessel is arrested?

Response: The managers (owners), as they are responsible for the actions of the crew.

Question: In prosecution, the AG's office is mostly responsible for delays in prosecution, why is that so?

Response: The AG office for the Western Region is severely understaffed and consists of 5 people. However, the police are also partly to blame for the delays because of the bureaucracies involved – the prosecution documents take too long before they are submitted to the AG's office.

Question: Since we are dealing with fish, which is highly perishable, after we take photos as exhibits, how do we dispose of the fish?

Response: According to the Fisheries Law, if the fish is wholesome, the Director of Fisheries will dispose of it in a manner he or she deems fit. In most cases, the fish is sold and the proceeds handed over to the court.

Question: The penalties mentioned in Ghana Cedis (GHc)?

Response: 1 penalty unit is GHc12. However, in other cases it is clearly specified that the penalty be paid in USD: However, a person can still pay the fine in GHc based on the daily exchange rate provided by the bank.

Question: How long can a case take before judgement?

Response: There is no specified number of days. It may take days, weeks, months or years. However, for fisheries, there is need to present the case for prosecution within a year.

Question: What does submission of '**no case**' mean?

Response: If you do this, you are telling the court that the case is a foolish case and will be a loss of time if they go ahead with prosecution. If the court agrees with this, then you are acquitted and discharged.

Question: Will it be possible for us (the trainees) to get copies of the Fisheries Law

Response: Yes, the Fisheries Commission will provide these.

Question: How many cases have so far been successfully prosecuted here in the Western Region?

Response: Since 2011, we received 30 cases and most of these were successfully prosecuted. One of the cases we lost was a vessel that did not have a fishing licence and up until now I still don't know how that vessel managed to obtain

the licence. The majority of the cases were in relation to light fishing. However we face a lot of resistance especially with vessel licences because the penalty that is very high. The vessel will be forfeited or confiscated by the state.

Comments: The police must be tactful in conducting their duties to avoid incidences of mob attacks. It is important to inform the arrested person of his or her offence **on** the site and if in doubt, must contact with MCS.

The police must take written communication seriously. There must be proper narration of facts. As much as possible, witnesses must be used. However, independent witnesses are better for successful prosecution.

Need for clarity on how perishable items should be disposed and local expertise/knowledge should be sought in the process of disposal of fish.



Role of Fishmongers in the Fishing Industry.

Mrs. Emilia Abaka-Edu

Fishmonger, Axim, Western Region

Fishmongers and their Role in the Fishing Industry.

Mrs. Emilia Abaka-Edu highlighted the important role that women play in the fishing industry, from pre-financing the fishing expeditions to processing and marketing fish. She later explained why the use of chemical and dynamite should be stopped as fishmongers face problems in processing the fish, and she ended by calling the Marine Police Unit to assist in stopping fishers from using illegal fishing methods.

Take home messages

- Women largely finance fishermen to go fishing and the financiers have first choice to buy the fish when the canoe lands.
- The fish is priced through negotiations with fishermen and negotiated price stays the same for the day.
- Women dominate the downstream trade in fisheries.
- Over time, there have been changes from traditional round ovens to the Chorkor Smoker that is more efficient and can process large quantities of fish at a time.
- Illegal fishing methods include use of chemicals such as carbide, DDT and mosquito coils; dynamite and light fishing. The most dangerous of these are the chemicals and dynamite.
- Illegally caught fish are not easily detected at the landing site. However, fish caught with chemicals gives problems when being processed:
 - Fingers of fish-processors become brittle, itchy or sore
 - Fish melts during preparation for smoking
 - Processing of the fish consumes more fuelwood

- Fish colour changes quickly when smoked from brown to black after a few weeks and the fish looks burnt.
- Chemically caught fish is sold on the market anyway. Fishmongers do not throw fish caught using chemicals or dynamite away even though they know it is bad fish. However, there are cases when the market rejected the fish. For instance, in Kumasi market women refused to buy fish coming from certain communities saying that the fish looked unusual
- Since fishing expeditions are mostly pre-financed by women, women can refuse to buy chemically caught fish and hence can help stop the use of chemicals and other illegal methods. But this can only be done if women have one voice.
- There is need for research to be done to identify the effects of fish caught with chemicals on human health and there is need for fishmongers and processors to be taught simple ways of detecting illegally caught fish.
- The police must help women by stopping fishermen from using chemicals.

Discussion

Question: How do you identify fish caught by chemical fishing?

Response: The blood of the fish turns black when landed. However, fishermen know that women can tell when they use chemicals and now they add other chemicals to stop the blood from turning black.

Question: If women detect that the fishermen used chemical or dynamite, why don't they report the men to the police so that they get arrested?

Response: This is complicated as fishmongers normally buy from their husbands – they are also related to other fishermen and this makes reporting to the police not possible.

Comment: As we just heard, it is difficult for the fishmongers to report chemical or dynamite fishing – all organisations need to collaborate and work together so as to stop these crimes. We must intensify our campaigns to educate the fisher folks about the dangers of chemical and dynamite fishing as well as other illegal gears. The process will take time, but slowly we will get there.

Question: How do you identify a fish caught by dynamite?

Response: When you lift the fish upside down, blood comes out of its mouth. When you turn the fish, the tail will touch the mouth since all bones are broken. Also when you smoke it, it breaks down into pieces.

Question: How can we get medical doctors to participate in these campaigns so as to educate people about the health impacts of consuming fish caught by chemicals and dynamite?

Comment: If women come together and tell the fishermen that they will not buy fish caught by dynamite, this will be effective. I am now in the process of getting all the women organised so that we can make such decisions together.

Question: Is there a difference between normal and chemically caught fish when you eat it?

Response: Yes. Chemically caught fish is tasteless. The chemicals also affect men's performance in bed.

Question: If women are joining hands to stop chemical and dynamite fishing, what are we as authorities doing to stop use of illegal methods in fishing?

Response: The authorities must be provided with the appropriate logistics and personnel to carry out regular outreach activities to educate communities and stop illegal fishing activities.

Comment: Communities must take control of the fisheries in their area and also make decisions and take control of the situation. We must sensitize them so that they know why various regulations were put in place. We must put in place community based fisheries management and this will work well when all communities are involved. Communities will not comply with the Fisheries Laws if others are not complying.



The fisheries working group
Danny Kirk Mensah
Chairman, Fisheries Working Group

The fisheries working group

The Fisheries Working Group (FWG): is a group of fisheries stakeholders which's creation was facilitated by the ICFG (Hen Mpoano Initiative) to address fisheries concerns in the Western Region, advise the Regional Director in efforts aimed at promoting sustainable fisheries, collaborative management and voluntary compliance.

