

Hen Mpoano

Marine Police Training Workshop Proceedings

September 25th - October 4th 2012

**Fresh approaches for promoting compliance
and enforcement**



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Cover Photos:

Top - Marine Police officers viewing a generator on board at the Sekondi Harbour (Kwesi is this correct); Bottom left – Mrs Patience Klinogo, Chief State Attorney, giving a lecture at the training workshop; Bottom center – Mr Kofi Agbogah, Deputy Chief of Party for the Coastal Resources Centre Ghana, giving an opening speech at the graduation ceremony; Bottom right: A Marine Police Officer receiving his certificate from the Mr. Ransford Moses Ninson, **DCOP**, at the graduation ceremony.

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Tendayi Mutimukuru-Maravanyika and Kwesi Johnson/ Elvis Adare

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List of Acronyms

Attorney General	AG
d ichloro d iphenyl t richloroethane	DDT
Economic Exclusive Zone	EEZ
Environmental Protection Agency	EPA
Fisheries Commission	FC
FWG	Fisheries Working Group
GCFC	Ghana Canoe Fishermen Council
Ghana Cedis	GHc
Gross Domestic Product	GDP
Hon.	Honorable
Inshore Exclusive Zone	IEZ
Integrated Coastal and Fisheries Governance	ICFG
Legislative Instrument	LI
MCS	Monitoring Surveillance and Control
Ministry of Agriculture and Food	MOFA
MP	Marine Police
Nautical Miles	NM
Standard Operating Procedures	SOP
Vessel Monitoring System	VMS

Executive summary

To facilitate a reform in the fisheries sector following the crisis and fears of a collapse of the fishing industry, the Government of Ghana approved regulations for the Fisheries Sector (LI 1968) that gives effect to the Fisheries Act (2002) in August 2010. These regulations are to serve, among other things, in regulating fishing gear and access to the fisheries in light of the crisis in the sector and evolving food and livelihoods security issues. Although an announcement was made at the launch of the new regulations that a new Marine Police Unit would be formed to assist the Fisheries Commission in land based educational, deterrent, and enforcement activities, up until only recently, the unit had a Director and marine police officers were still yet to be identified. In 2011, a task force, led by the Ghana Navy, was established to punctually apply the law but this had negative impact relative to promoting compliance with the regulations among fishermen.

In December of 2011, however, the Marine Police Director in Accra was granted permission to pilot a Marine Police Unit to collaborate with the Fisheries Commission in the Western Region. This workshop was the first of its kind in Ghana and aimed to build capacity of 25 identified police officers on fisheries issues including: the current status of fisheries sector in Ghana; the ecological basis of the fisheries regulations; the sociology and culture of fisher folks; and approaches for promoting compliance. The workshop took place over a period of 8 days from the 25th of September to the 4th of October 2012, at the Volta River Authority Club House in Aboadze, Shama District of the Western Region.

The workshop was participatory in nature and consisted of series of lectures on several fisheries related issues; group assignments, presentations and discussions; role plays; and field visits to various fish landing sites where the marine police officers interacted and discussed various issues with fisher folks. The field visits were important as the marine police officers managed to see the various fishing gears, the different types of fleets, as well as get first-hand information on illegal fishing activities in various communities. During the field visits, marine police officers also shared their knowledge with communities on the impacts of illegal fishing methods and Fisheries Laws.

From the workshop evaluation, it is clear that the workshop was successful. When presenting their assignment on various illegal fishing methods, one could tell that the Marine Police officers had now gained an understanding on their impacts and they also came up with strategies on how to reduce the use of these illegal methods and gears. Halfway through the training, participants were asked to evaluate the workshop and from their evaluation, they had learnt a lot about various fisheries related issues. At the end of the training workshop, when asked to rank the usefulness of the course on a scale of 1-10, (with 10 being excellent), 100% of participants gave a score ranging from 8-10 (28.6% ranked the course with a score of 8, 42.8% gave the course a score of 9 and 28.6% gave the course a score of 10). Participants also indicated that the course changed their perceptions on many issues including the role of the police (not just arresting people but also educating them to promote compliance) and fishing communities in fisheries management. Almost all the marine police officers who were trained were hearing about the Fisheries Laws for the first time and each one of them got copies of the L.I. and the Act during the training.

Several lessons can be learnt from the workshop and these include the following:

- There is a general lack of awareness of the Fisheries Laws among stakeholders in fisheries including the marine police and local communities. Awareness raising efforts on the Fisheries Laws to Ghanaians will therefore go a long way in enhancing voluntary compliance of the Fisheries Laws.

- So far, there is still lack of concrete knowledge on the impact of illegal fishing methods on human health – e.g. the impact of consuming fish caught with chemicals on human health. Research to provide concrete evidence on this will help promote voluntary compliance in fishing communities
- Educating fishing communities on fisheries laws and their justifications before enforcing the law has potential to produce positive impact – all fishing communities where the marine police went were excited to discuss the fisheries laws with the police. However, before the police visit to each community, preparatory work for communities to receive them is crucial.
- Although the workshop took place over a period of 8 days, some topics that are crucial to fisheries management were still not covered adequately. This shows that educating the marine police officers on fisheries issues should not be a once off thing, but there should be follow up training based on the challenges they will face in the field. It is therefore crucial that an evaluation of the marine police officers community training programmes be done to identify areas where the police need to be strengthened. Occasional refresher courses to cover emerging issues should therefore be part of the marine training programmes.
- By educating communities about Fisheries Laws, half of the work on enforcement is already done as education promotes voluntary compliance – this was a big lesson for the marine police officers who traditionally were involved in enforcement only and not education.
- The field visits as part of the training made communities take Fisheries Laws seriously. Expectations raised in communities on the upcoming enforcement of Fisheries Laws must be met or else this great opportunity will be lost.

In terms of the way forward, in the coming several months, the police will visit all the landing sites in the Western Region to educate the fishing communities about the Fisheries Laws and their justification. Although this education will continue to take place over and over again, processes will be facilitated for the police to come up with an enforcement strategy. The challenge however, is that only 25 marine police officers were trained and they will not be able to cover 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. The Hen Mpoano project has therefore made its own contribution to promoting voluntary compliance and enforcement of the Fisheries Laws and it is hoped that the Government of Ghana will use these experiences to upscale the Marine Police training so as to ensure that all fishing communities in all regions in the country are covered.

Background and opening speeches





Background

Ghana's fisheries are in a crisis and there are fears of an imminent collapse of the fishing industry. Livelihoods of fisher folks in fishing communities and food security for the nation are therefore threatened. The crisis in the sector is partly due to overfishing and the use of illegal fishing practices that are destroying the ability of fish stocks to regenerate. Because of declining fish stocks, fishermen are fishing to catch the last fish. Whereas Ghana was mostly self-sufficient in fish production less than 20 years ago, the country is now heavily dependent on fish imports in order to supply the essential protein in the Ghanaian diet.

It is because of this that the Government of Ghana approved regulations for the Fisheries Sector [Legislative Instrument (LI) 1968] that gives effect to the Fisheries Act (2002) in August 2010. These regulations are to serve, among other things, to better regulate fishing gears and access to the fisheries in light of the crisis in the sector and evolving food and livelihoods security issues. At the launch of the new regulations, there was an announcement that a new Marine Police Unit would be formed to assist the Fisheries Commission in land based educational, deterrent, and enforcement activities. However, up until only recently, the Unit had a Director and marine police officers were still yet to be identified. Collaborative processes between the Unit with the Fisheries Commission were also still yet to commence. In 2011, a task force, led by the Ghana Navy, was established to punctually apply the law in 2011, but this had negative impact relative to promoting compliance with the regulations among fishermen.

