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***FINAL REPORT ON WETLAND MONITORING ACTIVITIES IN  
YABIW COMMUNITY***

**Coastal Sustainable Landscapes Project**

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## CONTENTS

<b>Fist of Figures</b> .....	2
<b>1. Background</b> .....	4
<b>2. Introduction</b> .....	5
<b>3. Objectives of the wetland Curriculum</b> .....	6
<b>4. Methodology</b> .....	6
<b>5. Findings and Discussions</b> .....	7
<b>5.1. Successes</b> .....	7
<b>5.2. Challenges</b> .....	8
<b>5.3. Lessons learned</b> .....	8
<b>6. Observations, Conclusions, Way Forward, and Recommendations</b> .....	9
<b>6.1. Obseravtion and Conclusion</b> .....	9
<b>6.2. Way Forward</b> .....	9
<b>6.3. Recommendations</b> .....	10
<b>7. Critics on UCC wetland Curriculum</b> .....	10

### **Fist of Figures**

<i>Figure 1 Climate change club members, teachers and members of the yabiw community volunteer group</i> _____	3
<i>Figure 2 Yabiw Wetland-Before replanting of mangroves</i> _____	6
<i>Figure 3 Yabiw Wetland-After replanting of mangroves</i> _____	6
<i>Figure 4 CCC members on a field trip</i> _____	7
<i>Figure 5 CCC members starting mangrove nursery site</i> _____	8
<i>Figure 6 Replanting of mangroves at degraded sites by CCC members.</i> _____	8



*Figure 1 Climate change club members, teachers and members of the Yabiw community volunteer group*

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## ***BACKGROUND & INTRODUCTION***

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### **Background**

The Ghana Coastal Sustainable Landscapes Project (CSLP) is a United States Agency for International Development (USAID) Feed the Future initiative and a U.S. Forest Service-managed intervention being implemented in the six coastal districts of Ghana's Western Region. The project, originally a three-year project (2013-2016) funded with USAID Climate Change monies, was extended initially for another three years through September 2019 with Feed the Future funding, based on successes achieved within the initial phase. It worked to promote low emissions development in Ghana's Western Region by strengthening community-based natural resource management and monitoring, and improving livelihoods in farming and fishing communities.

The project's second phase, under the U.S. government's Feed the Future Initiative, had a specific objective to reduce poverty and increase resiliency in the target communities through improved natural resource management, livelihood diversification, value chain development, and ecosystem conservation and restoration. The project interventions covered 43 core coastal communities with smallholder farmers and fisher folks as the main beneficiaries. In total, project actions of one sort or another had reached more than 82 communities as of early June 2018.

The interventions of the CSLP were guided by two main outcomes: (i) increased incomes from livelihood diversification and, (ii) improved environment and natural resource management. Specific activities included agroforestry and forestry best practices, short- and medium-term livelihood improvement activities (e.g. beekeeping, climate smart agricultural, CSA, vegetable production), on-farm tree planting of commercial and agroforestry species and management of greening areas / urban greeneries. Others included wetland/mangrove conservation, spatial planning, Village Savings and Loan Associations (VSLAs) and youth engagement (via formation of environmental clubs in public schools).

The CSLP used in-field consultations, targeted trainings, strategic capacity building, detailed technical assistance, and participation in institutional/policy level discussions and workshops based on field-level experience to achieve project objectives.

## **Introduction**

Yabiw Mangrove Restoration site (Wetland) form integral part of the Pra estuary and associated wetlands. The area is biologically rich and have diverse ecosystem comprising mangrove forests, salt marshes and swamps. Recent ecological study of the ecosystem revealed that it is bountiful in fish and shellfish.

