COURSE REPORT

Connectivity Corridor Restoration in Cattle Ranching Landscapes

Armenia, Quindío, Colombia
May 21-26, 2011

A field course jointly organized by:
Environmental Leadership & Training Initiative (ELTI)
Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (CIPAV)

Background: Despite being both economically inefficient and environmentally unsustainable, extensive cattle ranching continues to prevail across Latin America, largely contributing to land degradation and deforestation. However, long-term scientific research conducted in the region has proven that a combination of better management practices and the implementation of silvopastoral systems (SPS) —the deliberate combination of trees, pastures, and livestock— can significantly improve both the productivity and sustainability of cattle production, while generating environmental services. This more sustainable model of cattle ranching has so far been successful at a small scale, but is yet to be attempted at the larger landscape level, where its could have important productive, environmental and social implications.

In Colombia, the recently launched Mainstreaming Biodiversity in Colombian Cattle Ranching project (known as Ganadería Colombiana Sostenible -GCS) is a first attempt to promote sustainable ranching practices at a national scale. The project aims to improve natural resource management, enhance the provision of environmental services (biodiversity, greenhouse gas mitigation, clean water supply and regulation), and increase productivity in cattle ranching landscapes. The project will contribute to biodiversity conservation by rehabilitating terrestrial and riparian corridors to connect the natural ecosystems, and by improving the surrounding pastoral landscapes. Based on more than 20 years of experience, partner organization CIPAV will provide the knowledge on sustainable cattle ranching technologies, as well as monitor the land-use change though the project. However, there is a marked need for training of the project's field staff on the theory and practice of large-scale restoration of connectivity corridors.

Fulfilling the long-term environmental goals of the project will require the proper and cost-effective restoration of the connectivity corridors, as well as the development of strategies to sustain them beyond the project's lifetime. This poses challenges including the short window of time available for corridor establishment, the biophysical diversity of the five

areas of implementation, and the scale of the project. In this context, the project's success will largely depend on the ability of field staff to guide landowners in the transformation of their farms. Thus, it is instrumental to complement their knowledge about SPS implementation with a better understanding about the principles of landscape-level conservation —connectivity corridors in particular—, the practice of ecological restoration, and strategies for their long-term sustainability.

The course has been divided into two sessions. This first session introduced connectivity corridors as a conservation strategy in cattle ranching landscapes, and the principles for their effective restoration. The second session, which will take place in October, will focus on strategies to ensure the long-term environmental, financial, and social sustainability of the corridors.

Objectives:

- To provide participants with a solid understanding of how the GCS project articulates sustainable cattle ranching and connectivity corridors into an effective landscape-level conservation strategy.
- To introduce participants to the principles underlying tropical forest restoration, and the special considerations for restoration of degraded pastoral landscapes.
- To teach participants, through case studies and practical field exercises, the basic steps to approach and tackle forest restoration.
- To illustrate, through field visits, a range of options for the restoration of connectivity corridors in cattle ranching landscapes.
- To provide participants with the opportunity to meet and establish contacts to collaborate in restoring connectivity corridors, and generate ideas that can be supported through the Leadership Program.

Course format: This first session of the course was divided in six modules, which took place over six days and included ample field time. The first three days of the training provided participants with an overview of the country's biodiversity, introduced connectivity corridors as a conservation strategy for productive landscapes, reviewed the basic principles of sustainable cattle ranching, and examined the environmental services provided by native species reforestation. The topics were framed in the specific context of the GCS project, and illustrated through field visits to pilot farms and through the review of local and regional case studies, including the PRORENA (Native Species Reforestation) and Agua Salud Projects in Panama. The fourth day of the course consisted of lectures on the principles of tropical forest restoration and how these are applied in the design of restoration actions for different environmental situations, including severely degraded pastures. Multiple examples were provided from over 20 years of large-scale restoration efforts in Brazil's Atlantic forest. The fifth day was conducted entirely in a cattle farm, where participants were guided in the practice of diagnosing and designing cost-effective restoration strategies for a variety of real-life situations. This practice will be the basis for participants to develop their own restoration action plans, which will be presented during the second session. The final day consisted of a day-long visit to a pilot sustainable cattle farm, which served to illustrate how environmental, productive and social sustainability goals can be met, and to review all course topics.

Instructors and Coordinators: Instructors covered different topics depending on their organization's expertise: Rodolfo Rodríguez and Andrés Zuluaga (National Cattle-Ranching Federation -FEDEGAN) explained the GCS project and its origins; Javier Mateo-Vega (ELTI) discussed ecological principles of conservation; Thomas Walschburger (TNC) discussed connectivity corridors as a conservation strategy; and several CIPAV staff shared perspectives and experiences in SPS implementation. Special guest instructors for this course included Dr. Jefferson Hall (STRI) who explained results of native species reforestation experiences and environmental services from the PRORENA and Agua Salud projects, and Drs. Ricardo Ribeiro and Sergius Gandolfi, (Laboratório Ecológico de Restauração Florestal -LERF, Brazil), who covered principles and strategies for tropical forest restoration, and guided the practical exercises.

The course was coordinated by Alicia Calle (ELTI) in collaboration with Enrique Murgueitio and Zoraida Calle (CIPAV), and was organized by Cecilia del Cid-Liccardi and Saskia Santamaría (ELTI), and María Mercedes Murgueitio (CIPAV).

Participants: This course was offered for technical field staff that will participate in the implementation of the connectivity corridors in the five regions of the GCS project, as well as for field staff from Brazil, Panama, Guatemala and Peru who work in similar initiatives. 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 were actively engaged throughout the course, and profited from the opportunities to network and discuss project ideas with instructors and other participants. They are also looking forward to the second part of the course, where they will present their action plans and get feedback from the instructors. The Leadership Program also generated interest among participants, many of whom are in the early stages of implementation, and thus can use all the support they can get. The LP will work with partner CIPAV to identify the most promising candidates and help them carry out their initiatives.

This course demonstrated that there is enough regional interest in these topics to make it worthwhile considering the possibility of developing further courses based on or related to this one. Collaboration with LERF and CIPAV to introduce sustainable cattle ranching principles to Brazil's Mata Atlântica, or a similar restoration course for the Panama Canal Authority (ACP), are examples of the ideas that came up during this course, and will need to be evaluated by the Neotropics Training Program over the coming months

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