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# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Report on the Second Training of  
Central Region Town and Country  
Planning Department officers



JANUARY 10<sup>TH</sup> -11<sup>TH</sup>, 2017

THE  
UNIVERSITY  
OF RHODE ISLAND  
GRADUATE SCHOOL  
OF OCEANOGRAPHY



**SPATIAL  
SOLUTIONS**

**Hen Mpoano**

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<https://ghanalinks.org/elibrary> search term: SFMP

*USAID Development Clearing House*

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**For more information** on the Ghana Sustainable Fisheries Management Project, contact:

USAID/Ghana Sustainable Fisheries Management Project

Coastal Resources Center

Graduate School of Oceanography

University of Rhode Island

220 South Ferry Rd.

Narragansett, RI 02882 USA

Tel: 401-874-6224 Fax: 401-874-6920 Email: [info@crc.uri.edu](mailto:info@crc.uri.edu)

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**Cover photo:** Group photograph of participants. (Credit: Spatial Solutions)

## Detailed Partner Contact Information:

**USAID/Ghana Sustainable Fisheries Management Project (SFMP)**  
**10 Obodai St., Mempeasem, East Legon, Accra, Ghana**

**Telephone: +233 0302 542497 Fax: +233 0302 542498**

|                   |                                      |  |
|-------------------|--------------------------------------|--|
| Maurice Knight    | Chief of Party                       | <a href="mailto:maurice@crc.uri.edu">maurice@crc.uri.edu</a>               |
| Kofi Agbogah      | Senior Fisheries Advisor             | <a href="mailto:kagbogah@henmpoano.org">kagbogah@henmpoano.org</a>         |
| Nii Odenkey Abbey | Communications Officer               | <a href="mailto:nii.sfmp@crcuri.org">nii.sfmp@crcuri.org</a>               |
| Bakari Nyari      | Monitoring and Evaluation Specialist | <a href="mailto:hardinyari.sfmp@crcuri.org">hardinyari.sfmp@crcuri.org</a> |
| Brian Crawford    | Project Manager, CRC                 | <a href="mailto:brian@crc.uri.edu">brian@crc.uri.edu</a>                   |
| Ellis Ekekpi      | USAID AOR (acting)                   | <a href="mailto:eekekpi@usaid.gov">eekekpi@usaid.gov</a>                   |

Kofi.Agbogah  
[kagbogah@henmpoano.org](mailto:kagbogah@henmpoano.org)  
Stephen Kankam  
[skankam@henmpoano.org](mailto:skankam@henmpoano.org)  
Hen Mpoano  
38 J. Cross Cole St. Windy Ridge  
Takoradi, Ghana  
233 312 020 701

Resonance Global  
(formerly SSG Advisors)  
182 Main Street  
Burlington, VT 05401  
+1 (802) 735-1162  
Thomas Buck  
[tom@ssg-advisors.com](mailto:tom@ssg-advisors.com)

Andre de Jager  
[adejager@snvworld.org](mailto:adejager@snvworld.org)  
SNV Netherlands Development Organisation  
#161, 10 Maseru Road,  
E. Legon, Accra, Ghana  
233 30 701 2440

Victoria C. Koomson  
[cewefia@gmail.com](mailto:cewefia@gmail.com)  
CEWEFIA  
B342 Bronyibima Estate  
Elmina, Ghana  
233 024 427 8377

Donkris Mevuta  
Kyei Yamoah  
[info@fonghana.org](mailto:info@fonghana.org)  
Friends of the Nation  
Parks and Gardens  
Adiembra-Sekondi, Ghana  
233 312 046 180

Lydia Sasu  
[daawomen@daawomen.org](mailto:daawomen@daawomen.org)  
DAA  
Darkuman Junction, Kaneshie Odokor  
Highway  
Accra, Ghana  
233 302 315894

### For additional information on partner activities:

|                        |   |
|------------------------|---|
| CRC/URI:               | <a href="http://www.crc.uri.edu">http://www.crc.uri.edu</a>   |
| CEWEFIA:               | <a href="http://cewefia.weebly.com/">http://cewefia.weebly.com/</a>   |
| DAA:                   | <a href="http://womenthrive.org/development-action-association-daa">http://womenthrive.org/development-action-association-daa</a> |
| Friends of the Nation: | <a href="http://www.fonghana.org">http://www.fonghana.org</a>   |
| Hen Mpoano:            | <a href="http://www.henmpoano.org">http://www.henmpoano.org</a>   |
| SNV:                   | <a href="http://www.snvworld.org/en/countries/ghana">http://www.snvworld.org/en/countries/ghana</a>                               |
| Resonance Global:      | <a href="https://resonanceglobal.com/">https://resonanceglobal.com/</a>   |

## **ACRONYMS**

|         |   |
|---------|---|
| CEDECOM | Central Regional Development Commission                 |
| CEWEFIA | Central and Western Fishmongers Improvement Association |
| FoN     | Friends of the Nation                                   |
| GIS     | Geographic Information System                           |
| GPS     | Global Positioning System                               |
| LUPMIS  | Land Use Planning and Management Information System     |
| QGIS    | Quantum Geographic Information System                   |
| SFMP    | Sustainable Fisheries Management Program                |
| TCPD    | Town and Country Planning Department                    |
| USAID   | United States Agency for International Development      |

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## **INTRODUCTION**

The USAID-Ghana Sustainable Fisheries Management Project (SFMP) continues to provide support to the Town and Country Department in different capacities, though fisheries focused. The project recognizes the important role the department plays in the planning of coastal resources including the limited coastal land and beach fronts.

Under this USAID funded project, the SFMP has established a GIS Data Hub at the Central Regional Office of the TCPD to build the capacity of Planners and Technical officers to incorporate coastal resource management in the preparation of Spatial Plans. The newly refurbished data hub is stocked with state-of-the-art facilities to serve two main purposes:

1. To serve as the central point for storing, retrieving, managing and sharing data across coastal districts
2. To provide regular trainings for regional and district staff.

