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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Initiating governance mechanisms
with Shama District on Pra
Resilience Planning process



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THE
UNIVERSITY
OF RHODE ISLAND
GRADUATE SCHOOL
OF OCEANOGRAPHY



Friends of the Nation

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Cover photo: Theophilus Boachie-Yiadom of Friends of the Nation presenting to participants on some resilience planning efforts (Credit: Gregory Essel).

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ACRONYMS

CCM	Centre for Coastal Management
CEWEFIA	Central and Western Region Fishmongers Improvement Association
CRC	Coastal Resource Center
CSLP	Coastal Sustainable Landscape Project
DAA	Development Action Association
DFAS	Department of Fisheries and Aquatic Science
DMFS	Department of Marine Fisheries Sciences
DQF	Daasgift Quality Foundation
FtF	Feed the Future
GIFA	Ghana Inshore Fishermen's Association
GIS	Geographic Information System
GNCFC	Ghana National Canoe Fishermen's Council
HM	Hen Mpoano
ICFG	Integrated Coastal and Fisheries Governance
MESTI	Ministry of Environment Science and Technology
MOFAD	Ministry of Fisheries and Aquaculture Development
NDPC	National Development Planning Commission
NGOs	Non-Governmental Organizations
SFMP	Sustainable Fisheries Management Project
SMEs	Small and Medium Enterprises
SNV	Netherlands Development Organization
SSG	SSG Advisors
STWG	Scientific and Technical Working Group
UCC	University of Cape Coast
URI	University of Rhode Island
USAID	United States Agency for International Development
WARFP	West Africa Regional Fisheries Development Program

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EXECUTIVE SUMMARY

Initiating governance mechanisms with Shama District on Pra Resilience Planning process is crucial for the sustained conservation of the Pra River Estuary.

Therefore, FoN organized series of meetings and field visits with stakeholders in the Shama District to discuss the Pra Resilience Planning process and the development of the Pra Estuary's Area Fisheries Co-Management.

The meetings provided the platform to brief the district level stakeholders about the progress of the Pra fisheries co-management pilot process. The following stakeholder institutions were engaged; the Shama District Assembly, Environmental Protection Agency (EPA), Wildlife Division of the Forestry Commission, Fisheries Commission, Traditional Leaders NADMO, the Pra Community leaders, etc.

The meetings discussed how to strengthen the governance mechanisms in the District and recommended that Town and Country planning program and GIS capability within the Shama District Assembly should be used to support the co-management process for the Pra estuary by providing various maps and other services.

Key output of the meetings also included the identification of the key institutions (i.e. Fisheries Commission, Shama District Assembly, EPA, Wildlife Division, Traditional Leaders, CSOs, University of Cape-Coast, etc.) that will support the implementation of the fisheries co-management plan. These meeting also provided the platform to draft the roles and responsibilities of the identified stakeholders and strategies for the fisheries co-management plan.

BACKGROUND

Communities fringing the Pra river estuary derive majority of their livelihoods from the wetlands and other natural resources within the enclave. Local knowledge from the communities indicates a rapid decline in fish catch both from the Pra river estuarine system and the surrounding seas. This has been attributed to the over-dependence and improper management of the resources, their habitats and surrounding environments. This as a result is contributing to increased vulnerabilities of these coastal communities as the day goes by; and may have adverse effects on future livelihoods. Carney (1998: 4) explains that a livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base'. Trying to attain such sustainable livelihood including the fisheries in the nearest future, seven communities surrounding the Pra river estuary tasked the two closest and most affected communities, Anlo Beach and Shama Apo, to jointly initiate management efforts which will eventually support the rebuilding of riverine and marine fisheries stocks.

In the year 2 of the Sustainable Fisheries Management Project (SFMP), actions to promote ecosystem-based fisheries management and community resilience planning were initiated in the Pra river estuarine area. In addition, Socio-ecological profiling, SWOT analyses of key stakeholder institutions, alternative livelihood assessment, and vulnerability assessment were conducted.

The need for a citizens-owned co-management agenda towards the management of the Pra estuarine area was emphasized. Two communities, Anlo Beach and Shama Apo, were tasked to initiate the process. In year 3 of the SFMP, these two communities have been engaged each through two multi-stakeholder gatherings which brought most community members deliberating on the concept of co-management and how this could be effective, considering the jurisdiction and economically viable species available to them. A major outcome of the

stakeholders' engagements was the urgent need for the formation of a co-management committee which has representatives from both communities. Stakeholders also suggested possible membership, mandates and jurisdictions for the proposed co-management committee.

To get support and buy-in from the District Assembly and other relevant agencies, there was the need to bring the Regional and district stakeholders and the community folks to discuss the Pra Resilience Planning process.

