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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

The Stakeholder Association Leaders Meeting of Small Pelagic Options



AUGUST, 2015

THE
UNIVERSITY
OF RHODE ISLAND
GRADUATE SCHOOL
OF OCEANOGRAPHY



Hɛn Mpoano



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Cover photo: Female participants in a Focus Group discussion in Cape Coast (Credit: Frederick Eduful - FoN)

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ACRONYMS

CEDECOM	Central Region Development Commission
FEU	Fisheries Enforcement Unit
FoN	Friends of the Nation
GIFA	Ghana Inshore Fishers Association
GITA	Ghana Industrial Trawlers Association
GNCFC	Ghana National Canoe Fishermen Council
LBCs	Landing Beach Committees
MCS	Monitoring Control and surveillance Unit
MPAs	Marine Protected Areas
NAFAG	National Fishermen Association of Ghana.
NAFPTA	National Fish Processors and Traders Association
SFMP	Sustainable Fisheries Management Project
TURs	Territorial Use Rights
USAID	United States Agency for International Development

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INTRODUCTION

The Sustainable Fisheries Management Project (SFMP) is funded by USAID Ghana and is being implemented over a 5-year period from 2014 to 2019 in Ghana by a consortium of partners with Coastal Resources Center of the University of Rhode Island as the lead partner. The implementing partners include: Friends of the Nation (FoN), Hen Mpoano, SNV, DAA, DAASGIFT, CEWEFIA, SSG- Advisors and Spatial Solutions.

The key objective of the project is to contribute to the rebuilding of Ghana's marine fisheries stock (small pelagics) and catches through adoption of responsible fishing practices. The reason being that; Ghana's small pelagic species which composed mainly of *Sardinella aurita* and *Sardinella maderensis*, are the main source of animal protein for the majority of coastal populations. However, the stock has already experienced signs of collapse. Recent stock assessments of small pelagics reported that these stocks are severely overfished and that overfishing continues to exacerbate beyond the level of sustainability.

Towards contributing to the above objective and as part of SFMP activities; FoN led stakeholder engagement processes from June to August 2015 with a shared responsibility concept where eleven (11) fisheries management action options were developed and discussed with stakeholders. The management options included the following: Closed Area, Closed Season, Increase Mesh size, Increase Min. Fish size, Territorial Use rights, Limit Number of Boats, Remove subsidy, Add fishing holidays, Daily landing Quotas, Total Annual Quotas and Business as Usual.

Two round of stakeholder meetings were organized in each of the four (4) coastal Regions; namely: Western, Central, Greater Accra and Volta Region. The first round of meetings were used to socialize the eleven (11) management options and allowed stakeholders to discuss and decide which option they preferred. Out of the eleven (11) Options presented, stakeholders in each of the four Regions selected a number of the options. To understand the reasons for the preferred option choices, a second round of engagement meetings were organized with the various fisheries national association leaders in the four coastal Regions.

This report narrates the proceedings of the second round of stakeholder meetings involving the fisheries association leaders. The report presents the reasons for the choice of options and it also captures the recommendations presented by stakeholders for the successful implementation of the preferred options.

STAKEHOLDER ASSOCIATION LEADER'S MEETINGS

A total of four (4) stakeholder association leader's meetings (one in each of the four (4) coastal regions) were organized. The meetings had a fair representation of the various fishing associations and groups. Participants were carefully selected to ensure that representatives from all the key marine fisher groups and associations were invited for the meetings; these associations included:

- Leaders of women fishmongers/processors associations
- Executives of the GNCFC
- Boat, Canoe and Gear Owners
- Leaders of Hook and Line fishers association
- Executive members of Inshore fisheries Association

- Executive members of NAFPTA
- Executive members of NAFAG
- Ghana Industrial Trawler Association (GITA)
- Traditional leaders in selected Coastal areas.

Other representatives were invited from key institutions such as Fisheries Commission, District Assemblies, Fisheries Enforcement Unit (FEU) (made up of Marine Police, Navy and MCS officers), Ghana Maritime Authority, Environmental Protection Agency, etc.