The GIS trainings are aimed at activating the newly established GIS Data Hub to function as the model training center, not only for TCPD staff, but other sister land sector agencies and departments. The first series of trainings were organized in September, 2016 to build the capacity of 20 officers (8 Planners and 12 Technical officers) in basic GIS/GPS applications relevant to spatial planning.

Prior to the trainings a need assessment had been conducted to ascertain the background of prospective participants in GIS and general computing. This second training involved the second set of officers who were shortlisted based on the results of the assessment.

### **Objectives**

The main objective of the training was to provide participants with fundamental skills in GIS, Remote Sensing and GPS data collection strategies for the effective planning and decision making relative to the management of coastal resources. The specific objectives for the training were:

- To activate the GIS Data Hub as the data clearinghouse and training center for the region.
- To have a basic, practical understanding of GIS concepts, techniques and real world applications.
- To introduce the use of Quantum GIS for basic data collection and mapping purposes.

### **Venue and Date**

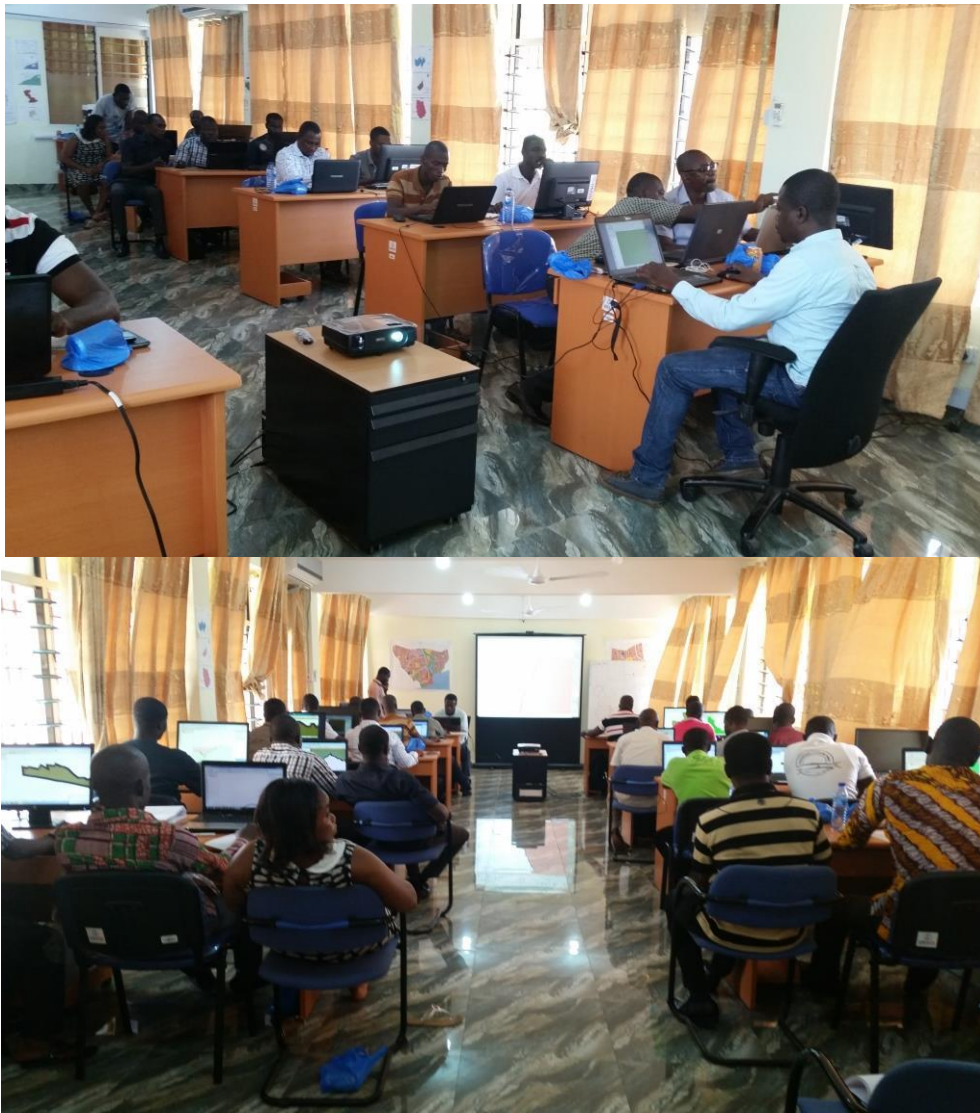
The training was organized in the Central Region GIS Data Hub at the Regional Town and Country Planning Department in Cape Coast from January 10 to 12, 2017.

### **Format of Training**

The training adopted the class room training format with some presentations and practical hands-on exercises. Activities were designed to address issues practitioners need on their day-to-day basis.

### **Participants**

The 3-day GIS training built the capacity of 23 participants from TCPD, CEDECOM and other SFMP partners (CEWEFIA and FoN) in basic GIS applications. The selection of TCPD officers for the training was informed by the results of the training need assessment that was conducted prior to the training. 2 Planners and 17 Technical officers from the Nine (9) coastal districts of the Central region were selected for the training.



**Figure 1: A cross-section of participants at the training**

## **WELCOME ADDRESS AND BACKGROUND TO THE SFMP**

The Director of Spatial Solutions Ltd, Mr. Peter Owusu- Donkor welcomed participants to the training workshop and explained the purpose and objectives of the training. In his welcome statement he indicated the commitment of SFMP to build the capacity of TCPD on the use of GIS in planning and the development of spatial plans within the coastal districts. Mr. Peter Owusu-Donkor assured participants of a series of trainings that has been planned for the region aimed at building the capacity of the region in advanced spatial planning tools and technologies.



**Figure 2: A view of participants at the training**

## **OPENING REMARKS**

Mr. Martey Korley, the Director of the Central region Town and Country Planning Department, welcomed participants to the training workshop and encouraged participants to demonstrate diligence in order to take full advantage of the opportunity offered them. He commended USAID-SFMP project for the enormous support the region has received through the Data Hub and the series of trainings. He encouraged participants to judiciously make use of the knowledge acquired and continually practice the lessons to add value to their work.

