

Training Workshop Proceedings

Fisheries Law and Regulations in Ghana



17 – 18 December, 2012, Volta River Authority (VRA) Conference Hall, Shama

Compiled By:

Godfred Ameyaw Asiedu, Cephas Asare, Tendayi Mutimukuru-Maravanyika, Josephine Laryea Alex Sabah and David Mills



USAID
FROM THE AMERICAN PEOPLE



COASTAL RESOURCES CENTER
GHANA



Friends of the Nation



sustainaMETRIX



WorldFish

This publication is available electronically on the WorldFish Center's website at <http://worldfishcenter.org> and the Coastal Resources Center's website at <http://www.crc.uri.edu>.

For more information contact:

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

Please cite this report as:

Ameyaw G., Asare C., Mutimukuru-Maravanyika T., Laryea J., Sabah A., and Mills, D. J. (2012). Training workshop proceedings: Fisheries Law and Regulations in Ghana. 17 - 18 December, 2012, Volta River Authority (VRA) Conference Hall, Shama. USAID-URI Integrated Coastal and Fisheries Governance (ICFG) Initiative. Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island. 30 pp.

Disclaimer:

This publication is made possible by the generous support of the American people through the United States Agency for International Development (USAID)/Ghana. The contents are the responsibility of the authors as part of the Integrated Coastal and Fisheries Governance (ICFG) Project and do not necessarily reflect the views of the United States Government or the WorldFish Center. Associate Cooperative Agreement No. 641-A-00-09-00036-00 for "Integrated Coastal and Fisheries Governance (ICFG) Program for the Western Region of Ghana," Under the Leader with Associates Award No. EPP-A-00-04-00014-00.

Cover Photos: Cephias Asare

Photo Credits: Pages 10, 11, 12, 13, 22, 23, 24, 26 Cephias Asare.

Contents

Introduction.....	1
Day 1: Current status of fisheries in Ghana and the Fisheries Laws (Act 625 of 2000)	2
The current status of fisheries in Ghana by Godfred Ameyaw Asiedu	2
Discussion: Status of Fisheries in Ghana	4
Fisheries Ecology and Ecological Justification for the Fisheries Law and Regulations by Godfred Ameyaw Asiedu.....	6
Introduction to Fisheries Law by Alex Sabah.....	7
Discussion: Fisheries Ecology and Ecological Justification for the Fisheries Law and Regulations and Introduction to Fisheries Law	9
Group work and presentation	10
Day 2: Fisheries Regulations	14
Fisheries Regulations Part I by Alex Sabah	15
Discussion: Fisheries Regulation Part 1.....	15
Mangrove Video	17
Video discussion	17
Fisheries Regulations Part II.....	19
Discussion: Fisheries Regulations Part II	19
Session Four: Group Assignments and Presentation	22
Action Planning and Workshop Evaluation.....	27
Annexes.....	29

Introduction

Ghana's national fisheries statistics shows that marine fish production has generally been on the decline for the past two decades. The case is not different from what the fishers themselves said during recent surveys conducted in coastal fishing communities in the Western Region of Ghana. Ghana Statistical Service, in January 2013, reiterated that the contribution of fisheries to Ghana's Gross Domestic Product (GDP) has declined and the fisheries sub-sector was one of the worst performers in the year 2012 as far as the economy of the country was concerned. Signs are clear and more people in Ghana are beginning to appreciate that fisheries in Ghana are heading towards a crisis. It is apparent that without reforms in fisheries management in Ghana, the future of the goods and services provided by fisheries in Ghana are by no means assured.

Many reasons account for the decline in fisheries in Ghana such as the use of unsustainable fishing methods such as light and chemical/dynamite fishing, use of destructive fishing gears like monofilament nets, increase in fishing effort with regards to increase in number of fishing vessels, increase in number and size of fishing gears, use of ice at sea resulting in prolonged fishing trips, and weak compliance and enforcement of the Fisheries Law and Regulations to mention a few.

The Government of Ghana, in efforts to salvage the situation, enacted the Fisheries Law (Act 625) in 2002 and the Fisheries Regulations (Legislative Instrument 1968) in 2010 to give effect to the Fisheries Act. Despite the benefits that adherence to the Fisheries Law and Regulations are intended to provide, there have been challenges with compliance and effective enforcement. A clear example is the enforcement operations that was conducted by a government enforcement task force which became a complete failure partly because the enabling conditions necessary to achieve the desired objectives of the operations were not thought through very carefully. One of the lessons learned from this enforcement activity was that resource users need to be educated on the Fisheries Law and Regulations to promote voluntary compliance in lieu of enforcement. This was what necessitated the planning and organization of this two day training on the Fisheries Law and Regulations for resource users from Anlo Beach, a migrant Ewe fishing community in the Shama District of the Western Region, which is one of the focal communities of the Hen Mpoano Initiative.

The workshop was organized for a period of 2 days (17-18 December 2012) at the VRA training center (See Annex 1 for the programme) and was facilitated by Alex Sabah and Godfred Ameyaw Asiedu. A total of 16 participants, 10 men and 6 women, (see Annex 2) attended the workshop. The workshop aimed to raise awareness and deepen participants' understanding of the Fisheries Law and Regulations and their ecological justifications. More details about the workshop are presented in the following sections.

Day 1: Current status of fisheries in Ghana and the Fisheries Laws (Act 625 of 2000)

The workshop started with registration and welcoming of participants to the training by Godfred Ameyaw, who later took participants through the program (Annex 1) and the main objectives. He explained that the workshop was important as participants would get opportunity to understand the Fisheries Law and Regulations and their ecological justifications. This he said, would enable them as leaders in the community to educate their community members thus help to promote voluntary compliance of the Law and Regulations. The Fisheries Law he said was approved by Parliament of Ghana in 2002 and the Regulations followed in 2010 to complement the Law.

Participants were later asked to introduce themselves and note their expectations from the training. A total of 16 participants attended the workshop and consisted of two key stakeholders in the fisheries industry – fisher folks (from Anlo community) and Fisheries Commission district personnel from Shama and Ahanta West districts. From their expectations, participants wanted to learn more about the fisheries laws so that they could also share with others in their community. Below is a list of the participants' expectations:

- to be able to work with the Law at the end of the workshop.
- to gain a better understanding of the Law so as to be able to educate others on the Law and Regulations.
- to learn about the Fisheries Law and the way forward after this training workshop.
- to understand the Law. Also hope that a Fisheries Technical Officer would be stationed at Anlo Beach to address fisheries issues including implementation of the Law and Regulations.
- to know the Law better so that I can go back and educate my community members on the Law.
- to understand the Law and apply it to help rescue the decline in fish production.
- to understand the Fisheries Law so that I can share with my co-workers.
- to understand the Law and impart it to others to help revive the fishing business.
- to understand the Law and educate others on fisheries especially when there is conflict at the beach.
- to impart knowledge on the Law to others better.
- to have a better understanding of the Law to work together with others to sustain the fisheries.
- to share with others the current status of the fisheries so as to manage it sustainably.

This was followed by various presentations and discussions.