In December of 2011, the Marine Police Director in Accra was granted permission to pilot a Marine Police Unit to collaborate with the Fisheries Commission in the Western Region. This workshop aimed to build capacity of 25 selected police officers on fisheries issues including: the current status of the fisheries sub-sector in Ghana; the ecological basis of the Fisheries regulations; the sociology and culture of fisher folks; and approaches for promoting compliance. The workshop took place over a period of 8 days from the 25th of September to the 4th of October 2012, at the VRA Club House in Aboadze and consisted of a series of lectures, group assignments and field visits to various landing sites (**see Annex 1 for the workshop programme**). The training was conducted by two collaborating partners, the Western Regional Fisheries Commission and the Hen Mpoano Initiative. A total of 60 people, 5 women and 55 men¹ participated in the workshop (**see Annex 2 for the full list of**

¹ All the 25 marine police officers were males

participants), including resource persons and invited guests who came to open and close the workshop.

This report begins with an executive summary, followed by the background to the training and opening speeches. These are later followed by presentations, discussions, group activities and field visits under 4 different themes namely, the situation of Ghana's fisheries today, fisheries management history and challenges, fisheries governance and communication and fisheries compliance and enforcement.



Opening Remarks by Mr. Mark Fenn, Chief of Party Coastal Resources Centre, Ghana

Mr. Mark Fenn started by saying that it was a great pleasure for him to participate in this workshop. He said that fish catch in Ghana was going down and that 45 % of fish consumed in Ghana was imported. He pointed out food security and poverty as critical issues in Ghana. He also said that in August 2010, new fisheries regulations were passed based on sound scientific evidence. However, during the first 10 months after the regulations were passed, no enforcement was done. Later, the government decided to set up a task force led by the Ghana Navy and they started by enforcing light fishing regulations in Elmina, and small mesh-size nets in Axim. The fishermen involved in light fishing and those using small mesh size nets were however very angry and seven Navy officers were injured and ended up in hospital after trying to confiscate the small mesh-size nets.

He went on to say that it took about 8 months for Hen Mpoano to get approval from USAID to train the Marine Police in the Fisheries Laws and Regulations. He said that in most cases the Navy/ Police do not give warnings to the public when it comes to enforcement of the law and that the Initiative was looking for new ways to promote compliance among fishers. He pointed out that fishermen will not comply with the laws if others are using illegal methods and are getting away with it. He later said that it was important that education programmes be carried out to make communities aware of the laws first and why they were put in place. For instance, explaining the impacts of dynamite fishing on fish ecology and human health will go a long way in promoting voluntary compliance.

He went on to say that it was important for the police to know that fishermen know very well what they do, are risk takers who will always go to sea hoping that things will improve, are intelligent and use traditional systems to find their way home and will not comply with the law unless everyone else does. He pointed out that it was important to understand them as well as strategies on how to work with them to promote compliance. He also mentioned that in all fishing communities there are chief fishermen who, previously, were able to set rules and enforce them. However, after the introduction of the premix committees, there has been politicisation of the landing beaches, with the new committees taking over most of the chief fishermen roles. Furthermore, newly formed ZOIL eco-brigades have eroded traditional beach cleaning systems that were in place. He later said that it was not too late to bring the chief fishermen back on board in managing fisheries and it was important to critically think about how they can assist in promoting compliance and law enforcement. Mark later said that emphasis should be on promoting compliance and that fishermen were already calling for the assistance of the Marine Police Unit to do this.

He further pointed out that the prosecution chain in the Western Region had so far done successful work in prosecuting offenders and that the Hen Mpoano Initiative had played a big role in building capacities of the various agents to understand the Fisheries Laws. He mentioned that several fisheries cases have been successfully prosecuted in the Western region alone. This is a great achievement as this is the first time in Ghana when this is happening – no other regions have been involved in this. Mark later stated that he hoped that

the good work that has started in the Western Region would spread to other regions as well. He ended his speech by saying that fishermen are calling for assistance from the Marine Police Unit and that they needed **fair** and **equitable** enforcement of the law in all regions in Ghana.



Opening Speech By Mr David Asante- Apētu Deputy Chief Commissioner of Police

Mr. David Asante-Apētu started by saying that it was a privilege for the selected personnel to attend this workshop. He said that the MPU was formed in 1916, was later disbanded and transformed into the Custom Excise and Preventive Service in 1962. He later pointed out that the Marine Police Unit was now being reactivated. He said the discovery of oil and gas had brought benefits and challenges and that illegal activities were bound to increase in the region. He however stated that ignorance of the law was no excuse and that the police were going to enforce the Fisheries Laws. He later offered his gratitude to USAID for funding various capacity building programmes for Ghana Police Service, including this training. He also stated that 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*”. He acknowledged the usefulness of ‘re-training’ and updating knowledge and skills of police personnel and urged the trainees to take the training seriously and participate fully in all the activities. He ended his speech up by declaring the workshop open (see **Annex 2 for the detailed speech**).



Opening Speech by Hon. Mike Akyeampong, Chairman, Fisheries Commission

Hon. Mike Akyeampong started by mentioning that he cherished the hard and risky work that the police. He mentioned that he had been involved in the development of the Fisheries Law and the Legislative Instrument (LI). He later mentioned that different governments had been involved in the development of the Fisheries Act and the LI, showing that different political parties in the country were in support of the Fisheries Laws. He however mentioned that the law had some loop holes and the 2010 LI was therefore put in place to address these. He further mentioned that the LI was developed after a thorough stakeholder consultation process.

He later said that there was still a need for all stakeholders to be clear on their roles in enforcing the law and further stressed the need for law enforcement to go hand in hand with

voluntary compliance. He mentioned some experiences where enforcement of the law resulted in violent clashes between fisher folks and law enforcement agents.

He went on to explain that in the past he chaired a committee at FAO in Rome that developed the International Code of Conduct on fisheries. He went on to say that in former times, the “sea was thought to be inexhaustible but as population increased and fish stocks dwindled, the whole world agreed that laws should be passed to regulate fisheries everywhere”. He later stated that he was saddened that in his own country, people were still using illegal fishing methods. He went on to say that so far, he had learnt from the International Law of the Sea that if foreign vessels have been arrested, delays in prosecution will not be good for the government. He went on to appeal to the participants to deal with the subject with the urgency it deserved. He said he was pleased that ‘**today we will give birth to the Marine Police Unit**’. He later mentioned that the FC had translated the fisheries regulations into four key local languages spoken in the coastal communities (*Fante, Ewe, Ga and Nzema*) and that these were going to be launched soon by the Minister for Food and Agriculture (**See Annex 3 for his detailed speech**).

The Situation of Ghana's Fisheries Today





The current crisis in the fisheries Sector By Kofi Agbogah; Deputy Chief of Party, CRC

Mr Kofi Agbogah highlighted the importance of fish in Ghana, outlined the fish landings by different fleets and presented the current status of fish resources in Ghana. He mentioned that fish stocks have been declining in Ghana and that there was need for a reform to manage fisheries. He ended by stressing that many countries were now regulating fisheries resources based on sound scientific evidence, and he encouraged Ghana to do the same.