## **TRAINING FACILITATION AND MODULES**

The training workshop was facilitated by Mr. Richard John-Jones, the Hub Instructor of the Western Region GIS Data Hub and an Assistant Town Planning Officer; Mr. Justice Camillus Mensah, the GIS officer of SFMP and Hen Mpoano; Mr. Obed Agyapong, the Central region GIS Data Hub Coordinator and Munzamil Mohammed of Spatial Solutions. The modules for the training were inspired by the results of the Training needs assessment. The modules were however modified slightly to address some of the issues from the first training. Quantum GIS and the LUPMIS tools (built on Map Maker) were the main GIS software used for the trainings. Participants were also provided with tutorial videos relevant to the modules treated.

Modules taught during the training are listed as follows;

### **Day 1**

1. Introduction to basic computing.
2. Introduction to basic GIS and Remote sensing.
3. Installation of QGIS software.
4. How to extract district based datasets from national databases such as road networks, towns, vegetation, towns etc.

### **Day 2**

1. Georeferencing scanned maps (planning schemes).
2. How to digitize from raster Data.
3. How to add attributes in a new & existing shapefiles.
4. Symbology and styling in QGIS.



## Day 3

1. Summary of previous lessons.
2. Introduction to GPS .
3. Data collection with the use of GPS (point, lines and polygon features).
4. How to import GIS data from GPS to QGIS using DNRGPS Software.
5. How to edit and clean data.

The material used for the event is found in the Manual for GIS Training of Central Regional TCPD Officers, which is online at

[http://www.crc.uri.edu/download/GH2014\\_SCI060\\_SpS\\_FIN508.pdf](http://www.crc.uri.edu/download/GH2014_SCI060_SpS_FIN508.pdf)



**Figure 3: Training in session**

## EVALUATION OF PARTICIPANTS

The knowledge gain of participants was assessed in a number of ways. Hands-on exercises, demonstration (by participants) and question and answer sessions were some of the ways the participants were evaluated. The map products from participants are shown in the Annex

## GENERAL ASSESSMENT OF TRAINING WORKSHOP

Participants expressed their expectations for the next training and made some recommendations for the subsequent trainings.

Some of the expectations of the participants were as follows

- to learn how to edit a polygon parcels (expansion /enlargement) and how to prepare a site plan with QGIS software.
- to learn how to apply digitizing in editing district datasets and to produce professional maps for planning and other purposes
- to learn how to use LUPMIS and GPS systems to plot site plans that would be accepted at the regional level
- To learn how map maker file formats could be imported into QGIS, learn how to geo-reference in QGIS, and how to manually enter coordinates of points from printed or hand-written data

- to know how to import and use spatial data in excel formats
- to know how to use GPS receivers and how data from the device could be imported into the QGIS software.

The participants also made the following recommendations

- More information on the fundamentals of computing should be provided as part of the introduction to enable easy understanding of the course.
- The facilitators should slow down in their explanation of some of the concepts and processes.
- Handouts on the use of QGIS software could be given to facilitate the learning processes.
- Practical exercises should be done more frequently to help participants grasp the concepts well.
- Stable internet should be provided to enable some of the internet based steps to be learnt.
- The period for the training should be extended.
- This training should be extended to the other TCPD officers.
- Revisit the use of GPS for collecting waypoints and transferring into the computer.
- Provide more videos that are relevant to our work.

## **ANNEX**

### **Annex 1: Training Agenda**

Ghana Sustainable Fisheries Management Project (SFMP)

Second Training of Central Region Town and Country Planning Department Officers

**10<sup>th</sup>-12<sup>th</sup> January, 2017**

**Central Regional GIS Data Hub, Cape Coast**

#### **AGENDA**

| <b>Training Session</b>  |                              |
|--------------------------|------------------------------|
| <b>Days (1, 2 and 3)</b> |                              |
| 8:30-9:00am              | Registration of participants |
| 9:00-12pm                | Session begins with          |
| 12:00pm-12:30            | Snack Break                  |
| 12:30-1:30pm             | Training continues           |
| 1:30-2:30pm              | Launch break                 |
| 2:30-5:30pm              | Training continues           |

**Annex 2: Attendance**

**GHANA SUSTAINABLE FISHERIES PROJECT-HM  
PARTICIPANTS ROSTER INFORMATION**

**Required in English**

**Please Print**

**Title of Course:** \_\_\_ TRAINING OF CENTRAL REGION TOWN AND COUNTRY PLANNING DEPARTMENT OFFICERS

**Activity:**  
\_\_\_\_\_ TRAINING \_\_\_\_\_

**Date:** \_\_\_\_\_ 10TH-12TH JANUARY, 2017 \_\_\_\_\_

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

| First Name | Surname  | Organization     | Email if available | Phone number | Sex |   |   |   |
|------------|----------|------------------|--------------------|--------------|-----|---|---|---|
|            |          |                  |                    |              | M   | F | Y | N |
| RANSFORD   | ROCKSON  | TCPD GOMOA WEST  |                    |              | X   |   |   |   |
| FRIMPONG   | AMEYAW   | TCPD AWUTU SENYA |                    |              | X   |   |   |   |
| EBENEZER   | ACKOM    | TCPD EKUMFI      |                    |              | X   |   |   |   |
| ERIC KWESI | ODURO    | TCPD AWUTU SENYA |                    |              | X   |   |   |   |
| SELORM     | GBORGBOR | TCPD KEEA        |                    |              | X   |   |   |   |
| First Name | Surname  | Organization     |                    |              | M   | F | Y | N |
| First Name | Surname  | Organization     |                    |              | M   | F | Y | N |
| HARUNA     | SAALU    | EFFUTU           |                    |              | X   |   |   |   |