Elements of the initiating governance mechanisms with Shama District on Pra Resilience Planning process included the following activities

- Participatory Rural Appraisal (PRA)
- Rapid Assessment
- Stakeholders meetings to discuss the processes of initiating governance mechanisms with Shama District.
- Vision Building Exercise on the Pra Resilience Planning process.

Participatory Rural Appraisal (PRA)

As part of initiating governance mechanisms with Shama District on Pra Resilience Planning process an initial Participatory Rural Appraisal (PRA) was conducted in Anlo Beach and Shama Apo communities.

The Participatory Rural Appraisal (PRA) was conducted for Anlo Beach and Shama Apo communities. The objective of the PRA was first to ascertain economically viable fish species in the Pra River and estuary, which will need management actions. The exercise was also targeted at ensuring the inclusion of co-management issues and strategies in the Medium Term Development Plan (MTDP 2018-2021) of the Shama District. Because of this and to also ensure effective integrated governance approach, the exercise was conducted together with the Shama District Assembly's DPCU.

In all, 352 persons participated in this exercise with 173 females and 179 males. The participants included as many people from the communities representing various key stakeholders including fishermen, fishmongers (women), traditional leaders, opinion leaders, mangrove harvesters, and youths. Amongst the fisheries resources mentioned to be of importance to the communities are Shrimps, Tilapia, Crabs, Mudfish, and Periwinkles. A prioritization process for identification of most economically viable fish species that the people preferred management actions on, revealed Tilapia, Shrimps and Crabs as amongst the most preferred in order of importance. Periwinkles, which was observed as a main substitute during the lean season was considered a fourth preference which needed attention because of current unsustainable exploitation rate.



Figure 1 Showing a cross-section of participants in Anlo Beach

GROUPINGS AND PRA PROCESSES

In Anlo Beach, there were four groups with fishmongers and processors in one group (women). Fishermen and net owners also joined the group of adult men, while mangrove harvesters and consumers joined the youth group. The fourth group, Chief and Elders, was made up of the Chief of the community, the chief fisherman, Konkohene and their elders. In Shama Apo, the groups were three. They included fishmongers and processors as a group of women, chief and chief fisherman's representatives in addition to their elders and other elderly men of the community forming the elderly men's group. The third group was the youth group made up of both young men and women.

The methodology for this exercise was mainly focus-group discussions. This participatory approach involved processes including identification of needs, prioritization and harmonization through pair-wise ranking. Efforts were made to ensure both information on fish species as well as general needs of the community were captured to feed into the district's MTDP.

Needs Identification

As the first process of the exercise, each group is facilitated to bring out the most pressing needs of the group and probably the community at large. Each participant is given the opportunity to air their views, ask questions and make their needs known to the entire group.

