

COURSE REPORT

Introduction to the Ecology and Strategies for Tropical Forest Restoration in Human-Modified Landscapes

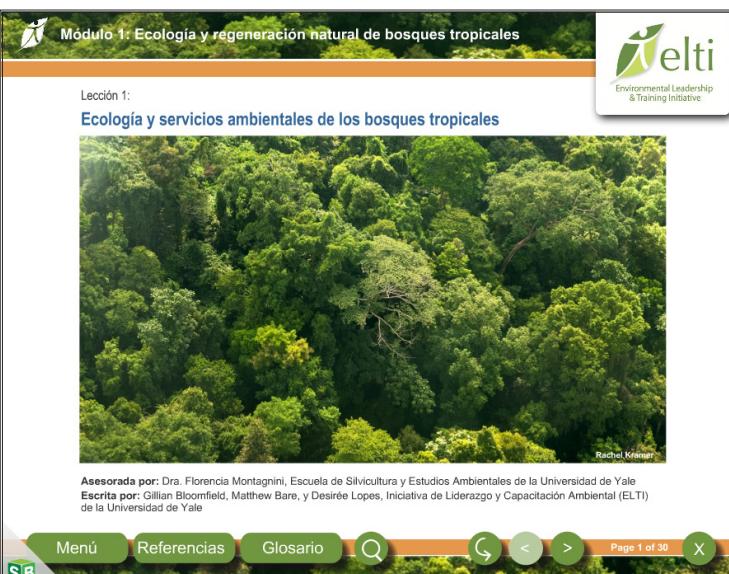
September 2 to October 13, 2013

An online course organized by:

The Environmental Leadership and Training Initiative (ELTI)

Background: As the damaging effects of deforestation are being observed in Latin America and around the world, there has been increasing interest in the restoration of tropical forests. However, many restoration projects fail over time because the species and methods employed do not match the biophysical and social conditions of the restoration site. The various agencies and actors involved in restoring degraded and deforested lands oftentimes establish single-species tree plantations, in many cases using short-rotation 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 tree species native to a region that have potential to provide economic and ecological benefits if used for reforestation. In addition to reforestation, there is a wide range of interventions that restore tree cover, such as assisted natural regeneration and direct seeding, which can be selected based on the particular conditions of a site. Understanding the ecological processes that relate to forest functioning can guide decision-making and the development of strategies for effective forest restoration and sustainable land management.

This online course aimed to provide an introduction to the concepts and techniques needed to develop and implement strategies for the restoration of forests and ecosystem services in multi-use landscapes. The course was designed for practitioners and professionals working for government agencies, NGOs, and the private sector looking to advance their knowledge about tropical forest ecology and restoration through a series of presentations, discussions, readings, and case studies. Additionally, over the duration of the course, weekly assignments and the final term paper guided the participants to develop preliminary restoration plans for managing a specific site of professional interest.



Módulo 1: Ecología y regeneración natural de bosques tropicales

Lección 1:
Ecología y servicios ambientales de los bosques tropicales

Asesorada por: Dra. Florencia Montagnini, Escuela de Silvicultura y Estudios Ambientales de la Universidad de Yale
Escrita por: Gillian Bloomfield, Matthew Bare, y Desiree Lopes, Iniciativa de Liderazgo y Capacitación Ambiental (ELTI) de la Universidad de Yale

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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.** Ecology and natural regeneration of tropical forests
- Module 2.** Effects of anthropogenic disturbance on regeneration
- Module 3.** Strategies to catalyze restoration in the tropics
- Module 4.** Influence of sociopolitical factors on restoration
- Module 5.** Monitoring and follow-up of restoration projects
- Module 6.** Completion of a restoration management plan

The participants were allowed to complete their assignments asynchronously, or according to their own schedules within that week, with assignments due on Sunday night at the end of each week.

