

# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

# Mangrove Replanting at Densu

# Estuary



JULY, 2018





This publication is available electronically on the Coastal Resources Center's website at <a href="http://www.crc.uri.edu/projects\_page/ghanasfmp/">http://www.crc.uri.edu/projects\_page/ghanasfmp/</a>

#### 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

Citation: Development Action Association (2018). Mangrove replanting at Densu estuary. The USAID/Ghana Sustainable Fisheries Management Project (SFMP). Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island and Densu Oyster Pickers Association . GH2014\_ACT187\_DAA. 19 npp.

#### Authority/Disclaimer:

Prepared for USAID/Ghana under Cooperative Agreement (AID-641-A-15-00001), awarded on October 22, 2014 to the University of Rhode Island, and entitled the USAID/Ghana Sustainable Fisheries Management Project (SFMP).

This document is made possible by the support of the American People through the United States Agency for International Development (USAID). The views expressed and opinions contained in this report are those of the SFMP team and are not intended as statements of policy of either USAID or the cooperating organizations. As such, the contents of this report are the sole responsibility of the SFMP team and do not necessarily reflect the views of USAID or the United States Government

Cover photo: Replanting of Mangroves by Densu Oyster Pickers Association (DOPA)

Photo Credit: Development Action Association - DAA

#### **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 KnightChief of Party maurice@crc.uri.eduKofi AgbogahSenior Fisheries Advisor kagbogah@henmpoano.orgNii Odenkey AbbeyCommunications Officer nii.sfmp@crcuri.orgBakari NyariMonitoring and Evaluation Specialist hardinyari.sfmp@crcuri.orgBrian CrawfordProject Manager, CRC brian@crc.uri.eduJustice OdoiUSAID Administrative Officer Representative Jodoi@usaid.gov

Kofi.Agbogah <u>kagbogah@henmpoano.org</u> Stephen Kankam <u>skankam@henmpoano.org</u> Hen Mpoano 38 J. Cross Cole St. Windy Ridge Takoradi, Ghana 233 312 020 701

Andre de Jager <u>adejager@snvworld.org</u> SNV Netherlands Development Organisation

#161, 10 Maseru Road, E. Legon, Accra, Ghana 233 30 701 2440

Donkris Mevuta Kyei Yamoah info@fonghana.org Friends of the Nation Parks and Gardens Adiembra-Sekondi, Ghana

233 312 046 180

Peter Owusu Donkor Spatial Solutions <u>powusu-donkor@spatialdimension.net</u> #3 Third Nautical Close, Nungua, Accra, Ghana 233 020 463 4488

Victoria C. Koomson <u>cewefia@gmail.com</u> CEWEFIA

B342 Bronyibima Estate Elmina, Ghana 233 024 427 8377

Lydia Sasu daawomen@daawomen.org DAA Darkuman Junction, Kaneshie Odokor Highway Accra, Ghana 233 302 315894

#### For additional information on partner activities:

CRC/URI:	http://www.crc.uri.edu
CEWEFIA:	http://cewefia.weebly.com/
DAA:	http://womenthrive.org/development-action-association-daa
Friends of the Nationa	http://www.fonghana.org
Hen Mpoano:	http://www.henmpoano.org
SNV:	http://www.snvworld.org/en/countries/ghana
Resonance Global:	http://resonanceglobal.com/
Spatial Solutions:	http://www.spatialsolutions.co/id1.html

# ACRONYMS

DAA	Development Action Association
DOPA	Densu Oyster Pickers Association
FC	Forestry Commission
NGOs	Non-Governmental Organization
SFMP	Sustainable Fisheries Management Project
URI	University of Rhode Island
USAID	United States Agency for International Development

# TABLE OF CONTENTS

Acronymsii	i
LIST OF FIGURES	1
SECTION 1: INTRODUCTION	L
1.1 Objectives	L
1.2 Expected outcomes	Ĺ
SECTION 2: PHOTO PROCESSES	2
2.1 Preparations and Training	2
2.2 The Role of Traditional Leaders	5
2	3
3 The Role of the Media	3
2.4 The role of CSOs	3
2.5 The Role of Densu Oyster Pickers Association (DOPA)	)
2.6 The Story of nursing mothers of DOPA10	)
2.7 Safety	
SECTION1	Ĺ
3: PROGRESS PHOTOS1	Ĺ
3.1 Growth Stage	Ĺ
3.2 Maintenance of Mangrove	Ĺ
SECTION12	
4: REPLANTING CONTINUES12	2