Take home messages

- The FWG is a multi-stakeholder platform to forge stakeholder coordination and offer advice to the FiC through the Western Region Directorate of the Commission
- FWG was formed against the background of little communication between stakeholders on dwindling fisheries resources resulting in inaction and 'blame game' and finger-pointing over the crisis in the fisheries sector.
- FWG consists of 11 people from 9 institutions:
 - Ghana Trawlers Association;
 - Ghana Inshore Fisheries Association;
 - Ghana National Canoe Fishermen Council;
 - Fishermen and Fishmongers representing the six coastal districts;
 - Western Region Cooperative Fishermen Service Centre's Union;
 - Attorney General's Department,
 - Environmental Protection Agency;
 - Ghana Navy and
 - Ghana Police Service (security agencies).
- The main objectives of the FWG are:
 - Enhance communication among fishery stakeholders in support of compliance and enforcement of fisheries regulations (LI 1968)
 - Identify options for improving the connections between fishers, fishing communities and District Assemblies
 - Identify strategies for minimizing conflicts and accidents at sea between fishing activities and those related to the petroleum industry.

- Achievement of the FWG include:
 - Platform is now recognized and was inaugurated by the Chairman of the Fisheries Commission
 - Made contribution to a policy paper on voluntary compliance & strategic enforcement by Hen Mpoano Initiative.
 - Provided strategies for education on compliance strategies
 - Helped reduce conflicts among fishers,
 - Advocated for sub-committees responsible for marine (fisheries) and coastal issues to be established in Assemblies along the coast
- Key challenges faced by the FWG include:
 - Poor participation by oil-and-gas industry and failure to attend meetings to discuss accidents at sea
 - Political interference
 - Recalcitrant fishers

Discussions

- Question: You have problems with politicians who come and promise fishing inputs and abolish the LI 1968, why don't you use the same platform to advise people that the politicians are not truthful.
- Response: Politicians are powerful and sometimes can influence many things. We made an arrest of canoes using lights and politicians went to the police station and ordered the arrested people to be released.
- Comment: As police, we still try by all means to use methods that counter these politicians. For now let's educate people about the dangers of illegal methods and gears. When we finally go out and enforce the law, if these politicians come, we shall resist them. Although some of these politicians are educated, they lack knowledge when it comes to fisheries issues.

Fisheries Governance and Communication



Presentations and discussions of group tasks

Five groups focused on the following illegal fishing methods:

- Dynamite
- Monofilament nets,
- Chemical fishing,
- Illegal mesh net
- Light fishing

The presentations by each group are outlined below.

Dynamite Group

What is dynamite? Dynamite is a type of explosive that contains nitroglycerin, a liquid that is used to make explosive and medicines.

Advantages

- It kills a lot of fish instantly
- Users get more income quickly
- Users get more fish

Disadvantages

- Market women make losses as the fish easily goes bad.
- The practice kills juvenile fish as well
- The process deplete fish in the sea
- Fish captured this way is poisonous
- Fish caught cannot meet export standards
- Dynamite poses threat to users.

Strategies to overcome challenges

- Assemble all leaders in the community to educate them on LI 1968
- Set up a committee within the fishing community to study laws regularly
- Rigorous enforcement of the law and arrest offenders
- Check and stop the practice at the sources of supply
- Persons caught should be prosecuted and imprisoned
- Make rules that bind the fishermen from using poisonous materials.

Comments:

- The group made a complimentary presentation. They demonstrated that they had understanding of the fisheries regulations.
- Need to remember that fishermen are inventors and in the absence of strict enforcement will continue to use illegal methods for fishing
- Small-size mesh nets

Monofilament nets

What are monofilament nets?

- These are cheap plastic nets, when torn this net does not rot but floats about in the water and continues to fish all sizes of fish – this is called **ghost fishing**.

Actions to be taken

- Educate fishing communities on the effects of using monofilament nets through the help of the chief fisherman. Educate them on Fisheries Regulations (L.I 1968) and the Fisheries Act 625; what it says about using this gear and the prescribed penalties for offenders.
- Enforcement of the law: This will be done through regular inspection of fish landing beaches, arresting and prosecuting the offenders.

Risks and challenges

- Political interference makes the processing of offenders difficult.
- High cost of fishing gear is a hindrance. Legal nets are expensive, and this makes monofilament nets attractive.

Strategies to overcome the challenges

- Fairness and promptness is a must. Once a vessel is arrested, processing of the offenders should be processed without interference. This is problematic due to other influences.
- Ban importation of 'illegal' gear. The government should ban the importation of the illegal fishing gear into the country
- Patrolling the fishing communities and increasing the visibility of the Marine Police Unit at the fish landing beaches
- Monitoring banned gears. For example, importation and sale of the illegal gears in the market would be checked by the marine police officers and FiC to make sure the purpose for which the gear is imported is strictly abided by.
- Motivation: The Marine Police Unit and the FiC should be well equipped for this task. The chief fishermen should be factored into all enforcement and educational programs.

Comments

- The trainee speaker spoke very well with authority
- Someone said that multi-filament nets are not found at the market, this is not true. These nets are available for sale, but they are expensive.

Chemical Fishing

What is Chemical Fishing?

- Fishing with dangerous chemicals such as carbide, cyanide and DDT
- Chemicals kill fish and put the health of humans at risk. Fish ready to reproduce and juvenile fish are also killed.

Action to be taken

- Educate fishers to appreciate that chemical fishing is prohibited by the law (LI 1968 Section 11 states clearly that anybody who contravenes this regulation must be punished severely).
- Well-thought out plan for joint education campaigns on voluntary compliance at beaches
- Identification of informants on the beaches to inform law enforcement agents on those using chemical. These informants should be protected.
- The culprits must be brought to justice.

Challenges/risks

- Sometimes politicians interfere with the justice system.
- Confrontation and attack by fishers.

Strategies to overcome challenges

- Effective patrols in fishing communities and beaches at all times.
- Empowerment of the local chiefs and chief fishermen and education on their rights to arrest and protect exhibits and the need to quickly inform the police for action.
- Putting in place watchdog committees to check on illegal activities in the community.
- Fairness in law enforcement.

Functions of the Marine Police in Enforcing the Fisheries Laws

The core function of the police is clearly defined in Article 200 of the 1992 constitution to protect life and property and apprehend and prosecute offenders. The MPU was admonished to embark upon an outreach to sensitize the communities on Fisheries Laws to make fishers aware of the laws, and also introduce the MPU and their future activities. Once they become aware of the Fisheries Laws, compliance may increase.

