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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

ANKOBRA VULNERABILITY ASSESSMENT
INFORMATION DISSEMINATION WORKSHOP
REPORT



JANUARY 19TH, 2016, ESIAMA

THE
UNIVERSITY
OF RHODE ISLAND
GRADUATE SCHOOL
OF OCEANOGRAPHY



Sps | **SPATIAL
SOLUTIONS**

Hen Mpoano

This publication is available electronically on the Coastal Resources Center's website at http://www.crc.uri.edu/projects_page/ghanasfmp/

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Cover photo: Workshop in session (Credit: Hen Mpoano)

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Daasgift:	https://www.facebook.com/pages/Daasgift-Quality-Foundation-ENGO/135372649846101
Friends of the Nation:	http://www.fonghana.org
Hen Mpoano:	http://www.henmpoano.org
SNV:	http://www.snvworld.org/en/countries/ghana
SSG Advisors:	http://ssg-advisors.com/
Spatial Solutions:	http://www.spatialsolutions.co/id1.html

ACRONYMS

CRC	Coastal Resources Center
CSLP	Coastal Sustainable Landscape Project
EDA	Ellembelle District Assembly
EPA	Environmental Protection Agency
FoN	Friends of the Nation
GIS	Geographic Information System
GREL	Ghana Rubber Estates Limited
NEMA	Nzema East Municipal Assembly
SFMP	Sustainable Fisheries Management Program
TCPD	Town and Country Planning Department
URI	University of Rhode Island
USA	United States of America
USAID	United States Agency for International Development

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INTRODUCTION

The Sustainable Fisheries Management Project (SFMP) is a five year effort to revamp the decline small pelagic Fisheries. As part of activities being implemented under the SFMP, HM is working at the Ankobra River Estuarine and Mangrove ecosystem to integrate community fisheries management and resilience plans. During SFMP Fiscal year one a vulnerability assessment was conducted for five (5) communities (Sawoma, Adelekazo, Eziome, Eshiem and Kukuaveli) within the Ankobra River Ecosystem to identify climate and non-climate threats impacting livelihoods and well -being of the estuarine communities.

A validation workshop was conducted on the 15th of September 2015 at Axim, Western Region of Ghana to validate findings of the vulnerability assessment and also solicit further stakeholder input and possible collaboration with other actors within those areas to build resilient livelihoods and ecosystem.

This information-sharing workshop was held at Esiama, in the Ellembelle district in Western Region of Ghana as a direct follow-up on the vulnerability assessment validation workshop conducted for the five estuarine communities of the Ankobra Estuary catchment area. The purpose of workshop was to share the assessments (spatial options analysis, Ankobra climate vulnerability assessment) and relevant information on the Ankobra area with key stakeholders and foster a collaborative approach to finding lasting solutions to identified issues.

There were 36 participants in attendance, with representatives from the 5 Ankobra estuarine communities, Officers from Nzema East Municipal Assembly (NEMA) and Ellembelle District Assembly (EDA) and the Regional Town and Country Planning Department (TCPD). Also in attendance were representatives of GREL, EPA, Fisheries Commission, and the Water Resources Commission. Representatives of partner organizations (Spatial Solutions, FON and Daasgift) and the Chief of Party of the Coastal Sustainable Landscape project participated in the workshop, (See Annex for detailed list of participants).

OBJECTIVES

The objectives of the workshop were to

- Share key findings of the Ankobra assessments with relevant stakeholders.
- Build support for a joint district management of shared natural resources along the Ankobra



*When we make plans, we should add
accountable persons to ensure their
implementation*

Mr. Ebenezer Dadzie-Paintsil
Regional Director TCPD

Figure 1: A cross-section of participants at the workshop

WELCOME ADDRESS AND BACKGROUND TO THE SFMP BY MR. STEPHEN KANKAM

Stephen Kankam the activity manager of SFMP welcomed participants to the workshop. In his welcome statement Mr. Kankam reiterated the commitment to have an effective discourse with all relevant stakeholders in finding a common solution to some of the challenges being faced in our various communities.



Figure 2: Stephen Kankam giving welcome address

He went on further to introduce the SFMP and put the Ankobra estuarine assessments in perspective. He acknowledged the different partners the project is working with from the Western, Central and Greater Accra with a common goal to revamp the decline in fishery. He stated that, though the project is a fishery project, there is also a focus on two key estuarine environments namely; the Pra and Ankobra estuaries- because of the critical role they play in fishery, serving as a nursery ground for some key fish species particularly the demersal species. The project is not just working with the Ministry of Fisheries and Aquaculture development, but also working with District Assemblies and Town and Country planning Department to see how those areas can be planned out to respond not only to the decline in fish stocks but also the issues of climate change and other stressors or drivers of change within those estuarine environment

PRESENTATIONS AND DISCUSSIONS

Two presentations based on the assessments (the Ankobra vulnerability and the spatial options assessments) were delivered by Staff of Hen Mpoano and Spatial solutions.

