Environmental Leadership & Training Initiative

COURSE REPORT

Tropical Forest Restoration in Human-Dominated Landscapes

(Delivered in Spanish)

September 25 to November 5, 2017
An online course organized by:
The Environmental Leadership and Training Initiative (ELTI)

Background: As the damaging effects of deforestation are being observed throughout the tropics, there has been increasing interest in the restoration of tropical forests and native tree cover. In the tropics, there are hundreds to thousands of native tree species that have potential to provide economic and ecological benefits if used for the wide range of restoration interventions, such as reforestation, assisted natural regeneration, agroforestry, and direct seeding. However, many restoration projects do not meet their stated goals over time because the species and methods employed do not match the biophysical and social conditions of the restoration site. Understanding the ecological processes that relate to forest functioning and the socio-political contexts of landholders can guide decision-making and the development of strategies for effective forest restoration and sustainable land management.

Landscape in the Pozuzo district, Oxapampa-Pasco, Peru where course participant Alfredo Apaza Ticona directed his course project. This landscape has montane forests, agrosilvopastoral systems, plantain and yuca plantations, and riparian trees. Photo credit: Alfredo Apaza Ticona

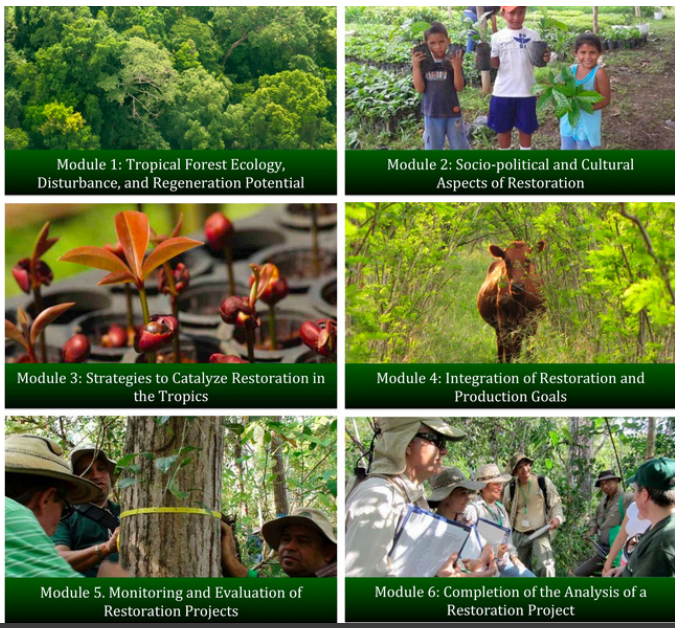
ELTI is an initiative of the Yale School of Forestry & Environmental studies and was created with generous support from Arcadia, a charitable fund of Peter Baldwin and Lisbet Rausing (www.arcadiafund.org.uk).

(Left) Photo taken by course participant Francisco Martínez during his site visit as part of his course project "Holistic Restoration in the eastern Quinto Guayas zone of Guayaquil." Photo credit: Francisco Martínez; (Right) Priority restoration area in the Panama City Metropolitan Natural Park dominated by exotic grass Saccharum spontaneum where course participant Elva Denvers Plata directed her course project. Photo credit: Elva Denvers Plata

This online course was designed to provide participants with an introduction to the concepts and techniques needed to plan and implement strategies for the restoration of 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 provided the opportunity for participants to meet and share experiences, concepts, and tools with each other, the ELTI facilitators, and guest experts.

Course 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/reforestation program; and
- Provide the opportunity for participants to engage in critical discussion on a weekly basis.



View of online course platform , which is comprised of six thematic modules

Format: This six-week course was offered in Spanish and was divided into thematic modules, each one lasting a week. The thematic modules were:

Module 1. Tropical Forest Ecology, Disturbance, and Regeneration Potential

Module 2. Socio-political and Cultural Aspects of Restoration

Module 3. Strategies to Catalyze Restoration in the Tropics

Module 4. Integration of Restoration and Production Goals

Module 5. Monitoring and Evaluation of Restoration Projects

Module 6. Completion of the Analysis of a Restoration Project

Course participant Ted Harry Tueros conducts a site visit as part of his course project "Recovering and Protecting the Degraded Ecosystem in the Nagazu Zone, Villa Rica District, Oxapampa-Pasco, Peru ." Photo credit: Julio Huaman

Educational Tools:

- Pre-recorded guest lectures that depicted the video of the guest speaker, along with the PowerPoint slides;
- Interactive presentations that provided a synthesis of core concepts;
- Suggested readings to complement the presentations;
- Case studies from Brazil, Colombia, Mexico, Panama, and Sri Lanka;
- Weekly online live discussion sessions with the lead professor and invited guest experts;
- Weekly discussion forums, during which participants are asked to share their thoughts and questions about the weekly material;
- Site visit by which the participant visits a potential area to direct the course project; and
- Discussion forums for individual work towards the creation of a final project: a preliminary management plan for restoration on a site of professional interest or for a hypothetical site.

At the end of the course, participants who completed the course requirements received a certificate of participation.

Participants: Twenty-seven environmental professionals participated in the course. Participants came from 11 different countries and represented a variety of sectors, including government, non-governmental organizations, private companies, academia, and public-private partnerships.

Photo of an area dominated by cattle ranching and Pacae trees in the buffer zone of the Yanachaga Chemillen National Park, Lamaquizu, Oxapampa-Pasco, Peru, where course participant Fredy Tueros Zevallos conducted his course project. Photo credit: Fredy Tueros Zevallos

Instructors and Coordinators:

Dr. Florencia Montagnini from the Yale School of Forestry & Environmental Studies (F&ES) served as lead professor for this course. She participated in four live sessions and provided feedback on project work throughout the course.

Gillian Bloomfield, ELTI's Online Training Program Coordinator, facilitated the delivery and management of the course, with teaching assistance from **Veronica Chang** (M.F.S. 2017, Yale F&ES).

Other primary contributors who provided pre-recorded video lectures and/or participated in live video conferences, included:

- **Mark Ashton,** Yale University, School of Forestry & Environmental Studies, United States
- **Gillian Bloomfield,** Environmental Leadership and Training Initiative, United States
- **Alicia Calle,** University of California, Santa Cruz, United States
- **Zoraida Calle**, Center for Research on Sustainable Agricultural Production Systems, Environmental Leadership and Training Initiative, Colombia
- **Eva Garen**, Environmental Leadership and Training Initiative at Yale University, United States
- **Florencia Montagnini,** Yale University, School of Forestry & Environmental Studies, United States
- **Daniel Piotto,** Federal University of Southern Bahia, Brazil.
- **Jacob Slusser**, Environmental Leadership and Training Initiative at Yale University, Panama

Live discussion sessions with participants and lead instructor, Dr. Florencia Montagnini

Live discussion session with guest presentation by Jacob Slusser.

Live sessions were held using videoconference software, "Zoom", which allowed for dialogue between course participants and invited guest experts.

Outcomes and Follow-up: The majority of 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 Gillian Bloomfield, ELTI Online Training Program Coordinator (Gillian.Bloomfield@yale.edu)

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