ELTI is a joint initiative of:

Participants: From a large pool of applicants, 31 participants were selected for their achievement and potential as environmental decision-makers involved in natural resource management or restoration in Latin America. They come from nine Neotropical countries and work in local and national governments, non-governmental organizations, private companies, academia, and public-private partnerships.

Instructors and Coordinators: The delivery and management of the course was facilitated by Gillian Bloomfield, ELTI's Web-Based Training Program Coordinator, and the teaching assistant Gabriel Chait, a joint MEM/MBA student at Yale University and the University of Los Andes, Colombia. Detailed feedback on the participant's preliminary management plans were provided by guest expert Dr. Francisco Román, associate research scientist at the University of Florida and part of the Madre de Dios Consortium in Peru. Live discussion sections with course participants were delivered by Dr. Florencia Montagnini, Yale School of Forestry & Environmental Studies, and Dr. Pedro Brancalion, University of São Paulo School of Agriculture Luiz de Queiroz (ESALQ). Recording and editing support for the pre-recorded guest lectures was provided by the Yale Broadcast Center.

Guest experts who reviewed interactive presentations or recorded guest lectures included:

- Mark Ashton, Ph.D., Yale University, School of Forestry & Environmental Studies, United States.
- Pedro Brancalion, Ph.D., School of Agriculture Luiz de Queiroz (ESALQ), University of São Paulo, Brazil.
- Alicia Calle, MSc, Program in Environmental Studies, University of California Santa Cruz, United States.
- Zoraida Calle, MSc, Center for Research in Sustainable Agricultural Production Systems (CIPAV), Colombia.
- Amity Doolittle, Ph.D., Environmental Leadership and Training Initiative at Yale University, United States.
- Eva Garen, Ph.D., Environmental Leadership and Training Initiative at Yale University, United States.
- William Laurance, Ph.D., School of Marine and Tropical Biology, James Cook University, Australia.
- Florencia Montagnini, Ph.D., Yale University, School of Forestry & Environmental Studies, United States.
- Francisco Román, Ph.D., University of Florida and Madre de Dios Consortium, Peru.

Yale SCHOOL OF FORESTRY & ENVIRONMENTAL STUDIES		Cursos ▾	Tareas	Calificaciones	Calendario
Sept2013Restauración	Home > Sept2013Restauración > Páginas > Módulo 3: Instrucciones	Editado por última vez por Gillian Bloomfield hace casi 1 mes			
Página de Inicio					
Anuncios					
Módulos					
Discusiones					
Chat					
Conferencias					
Personas					
Calificaciones					
Tareas					
Plan de Estudio	<p>Módulo 3. Estrategias para catalizar la restauración</p>				
	<p>Instrucciones:</p> <p>Después de las dos semanas del comienzo debe de estar familiarizado con los vínculos y la forma en que está acomodado el contenido en la plataforma.</p>				

Educational Tools:

- Interactive presentations that provided a synthesis of the core concepts of each week;
- Pre-recorded guest lectures that simultaneously depicted the video and audio of the guest speaker along with the PowerPoint slides;
- Optional and required readings to complement the presentations;
- Case studies providing restoration examples in Panama and Mexico;
- Two optional discussion sections conducted live with guest experts;
- Weekly short answer assignments which evaluated the participant's understanding of the content; and
- Discussion forums for individual and group work towards the creation of a final project: a preliminary management plan for restoration on a site of professional interest.



In addition to the discussion forum, the work toward the final project included one site visit, feedback from the guest expert, the peer-to-peer exchange of drafts, and literature searches using ELTI's **Tropical Native Species Reforestation Information Clearinghouse** (reforestation.elti.org). At the end of the course, each participant who completed all of the course requirements received a certificate of participation.

Course Objectives:

- Present the basic principles of forest 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; and
- Provide the opportunity for participants from diverse regions of Latin America to meet and share experiences, concepts, and tools with each other, the ELTI facilitators, and guest experts.

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