





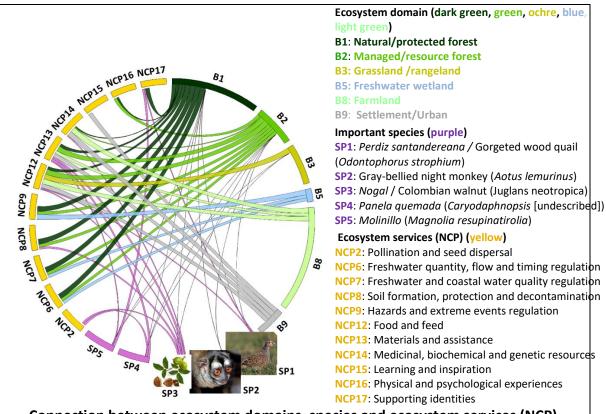
Project Final Report

	, ,	
Project Name Reconciling biodiversity conservation and agricultura		
, , ,	production in agroforestry cultivation systems in the Colombian Andes: a model for Colombia's post conflict era	
	lict era	
San Vicente de Chucurí, Colombia	_	
Convensiones Convensiones Convensiones		
Implementing		
Organization Universidad Industrial de Santander (UIS)		
Partners Corporación Colombiana de Investigación Agropecu (AGROSAVIA formerly CORPOICA)	aria	
Size of Project Site 150 ha		
Number of		
Beneficiaries 80 persons		
Key Species Cedro Grande (Juglans neotropica)		
Variegated Spider Monkey (Ateles hybridus)		
Blue-billed Curassow (Crax alberti)		
GEF Funding Amount US\$89,700 Co-financing US\$242,075		

Summary (Including relevance to values, Indigenous Language and knowledge (ILK), and governance)

In the Colombian Andes diversified agroforestry systems with cacao and coffee exist within a matrix of cattle pastures and well preserved forest fragments which harbor a biodiversity of fauna and flora that provide essential ecosystem services, but are threatened by agricultural intensification, post-conflict rural development and global market pressures. The project was carried out in the buffer zone of the Yariguíes National Park, a nationally important production landscape that with a high level of biodiversity and endemism. The region was relatively recently colonized and remained largely isolated due to the internal armed conflict. Against this background, the project contributed to the conservation of these biologically diverse production landscapes by identifying existing management strategies, reconciling biodiversity conservation and ecosystem service provisioning with agricultural production. To do so, an assessment of the biodiversity and ecosystem services was done across three different management strategies: (i) intensified cacao and/or coffee production without shade trees, (ii) designed agroforestry systems with planted shade trees, and (iii) close to natural polycultures. Plant, invertebrate and vertebrate Biodiversity indicators and ecosystem services (water provisioning, soil protection and pest control) were assessed. The project converted the autochthonous tacit knowledge about managing these diversified agroecosystems into explicit expert knowledge using a participatory approach. Thus, empowering local communities to conserve their knowledge for future challenges and inspire the emerging population of Colombian post-conflict farmers.

The GEF-Satoyama Project aimed to address three barriers to SEPLS globally, namely, insufficient recognition of SEPLS values, disappearing traditional knowledge, and weak governance. A strong link between values, knowledge and governance can potentially enhance biodiversity and production in SEPLS. The interplay between values, ILKP and governance contributing to the sustainability and resilience of SEPLS was considered as well as the linkages between the drivers and corresponding policies are shown in the following figures and tables below.

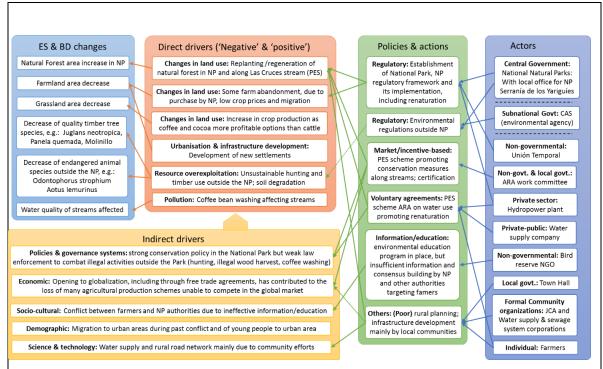


Connection between ecosystem domains, species and ecosystem services (NCP)

ILKP for the use and management of different ecosystem domains and species

Ecosystem	ILK				ILK h	olders	
Species	Domain	Description	Tren d	Hunter s	Logger s	Farmer s	City dweller s
2.Managed/ resource forest	1.Knowledge	mainly of timber species and animals used by hunters	ļ	0		0	
		Medicinal properties of trees	Ţ			0	
		plant taxonomy and demography of useful trees, and its pollination and dispersal syndromes	ļ	0	0	0	
3.Grassland /rangeland	1.Knowledge	how to grow livestock and food for their animals	→			0	
		how to heal animals	→			0	
5.Freshwater /inland	1.Knowledge	watershed dynamics, differential water-flow rates per stream	→			0	
waterbodies		physical-chemical characteristics of water (explanations about the color and minerals on it)	ע			0	
	4.World view	Myths and legends related to the unusual growth of water levels and avalanches	→			Ο	0
8.Farmland	1.Knowledge	crops soil and temperature requirements	→			0	
	1.Knowledge 2.Mgt. system	Local empirical knowledge of pest management and Local	→			Ο	