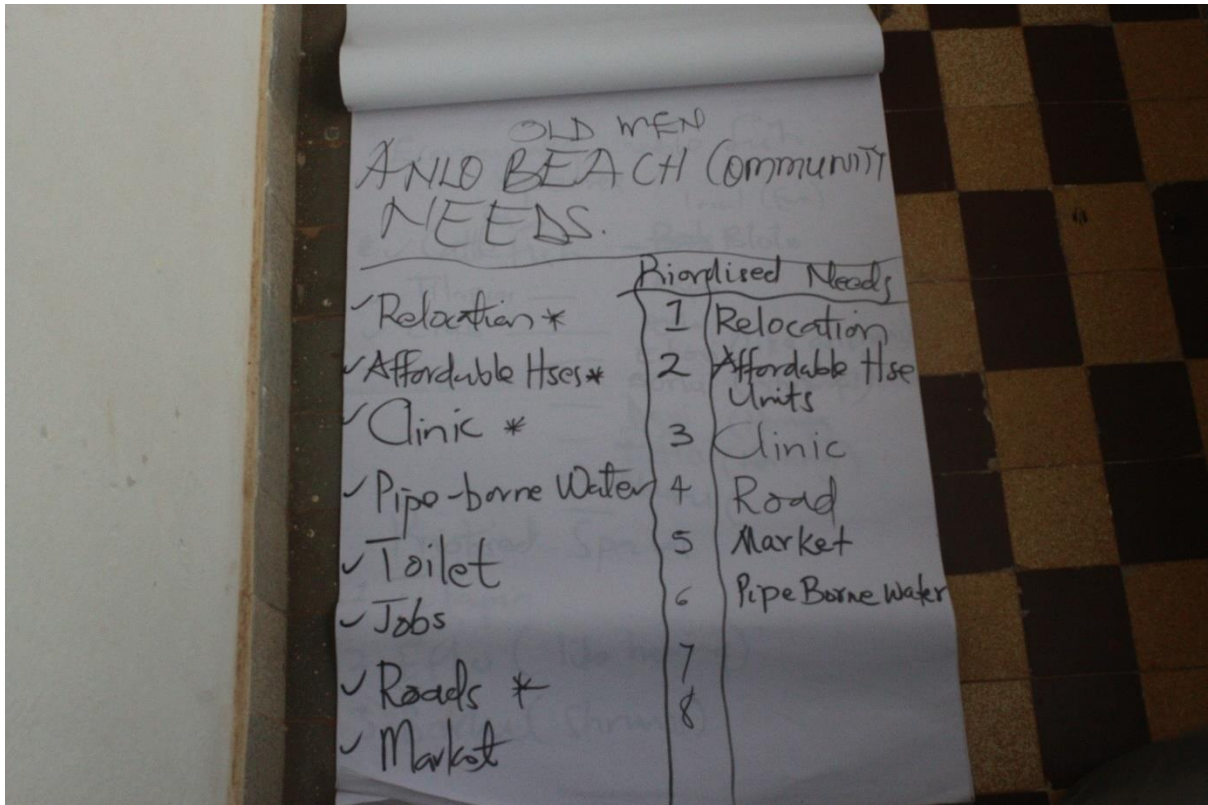


Figure 2 Showing 8 needs by elderly men of Anlo Beach

Prioritization

After mentioning several needs, each group prioritized the four most important or most needed out of the several mentioned needs. Where there is no harmony, the group goes through a voting exercise to determine the most preferred option.



Figure 3 Youth of Shama Apo prioritization their needs through voting



Figure 4 Showing prioritised fish species by women of Anlo Beach

Harmonization

In each community, all the groups present their outcomes to a plenary session, after which a pair-wise ranking exercise is conducted to harmonize all the prioritized needs. The harmonized needs are then ranked by voting. The outcome of the exercise then becomes the agreed needs of the community.



Figure 5 Showing a woman from Shama Apo making a comment on their prioritized needs

OUTCOMES OF THE PRA

The collaborative exercise together with the district assembly's MTDP team places the co-management information being gathered through this PRA in a very strategic position to be included in the 2018-2021 MTDP of the district. This will strengthen the integrated governance mechanism being facilitated between community, district, regional and national agencies relevant for fisheries management.

Management Area

At the end of the exercise, both communities agreed that the management area should cover the distance from the bridge on the Pra River at Beposo to the Estuarine area including a special sand dune separating the Pra River and the Atlantic Ocean; as well as about 100 meters of the beach.

Riverine and Estuarine Fish Species to Concentrate Management Actions

Four main fisheries species were noted to be of importance to both Anlo Beach and Shama Apo. They include, in order of priority,

- Tilapia
- Shrimps
- Crabs
- Periwinkles

GENERAL COMMUNITY NEEDS

The general community needs differed from each community. However, a few of them had some links to the Pra estuary co-management agenda. For example, Relocation of Anlo Beach a bit inland was the first need by all community members. This unanimous decision was reached as a result of the recent displacement of most community members due to sea level rise. This relocation has been a planned agenda for some time with little resistance by community members when initially planned. For about 7 years now, the entire community has agreed to the relocation. Although the plan is not to stop them from their fishing

activities, the community now believes that there will be reduced pressure especially on those who depend on the riverine resources including the mangroves. Sanitation around the estuary and riverine area could also improve.

In Shama Apo, when the elderly one tried to kick against the youth's request for employment opportunity being a prioritised need, it took the explanation of the various sources of income that could be created from managing the Pra estuary and turning it into an eco-tourism hub, for the entire participants to agree. The following is a list of the most prioritised needs in each of the two communities.

Anlo Beach

- Relocation
- Clinic
- Water
- Market

Shama Apo

- Hospital
- Sea Defence
- Road (asphalt)
- Employment opportunities

OTHER IDENTIFIED COMMUNITIES

With focus on resources in the Pra River and estuary, 10 other communities were identified to have direct impact on one or more of the 4 identified fisheries species. These communities include:

- Anlo Kwesi
- Adwoakrom
- Yabiw/ Antotre
- Esisim
- Krobo
- Bosomdo
- Borkokorpe
- Atwereboanda
- Nomda
- Supom-Dunkwaw

STAKEHOLDERS MEETINGS INITIATING GOVERNANCE MECHANISMS WITH SHAMA DISTRICT

Objectives of Meeting

The objectives of the meetings were to:

- Inform the District Assembly, Environmental Protection Agency (EPA), Wildlife Division of the Forestry Commission and the Shama District Assembly of the communities-decided co-management agenda.
- Validate and make inputs to the proposed co-management committee structure.

