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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Mangrove Replanting at Densu Delta



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THE
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GRADUATE SCHOOL
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Cover photo: A photo collage of Community members during the mangrove replanting exercise at the Densu Delta. (Photo Credit: Development Action Association - DAA)

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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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1. BACKGROUND

Mangroves play an important socio-economic as well as cultural roles for communities within the areas where they occur in Ghana. Mangroves sustain and protect, the ecosystem through soil stabilization, fish habitats and spawning grounds which serve as vital sources of food nutrients for coastal communities. In recent times, attention raised on use of mangrove to reduce the amount of carbon dioxide hence helping to mitigate climate change and its effects. They can also act as barriers between coastal storms and homes. The disappearance of mangroves therefore means the loss of these ecosystem services which will result in negative economic and social impacts in the coastal communities.

The current state of mangroves in the Densu Delta in the Ga South Municipal Assembly of the Greater Accra Region of Ghana calls for immediate interventions to restore the ecosystems so as to enhance their ecological services especially towards the sustainability of the oyster growth in the delta.

Though the efforts required to restore and maintain the depleted mangroves site in the Densu Delta is enormous, the Densu Oyster Pickers Association (DOPA) with the support of Development Action Association – DAA under the sustainable Fisheries Management Project (SFMP) has planted more than 20,000 seedlings of the red mangroves, thus restoring nearly 15 acres of depleted mangroves sites in the Densu Delta during the past year.

The members of DOPA have planted 5,000 seedlings of red mangroves under the current project year implementation. While previous planting has been done with a mixture of direct propagules planting and that of seedlings from established nursery, the 5,000 seedlings were done directly from the mangrove propagules.

With the planting of 5,000 seedlings, the members of DOPA continue to fulfil one of the key ecological management measures as stipulated in the draft Community Co-Management draft plan of the Densu Delta.

The replanting exercise was undertaken on the 31st January 2019 at the Densu Delta with 46 participants (9 males). This reports highlights some of the processes and replanting exercise performed by the members of the Densu Oyster Pickers Association – DOPA through a picture depiction of the replanting exercise.

1.1 Objectives

The objective of the replanting exercise is to restore depleted mangrove sites at the Densu Delta to:

- Ensure the implementation of the draft community management plan.
- Create a sense of ownership of the restored mangrove sites as community members participate in the restoration processes.
- Identify appropriate period for mangrove restoration.
- Understand the best methods and practices for mangrove restoration.

1.2 Expected outcomes

At the end of the replanting exercise, the outcomes expected are that:

- The DOPA will appreciate the Importance of mangroves to their livelihoods.
- 5,000 individual pieces of red mangrove seedlings will be planted.
- DOPA will understand the dangers of depleting the mangroves.



Figure 1. Some members of the Densu Oyster Pickers Association (DOPA) in a group pose before the mangrove replanting exercise at the Densu Delta

2. OPENING

The mangrove replanting exercise started with a prayer from Mr Francis Agbeshie, a member of DOPA at about 6.30 am.



Figure 2. Mr. Francis Agbeshie, a member of DOPA and the Densu Delta Com-management committee saying the opening prayer before the replanting exercise

Mr. Abraham Asare of DAA gave the purpose of gathering and explained the essence of the replanting exercise. He emphasized that, the mangroves that they are planting today is critical to the sustainability of the oyster resource that all members of DOPA want. He advised the participants to see themselves as part of the history so that one day their children and grandchildren will thank them for managing the resource well.

He urged the members to be stewards of the mangroves they are planting today, ensuring that the mangroves will be protected to serve its purpose. He thanked them for their hard work during the previous year's replanting and commended them for their dedication towards the restoration of the depleted mangroves sites. "Any time I come to the estuary and the see the growth of the planted mangroves, I remember your hard work and dedication towards this course" he said.



Figure 3. Abraham Asare, the M&E officer of DAA encouraging members of DOPA who participated in the replanting exercise for their hard work and dedication

2.1 Mangrove Importance and Threats

Madam Josephine Nyarko, an officer with the Wildlife Division of the Forestry Commission supported the DOPA with technical assistance on the replanting of the mangroves. She discussed the importance of replanting to restore depleted mangroves.

According to her, activities of those who harvest mangroves for fuelwood and the destruction by “Atidja” fishermen threatens the conservation efforts.