Challenges/risks

- Setbacks may come from those who have benefited from use of illegal means to achieve their goal. These people may convince community members not to abide by the laws.

Conclusion

Most members of the community see police presence as a threat to their illegal activities. There is the need to understand community members' behaviours and perceptions, those willing to give information should be protected. There is need to come up with graduated sanctions and first time offenders must be cautioned and educated on the Fisheries Laws.

Small-size mesh nets

Description

- Small mesh nets are those with intervals of less than one inch when stretched mesh size to be used at sea should be greater than 1 inch. Small mesh nets catch small & juvenile size of fish.

Action to be taken

- Educate fishermen and the community on LI 1968. Offenders should be arrested and prosecute without favour.

Challenges

- Authorized net is expensive. Government should block avenues that allow illegal nets into the Country.

Suggestion

- Government should subsidize the authorized nets for fishermen.
- Security agencies should conduct proper checks at the entry points to stop illegal nets from entering the country.

Conclusion

- The community, security agencies and the Fisheries Commission should join hands to prevent the use of small mesh nets in the sea.

Comments and questions

Question: What can we do to educate the politicians on illegal fishing methods?

Word of Caution: Policemen should be careful when dealing with politicians.

Comment: Policemen should continuously interact with experts so as to continue learning Fisheries Laws, illegal fishing methods and their effects.

Light Fishing

‘Light Fishing’ group Members:

Wonder Kpedator, Amoh Kyere, Moses Enimil and Owusu Kwadwo

- History of light fishing
- Light fishing started in early eighties. Light under water attracts all sizes of fish (including those about to spawn and juveniles). In the seventies, fishermen were selective and did not fish indiscriminately. They also operated seasonally and there was no light fishing.

Action to be taken

- The MPU will look for those who manufacture and indulge in light fishing and sensitize them on effect/harm it is causing to the ecosystem and also educate them on the law that prohibits use of light fishing. There is need for fishers and law enforcement agencies, especially the MPU to get close and collaborate for sustainable fishing.

Strategies

- There is the need for regular orientation and education for enforcement officers on fisheries issues. MPU to study co-management roles and the Fisheries Laws (e.g. L.I 1968, LI 11(1) that prohibits any fishing method that aggregate fish e.g. use of light, portable generators, switch board and bulbs beyond 500watts).
- Collaboration with canoe fishermen, boat owner associations and chief fishermen to enforce the Fisheries laws.
- Regular education of fishers on Fisheries Laws and creation communication channels for communities to contact government regularly on fishing issues.
- Empower fishermen to take responsibility for their own resource
- Ensure MPU is resourced with patrol boats for law enforcement
- Effective co-ordination with other sector agencies.

Risks and challenges

- Politicians make the laws yet some interfere with law enforcing activities when their friends are caught.

Comments:

- Need for the group to learn more about the law that bans light fishing
- Need for policemen to have initial dialogue with fishermen on light fishing.
- Police must enforce the Fisheries Laws to our benefit

Presentation & Discussion on film entitled 'Empty Nets'

Participants watched and discuss a video entitled, '**Empty Nets**'. Issues discussed include the Need for the Fisheries Law to be enforced to protect the fishing industry that is important for employment creation (livelihood sustenance) and food security.

- Fishermen are calling on the government to enforce the Fisheries Law as fish catch is declining
- Fish has omega 3 oils that is good for the human heart
- The oil-and-gas industry is impacting negatively on fishing activities. There is the need for Fisheries Impact Assessments to be done by the oil and gas companies.
- Some fishermen do not use illegal fishing methods (e.g. the Drift Gill Net (DGN), hook and line.
- Fishermen enjoy their work
- There is poor fish handling after harvesting



Why Fishermen Break the Law *Mark Fenn* **Chief of Party,** **Coastal Resources Centre, Ghana**

Why Fishermen Break the Law I

Mr. Mark Fenn presented the key factors that promote or not promote voluntary compliance.

Take home messages

Compliance is based upon:

- legitimacy of rules and enforcement institutions (Effectiveness of outcome of management rules, fairness in how benefits and sacrifices are distributed and efficiency of judicial process)
- Fairness of procedural process (public participation in rule making; higher levels of democratic decision-making and wise leadership and peer pressure), moral obligation and values that derives from many factors (environmental awareness, understanding the ecological and social basis for rules and common values)

Model for compliance;

- Deterrence = Probability of Detection + Severity of Penalty
- Violator Decision = Potential Illegal Gains *vis-a-vis* Deterrence
- Factors leading to low compliance include
- Low penalties, unfair law enforcement, low chance for detection, weak leadership, low social cohesion and lack of common values
- Factors that promote compliance include: widespread understanding of rules and their justification; environmental awareness, perceived crisis; dependence on fishing; public discussion of rules; perceived benefits; democratic processes in communities; fair and equitable enforcement and prosecution; high penalties; strong leadership; good relations with enforcement agencies

that are present regularly; diversified livelihood opportunities; professional training on improved methods and common values.



Why Fishermen Break the Law

Nana Adam Eduafo
Chief Fisherman, Aboadze

Why Fishermen Break the Law II

Nana Adam Eduafo identified the key reasons why fishermen were not complying with the Fisheries Laws.

Take home messages

- Fishermen break the laws.
- Low level of enforcement of Fisheries Laws and Legislation
- Crew members are empowered and encouraged to use any means of fishing to make more profit.
- Lack of respect for the chief fishermen by some fishers
- Unfair enforcement of the law by chief fishermen in some cases

Discussion

Question: What type of relationship exists between the chief and chief fishermen and how do the two institutions work?

Response: Chief fishermen fall into three categories:

1. Inheritance - those who were installed by hereditary.
2. Appointed by Chief - these are always under the chiefs and in most cases, there are no conflicts
3. Those selected by the communities under these arrangements, many conflicts exists. Irrespective of how the chief fishermen came to power, there is the need to educate them on the Fisheries Laws and encourage them to collaborate with the local chiefs. Before going out to each community, there was need for a background study to find out the relationships between the two institutions and strategize. The Ghana National Canoe Fishermen's Council (GNCF) can be a source of information



Building Resilience in Communities through Adaptive Co-Management of Fisheries

Dr. Tendayi Mutimukuru-Maravanyika
Post-Doctoral Fellow, WorldFish

Building Resilience in Communities through Adaptive Co-Management of Fisheries

Dr. Tendayi Mutimukuru-Maravanyika discussed the concept of resilience.