Expected outcomes

Expected outcomes of the meeting included:

- Conclusions of community multi-stakeholder meetings and field exercises presented to participants for validation and further information
- Proposed co-management committee structure presented to participants
- Background information for a co-management plan shared with participants for inputs.

Structure of Meeting

The meeting began with a presentation of the overview of the SFMP project, tis was to inform participants about the project goals, objectives and aspirations. The meeting discussed the resilience efforts as well as the co-management approach and the expected role of stakeholders. The meeting concluded with a discussion of the relevant institutional linkages for the implementation of the co-management plan.

OVERVIEW OF SFMP

Participants were reminded of the funding source, objectives and life span of the SFMP. Philip Prah of FoN who gave the overview indicated that the SFMP is a five-year project spanning 2014-2019, with the objective of rebuilding targeted marine fisheries stock and catches through the adoption of responsible fishing practices. He further informed that the project is being implemented by a consortium of 8 partners hence the visit of other organisations like CEWEFIA, DAASGIFT, SNV and the likes, all talking about the SFMP. On funders and lead implementers, he mentioned United States Agency for International Development (USAID) as the organisation funding the project; and the University of Rhode Island's Coastal Resources Center (URI-CRC) as the lead implementing agency.

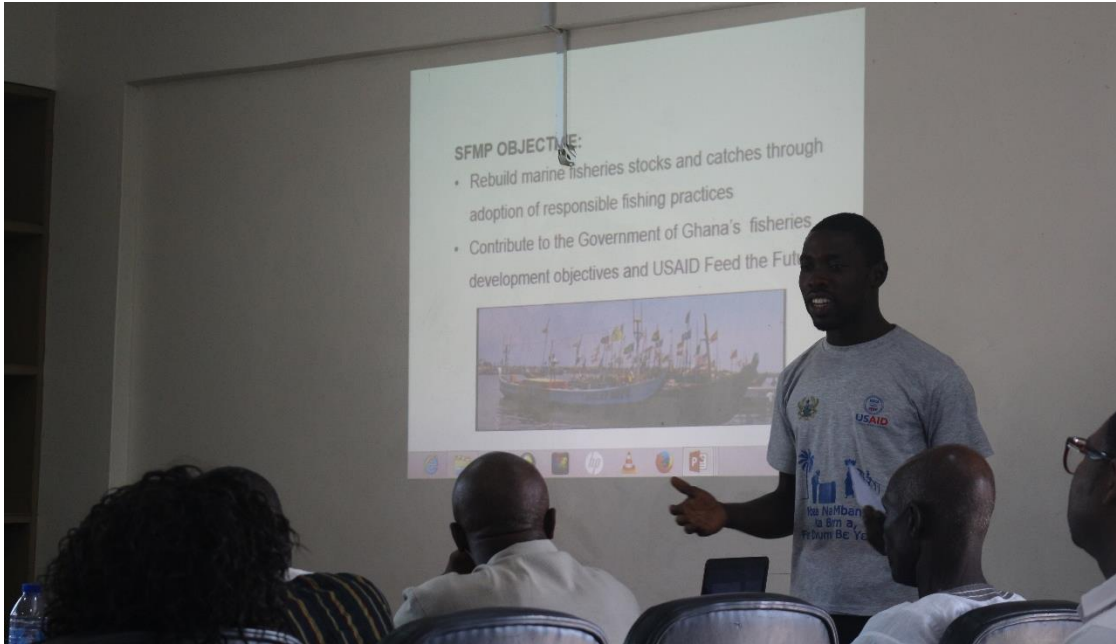


Figure 6 Philip Prah of FoN presenting the objectives of SFMP

RESILIENCE PLANNING EFFORTS

Participants of the meeting were briefed on some resilience planning efforts by the SFMP during its year 2 phase. The efforts included the following:

- Capacity Enhancement training of Field Data Collectors on Data Collection and GPS Data Gathering
- Spatial Climate Change Vulnerability Field Survey
 - Review of identified livelihoods interventions and their impacts
 - SWOT Analyses of
 - Wetlands Management Committee
 - Agriculture and Coastal Resources Management Committee
 - NADMO and
 - Disaster Management Committee
 - Livelihood Needs assessment of women in Anlo Beach, Krobo and Shama Apo

The resilience efforts have led to the emergence of the co-management agenda, being pursued by the two communities, Anlo Beach and Shama Apo.