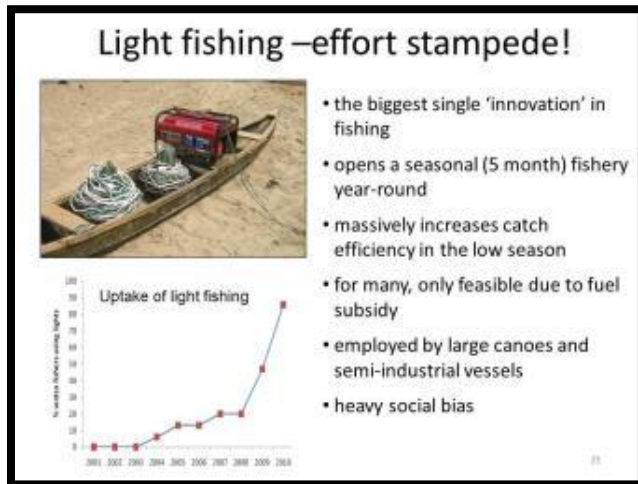
The current status of fisheries in Ghana by Godfred Ameyaw Asiedu

Godfred gave an overview of the current status and recent history of fisheries in Ghana highlighting changes in catch and effort and fleet over the past few decades as well as the introduction of unsustainable fishing practices that are very damaging to our fish stocks. He outlined the need for fisheries management reforms in Ghana and the need for adaptive co-management.

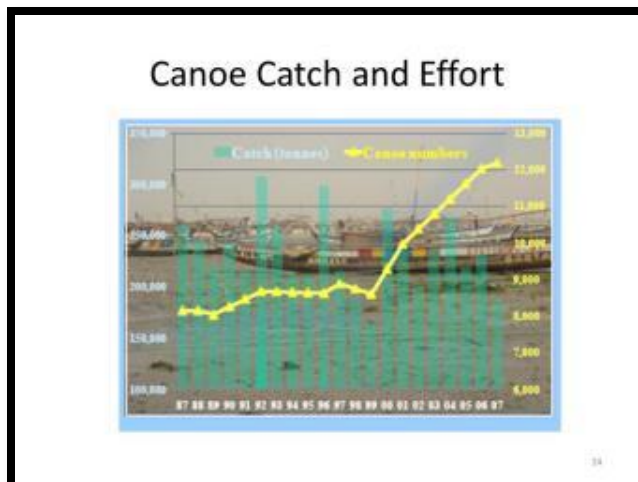
Take-home messages:

- Fisheries are important for nutrition and food security, livelihoods support, foreign exchange earnings, employment, income generation and poverty reduction.
- The contribution of fisheries to the above goods and services and Ghana's economy has declined.
- Part of the reason for this decline is the employment of unsustainable fishing practices including the biggest single innovation of light fishing which allows fishers to fish all year round.
- There are too many fishing boats and this still continues to rise, catches have declined, there is decrease in sizes of fish caught, increase in net lengths and corresponding decrease in mesh sizes as well as prolonged fishing trips.
- These changes make it clear that without reforms in fisheries management in Ghana, the future of the fisheries is doomed.
- Adaptive co-management has been tried and tested world-wide and is a recommended way forward for the management of fisheries in Ghana.
- In light of this, it is important that resource users and other fisheries stakeholders be aware of the Fisheries Law and Regulations.

Selected slides



This slide shows changes in canoe numbers and fish catch in the last 2 decades. Canoe numbers have increased sharply with a corresponding decrease in fish catch in the last decade.



One of the biggest single innovations in the fishing industry is light fishing. Light fishing is very destructive and should be discouraged but what do we see? More and more people are doing it and as one fisherman puts it, it has now become legal.

Godfred concluded by encouraging the participants to support and work with the Hen Mpoano Initiative by taking part in Project activities and capacity building initiatives. He also stressed that feedback from community resource users like them are also communicated with national level players to be considered in decision making.

Discussion: Status of Fisheries in Ghana

Question: Emmanuel Assilidjoe: Can the big boats (inshore vessels) fishing in the IEZ (6NM) be questioned by the canoes and if yes, how should they do that?

Responses: Godfred: Yes, but one needs evidence to show that an inshore vessel was found in the IEZ. Such cases should be reported to the appropriate authorities for prosecution in court.

Mr. Alex Sabah: According to the fisheries laws, the inshore boats are allowed to fish in the IEZ with purse seine nets but are not allowed to trawl.

Question: Victoria Apenuvor: About closed seasons which are observed in other places, is it not better if we bring this back in areas where they are no longer in operation as was previously practiced by “our forefathers”. This, would help rebuild our fish stocks.

Responses: Godfred: Victoria’s contribution is an intelligent one and that in order to effectively observe closed seasons there is need to have alternative livelihood strategies. This is why Hen Mpoano is working with the communities to come up with such options. He informed them that it is a slow process but with the support of the community “it is possible to get there”.

Questions Johnson Amiah: Like Victoria said, our forefathers were very clever and were able to put management options in place. Most of them farmed in addition to fishing and in the closed seasons they all went back to their farms. When one takes a look at the communities practicing beach seine from Cape Three Points in the Ahanta West District area, back then they used small beach seine nets and they had an effective catch share system where fish caught was shared equitably amongst themselves. Now the population has increased and everyone does as they please; it will be to the advantage of all if closed seasons are observed like in the past.

Response: Godfred: Bringing back closed seasons as in the past is a gradual process and cannot be done overnight. There is the need to sensitize fishers and educate them on the benefits of observing closed fishing seasons.

Question: Kennedy Attipoe: Is the decline in fish production due to the fact that we are harvesting too much or because the fish are no longer reproducing as they used to?

Responses: Godfred: A lot of reasons could be assigned to this including illegal fishing methods, overfishing, increase in population, increase in number of fishers, climate change and many more. Some of these could be controlled and all of us should work on them together to bring the change that we want in the fisheries.

Alex Sabah also added that fishers are now catching even juvenile fish in addition to fishing for adults. Only a few fish therefore grow to maturity so they can spawn before they are harvested. This he said also contributes to the decline.

George Assefuah contributed by saying that the construction of the harbor in Takoradi resulted in the destruction of fish spawning grounds in their waters near Anlo Beach and advised that all should do what they can to protect the fisheries.¹

Question Beauty Agbenyega: In your presentation you showed where harvested fish were put on polythene sheets on tables to keep them clean and hygienic. I want to know if we can also do this at Anlo Beach. Will people be punished and fined in any way according to the Law if they don't do this?

Response:

Mr. Alex Sabah: There is no provision in the Law that compels anyone to do that but there could be a by-law to that effect so that offenders could be punished, or you can champion this cause after the training in your community and get everyone on board.

Question: Victoria Apenuvor: You talked about light fishing and undersize mesh nets in your presentation; I want to know why we cannot stop the importation so that those practicing light fishing would not get access to such lights and illegal fishing gears?

Responses:

Mr. Alex Sabah: High voltage lights are not meant for fishing but other industrial purposes and so stopping the importation would affect those who really need it.

The undersize mesh nets at the border posts are claimed by the importers to be for other purposes like sponge for bathing so this also makes their complete ban difficult.

The other option would be to ban the use of rubber nets completely even if they are used in inland waters like Lake Volta and others.

