

COURSE REPORT

Monitoring of Areas Undergoing Ecological Restoration and Seminar on Ecological Restoration Networks

Recife, Pernambuco – Atlantic Forest region of Brazil
April 7-11, 2014

A field course jointly organized by:
Environmental Leadership & Training Initiative (ELTI)
Northeast Center for Environmental Research (CEPAN)



Background: The Northeastern Biodiversity Corridor (CBNE, in Portuguese) encompasses 271 municipalities along the coast of the Brazilian States of Alagoas, Pernambuco, Paraíba and Rio Grande do Norte. Despite its biological significance, the CBNE has been degraded extensively, which is a process that began approximately 500 years ago (Coimbra-Filho y Câmara 1996). More recently, detailed analysis of high-resolution satellite imagery shows that only about 12% (380,000 ha) of the original area of the CBNE remains, mostly in thousands of small fragments that are no more than 100 hectares in size (Ribeiro et al. 2009).

Given this context, one of the most important ways of recovering degraded areas and maintaining the biodiversity that remains has been the implementation of ecological forest restoration strategies. Monitoring

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the results of restoration activities is imperative for evaluating the success of restoration activities. However, plans for monitoring are often absent or only briefly incorporated into the design of the project. Monitoring is essential not only to evaluate the recovery of ecological processes, but also to guarantee that the restored areas are sustainable over time and will be able to attain the objectives of the ecological restoration project. Additionally, the results of monitoring can lead to adaptive management by identifying the necessary adjustments needed if objectives are not being met.

This course, entitled *“Monitoring of Areas undergoing Ecological Restoration”*, was designed to train the participants on the criteria and the indicators used to guide the monitoring of areas undergoing the process of ecological restoration located within the CBNE and how these parameters can be verified throughout the duration of these projects. This course highlighted the importance of monitoring, as well as the variety of ecological and sociopolitical monitoring strategies incorporated within the Monitoring Protocol of the Atlantic Forest Restoration Pact.

Objectives:

- Provide the participants with the principles, criteria and indicators used as guidelines for monitoring ecological restoration projects;
- Provide the participants with an applied field experience using the Monitoring Protocol as defined by the Monitoring Protocol of the Atlantic Forest Restoration Pact;
- Offer the participants the necessary knowledge to decide when and which complimentary actions should be adopted to guarantee the success of the restoration actions based on the pre-established goals of an ecological restoration project.





Course Format

This course was divided into four modules that took place over four days, with one full day of fieldwork and one day of data analysis.

Days 1 and 2:

- The first two days of the training provided participants with an overview of the ecological restoration principles and ecological restoration models, an introduction to what is monitoring and why it is necessary for ecological restoration projects, and a cost analysis of having a monitoring protocol included in restoration projects.
- The contents of the course were framed within the Monitoring Protocol of the Atlantic Forest Restoration Pact, so an overview of the protocol was presented, as well as an analysis of the application of the Protocol within the context of Pernambuco and the Northeastern region of Brazil.

Day 3:

- The third day of the course was conducted entirely within the restoration areas in the SUAPE Port and Industrial Complex, where participants were divided into five groups and were guided through how to establish a monitoring plot and data collection process according to the Protocol.

Day 4:

- The fourth day consisted of a group session in which the participants analyzed the data they collected during the field exercise and compared it to that of the other groups.



Participants: This training course was offered to 35 environmental practitioners, including representatives of government agencies, private industry, environmental programs, NGOs and academics, among others. All of the participants are engaged in current restoration projects, which led to a very rich exchange of information about different situations and approaches to solutions and adaptive management.

Instructors and Coordinators: Dr. Severino Ribeiro Pinto, Director of CEPAN facilitated the delivery of the course in collaboration with Cecilia Del Cid-Liccardi (M.F. from Yale F&ES) ELTI's Neotropics Training Program Coordinator. Cristiane Barbosa (CEPAN) and Saskia Santamaría (ELTI) organized the course. Instructors covered different topics according to their expertise, including:

- Dr. Severino Ribeiro discussed the fundamentals of ecological restoration and monitoring;
- Dr. Adriano Vicente presented the variety of ecological restoration models and facilitated the data collection in the field;
- Dr. Carlos Brandão explained the application of the Monitoring Protocol of the Atlantic Forest Restoration Pact, facilitated the data collection and led the data analysis session.

Ecological Restoration Symposium: Immediately following the course, ELTI and CEPAN hosted a one-day symposium on ecological restoration, entitled *"Challenges and Opportunities for the Northeast Biodiversity Corridor"*. The course participants attended the course and it was also open to the public. In total, 174 people attended the symposium, including regionally renowned environmental figures and international presenters. In addition to presenting the public policies and methodologies needed to adequately implement restoration actions, the symposium addressed the possibility of consolidating an Ecological Restoration Network in the region.



During the ecological restoration symposium entitled “Challenges and Opportunities for the Northeast Biodiversity Corridor,” the following presentations were delivered:

- *Ecological Restoration Network for the Northeastern Biodiversity Corridor* – Severino Ribeiro Pinto, Ph.D., Northeast Center for Environmental Research (CEPAN), Brazil;
- *Ecological Restoration Initiatives in the Industrial Complex Governador Eraldo Gueiros (SUAPE)* – Priscila Nascimento, M.F., Environmental Preservation Coordinator (SUAPE), Brazil;
- *Initiatives of Ecological Restoration of the State of Pernambuco* – Carlos André Cavalcanti, M.Sc., Director of the State Agency of Environment (CPRH), Brazil;
- *Environmental Adaptation Programs of the State of Paraíba* – Thiago Silva, M.Sc., Superintendence of Environmental Administration of the State of Paraíba (SUDEMA), Brazil;
- *Forest Restoration Bottlenecks from the Perspective of Diverse Actors* – Ana Paula Moreira da Silva, M.Sc., Institute of Applied Economic Research (IPEA), Brazil;
- *Elements of a National Strategy for the Recovery of Native Vegetation* – Mateus Dala Senta, Ministry of Environment (MMA), Brazil;
- *The Ecological Restoration Training Program of the Environmental Leadership & Training Initiative (ELTI)* – Cecilia Del Cid-Liccardi, M.F., Environmental Leadership & Training Initiative, Yale F&ES, USA;

Course Follow-Up: Participants were actively engaged throughout the course. They benefited from the practical field exercises and from the feedback received from instructors and their peers. ELTI’s Leadership Program was presented during the event and generated interest among participants. The goal is to work with CEPAN if promising candidates present proposals in order to help them carry out their initiatives. Additionally, ELTI will follow-up with participants through a survey to determine the influence the course had on their professional development and project implementation.

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