CO-MANAGEMENT APPROACH AND EXPECTED ROLES OF STAKEHOLDERS

Regional and district-level officials including the Fisheries Commission, Environmental Protection Agency (EPA), Wildlife Division of the Forestry Commission, and Shama District Assembly, have been well informed of the two communities' co-management approach. Theophilus Boachie-Yiadom of FoN explained to participants that there have been two Community multi-stakeholder meetings towards the co-management of the Pra Estuarine Area. The meetings were held each in Anlo Beach and Shama Apo. One important output of these multi-stakeholder meetings was the need for a rapid appraisal to identify the specific economically viable fish species that benefit both communities so as to concentrate on a few

species of importance as a co-management plan is being designed. There was also the need to map out areas of jurisdiction to initiate discussions with relevant regional and district level agencies for a possible legal backing. He added that the rapid appraisal has been conducted to identify specific economically viable fish species for both communities. Efforts were also made to map out co-management jurisdictional areas for consideration.



Figure 7 Theophilus Boachie-Yiadom of FoN presenting on the co-management approach
Co-Management Approach

The co-management approach was explained to be one which encompasses two communities with varying socio-cultural settings. Taking this into consideration, the ecosystem-based approach was used to ensure the protection of all relevant species being it of social interest or ecological essence. The approach, as shown in figure 3 covers aspects of human settlements, livelihood needs and ecological essence of the two community's relative to the Atlantic Ocean and the Pra River's Estuary system. Hence there is the provision of equitable representation of relevant stakeholders of both communities who will act as co-management committee members.

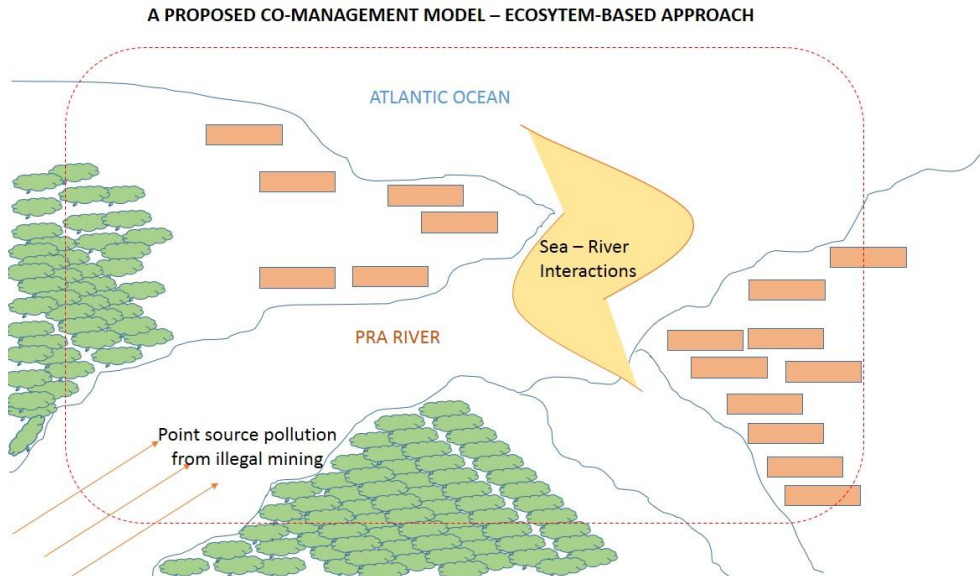


Figure 8 A proposed co-management model designed through community participation

Expected Mandates

Expectations of multi-stakeholder groups at the communities' level were presented to the participants and their inputs sought. Below are the main expected mandates of a proposed co-management committee, as prescribed by community members. The co-management committee needs to:

- Prevent the use of illegal fishing nets (such as drag nets) within the riverine system.
- Ensure proper conservation of mangroves within the estuarine area
- Identify possible diversified livelihood sources for mangrove harvesters, where necessary.
- Deal with illegal mining (galamsey) activities near the estuarine areas.

Having presented this, the participants deliberated and added the following;

- Educate and sensitize the two communities on proper fish handling and sanitation at the coast
- Increase public awareness on mangrove restoration and conservation
- Facilitate the formation of school clubs to encourage behavioral change and reduce the possibility of transfer of wrongful acts from adults to children
- Assist relevant agencies to ensure the enforcement of the District Assembly's by-laws

RELEVANT INSTITUTIONAL LINKAGES

Participants discussed thoroughly the need for institutional collaboration to help sustain the momentum with this community focused co-management agenda. In two groups, they discussed the relevant points of collaboration and expected roles of other stakeholders present. The key outcome of the discussion was for SFMP to collaborate with Fisheries Commission, EPA, Wildlife Division of the Forestry Commission and Shama District Assembly to provide the committee with some basic training to prepare them for the task ahead. Some departments at the district level were identified as key departments that could be provide support as and when needed by the committee. They include Directorate of Agriculture, Directorate of Education, Community Development, Physical Planning,

Economic Planning, NADMO, Wetlands Management Committee, as well as Agriculture and Coastal Resources Management Sub-Committee.