Questions: Emmanuel Assilidjoe: How do we know if someone has encroached into the 30m depth zone?

Response: Alex Sabah: Fishers have their ropes and stones which they use in measuring depth so they are able to detect if a vessel is actually in the 30m depth or not. He added that the Navy also has their equipment which enable them to detect when a vessel is in the 30m depth zone and can take action against such a vessel.

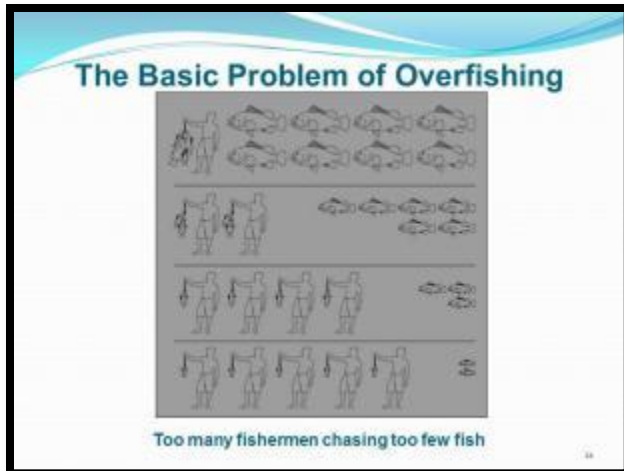
¹ This is based on his experience as a fisheries technical officer in charge of the Shama area and also from growing up in the area as the son of a fisherman.

Fisheries Ecology and Ecological Justification for the Fisheries Law and Regulations by Godfred Ameyaw Asiedu

Godfred took the participants through a presentation on fisheries ecology, what is it, and the ecological justification for the fisheries law and regulations. He took time to explain what the science of ecology really means and why it is important that resource users understand what fisheries ecology is in order to appreciate the natural processes occurring in water bodies. He highlighted that there was an ecological justification for sections of the fisheries law and regulations.

Take home messages:

- Fish like any other living things prefer to live in conducive environment with preferred environmental conditions.
- When these preferred conditions are altered by the activities of fishing, fish find it difficult to feed, grow, spawn and multiply.
- It is necessary therefore that fishing is done in ways that ensure protection of the environment in which the fish lives to safeguard their long term existence.
- Overfishing is believed to be the most important reason for dwindling fish stocks not to mention the use of destructive fishing gears.
- Monofilament fishing gears are very efficient in catching fish including juvenile fish that could have been allowed to grow to maturity before they are harvested
- The use of under size mesh nets is also as destructive as monofilament nets as this also catches juvenile fish.
- Light fishing aggregates both mature and juvenile fish which renders fish more easily caught. People are able to fish all year round nowadays due to light fishing. There is therefore more pressure on our fish stocks.
- Pair trawling is more efficient in destroying the sea bottom.
- Beach seining is not supposed to be done close to river estuaries as this catches juvenile fish that that are migrating back to sea.
- Protected areas is a fisheries management tool that act as a safe haven where fish can have their freedom to feed, grow, spawn and multiply before they move to other areas to be harvested.



There is high fish catch when few people are fishing. This also improves the sizes of fish caught. A large number of fishers results in low fish catch as well as decrease in sizes of fish caught.



There is ecological justification for the ban of various destructive fishing gears and methods by the fisheries law and regulations

Introduction to Fisheries Law by Alex Sabah

Alex Sabah presented an overview of the fisheries law and regulations. He pointed out that the fisheries law is divided into 6 parts and 141 sections; the provisions he said can be put under 3 broad areas of concern namely:

- Conservation of the resources;
- Safety of the operators and
- Enforcement

He also took participants through relevant sections of the law taking time to explain each section to them. Sections of the law explained include:

- License for canoes and qualification for license (Regulation 27)
- Establishment of zones and prohibition of fishing inside zones (Section 81)
- Destruction of fishing gears of artisanal fishermen within the IEZ (Section 82)
- Closed seasons (Section 84)
- Submerged stationery fishing gear (Section 86)
- Prohibited fishing methods (Section 88)

- Protection of gravid and juvenile lobsters, crustacean and juvenile fish (Section 89)
- Fishing for marine mammals (Section 90, R17)
- Fisheries Impact Assessments (Section 93)
- Establishment and functions of the Monitoring, Control and Surveillance and Enforcement Unit (Section 94)
- Authorized Officers (Section 95)
- Policing and other powers of Authorized Officers (Section 96)
- Possession of prohibited fishing gear (Section 135)

Take home messages:

- A person shall not use a canoe for fishing in the fishery waters unless a license has been issued for the canoe for the purpose of fishing.
- The water area specified in the schedule to the Fisheries Act is declared as the Inshore Exclusive Zone (IEZ).
- A person aboard a motor fishing vessel shall not destroy or damage any appropriately marked fishing gear of an artisanal fisherman inside the IEZ.
- The Fisheries Commission may declare closed seasons, including their duration, for fishing in specified areas of the coastal waters or the riverine system.
- Every submerged stationary fishing gear or surface drifting gear shall bear conspicuous surface marks using brightly coloured buoys, flags or floating poles and night lighted markers all of which must be visible in clear weather at a distance of about at least one nautical mile, except that in the case of nets, the markers shall be placed at intervals of 25 metres along the full length of the net.
- A person shall not use any explosive, poison, or other noxious substance for the purpose of killing, stunning, disabling or catching fish or in any way rendering fish more easily caught.
- A person shall not knowingly take any gravid lobsters, crustacean or any juvenile fish during fishing.
- A person shall not fish for marine or freshwater mammals in the fishery waters of the country without prior written approval from the Fisheries Commission.
- A person or government department or other agency planning to conduct any activity other than fishing which is likely to have a substantial impact on the fishery resources or other aquatic resources of Ghana shall inform the Fisheries Commission of the plans prior to the commencement of the planned activity with a view to the conservation and protection of the resources.
- There is established by the Fisheries Act a Monitoring, Control, Surveillance and Enforcement Unit which is responsible for monitoring, control and surveillance of all fishing operations within the fishery waters of Ghana.
- The Fisheries Minister, may in writing, appoint any public officer as an authorized officer for the purposes of the Fisheries Act and the person shall exercise all powers and functions provided by or under the Fisheries Act.
- For the purposes of enforcing the Fisheries Act, an authorized officer shall have the same powers of arrest as a police officer.
- A person shall not possess or control a fishing gear that is prohibited for use in the fishery waters, unless the gear is located at least two kilometers inland from a shoreline.



Discussion: Fisheries Ecology and Ecological Justification for the Fisheries Law and Regulations and Introduction to Fisheries Law

Question: Victoria Apenuvor: You talked about gravid lobsters and other crustaceans being released but there are other species such as the ribbonfish; how do we know when they are gravid?

Response: Mr. Alex Sabah: The law does not mention these species because it is difficult to tell when they are gravid however the law is clear on the approved mesh sizes to be used that would ensure that only mature fish are caught and not juveniles.

Question: Nobel Dogbatey: The main species from beach seine fishery in Anlo is shrimps but with the big mesh size we cannot catch the shrimps. What do we do?