In total, about 185 association leaders participated in the four (4) regional meetings (about 46 participants per each of the Regional meeting). Approximately 25% of the participants were female and 75% were males.

Objective of Stakeholder Association Meetings

The objective of the stakeholder association leaders' meetings was to listen to the stakeholders to understand the reasons for the options chosen and to collate their recommendations for the implementation of their preferred options.

Methodology

The stakeholder association leaders' meetings employed participatory processes and interactive tools including; interactive power-point presentations, group work sessions and interactive plenary discussions.

The local languages were used for the meetings to ensure that participants understood the information. For Western and Central region meetings, Fante and Twi languages were used; while Ga language was used for the Greater Accra Meeting and Ewe language used for Volta regional Meetings respectively. This allowed participants to freely express themselves to provide very useful information.

Interactive Power-Point Presentation

Two (2) power point presentations were made at each of the meetings. Each presentation used pictures, simple charts and illustrative diagrams to explain the key information to participants (figure 1). The first presentation covered the SFMP project. This presentation explained the objectives and aspiration of the project, it also noted that the small pelagic fisheries was the key focus of the project and encouraged stakeholders to support the process. The presentation presented simple charts and illustrative diagrams to show the declining small pelagic fisheries and called for the urgent need for the implementation of management actions options to address the situation.

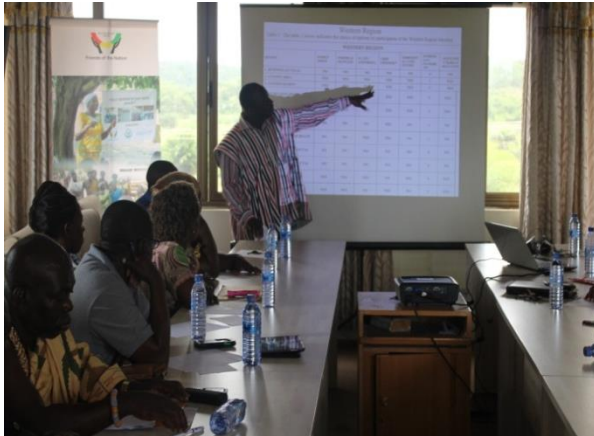


Figure 1 Resource persons delivering power point presentations to participants

The second presentation recapped the first round of stakeholder meetings and outlined all the choices made per each of the four regional meetings. In each region the presentation zoomed on the choice per that region and validated the choices made from the first round of meeting.

Group Work Session

Group work session (figure 2) was employed to maximize active participation of the participants at the various meetings. For the group work, participants were separated as per their associations for peer discussions and review of the option choices made. Each group was facilitated by a lead person and supported by a recorder. At the group work session participants discussed and provided reasons why they preferred the selected choices, they also provided recommendations for the implementation of the preferred options.



Figure 2 Group session discussions in the various regions

Plenary Discussions

The proceedings from the group work session were presented at a plenary session by the representatives of each of the groups. The plenary session discussed the various presentations and provided input to refine the reasons for the options chosen and the recommendations made.



Figure 3 Participants presenting the outcomes of their group works at the plenary sessions

Preferred Options

During the first round of meetings, stakeholders in each of the four Regions discussed and prioritized their preferred set of options out of the following eleven (11) options: Closed Area, Closed Season, Increase Mesh size, Increase Min. Fish size, Remove subsidy, Territorial Use Right, Limit number of Boats, Add fishing Holidays, Daily Landing Quotas, Total Annual Quotas and Business As Usual.

The following were the preferred choice of options per each of the regions from the first round of meetings;

Western Region: Closed Area, Closed Season, Increase Mesh size, Increase Min. Fish size, Remove subsidy and Territorial Use Right.

Central Region: Closed Area, Closed Season, Increase Mesh size, Increase Min. Fish size and Limit number of Boats.

Greater Accra Region: Closed Area, Closed Season, Increase Mesh size, Increase Min. Fish size and Limit number of Boats.

Volta Region: Closed Area, Increase Mesh size, Increase Min. Fish size, Closed Season and Territorial Use rights.