| First Name | Surname        | Organization | Email if available | Phone number | Sex |   | Do you wish to receive messages on SFMP? |   |
|------------|----------------|--------------|--------------------|--------------|-----|---|--|---|
|            |                |              |                    |              | M   | F | Y  | N |
| EBENEZER   | AFUTU          | EFFUTU       |                    |              | X   |   |  |   |
| RICHARD    | ANDZIE QUAINOO | MFANTSEMAN   |                    |              | X   |   |  |   |
| HARUNA     | APPIAH         | MFANTSEMAN   |                    |              | X   |   |  |   |
| OBED       | AGYAPONG       | GOMOA EAST   |                    |              | X   |   |  |   |
| ISAAC      | ASARE          | REG. TCPD    |                    |              | X   |   |  |   |
| SAMUEL     | OSEI-BAAFI     | KEEA         |                    |              | X   |   |  |   |
| RICHMOND   | BOTCHWAY       | ABURA ASEBU  |                    |              | X   |   |  |   |
| ALEX       | ASARE ADU      | EKUMFI       |                    |              | X   |   |  |   |
| ERNEST     | BOATENG        | CCMA         |                    |              | X   |   |  |   |
| MICHAEL    | LARBI          | ABURA ASEBU  |                    |              | X   |   |  |   |
| TETTEH     | DOKU           | GOMOA WEST   |                    |              | X   |   |  |   |
| First Name | Surname        | Organization |                    |              | M   | F | Y  | N |
| MICHAEL    | TAKYI          | CEWEFIA      |                    |              | X   |   | X  |   |
| KONADU     | BOAKYE         | CEDECOM      |                    |              | X   |   | X  |   |
| DAVID      | MINTAH         | CEDECOM      |                    |              | X   |   | X  |   |

| First Name | Surname | Organization    | Email if available | Phone number | Sex |   | Do you wish to receive messages on SFMP ? |   |
|------------|---------|-----------------|--------------------|--------------|-----|---|---|---|
|            |         |                 |                    |              | M   | F | Y   | N |
| PHILIP     | PRAH    | FON             |                    |              | X   |   | X   |   |
| FRANCIS    | OSEI    | GOMOA EAST      |                    |              | X   |   |   |   |
| DESMOND    | TUTU    | REGIONAL OFFICE |                    |              | X   |   |   |   |