Response: Alex Sabah: The net has both small mesh and big mesh so juvenile shrimps or fish are not retained in the net.

Question: Kennedy Attipoe: This shrimp species in our area do not grow big (during their season we can catch up to 200 million in a single cast) and we must not let them go by using the big mesh size.

Response: Mr. Sabah: That is why we are talking about adaptive co-management. This needs to be brought to the attention of government so that when the shrimp season starts you can be allowed to fish with the smaller mesh size nets. Such a system may be abused though and there is need for research to support this.

Question: Johnson Amiah: What do we do with small mesh size nets that are used to catch juvenile fish?

Responses:

If you are asking me to stop the use of small mesh size nets then you should provide me with an alternative livelihood so I can also get something to eat. George Assefuah added that there should be a by-law that permits the use of the small mesh size nets only during the shrimp season. Mr. Alex Sabah cautioned that in coming up with by-laws it should be ensured that it conforms to the national law so as to avoid conflicts.

Group work and presentation



Participants were then divided into 3 groups: Group 1 discussed the question ‘Why do fishermen flout the fisheries law? What will make them self-compliant? Group 2 discussed ‘Should Ghana continue to operate open access system of managing the fisheries resource? Why?’ and Group 3 discussed ‘Given the declining status of fish in Ghana, what type of management systems do you think will be appropriate for Anlo and who should do what?’. Each group had a rapporteur/coordinator to facilitate the group work. The groups were asked to report on their discussion after the session. The presentation and issues raised during the plenary discussion are presented here.

Report from Group 1: Why do fishermen flout the fisheries law? What will make them self-compliant?

Group members:

- Kennedy Attipoe
- Torgbui Tekple-Garikor
- Emmanuel Assilidjoe
- Godwin D. Kporwodu
- Victoria Akpenuvor
- Rapporteur/Coordinator: Alex Sabah



Presentation:

Fishermen flout the law because:

1. There is no enforcement of the laws and regulations
2. They act according to the canoe owner/net owner's instruction even when it contravenes the law. If one decides to do what is right and it goes against the owner's instruction you would be sacked from the company².

Fishers would become self-compliant if:

1. The chief fisherman is educated on the law and regulation and given a copy of the law to use in educating his community members. This is because some communities respect their chief fisherman.
2. The message and education targets the canoe/net owners; crew members and canoe owners should be prosecuted as well when any canoe is caught practicing illegal fishing. This would serve as a deterrent to all.
3. There should be frequent dialogue with fishers encouraging them to comply with the law. These interactions should especially be intensified during the fishing season.

² The owner, according to the participants, is the one who is prosecuted so he dictates what should be done on his canoe or what should be done with his nets and the crew has no say in this.

4. Handouts of fisheries regulations should be given out to canoes upon registration.

Report from Group 2: Should Ghana continue to operate an open access canoe fisheries? Explain why?

Group Members:

Noble Dogbatey
Beauty Agbenyega
Johnson E. Amiah
Bertha Kporvi
Andrews Kpobi
Rapporteur/Coordinator: Cephas Asare



Presentation:

No, Ghana should not continue to operate an open access canoe fisheries and this is because of the following reasons:

1. It has led to the increase in the number of fleets and the depletion of fish stock.
2. Traditional rules are violated.
3. In case of an emergency, no one is held responsible.
4. It is not safe for an individual to go out to sea alone, however due to the open access people go out to sea alone.
5. There is no proper inspection of equipment before they are used.
6. To prevent increase in number of canoes.
7. It does not help to control the fleets.

Contribution:

Cephas: I do not agree that one man cannot go to sea all alone. One-man canoes exist and can go out to sea alone. However, the issue is about safety – whether one is safe or not when he goes to sea alone.

Question:

Kennedy: The open access provides job for many people so if it is stopped, what would happen to those that lose their jobs?

Response:

Alex Sabah: Should we continue the open access at the expense of the resources? We are more concerned about the sustainable management of

the fisheries and not only giving livelihoods to people. If not, it would lead to a speedy decline of fish stocks.

Report from Group 3: Given the declining status of fish in Ghana, what type of management systems do you think will be appropriate for Anlo and who should do what?

Group Members:

- George Assefuah
- Dorcas Kotoka
- Agnes Atoklo
- John K. Gordor
- Godwin Gakpei
- Rapporteur/Coordinator: Josephine Laryea



Presentation: Reasons for fish decline in the sea and the river

1. Use of unsustainable fishing practices e.g. light and chemical fishing
2. Erosion of the beach and fish habitat (this is natural process)

What can be done:

- To ensure the sustainability of the marine resources government should enforce the Fisheries Law and regulations. The chief fishermen should be given the power to preside over some fisheries issues in the community.
- The community should form some co-management³ unit to manage the resources.

Discussion

Question: Beauty Agbenyega: when the light fishers are being chased at sea in Shama and other places they bring their catch to Anlo Beach and the women buy. Is it

³ Josephine was of the opinion that more specific co-management institution should have been raised by the group.

possible for the marine police to be stationed at Anlo community to monitor these illegal activities?

Response: Alex Sabah: Will the marine police get a place to lodge if deployed to Anlo Community

Kennedy was of the view that they would be more effective if they stay within the community

Comments: Noble K. Dogbatey: Alternative livelihoods should be introduced at Anlo. He informed all that formalin was now being used to preserve fish whilst some fishers were using soap solution (from SABA and SoKlin washing powder and sea water) to wash off the blood from fish to make it look clean and fresh. This fish, when handled by women, cause bruises on their hands. After handling such fish, women cannot eat with their hands because of the bruises and have to use spoons.

Question: Johnson Amiah: Is it possible to have a local committee in Anlo to act as a task force to monitor the use of light fishing?

Response: George Assefuah: There is need for this committee to be empowered, otherwise it becomes ineffective.

The day came to an end with closing remarks from Godfred. He thanked participants for their patience and contributions. He said that he was particularly impressed with the way everyone abided by the set rules and how the women participated actively in the discussion sessions. He encouraged everyone to be punctual the next day.

Day 2: Fisheries Regulations

Day two began with an opening prayer by Victoria Apenuvor, followed by a recap of day one. This was followed by a presentation by Mr. Alex Sabah on fisheries regulations.

Fisheries Regulations Part I by Alex Sabah

Mr Alex Sabah took participants through “relevant” portions of the regulations which talk about:

- use of set nets (Regulation 8)
- beach seine not to be used in marine protected areas (Regulation 9)
- manufacture, importation, sale and use of authorized fishing nets and gears (Regulation 10)
- prohibited fishing methods (Regulation 11)
- minimum mesh sizes of fishing gears (Regulation 12)

He demonstrated how the mesh sizes could be measured by hand by opening up the net and taking the measurements diagonally.