Comparing all the preferred choices from the four regions, the following five (5) top preferred options emerged: Closed Area, Closed Season, Increase Mesh size, Increase Min. Fish size and Territorial use rights. Fig 4 below shows the graphical representation of the choices from all the four regional meetings put together. The highest score point was 20 meaning all the stakeholders at the meetings accepted the option as the most preferred and the lowest was 0 meaning no acceptance.

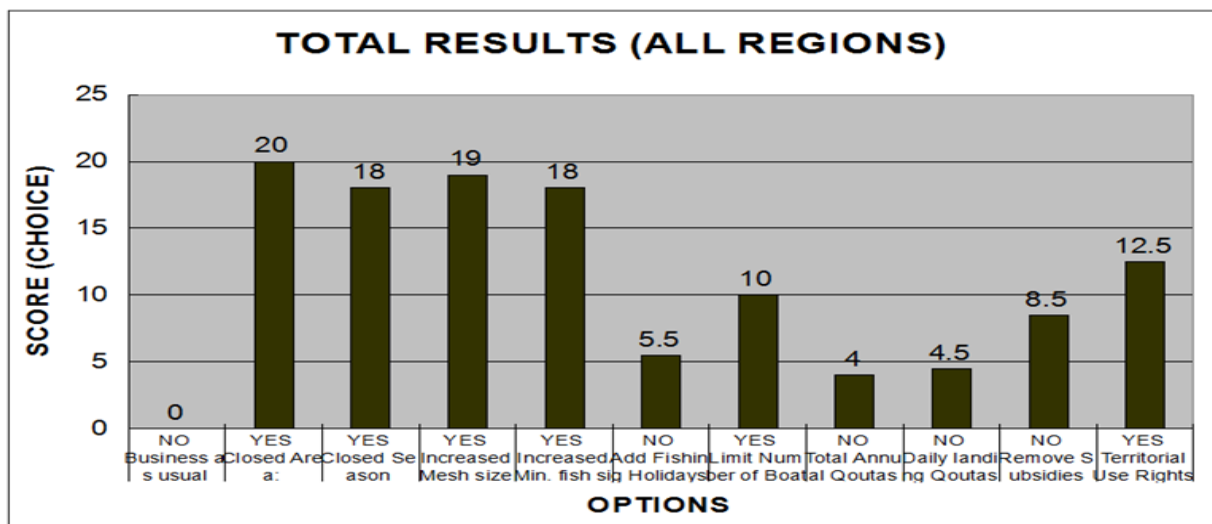


Figure 4 chart showing option choice for all the four Regions.

Table 1 Scoring of options and percentage

Options	Points Score	Percentage
Closed Area	20	100%
Increase Mesh size	19	95%
Closed Season	18	90%
Increase Min. Fish size	18	90%
Territorial Use rights	12.5	63%
Limit Number of Boats	10	50%
Remove subsidy	8.5	43%
Add fishing holidays	5.5	28%
Daily landing Quotas	4.5	23%
Total Annual Quotas	4	20%
Business As Usual	0	0%

Source (field work, FoN 2015)

Table 1 shows the scoring for each of the options and also presents the percentage of participants who chose the option. The table captures information from all the four regional meetings put together.

REASONS FOR THE SELECTION OF OPTIONS

The reasons provided by stakeholders for the selection of each of the options included; why the option is preferred or not preferred and the recommendations to ensure the successful implementation. These discussions were based on the preferred choices selected by the larger stakeholders from the first round of stakeholder meetings as presented in figure 4 and table 1. The detail discussions and issues raised about each of the option are as follows;

Business as Usual¹

At all the meetings participants indicated that they do not prefer *Business as Usual*. This option scored 0-points indicating that none of the participants wanted this option. The reasons given by the participants included the following;

- The current management practices where compliance and enforcement of fisheries laws are weak will eventually lead to total collapse of the marine fish stock. Participants argued that this option currently being practiced has led to the low recognition and poor collaboration of stakeholders and gradual collapse of the marine fish stock. They explained that this current management practices has contributed to the wide spread use of unsustainable and illegal fishing methods which is currently contributing to increased effort and overfishing. Participants worry that a total collapse of the small pelagic fisheries is anticipated if we continue with this current *Business as Usual* management practice.
- Participants noted that immediate actions must be taken to reverse the declining trend and therefore new management options should be considered. Participants indicated their willingness to support and actively participate in the implementation of result oriented management options.

