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# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

## Exchange Visit for Town and Country Planning Department Officers: Workshop Report



SEPTEMBER 2016

THE  
UNIVERSITY  
OF RHODE ISLAND  
GRADUATE SCHOOL  
OF OCEANOGRAPHY



**Hɛn Mpoano**



**SPATIAL  
SOLUTIONS**

This publication is available electronically on the Coastal Resources Center's website at [http://www.crc.uri.edu/projects\\_page/ghanasfmp/](http://www.crc.uri.edu/projects_page/ghanasfmp/) and Hen Mpoano's website at <http://www.henmpoano.org>

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

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Spatial Solutions:	<a href="http://www.spatialsolutions.co/id1.html">http://www.spatialsolutions.co/id1.html</a>

## **ACRONYMS**

CR	Central Region
CRC	Coastal Resources Center
EDC	Environmental Data Center
EPA	Environmental Protection Agency
GIS	Geographic Information System
GoG	Government of Ghana
ICFG	Integrated Coastal and Fisheries Governance
ICM	Integrated Coastal Management
LAP	Land Administrative Project
LOGODEP	Local Government Development Project
MMDAs	Metropolitan, Municipal Districts Assemblies
NDPC	National Development Planning Commission
SFMP	Sustainable Fisheries Management Program
TCPD	Town and Country Planning Department
UCC	University of Cape Coast
URI	University of Rhode Island
UAV	Unmanned Aerial Vehicle
USA	United States of America
USAID	United States Agency for International Development
VRA	Volta River Authority
WR	Western Region

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## **INTRODUCTION**

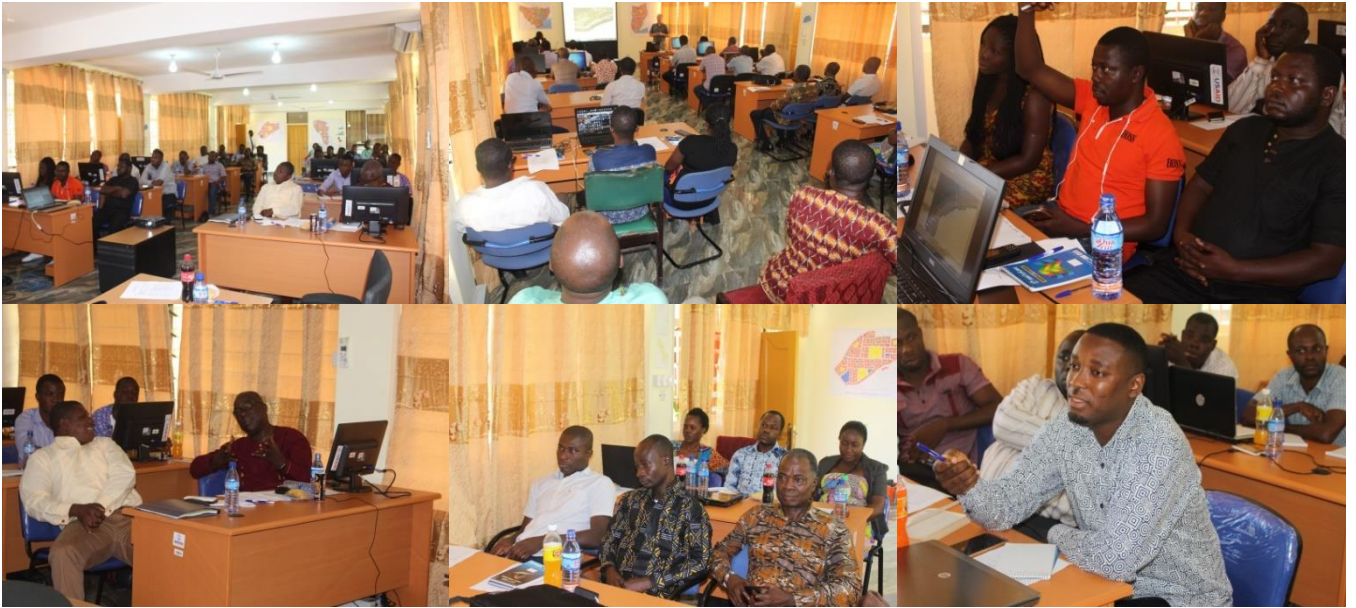
Since its inception two years ago, the Ghana-USAID Sustainable Fisheries Management Project (SFMP) has been working with Government of Ghana (GoG) to help save the near collapse status of the Ghanaian fishery by rebuilding marine fisheries stocks and increasing production through effective fisheries management strategies and adoption of responsible fishing practices. Working closely with the Town and Country Department (TCPD), the project intends to build the capacity of the department to promote geospatial applications for coastal planning.