Take home messages:

- A person shall not use a multifilament set-net the mesh size of which is less than fifty millimeters in stretched diagonal length in the marine waters or a riverine system, a monofilament set-net the mesh size of which is less than seventy-five millimeters in stretched diagonal length in a riverine system or marine waters.
- A person shall not use beach seine net in estuaries or in areas to be designated as marine protected areas by the Fisheries Commission.
- A person shall not manufacture, import, sell or use a fishing net or gear, the mesh size of which is less than twenty-five millimeters in stretched diagonal length.
- A person shall not within the fishery waters of this country use any fishing method that aggregates fish (such as light and bamboo) or use explosives, obnoxious chemicals or any other prohibited fishing methods which render fish more easily caught or operate pair-trawling.
- A person shall not operate or carry on board a fishing vessel a trawl net the mesh size of which is less than sixty millimeters in stretched diagonal length or a shrimp trawl net the mesh size of which is less than fifty millimeters in stretched diagonal length
- A person shall not use a large pelagic purse seine net which has a mesh size of less than one hundred millimeters.
- A person shall not use a small pelagic purse seine net which has a mesh size of less than twenty-five millimeters.
- There are various penalties associated with the above offences.

Discussion: Fisheries Regulation Part 1

Question: Noble K. Dogbatey: If my four – inch net catches a small sized fish, is it illegal?

Response: Alex Sabah: it is not necessarily illegal since the net size is the correct size.

Question: In case of a boat engaging in an illegal activity, who should be arrested, the owner of the boat or the crew members?

Response: The boat owner is responsible since the boat belongs to him, though the crew members (including the Captain) were present when the incident happened.

Question: What is a natural closed season and what happens after the natural closed season?

Response: Kennedy: In Anlo they have what they refer to as a natural closed season in the months of July, August and September. During these months people do not fish

because the river Pra's current is so strong that nets cannot be set; whoever tries to set nets in the river around these months loses such nets. He said that after this natural closed season "the fish are in abundance and beautiful". In response to a question by Mr. Alex Sabah as to what happens after the "natural closed season". He added that in the estuary grey mullet and tilapia are caught but when 2 inches nets are used they are unable to catch the tilapia because they do not grow that big and he attributed this to the high concentrations of salt water in the estuary.⁴

Responses: Mr. Alex Sabah: This could also be a result of continuous pressure on the fish which limits them to grow to bigger sizes. If a closed season is instituted, there could be a difference in the size of fish caught. He also added that some festivals indirectly institute closed seasons, an example being the Bakatue festival of the Elmina people in the Central Region.

Question: What are some of the fishing gears commonly used in Anlo and which one is the least destructive?

Response: Some of the fishing gears commonly used in Anlo beach includes the set net, cast net and the hook and line. Hook and line is the least destructive.

Question: Torgbui Tekple-Garikor: The women who fish in the river use their hands but there is no provision in the law about the minimum size they should land.

Response: Alex Sabah: Although there is no provision in the law, the women should release undersized fish.

Question: Noble K. Dogbatey: There are ponds formed after the rainy season and when these ponds dry you can see small sized tilapia which if not caught would die. What happens when you catch such fish?

Response: Alex Sabah: The person who catches such fish should explain when asked the source of such fish.

Question: Victoria Apenuvor: What happens if the small fish ends up in the hands of a fish fryer that then fries, sends to the market and is arrested for selling undersized fish?

Response: Alex Sabah: In this case the fish chain would be followed to establish the fact and know if the person is really guilty or not.

Question: Noble K. Dogbatey: Why can't we ensure that those who claim that the small mesh size nets they are importing is for other purposes like sponges for bathing. Why are these not cut into sponge sizes before importing them into the country⁵. He also added that the light fishing has taken a new dimension – light fishers now use two high voltage bulbs; one on the surface and the other is immersed in the water. This he said prevents the fish from coming close to shore as beach seiners will catch them. He said that he noticed 11 canoes doing light fishing in Anlo Beach the previous day.

Responses: Mr. Alex Sabah: This is the reason why the marine police was established to educate fisher folks and enforce the Fisheries Laws.

⁴ This small size fish may be due to stunting as a result of over fishing in the estuary. Stunting can be an adaptive mechanism by the fish to enable them reach maturity faster so as to be able to reproduce before they are harvested.

⁵ This is a very good point that could be explored as a solution to the importation of small mesh size.

Kennedy: The main culprits are fishers from Abuesi, Aboadze and Sekondi. When they land their fish, Anlo community members see them with illegal and destructive fishing gears.

Question: Mr. Alex Sabah: It has been observed that fishing during July, August and September is not very productive. Is it true or false?

Response: Kennedy: This is true and it is around the same time when we have the natural closed season. Around this time, we however experience bumper harvests of shrimps.

Question: Beauty Agbenyega: When fishers use the three-quarter inch nets to catch the small shrimps during their season women buy them; are they breaking the law?

Response: Alex Sabah: If it becomes part of a by-law that shrimps should be fished in the season with 3-quarter inch net (based upon research that establishes that they do not grow beyond the stated size) then the women would not be breaking any law.

Question: Andrews Kpobi: Is there a particular period when fish come into the estuary to spawn and go back?

Response: Godfred: This happens throughout the year and that there is no particular period in the year for this as different species of fish spawn at different times of the year.

Mangrove Video

A thirty minute “**mangrove video**” on how people from Ayannui in the Volta Region were making a living from sustainable harvesting of the mangroves was shown to the participants. The mangrove planters from this community are not particularly land owners but use a system of share cropping – a situation Anlo beach people can relate to as they are migrants and do not own lands. They could adopt this practice of share cropping to start their own mangrove plantation. This would serve as an alternative livelihood for both the youth and the old in the community.

Video discussion

During the discussion, participants identified the following lessons from the video:

- Fish (mudfish and tilapia) lay their eggs in the mangroves.
- Mangroves can generate income for harvesters, fuel wood for smoking fish and provide building and construction materials
- Mangroves take about six months to mature
- Johnson: mangrove is highly cherished in the Volta Region compared to the Nzema areas in the Western Region

Question: Alex Sabah: Do they own the areas where the mangroves are planted?

Response: Noble K. Dogbatey: Some of the lands are family lands and planters can acquire a piece of the land and pay the owner with portions of the mangroves. When mangroves are harvested they die so you have to replant.

Kennedy Attipoe: The mangroves only die when you harvest them with the roots but if you harvest at the stem they will not die.

Replanting is better than waiting for regeneration because the mangroves grow faster when replanted.

Question: Johnson Amiah: We know the mangroves were planted for business but do they harvest all at once?

Response: Kennedy Attipoe: The harvesting is done gradually. I saw crabs and catfishes in the mangroves, if we leave the trees, this helps the fish and the crabs. Mangrove branches are also used in Acadja⁶ fishing

Question: Alex Sabah: What do you think of Acadja fishing? Is it good or bad?

Responses

Kennedy: it is good. It is just like someone practicing his/her own fish farming and it gives you money.

Torgbui: Acadja was practiced in the Volta Lake and they noticed that fish that lay their eggs in the mud started going into the Acadja. This affected the reproduction of the fish.

Victoria: Acadja can be practiced effectively if you use big size mesh nets that allow the small fish to escape and grow.

George: Any method of fishing that allows fish to be caught easily is not good.

Alex Sabah: Acadja fishing itself is not bad but a permit must be obtained before starting.