This was a strong indication that stakeholders are prepared to change to a more sustainable fisheries management.

Closed Area²

Closed area had the highest score of 20-points and participants agreed that it is a preferred option. Participants in all the four regional meetings agreed that there was the need for small networks of marine protected Areas (MPAs) that will be closed either permanently or temporal. They explained that breeding grounds and or critical habitat of fish when closed will contribute to rapid replenishment of the fish stock. They proposed that critical habitats

¹ **Business as usual:** is the option where no new measures are introduced to restore the fishery but continue the current management practices in which enforcement is weak and not sustained, where illegal and unsustainable fishing practices are widespread. With this option, the open access to the fishery will continue... Please refer to the SFMP issue Brief on Business As Usual for more detail information of this option.

² **Closed Areas** Implies a permanent area closure and its defined as a no-take marine reserve where no fishing is allowed in a reserve... Please refer to the SFMP issue Brief on Closed Area for more detail information of this option.

such as estuaries, lagoons, mangrove swamps, rocky areas in the sea, etc could be considered as possible areas to be closed.

Specifically, participants proposed the following areas as key areas to be considered for closed areas:

- Tano river estuary in Jomoro District.
- Ankobra River estuary in Ellembelle and Nzema East Districts
- Pra river estuary in the Shama District
- Keta lagoon and river estuary in Volta Region
- Sweet, Yinnin and Densu river
- Whim river estuary in STMA
- Sweet River Estuary
- Yinnin River estuary
- Densu River Estuary
- Elmina River Estuary and the rocky areas close to the estuary
- Estuaries along Apam, Saltpond to Mumford.

Participants argued that the current fisheries laws do not allow beach seine in estuaries but the laws do not ban other methods of fishing in estuaries. They therefore proposed that instituting close areas in these estuaries areas will regulate all fishing activities in those areas and protect the juvenile fishes that spawn in the estuaries. Participants explained that when they fish in the estuaries they land a lot of juvenile fishes.

Participants also recommended that scientific studies should be conducted in the proposed areas to ascertain the suitability for close areas and quantify the expected gains. They noted that the extent of the boundaries of the estuary to be closed could be determined by the study, especially the seaward, eastward and westward limits. Participants proposed the following boundaries for consideration for estuaries

- A range of between 0nm-18nm from Shoreline to seaward boundary
- 50-100metres boundary for the eastward and westward limits stretching into the sea.

Participants cautioned that closed areas should be bottom-up consultative process where the fringe communities and stakeholders are consulted and incorporated in any management arrangement. They also stressed that the areas should be clearly marked to inform fishers and other marine space users. Participants also noted that alternative and or diversified livelihoods interventions should be implemented, where necessary, to support communities who may suffer severely from the closed areas. They also proposed that once these areas are closed they should be gazetted to keep off other activities such as oil & Gas exploration and other mining activities. Participants also advised that District Assemblies and traditional leaders could be part of the management arrangement for the closed areas and could support the process with bye-laws and local taboos. Participants noted that there will be the need to put in place the legal and regulatory framework to guide the implementation of a close area.

Closed Season³

Participants gave closed season a high score of 18 points indicating that they are in high support for this option. They explained that there was the urgent need to institute closed season for Ghana's fisheries. They noted that fish landings at certain periods of the year records high Juvenile fishes and adults in their fecundity period, they explained that this was very destructive to the fisheries resources and contributes to the depleting marine fish stock.

Participants also proposed that closed season should be limited to small Pelagic fisheries only and should be instituted for a period of about three (3) months. They explained that if the season is closed for a long time it would greatly affect fishermen and compliance may be difficult.