Take home messages - Resilience

- Ecological resilience is the amount of disturbance that a system takes before it shifts to another set of variables and relationships that dominate a new stability
- Social resilience is the ability of communities to adapt in the face of external social, political or environmental stresses and disturbances
- A resilient community is one that is able to buffer disturbance; self-organize after disturbance and has capacity to learn and adapt.
- Adaptive co-management can help resource managers make sense of the chaotic and complex situations they face daily and provide a framework to learn systematically from their successes and failures.
- To initiate co-management in Ghana, the Hen Mpoano Initiative is working at the fisheries stakeholders at the national, regional, district and community levels.

Discussion

Question: What can we do to improve the education levels of fishing communities? Are we going to promote evening programmes for the fisher folks so that they can learn the basics for reading and writing?

Response: Unfortunately, community members do not see low literacy rate as a challenge/problem. So far, no one has mentioned this in discussions of key challenges faced.

Fisheries compliance and enforcement





Fisheries Act and Regulations
Hon. Mike Akeaympong
Chair, Fisheries Commission

Fisheries Act and Regulations

Hon. Mike Akeaympong, made a presentation on the Fisheries Laws, the process for formulation of the Act and the LI. He also gave each of the participants a copy of the Act. He highlighted on the key sections of the Act and the LI that address illegal activities.

Key Messages

Illegal Activity	Where do you find it in the (L.I. 1968 of 2010/ Act 625, 2002)
Use of set nets (monofilament and multifilament set nets)	L.I. 8
Beach seining at Estuaries	L.I. 9
Manufacture, importation, sale, and use of authorised fishing nets and gear	L.I. 10
Prohibited fishing methods	L.I. 11
Minimum Mesh Sizes of fishing gears	L.I. 12
Markets of fishing gear	L.I. 25
Transshipment of fish	L.I. 33
Prohibited Fishing methods	Section 88 of Act 625



Defining a common understanding of the roles of Marine Police
Elvis Addae
Communications Officer

Defining a common understanding of the roles of Marine Police

Participants were divided into groups to discuss the roles of various stakeholders in education and enforcement of the various fisheries laws. Each group was asked to present on the roles of chief fishermen and marine police in education and law enforcement.

Table 1: Roles of stakeholders in education and enforcement of fisheries laws

Activity	Stakeholder Roles in enforcement	Roles
Education	Chief fishermen	<ul style="list-style-type: none"> • Mobilising fishing communities • Collaborate with the Marine Police officers • Explaining the effects of illegal methods • Education on penalties when caught • Organise regular campaigns • Source funding for educational campaigns • Identify and invite experts to come and educate communities on various topics
	Marine police	<ul style="list-style-type: none"> • Gather chief fishermen and educate them on the fisheries laws • Educate fisher folks on the fisheries laws and effect of illegal fishing methods/ gears to the ecology of fish and human health • Socialise with communities • Link up relevant stakeholders
	Fisheries Commission	<ul style="list-style-type: none"> • Translate the Fisheries Laws and Regulations into local language and make these available to landing sites and all key stakeholders • Educate Chief fishermen on the Fisheries Laws • Collect and analyse fish landing and effort statistic
Enforcement	Chief Fishermen	<ul style="list-style-type: none"> • Provide information to the Marine Police officers • Formation of a watchdog committee • Sanctioning culprits • Arrest suspects and send them to the police • Enforcement of by-laws
	Marine Police officers	<ul style="list-style-type: none"> • Beach combing and inspection of landing sites • Arrest and prosecution of culprits • Detect and prevent crime • Investigate sources that supply illegal gears
	Fisheries Commission	<ul style="list-style-type: none"> • Continue with MCS activities • Take charge in disposal of fish (both wholesome and unwholesome)



Fisheries Agents, the Navy, and the Chief Fisherman

Mr. Papa Yaw Atobrah

**Director, Fisheries Commission -
Central Region**

Fisheries Agents, the Navy, and the Chief Fisherman

Mr Papa Yaw Atobrah presented on the roles of law enforcement agents.

Take home messages

- Effective enforcement of the Fisheries Laws leads to sustainable management of the fisheries resources. Stakeholders roles are clearly defined in Ghana Laws to include
 - FC: to regulate and manage the utilization of the fishery resources of Ghana and co-ordinate the policies in relation to them. Article 269, 1992 constitution (Act 625, 2002)
 - Ghana Police: maintain law and order. Article 200 (3), 1992 Constitution.
 - Ghana Navy: defense as well as such other functions for the development of Ghana as the President may determine
 - Key operations by the law enforcement agents include: Lake patrols, Beach combing, Inspection of gears, seizure of unauthorized gears, investigations, prosecution
 - Key issues that needs to be addressed for the laws to be effectively enforced include:
 - Need for planning of enforcement by various agents
 - Funding of enforcement activities
 - Logistics (transport, communication, insurance and motivation
 - Mobilization of fisherfolks
 - Arbitration

Discussion

Question: Will there be no conflicts between the MPU and the Navy? How will the two work together?

Response: There is no potential conflict as their roles are clearly spelt out in various laws. The Navy focuses on defence, whilst the MPU will focus on investigations and gathering evidence for culprits to be prosecuted. There is need for the two to work together.



Developing a Standard Operating Procedure for Fisheries

Mr. Papa Yaw Atobrah

Director, Fisheries Commission,
Central Regional

Developing a Standard Operating Procedure for Fisheries

Mr Papa Yaw Atobrah explained the need for a Standard Operating Procedure (SOP) since many organisations are involved in the enforcement of the fisheries laws.

Take home messages

- Standard operating procedures (SOP) are written guidelines that define how operations in an organization are conducted. The SOP explains what is expected and required of organization and individuals working within those organizations.
- SOP helps in ensuring consistency when performing certain tasks and provides step-by-step instructions on conducting enforcement activities. When followed properly, SOP helps to protect enforcement personnel and the image of the organization
- There is need for an SOP for the enforcement of Fisheries Laws.



Ethical Consideration

Alex Sabah

Director, Fisheries Commission,
Western Region

Ethical Consideration

Mr Sabah highlighted the principles that should guide the MPU when enforcing the law. He encouraged them to lead by example and avoid situations that lead to conflict of interest.