The past, present and future situation for the mangrove areas in the Densu Delta Ramsar sites were discussed. Participants mentioned several species of fish they harvested previously. They therefore agreed that it was important to restore the mangroves.



Figure 4. Madam Josephine Nyarko (with microphone) of Forestry Commission in discussion with participants on the importance of mangrove restoration and conservation before the replanting exercise at the Densu Delta

All participants present came to the conclusion that, the community should be sensitized on the harvesting of mangroves to minimize these threats and help the mangroves to flourish.



Figure 5. A section of the participants who took part in the mangrove replanting exercise paying rapt attention during discussions on the importance of mangroves

2.2 The Mangrove Replanting

The DOPA member had the opportunity to put into practice the knowledge they had acquired from the previous years of training on mangrove nursery and planting with technical guidance from Madam Nyarko.

Mr. Asare led the participants to successfully plant 5,000 seedlings of mangroves by direct planting.

USAID through the Sustainable Fisheries Management Project provided the financial assistance in acquiring the seedlings for planting.



Figure 6. Mr. Abraham Asare of DAA demonstrating how the mangroves propagules should be properly planted



Figure 7. Francis Agbeshie and Promise Huga, members of DOPA clearing some areas before the mangrove propagules were planted



Figure 8. Participants at the replanting exercise, collecting mangrove propagules readying for replanting

2.3 The Replanting



Figure 9. Members of DOPA zealously participates in the planting of 5,000 seedlings of mangroves at the Densu Delta as part of the mangrove depleted sites restoration under the Densu Delta Community Co management plan

3. OBSERVATIONS AND CHALLENGES DURING THE REPLANTING EXERCISE

3.1 Observations

Some key observations were made during the mangrove replanting exercise. These include but not limited to the following:

- The members of DOPA continue to demonstrate their willingness to implement the content of the draft Densu Delta Community Management plan.
- Under the direction of the technical advisor, the participants successfully planted all the 5000 mangroves seedlings.

3.2 Challenges

There were few challenges that were encountered during the replanting exercise. Key among them were:

- It had rained the day before, so the delta was very muddy and very difficult to walk through and plant the mangrove seedlings. To overcome that, some of the participants served as support for others to carry them through some of the muddy areas to be able to plant all the allotted sites as planned.



Figure 10. Despite the difficult terrain, the participants were determined to replant all the 5,000 allotted mangroves seedlings at the Densu Delta as planned

- Another challenge was the inadequate planting tools which slowed down the replanting exercise. There were few cutlasses for clearing some areas of the planting sites which increased the planned allotted time for the replanting exercise.
- To overcome this, most of the clearing had to be done by the males in order to increase the speed of the clearing before planting. Also, some of the participants lacked the proper safety wear such as wellington boots for the replanting exercise.



Figure 11. While some of the participants had wellington boots on (right), others used their bare foot during the replanting exercise

3.3 Monitoring of Planted Mangroves

The opportunity was used to monitor the growth some red mangroves which were planted six months ago. The initial assessment indicate a high rate of survival.



Figure 12. Initial assessment of red mangroves planted earlier on showed signs of improvements and high rate of survival at the Densu Delta restoration site

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Members of the Densu Oyster Pickers Association, as well as the local community acknowledge the importance of mangroves as part of the biodiversity of the Densu Delta and most importantly to the sustainability of the oyster. In this regard, the members have exhibited great sense of ownership of the mangrove restoration exercise at the Densu Delta.

Though reasonable strides have been made in restoring the mangrove population to a healthy level, more work still needs to be done to achieve the overall goal. The leadership of DOPA needs to be strengthened to take the lead in sourcing for local funds to continue with the replanting exercise.

The field work revealed that there is a high potential for restoring the mangroves of the area to improve the fisheries and also livelihood of the local community while playing critical ecosystem services.

4.2 Recommendations

- Members of DOPA should lead the awareness creation campaigns on the need to preserve mangroves to improve the biodiversity of the Delta.
- The planted seedlings should be monitored at the early stages to ensure high rate of seedling survival and also replace seedlings that wither.
- Leadership of DOPA should be strengthened to liaise with local government agencies such as the Municipal Assembly, the Forestry Commission (Wildlife Division) to seek support for collaboration in the restoration process since the Densu Delta forms part of a protected wetland zone (RAMSAR site).

4.3 Departure



Figure 13. Members of DOPA and participants of the mangrove replanting exercise prepare to leave after successfully replanting 5,000 seedlings at the Densu Delta