They cautioned that if close season is instituted, it must be for all fishing gears including Artisanal, Inshore and Industrial Trawlers, this they explained will ensure fairness and promote effective monitoring. Participants made proposals for the exact period for the closed season, however they had diverse views on the exact period, the proposals were as follows;

- March, April and May
- April, May and June.
- July, August and September
- August, September and October

However, majority of participants proposed the period of July to October but they argued that this period falls within the major upwelling (major fishing season) and therefore the anticipated impacts on fishers would be great. Participants therefore, recommended that for an effective closed season to be in place there should be the following;

- Research into what particular months/period would be most appropriate for the institution of closed season.
- Enactment of proper regulations and the necessary legal framework for the close season.
- Communication about the role of stakeholders and the management arrangement for the close season to stakeholders before the closure begins.
- Education and extensive communication to fishers on the processes and procedure for the close season, including the period, the locations, the legal regime and enforcement processes.

Increased Minimum Mesh Size⁴

This option had a score of 19-points meaning most participants from the four (4) regional meetings agreed that this option is good to be implemented in Ghana. Participants noted that,

³ **Closed Season:** This implies a seasonal closure when a ban is placed on fishing activities for a specified period in respect to type of fish, method of capture or any parameters specified in notice of closure as per the Fisheries Act (2002)... Please refer to the SFMP issue Brief on Closed Season for more detail information of this option.

⁴ **Increased Minimum Mesh Size:** This implies increasing the minimum net mesh size based on appropriate fish size by species to allow a large percentage of the population to escape the net and have a chance to grow to a size that allows fish to spawn at least once.... Please refer to the SFMP issue Brief on Increased Min. Mesh size for more detail information of this option.

there is the need to increase the minimum mesh size and enforce it to reduce Juvenile fish landings. They explained that bigger mesh sizes will allow fingerlings and Juvenile fishes to escape through the nets. This they noted will provide the opportunity for fish to grow to the mature size before they are fished. Participants argue that knowing the mature size of each fish will be good to inform the right net sizes.

Participants also recommended that a special net should be dedicated for fishermen who target anchovies and therefore, they stressed that the mesh sizes indicated in the Fisheries Regulation 2010 (LI 1968) should be reviewed. They noted that traditionally, fishers had different nets with different mesh sizes for fishing of different fish species and in different seasons, they noted that this should be studied and replicated where possible.

Participants proposed that the following should be done to support the process;

- Research should be conducted on the right mesh size that is appropriate for different targeted species.
- Stakeholders should be consulted on the finding of the research and consensus built on the approved nets and mesh sizes to use.
- The required legal and regulatory framework should then be put in place to regulate the mesh size use.

Participants noted that there were key variables such as the trawling angle, the speed of the boats and the material used to manufacture the nets that need to be considered. They noted that some material expands when in contact with water and this reduces the mesh size. They also explained that acute net angle and the fast moving fishing boats limits the possibility of escape of juvenile fishes even if large mesh size are used. They explained that these and other factors affect the mesh size and needs to be considered when implementing mesh size regulation.

Increase Minimum Fish Size⁵

Participants gave this option a high score of 18 points meaning the option was high accepted by participants. Participants explained that increased Minimum fish size was a very good conservation measure and will contribute to the retention of adequate stock. They however indicated that this should be linked to the minimum mesh size. They explained that the net size will determine the size of fish landed. They however noted that there are incidental catches where the sizes of fish would be smaller than the net size due to other factors, so they proposed that an allowable percentage of incidental catches should be allowed. In addition to this, participants proposed that there will be the need to conduct studies to define the mature size of fish per each species as informed by science. They also proposed that the fish sizes per species indicated in the Fisheries regulation 2010 should be reviewed based on the information from the study. Participants advised that extensive communication and stakeholder consultation were necessary to support the implementation of this option.

⁵ **Increase Minimum Fish Size:** With this option there the minimum size of each fish species is determined and regulated through three typical types of size limits: minimum, maximum, and slot, Understanding of the biology of fish determines which method to use... Please refer to the SFMP issue Brief on Increased Min. Fish Size for more detail information of this option.

