Environmental Leadership & Training Initiative

**COURSE REPORT**

# Rainforestation Training for Climate-Resilient Recovery

**Salcedo, Eastern Samar, Philippines**
**April 15-16, 2016**

**A field training organized by:**
Environmental Leadership & Training Initiative (ELTI)
Institute of Tropical Ecology & Environmental Management of the Visayas State University (ITEEM-VSU)
Eastern Samar State University (ESSU)
Local Government Unit of Salcedo (LGU-Salcedo)

**Background:** On November 8, 2013, one of the strongest tropical cyclones ever recorded hit the central Philippines. Super typhoon Haiyan (known locally as Yolanda) wreaked havoc particularly on Eastern Samar and Leyte provinces, causing over six thousand casualties and billions of dollars in damages. International and local aid agencies immediately focused on relief operations to provide the basic needs of the 4.1 million people displaced by the disaster, including temporary shelters, clean drinking water, food assistance, medical supplies and sanitation facilities. Rehabilitation efforts followed with the rebuilding of homes, roads and other critical infrastructure.

ELTI is an initiative of: Yale School of Forestry & Environmental Studies in collaboration with: Smithsonian Tropical Research Institute


One of the main sources of income in this region is coconut production, being the second highest coconut-producing region in the country, with almost 270,000 hectares just between Eastern Samar and Leyte. The typhoon damaged an estimated 33 million coconut trees, with 13 million totally destroyed in the two provinces alone. This has greatly impacted over a million coconut farmers who are already among the poorest and most vulnerable in the country. Some of the farmers have replanted their lands with coconut seedlings provided by aid groups and the national coconut agency, however, they still need to wait six to eight years for the trees to become productive. In the mean time, intercropping with vegetables and fruit trees is being promoted for subsistence and short-term income generation. In other areas, land is being abandoned or sold due to a lack of capital to rehabilitate the areas.

Rehabilitating natural ecosystems is crucial in post-disaster recovery to support human livelihoods and to sustain the delivery of ecosystem goods and services, including a steady supply of water and protection from future extreme weather events. This is an integral part of a climate-resilient recovery strategy, where communities are not only provided with assistance to recover from climate change events but are also equipped to deal with future disasters better. The destruction of many of the region's coconut monocultures, in particular, provides an opportunity to rehabilitate the watersheds in such a way that not only supports local communities' agriculture and forest-based livelihoods, but that also preserves biodiversity and provides a more optimum supply of ecosystem services.

Realizing the need to address this gap in the rehabilitation efforts, ELTI and ITEEM-VSU designed a training program aimed at rehabilitating the damaged watershed areas in Eastern Samar and Leyte, while at the same time, augmenting the current farming system in the surrounding areas using the Rainforestation approach – a participatory, native species-based reforestation/agro-forestry strategy developed by VSU and the German Society for International Cooperation (GIZ, formerly GTZ) in the early 1990s. This training series is intended to serve as a modest yet concrete contribution to the long-term initiative to '*build back better*' in the region.

**Objectives:** The specific aims of this training course were as follows:

1. To provide participants with a solid understanding of the principles of Rainforestation and its application in different ecological and social contexts;
2. To provide participants with a basic understanding of forest ecology and natural succession, and an array of restoration strategies;



3. To guide participants through the planning (watershed rehabilitation and farm plan) process based on site-specific factors and user needs;
4. To teach participants through hands-on, experiential learning, the process and practice of establishing a Rainforestation site; and
5. To foster an exchange of experiences, lessons learned and best practices for applying Rainforestation in watershed areas.

**Course Format:** The training was planned and conducted in collaboration with Mr. Danilo Duran, the Municipal Environment and Natural Resources Officer of Salcedo, and Mr. Jovino Padullo Jr., a teacher and extension worker from ESSU – both of whom are alumni of the Rainforestation Trainers' Training Program of ELTI and ITEEM-VSU. Prior to the training, the ITEEM-VSU team, together with Mr. Padullo and Mr. Duran, met with the identified local People's Organization, the Farmers Entrepreneurs Association (FEA), to discuss their needs and motivation, as well as their capacity and commitment to engage in the rehabilitation efforts. FEA recently purchased approximately 4 hectares of land in Barangay Iberan, which they plan to develop into an agro-ecosystem. Recognizing the importance of a sustainable water source to support their livelihoods, FEA was willing to dedicate a portion of their land in the water catchment area for restoration. After the target area had been determined, the group set out to survey the area and do an initial assessment of the vegetative cover and the soil conditions. This was to ensure that the choice of species to be planted would match the site conditions. The collected data were analyzed by ITEEM-VSU and Mr. Padullo and incorporated into the training program.