# LIST OF FIGURES

Figure 2: Members of the Densu Oyster Pickers Association (DOPA) arriving for the replanting exercise at the Delta	Figure 1: Section of the mangrove depleted fields of the Densu Delta where the red mangrove specie will be replanted
Figure 3: Members of the Densu Oyster Pickers Association (DOPA) arriving for the replanting exercise at the Delta	Figure 2: Members of the Densu Oyster Pickers Association (DOPA) arriving for the
Figure 4: Participants receives instructions before the replanting exercise is carried out  3    Figure 5: Mr Andrew Agyekum Hene (A municipal Forestry Officer) from Winneba who  was the resource person leading the replanting exercise educates participants the proper procedures to follow in replanting the mangroves. This is to ensure that, the mortality ra	Figure 3: Members of the Densu Oyster Pickers Association (DOPA) arriving for the
was the resource person leading the replanting exercise educates participants the proper procedures to follow in replanting the mangroves. This is to ensure that, the mortality ra4 Figure 6: . Mr Andrew Agyekum Hene (A municipal Forestry Officer) from Winneba continues with the instructions before replanting exercise begins	Figure 4: Participants receives instructions before the replanting exercise is carried out
procedures to follow in replanting the mangroves. This is to ensure that, the mortality ra4 Figure 6: Mr Andrew Agyekum Hene (A municipal Forestry Officer) from Winneba continues with the instructions before replanting exercise begins	
Figure 7: Forestry Officer demonstrating the best way of planting the mangroves propagules 5    Figure 8: The "River Priest" of the Sakumo River showed their commitments toward the reforestation exercise carried out  6    Figure 9: The "River Priest" of the Sakumo River showed their commitments toward the reforestation exercise	procedures to follow in replanting the mangroves. This is to ensure that, the mortality ra4 Figure 6: . Mr Andrew Agyekum Hene (A municipal Forestry Officer) from Winneba
Figure 9: The "River Priest" of the Sakumo River showed their commitments toward the reforestation exercise  6    Figure 10: The "River Priest" of the Sakumo River and other traditional leaders planting the first Mangrove.  7    Figure 11: Nii Ampofo of the Sakumo We family (the traditional custodians of the Densu River) planting a mangrove seedling	Figure 7: Forestry Officer demonstrating the best way of planting the mangroves propagules 5 Figure 8: The "River Priest" of the Sakumo River showed their commitments toward the
reforestation exercise	Figure 9: The "River Priest" of the Sakumo River showed their commitments toward the
River) planting a mangrove seedling  7    Figure 12: Mr. Mohamed (right), reporter with New Times Daily newspaper interviewing  8    Madam Lydia Sasu of DAA  8    Figure 13 Madam Lydia Sasu, the Executive Director of Development Action Association  8    planting some of the first seedlings of the red mangroves  8    Figure 14: Members of DOPA actively participate in the replanting of the depleted areas of  9    Figure 15: Members of DOPA actively participate in the replanting of the depleted areas of  9    Figure 16: Members of DOPA actively participating in the replanting of the depleted areas of  9    Figure 17: Nursing mothers of DOPA actively supported the replanting exercise  10    Figure 18: A member of DOPA properly dressed for the replanting exercise  10    Figure 19: The replanted mangroves showing signs of growth.  11    Figure 20: The replanted mangroves showing signs of growth.  11    Figure 21: Members of DOPA clearing weeds around the replanted mangroves to ensure  11    Figure 22: Members of DOPA clearing weeds around the replanted mangroves after the  11    Figure 23: DOPA members continue to embark on replanting of the red mangroves after the  12    Figure 24:DOPA members continue to embark on replanting of the red mangroves after the  12    Figure 24:DOPA m	reforestation exercise