Figure 9 A group of participants discussing on relevant institutional linkages



Figure 10 A group member presenting the outcome of discussions



Figure 11 Representative of Education department explaining the need for schools' inclusion in the co-management process



Figure 12 Director of Agriculture making a submission



Figure 13 Representative of Community Development making a submission



Figure 14 Chairman of the Agriculture and Coastal Resources Management Sub-committee making a submission

VISION BUILDING EXERCISE

As part of initiating governance mechanism on Pra estuary's area Co-management with District stakeholders a two-day vision building exercise was organized.

The vision building exercise included sites visits and round-table discussions. The first day focused mainly on sites visits to give participants a fair idea of the area and issues to be discussed. Based on the observations, participants were guided through a vision building exercise to convert their terms of reference into actionable activities to obtain maximum outputs.

Site Visits

Both Anlo Beach and Shama Apo communities were visited during the sites visits. In both communities, a walk along the beaches were done to reveal real issues as they are in the communities. Walk along banks of the River Pra was done in Anlo Beach for observations of issues around the river. A canoe ride was also done to observe the state of mangroves especially those along the river banks.



Figure 15 Some committee members observing issues along the river banks

Round Table Discussions

Issues from the field visits were discussed and the expected changes noted. In all, participants agreed on six expected changes that need to reflect in the vision; which included the following:

- Avoiding accidents on the Pra River Estuary
- Observing more fish in the estuary
- Seeing more mangroves around the estuary
- Coastal areas or beaches and Estuary attracting tourists
- Observing oysters at the base of mangroves that are along the river banks
- Avoiding cutting of mangroves along the river banks

With these six expected changes, committee members proposed the following visions:

ENSURING THE REHABILITATION OF THE MANGROVES AT THE PRA ESTUARY TO PROMOTE MORE FISH STOCK BY SUSTAINING THE SAFETY AND LIVELIHOOD OF THE PEOPLE IN AND OUTSIDE THE ESTUARINE AREA

WE WANT TO SEE FORESTED MANGROVES, MORE FISHES AND IMPROVED HUMAN SAFETY THAT WILL ATTRACT TOURISTS TO THE PRA ESTUARY

ENSURING IMPROVED FISH STOCKS, HUMAN SAFETY AND SUSTAINING THE ECOLOGICAL ENVIRONMENT OF THE PRA ESTUARINE AREA

IMPROVING AQUATIC LIVELIHOOD, HUMAN SAFETY AND TOURISTS ATTRACTION ON RIVER PRA ESTUARY

The district and regional level stakeholders present were tasked to rephrase the visions into one grammatically correct vision.

At the end of the day, the agreed drafted vision read *“A rehabilitated mangrove ecosystem that will improve aquatic resources in the Pra estuarine area to improve livelihoods and boost eco-tourism whilst ensuring human safety”*



Figure 16 Officers from Environmental Protection Agency and Fisheries Commission fine-tuning the vision for the committee

Rapid Assessment

As part of initiating governance mechanisms with Shama District on Pra Resilience Planning process a 2-day rapid assessment was conducted by Friends of the Nation (FoN).

This 2-day rapid assessment was recommended following stakeholder meetings organized to initiate discussions towards the development of a co-management plan for the Pra Estuary and its associated resources. The key recommendations these stakeholder meetings included the need for

- A rapid appraisal to identify the specific economically viable fish species that benefit both communities so as to concentrate on a few species of importance as a co-management plan is being designed
- Mapping out areas of jurisdiction to initiate discussions with the Fisheries Commission, Environmental Protection Agency (EPA), the Wildlife Division of the Forestry Commission, and the Shama District Assembly, for a legal backing

As a result, this rapid appraisal focused on the identification of specific economically viable fish species that benefit both communities; as well as mapping out some possible areas of jurisdiction for the proposed co-management structure and plan, as informed by the people.

Methodology

Respondents were selected using a random sampling technique. The respondents who were usually in a focus group either mending nets, smoking/sorting fish (figure 1), hauling nets or buying fish, responded to a very simple interview guide for the purpose. These respondents were from Anlo Beach and Shama Apo communities. About 200 people were reached while assessing the various fish species. However, only about 106 of them allowed their names and contacts to be captured. Any time a group of people agreed to participate in the questioning, the concept of Sustainable Fisheries Management Project (SFMP) was explained to them prior to questioning. Respondents were also allowed to ask questions bothering their minds.

A fisheries guide – *Fishes in the Coastal Waters of Ghana* – by Kwei and Ofori-Adu (2005) was used as a guide to confirm identified fish species at the landing sites.