Majority of fish species spend their juvenile stages of growth in the estuary and wetland, thereby making this ecosystem an important fish nursery and spawning ground. During the later stages in their development, fishes in the Pra estuary and wetland migrate to the marine environment. Consequently, maintenance of the health of the estuary and the associated wetlands are crucial to achieving food security and enhancing livelihoods in surrounding fishing communities. The wetland also provides other functions such as supporting stabilization of the coastline, reducing erosion and buffering against the impacts of flooding on abutting communities.

In addition to its ecological functions, the Pra estuary and wetland have socio-cultural, economic and other ecological values that offer further justification for its conservation. The estuary forms part of an important river transportation system linking the coast and inland areas. In fact, this is one of the most convenient modes of transporting farm produce from riparian farming communities dotted along the river to the coast. The estuary is also important for preserving the cultural heritage of the people of Shama and its environment since it is linked to the celebration of the annual traditional festival of the people.

Prior to wetland monitoring and management, there is ongoing education and facilitation of wetland Curriculum developed by the University of Cape to the Climate Change Club in Yabiw Methodist Junior High School and the community Volunteer group. This is in collaboration with the University of Cape Coast and CSLP. The wetland curriculum is made up of seven training modules; Module one: Nature, types and importance of wetlands, Module two: Ecology of coastal wetlands, Module three: Biodiversity of wetland ecosystems, Module four: Threats to wetlands, Module five: Water quality and invertebrate monitoring , Module six: Fisheries monitoring, and Module seven: Wildlife monitoring The school kids who range in the age 12 to 16 years are exposed to the wetland ecology and how to monitor the wetland to ensure healthy resources for supporting the livelihood of the people. This extendeds to the community members. The education is more focused on the Climate Change Club since the kids are the future pioneers and managers of the Wetland and its significant resources. Also the teachers of the Climate Change Club are taking through the Wetland Curriculum to make facilitation easier for them.



*Figure 2 Yabiw Wetland- Before replanting of mangroves*



*Figure 3 Yabiw-After replanting of mangroves*

### **Objectives of the Wetland Curriculum**

- To create awareness among students and local communities on the importance of wetlands.
- To develop capacity of students and communities to monitor and assess the health of coastal wetlands.
- To inculcate in communities and other stakeholders the need for the protection, conservation and restoration of wetlands.

### **Methodology**

Classroom teaching and learning method was used since the Climate Change Club members are all student in the Yabiw Methodist JHS (1, 2&3) and a total of 70 members (41Males + 29Females) with 3 club teachers ( 2Males+ 3Females).The wetland curriculum was taught in accordance to the modules. Quizzes and examinations were organize after each module to assess and test the understanding of the club members on the module treated. Some portions of the modules calls for practical observation and studies. Due to this, the club members are often taken on study tours and field trips to observe what is being taught in the module. This throws more light and insight on the module treated.

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## *FINDINGS AND DISCUSSIONS: SUCCESS, CHALLENGES & LESSONS*

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### **Findings and Discussions**

#### **Successes:**

- Modules 1 – 4 have been completed. The excellent performance of the club members in Quizzes and examinations that were organized under these modules clearly shows the vivid understanding of the club members in the modules.
- ToT on the Module 5 – 7 was organized for the teachers of the Climate Change Club to make facilitation easier for them.
- Three field trips (study tours) were organized for the club members. First field trip was to the Shama estuary (2017) and Yabiw mangrove site for practical observation of what is taught in the early modules about estuaries and the type of mangrove species. The second and third field trips was to Fosu lagoon at Cape Coast and Benya lagoon at Elmina. This was to help the club members to observe and tell the difference between a Close lagoon (Fosu lagoon) and Open lagoon (Benya lagoon), identify and list some of the Fauna and Flora species present at the lagoons, use the water quality checker to measure the various water quality parameters that affects water and identify and tell some threats to the wetlands.



*Figure 4 CCC members on a field trip*



- The club members were able to establish a mangrove nursery of 563 mangrove propagules and of which 350 nursed mangrove propagules were planted successfully by the club members with help from some members of the Yabiw community volunteer group.



