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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Oyster Culture Training

JUNE, 2018

THE UNIVERSITY OF RHODE ISLAND
GRADUATE SCHOOL OF OCEANOGRAPHY
CRC COASTAL RESOURCES CENTER

Development Action Association

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Citation: Development Action Association (2018). Oyster Culture Training. The USAID/Ghana Sustainable Fisheries Management Project (SFMP). Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island and Development Action Association GH2014_ACT194_DAA. 21 pp.

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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: An Oyster Cultch piloting site under construction at the Densu Delta

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ACRONYMS

CRC	Coastal Resource Center
DAA	Development Action Association
SFMP	Sustainable Fisheries Management Project
URI	University of Rhode Island
USAID	United States Agency for International Development

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1.1 Background

The USAID Sustainable Fisheries Management Project (SFMP) focuses on rebuilding targeted fish stocks through adoption of sustainable practices and exploitation levels. SFMP's partner DAA's role is to engage in advocacy for more women to be perspectives to be included in fisheries management decision making.

One of such initiatives is the Co -Management of the Densu delta, aimed at improving management of fisheries resources in the Densu River. DAA support for the co-management of the delta include building the capacity of the users of the rivers on oyster biology, ecology and management with basic technical information on oyster resource management.

The Centre for Coastal Management at the University of Cape Coast facilitated the training on the cultch of oysters for the Densu Oyster Pickers Association (DOPA) following the water quality monitoring.

1.2 Training Objectives

The objectives of the oyster cultch training are:

1. Provide the pickers with the basic skills in oyster cultch to enable DOPA
2. Pilot the cultch of the species *Crassostrea tulipa* species in the delta,
3. To ascertain the most productive site for spat collection to sustainability of the wild stocks in the ecosystem.

1.3 Training Methodology

To enhance learning, the trainer used lectures, group discussions, audio-visuals, group exercises, role-play and simulation.

1.4 Training Participants

Seventy (70) members of DOPA made up of 84% females were selected for the training.

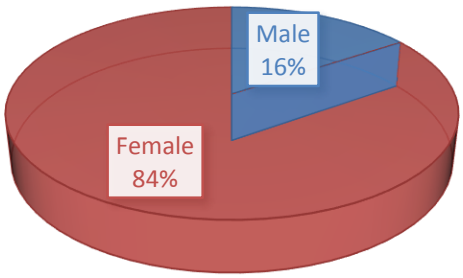

Figure 1. Sex distribution of participants during the training

2.0 TRAINING DELIVERY

The training took 2 days: 1 day for a classroom theoretical session and second day for hands on field demonstrations, on the 22nd and 27th of March 2018 respectively.

The Executive Director of DAA gave the opening remarks and admonished the participants to take keen interest in the culturing of oyster to increase its production and improve their income.

2.1 Day One

The training facilitator led the participants discuss the need for culturing of the oyster species and the ripple impact on the future of the oyster business.

In groups, participants brainstormed on things to consider before starting an oyster farm and present in a plenary.

He also stressed on the importance of site selection; considering factors such as the technological and economic, nature of the species, flow of the river, siltation and levels of environmental factors such salinity, temperature, pH levels and pollution.

According to him, the optimum levels of environmental factors for effective growth should also be considered as well as spat collection procedures, types of materials used in cultch preparation and the best time to set cultches for collection of spat.

The trainer also taught the participants on oyster farm management, harvesting, the need for depuration of harvested oysters, and marketing.

Figure 2. Participants during the theoretical sessions of the oyster cultch training

2.2 Practical Session

The second day of the training was the practical demonstration of the classroom work. This offered the participants the opportunity to demonstrate how to prepare cultch for spat collection on demonstration farms.

Figure 3. Participants prepare oyster cultch to establish pilot oyster cultch

2.3 Oyster Demonstration Farms

In demonstrating to the participants how to set up a demonstration farm, the facilitator introduced them to the types of cultch systems i.e. off bottom and bottom cultch. He showed them how to use the raft technique off bottom cultch and using bamboo sticks to set up a raft.

He then instructed them to set up a 3 by 6 m rafts on the three sites identified during data collection.

The criteria for selecting the sites were that: It should be free of navigational disturbance, in addition, not be too shallow (not less than 0.5 m water level during high tide) or too deep (highest recorded depth is 5m). The raft was then set up for off bottom cultch. Each set up had about 100 cultches suspended for spat collection. The shell planting technique was also used for the bottom cultch where shells were planted in a confined area to enhance production.

According to him, these techniques ensure the maximum utilization of available resources; fortunately, oyster shells and bamboo are available in along the Densu.

Figure 4. Participants establishing the cultches in the Densu Delta

3.0 TRAINING OUTCOME

The participants were grateful to the instructors for the advanced knowledge they had gained in oyster farming. The DOPA members are now willing to work in groups to cultivate their own oyster farms.

This will consequently reduce the over harvesting in the Densu-a good step towards sustainability of the resource.

Faana was identified as a high spat production site during the training, the pickers therefore agreed to close off the area to allow the spats to grow..

Figure 5. Scene of an established oyster cultch in the Densu Delta

4.0 CHALLENGES

The major challenge encountered during the training was inadequate funds. As a result, the spat nurseries could not be transplanted and so the refugia could not be tested.

The DOPA could also not monitor the sites frequently to remove plastics that had lodged in the shells Fresh water spilled from the dams also contributed to the 100% mortality of the spats on the demonstration farm.

5.0 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The training has been very successful despite the challenges faced. The DOPA have gained basic skills in oyster cultching and Faana, has also been identified as a possible refugium for the oyster populations.

5.2 Recommendation

The following recommendations are made based on lessons learned from the training.

- SFMP should support the DOPA members to set up group farms to ensure sustainability the off bottom cultch should be explored as the appropriate technique for oyster farming in the delta.
- There are several factors that impede the production of spats in the Densu, hence farms in the delta require daily monitoring and management for effective production.

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