



Environmental  
Leadership &  
Training Initiative



## COURSE REPORT

# Silvopastoral Heirs: Sustainable Cattle Ranching and Ecological Restoration in Pilot Farms

ELTI Permanent Training Site  
El Hatico Nature Reserve, El Cerrito, Valle del Cauca, Colombia  
June 14-16, 2017

A field course organized by:  
Center for Research on Sustainable Agricultural Production Systems (CIPAV), Colombian Cattle Ranching Federation (FEDEGAN), El Hatico Nature Reserve and The Environmental Leadership and Training Initiative (ELTI).



Silvopastoral Heirs at Nirvana Reserve (Palmira, Valle del Cauca, Colombia).



**HEREDEROS  
SILVOPASTORILES**  
Ganadería Sostenible y Restauración Ecológica

**Background:** Transforming conventional cattle ranching into sustainable forms of livestock production is an essential step in preserving the natural ecosystems of Latin America, a region where ecological restoration is creating new opportunities to support rural livelihoods. However, the continuity of both sustainable cattle ranching and farm-scale restoration relies on generational exchange. Transmitting knowledge and values is fundamental for guaranteeing sustainable land use in the future.

ELTI is an initiative of:

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In collaboration with:

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These cattle ranchers from Caquetá struggled to keep their farms during several years of armed conflict, and are now working to connect forest fragments in their properties.

The Mainstreaming Biodiversity in Sustainable Cattle Ranching Project (GCS Ganadería Colombiana Sostenible) promotes the adoption of environmentally friendly silvopastoral systems (SPS) that enhance farm productivity, natural resource management and the delivery of environmental services. Project partners are the GEF, Department of Business, Energy & Industrial Strategy (UK), The World Bank, Fedegan, The Nature Conservancy, CIPAV and Fondo Acción. This initiative seeks to scale up SPS and integrate them with ecological conservation and restoration in five Colombian landscapes: Cesar River valley and lower Magdalena in the dry Caribbean region; Andean Oak Corridor in Boyacá and Santander; the Coffee Ecoregion and the eastern Andes foothills in Meta department. Pilot farm owners work actively in farmer to farmer training and therefore play a key role in scaling-up the adoption of SPS and ecological restoration practices, and in promoting cultural change towards sustainable livestock production.

This course was offered to the sons and daughters of some leading cattle farmers in Colombia, who own pilot farms and are active trainers of other farmers. The new generation of *Silvopastoral Heirs* needs tools and a strong motivation to continue the task of integrating livestock production with conservation and ecological restoration, and teaching other cattle ranchers how to produce milk and beef while enhancing environmental services. The course was held at ELTI's main training site in Colombia, El Hatico Nature Reserve, an estate that has been managed by nine generations of a single family and is an international reference for sustainable production. The course introduced some theoretical and practical aspects of tropical forest restoration integrated to SPS, and explored the role of folk music in rural sustainability. At the end of the course, this first group of alumni formed a network of *Silvopastoral Heirs* for the exchange and communication of hope among young cattle ranchers.



Carlos Hernando Molina and a group of Silvopastoral Heirs examine dung beetles at El Hatico focal training site.

**Objectives:** The main objective of this course was to bring together several members of the new generation of silvopastoral cattle ranchers, to motivate them by highlighting their families' commitments to sustainable production and restoration, and to facilitate the exchange of ideas and motivations between them. Some specific objectives were:

- To present the main concepts of forest restoration, integrated to sustainable cattle ranching;
- To explain the agroecological principles and practices of silvopastoral systems;
- To highlight the value of local species for small restoration and silvopastoral initiatives;
- To reflect on the human values behind sustainable livestock production and restoration;
- To form the Colombian Network of Silvopastoral Heirs.

### Field-course format

This course combined short presentations of the participating pilot farms with some lectures, a guided tour of El Hatico, group exercises, a field trip and presentations of folk music. The meals were prepared with local and organic ingredients purchased directly from small farmers, and were designed to reflect the principles of agroecology and food sovereignty.

### Day 1, Wednesday, June 14

The first day began with an introduction in which Enrique Murgueitio (CIPAV's executive director) asked the participants to listen respectfully to each other's presentations. ELTI alumni Julián Giraldo and Adriana Giraldo



Composer Adolfo Cardozo from Venezuela knows the perfect song to illustrate nearly any ecological concept.



Carlos Hernando Molina (left), Adolfo Cardoso (right) and silvopastoral heirs from Caldas, Caquetá and Santander.

coordinated the next session, in which one or more members of each family presented their pilot farms and explained the advances in the implementation of restoration and sustainable production initiatives. After the pilot farm presentations, three members of the ninth generation of owners of El Hatigo, explained this private reserve's approach to conservation and sustainable production, emphasizing the role of generational exchange and knowledge transmission. After that, ELTI's Colombia coordinator, Zoraida Calle, made a presentation about ecological restoration, the science of hope. The final session before lunch was a case study presented by ELTI alumni Julián and Adriana Giraldo: *Heirs of Bellavista, participatory research and ecological restoration, community work focused on water.*

During the afternoon, the group was divided into two sub-groups (adults and youth) for a guided tour of the silvopastoral systems, organic sugar cane and the restored biological corridor of El Hatigo. Both groups observed the complex silvopastoral systems that form a wildlife friendly agricultural matrix, and analyzed the role that functional biodiversity and animal welfare play in the enhanced milk production of these systems. After the field visit, PhD candidate Alicia Calle presented four case studies of farms that integrate silvopastoral systems to ecological restoration, with detailed data that illustrate positive land-use change. Venezuelan researcher and folk music composer Adolfo Cardozo made a moving musical presentation about the role of folklore from the flatlands known as the Llanos in supporting a culture of sustainable cattle ranching. The day ended with the first exercise, in which small groups of participants thought about a definition of *silvopastoral heirs*, and tried to define their role as custodians of the land, farms, families and rural cultures.

