Environmental Leadership & Training Initiative

COURSE REPORT

CERTIFICATE PROGRAM FIELD COURSE: CONSERVATION, RESTORATION, AND SUSTAINABLE USE IN PRACTICES

June 4–10, 2023

A course organized by:
Environmental Leadership & Training Initiative (ELTI),
Forest Foundation Philippines,
Institute of Tropical Ecology & Environmental Management of Visayas State University (VSU-ITEEM),
and Restoration Initiative for Sustainable Ecosystems (RISE)

Group photo of participants and organizers

Background: The Philippines is one of 17 countries identified by Conservation International as megadiverse. Much of the country's forest, however, has been cleared by logging and for conversion to agriculture. To address the resulting loss of ecosystem services, the country's government is using an array of strategies, including protected areas, community-based forest management, and reforestation. The results have generally been disappointing. ELTI has been working with Visayas State University (VSU) to change the dominant conservation and restoration paradigm through a strategy known as rainforestation, which uses

Participants discussing the importance of soils in a restoration site

native tree species for restoration and works with land managers to ensure that the trees are meeting both economic and ecological objectives.

Over six days, alums from the Tropical Forest Landscapes online certificate program deepened their understanding of tropical forest ecology by visiting a Key Biodiversity Area, learning about the origins of rainforestation, visiting demonstration sites, conducting a site assessment, propagating forest tree species, helping develop a rainforestation site, and learning about ongoing research and applied conservation and restoration efforts. They learned how the rainforestation process addresses complex land tenure and other governance challenges. Participants also interacted with local government officials, community members, and other stakeholders who have implemented rainforestation to understand their motives and experiences.

This course was held at ELTI's training landscape in Leyte, Philippines. ELTI's training landscapes provide experiential, place-based learning opportunities designed to facilitate engagement and support the retention and application of knowledge.

Objectives:

- To provide insights into the complexities of forest conservation, restoration, and sustainable use in the Philippines
- To teach participants the process and practice of establishing a rainforestation site and native species nursery through hands-on, experiential learning
- To foster an exchange of ideas, experiences, lessons learned, and best practices in forest conservation, restoration, and sustainable use

Identifying native seedlings during a site assessment in a new restoration area

Lunch break

Tree planting activity with school kids

Program

Arrival Day: Welcome

Organizers picked up most participants at Tacloban City Airport and made the two-hour journey to VSU. Other participants who had transportation problems or had made other arrangements arrived later. Participants checked into their accommodations at the VSU Apartelle and attended a welcome dinner where they were greeted by VSU President Edgardo Tulin, VSU Extension Office director Antonio Abomo, and the course organizers.

Dat 1: Introduction to Philippine biodiversity, conservation, and restoration

The course started with opening remarks by David Neidel, ELTI's global strategy advisor; a discussion of participants' expectations by Adelina Carreno (VSU volunteer); and a couple of short introductory presentations. Joy Compendio, ELTI's Philippines coordinator, gave an introduction to biodiversity in the Philippines, forest types, major land uses on Leyte, and problems with conventional reforestation. Angelita Orias, instructor at VSU Institute of Tropical Ecology and Environmental Management (VSU-ITEEM), then gave an overview of the establishment, development, and dissemination of the rainforestation approach. After lunch, participants traveled to the VSU-ITEEM nursery area, where they visited the Rainforestation Knowledge Center, heard an introduction to VSU-ITEEM's research on *Aqualaria* spp, visited the new VSU Zonal Center for Biodiversity Conservation and Habitat Restoration, and visited the original rainforestation demonstration site. Unfortunately, a visit to VSU-ITEEM's agroecology demonstration area had to be curtailed due to an intense rainstorm. Participants then visited two rainforestation sites: Patag, where they met the landowner and the president of the local

Watering newly planted seedlings

people's organization that had developed the site, and Marcos, where they met with owner Manuel Posas, who discussed the establishment and management of his rainforestation site.