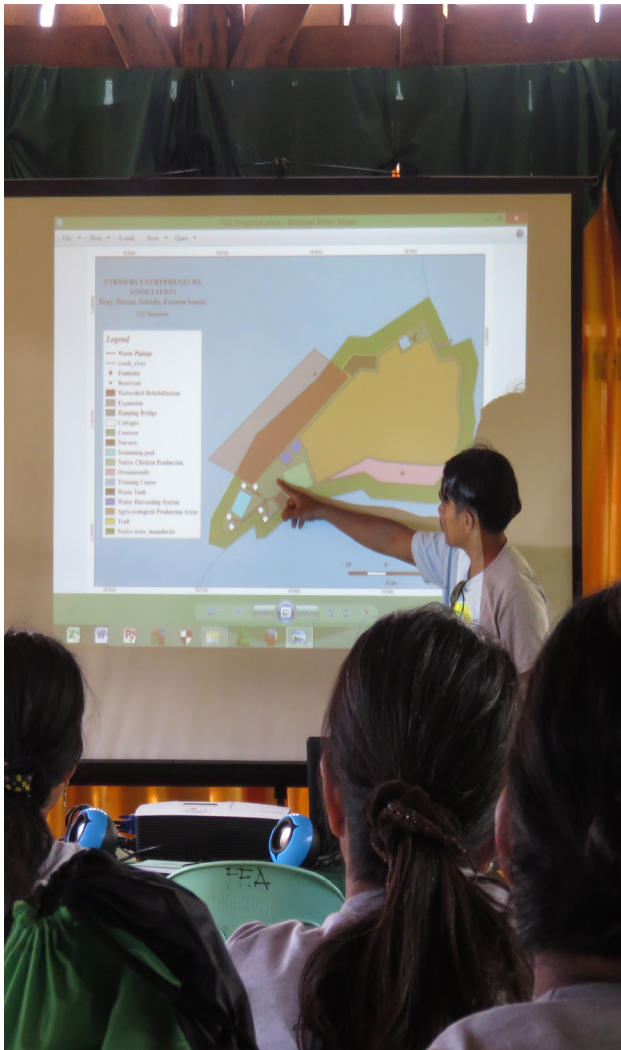
**Day 1:** The training opened with remarks by Mr. Luis Bayarong Jr., the President of the FEA-Iberan chapter, who reminded the group of the objectives of the training, while leveling the expectations of the members. Dr. Marlito Bande (VSU) provided an overview of Rainforestation, outlining the history and principles of the approach, the need to restore the Philippine forests and biodiversity, and the opportunities and constraints to developing community-based Rainforestation sites. Dr. Edwino Fernando (University of the Philippines-Los Baños) then gave an introduction to basic forest ecology as a primer to ecological restoration, touching on concepts such as ecosystems, ecosystem functions and services, forest succession, and plant life strategies. Dr. David Neidel (ELTI) followed with a presentation on different restoration approaches that can be adopted based on the level of degradation and on critical site and landscape thresholds. He shared case studies on Assisted Natural Regeneration, the Framework Species Method, the Samboja Lestari case, and Rainforestation, underlining each method's appropriateness for specific ecological and social contexts and management objectives. Mr. Padullo

then focused the discussions on the FEA site by presenting the results and analysis of their assessment, and providing valuable input on the watershed rehabilitation strategy.

For the afternoon session, the participants were divided into four teams – agro-forestry, aquaculture and animal husbandry, infrastructure, and watershed rehabilitation – to deliberate on how they envision their team's agenda being integrated into the development plan of their property. Each team was given a map of the area, was asked to illustrate their plans on the map, and then present their land use management map to the whole group for feedback. The ITEEM-VSU team consolidated the maps into a GIS format for more accurate scale and positioning, while Dr. Bande and Mr. Bayarong facilitated further discussion on the restoration plan to prepare for the next day's planting activity.

**Day 2:** The day started in the community nursery, where all the participants lined up to collect 10 seedlings of a particular species. ELTI and VSU contributed quality seedlings of native dipterocarp and pioneer species to jumpstart the restoration initiative and process. After a short demonstration on how to properly handle the seedlings during hauling, everyone proceeded to the restoration area. Dr. Fernando referred to different plants during the hike, talking about their dendrology, life strategy and ethnobotanical uses. He recommended native species for cultivation in their agro-forestry area and ornamental garden. Upon reaching the site, Dr. Bande showed the correct way of planting and reiterated the importance of site-species matching, assigning the participants to plant near the stream or up the slope based on the species they were carrying. The planted area was geotagged for monitoring purposes. Surrounding areas were also visited to assess their potential for restoration, including some 90 hectares currently owned by the Philippine Boy Scouts.

In the afternoon, Dr. Bande presented the consolidated GIS map for comments and fine-tuning. During the lively open forum that ensued, Mr. Duran emphasized the critical role of water in all their planned activities and reminded the group to consider and address this issue first and foremost. Mr. Bayarong rallied the members on to be responsible farmer entrepreneurs, pointing to the fact that their livelihoods are dependent on a healthy environment. The group started to discuss how to enjoin the owners of the surrounding areas to participate in the rehabilitation of the watershed as well. Ms. Hazel Consunji



(ELTI) then briefly talked about the ELTI Leadership Program as an opportunity for FEA to access follow-up support for their rehabilitation plans. Ms. Consunji and Mr. Duran provided the final remarks, both saluting FEA's commitment to sustainable development and assuring them of their organizations' continued assistance to this initiative. As a response from the participants, representatives from different FEA chapters expressed their heartfelt gratitude and pledge to follow through with their plans. The training ended with a course evaluation and awarding of certificates of participation.

**Participants:** The training was attended by 36 members of FEA from different chapters representing different barangays or villages, and three representatives from the Local Government Unit of Guiuan, the neighboring municipality, including Ms. Concesa Abuda, who is also an ELTI alumna.

**Follow Up:** The members of FEA will protect the restoration site and expand it, while Mr. Duran and Mr. Padullo will monitor their progress. Given the scale of the effort needed to rehabilitate the region's watersheds, there were suggestions for a landscape-level mapping and planning exercise to better identify restoration opportunities and prioritize interventions. Although VSU might be able to take the lead in this assessment process, ELTI has also begun discussing with the United Nations Food & Agriculture Organization's Asia-Pacific office about potentially piloting a forest landscape restoration assessment in this region (i.e., Eastern Samar and Leyte) as part of a national assessment that they are planning to undertake in the near future. Meanwhile, ELTI and ITEEM-VSU are exploring opportunities with alumni and local partners in the region to replicate this training and develop additional restoration sites, working with the municipality of Guiuan next.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