Figure 12: Mr. Mohamed (right), reporter with New Times Daily newspaper interviewing  8    Madam Lydia Sasu of DAA  8    Figure 13 Madam Lydia Sasu, the Executive Director of Development Action Association  8    planting some of the first seedlings of the red mangroves  8    Figure 14: Members of DOPA actively participate in the replanting of the depleted areas of  9    Figure 15: Members of DOPA actively participate in the replanting of the depleted areas of  9    Figure 16: Members of DOPA actively participating in the replanting of the depleted areas of  9    Figure 17: Nursing mothers of DOPA actively participating in the replanting exercise  9    Figure 18: A member of DOPA properly dressed for the replanting exercise  10    Figure 20: The replanted mangroves showing signs of improvements  11    Figure 21: Members of DOPA take time to "clear" around replanted mangroves to ensure  11    Figure 22: Members of DOPA clearing weeds around the replanted mangroves after the  12    Figure 23: DOPA members continue to embark on replanting of the red mangroves after the  12    Figure 24:DOPA members continue to embark on replanting of the red mangroves after the  12	Figure 11: Nii Ampofo of the Sakumo We family (the traditional custodians of the Densu
Figure 13 Madam Lydia Sasu, the Executive Director of Development Action Association    planting some of the first seedlings of the red mangroves.    8    Figure 14: Members of DOPA actively participate in the replanting of the depleted areas of    the Densu Delta with red mangrove seedlings.    9    Figure 15: Members of DOPA actively participate in the replanting of the depleted areas of    the Densu Delta with red mangrove seedlings.    9    Figure 16: Members of DOPA actively participating in the replanting of the depleted areas of    the Densu Delta with red mangrove seedlings.    9    Figure 16: Members of DOPA actively participating in the replanting of the depleted areas of    the Densu Delta with red mangrove seedlings.    9    Figure 17: Nursing mothers of DOPA actively supported the replanting exercise    10    Figure 18: A member of DOPA properly dressed for the replanting exercise    10    Figure 20: The replanted mangroves showing signs of growth.    11    Figure 21: Members of DOPA take time to "clear" around replanted mangroves to ensure    higher survival rate  11    Figure 22: Members of DOPA clearing weeds around the replanted mangroves to ensure    higher survival rate  12    <	Figure 12: Mr. Mohamed (right), reporter with New Times Daily newspaper interviewing
Figure 14: Members of DOPA actively participate in the replanting of the depleted areas of    the Densu Delta with red mangrove seedlings	Figure 13 Madam Lydia Sasu, the Executive Director of Development Action Association
the Densu Delta with red mangrove seedlings	Figure 14: Members of DOPA actively participate in the replanting of the depleted areas of the Densu Delta with red mangrove seedlings
Figure 17: Nursing mothers of DOPA actively supported the replanting exercise	the Densu Delta with red mangrove seedlings
Figure 20: The replanted mangroves showing signs of growth.  11    Figure 21: Members of DOPA take time to "clear" around replanted mangroves to ensure  11    higher survival rate  11    Figure 22: Members of DOPA clearing weeds around the replanted mangroves to ensure  11    Figure 22: Members of DOPA clearing weeds around the replanted mangroves to ensure  12    Figure 23: DOPA members continue to embark on replanting of the red mangroves after the  12    Figure 24:DOPA members continue to embark on replanting of the red mangroves after the  12	Figure 17: Nursing mothers of DOPA actively supported the replanting exercise
higher survival rate	Figure 20: The replanted mangroves showing signs of growth11
higher survival rate	higher survival rate
Figure 24:DOPA members continue to embark on replanting of the red mangroves after the	higher survival rate
$11111101 10010111112 \dots 10010000000000000$	Initial replanting  12    Figure 24:DOPA members continue to embark on replanting of the red mangroves after the initial replanting  12