Key messages

Ethics are a set of moral principles that control and influence behaviour. These include:

- All persons must be treated with respect and dignity. The use of violence should be avoided (e.g. manhandling, harming or assaulting suspects).
- Be fair & impartial when enforcing the law. Avoid over or under arresting of culprits
- Ensure confidentiality: whistle blowers must be protected
- Avoid potential or apparent conflict of interest.
- Put the society and nation before self
- Don't take advantage of community members
- Do what is right and lead by example and always avoid professional misconduct.
- Work with integrity, honesty and truthfulness to win the trust of communities
- Inspire others by your own sense of dedication and commitment

Discussion

Question: Should gifts be accepted or rejected when the police are doing their duties?

Responses: Accepting gifts may result in failing to do one's duties well. The police must avoid accepting gifts as this may affect them when performing their duties.

Workshop Evaluation

Workshop evaluation was done at two intervals,

1) halfway through the training and 2) at the end of the training. Identified issues are presented in the Box below:

Box 1: Responses given by participants when asked what they had learnt during the first evaluation exercise.

- Difference between good and spoiled fish.
- Problems with our water bodies.
- Difference between sea and lake
- Rules and regulations covering the water bodies and turtles in our country.
- The types of nets and their implications on the fishes.
- Fishermen using illegal ways of fishing, oil and petroleum industries causing problems to our water bodies.
- The use of formalin in stocking fishes.
- The omega 3 oil in fish is good for the heart.
- The use of light in fishing isn't a technology but rather an illegal way of fishing.
- Fishermen should be educated on the use of nets and other chemicals in fishing.
- Duties and roles of the Hen Mpoano in the fishing industry.
- The different types and fleet in fishing.
- Fish in the sea can be endangered by the use of chemicals.
- The harmful aspect of dynamite fishing.
- The high cost of nets and canoes.
- Industrial vessels are insured but canoes are not and therefore proposals have been made for canoes too to be insured by the insurance companies.

At the end of the training, participants were asked to complete evaluation forms.

Concerning their **expectations** of the workshop, almost all participants were not aware of the focus of the workshop – most expected to learn how to swim, whilst a few expected to arrest people and enforce the Fisheries Law.

Concerning the **topics they found most useful**– these can be grouped into three categories:

- Learning about the Fisheries Law.
- Learning about the illegal fishing methods and how they affect human health and the fish in the sea.
- Learning about the importance of fish in Ghana.

Participants indicated the “topics wanted, some topics to be covered in more depth.

- Chemical and dynamite fishing and their effect on human health.
- The Fisheries Act and Regulation.
- Detailed action plans to follow up on illegal fishing methods in communities.

Participants indicated that they also changed their perceptions on many issues. Interesting to note were:

- Duties of the police and community in managing fish resources.
- The perception that fishermen were poor.
- Buying and eating fish

- Perception that the police must arrest suspects – rather to educate them first before doing the arrest.
- Perception that fisheries were not governed by any law.

Skills they wanted to develop in future;

- To develop their knowledge of the Fisheries Law and LI.
- Identify fish caught by illegal methods.
- Interact and communicate with communities. The exact responses to the questions asked are in **Annex 5**.

Ranking of the training on a scale of 1 to 10 (with 10 as excellent), (see Table 2 below)

Table 2: Evaluation of the training

Response	No.	%
10 (excellent)	2	28.6
9	3	42.8
8	2	28.6
Total	7	100

Recommending the course to other colleagues, 17 respondents said **Yes** - meaning that they would recommend it.

Table 3: Responses on whether the participants would recommend the training to others

Response	No.	%
Yes	17	100
No	0	0
Total	17	100

Role play on Community Entry

To wrap up the workshop, 6 participants were selected to do a role play on community entry. Three officers were to act as community members and the other three to act as the MPOs. At the end of the role play, there was a discussion and key issues raised include the following:

- The need for patience when dealing with community
- The need for MPU to develop relations with community members. In the role play, some community members were about to run away when they saw the police. The policemen however did well to calm the community members down, explaining that they were there to educate them and not to arrest them.
- The need to recognise that community members will quickly refuse that they do illegal fishing. The MPU must take an initiative to educate them about the dangers of using the illegal fishing methods as well as explain the Fisheries Laws to them.

Graduation and workshop closure

The closing ceremony was held at the CRC premises at Adiembra Parks and Gardens. Closing speeches were made by

- (1) Western Regional Commander of the GPS DCOP Ransford Ninson, and
- (2) Chairman of the Fisheries Commission Hon. Mike Acheampong (See Annex 4), after which, participants were presented with certificates (see the pictures below)



Annexes

Annex 1: Workshop Participants' list

No	Name	Sex (M/F)	Age	Organisation	Contact Phone #	Email
Marine Police leaders and Trainees						
	Kennedy Kyei	M	48	MPU		
	Amoh Kyere	M	35	MPU		
	Kwaku Asante	M	37	MPU		
	Moses	M	32	MPU		
	Martin K Nkansah	M	35	MPU		
	George Asare	M	45	MPU		
	Logah Alfred	M	25	MPU		
	Owusu Kwadwo	M	26	MPU		
	Dickson O Amponsah	M	26	MPU		
	Boakye F George	M	26	MPU		
	Isaac Koranteng	M	33	MPU		
	Adabogo Alebina	M	26	MPU		
	Stephen K Obour	M	27	MPU		
	Joseph Dzifa Fiagbedzi	M	35	MPU		
	Amos Okyere	M	26	MPU		
	Isaac Kombat	M	26	MPU		
	Kofi Sarpong	M	23	MPU		
	Wonder Kpedator	M	37	MPU		
	Martin Kateye Tetteh	M	32	MPU		
	George Bacha	M	38	MPU		
	Agyemang Opambour	M	27	MPU		
	Godfred Darkoh	M	27	MPU		
	Emmanuel O. Addae	M	46	MPU		
	Owusu Abraham	M		MPU		
	Asomaning Kofi	M		MPU		
	Laar Baaman	M	48	MPU		
	Kofi Agbogah	M	50+	CRC Ghana		
	Tendayi Maravanyika	F	37	WorldFish		
	Kwesi R. Johnson	M	43	FoN		
	Alex Y. Sabah	M	50+	FiC		
	John D. Eshun	M	59	Fisherman		
	Elvis Addae	M	52	CRC Ghana		
	George Hutchful	M	61	CRC Ghana		
	Emmanuel O. Marfo	M	30+	FiC		
	Nana Kojo Konduah IV	M	72	Chief Fisherman		
	Nana Adam Eduafo	M	52	Chief Fisherman		
	Papa Yaw Attobrah	M	50	FC		
	Juliet Ama Agyeiwaa	F	24	Wildlife Division		