Add Fishing Holidays⁶

Participants explained that fishing holidays have been a traditional tool for artisanal fisheries for a long time where one day in a week fisher folks take a holiday. They noted that for most areas Tuesday is the main traditional fishing holiday, they added that there are also Thursdays and Sundays fishing holidays in some areas. They explained that fishing holidays are based on traditional beliefs but are not recognized by Ghana's current fisheries laws and this has been a great disincentive for its effective implementation.

On the option of introducing an additional holiday to two days in a week, participants largely disagreed. They gave a score of 5.5 points indicating that they do not prefer this option. They however stressed on the following;

- The current holidays should be legislated and enforced. The existing holidays based on the locality should be maintained and measures put in place then ensure high compliance.
- Other gear types and fishing vessels such as inshore and trawlers should respect these holidays for fairness and equity.

Participants recommended that District Assemblies, Traditional Leaders and enforcement

Agencies should collaborate with Fisheries Commission and fisher folks leaders to enforce the holidays.

Limit Number of Boats⁷

Participants gave this option an average score of 10 points indicating that it could be implemented as a management tool for Ghana fisheries. They explained that this option would contribute to the reduction of the number of fishing vessels/boats/canoes and ultimately reduce fishing effort. They noted that this will reduce the pressure on the fish stock and increase profitability for the few fishermen that would be left. They explained that there were too many vessels/boats/canoes competing for the little fish stock available and this is contributing to '*the race to catch the last fish*'.

Participants noted that the artisanal fisheries currently have no limit for the number of canoes that one could operate with. The open access regime currently being practiced is also contributing to increased fishing efforts. Hence it was noted by participants that limiting the number of vessels/boats/canoes alone will not be adequate to address the declining fish stock unless other measures are implemented to stop open access and improve enforcement and compliance of existing laws. There was a strong proposal by all for a study to be conducted to find out what level of effort is sustainable for Ghana's small pelagic fisheries. Participants added that this study could outline the minimum and maximum number of vessels/boats/canoes sustainable for our fisheries. This study could also guide the implementation of limits for vessels/boats/canoes.

⁶ **Add Fishing Holidays:** This option implies legally adopting two (2) fishing holidays in a week as an input control, it could effectively limit the amount of time fishermen are allowed to fish and could reduce overall fishing effort to more sustained levels.

⁷ **Limit number of Canoes:** Limiting the number of canoes/boats/vessels in a fishery is a way to limit fishing capacity to match available fish stock size. Fishing effort (number of boats, etc) and their activity combined, create the overall fishing capacity.

Participants recommended that if necessary, government should institute an arrangement to buy-off vessels/boats/canoes from fishermen especially for those who may want to move out of fishing. Some participants proposed that the maximum number of vessels/boats/canoes per person should be five (5), they added that for a period of five (5) years there could be no new addition and no replacement for damaged vessels/boats/canoes. This they argue would regulate the number of vessels/boats/canoes.

They also recommended that the following could be done to support these options;

- Promote diversified and or alternative livelihoods for fisher folks who may be affected by the implementation of this option.
- Develop and implement extensive communication to stakeholders about the merits and demerits of this option.
- Conduct extensive stakeholder consultations to collate stakeholder ideas and support for the option.

Daily Landing Quotas⁸

Daily landing quotas scored a low point of 4.5, indicating that participants do not support this option. They explained that daily landing quotas would be too complicated for Ghana's fisheries. They noted that the monitoring of the quotas would be very difficult due to the nature of Ghana's fishing industry and the nature of the landing sites. They therefore, proposed that there was the need to consider other management options rather than the daily landing quotas.

Annual Total Quotas⁹

Participants scored 4-points for *Total Annual Catch*, this indicated that participants did not prefer this option. They explained that quotas were difficult to manage especially for Ghana's fisheries and the pre-conditions necessary to support the effective implementation of this option were not in place. Participants therefore recommended that Total Annual Quota should not be an option to consider.