Take home messages

- Ghana is a fisheries dependent country, ranks 6th on the league of Nations and ranks highest in Africa in fish consumption (about 23-25kg/ person/ year, which is way about the world average of 6kg/ person/ year).
- Ghana consumes about 450,000 t of fish per year and almost half of this is now imported.
- Fishing fleet in Ghana includes the artisanal, inshore/ semi-industrial and Industrial vessels. There are about 14000 artisanal boats in Ghana, creating fisheries related employment for about 2.5 million people along the fish value chain. Of the total landings in 2009, artisanal fishermen contributed about 70%.
- Fish contributes about 60% of animal protein in the diet of Ghanaians and in addition to nutrition, fisheries contribute to macro economy and employment creation. Fishing is the main economic activity of shorefront communities both inland and marine and is a major contributor to the revenues of shorefront district assemblies and contributes immensely to the national GDP.
- The main sources of fish in Ghana are the rivers, lakes, lagoons, ponds and the sea. Ghana's coastline is approximately 550km. The exclusive economic zone (EEZ) or 200 nautical miles into the sea covers an approximate area of 203,500km². This marine area provides the bulk of the fish landed in Ghana. In addition, there is a near shore Inshore Exclusive Zone (IEZ) (**6NM or 30m depth whichever is further**) which is reserved for the artisanal fishermen only. Within the 200 nm, 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. However, the increase is not matched with an increase in fish catch but rather a decline.
- A study conducted in Dixcove shows that fishers are traveling 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. These changes (referred to as **Effort Creep**), should be factored this into the catch per effort statistics. One fishing trip in 2000 cannot be compared with one trip in 2010.
- When few people are involved in fishing, bigger fish are caught. However, as the fisher numbers increase, the size of the fish decreases - leading to what is termed 'fishing down the food chain'. Gradually, the mesh size used gets smaller and smaller. This is mainly a result of the open access system that is heavily subsidized and fishers are racing to catch the last fish.

- Currently, fish stocks are overfished and there is fear of the imminent collapse of the fishery. This is mainly because of the open access regime in the fishery which is over capitalized and heavily subsidized (premex 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 like light fishing
 - Use of undersize mesh and unapproved nets
 - Beach seining around the mouth (estuaries) of lagoons
 - Trans-shipment (going fishing without nets and returning with fish - also called SAIKO SAIKO)
- Women dominate down steam trade of fish.
- Small scale fisheries employ more people than large scale, consumes less fuel and lands more fish (almost twice) than large scale fishing.

Discussion after Kofi's Presentation

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

Response: Will take about 30-40 years to rejuvenate if things are done properly

Question: You talked about Ghana's fish consumption being very high in the world, what is the world average?

Response: Ghana's average consumption is about 23 kg/person/year whilst the world average figure is 16 kg/ person/ year

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

Response: Honourable Mike Akyeampong responded by saying that political will was there and that he had met with the Defence Minister and with the police to discuss how best to enforce the Fisheries Laws. To kick start the enforcement activities they started by putting in place a task force, and in less than 4 years came up with the LI and also translated the law into local languages. He mentioned that the Fisheries Commission had secured funding: 50.3 million from the World Bank project and 3.5 million from the Global Environmental Facility for an upcoming fisheries management project. He emphasised that political will was there, a reason why in a short space of time they managed to achieve so much. However, he said that in their new task there was need to do education at the same time with enforcement so as to educate people about the law. On the issue of subsidies, he pleaded with participants to bear with politicians who cannot immediately stop this. However, 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: Plastic nets are not entirely banned from the system. But small mesh size net of 2 inches and less are not allowed in the country at all. All bigger ones are allowed in the rivers and lagoons. Plastic nets of whatever size are however not allowed in the sea at all.



Fisheries Ecology By Godfred Ameyaw; Fisheries Adviser, WorldFish

Mr. Godfred Ameyaw gave an introduction to fisheries biology and ecology, classification of fish and aquatic products and described the main fish resources in Ghana (coastal demersals, deep sea demersals, small pelagics and large pelagics). He also presented the status of fish resources, the marine environment, upwelling systems, fisheries importance of lagoons and estuaries 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 material to the estuarine food webs 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 when parts of nets are lost, they still continue to fish (ghost fishing).
 - Light fishing attracts all fish including juvenile fish.
 - Undersized nets harvest all fish including juvenile fish.
 - Chemical fishing contributes to pollution of the marine environment, 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 bottom habitats that are used as spawning and nursery grounds for fish.
 - Marine Protected Areas is a fisheries management tool for rebuilding fish stocks.

Discussion after Godfred's Presentation

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

Response: The percentage of salt in the water. Estuary is an area where a river 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: We have heard about the monofilament nets that are banned by the law? Where are they passing through to get into the country? Why are they found on the market? Are people paying someone to get these illegal nets into the country? And the government once confiscated the monofilament nets in the community and promised to bring the legal nets but up until now this has not happened. When will the legal nets be brought into the community?

Response: A lot of fishermen use monofilament nets because it is cheap – the multifilament nets are too expensive. 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.

All fishing inputs are tax free and the monofilament nets can be used in the river 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 be doing ghost fishing for a long time.

Question: We have heard that there are few fishermen chasing few 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 FC using section 84 of the LI may also declare closed seasons to stop people from fishing in certain areas at certain times of year. Management of fleet has started and soon we will be moving on to licensing of canoes.

Question: How feasible is it going to be to scrap some of the boats off? I am sure politicians will not want to do this as this is sacrificial.

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 give licence to. Now Ghana was given a maximum number of 13 and this was smaller than the vessels that were already operating. What we did was to organise a meeting with them so that they could help us identify the vessels to remove from the system. This seems to be working well.

Question: How can we tell that a vessel is operating in an area that is beyond their legal area of operation? What devices should we use?

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 on board. You may also partner with the navy as they are better equipped to locate boats.



Situational facts relative to food security for Ghana By Kyei Yamoah; Friends of the Nation

Mr 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, employment 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 dependency on fish for nutrition is amongst the highest in the world and is higher than all African nations.
- 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. Chemicals used in fishing can cause many diseases including cancer.

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 answer this question as banning plastics is not an easy thing to do. There is need to also work with the Environmental Protection Agency (EPA).

Question: Is it legal for people to go and dump things in the sea?

Response: The Environmental Protection Act prohibits dumping of things that destroy fish habitat. Dumping of refuse at sea is therefore an offence (See the Shipping Act)

Question: Aquaculture is an answer to our problems of declining fish catch especially here in Ghana where Tilapia is a delicacy: what are we doing as a nation to promote aquiculture?

Response: Hon. Mike Akyeampong responded by saying that Ghana's aquiculture production has so far gone up and doubled in two years. He also said that if the country was serious about this, it was easy to get to 100 000 tonnes/ year in the coming 5 years.

Field visit to Abuesi community

The meeting started with welcome remarks by Nana Konduah, the chief fisherman of Abuesi and Chairman of the Western Regional Ghana Canoe Fishermen's Council, who later introduced the trainees to the community. He explained that the Marine Police Unit existed some time ago and has been reactivated to take part in education and enforcement of Fisheries Laws. He encouraged the fishermen to work with the Marine Police Unit by voluntarily complying to avoid being caught. He further explained that the police were not enemies of the fisher folks but were coming to ensure that fishermen do the right thing so as to ensure that fisheries are sustained. The marine police leadership later got opportunity to re-echo the message by the chief fishermen – they emphasized that the police had come to learn from the fisher folks and that they needed their cooperation and support. After these introductions, the fisher folks and the Marine Police Officers got opportunities to discuss various issues. Questions asked and the responses given are presented below². After the discussions, the trainees were divided into four groups and visited the following communities; Abuesi, Shama Apo, Shama Bentsir and Aboadze to interact and get in-depth information from the fisher folks.

Discussion at Abuesi

Question: Why do the fishermen still use dynamite (and other illegal fishing methods) to catch fish when they know that it's not a good method of fishing?

Response: They use the dynamite because it's a cheap way of fishing and they are able to catch a lot of fish. Multifilament nets are too expensive, for instance.