No	Name	Sex (M/F)	Age	Organisation	Contact Phone #	Email
	Hon. Mike Akyeampong	M	67	Fisheries Commission		
	Godfred Ameyaw	M	40	WorldFish		
	Perpetua Kwakuyi	F	40+	CRC		
	Ernest Saforo	M	33	FoN		
	Edward Taylor	M	47	FoN		
	Felix Nani	M	40+	WD		
	Emilia Abaka-Edu	M	46	Fishmonger		
	Cephas Asare	M	31	WorldFish		
	Emmanuel Ocran	M	47	FC		
	Danny Kirk Mensah	M	84	Fisheries Working Group		
	George K Assafuah	M	58	FiC		
	Patricia Markwei	F	59	FiC		
	Kofi Mensah	M	35	FoN		
	Philip Ntiamoah	M	46	FiC		
	John Edward Afful	M	54	GNCFC		
	Abaka-Edu Mike	M	48	GNCFC		
	Marvin Baidoo	M	60	GNCFC		
	Nana Kofi Annan	M	52	GNCFC		
	Nana Efirimu IV	M	67	GNCFC		
	Nana Kwesi Tekon	M	61	GNCFC		
	Joseph K Ocran	M	73	GNCFC		
	Patience Klinogo	F		Attorney General Dept.		

Annex 2: Marine Police Training Program

Day	Time	Topic	Resource Person
THE SITUATION IN THE FISHERIES SECTOR TODAY			
1: 25 September	0900-0930	Opening remarks from the Fisheries Commission, Ghana Police, and CRC	Mark Fenn, Director CRC
	0930-1030	The current crisis in the fisheries Sector	Kofi Agbogah – CRC, Hen Mpoano
	1030-1045 1045-1140	Tea break Fisheries Ecology)	Godfred Ameyaw Asiedu – World Fish/Hen Mpoano
	1130-1230	Situational facts relative to food security for Ghana	Kwadwo Kyei Yamoah – FoN/ Hen Mpoano
	1230-1330	Traditional Management of the marine fisheries resource	Nana Konduah IV – Chief Fisherman , Abuesi
	1330-1430 1430-?	Lunch Visit to fisheries landing sites in Shama District (small group tasks)	
2: 26 September	0900-1000	Debrief from Day 1 small group work	ALL Participants
	1000-1100	The principle fish in Ghana's marine environment	Marfo Emmanuel – Fisheries Commission, Western Region
	1100-1200	An overview of fishing gear, fleets, and markets	Alex Sabbah – Western Region , Fisheries Commission
	1200-1300	Films and discussion on issues in the fisheries sector	
	1300-1400 1400	Lunch Visit to the Sekondi fishing harbour fleets (small group tasks)	
FISHERIES MANAGEMENT: HISTORY AND CHALLENGES			
3: 27 September	0900-1000 1000-1100	Debrief from small group tasks Challenges for management in the sector	Donkris Mevuta – FoN/ Hen Mpoano
	1200-1300	The erosion of cultural norms and the powers of Chief fishermen	Kwadwo KyeiYamoah –FoN/ Hen Mpoano and Nana Adam – Chief Fisherman of Aboadze
	1300-1430 1430	Lunch Visit to Ngyeresia fishing community to talk to elders	
4: 28 September	0900-0930	Debrief from Day 3	
	0930-1030	International Monitoring Control and Surveillance	Papa YawAtobra, Central Regional Director, Fisheries Commission
	1030-1130	Challenges in prosecution in fisheries and environmental cases.	Chief State Attorney Western Region
	1130-1230	Discussions with representatives of industrial fleets and Fisheries Working Group	
	1230-1330 1330	Overview of Fisheries Markets Lunch	

Day	Time	Topic	Resource Person
FISHERIES GOVERNANCE AND COMMUNICATIONS			
5: 1 October	0900-1000	The Sociology of fishing communities	KyeiYamoah, Stephen Kankam – FoN
	1000-1100	Why fishermen break the law	Mark Fenn, Chief of Party, CRC, Hen Mpoano and Nana Adams, Chief Fishermen, Aboadze Fishing community
	1100-1200	Communicating with fisher folk	Dominic Dadzie, Fisherman/Teacher APGS, SHS, Takoradi.
	1200-1300	Building resilience in fishing communities	Dr.Tendayi Mutimukuru-Maravanyika, Worldfish, Hen Mpoano
	1300-1430 1430	Lunch Visit to Funko Beach	
6: 2 October	Whole Day	Visit to Dixcove community (interactions with fishermen and fish mongers)	
7: 3 October	0900-1000 1000-1200	Fisheries Act and Regulations Workshop session on defining and common understanding of the roles of Marine Police, Fisheries Agents, the Navy, Chief Fishermen	Fisheries Commission – Accra Papa Yaw Attobrah, Cape Coast FC Regional Director
	1200-1300	Evidence gathering and fisheries investigation	Chief State Attorney/WR, Papa Yaw Atobra, Central Regional Director – Fisheries Commission
	1300-1400 1400-1600	Lunch Developing an SOP (Standard Operating Procedure) for fisheries	Papa Yaw Attobrah, Central Regional Director – Fisheries Commission
	1600	Defining common ethical principles	led by Alex Sabbah, Western Regional Director fisheries Commission
8: 4 October	0900-1100	Planning and scheduling educational fora in WR fishing communities	MCS WR/FC
	1100-1200	Evaluation	led by Alex Sabbah, Western Regional Director Fisheries Commission
	1200-1300 1400	Lunch Practical exercise	

Annex 3: Speech by the Director General Research, Planning and ICT at the opening ceremony for the MPU training workshop

I deem it a great honour and privilege to be here for the opening of this training course for 25 selected personnel for the Marine Police Unit. A course designed to equip participants with some basic knowledge and skills in fisheries and governance security.

Distinguished ladies and gentlemen, the concept of Marine Policing was muted in the Ghana Police service way back in the colonial days. The Unit was thus created in 1916, but later disbanded in 1942. Exigencies of the time have however called for the recreation or reactivation of the Unit to provide security along the Coastal areas as well as for our oil and gas industries.

You will agree with me that the discovery of oil in the country does not only come along with benefits by way of employment and revenue, but also brings along challenges as criminals are bound to divert their operations to this area that is known by all of us as lucrative. It therefore behoves on us all especially the Ghana Police service to provide internal security along these areas to ensure activities are carried out in serene atmosphere and criminals are not only arrested, but also prosecuted. With the passing of state approval of the Fisheries Regulations LI1968, the police are now armed to perform our sworn duties as far as the fisheries sector is concerned. Ignorance of the law is no excuse. I am happy to learn that there is going to be a phase for education after which we shall ensure compliance of the law.