**Day 2, Thursday, June 15 (field trip)**

In the morning, the group visited the Sugar Cane Museum at Piedechinche Hacienda. This traditional house and the surrounding lands were restored to illustrate the history of sugar cane cultivation in different ecosystems of Colombia. Each replicate of a



Group exercise; three generations envision a Colombian Silvopastoral Heirs Network.



A work group discusses the logistics of forming the Colombian Network of Silvopastoral Heirs.

traditional sugar mill is surrounded by a small sample of the native vegetation of a different geographic area or life zone. The group observed the ingenious trail design and the use of native plants to recreate different agroecosystems.

In the afternoon, the group visited Nirvana Nature Reserve, located in the mountains of Palmira, Valle del Cauca. The forests of this old coffee farm have recovered after the owners decided to create a private reserve in their steep lands. Currently, each family member has a small business related to conservation. Jaime Diego Botero explained his personal relation with the highly endangered comino crespo tree (*Aniba perutilis*). This once common precious timber tree was overexploited until it almost disappeared from the Andean forests of the municipality of Palmira. However, the roots of the old trees have survived in the ground for decades, and the timber can be used to create beautiful furniture. Jaime Diego transforms these old roots into unique art pieces, and propagates this species to enrich the secondary forests of Nirvana reserve.

### Day 3, Friday, June 16

Enrique Murgueitio began the morning session with the presentation *People, livestock and trees: a history of passion and cultural roots*. This inspiring talk explored the relationship between people and bovine cattle, stressing the fact that this species originated in a forest environment, and needs a shaded habitat. Julián Giraldo showed the main principles and regional variations of the ecological restoration approach that is applied in the pilot farms of the Mainstreaming Biodiversity in Sustainable Cattle Ranching Project. These talks were followed by a synthesis of the results of the first group exercise, prepared by Adolfo Cardozo, Alicia Calle and ELTI alumni Adriana Giraldo and Karen Castaño.

The final group exercise focused on the logistics of forming the Colombian Network of Silvopastoral Heirs. After the presentation of this exercise the group enjoyed a live concert of Campo & Sabor musical group, directed by composer and writer León Octavio Osorno.



Group exercise surrounded by fruits and seeds brought by course participants from different pilot farms.

**Participants:** The individuals selected to attend this course represented 19 pilot farms and the five ecoregions of the Mainstreaming Biodiversity in Sustainable Cattle Ranching Project. One Mexican participant came to the course because she plans to replicate the Silvopastoral Heirs Program in her country. The group included 19 adults and 12 teenagers.

### Instructors

- Enrique Murgueitio, CIPAV, Colombia
- Zoraida Calle, ELTI (Colombia Program) and CIPAV, Colombia
- Alicia Calle, University of California, USA
- Adolfo Cardozo, CIPAV, Venezuela
- Carlos Hernán Molina, El Hatico reserve, Colombia
- Carlos Hernando Molina, El Hatico reserve, Colombia
- Enrique José Molina, El Hatico reserve, Colombia
- Julián Andrés Giraldo, CIPAV (ELTI alumn), Colombia
- Adriana Giraldo, CIPAV (ELTI alumna), Colombia
- Karen Castaño, CIPAV (ELTI alumna), Colombia
- Jaime Diego Botero, Nirvana Nature Reserve, Colombia

## **Outcomes and Follow-up:**

The course participants agreed on the following definition of *Silvopastoral Heirs*: Children, teens and adults who gradually and voluntarily receive a legacy of principles and values grounded on love for the land from their elders, and give continuity to a family project.

Their mission is to generate and disseminate a culture of production in harmony with nature, to preserve and enrich the natural heritage, and improve the quality of life. The group proposed the following set of values and principles of the *Silvopastoral Heirs* (SH):

- They respect all life forms
- They understand the ecological, economic and social context of their farm, region and agroecosystem.
- SH perpetuate the family legacy for future generations
- SH maintain and nurture their sense of belonging (to the land), no matter where they are.
- They are humble when learning and generous when teaching.
- They understand that livestock production, agriculture and conservation are linked to each other, and therefore, cannot function independently.
- They nurture curiosity and a capacity for astonishment to investigate and learn from mistakes.
- They provide solutions and are not afraid of novel ideas.
- They understand that land management is a temporary task which involves a responsibility to society and to future generations.
- They persevere in their effort to improve the farming system in harmony with nature.
- They respect the ideas of others and know how to work in teams.
- They encourage other members of their communities to be involved in the process.
- They foster a dialogue of knowledge around conservation and production.
- They know how to do things with their hands.

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