² This is the same process that was followed for all the community field visits.

- 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 and they spend a minimum of two days on the sea.
- Question: What sort of cases does the arbitration committee settle between the fishermen?
- Response: They settle misunderstandings and normally hand over cases beyond their capacity to the police.
- Question: Do the fishermen use life jackets when fishing? In case of any accidents, how do they survive?
- Response: No. When accidents occur, they attach strings to the canoe, turn it up and later sweep the water away from the canoe.
- Question: Are fishermen's canoes insured?
- Response: No. This is because of the fear that canoe registration or census of any type could potentially be used by government to tax fishermen. 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 was initiated much earlier unlike in Ghana. Greediness on the side of the fishermen also makes them not abide by the rules. Nowadays, fishermen even go to fish on Tuesdays unlike in the past.

Suggestions from the police

- There was a suggestion that, 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 killing fish to prevent diseases and pre-mature deaths.

Advice from the Chairman, FC

- He advised the fishermen on the effects of using poisonous substances for fishing. He explained the impact of chemicals on human health and advised the fishermen to use life jackets in fishing.



The Principle Fish in Ghana Marine Environment By Marfo Emmanuel; Fisheries Commission

Mr. Emmanuel **Ohene** Marfo gave an overview of the different kinds of common fish species found in Ghanaian coastal and marine waters as well as their status. He showed participants coloured photos of the different species of marine fish found in Ghana's coastal and marine environments highlighting features that makes them adapt these species to their environments. He also described the kinds of fishing gears used in catching them.

Take home messages

- The Marine fisheries comprises **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 mostly by surrounding /encircling net (purse seine net). High catches of small pelagics are mainly during the upwelling periods. Examples include: Flat sardinella [Aduku (*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 Yellowfin tuna [Geku (*Ewe*), Odaa (*Ga*) and Edae (*Fante*)]
- Current status of Fish resources
 - Small pelagic species are influenced by environmental conditions
 - Demersal resources are overexploited
 - There is low abundance of shrimp resources
 - Skipjack Tuna is in good state whilst Bigeye and Yellowfin Tunas are at optimal levels of exploitation

Discussion

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

Response: There has been spatial planning and it's now being implemented to protect fish and other species at protected sites. By-laws are being developed for some rivers and lagoons.

Question: Is mangrove 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; others hide in the estuaries and deep sea.

Question: Why do fish migrate to greener pastures? 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 by Mr Alex Sabah; Director, Fisheries Commission

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. In Ghana these are classified into three: Artisanal; Semi-industrial and Industrial.
 - Artisanal crafts were over 12000 as at 2004 census and there has been a huge increase in numbers in the last 10 years.
 - Canoes are made from a local tree called “wawa” (*Triplochiton scleroxylon*) and are of four types: small size (one man canoe: 4-5 m long and 40-50 cm wide), medium (line and set net canoes: 6-11 m and 70-100 cm wide), large

(ali poli watsa canoes: 12-18 m long 1.3-1.8 m wide) and large (beach seine canoes).

- Inshore vessels have a wooden hull with inboard engines and are locally built. They are multi-purpose vessels (Purse seiners and Trawlers) and their length ranges from 8-37 m. There are two types of inshore vessels: Small inshore vessels that are 8-10 m long and are mostly purse seiners and fish within the IEZ (30m zone) and Large inshore vessel: with length that is more than 10-37 m. They are mostly trawlers and cannot fish within the 30 m 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/ Takoradi.
- A fishing gear is a device used to catching fish and there are two types of gears: passive and active gear. Passive gear is set in 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 and examples include ring net or purse seine, cast net, beach seine and trawl. Illegal gears include monofilament nets, use of dynamite and illegal methods include pair trawling, dumping of fish, harvesting marine/ fresh water mammals without permission; trans-shipment of fish 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 by fishermen.

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. For instance, in Tanzania they have a device that they use to do this - fish caught by dynamite changes from its original colour to yellow when the fish comes into contact with the device.

When turned mouth down, blood oozes out from the mouth of fish caught with dynamite, the fins easily fall when touched and the colour turns into light green when put in a refrigerator.

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 of the Biribireba Radio Drama Episode

One episode of the Biribireba radio drama was played out to the workshop participants. During a discussion that followed, participants identified the following as key lessons learned.

- Fishermen are very fast in apportioning blame so the police should be smart.
- Police should go about their duties politely during patrols.
- If the police can't easily arrest fishermen who are closer to them, they should rather take time to educate them on the implications of illegal way of fishing and its effects on the fish.
- Fishermen use portable generators at sea and these are different from the normal one.

Field visit to the Sekondi fishing harbour

During the visit, the marine police were welcomed by the Chief Fisherman of Sekondi fishing harbour (name – Elvis to provide). The MP officers later visited the semi- industrial fleet office where they were introduced to the fisher folks who were present. Various issues were discussed at a round table (see the questions and their responses and suggestions made below). The chief fishermen later took the trainees on a tour of his semi-industrial boat and showed them the engine and other gadgets on board. He later took the trainees to the canoe landing site where they managed to interact with the 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 among themselves?

Response: Yes. Juju in fishing is real. Even the so-called Christians and Muslims also use it.

Question: Why Do Fishermen Break the Law?

Response: The fishermen do break the law because:

- There is lack of voluntary compliance among them.
- Traditional rulers and chief fishermen do not work hand-in hand.
- Favouritism and sympathy on the side of both the traditional rulers and the chief fishermen.
- They have very weak rulers.
- There is partiality or favouritism and selective enforcement of the law.

Suggestions from the fishermen

- The politicisation of selling of boats to the fishermen should be stopped. Boats should be sold fairly, not on protocol basis.
- The Western Region Fisheries Commission should step in, educate and organize their own management in Takoradi which will help solve problems of the fishermen in the region. At the moment fishers have to go to the head office in Accra to report conflicts.
- The marine police officers should do their work well and use the law fairly to prevent misunderstandings between them and fishers. The police must learn proper ways of approaching communities in order to assist them.
- The traditional council and the chief fishermen should unite and work hand-in-hand before the police start their work.
- Immediate meeting between the Marine Police Unit and the Ghana Canoe Fishermen Council should be organized for the police to get important information before they embark on their duties.

Suggestion from the police

- The FC should go to the market and buy dynamite and show it to the marine police officers as many have never seen it.

Comment from Fishermen

- Beside the dynamite sold in the market, fishermen use car batteries to produce dynamite themselves. They also use formalin (mainly used for preserving copses) for fishing as well as mixtures of cow dung and mosquito coils.

Fisheries Management: History and Challenges



A history of fisheries management in Ghana By Mr. George Hutchful Coastal Resources Centre

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 formed
 - In 1952, boatyards were established in Sekondi to promote construction of semi industrial mechanised boats
- 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
- Early 1980s
 - The task of managing fisheries was given to the newly formed District Assemblies whose main responsibilities were to formulate and adopt by-laws to promote responsible fishing. However, district personnel had no background in fisheries and hence nothing was done
 - Fisheries Department still retained the role of policy formulation, monitoring and enforcement
- Late 1990s
 - Community Based Fisheries Management introduced
 - Individual communities were now responsible for managing their fisheries
 - Community based fisheries management were put in place to spearhead management activities
 - However management was mainly focused on the artisanal sector area 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 by Donkris Mevuta Director, Friends of the Nation

Mr. Donkris Mevuta presented the key challenges in managing fisheries, described the two management systems for fisheries (top-down and co-management) as well as the role of marine police 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 maximising 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 of fish
 - Insufficient and irregular supply of premix 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)
 - Poor compliance and enforcement of regulations
 - Poor coordination with other Ministries and the Metropolitan, Municipal and District Assemblies
 - Heavy political polarization & interferences
 - 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** from the developed world. The system however works well where strong centralised management exists – unfortunately Ghana's canoe fisheries will never generate enough money to support such a system.
 - In adaptive co-management, fishers and other **stakeholders** must be 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 dominant goal of marine resource management is to aid a sound fisheries policy founded on long-term thinking, profitability and sustainable harvesting of marine life
- The role of the Marine Police Unit is critical in fighting these challenges to ensure sustainability & 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.