### Annex 3: Map products

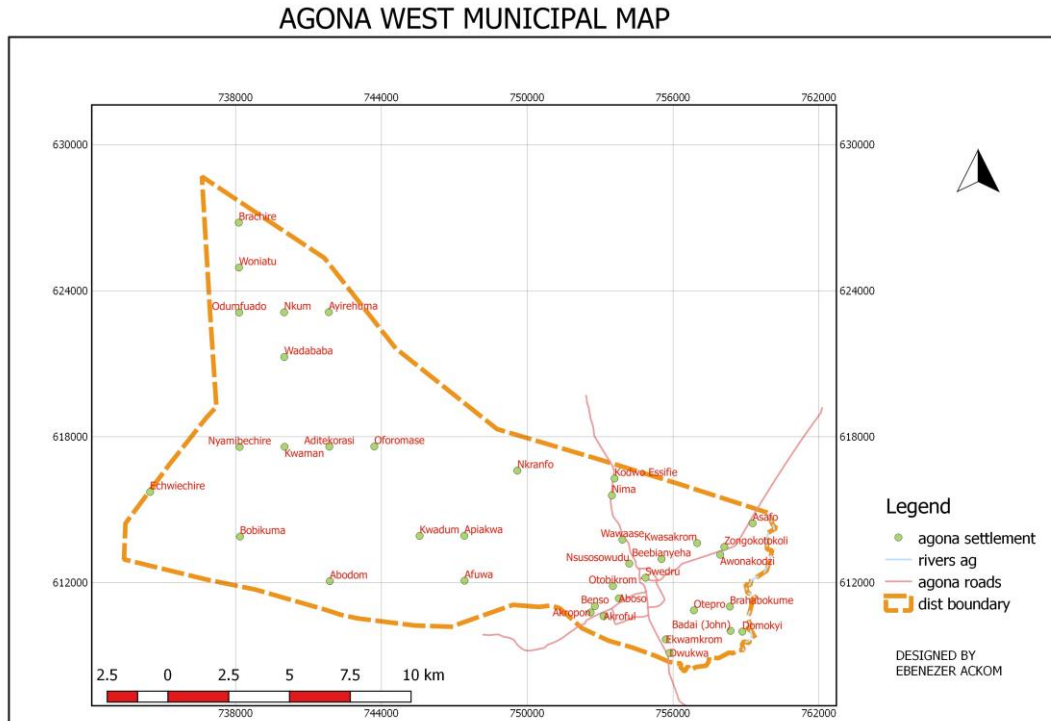


Figure 4 Agona West Municipal Map

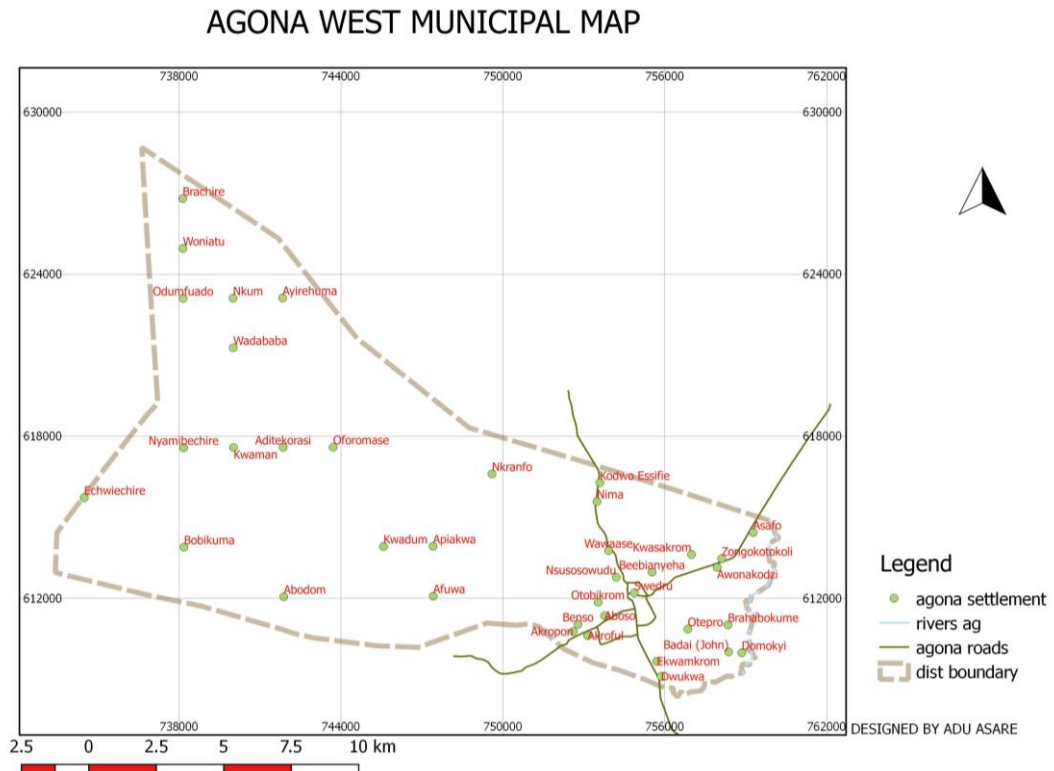


Figure 5 Agona West Municipal Map

AGONA EAST DISTRICT MAP