The SFMP project is currently providing support to two regions- Western and Central as well as the National headquarters of the department. Comparatively, the Western region is ahead of the central region in terms of spatial planning due to a number of reasons, notable among them is the support received through development assistance initiatives such LAP, ICFG and LOGODEP. SFMP seeks to bridge this gap and provide platform planners from the 2 regions to share knowledge and good practices for coastal planning through learning and exchange visits.

To this end, in July, 2015 the project assembled Planning officers from the 2 regions to demonstrate the successes, experiences and challenges from the western regional GIS Data Hub. This year's Exchange Visit event was intended to illustrate tools and methodologies for coastal spatial planning and highlight the utility of spatial planning approaches for completing coastal climate vulnerability assessments and adaptation planning using examples from the Western region. Additionally, the event provided the opportunity to initiate preliminary discussions on the outline and content of an Integrated Coastal Management toolkit proposed for central region.

The event was well attended with participants from TCPD, UCC and Lands Commission. The one day workshop assembled 35 participants including Spatial Planners and Technical officers from all the Coastal MMDAs in the two regions; representatives from UCC and Lands Commission. The TCPD Directors of the two regions were both present at the workshop. The newly refurbished GIS Data Hub was the venue for the workshop.





**Figure 1 Cross section of participants at the workshop**

## **OVERVIEW OF SFMP AND PURPOSE OF THE EXCHANGE VISIT**



**Figure 2 Mensah explaining the purpose of the workshop**

Justice introduced the Sustainable Fisheries Management Project to the participants. He indicated that the purpose of the SFMP is to save the near collapse status of the Ghanaian fishery by rebuilding marine fisheries stocks and increasing production through effective fisheries management strategies and adoption of responsible fishing practices.

Justice also hinted the need to address spatial planning in a typical fisheries management project. He explained that fisheries, though mostly water dependent, requires proximity to land for market, transportation and processing.

## **SUMMARY OF PRESENTATIONS**

Presentations were delivered by Christopher Damon from the Environmental Data Center of the University of Rhode Island; Peter Owusu Donkoh from Spatial Solutions Ltd and Stephen Kankam from Hen Mpoano

### **Uav Technology for Coastal Planning**

*Christopher Damon, EDC, URI, Rhode Island*

Chris Damon’s presentation highlighted the results of a UAV pilot study that was conducted in the western and central regions in December, 2015, June, 2016 and September, 2016. He also threw light on some of the initial analysis and methodology that was employed to quantify vulnerability of some coastal communities. In his submission, Chris Damon provoked the Planning officers to critically think about building resilience of coastal communities as he presented some issues that emanated from the pilot studies.



**Figure 3 Chris Damon facilitating a brainstorming session**

### **Questions, Comments and suggestions**

- There is the need for a holistic study through collaboration with other departments to help understand the landscape before planning is initiated.
- The overarching question planners should ask first is “How did we come this far?”
- As we anticipate excessive coastal erosion in the future resulting from Climate change, we should also check other stressors like sand winning.
- Is there any adaptation plan for the people of Shama and Anlo Beach relative to the spate of erosion of the sandbar?
- There is a resettlement plan for the people of Anlo Beach. However, individuals are required to acquire their own piece of land in the proposed site for development



- Developers should be required to provide engineering details that support any proposed infrastructural development before permits are issued
- The new Town and Planning Authority law will empower the authority to regulate development more effectively.
- UAV images could be used to support analysis and proposals to the government to solicit funds for some interventions.