Day 2: Rainforestation Site Assessment and Assisted Natural Regeneration

Participants departed early to visit Bago, a barangay (brgy.) in the municipality of Bato, approximately two hours south of VSU. An ELTI alum is working with local community members interested in restoring the watershed to develop a new rainforestation site on six hectares of an 11-hectare piece of land. Working in two teams, participants conducted a site assessment in which they identified the disturbance factors affecting the site and the number and diversity of seedlings to determine how many trees would need to be planted. Kenneth Oraiz and Cecille Marie Quiñones, both from the VSU Department of Soil Science, used soil pits to discuss the soil characteristics of the site. Participants reported their findings and then discussed the plans for the site with the family that owns the site and local officials. After lunch, participants received an introduction to assisted natural regeneration (ANR) and had the opportunity to try flattening grasses from around existing trees seedlings using a specially designed pressing board—a frequently used ANR technique.

Day 3: Nursery Establishment and Seedling Production

Participants traveled to the municipalities of Abuyog and Silago, located in central and southeastern Leyte, respectively. Along the way, they stopped at a landslide area in Brgy. Mailhi, Baybay City, where more than 20 people died during Tropical Storm Megi (known in the Philippines as Agaton) in April 2022. Marlito Bande, associate professor at VSU-ITEEM, discussed how coconut monocultures exacerbate landslides and showed participants an adjacent rainforestation site where VSU-ITEEM used deep-rooted native tree species to mitigate

Participants learning how to process Manila hemp fibers

Presentation of new monitoring technologies

ELTI Alum Jesus Felipe Subingsubing discussing the integration of native trees into his farm

the landslide danger. Participants then traveled to Brgy. New Tanguile in Abuyog, where Dr. Bande discussed a research project being conducted in collaboration with a local farmer on the promotion and conservation of *Aquilaria*, a group of species that produce agarwood in response to a fungal infection. The researchers propose the domestication of *Aquilaria*, an expensive commodity, and its integration into rainforestation as a substitute for the illegal practice of harvesting it from the wild. Participants then explore d an area of logged and unlogged primary forest at Tres Marias in the Mt. Nacolod Local Conservation Area. During the walk, participants learned about tree fruiting and flowering phenology, an important consideration when using native trees for reforestation. Nearby, participants learned how to collect native tree seedlings. Participants then traveled to Brgy. Kambonggan, Baybay City, to visit the rainforestation site of ELTI alum Guiraldo Fernandez, Jr. In addition to helping members of a school group plant trees, participants learned how to mix planting media, transfer wildlings to poly bags, and increase wildlings' survival by using a recovery chamber. Finally, participants toured the rainforestation site, where they learned about the resilience of native trees.

Day 4: Rainforestation farming

Participants traveled to the island province of Biliran, just north of Leyte. On the way, they stopped at the farm of ELTI alum Jesus Felipe Subingsubing, a wealthy businessman who is integrating *Aquilaria* spp., Dipterocarps, and other native trees into his farm. Mr. Subingsubing also discussed trying to persuade some neighboring large landowners, who are primarily engaged in sugar cane production, to integrate native trees. In Biliran, the participants met with Efren Saz, who gave a short introduction to his five-hectare rainforestation farm before showing them around the farm. Participants saw a

Participants discussing how they will apply what they learned to their own sites

demonstration of how to harvest abacá fiber from *Musa textilis* using both traditional and machine-based techniques. Participants also received a demonstration of how to use new smartphone-based monitoring technologies provided to VSU-ITEEM by RESTOR, which gave rise to an important discussion about data ownership. Finally, participants planted some replacement trees before heading to Tomalistis Falls for swimming and recreation.

Day 5: Reflections

Participants spent the morning shopping at the local market and handicraft centers. They also visited the historic Immaculate Conception Church in Baybay City. After lunch, each participant had an opportunity to present their management plan and/or reflections on visiting the Philippines and discuss them with the course instructors and other participants. They then filled out a course evaluation. A short closing ceremony was then held with remarks by David Neidel and Guiraldo Fernandez, Jr., followed by the awarding of certificates. The day concluded with dinner and performances of local songs and regional dances by the VSU Choral Ensemble and the VSU Folkloric Dance Troupe.

Departure Day: Farewells

Participants had breakfast and then were transported to Tacloban City Airport for their flights home.

Participants

The course was offered to 11 ELTI online certificate program alumni from the following eight countries: Germany, Ghana, India, Indonesia, Kenya, UK, USA, and Taiwan.

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