Lessons learned

- Noble K. Dogbatey: Growing mangroves serves as nursery grounds for fish that would increase fish production.
- Kennedy: If we speak to those who cut mangrove trees in Anlo close to the estuary to stop, trees can grow and more fish would come into the estuary to spawn
- George: District Assemblymen should participate in trainings like this.
- Godfred: The Hen Mpoano Initiative works closely with the Districts and there are plans to have a special meeting with all the district assemblies to discuss the ongoing visioning exercise and see how best Hen Mpoano and the districts can work together to achieve these visions.
- Emma: I think we should cut the dead mangrove trees and leave those that are healthy and still growing.
- Noble K. Dogbatey explained that the healthy ones are cut in addition to the dead ones because the dead ones might not bring the expected incomes.
- Godfred encouraged the community members to take the lead in the planting of mangrove trees in their communities.

⁶Acadja (Brush-park fishing) is a method of fishing where branches of mangrove trees are used as shelter by fish and as the trees start to decompose in the water, this serves as food for fish. These are monitored by the owners (people who set up these structures) and when the fish get mature, they beat the water to scare the fish. As they try to escape, they are caught in set nets.

- Kennedy Attipoe:
 - We would need assistance with the planting of mangroves so we know which ones to plant and where.
 - The Forestry Department once implemented a mangrove planting project in Anlo and planted many mangrove trees but the last flood destroyed these.
 - Stephen Kankam (from the Hen Mpoano Project) asked me to mobilize the youth in the community who are involved in the cutting of mangroves to be trained in replanting but for this to happen there is the need for us to acquire land.
- Godfred: I hope mangrove replanting will be part of the vision developed by men since they are the ones actively involved in the cutting.

Fisheries Regulations Part II

Participants were taken through relevant portions of the Fisheries Regulations by Alex Sabah. This focused on the following:

- Marks on fishing gear (R 25)
- Application for a license to operate a canoe (R 27)
- Transfer of canoe license (R 28)
- Incidental catches/by-catches (R 31)
- Dumping of fish (R 32)
- Transshipment (R 33)

Take home Messages

- Each submerged stationary fishing gear or surface drifting gear shall bear conspicuous surface lighted marker which is visible in clear weather at least at a distance of one nautical mile.
- A person shall not operate a canoe within the coastal waters or riverine system of Ghana for the purpose of fishing or in connection with fishing activity unless the canoe has been licensed by the Fisheries Commission or a person authorized by the Commission.
- A canoe license is not transferable except with the prior written approval of the Fisheries Commission or a person authorized by the Commission.
- A person who catches gravid lobsters, other crustaceans, any juvenile fish as by-catches or incidental catches shall release them immediately to their natural habitat or environment in a manner that causes them no harm.
- A person fishing shall not dump from any vessel fish that has been caught which is suitable for human consumption.
- A person shall not transfer fish from one canoe to another canoe or from a semi-industrial to a canoe except in areas where there are no safe landing facilities and with the consent of the owners.

Discussion: Fisheries Regulations Part II

Question: George Assefuah: The Director of Fisheries should look at how we can move fisheries forward and improve the lives of women in fishing communities who are involved in the processing and marketing of fish.

Response: Mr. Alex Sabah: The Fisheries Commission has the wellbeing of women in fishing communities on their agenda. In fact this is component of the World Bank supported West Africa Regional Fisheries Program.

Question: Victoria Akpenuvor: Participating in meetings of this kind, makes me think critically about our fisheries and their current state. As I sit here, one of the things I'm thinking about is how we can involve everyone especially the youth and women in processes targeted at improving fisheries.

Response: Godfred: Like Victoria stated, it is critical that all stakeholders are involved in all processes, a reason why we are working closely with all the stakeholders in Anlo as a pilot for replication in other communities.

Question: Noble K. Dogbatey: sometimes the shrimps caught are too many and not matured and the women cannot smoke all at once. The bulk of it is dumped into the river or the estuary. Is this a good practice?

Response: Mr. Alex Sabah: This is not a good practice. The women should just buy what they can smoke and leave the rest for others to buy also.

Question: Canoe licensing is not transferrable, why?

Response: George Assefuah: Vehicle and driver licensing are not transferable, same applies to canoe licensing.

Question: Mr. Alex Sabah: Why is dumping of fish not a good practice?

Response: Before the fish is dumped, the preferred ones are taken out and the ones that are not wanted are thrown away. This action pollutes the water since the fish are already dead, and would start decaying. Every person would like to live in a nice and habitable environment; the same applies to these fishes too. People dump fish that they don't want but this fish may be the target species for other fishers. This is a threat to these fishers' livelihood security.

Question: Why is "Seiko" (transshipment) not a good fishing practice?

Response:

- It increases fishing pressure. There would definitely be by-catch that others would want to buy, thus it keeps the business thriving, and therefore more pressure on fish stocks.
- People fish with smaller mesh size nets and catch untargeted fish and sell to others at sea. "Seiko" therefore contributes to the use of illegal fishing nets.
- Beauty: Fish bought directly from the fishers themselves are cheaper than that bought from the "Seiko" fishers, therefore this should not be encouraged.

Question: Victoria: I am grateful for this education. I would like to encourage the leaders/facilitators to keep on with programs like these that would enhance our capacities and equip us to inform others at home.

Question: Victoria Akpenuvor: When smoking fish (Amane/Abobi), we collect the water that comes out of the fish, this water really smells bad. Is it right to discharge this waste water into the sea or river?

Response:

- Don't wait till the whole process is done and the water starts smelling bad before discharging it, you could be disposing it from time to time as you are smoking the fish and the water is collected.
- The waste water has a bad odour and thus would pollute the water that you throw it into.
- Kennedy: When thrown at the shores of the beaches, the waves dilute it quickly. It is better than throwing it into the estuary or the river.
- Put the fresh fish into a basket when it is bought to drain some of the water from it before the smoking starts.

Question: Victoria: The fish we are talking about here is small and we wonder where all that amount of liquid comes from.

Response: In some places e.g. Anlo, Bantama, a cement platform is built and the water is channeled into a collecting pit where it is collected at short intervals.

Question: Noble K. Dogbatey: Why do the community members not take an initiative to solve their community problems instead of waiting for "outsiders" to prescribe solutions to them?

Responses: Agnes Atoklo: This is happening in the community because people do not respect each other's views so no one wants to get involved or be seen as the one taking initiative in problem solving. Everyone sticks to his/her own business.

Comment: Alex Sabah also added saying that everyone learns from experience and other people's experiences can also be very valuable in problem solving. In some other countries like Senegal, are instances where people took it upon themselves to protect their resources even before the laws were put in place. They even decided to put in extra effort when the law gives a limit. For example, if the law requires them to use a 2 inch net, they decide to use 4 so they would not end up depleting their stocks. The situation we see here in Ghana is the opposite. If the law requires you to use 2 inch net, people use a 0.5 inch net. We as Ghanaians should therefore change our attitudes.

Question: Godwin Gakpei: Sections of the law and regulations that we have been trained in should be made available to the fishing companies in Anlo as well.

Responses: Godfred: The project will think about how best to assist in this.

Question: Alex Sabah: Are members of fishing companies able to read and write

Response: Yes. Company owners can read and write.

Comment: Margaret: I am grateful for this training program. Some of the issues mentioned here never struck me before, "it has been an enlightening experience. I urge you not to stop here".