## **Coastal Spatial Planning, Climate Vulnerability Assessment and Adaptation Planning**

*Peter Owusu-Donkoh, Spatial Solutions Ltd*

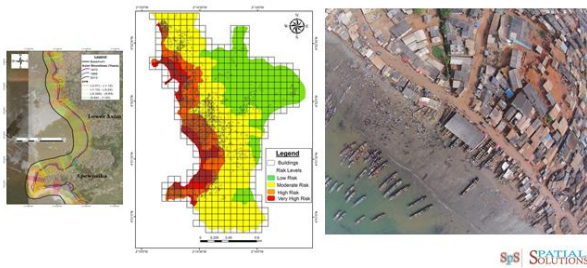
Mr. Owusu Donkoh’s presentation reviewed some of the coastal management plans that have been developed for the country or specific areas in the country. He indicated that the country has not yet developed a comprehensive coastal plan for the management of coastal resources. However, he indicated efforts of some districts in the western region like Shama and Ahanta West in developing typical coastal plans. He then reiterated the commitment of the SFMP project to support the region to develop an Integrated Coastal Management toolkit for the entire region.



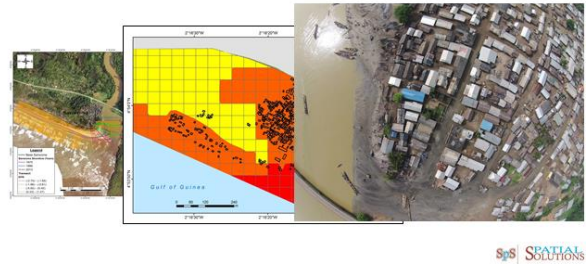
**Figure 4 Presentation on Climate Vulnerability Assessment and Adaptation Planning**

Mr. Owusu Donkoh also gave some highlights of a coastal climate vulnerability assessments and adaptation planning study that was conducted in Axim and Sanwoma in the Western region

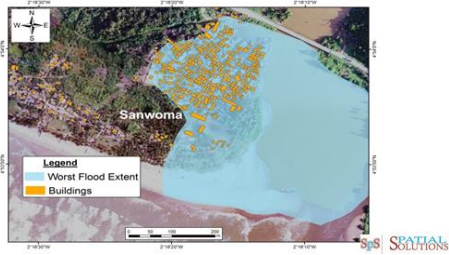
Shoreline Erosion in Axim



Shoreline Erosion Rate in Sawoma



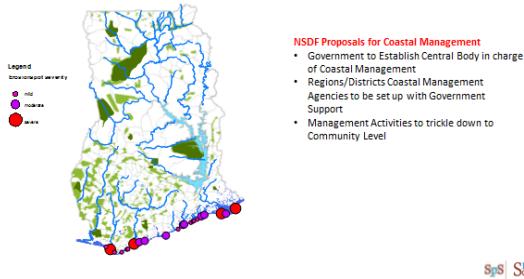
Flood hazard map of Sanwoma (worst flood experienced)



Realities on the Ground



NSDF – Coastal Erosion Hotspots



Other Government Interventions in CM

- **Medium-Term Development Policy Framework (GSGDA)**
- Broad policy on climate change and environmental sustainability
- NADMO aftermath reactions depending on location
- EPA broad approach to coastal management

Private Sector (Donors and NGO) Interventions

- USAID support to partners towards coastal management (FON, HM, SpS)
- Tullow Oil (Jubilee Partners) contribution towards preparation of spatial plans with emphasis on coastal management

Way forward

- GSGDA should emphasize on additional guidelines for the coastal districts
- TCPD should review the LAP 1 manual for preparation of spatial to include special additional requirements and emphasis on coastal planning.
- Government should set up a national department solely responsible for management of coastal activities.

Figure 5 Selected Slides from the presentation

Questions, Comments and suggestions

- Kwame Nkrumah introduced the coastal road which was supposed to check development along the beach frontage of communities.
- EPA has conducted an assessment of the entire coastline of the country
- Tangible and feasible proposals for the management of coastal fronts should be submitted to companies like the Jubilee partners, Mining companies, etc
- Government agencies like VRA should stop the ‘lip service’ and support the protection of wetlands.
- Some coastal issues cross district boundaries, hence the need for some joint area planning to manage some key resources.