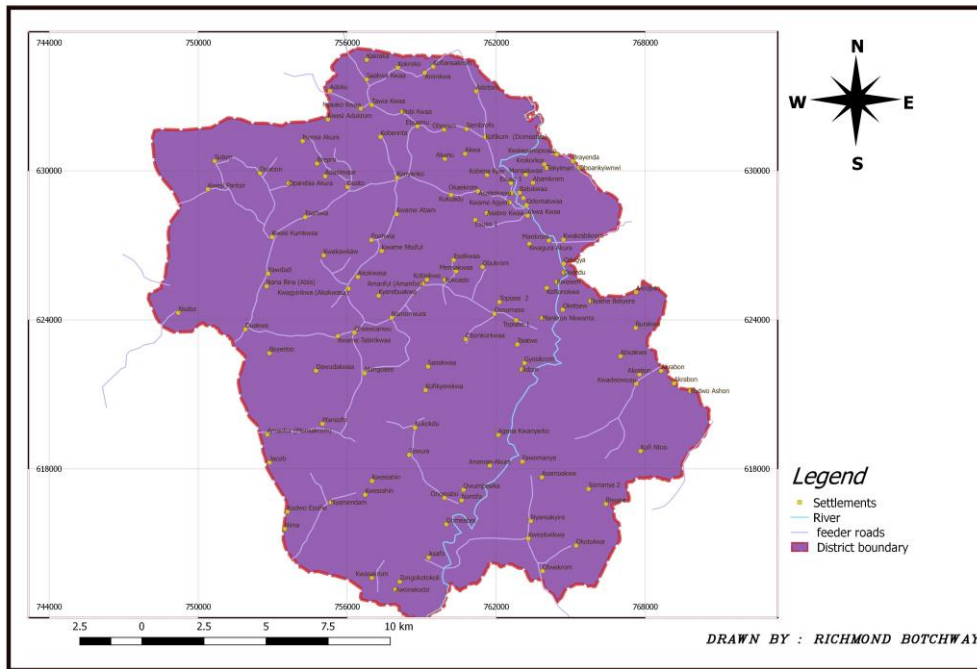


Figure 6 Agona East District Map

AGONA EAST DISTRICT MAP

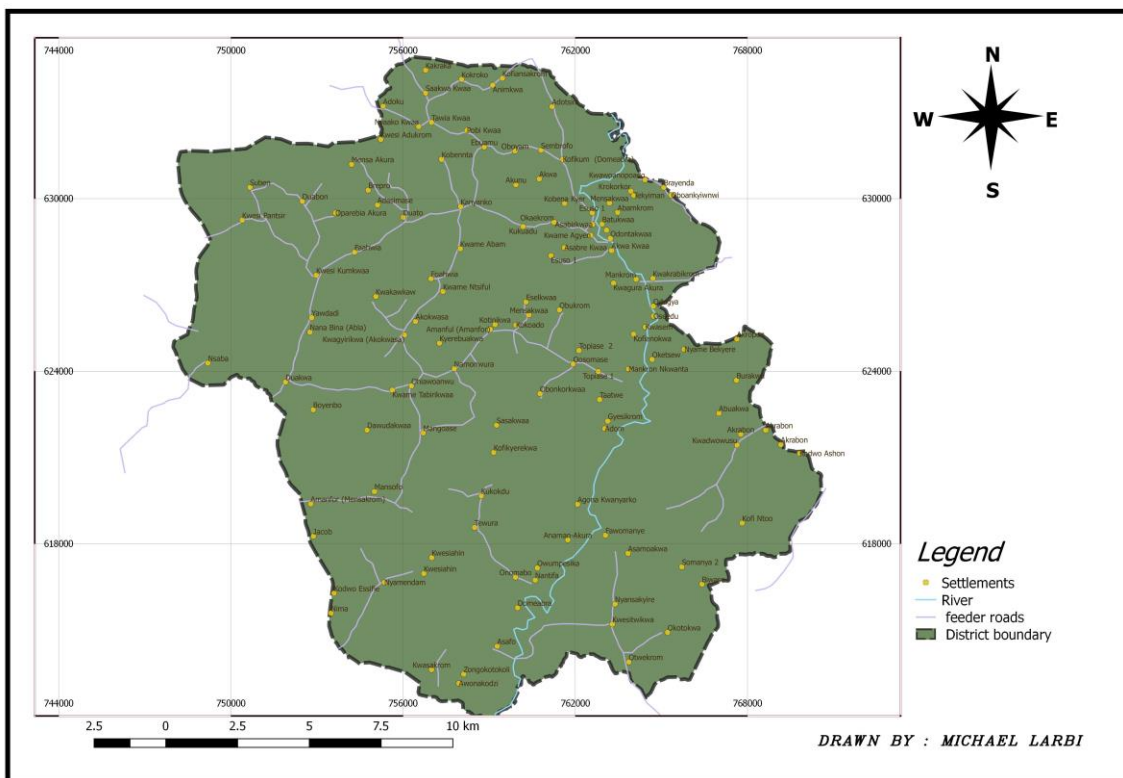
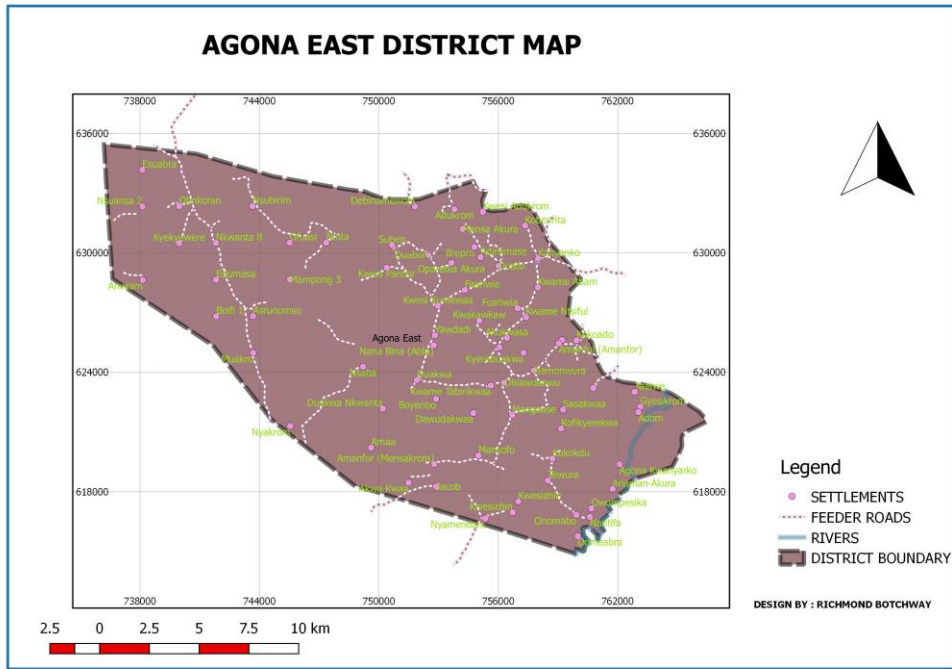
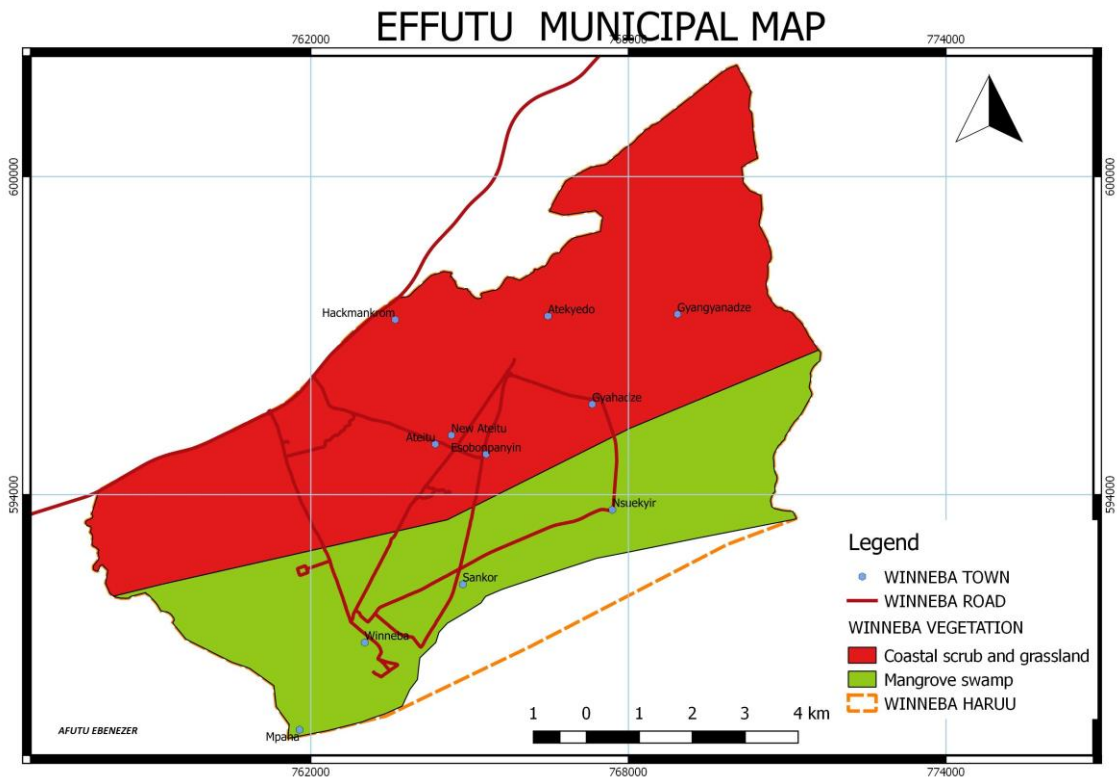