# ACKNOWLEDGEMENTS

DAA would like to express its gratitude to the training facilitators from Forestry Commission (FC). And the greatest appreciation goes to the community members from Tsokomey, Bortianor and Tetegu whose dedication, enthusiasm and hard work ensured that the replanting was a success.

# **SECTION 1: INTRODUCTION**

Mangroves in Ghana have been over-exploited for diverse economic reasons including fuel (firewood, charcoal, wood for fish smoking), construction materials (timber, beams and poles, fence posts, thatch), fishing (atidza), industry (salt) and agriculture. However, their over harvesting means decimated fish stocks and depletion of the Densu's forest cover.

SFMP and its implementing partner DAA, has trained the members of their association on the need to protect the Densu to protect their livelihoods. The members were mobilized with support from the Forestry Commission of Ghana to raise and replant re mangrove propagules on the severely degraded sites along the Densu River.

This is a photo report of the mangrove seedling replanting exercise by members of DAA.

#### 1.1 Objectives

The objective of the replanting exercise is to replenish all depleted land areas under the Densu Delta Co Management Plan.

#### **1.2** Expected outcomes

- The red mangroves will be raised and replanted in the Densu
- The planted seedlings are nurtured to grow.
- Develop measures to minimize over harvesting of the mangroves
- Ten thousand mangrove seedling nursery established

# **SECTION 2: PHOTO PROCESSES**

### 2.1 Preparations and Training



Figure 1: Section of the mangrove depleted fields of the Densu Delta where the red mangrove specie will be replanted



Figure 2: Members of the Densu Oyster Pickers Association (DOPA) arriving for the replanting exercise at the Delta



Figure 3: Members of the Densu Oyster Pickers Association (DOPA) arriving for the replanting exercise at the Delta



Figure 4: Participants receives instructions before the replanting exercise is carried out

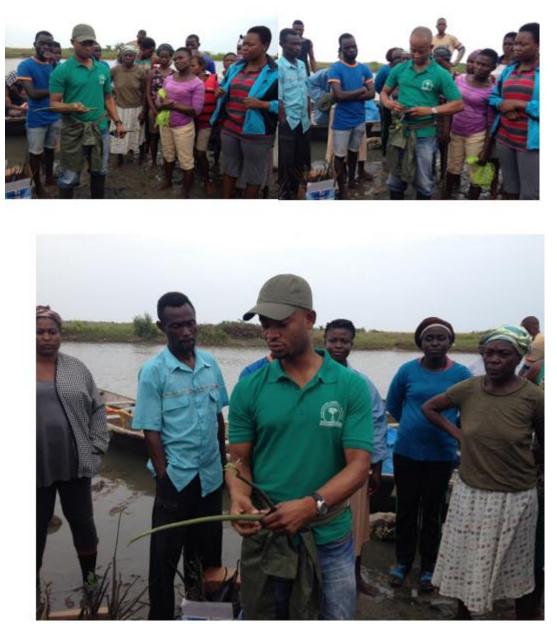


Figure 5: . Mr Andrew Agyekum Hene (A municipal Forestry Officer) from Winneba who was the resource person leading the replanting exercise educates participants the proper procedures to follow in replanting the mangroves. This is to ensure that, the mortality ra



Figure 6: . Mr Andrew Agyekum Hene (A municipal Forestry Officer) from Winneba continues with the instructions before replanting exercise begins



Figure 7: Forestry Officer demonstrating the best way of planting the mangroves propagules

#### 2.2 The Role of Traditional Leaders



Figure 8: The "River Priest" of the Sakumo River showed their commitments toward the reforestation exercise carried out



Figure 9: The "River Priest" of the Sakumo River showed their commitments toward the reforestation exercise



Figure 10: The "River Priest" of the Sakumo River and other traditional leaders planting the first Mangrove.



Figure 11: Nii Ampofo of the Sakumo We family (the traditional custodians of the Densu River) planting a mangrove seedling

#### 2.3 The Role of the Media



Figure 12: Mr. Mohamed (right), reporter with New Times Daily newspaper interviewing Madam Lydia Sasu of DAA

#### 2.4 The role of CSOs



Figure 13 Madam Lydia Sasu, the Executive Director of Development Action Association planting some of the first seedlings of the red mangroves

#### 2.5 The Role of Densu Oyster Pickers Association (DOPA)



Figure 14: Members of DOPA actively participate in the replanting of the depleted areas of the Densu Delta with red mangrove seedlings



Figure 15: Members of DOPA actively participate in the replanting of the depleted areas of the Densu Delta with red mangrove seedlings



Figure 16: Members of DOPA actively participating in the replanting of the depleted areas of the Densu Delta with red mangrove seedlings

### 2.6 The Story of nursing mothers of DOPA



Figure 17: Nursing mothers of DOPA actively supported the replanting exercise

### 2.7 Safety



Figure 18: A member of DOPA properly dressed for the replanting exercise

# **SECTION 3: PROGRESS PHOTOS**

3.1 Growth Stage



Figure 19: The replanted mangroves showing signs of improvements



Figure 20: The replanted mangroves showing signs of growth.



#### **3.2 Maintenance of Mangrove**

Figure 21: Members of DOPA take time to "clear" around replanted mangroves to ensure higher survival rate



Figure 22: Members of DOPA clearing weeds around the replanted mangroves to ensure higher survival rate

## **SECTION 4: REPLANTING CONTINUES**

Figure 23: DOPA members continue to embark on replanting of the red mangroves after the initial replanting



Figure 24:DOPA members continue to embark on replanting of the red mangroves after the initial replanting