COURSE REPORT

Strategies for the Sustainability of Connectivity Corridors

Armenia, Quindío, Colombia
October 8-13, 2011

A field course jointly organized by:
Environmental Leadership & Training Initiative (ELTI)
Center for Research on Sustainable Agricultural Production Systems (CIPAV)

Background: Extensive and treeless cattle ranching, the way that currently prevails throughout the Neotropics, is economically and environmentally unfeasible due to its impacts in terms of soil degradation and deforestation. Recent advances in scientific research in the region have demonstrated that the adoption of silvopastoral systems (SPS) and better management practices can lead to the improvement of cattle ranching productivity, and at the same time generate ecosystem services. However, until now the transformation towards a more sustainable way of cattle ranching has not been attempted at a large scale. The Mainstreaming Biodiversity in Colombian Cattle Ranching project (known as GCS) is a first attempt to achieve this goal.

One of the main activities of the project is the implementation of riparian and terrestrial corridors that connect remnant forests and other natural ecosystems. The successful establishment of these connectivity corridors and their sustainability are instrumental to ensure that the goals of biodiversity conservation and provision of other ecosystem services are achieved in the long term. Among some of the challenges of the project are: the temporary scale and spatial effort of restoration, the diversity and biophysical conditions and the types of forests in the five areas of implementation, and the necessity of implementing mechanisms that guarantee the social, environmental and economic sustainability of the corridors beyond the conclusion of the project.

In this context, the project's regional field staff will play a key role in ensuring that landowners understand the importance and correct implementation of the corridors, and conserve them in the future. This course sought to provide them with solid basic techniques for the ecological restoration of the corridors, as well as the necessary tools to identify alternatives that will allow for their sustainability.

The course was divided into two sessions. The first session introduced the connectivity corridors as a conservation strategy in cattle ranching landscapes and the principles for their effective restoration. The second session explored the concept of sustainability and its components, and presented alternative activities that can be used to facilitate the sustainability of the connectivity corridors.

Objectives:

- To introduce the general concept of sustainability and its environmental, social, and financial dimensions, and to explain its relevance in the context of the Project's connectivity corridors.
- To examine previous ecological restoration experiences, and analyze the elements that enabled or hindered their sustainability, drawing lessons that may be applied in the connectivity corridors.
- To present a range of activities, or menu of technical options, that can be incorporated into a restoration project with the purpose of increasing its chances of success and facilitate its sustainability.
- To provide participants with the opportunity to meet and network with other conducting similar work, and to generate ideas for further support by ELTI's Leadership Program.

Course format: This second session took place over six days, and was divided into three modules and a full field day. Each module included a series of talks and site visits to illustrate the concepts presented. This second session also included participants' presentations of their action plans, which were developed using the methodology learned during the first session, and which received suggestions and feedback from instructors and fellow practitioners.

The first module presented the environmental, social, and financial dimensions of sustainability, and their relevance in the context of the GCS project. The main goal was to illustrate the importance of identifying sustainability strategies taking into account the relevant regulatory frameworks and institutional arrangements in the Colombian context.

The second module included case studies and site visits to illustrate examples of activities that contribute to consolidate and sustain connectivity corridors. During a visit to the El Bambusal farm, participants learned about new ventures for the bamboo markets, and visited a connectivity corridor that was restored with bamboo to protect a micro wetland. They also visited an agroforestry system that combines coffee, organic bananas, and tropical flowers, and heard about the benefits for restoration and biodiversity conservation from the landowner. During a second field trip to different sites in the Salento municipality, participants witnessed how the restoration efforts in an agricultural landscape have opened doors for a flourishing tourism industry, with offers attractions such as agrotourism, architectural restoration, biological corridor, and traditional handcrafts made with non timber forest products.

The third module, which took place at El Cortijo farm, presented additional topics on the practice of ecological restoration not covered during the first course. Topics included seed banks, nurseries, and seedling transplant, and were combined with a walk through the farm to illustrate how production and restoration can be combined, and a practical exercise on how to evaluate the landscape's potential to self-recover.

The course concluded with a full field day at the El Hatico Natural Reserve, a pilot demonstration farm that for many years has been experimenting with tree-based grazing systems, organic sugar cane cultivation, and sustainable management of secondary forest. This field served as a backdrop to illustrate the practical application of all topics covered in the course in a real setting, and to answer any remaining questions by participants.

Instructors and Coordinators: Local and international instructors covered multiple topics based on their expertise. Enrique Murgueitio (CIPAV) introduced the concept of sustainability as applied to connectivity corridors within cattle ranching landscapes, and explained the importance of providing landowners with a menu of sustainability strategies. Dr. Julian Chará (CIPAV) explained the Colombian regulatory framework on Payment for Ecosystem Services (PES). Dr. Ximena Londoño (Colombian Bamboo Society) talked about the use of bamboo in connectivity corridors and restoration. Nicolás Zea (BID) gave a talk about the outlook of the timber and bamboo markets, and Daniel Uribe (Agroecotur) focused on multimodal tourism strategies. Dr. Florencia Montagnini (Yale F&ES) covered the principles of agroforestry systems, economical and biological enrichment, PES, and sustainable management of secondary forest. Drs. Ricardo Ribeiro, Pedro Brancalion and André Nave (LERF) addressed technical aspects of restoration such as seed collection, nursery production, and economic models for the maintenance of forest restoration. Other members of CIPAV and ELTI shared their experiences on other relevant aspects like new substrate for tree propagation, participatory research, planning the establishment of biological corridors, and technology adoption from the producers' perspective.

Participants: Course participants were technical field staff participating in the implementation of connectivity corridors in the GCS project, as well as for selected participants from Brazil, Panama, Guatemala and Peru who work on relevant topics. In total, 26 Colombian participants from the five regions of the project, and 5 international participants, attended the training event.

Outcomes and Course Follow-up: Participants presented their action plans and received feedback from the instructors and their peers. The Leadership Program will work with CIPAV to identify candidates who need help to carry out their initiatives. On the other hand, given the interest in these topics at the regional level, the Neotropical Training Program will evaluate ideas to potentially replicate or deliver related courses.

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