Remove Subsidy¹⁰

This option scored 8.5points, indicating that more than half of the participants do not support the removal of fuel and other subsidies. They argued that the current subsidy on pre-mixed fuel has more advantages because the levies from the sale of the fuel are used for community

⁸ **Daily Landing Quota:** requires setting specific limit or amount of fish allocated for each boat/canoe/vessel to regulate fishing harvest and improve market pricing. It usually is assigned by species for each boat/canoe/vessel or a category of of them.

⁹ **Total Annual Quotas:** This is also called total allowable catch (TAC) and this option sets a maximum total amount of fish that can be caught each year by all fishers. For this option a technical group will recommend annual quotas limit based on yearly stock assessments. When the quota is reached, the fishery is closed for the rest of the year regardless of how short or long it took to reach the quota.

¹⁰ **Remove Subsidies:** this option proposes the removal of fishing subsidies, this is because subsidies initially work to increase profitability of fishing, but if the fishery is open access, over time it encourages more people and vessels to enter the fishery, risking overcapacity. Then profitability is lost over time as long as the fishery remains open. So there is the need to reduce effort by removing subsidies...

development. They noted that communities would not benefit if the subsidies are removed because they do not trust that the government and or politicians will transfer the subsidies directly to communities. They proposed that the LBCs¹¹ should be reconstituted for areas where they were not functional and or transparent.

Some participants, who supported the removal of the subsidy, argued that the levies from the subsidized fuel only benefited a few community leaders and political functionaries and not the community at large. They noted that there were too many political interests and interferences with the management of the pre-mix fuel, this they noted has contributed to diversion and most times artificial shortages of the fuel especially during major fishing seasons. These participants proposed that the subsidies could be channeled to health insurance benefits, direct cash transfers, educational scholarships, energy supply, micro financing and other useful direct support to fisher folks. They propose that a study be conducted to find out how much fuel subsidy is placed on the pre-mixed annually, they added that the study could also outline the actual impacts of the fuel subsidy.

Territorial Use Rights (TURs)¹²

Participants scored this option 12.5 points, indicating that more than half of the participants prefer this option. They explained that there was the need to stop the open access regime where fishermen fish anywhere. They noted that introducing TURs will promote responsible fishing practices. They explained that when a group of fishermen are given exclusive access to a certain territory they will manage the resources in the territory very well.

Participants advised that TURs could be implemented at the Regional or District scale using the administrative boundaries as the limit. They proposed that local multi-stakeholder management committees could be put in place to manage the TURs areas. Participants also advised that the necessary legal and administrative arrangement be put in place to support the successful implementation of the TURs. They also noted that stakeholder consultation and extensive communication should precede the establishment of any TURs.

RECOMMENDATIONS

Participants recommended there was the need to conduct scientific studies to inform the implementation of each of the preferred options. Especially; Closed Area, Closed Season, Increased Minimum Mesh size, Increased Minimum Fish Size, Limit Number of Boats/vessels/canoe and Territorial Use Rights.

Participants also recommended that further studies be conducted to outline the best sequence for the implementation of the preferred options (whether start with one and follow later with others or run a selection of the preferred option simultaneous). Participants therefore strongly recommended that the acquisition of a fisheries research vessel is paramount to the process and that Fisheries Commission should engage all the necessary processes to acquire a research vessel.

¹¹ LBCs: are the Landing Beach Committees responsible for the premix fuel sale and management at the landing sites.

¹² **Territorial Use Rights in Fisheries (TURFs)**: This option provides fishermen with exclusive rights to fish in a certain area at the exclusion of others.

Participants stressed that extensive stakeholder consultation and intensive communication is required before the implementation of any of the preferred options. They advised that the communication should state clearly the anticipated benefits (short-long term) and the expected impacts (both negative and Positive).

CONCLUSION

Participants unanimously agreed that there was the need to introduce new management options for Ghana fisheries, they agreed that there would be initial loses but the future gains could be beneficial to all. The meetings revealed that fishers want to be engaged and they want to be part of the decision making process regarding Ghana's fisheries management. This is an important enabling environment for improved governance of Ghana fisheries.