Climate Livelihood Vulnerability Assessment by Stephen Kankan

Stephen Kankam, presented on the Climate livelihood Vulnerability Assessment that was conducted in five Ankobra estuarine communities (Sawoma, Adalakazo, Ajomoro Eshiam, Eziom and Kukuaveli) in the Western region of Ghana. He took participants through the approach/methodology used and some of the key findings from the assessment for the various communities. In his presentation, Stephen indicated that the vulnerability assessments and its

related activities within the Ankobra ecosystem contributes to one of the four intermediate results of the project- Implementation of Applied management initiative

He also mentioned that the project had a national focus, looking at a sardinella management plan. Since these species are migratory the project's focus is on the entire coast and not limited to the estuary. He indicated that, there is already a national Fisheries Management plan that looks at all the species. What the SFMP wants to contribute to is a subset of that Management plan which is the Sardinella management plan.



Figure 3: Stephen Kankam presenting on the findings of the Vulnerability assessment to stakeholders

Key Messages

- The Assessment was done for the lower Ankobra Catchment basin not only to understand climate drivers but also some non-climate stressors as well.
- The assessment was a strategy to structure the planning and management approach foreseen for the Ankobra Estuary.
- A livelihood vulnerability approach was taken because of the focus of the project and also how the livelihood of those people fringing the estuary is dependent on the resource and the importance of managing those livelihood and the resources of that area.
- Sources of livelihood vulnerability were identified and opportunities of building resilience of the communities and the ecosystem against climate and non-climate stressors were also explored

SOURCES OF VULNERABILITY	
Livelihood (men)	Challenges
Food crop farming	<ul style="list-style-type: none"> Flooding Rodents/Pests
Alcohol Distillation	<ul style="list-style-type: none"> Flooding
Cocoa farming	<ul style="list-style-type: none"> Flooding Pests/Diseases Fertilizer/Spraying Cost
Coconut	<ul style="list-style-type: none"> Flooding Pests/Diseases
Fishing	<ul style="list-style-type: none"> Polluted river (Ankobra)
Livelihood (women)	Challenges
Food crop farming	<ul style="list-style-type: none"> Flooding High temperatures Rodent, pest and diseases
Cocoa	<ul style="list-style-type: none"> Flooding Pest and diseases High temperatures Storms High cost of pesticides
Trading	<ul style="list-style-type: none"> Buying on credit and unable to pay Lack of market
Carrying of wood	<ul style="list-style-type: none"> Floods Flooding Storm Harmful reptiles
Oil (copra)	<ul style="list-style-type: none"> Flooding

SOURCES OF VULNERABILITY	
Livelihood (men)	Challenges
Fishing	<ul style="list-style-type: none"> Storms/Excessive rainfall Sanitation Excessive sunshine Capital
Food crop farming	<ul style="list-style-type: none"> Pests and Diseases Irregular rainfall Erosion and deposition of soil Flooding Bush burning Storms Safety issues
Mangrove selling	<ul style="list-style-type: none"> Marketing (seasonal) Pests and Disease Fertilizer application Access to market (poor road network from cocoa farms)
Cocoa	<ul style="list-style-type: none"> Pests and Diseases Capital Fertilizer application Safety issues Storms
Rubber	<ul style="list-style-type: none"> Pests and Diseases Capital Fertilizer application Safety issues Storms
Alcohol Distillation	<ul style="list-style-type: none"> Safety issues Storms
Coconut Oil	<ul style="list-style-type: none"> Weather conditions/Seasons
Livelihood (women)	Challenges
Fish Mongers	<ul style="list-style-type: none"> Marketing High cost of materials and equipment Smoke Flooding as a result of the high tides and seasonal rainfall Storage facilities Don't have own land to draw from
Fire Wood	<ul style="list-style-type: none"> Travel long distance to get fuel wood as a result of the forest and mangrove depletion Lack of market during the lean seasons Unable to work during the rainy seasons Risk issues
Mullocks harvest	<ul style="list-style-type: none"> Inadequate canoes Most women don't know how to paddle the canoe Mangrove harbours harmful animals (mosquitoes) High tides/Flooding Lack of storage facilities Lack of market
Farming	<ul style="list-style-type: none"> Flooding at low land areas Soil infertility Lack of market Lack of lands for food crops because most of the land have been converted to rubber plantations Pest and diseases
Traders	<ul style="list-style-type: none"> Lack of market (esp. in the rainy seasons when there is a lot of flood) High cost of labour