## Central Regional Toolkit: Lessons from Western Region

*Stephen Kankam, Hen Mpoano*

Stephen's task was to introduce the Integrated Coastal Management toolkit to the Planning officers from the central region. He provided a brief background of the ICM toolkits that were developed for five coastal districts in the western region under the Integrated Coastal Fisheries and Governance (ICFG) Initiative. Unfortunately, none of the officers from the western region for which the toolkit was developed had even seen the toolkit for their respective districts. Stephen attributed this anomaly to the non-participation of the planning officers in the document development process.



**Figure 6 Stephen leading discussion on the ICM toolkit proposed for the Central region**

Stephen stepped participants through the content and the general outline of the ICM toolkit and initiated a discussion on the outline of the proposed toolkit for the central region.

### **QUESTIONS, COMMENTS AND SUGGESTIONS**

- The toolkit should be tailored to the needs of the Physical planners. The previous toolkits were designed with both Development and Physical Planners in mind, but the product has since not been used.
- The Central regional ICM toolkit could either adapt the NDPC outline or develop a customized outline, drawing inspiration from the new Land use Planning Law.
- The new Town and Country Planning Authority should be involved at every level of the toolkit development to encourage the mainstreaming of the document in planning the region
- Some technical details like the boundary of the coastal zone should be backed by literature or some planning regulations



- Implementation of the strategies in the toolkit may transcend district boundaries; hence a regional approach to such issues should be adopted.

## BREAKOUT SESSION

After Stephen’s presentation, participants were randomly divided into 2 groups to discuss the outline and content of ICM toolkit proposed for central region. The groups also discussed priority areas and data gaps that need to be filled prior to the toolkit development.



Figure 7 Pictures of the two groups in the breakout session

Each of the groups discussed and shared their responses to the following questions;

- What should the outline of the toolkit look like?
- What are the priority areas and issues in the region that the toolkit should address?
- Do you need additional data that will feed into the toolkit?

The responses from the two groups are displayed in the table below;

Table 1 Responses from the Two Groups

Questions	Group 1	Group 2
<b>Toolkit outline</b>	<ul style="list-style-type: none"> <li>• Demographic Characteristics</li> <li>• Socio-economic Characteristics</li> <li>• Location of key infrastructure</li> <li>• Extent of physical development</li> </ul>	<ol style="list-style-type: none"> <li>1. Introduction           <ul style="list-style-type: none"> <li>• The District/Community profile</li> <li>• Identification of issues</li> <li>• Solution for issues</li> </ul> </li> </ol>

Questions	Group 1	Group 2
	<ul style="list-style-type: none"> <li>• Land Ownership</li> <li>• Existing water bodies</li> <li>• Major Tourism Sites</li> <li>• Coastal land degradation</li> <li>• Sanitation</li> </ul>	
<b>Priority Areas</b>	<ul style="list-style-type: none"> <li>• Elmina</li> <li>• Iture</li> <li>• Brenu-Akyinim</li> <li>• Moree</li> <li>• Ekon</li> <li>• Saltpond</li> <li>• Apam</li> </ul>	<p>Areas of Interest</p> <ul style="list-style-type: none"> <li>• Apam</li> <li>• Cape Coast</li> </ul> <p>Issues</p> <ul style="list-style-type: none"> <li>• Sea erosion</li> <li>• Sanitation issues</li> <li>• Poor structures and haphazard development</li> <li>• Bureaucratic systems in physical development administration</li> </ul> <ul style="list-style-type: none"> <li>• Land tenure system</li> </ul>
<b>Data Gaps</b>	<ul style="list-style-type: none"> <li>• High resolution imagery</li> <li>• Environmentally sensitive areas</li> <li>• Existing and proposed modes of transportation (rail, road, water)</li> <li>• Data on sand winning activities</li> <li>• Location of existing sanitary facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Population</li> <li>• Land size</li> <li>• Satellite images</li> <li>• Base maps</li> </ul>

## NEXT STEPS

Planners in the central region will benefit from ongoing training in the application of GIS for coastal land use planning and management. This training will anchor the development of guidelines and regional tool kit for coastal planning and management in the coastal districts of the central region.



