



GEF-Satoyama Subgrantee Highlights Report

Organization Name:	FIDES
Country:	Ecuador
Reporting Quarter:	FY18 Q4 (April to June 2018)
Person submitting Report:	María Dolores Vera

<Highlight 1>: **1.1.1.5 Repopulation and monitoring of blue crab (*Cardisoma crassum*) and black shell (*Anadara similis*, *Anadara tuberculosa*). Shell repopulation in 3 areas for the purpose of seed production and recovery of black shell in the Rio Chone estuary and in the Portoviejo River estuary.**

Black shell¹ (*Anadara tuberculosa* and *Anadara similis*), is one of the most important mollusks that are part of food sovereignty of people of the Mangrove ecosystem, and it used to be one of the main incomes for families in the estuaries. However, shrimp industry activities, river pollution, loss of habitat and inadequate management of the ecosystem contributed to the near extinction of these two species in the estuaries.

Against this, FIDES submitted to the Czech Republic Development Cooperation the project “*Encouraging the revival of artisanal fisheries shell and community tourism that contribute to the recovery of livelihoods in 3 rural communities affected by the 2016 earthquake in Manabí*”. Repopulation of black shell in captivity is focused to decrease the current number of catches of wild shells and to implement a sustainable commercialization according to the allowed sizes.

To carry out shell repopulation, the following activities were previously developed:

- Bacteriological analyses were conducted to shells from Chone River Estuary and Puná Island (Guayas), in the framework of an agreement with the Technical University of Manabí, providing favorable results for the sanity of the specimens (Appendix 1 and 2).
- Water analyses were undertaken to determine parameters such as salinity, pH, dissolved oxygen and temperature, with the aim of determining healthy conditions for the specimens. All results were favorable to the wellbeing of the shells.
- Also, water analyses were undertaken in the places where shell repopulation was defined to be carried out, in order to identify the disposability of phytoplankton that will ensure the food supply for shells. Results were also positive as there is a considerable richness of phytoplankton species required for the shells’ diet, in both estuaries.
- Several visits to the estuaries of El Churo, Cojimíes Parish, Pedernales Canton, north of Manabí Province, as well as to the Balao Parish, Balao Canton, Guayas Province; in these sites the shells’ suppliers were established to obtain the genetic material required to the repopulation.
- Five families in the Chone River Estuary and 12 families in the Portoviejo River Estuary were identified after several meetings in the communities

The first shell-seeds planting was carried out on June 15th, since until May, it was raining on the high areas of the river basins. Even though they were isolated rains, they did not allow to reach the values of water salinity required for the survival of *Anadara tuberculosa* and *Anadara similis*.

Ten families from the Portoviejo River Estuary received 1350 specimens, of a total of 2500, which is the total number that will be delivered to each family. Families of the Chone River Estuary received 3820 individuals. In a second stage

¹ *Anadara tuberculosa* and *Anadara similis* are two species commonly identified by local people as “concha prieta” (black ark or black shell), as they share morphologic features. They are also usually found together within the Mangrove forest.

that will take place during July, the remaining amount will be delivered. This activity will continue to be executed in the following quarter.

There was developed a document called “Captive breeding of Black Ark (*Anadara tuberculosa* – *Anadara similis*) in the Estuaries of Portoviejo and Chone Rivers to strengthen communitarian traditional livelihoods”. This document, which is the technical guide for the execution of the project, was submitted to the Ministry of Environment at the end of April in order to obtain the research permit, and the permit was issued on June.

After a pilot carried out in the Estuary of the River Chone where shells were produced in cages, the experience was not good since most of the production was stolen. After a deep research on past experiences in Esmeraldas Province (Muisne Island), it was concluded that the best method is the production of shells in farmyards within the mangrove forest, in an effort to not disturb natural conditions of breeding. For this reason, shells will be grown in farmyards that do not allow shells to migrate to other places within the mangrove; also, each family will own a number of farmyards, this will encourage them to personally take care of the production since the benefits will go directly to them. Density of seeds corresponds to 20 shells per each square meter, consequently it is required an area of 125 m², that hosts 2500 shells per family.

Monthly monitoring of shells will start on July, 2018.

<Highlight 2>: 1.1.1.1 Active participation of communities in the implementation of management plans of protected areas in the two and permanent control of conserved areas. Legal constitution of the Intercommunity Committee of the Portoviejo River Estuary.

One of the first steps to undertake the legalization of the protected communal area is to constitute and legalize the organization that will manage the area. For this reason, on May 16th it took place an intercommunity assembly for the legal constitution of the Intercommunity Committee of the Portoviejo River Estuary, an organization that will represent the four communities in the governance and management of the protected area before the Ministry of Environment. 60 people from the four communities approved the statutes of the organization. At the moment, a land tenure analysis is being held by the Autonomous Governments of the parishes where the area is located, to determine that there is no overlapping with private lands.

Photos



Photo 1. Sampling of parameters in water such as pH, dissolved oxygen, and temperature. Credits: Kevin Reyes, FIDES.



Photo 2. Meetings with members of Las Gilces and San Jacinto communities to organize shells repopulation. Credits: Andrea Calispa, FIDES.



Photo 3. Shells delivered to people in Las Gilces community. Credits: Jairo Díaz, FIDES.