Johnson: I think this enlightenment and education came in at a later time when most of the damage had already been done. However if we make up our minds to adhere to it, it would be of a great help to us and we would start seeing changes.

Session Four: Group Assignments and Presentation



In this session, participants were grouped just as the day before to discuss certain questions pertaining to fisheries and try and come up with possible solutions. Group 1: Is closed season a good fisheries management tool? Yes/No. Explain; Group 2: What will be the benefits of registering and licensing canoes? Group 3: If Shama District develops fisheries by-laws what do you think will be some of the challenges of implementation, compliance and enforcement of these by-laws in your community?

Like the previous day each group had a rapporteur/coordinator to assist the participants think through the questions and generate possible solutions; the groups were asked to report on their discussion after the session. The presentation and issues raised during the plenary discussion are presented here.

Report from Group 1: Is closed season a good fisheries management tool? Yes/No. Explain

Group Members:

- Kennedy Attipoe
- Torgbui Tekple-Garikor
- Emmanuel Assilidjoe
- Godwin D. Kporwodu
- Victoria Akpenuvor
- Margaret Adzima
- Rapporteur/Coordinator: Alex Sabah



Presentation and Discussion:

- Yes, it is a good management tool. It will enable the fish to grow in size and increase in numbers.
- This would improve the standards of living since more income would be generated from selling the big sized fish.
- People will be encouraged to engage in alternative livelihoods such as farming and petty trading.
- It would give us some time to maintain our fishing gears.
- It would give us the time to engage in recreational activities like traveling around the country to see certain places of interest.

Question: Alex Sabah: How will the closed season enable fish increase in size?

Responses:

- Kennedy: Closed seasons allow the fish to reproduce without being disturbed.
- Mr. Alex Sabah: There are experiences from Egypt where fishers form cooperative association and some of the proceeds from fish sold during the open season are retained to support fishers during the closed season. The closed season helps with stock rebuilding.
- Beauty: The closed seasons would lead to the reduction in illegal fishing as there would be more fish to harvest.
- Victoria: Closed seasons will give parents more time to look after their children.

Report from Group 2: What will be the benefits of registering and licensing canoes?

Group Members:

- Noble Dogbately
- Beauty Agbenyega

- Johnson E. Amiah
- Bertha Kporvi
- Andrews Kpobi
- Rapporteur/Coordinator: Cephas Asare



Presentation:

The benefits would be at three levels: Nation/District Assemblies; Boat owners; Crew members

Nation/Assemblies

- There would be income for the assemblies for development
- The District Assemblies and the nation will know the number of canoes operating in our waters and would be able to plan toward their development i.e. in the importation of inputs (nets, outboard motors, pre-mix fuel, etc)
- It will enable the Fisheries Ministry to control the fleets (in regard to the numbers that are allowed to go out to fish)
- License defaulters could easily be traced

Net/boat owners

- In case of accident at sea, they could be assisted.
- Order for appropriate equipment (one would only be able to purchase the right equipment that are suitable for his boat e.g. mesh sizes)
- Helps in tracing missing canoes

Crew

- Equitable distribution of inputs (pre-mix fuel, nets, outboard motors)
- All crew members would be identified with particular canoes.

Question: Kennedy: If some canoes are not registered by the authorities would that not cause some form of unrest as “a hungry man is an angry man”?

Response:

- Alex Sabah: It would be done appropriately with proper education and understanding.

- The few that would go fishing would also bring back enough for all.
- This is currently not in effect, however before this takes off, it would be discussed thoroughly with all stakeholders so there would be a general compromise as to what exactly would be done.
- George Assefuah: It is stated in the Act and LI that one would have to apply for a permit before the construction of the boat. If denied and the boat is still built, it would be the boat owners disadvantage as he cannot go out to sea.

Comment: Kennedy: If I construct a canoe and I apply for registration and I do not get it; that would make me unhappy as I don't want to join someone's canoe as a crew member.

Response:

- Alex Sabah: When the registration starts, one must apply for registration first – if granted, then one can go ahead and build the canoe.
- Assafuah: Why would you want to build your canoe before applying for a license? If you do not want to follow the right procedure then you would have to go to sea with the unregistered canoe.

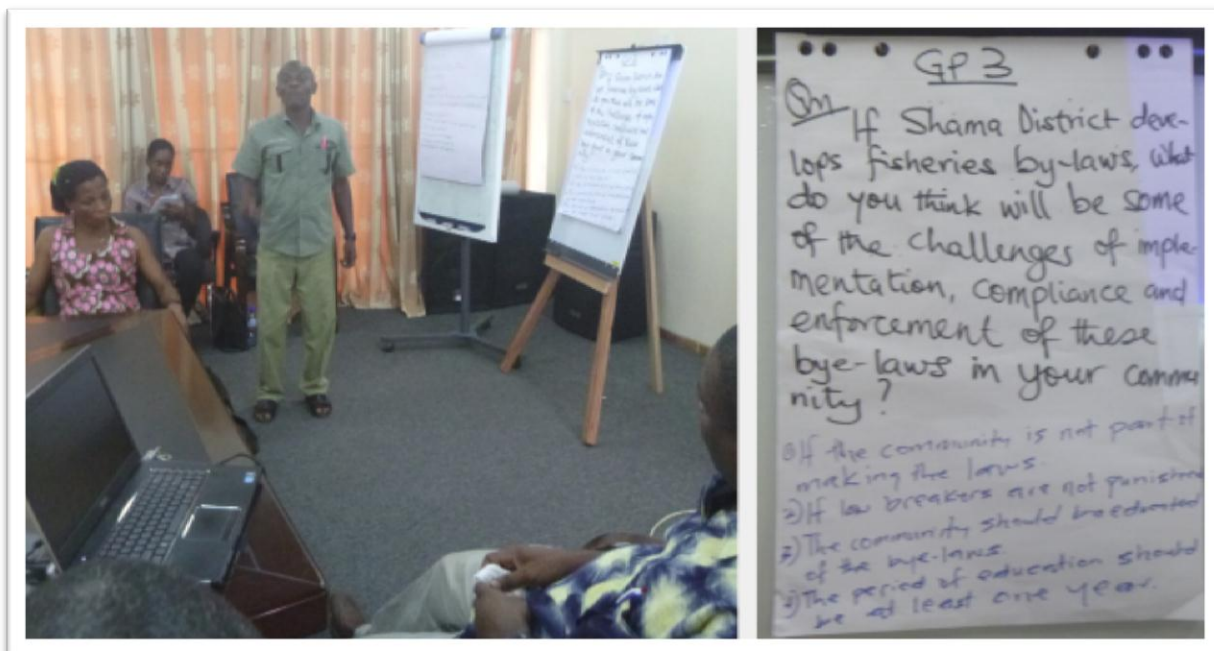
Question: Victoria: If the registration is done, will the licensed canoes be monitored before going out to sea?

Response: No. There may not be need for this.

Report from Group 3: If Shama District develops fisheries by-laws what do you think will be the challenges of implementation, compliance and enforcement of these by-laws in your community?