Figure 5 CCC members starting mangrove nursery site.

Figure 6 Replanting of mangroves at degraded sites by CCC members.

- The club members also organized two consecutive general cleanings exercises in the community. Most parent where happy to see their wards helping to clean the community. This also motivated most of the parent and other community members to join in the clean-up exercises.

### Challenges:

- Most of the days scheduled for club meetings are taken over by school activities related to the Ghana Education Service Activity Calendar.
- Repetition of Wetland Modules due to the arrival of new members into the club, that is, new student from the primary school that have moved to the JHS and are willing to join the club.
- Short time for the wetland module facilitation and due to this, the maximum coverage if the modules are delayed and its reduces the efficiency and effectiveness of the wetland facilitation,
- Chieftaincy conflict in the Yabiw community led to the inability to work effectively with the community volunteer group for a period since most of the members of the group were involve in the conflict.

### Lessons learned:

- There are high probability that, the knowledge of wetland monitoring and conservation impacted to into the future generation will have great importance in the near future.
- Strong linkage between livelihood and conservation impact conservation positively.
- Gaining integrity and respect of stakeholders and community members is important for success.
- Know the extent (size) of the conservation area measurement is key to management.



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## ***OBSERVATIONS, CONCLUSION, WAY FORWARD & RECOMMENDATION***

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### **Observations, Conclusion**

It can be concluded that the CSLP in collaboration with UCC has contributed its quota to promote the idea and knowledge on the wetland, its importance and the conservation and management of its resources to the Climate Change Club members and the Yabiw community members as a whole. The CSLP has made significant impact in the lives of the beneficiary community members and their dependents. Teachers, students and community members have appreciated and realized the importance of wetland, its resources the necessity to conserve and manage it for the good of the present and future generation. As students gain a greater awareness of the role on the importance of wetland monitoring, conservation and management practices, it is expected they grow to become responsible citizens who support wise wetland conservation and management policies. In the Yabiw community and other catchment communities around the wetland, the awareness on the impact importance of wetland and its resources being a great source of livelihood has been well established. Community members and students (Club members) who work more around the wetland and depend solely on it as livelihood are pleased with the wetland acting as buffers and preventing flooding in their farms, also they spoke about the huge income they get from selling some of its resources such as periwinkles, fishes, and crabs. These they said, has aroused their interest in the conservation and management practices introduced by CSLP through the Club members and community volunteer group. The community volunteer groups and the Climate Change Club formed to help champion the course are doing their best but can do better.

### **Way forward:**

The facilitation of the rest of the wetland module, that is, Module 5-7 by the club teachers will continue with the Climate Change Club (CCC) and there will be regular monitoring and maintenance of the mangrove restored site by the CCC members and members of the Yabiw community volunteer group.

### **Recommendations:**

**CCC members should be grouped:** The club members who have already been taken through most of the Wetland modules should be separated from the fresher's that are joining the club. The old members should be in one classroom and the new members should also be placed in another classroom and each group should be handled by a different club teacher. This will help solve the issue of constant repetition of the modules.

**Increasing the number of hours and days for the club meetings:** The time and the number of days for the club meetings should be increased. This will help increase the efficiency and effectiveness of the wetland module facilitation and leading to more coverage of the aspects and sections of a particular module within the time frame. Weekends, that is, Saturdays should be included in the club meetings to help cover up the days taken up by the school's schedules and activities.

**Intensive education in the communities:** There should be intensive awareness creation and education on the wetland and its importance, conservation and management activities more to the nearby communities that also have access to the resources in the Yabiw wetland.

### **Critique on UCC wetland Curriculum:**

- Insufficient picture illustrations on the biodiversity of wetlands (Module 3).
- No sample graph illustrations on the length-weight relationship under fisheries monitoring (Module 6).
- Less information on wildlife monitoring around wetlands (Module 7).
- No information on mangrove nursery establishment and mangrove restoration.