The Erosion of Cultural norms and the powers of chief fishermen by Nana Adam Chief Fisherman, Aboadze

Nana Adam explained how chief fishermen were installed in Ghana. He described the traditional roles of chief fishermen in the management of fisheries in their communities, and how these had changed over time. He ended by pointing out that fishers had bad 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.
 - Some communities have a hereditary system for installing chief fishermen. This category of leaders is very well-respected.
 - Some chief fishermen are appointed by the 'traditional chiefs' but they are not well-respected by the generality of fishers.
 - In the last category, fellow fishermen nominated and appoint their leaders.
- The chief fisherman has to be extensively experienced in fishing. He is an administrator, and leader of the fisher folk. 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 law. 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 influences.
- In Ghana, traditionally, the Chief Fisherman enforces laws and regulations. He is the one who controls the fishermen from indulging in illegal fishing activities; for example
- Observance of taboo days (usually Tuesday and Sundays). These days are used for maintaining one's own gear.
- Fisheries regulations (LI 1968 and Fisheries Act 625)
- 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 powers. Connected fishers (as well as chief fishermen) break the law with impunity and are not accountable to anyone in the community.
- Good intentions or programs by government (e.g. subsidies on premix fuel or outboard motors, and 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 in the fishing communities 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.
- 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 marine police officers 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 marine police officers were welcomed by the chief fishermen who also explained why the marine police were visiting the community. This was followed by a speech by the leader of the Marine Police, DCP Laar Baaman, who told the gathering about the work of his Unit. This was followed by discussions and interactions between the marine police officers and the fisher folks. 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. 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 Marine Police Unit, and there is therefore critical work for enforcement of the law to be done.,

Discussions

- Question:** Is 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 olden days, young fishers listened to their elders. Today anyone connected to the right political party can be appointed as chief fisherman.

Fishers have the know-how to outwit the security agencies on the sea; therefore the Marine Police must be equipped not only with vessels to patrol the sea, but also gadgets to test fish when it is landed.

Fishers complained that they were not adequately involved in the formulating of LI 1968 and therefore felt reluctant to abide by it.



International Monitoring Control and Surveillance By Mr. Papa Yaw Attobrah, Director, Fisheries Commission, Central Region

Mr. Papa Yaw Attobrah explained that the Monitoring Control and Surveillance (MCS) unit of the Fisheries Commission was basically its technical wing. He went on to explain that as the name suggests, MSC was 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 Monitoring Surveillance and Control (MCS) Unit that consists of secretariat of the FC, Navy, Air Force, Attorney General from Ministry of Justice and officers of the Water Research Institute.
- Main functions of the MSC 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 Fisheries Act stipulates that police service shall be equipped and maintained to perform its traditional role of maintaining law and order. (Article 200, 1992 constitution]
- 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 Act 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 (VSM) station
- The Fisheries Commission has three vessels for monitoring surveillance and control. 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 licenses?

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

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

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

Question: You said that you gave a boat to the Ghana Navy as part of equipping them for their work? Why didn't you also give a boat to the Ghana Police?

Response: The police did not have a marine police unit at that time.

Question: 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 perch 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 too few indeed 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 By Patience Klinogo Chief State Attorney, Western Region

In her presentation, she highlighted that the Attorney General's office works with investigators and prosecutors. She said prosecution depended on evidence gathering, effective investigation and arrests. She emphasised the need for evidence gathering to support prosecution of cases and urged the police to play their role. She however pointed out that the Fisheries Law were new and most lawyers were still not familiar with them.

Take home messages

- Effective prosecution depends on communication and documentation of the case and 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.
- What constitutes an infraction includes, for instance, possession of items such as: portable generators, bulbs of 500 watts and more, switch boards, explosives, undersize nets and obnoxious substances. 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 arrests can be made 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/ 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 – most police officers are interested in working on the road to stop cars.
- When gathering evidence, it is important to take photos especially when dealing with fish as this is a perishable good. The police should make sure they get exhibits e.g. cut a piece of the net, put it in an envelope seal and sign. 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. However, if an offense is committed by a foreign vessel, the case is taken to the High Court
- Question: Who is prosecuted when a vessel has been arrested?
- Response: The managers as they are responsible for the actions of the crew.
- Question: In prosecution, the AG 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 about 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 Attorney General’s (AG) 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/ she deems fit. In most cases, the fish is sold and the proceeds handed over to the court.
- Question: The penalties mentioned, are they are 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: 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/ 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/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.

Fishmongers and their role in the fishing Industry. By Emilia Abaka-Edu, Fishmonger, Axim Community

Mrs Emilia Abaka-Edu explained 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 the fisheries
- Over time, there has 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: chemical 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 with processing:
 - Fingers of fishmongers 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 to 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 rejects the fish. For instance, in Kumasi market women refused to buy fish coming from certain communities saying that the fish looked unusual
- Since fishers are pre-financed by women, women can refuse to buy chemically caught fish and hence can help stop the use of chemicals and use of illegal fishing 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 fish mongers 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 By Danny Kirk Mensah

Inshore Fisherman

Mr. Danny Kirk Mensah told participants about the Fisheries Working Group (FWG): that it was a group of fisheries stakeholders who have come together to promote sustainable fisheries, collaborative management and voluntary compliance. Members are drawn from all sectors of fishers (artisanal, semi-industrial etc.); the security agencies, CSOs and the Attorney General's Department. He explained that the main problems hindering adherence to the Fisheries Laws included (a) the “**blame-game**” as stakeholders blamed each other for the decline in fish catch and (b) political interference by politicians who order the release of their cronies when they are arrested for infractions. He however later pointed out that the FWG has been helpful in reducing conflicts among stakeholders.

Take home messages

- The FWG is a Multi-stakeholder Platform to forge stakeholder coordination and offer advice to the FC through the Western Region Directorate of the Commission
- FWG formed against the background of little communication between stakeholders on dwindling fisheries resources resulting in inaction and ‘Blame Game’ over 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 - 2 Fishermen and 2 Fishmongers representing Shama, Sekondi, Ahanta West, Nzema East, Ellembele and Jomoro districts; Western Region Cooperative Fishermen Service Centres Union; Attorney General's Department, Environmental Protection Agency; Ghana Navy and Ghana Police Service
- The main objectives of the FWG include:
 - Enhance communication among fishery stakeholders in support of compliance and enforcement of new fisheries regulations (LI 1968)
 - Identify options for improving the connections between fishers, fishing communities and their 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 FC
 - Made contribution to a policy paper on voluntary compliance & strategic enforcement by Hen Mpoano
 - Has come up with education on compliance strategies
 - Helped reduce conflicts among fishers,
 - Helped in advocating for sub-committees responsible for marine (fisheries) and coastal issues to be established in district 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 interferences

- Recalcitrant fishers

Discussions

- Question: You said that you had problems with politicians who come and promised fishing inputs – for instance they say that if we come into power, the LI for fisheries will be abolished, why don't you use the same platform to advise people that what the politicians are saying is not true?
- Response: This is a bit tricky. Politicians are powerful and sometimes can influence many things. For instance, we made an arrest of canoes using lights and an MP 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

The day started with groups five groups focusing on the following illegal fishing methods: dynamite, monofilament nets, chemical fishing, illegal mesh net, and light fishing, presenting their work on their assignments. The presentations by each group are outlined below.