Figure 7 Agona East District





**Figure 8 Agona East District Map**



**Figure 9 Effutu Municipal Map**

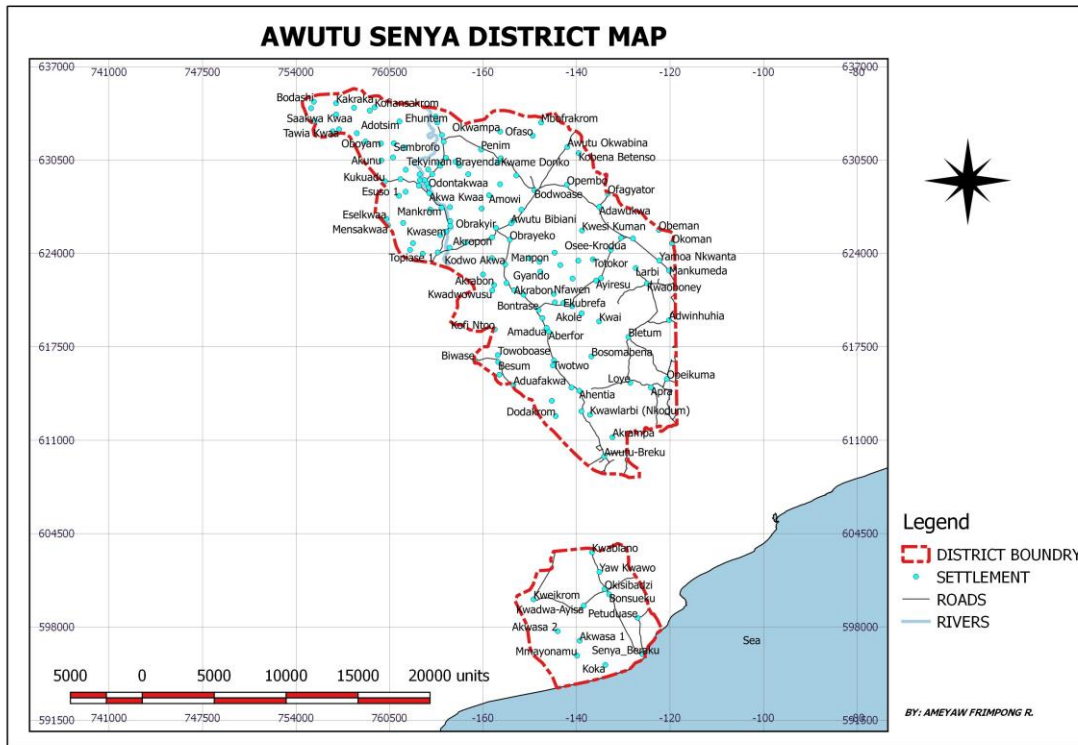


Figure 10 Awutu Senya District Map

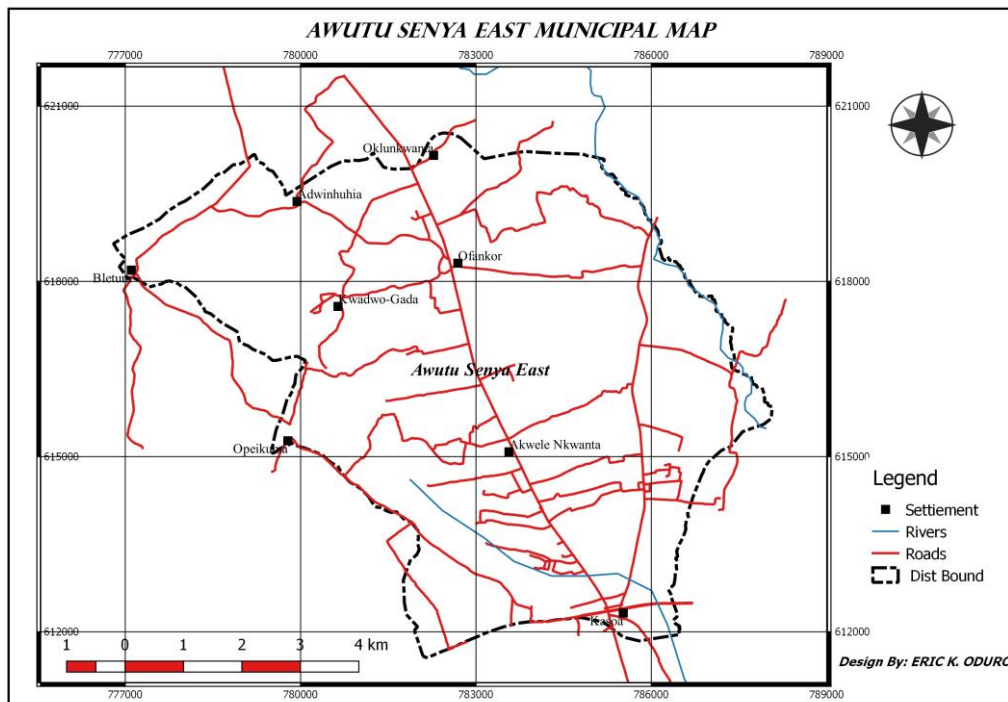
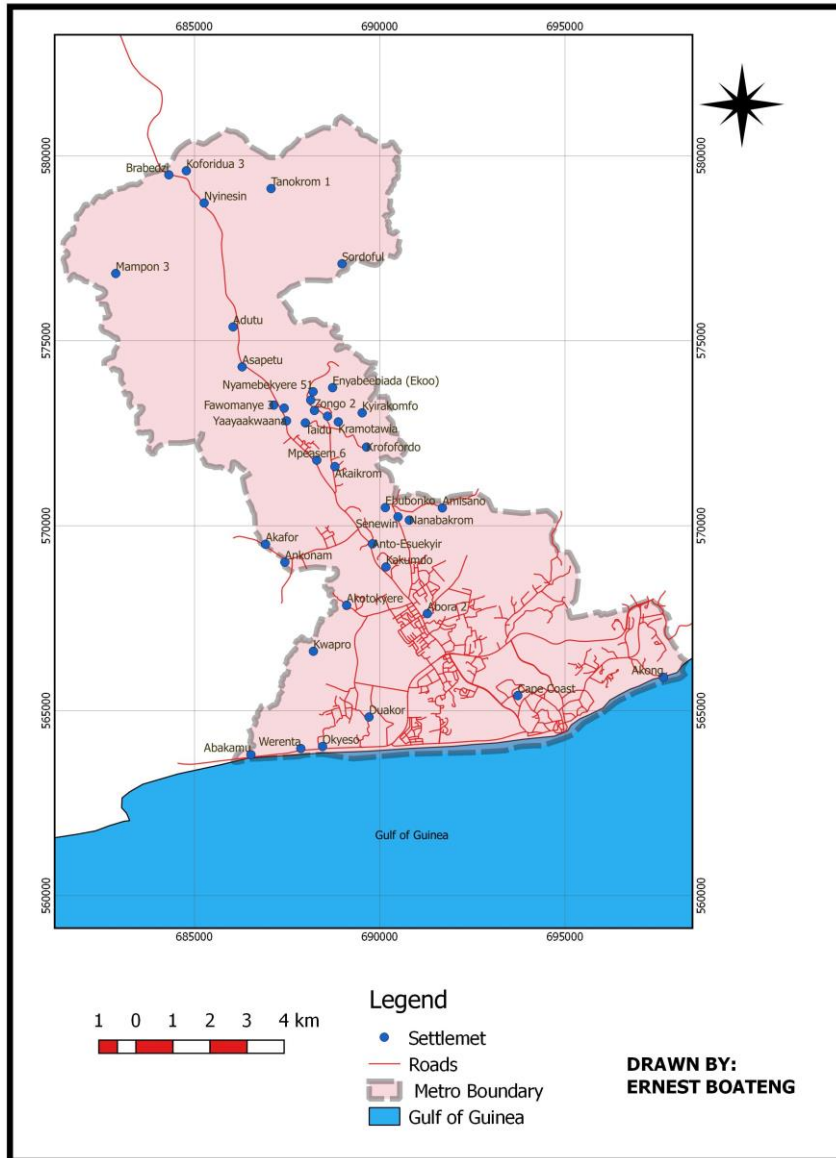
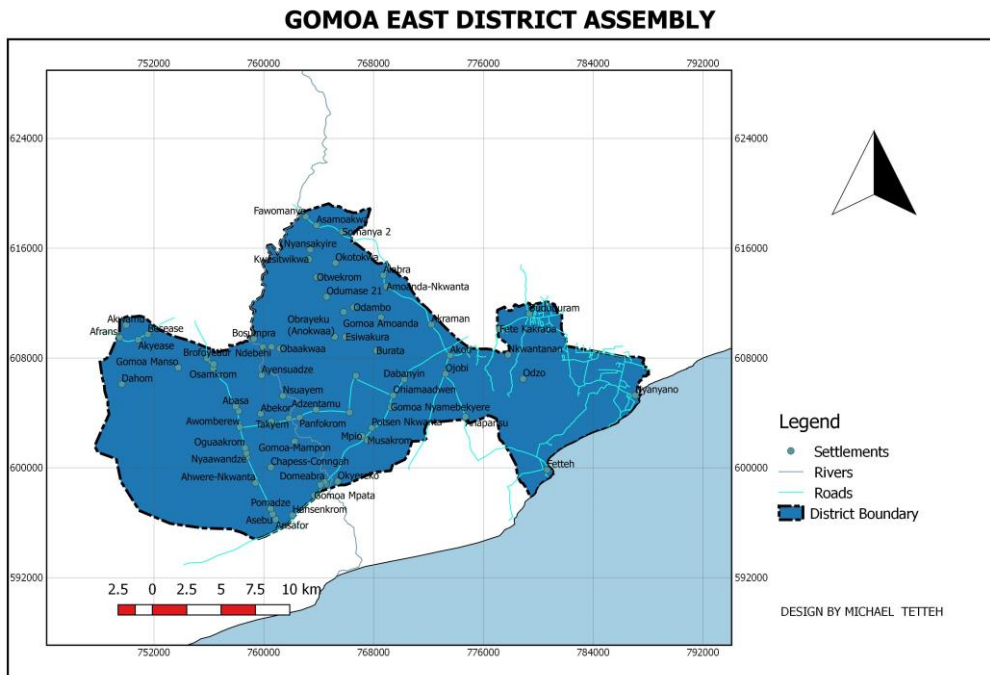