Group Members:

- George Assefuah
- Dorcas Kotoka
- Agnes Atoklo
- John K. Gorodor
- Godwin Gakpei
- Rapporteur/Coordinator: Josephine Laryea



Presentation:

- If the community is not involved in making of the laws
- If those who break the law are not punished
- If communities are not educated on the by-laws (The period of education should be at least one year)
- If the chief fisherman is not being backed by law
- If people do not make the effort to voluntarily comply with the by-laws
- If enforcement is not done by the police in partnership with the chief fisherman and the Fisheries Department.

Question: Why should the education be for such a long period?

Response: Some people who get the opportunity to participate in such training programs sometimes do not also inform others on what they learnt. If this happens, information does not reach the broader community. Such education programs should get to a critical mass of people in the community and not only a few. If the education is carried out over a longer period, it will increase the chances of many people getting informed.

Question: If the community is involved in coming up with the by-law why do we need legal backing again?

Response: Assefuah: The legal backing would be for the chief fishermen to bring some “fear” for community members who do not comply.

Action Planning and Workshop Evaluation

Participants were asked to come up with action plans to be implemented after the workshop. They were later asked to evaluate the workshop by answering the following questions: What went well? What did not go well? What did you learn? Anything else you want to add?

Action planning:

WHAT?	WHEN?	WHO?
Educate the church	Sundays	Torgbui Tekple-Garikor
Discuss issues learnt from this training program with other members of the unit council, then help inform the other community members	13th January, 2013	Kennedy Attipoe, the secretary and other unit committee members
Mangrove planting project	Dec – end of Jan	Noble K. Dogbatey
Female peer education program	Thursday 20 th Dec, 2012	Victoria Akpenuvor
Local radio educational program on fisheries law and regulation	Tuesdays	Emmanuel Assilidjoe (C3P)
Update data on canoes at Anlo Beach	13 th – 19 th Jan, 2013	George Assefuah
Education at the beaches in Dixcove	From Dec – end of Jan	Johnson E. Amiah
Educate the fishing companies at Anlo Beach	From Dec - Jan	John K. Gordor
Peer education of ZOIL employees	From Dec	Beauty Agbenyega
Community education	From Dec	Bertha Kporvi

Workshop Evaluation

What Went Well?

- The program was very good in general.
- Adherence to the time allotted to each schedule was good
- The food was good
- The facilitators were good
- The patience of the presenters during their presentations
- The lady rapporteur (Josephine) was well dressed

What didn't go well?

- There was no time keeper
- The food, and there were no soft drinks
- The waitresses were not smart in serving the food
- The visibility of the fonts on the projection was not too clear
- Materials (the Fisheries Law and Regulations) should be made available in Ewe

What more to add?

- Addition of other helpful topics to what was given
- Talk on child labor
- Make provision for writing materials for trainees

What did you learn?

- The use of chemical fishing and its health implications
- Importance of mangroves
- Women who buy fish that were caught with illegal methods are guilty and thus liable to face the deserved penalties

Closing Remarks

Godfred thanked all participants at the close of the training for devoting their time and energy to this training without complains. He encouraged all participants to deliver on their action plans when they get back to the community and added that the Hɛn Mpoano team would also monitor progress of work to see how well they have done in carrying out those actions and offer any assistance if needed.

Annexes

Annex 1: Training Programme

DAY ONE

TIME	ACTIVITY	WHO
9:00	Registration of participants	Josephine Laryea
9:15	Opening prayer Self-introductions and expectations from training workshop	All participants
9:30	Ground rules Opening remarks Discussion of project/review	Godfred Ameyaw
10:00	Status of fisheries in Ghana	Godfred Ameyaw
10:30	Fisheries ecology and ecological justification for the fisheries law and regulations	Godfred Ameyaw
SNACK BREAK		
11:00	Introduction to the fisheries law, Act 625 of 2002 License for canoes and qualification for license (R 27) Establishment of zones and prohibition of fishing inside zones (S 81) Destruction of fishing gears of artisanal fishermen within the IEZ (S 82) Closed seasons (S 84) Submerged stationary fishing gear (S 86) Prohibited fishing methods (S 88) Protection of gravid and juvenile lobsters, other crustaceans and other juvenile fish (S 89) Fishing for marine mammals (S 90, R 17)	Alex Sabah
12:30	LUNCH BREAK	
2:00	Group work	All participants
2:30	Presentation of group assignments	All participants
3:00	Fisheries impact assessments (S 93) Establishment and functions of the MCS and Enforcement Unit (S 94) Authorized officers (S 95) Police, other powers of Authorized officers (S 96) Possession of prohibited fishing gear (S 135)	Alex Sabah
4:30	CLOSING REMARKS	
DAY TWO		
9:00	Opening prayer Recap of day one	Godfred Ameyaw
9:20	Use of set net (R 8)	Alex Sabah

	Beach seine not be used in marine protected areas (R 9) Manufacture, importation, sale and use of authorized fishing nets and gears (R 10) Prohibited fishing methods (R 11) Minimum mesh sizes of fishing gears (R 12)	
10:30	SNACK BREAK Mangrove video and discussions	All participants
11:00	Group assignments	
11:30	Group presentations	
12:00	Markets on fishing gears (R 25) Application for a license to operate a canoe (R 27) Transfer of canoe license (R 28) Incidental catches/by-catches (R 31) Dumping of fish (R 32) Transshipment (R 33) Group Assignment and Presentation	Alex Sabah
1.00	LUNCH	All participants
2:00	Action planning	All participants
2:20	Evaluation	All participants
2:40	Closing remarks	Godfred Ameyaw
3:00	Closing	Godfred Ameyaw

Annex 2 – List of Participants

No.	Name	Gender	Age	Position in the community	Head of household	Contact number
1	Godwin D. Kporwodu	M	65	Fisherman	Godwin D. Kporwodu	
2	John Kennedy Attipoe	M	42	Unit Committee Chairman	John Kennedy Attipoe	
3	Torgbui Tekple-Garikor	M	52	Chief	Torgbui Tekple-Garikor	
4	Andrews Kpobi	M	43	Fisherman	Andrews Kpobi	
5	Victoria Akpenuvor	F	55	Fishmonger/Trader	Victoria Akpenuvor	
6	Noble K. Dogbatey	M	59	Unit Committee Secretary	Noble K. Dogbatey	
7	Beauty Agbenyega	F	38	Fishmonger	David Kpakini	
8	Bertha Kporvi	F	42	Petty trader	Dora Dogbati	
9	Agnes Atoklo	F	50	Fishmonger	Amedzame	
10	Godwin Gakpei	M	52	Chief Fisherman's Secretary	Godwin Gakpei	
11	Dorcas Kotoka	F	47	Fishmonger	Dorcas Kotoka	
12	John K. Gordor	M	54	Community health committee member	John K. Gordor	
13	Emmanuel N. Assilidjoe	M	34	Fisheries Commission worker	Emmanuel N. Assilidjoe	
14	Johnson E. Amiah	M	57	Chief Technical Assistant (Fisheries Commission)	Johnson E. Amiah	
15	George K. Assefuah	M	58	Technical Assistant (Fisheries Commission)	George K. Assefuah	
16	Margaret Adzima	F	59	Fishmonger	Margaret Adzima	