Dynamite Group: Members - Martin Kateye Tetteh, Isaac Koramteng, Martin K. Nkomsah Amonsah, Amos Okyere and Kofi Asomaning

What is dynamite?

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

Advantages

- Gives bumper harvest
- Users will get more income temporarily
- You get abundant food initially

Disadvantages

- Market women make losses as the fish easily goes bad.
- The practice kills juvenile fish and those about to lay eggs
- In the process you deplete all the fish in the sea
- Fish captured this way is poisonous to human health
- There is a loss to potential exports earning and income
- Using dynamite poses threat to users as it can injure them.

Risks / challenges

- Law enforcers can be attacked
- Your family will be at risk
- You will be insulted

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
- Apply rigorous enforcement of the law and arrest offenders
- Check and stop the practice from the sources of supply
- Those caught should be prosecuted and imprisoned
- Make hard and fast rules that bind the fishermen from using poisonous materials.

Comments:

- The group did thorough research and spoke with authority. They now have an understanding of the fisheries law
- Need to remember that fishermen are inventors and will continue to seek illegal methods for fishing
- Only one person presented and he did not collaborate with the person writing notes on the flip chart

Illegal Mesh Net Group: Members - Kennedy Kyei, Agyemong Opambour, Adabogo Arebina, Kofi Sanpong and Boakpe F. George

Description

- Small mesh nets are those with intervals of less than one inch when stretched. Small mesh nets catch all size of fish and decrease fish productivity.

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 all the loopholes that allow illegal nets into the system.

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 so that they stop promoting illegal fishing methods?
Word of Caution:	Need for policemen to be careful when dealing with politicians as their lives may be doomed
Comment:	Need for Policemen to continue interacting with experts so as to continue learning about Fisheries Laws, illegal fishing methods and their effects.

Monofilament nets Group: Members - Joseph Dzifa Fiagbedzi, Stephen Abour, Kwaku Asante, Logah Alfred and Owusu Abraham

What are monofilament nets?

- These are cheap plastic nets with space of less than one inch when stretched. Torn gear does not rot but floats about in the water and continue to fish on its own catching all sizes and types of fish – this is called **ghost fishing**.

Actions to be taken

- Educate fishing communities about the effects of using the gear through the help of the chief fisherman. Educate them on Fisheries Regulation 2010 (L.I 1968) and the Fisheries Act (ACT 625); what it says about using this gear and the prescribed penalties for offenders.
- Enforcement of the law: This will be done by the Marine Police and the Fisheries Commission Monitoring Control Surveillance (MCS) unit through regular inspection of fish landing beaches, arresting and prosecuting the offenders.

Risks and challenges

- Political interference. Politician comes in after arrest to set offenders free as the own most of fishing vessels.
- High cost of fishing gear. Legal nets are expensive, making monofilament nets attractive as it is cheap.
- Marine Police officers may be insulted by the fisher folks.

Strategies to overcome the challenges

- Fairness. When it comes to arresting and prosecuting both the small vessel and bigger vessel, it is a problem because most vessels are owned by politicians so after arresting them, they are left free.
- 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 FC to make sure the purpose for which the gear is imported is strictly abided by.
- Motivation: The Marine Police Unit and the FC should be well equipped. The chief fishermen should be factored into all enforcement and educational programs.

Comments

- the 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.

Light Fishing Group: Members - Wonder Kpedator, Amoh Yyere, Moses Enimil and Oususu Kwadwo

History of light fishing

- Light fishing started in early eighties during the time of former President Mr. Jerry John Rawlings. Light attracts all sizes of fish (including those about to spawn and juveniles) for as far as 400 meters away. In the seventies, fishermen were selective of what they extracted and did not fish indiscriminately. They also operated seasonally and not throughout the year as there was no light fishing.

Action to be taken

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

Strategies

- There is a need for regular orientation and education for enforcement officers on fisheries issues. There is a need for MP Unit to study co-management roles and the Fisheries Laws (e.g. L.I 1968, SECTION 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 MP Unit resourced with patrol boats for law enforcement
- Effective co-ordination with other sector agencies .

Risks and challenges

- In their party manifesto, politicians promote sustainable fisheries, yet in practice they interfere with law enforcing activities when their friends are caught.

Comments:

- Speaker was loud and managed to capture our attention.
- There is need for the group to learn more about the law that bans light fishing
- There is need for policemen to dialogue with fishermen and appeal to their conscience so that they can stop using light
- The police must not forget that their bosses were involved in the formulation of the Fisheries Laws and they need to enforce it so that it works to our benefit

Chemical fishing Group: Members?

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 enforcing 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 boat or canoe owners.

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.

Illegal Fishing methods: Presentation by Assistant Superintendent of Police - Emmanuel Addae, Second in command, Marine Police

Dynamite is a powerful explosive composed of nitro-glycerine or ammonium nitrates among other constituents which is used for blasting of rocks and in mining. This chemical is dangerous to human health and believed to cause cancer when consumed. Of late dynamite has found its way into the fishing industry. Some fishermen in identified fishing communities use dynamite among other dangerous chemicals as part of their working gear in the process of fish extraction with the excuse that it gives them much yield, thus increasing their profit margin.

Use of dynamite in fishing is devastating. A blast in fishery water causes havoc, destroys the marine ecosystem, breaks the food chain and the habitats of fish and worst of all, pollutes the sea.

When dynamite is used the explosion debilitates the fish and renders them incapacitated and eventually kills them. The dead or stunned fish then floats on the surface ready for harvesting. All living organism, (including juvenile and fish that is about to spawn), in areas where the blast took place dies. It annihilates juvenile fish. Both ones which are ready for spawning and coral reefs where the fish use as their habitat and feeding places are turned into a 'desert' by the blast. Some common fish in some areas are extinct due to the use of this practice.

Small net mesh is illegal as it harvests all fish, including juvenile fish that still need to grow and reproduce.

Monofilament nets are made from nylon that does not rot. Because of its thin nature, endangered and protected marine species, can fall prey and easily be trapped. Breakage in the monofilament nets can cause ghost fishing, as it moves about in the sea, trapping fish along the way.

Light fishing is used to attract fish for harvesting. During light fishing a high voltage light, probably 1500 watts, attached to an operating electric generator is lowered into the sea. Because of the brightness of the light, all fish, including those about to spawn and juvenile fish gets attracted thus drawing fish of any kind and size towards it.

Chemical fishing is the use of dangerous chemicals such as DDT, carbide, cyanide, formalin and mosquito coils to fish. These chemicals are mixed with food and spread on the sea or poured on the surface area where fish is found. Fish that come into contact with the chemicals die, floats on the surface and is harvested. Chemicals pollute the environment and are harmful when consumed by humans.

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 and the main objective is to protect life and property and apprehend and prosecute offenders. Marine Police Unit work however, goes beyond these functions and includes activities for educating fisher folks on the effect of using illegal methods. Sensitization on Fisheries Laws must be extended to all stakeholders in the fishing industry. Once they become aware of the Fisheries Laws, voluntary compliance may increase. However, those who do not abide by the laws should be arrested.

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 and their main objective is to enforce the law. There is the need to understand community members and change this perception. Those willing to give information should be protected since they may get in trouble. There is need to come up with graduated sanctions and first time offenders must be educated on the Fisheries Laws.