The recreation of the Marine Police Unit since its disbandment in 1942 no doubt requires training and retraining of personnel of the unit to develop their capacities to enable the unit to take off and impact positively in the fight against crime. The cost involved in organising training of this kind is however high and the police administration is most often constrained as a result of limited resources to handle training all on its own. The administration values interventions such as these and therefore registers its deep appreciation to the US government and the Coastal Resources Centre for sponsoring this course.

The Ghana police service has benefitted from many capacity building courses organised by the US government both in Ghana and in the United States of America. I have gone through the contents of this training programme and I am highly encouraged by the fact that your participants will benefit immensely from it. It is therefore the expectation of the police administration that you will imbibe new skills and knowledge to enhance your professional competence. The only way you can show appreciation to the organisers and sponsors of this course is to take the course seriously and replicate what you will learn in the field.

If you participate fully, contribute in discussions and share ideas and experiences, I am sure you will enjoy the course to the fullest. On behalf of the Inspector General of Police, the Police Administration and on my own behalf, I wish to thank the Coastal Resources Centre, organisers of this course for assisting us with this important programme. We are also grateful to our resource persons who, out of their busy schedules, have taken up the challenge to share their rich knowledge and experiences with the course participants.

Thank you and God bless you all

Annex 4: Address delivered by DCOP Ransford Moses Ninson at the closing ceremony of the MPU training workshop

I deem it very important to be here for the closing ceremony of this all important eight days course geared towards building the capacities and capabilities of the Ghana Police service Marine Corps to effectively enforce the approved regulation for the Fisheries Act (2002) that gave effect to the Fisheries Regulation (L.I. 1968).

The inspector General of Police has asked me to extend his heartfelt congratulations to you for completing this important course. He would have loved to be here for the closing ceremony, but could not make it because of other commitments.

Senior Police Officers, distinguished ladies and gentlemen, the Ghana Police Service as you all know is statutory body tasked to provide the necessary congenial environment for the citizens and residents to discharge their lawful duties and activities without fear of intimidation, protect the rights and freedom of all persons including foreigners and above all, ensure that there is internal peace in the country for the state haven in West African Sub-Region.

Mr Chairman, the oil and gas find in the region is expected to introduce security challenges. Needless to add that the socio-economic transformation of that is expected to emerge in the Region will be saturated with organised crimes such as land and property fraud, robbery, drug dealings, money laundry, piracy, human trafficking and crude forms of fishing.

It is a known fact that the establishment of the Oil Rig in the sea around Cape Three Point with maximum lights around will encourage fishes to gravitate towards the rig.

Distinguished audience, global population has increased over the years and Ghana is not an exception. The increase in the population comes with the correspondent increase in the demand for fish products. In a bid to satisfy this growing demand, some fisher folks will embark on all forms of crude fishing methods thereby endangering fish species and depleting our stock in our coastal oceans.

Mr Chairman, the Ghana Police Marine Unit is very young in terms of its operations and it is in the light of this that I am expressing the Police Administration appreciation to the organisers of this course – Coastal Resources Centre (Hen Mpoano).

I must say participants were privileged to have this blend of experienced resource persons from Coastal Resources Centre and the AG's Office for the course. Though the duration seems short, it was worthwhile and participants have no doubt benefitted immensely. I am glad to hear from the Course Leader that they (the participants) have gained immense knowledge that will propel them to perform better in the days ahead

Distinguished guest, during the eight days training, the personnel have been taken through:

- The Fisheries Act
- Current crisis in the fishing sector
- Fishing ecology
- Situational facts relevant to food security

- Traditional management of marine fishery resources
- History of Fishery in Ghana
- An overview of fishing gears
- Evidence gathering and fishing investigation among others

May I emphasize here that, the training programme has equipped the Marine Police Corps to effectively carry out educational programmes at the landing beaches and fishing communities in concert with members of the Fisheries Commission to ensure best fishing practices and to make sure that fishermen and vessel/ boat owners are abreast with the fishing laws of the land.

Permit me to remind you [the course participants] that the Police Administration has adopted a strategic direction which is aimed at realising the vision of the Ghana Police Service to be a world class Police Service capable of delivering planned, democratic, protective and peaceful services up to the standards of international best practices. You are all therefore agents of change with huge roles and responsibilities to play towards the successful implementation of the Five Year Strategic National Policing Plan.

Marine Police Unit has just been re-established and you are privileged to benefit from this first course. Many more courses have been lined up for you in our bid to develop your capacities to effectively perform at the Unit.

You will agree with me that the Marine School is currently not in the best of state, but the Police Administration is making frantic efforts to complete renovation works soon. The Long Term plan however, is to develop it into an Academy with all the modern facilities one can think of.

The Marine Administration has all the confidence in you and so I urge you to remain calm and focused on your goals in the face of these initial challenges. Remember that you are accountable to the people you serve.

We take this opportunity to appeal to the fisher folks and the Boat/Vessel owners to cooperate with the Marine Police and the Police Service as a whole in its educational and enforcement programmes in order not to bring any confrontation and bad blood between the Police and the fishermen. Abiding by the fisheries laws and regulations will ensure to the benefit of all.

May I take this opportunity to commend the Coastal Resources Centre, organisers of this course for your kind gesture, but like Oliver Twist, we shall continue to ask for more and hope you will always welcome us with open arms.

Many thanks also to all the Resource persons who out of their busy schedules, took up the challenge to share and impart their rich knowledge and experiences. The Police Administration appreciates your commitment and urges you to continue with the same spirit to ensure the development of our personnel.

To you the course participants, I say congratulations. It is said that every man sent out from an institution of learning should be a man of his nation as well as a man of his time. I am confident

you the participants who carry the honour of graduating from this course will continue to give your lives and talents, a high measure of public service and public support.

I wish to thank all and sundry who in diverse ways contributed to the success of this course. At this juncture, it is my singular honour to declare this course officially closed.
Thank you and God bless you all.

