Annex 2: Report of conclusion of IPSI Collaborative Activity

The following form is for use in reporting the conclusion of an IPSI Collaborative Activity. Please fill out this form when the Collaborative Activity is finished and submit to the IPSI Secretariat (isi@unu.edu).

Project title:
Improvement of the livelihoods of the communities through the sustainable management of productive landscapes and biodiversity conservation in mangrove (Estuaries Chone and Portoviejo), the dry forest (Cordillera del Balsamo) and rainforest (Comune Playa de Oro).
Actual term *(e.g. 1 January 2014 – 31 December 2015)*:
1 September 2016 - 31 December 2018
Please provide a description of the activities and its outputs and/or outcomes below:

COMPONENT 1: SOCIO-ENVITORNMENTAL

The main results are:

- 13.4 hectares were reforested with mangrove trees in both estuaries.
- 19.3 hectares of reforested dry forest in El Balsamo Cordillera.
- 23,000 red mangrove plants have been produced in the nursery for later reforestation.
- 1200 hectares of mangroves, 330 hectares of dry forest and 7,000 hectares of rainforest are conserved and sustainably manage by community organizations and private owners.
- 3 Youth Groups empowered in the conservation of the mangrove ecosystem.
- A total of 45,400 black shell were seeded in the two estuaries; the monitoring conducted in December confirmed a mortality rate in the black shell population of 40% in the Rio Portoviejo estuary and population growth of 59% in the Rio Chone estuary.
- 1000 m long of channels were cleaned. However, in the Chone river estuary it was not possible to recover all the channels, and those channels that were not recovered actually developed the conditions for the repopulation of blue crab.
- 2 areas of rice fields were seeded with 1200 juvenile chame fish and 3 areas of mangrove forest repopulated with 15.000 shells, of a total of 45.000. In regard to crabs, a last repopulation of 215 blue crabs (*Cardisoma crassum*) was carried out.
- 8000 plants of the following species: seca, algarrobo (*Ceratonia siliqua*), balm (*Myroxylon pereirae*) guayacán (*Tabebuia chrysantha*), guaba (*Inga edulis*) dormilones (*Mimosa púdica*) and guachapelí (*Albicia guachapele*), were produced in the nursery in the dry forest; in the case of ovo (*Spondia purpurea*), the plant material is obtained from plant cuttings that are acquired. 1454 plants were sowed in the El Balsamo Cordillera.

COMPONENT 2: SOCIO-PRODUCTIVE

Sal gourmet:

- Rehabilitation of salt pits with a lower degree of contamination with the use of bacteria, decontamination and definitive closure of salt pits with a higher degree of contamination.
- Results of the laboratory tests of the different parameters analyzed determined that salt is suitable for human consumption and therefore it is possible to insist on the production of gourmet salt.
- The Association of Salt Producers (ASPROSAL) in the process of organizational strengthening, have a new board, performing their functions, holding meetings and assemblies in accordance with the statute and regulations.
- In partnership with the Universidad Laica Eloy Alfaro de Manta, two documents were elaborated to improve the quality of salt production processes: A manual on the operative and administrative quality management system, where all procedures have been defined according to the international standard ISO 9001: 2015. A system was also developed for identifying and controlling hazards in the production of salt for human consumption. In addition, ASPROSAL members have been trained in the use and implementation of these manuals.

- A document of the business plan with emphasis on the issue of markets was ellaborated.
- The contacts with the LUSH Company are maintained as a potential partner in the international market.

Tourism:

- 42 dining cabins were built on the edge of the beach of the community of San Jacinto, which were opened on December 16th, 2017. An ecological path within the mangrove along with the group of young people from Las Gilces community was built
- A digital campaign in the Portoviejo and Chone Rivers Estuaries was launched on the "Turismo en los Estuarios de Manabí" website. It broadcasted touristic activities (gastronomic festivals and tour packages) for both estuaries.
- Elaboration of three videos and two posters to promote community tourism and conservation efforts mangrove species.
- Engagement of the provincial government of Manabí to support the elaboration of the 2 promotional videos and to support a gastronomic fair in the beach of San Jacinto (Portoviejo River estuary).
- Training in bartendering and gastronomy were undertaken in cooperation with CRISFE (a productivity foundation from Pichincha Bank)
- 35 families of 2 community organizations from the Portoviejo River Estuary trained in gastronomy and basic accounting. This qualification consists of 7 workshops and 2 individual counseling sessions. It started in December 2018 and it finalized in January 2019.

Cocoa:

- The quality of cocoa is being improved with a better drying system.
- 1 cocoa processing machinery was acquired consisting of:

  . cocoa grain toaster (1/2 HP reducer motor, 20 kg capacity, 304 stainless steel)
  . cocoa peeler (1/2 HP electric motor, 60 kg / hour capacity, in 304 stainless steel)
  . cocoa mill (1 HP electric motor, 60 kg / hour capacity with base, hopper and discharge of 304 stainless steel)
- Four members of Playa de Oro were trained by INMEGAR factory (where the machinery was built).

COMPONENT 3: EDUCATION – SENSITIZATION

- 1498 children from 19 schools from levels 6 and 7 have improved knowledge and established the basis for the commitment to care for the mangrove ecosystem.
- 42 individuals participated in the process of educating and training of community leaders. 30 successfully completed it and received a certification in a graduation event.
- 202 members of 4 community organizations participated on the replication of the training process on the Adaptation to Climate Change Based on Ecosystems Module.

Please attach additional pages as necessary.