Project Update: April 2019

Project Area
The Keta Lagoon Complex Ramsar Site (KLCRS) was established as a wetland protected area or Ramsar site on 14 August 1992. It is located within the South Tongu, Akatsi South, Ketu South and Keta districts of the Volta Region of Ghana. The KLCRS has an area of 101,022.7 ha which covers part of the Volta River estuary. The lagoon area of 30,000 ha is fringed by numerous settlements.

In addition to the mangroves that are globally threatened, the KLCRS contains a number of unique animal species that are relevant for conservation. Seventy-six migratory and resident water bird species, including 21 globally significant species, numbering over 100,000 are found in the KLCRS. The vulnerable West African manatee or seacow (*Trichechus senegalensis*) and the West African sitatunga (*Tragelaphus spekii*) — a swamp-dwelling antelope which is categorised as least concern species by IUCN — have been spotted in the KLCRS before.

Project Site
This pilot project is being implemented in Agbatsivi, Salo and Agortoe communities in the Keta Municipality.

Project Background
Overexploitation of mangroves for fuelwood and mangrove conversion to other land uses has aggravated climate change impacts (coastal erosion and floods) in the KLCRS. Interventions have focused on mangrove restoration and community education on their conservation values. Nonetheless, fish processors and households do not have alternative fuelwood sources. Consequently, mangroves are continuously degraded.

In addition to education and awareness creation, this pilot project seeks to identify and train mangrove harvesters and community groups to establish and sustainably manage woodlots made of fast-growing coppiceable species (*Senna siamea*) to supply households and fish processors with fuelwood and restore mangroves and their ecosystem services. Mangrove forests are crucial to protect coastal communities from sea-level rise and storms, and provide other benefits such as carbon sequestration and habitats for marine species.

Project Contribution
This pilot project is aimed at contributing to;

1. Restoration of the mangrove ecosystems in the KLCRS to provide ecosystem services to benefit the communities within the KLCRS.
2. Awareness creation in communities on the ecosystem services provided by mangrove ecosystems (especially flood regulation) and the need to conserve the ecosystems; and alternative sources of fuelwood (*Senna siamea*) for fish processing and use in households.
3. Provision of sustainable alternative sources of energy (fuelwood) to reduce pressure on mangrove ecosystems.

Implemented Activities in Third Quarter of the Project

Project activities in the third quarter included seedlings production, mangrove ecosystem and ecosystem services restoration, and education and awareness creation.

- **Seedlings Production**

Two nurseries have been established in the Agbatsivi and Salo communities to produce *Senna siamea* seedlings and white mangrove seedlings. Over 5000 pieces of used drinking water (plastic) sachet littered around the communities were collected and used as polypots for raising the seedlings, and to contribute to alleviation of the plastic menace. So far, 3400 *Senna siamea* seedlings and 1000 white mangrove seedlings have been raised at the Agbatsivi community nursery whereas 2000 *Senna siamea* seedlings have been raised at Salo community nursery.

- **Woodlot Establishment**

In the last quarter, it is expected a demonstration *Senna siamea* woodlot will be established with community members in Agbatsivi community and the rest of the *Senna siamea* seedlings given out to community members and participants of the demonstration woodlot establishment to establish their woodlots or plant in their communities and households.

- **Mangrove Restoration**

In this quarter, 4300 red mangrove (*Rhizophora racemose*) propagules were collected and planted directly on degraded muddy or partially flooded sites in the Agbatsivi community. The red mangrove propagules are viviparous and already develops a sprout on the mother tree, making it suitable for direct planting.

In the next quarter, it is expected that about 1000 white mangrove seedlings and collected wildlings will be planted.

- **Education and Awareness**

The audio message recorded in local language on conservation values of mangroves and alternative sources of fuelwood was played on Jubilee Radio in Keta. This has helped the project to get good reception from the communities who held the view that mangroves serve as breeding grounds for mosquitos and did not encourage its planting. Through the audio message and direct interactions with community members and opinion leaders, the Agbatsivi community provided degraded areas for planting and a local chief and some fifteen community members have been involved in the planting of the mangroves.

Conclusion

- A total of 5400 *Senna siamea* seedlings have been raised at two nurseries established at Agbatsivi and Salo communities. A total of 1000 white mangrove (*Avicennia germinans*) seedlings have been raised at the Agbatsivi community nursery.
- In the next quarter, a demonstration *Senna siamea* woodlot will be established at Agbatsivi community and the rest of the *Senna siamea* seedlings given out to interested community members and demonstration woodlot project participants to establish their own woodlots or plant in their communities and households.

- So far, 4,900 red mangrove (*Rhizophora racemose*) propagules have been collected and planted directly at Agbatsivi. About 1000 white mangrove seedlings and collected wildlings will be planted in the next quarter.
- Audio message was played on Jubilee Radio in Keta to educate communities within the KLCRS on conservation values of mangroves and alternative sources of fuel.

Left: Senna siamea nursery at Salo community. Right: Senna siamea nursery at Agbatsivi community.

Some community members collecting red mangrove propagules in Agbatsivi community.

Some community members planting mangrove in degraded landscapes in Agbatsivi