Annex 5: Workshop evaluation

What were your expectations before coming into this training?	What topics did you find useful and why?	What topics would you have wanted more in-depth? Please give details	I have changed my assumptions/ opinions about	I believe that some of the most important skills for me to develop in Future are:
<ul style="list-style-type: none"> • I was expecting that marine is about swimming so I was thinking that I am coming to swim • I thought I may be put in a speed boat and be moving on the sea as I have heard the word marine police • I was afraid because I thought all is about swimming and only to implement the law since that is my duty • I thought it was a swimming course • For me this training has helped me and my expectation before coming to the workshop was to see something like dynamite, carbide and others • I thought we were coming to arrest those doing illegal fishing • I thought I was coming to learn how to swim and not to know 	<ul style="list-style-type: none"> • Learning about the L.I. and the Fisheries Act 1968 and Dynamite • Chemical fishing: it is not good to use for fishing because it brings about cancer and cause diseases to human beings • The use of the monofilament net because it kills the juvenile fish • The chemical fishing, small mesh net – these methods are not good for our fish • Dynamite which can affect us in future • Chemicals that in future can affect our health and future generation • All topics were useful because they added knowledge to me • All topics were useful especially topics on chemicals used for fishing • Light fishing because it 	<ul style="list-style-type: none"> • Fishing and the chemical fishing as a topic • Chemical fishing as majority of Ghanaians do eat fish • Dynamite, DDT, Carbide – we need to know more about the effects, how harmful to our body • Light fishing. Because light fishing in our sea is not commonly detected • Dynamite because it leads to the depletion of fish in the sea and also leads to loss of exports and income • Chemical fishing and its effects on the health of a person and its implications • Areas of the Fisheries Act and the LI. This is a tool I will use in most 	<ul style="list-style-type: none"> • Fish • The way I used to buy and eat fish • Fishermen. I did not know that fishermen are rich and intelligent • Using chemicals in fishing because it is dangerous to our body and the sea • I learnt all fishing methods such as chemicals, dynamite • Assumed income of fishermen • The duties of police and community • How fishermen use illegal ways of fishing • Not to entertain 	<ul style="list-style-type: none"> • Fisheries regulation Act 2012 and the L.I. 1968 • To further the skills I have acquired to my family, friends, community in Ghana • Knowing how fish are caught with dynamite and how fishermen can change the technology • Knowing how dynamite fish look like, how you can detect transshipment vessels • Community interaction and education as well as communication skills • Thorough knowledge of fisheries Law and communication skills • To educate my

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<p>anything about fisheries. Meanwhile this programme has really made a positive impact in me</p> <ul style="list-style-type: none"> • I thought I came here to catch fish or swim or go to the sea side • I thought we were coming to do sea work but I did not know that they would teach us how people do illegal fishing in our sea • For me coming into this training I did not know much about our sea. Now I know much about our sea problem • I thought we were coming to learn how to swim • How to swim and how to go about it • My expectation were about learning how to swim • I thought I was going to swim but I have learnt that our fish are costly caught illegally 	<p>attracts all kind of fish</p> <ul style="list-style-type: none"> • Monofilament net because it is a rubber net. If thrown in the sea it causes ghost fishing which continued catching both small and big fish under the sea • Dynamite, light fishing, monofilament net. Because I now know those illegal fishing methods affect our marine life stock • LI 1968 of 2010. It has helped me to know much about how some fishermen use chemicals to fish • LI 1968 of 2010 • Light fishing: I now know that light fishing is not good • Chemical fishing because it is not good for human health and it can cause damage to our fish in our sea • Chemical fishing in which chemicals like carbide, dynamite, DDT, Mosquito coils 	<p>parts of my work</p> <ul style="list-style-type: none"> • Chemical fishing. When you eat fish caught by chemicals you will end up sick • Dynamite have future effects and I have to learn more a bit on that • Chemical fishing in which dangerous chemicals like Mosquito coils, DDT and carbide are used for fishing • Dynamite – we did not come across it during the trips we had and I do not know how it looks like • Dynamite is also dangerous because it can cause accident for a person using it and it also kills the smallest fish on the sea • Dynamite is poisonous to human health and it makes us lose our exports 	<p>any offenders</p> <ul style="list-style-type: none"> • How to behave in the fishing community and know what to look out for • Chewing of fish because now I have seen chemical and light, carbide fish and the way I will eat it • My opinion about the lesson as I now know about how people use chemicals for fishing in our sea • Buying of fish from the market • Illegal fishing methods are not good so I will fight against it • Know some fishermen are using chemical to fish • Fishing and 	<p>community</p> <ul style="list-style-type: none"> • To implement what I learnt here and also educate my community • To be able to assemble all the fishing communities and explain to them the effect about illegal fishing • To educate fishermen • To stop illegal fishing something like light fishing, chemical fishing, transshipping • Avoiding token gifts from offenders or people • By educating the fishermen to stop light fishing and chemical fishing • To advice my community members not to use illegal way to fish in the sea • Knowing the

What were your expectations before coming into this training?	What topics did you find useful and why?	What topics would you have wanted more in-depth? Please give details	I have changed my assumptions/ opinions about	I believe that some of the most important skills for me to develop in Future are:
<ul style="list-style-type: none"> • I thought I was coming to do sea work • My expectation was to be educated on issues related to marine police but not that related to fishing and illegal fishing methods • That I would be equipped with the requisite knowledge to be an effective marine police • To learn something about fisheries and governance • To upgrade my knowledge on fisheries and governance • I thought I was coming to catch fish or go to the sea side • I thought I was coming to learn how to swim so I became very worried • I thought we were coming for a swimming course • I thought we were just coming for a training course 	<p>are used for fishing</p> <ul style="list-style-type: none"> • Chemical fishes. There are ways that chemical fish can be detected • Enforcement of the Law because of arresting and prosecution it will put an end to the illegal fishing methods • History and challenges. Fishermen said that the outboard motors are very expensive • The L.I. and the fisheries Act • Both the practical and the theoretical aspects was good for me • Chemical fishing because when the use of chemical fishing is allowed into the system, my life, your life and our fish are at risk • The importance of fisheries because it gives us more nutrient and increase our food security and also it provides omega 3 oil that helps our heart 	<p>and income and depletes the fish in the sea</p> <ul style="list-style-type: none"> • Coming up with action plans to follow up on illegal fishing activities in a fishing community e.g. dynamite, small mesh net, monofilament net etc. • Types of fishing gears and the insurance of vessels • Use of bamboo for fishing. I don't know how they use bamboo to catch fish • Dynamite and its effects • LI and Acts • None • The use of chemicals for fishing and the protection of sea mammal's/ animals • Marine Jurisdiction. That metres that vessels are supposed to fish 	<p>fishing gears</p> <ul style="list-style-type: none"> • My perception of arresting suspects but now I have to educate • All that I have been doing in the service which are not right. Now I must educate and thereafter take action • Seeing fish as a common job without any law covering it 	<p>fishing gears and the chemicals</p> <ul style="list-style-type: none"> • Continue learning the laws and receive more education from the chief fishermen and the fisheries commission • I must be disciplined and also learn all that I have been taught • To detect a chemical and dynamite fish