Figure 4: Selected slides showing sources of vulnerability for livelihood for the communities

Ankobra Estuarine From Spatial Analytical Perspective by Peter Donkor

Mr. Peter Donkor presented on the *Spatial Options Analysis* aspect of the Assessment. In his presentation, he mentioned that, the Ankobra River Estuarine and the surrounding communities have issues to deal with and one key thing to do in order to understand these issues is the type of land use/activities happening in those areas. He indicated that a spatial analysis was necessary to identify the different land uses (man-made and naturally occurring) patterns happening within the Ankobra Catchment area. He emphasized that some of the land use changes detected from the analysis, were as a result of population increase within the area. Although some of the activities happening currently were already ongoing in the past, due to population increase the effect of these activities has intensified.

Comparing land use from 1990 to 2010, he mentioned that within the 20-year period, there are certain land uses and activities coming in which are changing the landscape at a very fast rate. He cautioned that if this trend is not checked it will have serious repercussions on the livelihood and the ecosystem.

People must be well educated on the issues
raised at the workshop since a lot of people
are ignorant of some of them

John Asiedu- Adelekazo



Figure 5: Mr. Peter Donkor presenting on findings of the spatial options assessment

Key Messages

- For planning regulations, there is the need for a buffer zone (riparian zone) along every water body to protect the water. For a bigger river like the Ankobra we need to have a buffer of 50 meters on either side.
- The number of settlements within these areas are very small but the impact of their activities are enormous
- A large forest area has been cleared for rubber plantation at a site close to the estuary

Summary of Key Issues (Findings)

- The natural environment/ecosystem in the study area has been severely altered;
- Forest and wet lands experienced massive net sum decline;
- Forest cover diminished woefully in both the 50 m buffer and the entire study area;
- The annual rate of decline in forest cover is more severe in the 50 m buffer than the entire study area;
- The massive loss of forest cover is widespread but more visible around major settlements;

Summary of Key Issues (Findings)

- Wetlands recorded net sum increase in the 50 m buffer but evidence of substantial depreciation in some areas is observed;
- The annual rate of decline of wetlands generally increases with increasing distance from the River;
- Croplands increased at a rapid pace in both the 50 m buffer and study area than any other land cover type;
- As a result of farming related activities, grasslands increased at a significantly high rate;
- About 95 percent of forest cover loss is accounted for by farming and its related activities;
- The change from forest to crop lands is widespread but particularly overwhelming around settlements;

Figure 6: Selected slides from the spatial options presentation

QUESTIONS, SUGGESTIONS, CONTRIBUTIONS

- Awulae Angama Tu-Agyan II: Did you look at the historical background of these areas to understand the structure?

- People moved to these communities because of the availability of fish within the Ankobra area, but due to the level of pollution of the water body they don't get enough fish to catch
- Local authorities were managing their natural resources and were doing a good job until the democratic system of governance came and a lot of policies developed and the resources are deteriorating
- The issue is both government and the behavior of the people
- Are community members aware of existing buffers and who manages it?
- Some education has gone in some communities on the buffer zone, but the effort is still inadequate
- People don't regard nature any longer when you go to our big cities you don't find lots of green areas.
- Most of the issues discussed seemed to be coming from the community members living in those areas. They may be doing it in the past but due to population increase the effects has intensified with increased impact
- GREL, in going forward, should link the impact of their activities to food security



Figure 7: Participants asking questions and making contributions after the presentations.

REMARKS BY PARTNERS

CSLP

Steve Dennison, the Director of the Coastal Sustainable Landscape Project gave a brief on what they're doing and the various stakeholders they are engaged with (Farmers, institutions and some NGO's). He noted that the main objective of the CSLP is focused on Carbon Sequestration. He made mention that identifying institutions and having a co-management plan in place is very important and CSLP is playing a collaborative role.



Figure 8: Mr. Steve Dennison Director CSLP

DAASGIFT

The representative of DAASGIFT Quality Foundation mentioned some of the work they are doing and their engagement with the women groups and the youth at Sanwoma. They are engaged in education and sensitization of these groups on sustainable fisheries. He reiterated the need for a more intensified education to change some of the perception they have towards fisheries. He indicated that most of these folks they are working with still believe fish gets rained down from the sky and can't get depleted since they always come during the raining season.



Figure 9: Stephen Swanzu Daasgift Quality Foundation

GREL

In reaction to a point made by Mr. Peter Donkor of spatial Solutions, that large portions of the forest area has been cleared for rubber plantation, the representative from GREL, Mr. Paa Nyarko Aidoo gave a brief presentation on the criteria and various processes individuals will need to go through before they get registered under their scheme. He mentioned that most of the issues coming up from rubber plantation is as a result of some of the out-grower farmers not complying with the rules and has nothing to do with GREL as an institution.



