

COURSE REPORT

RESTORATION BOOT CAMP FOR TROPICAL ASIAN FORESTS

April 22, 2019 to June 22, 2019

An online course with a field week organized by:
Environmental Leadership & Training Initiative (ELTI), and
Institute of Tropical Ecology & Environmental Management of Visayas State University (VSU-ITEEM)



Full group picture with participants and their certificates.

Background: As the damaging effects of deforestation are being observed in tropical Asia, there has been increasing interest in the restoration of tropical forests and rehabilitation of degraded landscapes. However, many restoration projects fail over time because the species and methods employed do not match the biophysical and social conditions of the site. Agencies and actors involved in restoration often establish single-species tree plantations, in many cases using fast-growing exotic species which can do little to restore the biodiversity and functioning of forest ecosystems. Meanwhile, in the tropics, there are hundreds to thousands of native tree species that have potential to provide economic and ecological benefits if used for

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Dr. Marlito Bande gives an ANR presentation at field site.

the wide range of interventions that restore tree cover, such as reforestation, assisted natural regeneration and direct seeding. Understanding the ecological processes that relate to forest functioning and the sociopolitical contexts of landholders can guide decision-making and the development of strategies for effective forest restoration and sustainable land management.

This online course with a field week provided participants with an introduction to the concepts and techniques needed to plan and implement strategies for the restoration of Asian tropical forests and ecosystem services in multiple-use landscapes. The course was offered to practitioners and professionals looking to advance their knowledge about tropical forest ecology and restoration. The course included a series of presentations, discussions, readings, and activities that guide the development of a restoration management plan and the application of concepts learned in the weekly modules. Additionally, this course included a 4-day field week in Leyte, the Philippines for hands-on experiential learning.

Objectives:

- Present the basic principles of forest tropical ecology, natural and anthropogenic disturbances, and how those disturbances affect the potential for regeneration;
- Provide the knowledge to evaluate and compare an array of tropical forest restoration methodologies and how the biophysical and socioeconomic conditions of a site influence the decision-making about which strategies to utilize;
- Allow participants to analyze the ecological conditions, disturbance history, sociopolitical factors, and monitoring plans for the adaptive management of a specific restoration site;
- Provide participants with an opportunity to develop hands-on skills needed to implement a restoration project; and
- Provide the opportunity for participants from diverse countries of tropical Asia to meet and share experiences, concepts and tools with each other, ELTI facilitators and guest experts.



Course participant collects wildlings (*Shorea contorta*).

Joy Natividad



Course participant collects wildlings (*Shorea contorta*).

Joy Natividad



Course participant holds different species of native seedlings.

Joy Natividad

Course Structure: This six-week online course was offered in English and was divided into one-week thematic modules. The modules included pre-recorded videolectures from experts, interactive presentations, diverse case studies, weekly live sessions, and discussion online forums. The thematic modules were:

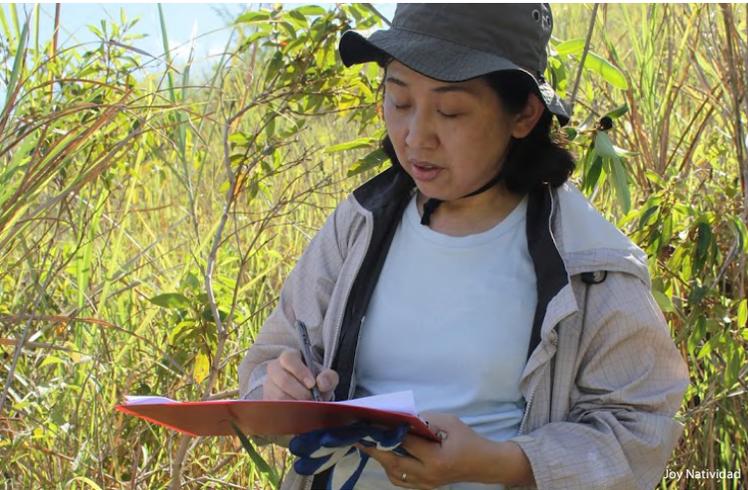
- Module 1. Tropical forest ecology, disturbance, and regeneration potential
- Module 2. Strategies to catalyze restoration in the tropics
- Module 3. Integration of restoration and production goals
- Module 4. Social aspects of restoration
- Module 5. Monitoring and evaluation of restoration projects
- Module 6. Development of a restoration management plan

Field week structure:

- Day 1. Introduction to the biodiversity of the Philippines and Rainforestation
- Day 2. Phenological observation of indigenous tree species, nursery establishment and seedling production
- Day 3. Site assessment, Assisted Natural Regeneration, and experimentation on native tree growth
- Day 4. Rainforestation site establishment and refining restoration plans with lessons learned from the VSU experience

Participants: Eight environmental professionals participated in the course. Participants came from six different countries and represented a variety of sectors, including government, non-governmental organizations, private companies, and academia.

Instructors and Coordinators: Dr. David Neidel (ELTI) served as lead professor for this course. Eli Terris (ELTI) facilitated the delivery of the course, with assistance from Karin Bucht (ELTI). Lyra Chu (ELTI), Dr. Marlito Bande



Course participant collects data at field site.



Course participants plant wildlings in nursery at VSU.



Lyra Chu, ELTI Philippines coordinator, gives a presentation on out-planting



Course participant out-plants a seedling with Lyra Chu.

(ITEEM), Jimmy Pogosa (ITEEM), and Angelita Orias (ITEEM) served as resource people during the field week, with additional facilitation by Gerwin Matinao (ELTI), Madel Maarat (ELTI), Sheena Gonzales (ELTI) and other ITEEM staff. Other instructors who participated in live video discussion included: Mark Ashton (Yale F&ES), Stephen Elliott (Chiang Mai University), Florencia Montagnini (Yale University), Benjamin Brown (Charles Darwin University), and Rakan Zahawi (University of Hawai'i at Mānoa).

Outcomes and Follow-up: All participants were actively engaged throughout the course, benefited from the feedback they received from the instructors and their peers, and successfully completed their preliminary management plans. In the months following the course, ELTI will follow up with the participants to see how the course and final project have influenced their professional development and the management of their individual restoration sites.

For more information: Please contact Eli Terris (ELTI) at eli.terris@yale.edu.

This event was possible thanks to Arcadia, whose Environmental Conservation grants support programmes that protect and enhance biodiversity, and provide field training and academic research.