Presentation and discussion of the video entitled 'Empty Nets'

Participants were asked to watch and discuss a video entitled, '**Empty Nets**'. Issues discussed include the following:

- There is need for the Fisheries Law to be enforced to protect the fishing industry that is important for employment creation
- Fishermen are calling for 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 affecting fishermen. There is need for Fisheries Impact Assessments to be done before oil-and-gas projects take off
- Some fishermen do not use illegal fishing methods (e.g. the DGN do not use light)
- Fishermen enjoy their work
- There is poor fish handling after harvesting



Why Fishermen Break the Law by Mark Fenn Chief of Party, CRC

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)
- The classic 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 by Nana Adam, Chief Fisherman, Aboadze Community

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

Take home messages

Reasons why fishermen break the law include

- Lack of voluntary compliance
- Lack of enforcement of Fisheries Laws and Legislation
- Canoe owners sometimes empower and encourage their crew members to use illegal fishing methods so as to make more profit
- Lack of respect for the chief fishermen by fishers especially those who were put in place by politicians
- Unfair enforcement of the law by chief fishermen (for instance, their own relatives are not punished if they do something illegal)
- Poverty, chief fishermen who are hungry do not enforce the law and sometimes sell their birth rights to people who can pay

Discussion

Question: What type of relationship exists between the chief and chief fishermen and how do we ensure that the two organisations work hand in hand?

Response: Chief fishermen fall into three categories: (1) those who were installed by the forefathers - in this case, the chief fishermen and the chief rule equally; (2) those appointed by the chiefs themselves – these are always under the chiefs and in most cases, there are no conflicts and (3) those selected by the communities/ those put in place by politicians – in most cases, many conflicts exists between the two chiefs and fishermen do not respect the chief fishermen. Irrespective of how the chief fishermen came to power, there is need to educate them on the Fisheries Laws and encourage them to collaborate with the local chiefs who are owners of the land. Before going out to each community, there is need for a background study to be done to find out the

relationships between the two institutions and come up with strategies on how to mend relations and make them work together. The Ghana National Canoe Fishermen's Concil (GNCFC) is aware of the conflicts in all the landing sites and they can be a source of information



Building Resilience in fishing communities through adaptive co-management of fisheries

By Dr. Tendayi Mutimukuru-Maravanyika

Post-Doctoral Fellow, WorldFish

In her presentation, Dr. Tendayi Mutimukuru-Maravanyika started by giving a background and definition of the concept of resilience. She said that the concept evolved from the field of ecology in the 1960s to early 1970s and has since evolved due to the realisation of the complex nature of managing natural resources such as fisheries. She went to explain why managing natural resources was complex and mentioned the interaction between ecological and social systems as well as many factors at play. She later mentioned that, global experiences so far have shown that adaptive co-management can yield positive results in managing complex natural resources. She mentioned that co-management was not a new concept in Ghana as it was tried before. However, the attempts did not yield positive results. She however said that, despite this, there was need to learn from the past failures and use the lessons to improve on co-management of fisheries. She later explained what the Hen Mpoano initiative has done so far in initiating co-management in Ghana, and gave more details on the activities in the communities and the challenges faced. She ended her presentation by encouraging all stakeholders to play their part, so as to build the resilience of fishing communities.

Take home messages

- 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 failure
- To initiate co-management in Ghana, the Hen Mpoano project is working at all levels – national, regional, district and community levels.
- So far, the following processes have been facilitated to initiate adaptive co-management in communities: Baseline surveys and context studies, presentation and verification of baseline findings to broader community; meetings with individual stakeholders (e.g. women) to help them agree on key problems faced and generate a shared vision for fisheries management in their area
- Key challenges faced include, among others: high illiteracy rates in fishing communities; fisher folks are too busy and do not have much time to participate in

meetings; migrant fishing communities to do not have control over land resources and wetland areas where fish spawn; diverse ethnic groups in fishing communities that slows progress as we have to work through translators; high dependency syndrome in fishing communities; weak local fisheries management institutions and lack of extension support for fisher folks as the Fisheries Commission personnel are only trained to collect data at the fish landing sites.

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. Our challenge is, how do we make them realise that this is problem and that something needs to be done.

Fisheries compliance and enforcement





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

The chairman of the Fisheries Commission, Hon. Mike Akeaympong, made a presentation on the Fisheries Act. He gave a background of the Marine Police Unit, that..... He also presented the process for formulation of the Act and the LI... and he took the participants through 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 stops illegal activities.

Illegal Activity	Where do you find it (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

Workshop session on defining a common understanding of the roles of Marine Police by Elvis Addae

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 and participants later agreed, in plenary, on the roles of chief fishermen and marine police in education and law enforcement. The agreed roles are summarised below

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
	FC	<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, Chief Fishermen by Mr. Papa Yaw Attobrah, Central Region (Cape Coast) FC Regional Director

Mr Papa Yaw Attobrah presented the roles that law enforcing agents must play and stressed the need for coordination of law enforcing for effective enforcement of the law. He ended by outlining key issues to be addressed for effective enforcement of the Fisheries Laws.

Take home messages

- To effectively enforce Fisheries Laws to enable the fisheries resources to be managed sustainably, there is need for all key stakeholders to play their part. The roles of key stakeholders are clearly defined in Ghana Laws and 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. (s2 Act 625, 2002)
 - Ghana Police: maintain law and order. Art. 200 (3)
 - Ghana Navy: defense as well as such other functions for the development of Ghana as the President may determine
- Key strategies for law enforcement include: promoting voluntary compliance through education and training and deterrence. Education materials must be made available for this
- 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 laws to be effectively enforced include:
 - Need for planning of enforcement by various agents
 - Funding of enforcement activities
 - Logistics such as transport, communication, insurance and motivation (those doing the work must be motivated)
 - Mobilization of fisher folks
 - 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 by Papa Yaw Attobrah, Central Regional Director Fisheries Commission

Mr Papa Yaw Attobra explained what s Standard Operating Procedure (SOP) is, its importance, especially when many organisations are involved in the enforcement of the fisheries laws and ended by stressing the need for an SOP to be developed to guide the enforcement of Fisheries Laws.

Take home messages

- Standard operating procedures are written guidelines that define how operations in an organization are conducted. They explain what is expected and required to do certain things.

- SOP helps in ensuring consistency in 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 to be developed.



Ethical consideration By Alex Sabbah, Western Region FC Director

Mr Alex Sabbah highlighted the principles that must guide work by the Marine Police Unit in enforcing the law. He encouraged officers to lead by example and avoid situations that lead to conflict of interest.

Key messages

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

- It is important that all people be treated with dignity and respect and use of violence should be avoided (e.g. manhandling, harming or slapping people).
- It is important to be fair, equitable and impartial when enforcing the law. Need to avoid over or under arresting of culprits
- There need to ensure confidentiality: whistle blowers must be protected
- Need to avoid potential or apparent conflict of interest.
- Put the society and nation before self
- Don't take unfair advantage of community members
- Need for officers to do what is right, lead by example and should always avoid professional misconduct.
- Need to do our work with integrity, honesty and truthfulness to win the trust of communities
- Need to inspire others by our own sense of dedication and commitment

Discussion

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

Responses: There was a big debate on what to do when people present gifts to the marine police as these gifts may result in the marine police failing to do their duties well and favouring other community members. After the big discussion, there was a general agreement that the police must avoid accepting gifts and these may affect them when performing their duties.