Figure 11 Awutu Senya East Municipal Map

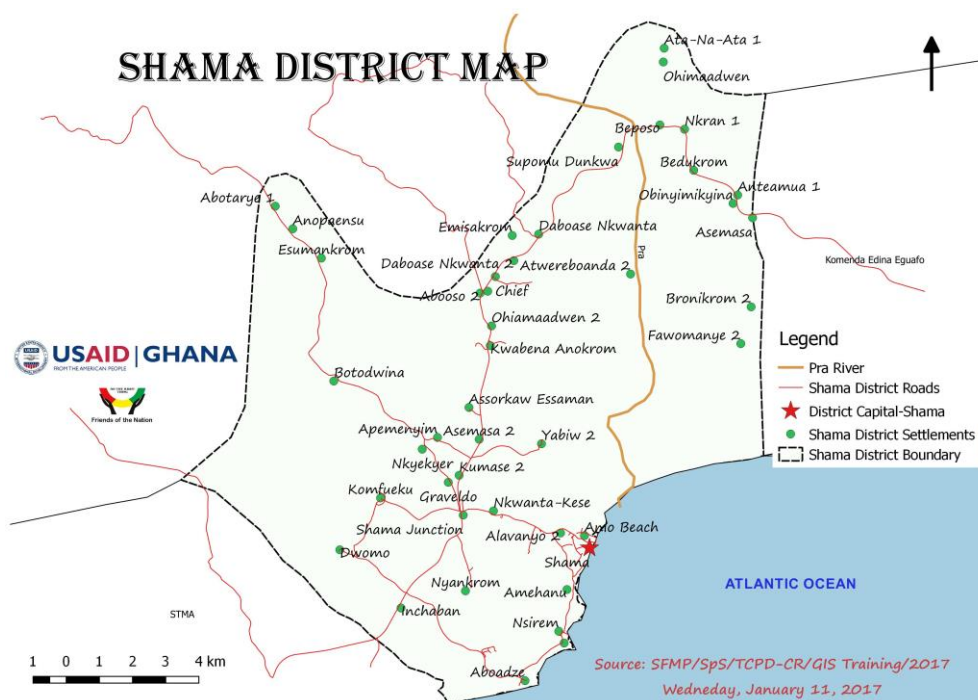
**CAPE COAST METROPOLITAN MAP**



**Figure 12 Cape Coast Metropolitan Map**



**Figure 13 Gomoa East District Assembly**



**Figure 14 Shama District Map**