Figure 17 FoN staff explaining the SFMP concept and the rationale for co-management to a group of young women prior to questioning

Co-Management Model

A model being proposed for the Pra Area co-management is that of an Eco-system based one where interaction between plants, animals (including humans), micro-organism and non-living components leads to a relatively self-contained system (SPC, 2010). A flora and fauna assessment by Friends of the Nation (2014) in the Pra estuarine area shows a relatively good interaction between the Pra River and the Sea, since most of the 26 species sampled were found to be of a Marine origin, as indicated in table 1 below, where M=Marine, B=Brackish and F=Freshwater.

Table 1 Fish species sampled from various tributaries of the Pra River (source: Friends of the Nation, 2014)

Species (Ecological niche i.e. M=marine; B=Brackishwater; and F= Freshwater)	N	Composition (%)	Standard Length (cm)			Composition of modal class (%)
			Min	Max	Modal class	
Finfishes						
<i>Sarotherodon melanotheron</i> (B)	63	19.21	3.4	14.3	6.0 – 6.9	28.6
<i>Tilapia zillii</i> (F)	14	4.27	4.1	15.8	4.0 – 4.9	42.9
<i>Hemichromis fasciatus</i> (F)	1	0.30	-	-	-	-
<i>Bostrychus africanus</i> (F)	24	7.32	6.2	10.7	8.0 – 8.9	33.3
<i>Liza falcipinnis</i> (M)	4	1.22	-	-	-	-
<i>Mugil cephalus</i> (M)	30	9.15	5.7	21.4	8.0 – 8.9	33.3
<i>Gobinellus occidentalis</i> (F)	13	3.96	-	-	-	-
<i>Eleotris</i> sp (F)	2	0.60	-	-	-	-

Species (Ecological niche i.e. M=marine; B=Brackishwater; and F= Freshwater)	Composition		Standard Length (cm)			Composition of modal class (%)
	N	(%)	Min	Max	Modal class	
<i>Echelus myrus</i> (M)	1	0.30	-	-	-	-
<i>Aplocheilichthys spilauchen</i> (F)	8	2.44	-	-	-	-
<i>Periophthalmus barbarous</i> (B)	11	3.35	-	-	-	-
<i>Schilbe mandibularis</i> (F)	2	0.61	-	-	-	-
<i>Mycteroperca rubra</i> (M)	1	0.30	-	-	-	-
<i>Gobiodes sagitta</i> (F)	3	0.91	-	-	-	-
<i>Arius gigas</i> (M)	7	2.13	-	-	-	-
<i>Elops lacerta</i> (M)	12	3.66	-	-	-	-
<i>Kribia nana</i> (F)	3	0.91	-	-	-	-
<i>Pomadasys incises</i> (M)	3	0.91	-	-	-	-
<i>Pomadasys jubelini</i> (M)	1	0.30	-	-	-	-
<i>Lutjanus</i> sp (M)	1	0.90	-	-	-	-
<i>Dicologlossa hexaphthalma</i> (M)	3	0.91	-	-	-	-
<i>Eucinostomus melanopterus</i> (M)	2	0.61	-	-	-	-
<i>Psettias sebae</i> (M)	1	0.31	-	-	-	-
Crustaceans						
<i>Penaeus kerathurus</i> (M)	17	5.18	1.0	1.8*	-	-
<i>Penaeus notialis</i> (M)	63	19.21	0.3	1.5*	-	-
<i>Callinectes amnicola</i> (M)	36	10.98	1.7	5.0*	-	-

For this, reason and the fact that stakeholders felt the co-management plan should have a jurisdiction covering the wetland areas and the near shore, questions on fish species were not limited to the riverine areas. A co-management model being proposed by stakeholders is indicated in figure 2 below, with proposed management area found within the dotted red lines.

Identified Fish Species

During the stakeholder meetings, the main fish species that were talked about are found in the table 2 below.

Table 2 fish species mentioned to be of importance to the local economy (source: stakeholders meeting, November, 2016).

<i>Community</i>	Fish Species	Local Name	Fish Status
<i>Anlo Beach</i>	Anchovies	Abobi	Marine
	Cassava fish	Ekan-dzarke	Marine
	Shrimps	(Boolu): Whitish (booluvi), reddish (booludze)	Marine
	Riverine shrimps	Amume boolu	Riverine
	Silver fish/Eel	Nipare	Marine
	Tilapia	Akpa	Riverine
	Prawns	Abor	Riverine
<i>Shama Apo</i>	Silver fish/ Eel(marine)	Wawony3n	Marine
		Kukura	
	Tilapia	Mpatoa	Riverine
	Cassava fish	Ekan	Marine
	Anchovies	Amoni/ keta school boys	Marine

During the field work in December 2016, the following were mentioned by the respondents to be of economic importance to confirm or add up to the earlier information.