Figure 10: Mr. Paa Nyarko Aidoo presenting on process involved in rubber plantation

 Government should give back authority to the
 traditional leaders, they can really enforce
 laws within their communities

Awulae Angama Tu-Agyan II
 President, Gwira Traditional Council

WAY FORWARD

The workshop was successful in bringing key stakeholders together to discuss in detail what should be the next step to build support for the joint district management of the shared natural resources along the Ankobra River.

Some of the things suggested in moving forward include:

- Increased awareness of the buffer zone
- Roles and responsibilities should be assigned to the various institutions
- Integrative and interactive approach to Co-management
- Education (Representatives from media houses, School Environmental Clubs)
- Training on adaptation practices
- Representation of villages in committee
- Devolution of power/authority to local levels/ communities' traditional council Reforestation Plan

A fifteen-member committee was agreed upon with representatives from relevant stakeholder groups which include:

- Water Resources
- Forestry Commission
- Environmental Protection Agency
- District Assembly (Planning Dept. and Environmental Unit)
- Traditional Authorities
- Stool Lands
- Mineral Commission
- Fisheries Commission
- Five Estuarine Communities of the Ankobra Catchment area

A small working group committee of 11 was formed at the workshop. This group will begin a consultation process to nominate representatives to be part of the committee and also solicit for support in forming the bigger committee.

The membership of the working group is as follows;

- Traditional Authority
- Planning Officers (2)
- Water Resources Commission
- 5 community Representatives
- EPA
- Fisheries Commission

ANNEX 1: WORKSHOP PARTICIPANT LIST

GHANA SUSTAINABLE FISHERIES PROJECT-HM PARTICIPANTS ROSTER INFORMATION

Required in English
Please Print

Title of Course: ANKOBRA ESTUARINE ASSESSMENTS DISSEMINATION WORKSHOP

Activity: WORKSHOP

Date: 19TH JANUARY 2016

Length of Course: Less than three days Three days or longer

First Name	Surname	Organization/Community	Sex		Do you wish to receive messages on SFMP?		Signature/Thumb Print
			M	F	Y	N	
Asuako	manza	ajomoro eshiem		X			
Lawrence	Amuzuah	Kukuavile	X		X		
Regina	Amuzuah	Kukuavile		X	X		
Anthony	Kwofie	Ajomoro eshiem	X		X		
Emmanuel	Ediem	Ajomoro eshiem	X		X		

First Name	Surname	Organization/Community	Sex		Do you wish to receive messages on SFMP?		Signature/Thumb Print
			M	F	Y	N	
Paul	Amoah	Ankobra	X		X		
Ted	Tettey	EDA	X		X		
Derrick	Obeng dapah	EDA					
Francis	Arthur	FC	x		X		
Arafat	Salifu	FC	X				
Polley	Daniel	Eziom	x		x		
Georgina	Polley	Eziom					
Kojo	Gyan	Eziom	x		x		
Samuel	Acquah	Adamus mining	X				
Ama	Ferkah	Tcpd		x	X		
Ebenezer	Dadzie-paintsil	Tcpd	X				
Awulae angama	Tu-agyan ii	Gwira traditional council	X				
Isaac morfah	Morkeh	Ankobra	x		X		

First Name	Surname	Organization/Community	Sex		Do you wish to receive messages on SFMP?		Signature/Thumb Print
			M	F	Y	N	
C							
Francis	Yankey	Ankobra	x		X		
Frank tanner	danso	Ampo NEMA	x		X		
Theophilus	B-Yiadom	FoN	x		X		
Kwabena	A-Bediako	TCPD – EDA	x		x		
Uncle paul	Christ	Adelekazo	X				
John	Asiedu	Adelekazo	X				
Gladys	Quayson	Adelekazo		X			
douglas asuako	Ferkah	EPA	x				
Paa nyarko	Aidoo	GREL	X				
Abraham a.	Aikins	GREL					
Stephen	Swanzy	Daasgift	x				
Sister hope	Asmah	Daasgift		X			
Joseph	Alloba	Kukaveli	X				

First Name	Surname	Organization/Community	Sex		Do you wish to receive messages on SFMP?		Signature/Thumb Print
			M	F	Y	N	
Rosemary	Ackah	Sanwoma		X			
Stephen	Dennison	CSLP	x			x	
Mawuli	Lumor	WRC-ankobra basin office	X		x		
Mathew	b. Baidoo		x				