Workshop Evaluation

Workshop evaluation was done at two intervals, 1) halfway through the training and at the end of the training. For the first evaluation, when asked what they had learnt, participants identified the following:

- Difference between good and spoilt 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 net 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 fishes helping children to get sharp brains and also good for the heart.
- The use of light in fishing isn't a technology but rather an illegal way of fishing and the lights causing harm to the fishes in the sea.
- Fishermen should be educated on the use of nets and other chemicals in fishing since education is the key to success.
- Duties and roles of the HƐn Mpoano in the fishing industry.
- The different types of canoe and fleets in fishing.
- Fishes in the sea can be endangered by the use of chemicals.
- The harmful part of dynamite to fishes.
- The cost of a net (1-1.5 billion) and that of a canoe (GH¢800) very expensive.
- Industrial vessels have been insured but canoes have 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. However, because the evaluation form was too long, most of the participants did not complete all questions.

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 during the training – these can be grouped into three categories: learning about the Fisheries Law and the Legislative Instrument; learning about the illegal fishing methods and how they affect human health and the fish in the sea; and learning about the importance of fish in Ghana.

Participants indicated the topics that they wanted to be covered in more depth and these again can be grouped into three categories: Chemical and dynamite fishing and their effect on human health, the Fisheries Act and the Legislative Instrument; and they also wanted to come up with 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; and the perception that the police must arrest suspects – rather to educate them first before doing the arrest; and finally the perception that fisheries were not governed by any law.

When asked about the most important skills they wanted to develop in future, participants responses can be grouped into three categories: to develop their knowledge of the Fisheries Law and LI; skills to identify fish caught by illegal methods such as dynamite; skills to interact and communicate with communities. The exact responses to the questions asked are in **Annex 5**.

When asked to rank the training on a scale of 1 to 10 (with 10 as excellent), 100 % of participants who responded to this question rated the training at **8** (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

When asked if they would recommend the course to other colleagues, 100% of those who responded to the question 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 asked to do a role play on community entry. Three officers were to act as community members and the other three to act as the marine police. 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 marine police 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 in calming the community members down and explaining that they were there to educate them and not arrest them
- The need to recognise that community members will quickly refuse that they do not use illegal fishing methods even if they do. The marine police must take an initiative to educate them about the dangers of using the illegal fishing methods as well as explain the Fisheries Law to them

Graduation and workshop closure

Two keynote addresses were made by the DCC police, who later declared the workshop closed (see **Annex 4 for the full speech**), and the Chair of the Fisheries Commission. After the speeches, participants were presented with certificates (see the pictures below)



Annexes

Annex 4: Workshop Participants

No	Name	Sex (M/F)	Age	Organisation	Contact Phone #	Email
Marine Police leaders and Trainees						
1.	Kennedy Kyei	M	48	MPU	0244848982	
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7.	Logah Alfred	M	25	MPU	0247090650	
8.	Owusu Kwadwo	M	26	MPU	0243678192	
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14.	Joseph Dzifa Fiagbedzi	M	35	MPU	0243283220	
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16.	Isaac Kombat	M	26	MPU	0545050094	
17.	Kofi Sarpong	M	23	MPU	0247478725	
18.	Wonder Kpedator	M	37	MPU	0242103989	
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Resource Persons and Other Participants						
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28.	Tendayi Maravanyika	F	37	WorldFish	0208993912	

29.	Kwesi R. Johnson	M	43	FON	0544858474	kwesirandolphjohnson@hotmail.com
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32.	Elvis Addae	M	52	CRC Ghana	0244073934	elvaddae@yahoo.com
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35.	Nana kojo Konduah IV	M	72	Chief Fisherman	0243681060	
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52.	Philip Ntiamoah	M	46	FC	0209337437	
53.	John Edward Afful	M	54	GNCFC	0244489991	
54.	Abaka-Edu Mike	M	48	GNCFC	0244880174	
55.	Marvin Baidoo	M	60	GNCFC	0245111492	
56.	Nana Kofi Annan	M	52	GNCFC	020822501	
57.	Nana Efirimu IV	M	67	GNCFC	0248449155	
58.	Nana Kwesi Tekon	M	61	GNCFC	0242572193	
59.	Joseph K Ocran	M	73	GNCFC	0245086437	
60.	Patience Klinogo	F		Attorney General office		

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 and ?
	0930-1030	The current crisis in the fisheries Sector	Kofi Agbogah – CRC, Hen Mpoano
	1030-1045	Tea break	
	1045-1140	Fisheries Ecology)	Godfred Ameyaw – World Fish, Hen Mpoano
	1130-1230	Situational facts relative to food security for Ghana	Kyei Yamoah – FoN, Hen Mpoano
	1230-1330	Traditional Management of the marine fisheries resource	Nana Konduah – Chief Fisherman from Abuesi
	1330-1430	Lunch	
	1430-?	Visit to fisheries landing sites in Shama District (small group tasks)	
2: 26 September	0900-1000	Debrief from Day 1 small group work	
	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 Regional Director, Fisheries Commission
	1200-1300	Films and discussion on issues in the fisheries sector	
	1300-1400	Lunch	
	1400	Visit to the Sekondi fishing harbour fleets (small group tasks)	
FISHERIES MANAGEMENT: HISTORY AND CHALLENGES			
3: 27 September	0900-1000	Debrief from small group tasks	Donkris Mevuta – FoN, Hen Mpoano
	1000-1100	Challenges for management in the sector	
	1200-1300	The erosion of cultural norms and the powers of Chief fishermen	Kyei Yamoah –FoN, Hen Mpoano and Nana Adam – Chief Fisherman of Aboadze
	1300-1430	Lunch	
	1430	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 Yaw Attobrah, 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	Overview of Fisheries Markets	
	1330	Lunch	

FISHERIES GOVERNANCE AND COMMUNICATIONS			
5: 1 October	0900-1000	The Sociology of fishing communities	Kyei Yamoah, 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 (Dadzie)
	1100-1200	Communicating with fisher folk	
	1200-1300	Building resilience in fishing communities	Dr. Tendayi Mutimukuru-Maravanyika, World Fish, 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	Fisheries Act and Regulations	Fisheries Commission – Accra
	1000-1200	Workshop session on defining and common understanding of the roles of Marine Police, Fisheries Agents, the Navy, Chief Fishermen	Papa Yaw Attobrah, Cape Coast FC Regional Director
	1200-1300	Evidence gathering and fisheries investigation	Chief State Attorney/WR, Papa Yaw Attobrah, 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 has 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. Core functions:

With the passing state approval of the Fisheries regulations LI1968, the police is 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 this 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.

You are to 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 to 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 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, ensuring 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 and 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, it 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 impact 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 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 you 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 anything about fisheries. Meanwhile this programme has really made a positive impact in me I thought I came here to catch fish or swim or go to 	<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 attracts all kind of fish Monofilament net because it is a rubber net. If thrown in the sea 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 parts of my work Chemical fishing. When you eat fish caught by chemicals you will end up sick 	<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 any offenders How to behave 	<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 community To implement what I learnt here and also educate my community

<p>the sea side</p> <ul style="list-style-type: none"> • 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 • 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 	<p>causes ghost fishing which continued catching both small and big fish under the sea</p> <ul style="list-style-type: none"> • 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 are used for fishing • 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 	<ul style="list-style-type: none"> • 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 and income and depletes the fish in the sea • 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 	<p>in the fishing community and know what to look out for</p> <ul style="list-style-type: none"> • 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 fishing gears • My perception of arresting suspects but now I have to educate • All that I have been doing in the service which are not 	<ul style="list-style-type: none"> • 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 fishing gears and the chemicals • 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
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<p>became very worried</p> <ul style="list-style-type: none"> • I thought we were coming for a swimming course • I thought we were just coming for a training course 	<ul style="list-style-type: none"> • 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>to catch fish</p> <ul style="list-style-type: none"> • 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>right. Now I must educate and thereafter take action</p> <ul style="list-style-type: none"> • Seeing fish as a common job without any law covering it 	
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