Figure 18 Burrito



Figure 19 Long-finned herring

Scientific Name:
Chloroscombrus
chrysurus (Linn. 1776)

English Name:
Atlantic bumper

Local Name:
Tantemire



Figure 20 Atlantic Bumper



Scientific Name:
Sardinella eba (Val.)
maderensis (Lowe,
1839)

English Name:
Flat Sardinella

Local Name:
Eban

Figure 21 Flat Sardinella

Jurisdictional Mapping

Participants during the stakeholders' meetings were of the view that the co-management committee should have an oversight responsibility of the estuarine area together with the very near-shore areas in both communities. Attempts were made to find out from the people the extent of nearshore jurisdiction they talked about. Community folks were however of limited knowledge. Nonetheless, some fishermen in Shama, who are conversant with the use of GPS informed that a one-mile distance on GPS (which was approximated to be about 100 arm-lengths) should be okay for near-shore management. The seascape and sea level rise however, made it impossible to obtain perpendicular points.

In Anlo Beach, points taken along the river banks and the closest house indicated a 0.0148 miles, which is approximately 24 meters (figure 9). The distance between the lowest tidal mark and that of the highest tidal mark, was projected to be 0.198 miles, approximately 32 m (figure 10).



Figure 22 Showing distance between river banks and the nearest building in Anlo Beach

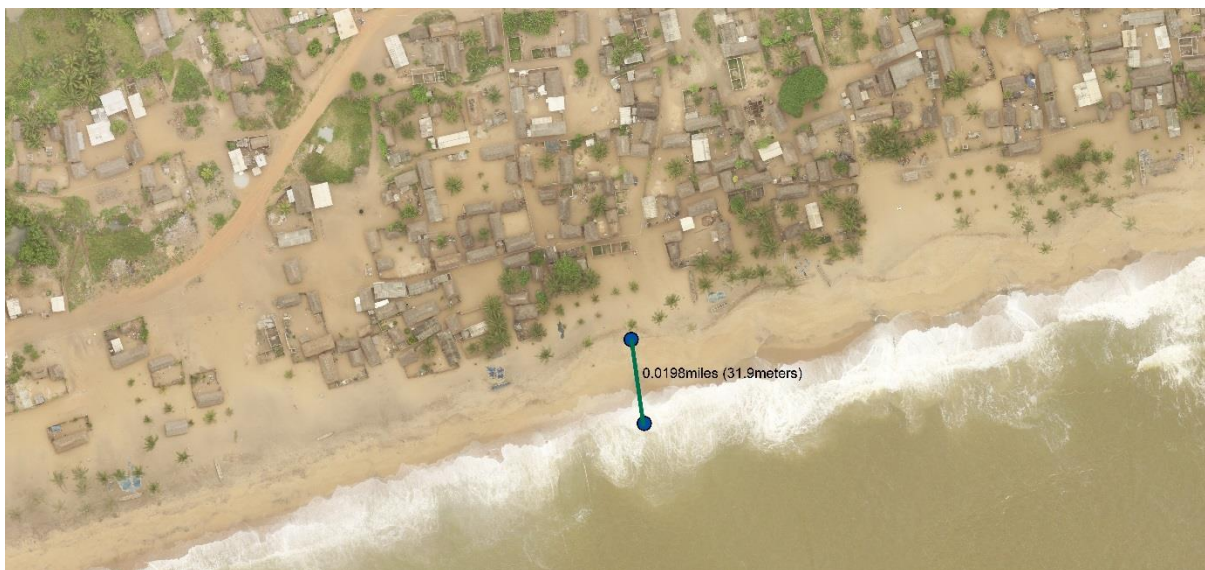


Figure 23 Showing the distance between the lowest tidal mark and the highest tidal mark at Anlo Beach

NEXT STEPS

Further engagement will be held with the other communities to identify their preferred species to further update the PRA information including proposed management actions.

In both communities, there were so much praise for USAID and SFMP for the relentless effort to support the management of the Pra estuary, which according to them is long overdue.

It was also agreed that stakeholders at the community level need to nominate two people each to represent them at the committee level. While one will represent as the real committee member, the other will serve as task force member to help operationalize the plans of the committee. The nominated representatives will vote which of the two represents as a committee member or task force member, at the next meeting to be organized.

The committee members will therefore be engaged in visiting the other communities and also supported to carry out their immediate planned activities which include sensitizing most community members on the co-management agenda.

Other proposed next steps were the need for FoN to:

- Facilitate a collaborative detail mapping exercise of the wetland areas and closest seascape (preferably using drones), for management decisions
- Continue co-management discussions with relevant agencies like the Fisheries Commission, Environmental Protection Agency (EPA), the Wildlife Division of the Forestry Commission, and the Shama District Assembly (SDA), to ensure appropriate legal backing
- Obtain maps from the Spatial Solutions' field exercise at Shama Apo and Anlo Beach to support the production of the GIS maps.