# TRAINING PROGRAM

## Exchange Visit for Western and Central TCPD

Date: September 22, 2016

Venue: Central Region GIS Data Hub, Cape Coast

### Objectives

- To illustrate the utility of spatial planning approaches for completing coastal climate vulnerability assessments and adaptation planning using examples from the Western region of Ghana.
- To encourage peer to peer exchange of tools and methodologies for coastal spatial planning.
- To initiate preliminary discussions on the outline and content of a central region Integrated Coastal Management toolkit.

### Session Plan

Table 2 Session Plan

8.30 – 9.00	Participant registration
9.00 –9.30	Welcome and Purpose of the Exchange Visit
9:30 –10.00	<b>Presentation 1:</b> Chris Damon UAV technology for coastal planning
10.00–10.30	Plenary Discussion
10.30–11.00	<b>Snack Break</b>
11.00– 11.30	<b>Presentation 2:</b> Peter Owusu Donkor Coastal spatial planning, climate vulnerability assessment and adaptation planning
11.30–12.00	Plenary Discussion
12:00 –1.00	<b>Presentation 3:</b> Stephen Kankam Central Regional Toolkit: Lessons from Western Region
1.00–1.30	Plenary Discussion
1.30 – 2.15	<b>Lunch Break</b>
2.15 – 3.00	Breakout Session
3.00–3.30	Plenary Report back
3.30	Adjourn

# GHANA SUSTAINABLE FISHERIES PROJECT-SpS PARTICIPANTS ROSTER INFORMATION

Required in English

Please Print

**Title of Course:** EXCHANGE VISIT FOR TOWN AND COUNTRY PLANNING  
DEPARTMENT OFFICERS

**Activity:** WORKSHOP

**Date:** 22<sup>ND</sup> SEPTEMBER, 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
ELSIE	NAI	KEEA TCPD	f	Y
PATRICK	COBBINA	TCPD- EFFUTU MUNICIPAL	m	Y
RICHMOND	OBIRI	TCPD- AWDA	m	Y
PHILIP	ADJEI	GEDA	m	
NICHOLAS	PUJAS	EKUMFI TCPD	m	
SETH	ANKRAH	ABURA-DUNKWA TCPD	m	
AMA	FERKAH	WR- TCPD	f	Y
NANA EFUA	ACKAH	STMA TCPD	f	Y
CELESTINA	AMA BAIDEN	CR- TCPD	f	Y
EMMANUEL	ANSAH LARBI	TCDP	m	Y
ALEX	KWASI ASAMOAH	TCPD	m	Y
CUPID	OPOKU	TCPD	m	Y
EBENEZER	DADZIE-PANTSIL	WR-TCDP	m	Y

<b>First Name</b>	<b>Surname</b>	<b>Organization/Community</b>	<b>Sex</b>	<b>Do you wish to receive messages on SFMP</b>
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COSMOS	APPIAH-AMPOSAH	CR-TCDP	m	Y
ISAAC	ADOAH	TCDP	m	Y
ANDREW	OHENE AGYEKUM	CR OFFICE TCDP	m	Y
SAAH YAW	MENSAH	TCPD	m	Y
STEPHEN	NANA YAW KAKRABA	TCP	m	Y
BENEDICT A	NANA ANSAH	TCDP	m	Y
EBENEZER	OKRAH	TCP	m	
RAPHEAL	FIAVE	WR-TCPD	m	Y
JONES	RICHARD JOHN	TCPD	f	Y
OBED	AGYAPON G	GOMOA EAST	m	Y
ENOCH	TEYE	EKUMFI TCPD	m	Y
JUSTICE	NANA INKOOM	WASCAL	m	Y
GLORIA	YUKI	UCC	f	Y
ANTHONY	OSEI-MENSAH	TCDP	m	Y
ALEXANDER	ADJEI	RD	m	
ISAAC	ABBAN	TCPD	m	
ISAAC	AFFUM	TCPD	m	Y
NANA	KUSI NSIAH	TCPD	m	Y
CHRISTIAN	OWUSU	LC/SMD	m	Y
FRANK	YARTEL	TCPD	m	Y
EMMANUEL	MENSAH	UCC	m	Y