	3.Soc.	environmental perception,				İ	
	Institutions	summarized in Peasant Culture:					
	4.World view	Food, building techniques (including					
	T.WOITU VIEW	local timber), local beverages, social	1				
		traditions, religious traditions.					
Molinillo	1.Knowledge	identification and taxonomy of the					
MOIIIIIIO	1.Kilowieuge	specie, seed nursing, seedling					
		requirements, trees demography	7			0	
		and fruit processing as kitchen tool					
Nogal	1.Knowledge	identification and taxonomy of the					
Nogai	1.Kilowieuge	specie, seed nursing, seedling					
		requirements, trees demography	7			0	
		and wood processing					
Panela	1.Knowledge	identification and taxonomy of the					
	1.Knowledge						
quemada		specie, seed nursing, seedling				\circ	
		requirements, trees demography,	7			0	
		wood processing and house and					
D 1:	477 1 1	fence building using this wood					
Perdiz	1.Knowledge	habits and daily activity, preferred					
santanderea		food sources, reproductive biology	7			0	
na		and demography. (because was a				•	
		highly hunted specie in the past)					
		Specie recognition through the bird sound as a scientific level	→			0	
Actors:	participation	management supply &			CONS	ervation	
 Nation	al level	entral govt.			Natio	onal Parks	(NPs)
					-		-
Subnat	ional level	Departmental govt. CAS (environmental	agency	()			
Local le	evel:						
(Neighboι							
	ıring municipality)	Hyd	lropow	er		itional Pa	
	ıring municipality)	Нус	lropow plant	er	adr	ministrati	on
	ring municipality)	Нус		er	adr (Ic	ministrati ocal office	on e):
			plant		adr (lo n	ministrati ocal office nanaging	on):
Municipal	San Vicente	National producer Water	plant	ES	adr (lo n Ya	ministrati ocal office nanaging origuíes N	on): P
level (San		National producer federations' local supply	plant P sch		adr (lc n Ya in	ministrati ocal office nanaging riguíes N cluding it	on :): : P
	San Vicente	National producer Water federations' local supply	plant P sch	PES Jeme	adr (lc n Ya in	ministrati ocal office nanaging origuíes N	on :): : P
level (San	San Vicente	National producer federations' local supply	plant P sch	PES Jeme	adr (lc n Ya in	ministrati ocal office nanaging riguíes N cluding it	on :): : P
level (San Vicente)	San Vicente Town hall	National producer federations' local representatives Water supply company	P sch	PES Jeme	adr (lo r Ya in nat	ministrati ocal office nanaging riguíes N cluding it	on): P s sts
level (San Vicente) 	San Vicente Town hall Community	National producer federations' local representatives company Local farmers Water supply company	plant P sch 'A	PES Jeme	adr (lo n Ya in nat	ministrati ocal office managing origuíes N cluding it cural fores	on): P es sts
level (San Vicente) Ward (vereda)	San Vicente Town hall Community Action Groups	National producer federations' local representatives company Local farmers associations (mixed sewage system)	Plant F sch 'A oply & orstem	PES Jeme	adr (lo n Ya in nat	ministrational office managing origuíes Nacluding it cural fores mental Nacluding it distributes of the mental Nacluding it (Birdrese)	on): P es sts
level (San Vicente) 	San Vicente Town hall Community	National producer federations' local representatives company Local farmers Water supply company	Plant F sch 'A oply & orstem	PES Jeme	adr (lo r Ya in nat Environn - ProAves - Unión Te (renatura	ministrational office managing origuies N cluding it cural fores mental NC (Bird reservence)	on PP ss sts GOs: rve)
level (San Vicente) Ward (vereda)	San Vicente Town hall Community Action Groups	National producer federations' local representatives company Local farmers associations (mixed sewage system)	Plant F sch 'A oply & orstem	PES Jeme	adr (lo r Ya in nat Environn - ProAves - Unión Te	ministrational office managing origuies N cluding it cural fores mental NC (Bird reservence)	on PP ss sts GOs: rve)
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Water supply company	plant sch 'A oply & vstem	PES eme RA'	adr (lo r Ya in nat Environn - ProAves - Unión Te (renatura - Natura (f	ministrational organisms of the control of the cont	on PPs ststs
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Water supply company Water supply company	plant F sch 'A pply & rstem rs	PES seme RA'	environn ProAves Unión Te (renatura Natura (f	ministrational organisms of the control of the cont	on PPs ststs
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Mater supply company Water supply sewage sy group andividual Farmers (male & female) with Agroforestry (Cocoa, coffee, mixed) and	plant F sch 'A pply & rstem rs	PES seme RA'	environn ProAves Unión Te (renatura Natura (f	ministrational organisms of the control of the cont	on PPs ststs
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Mater supply company Water supply company Water supply company Water supply company Mater supply company Water supply company Water supply company Sewage symmetry Brown associations (mixed & female) with company Agroforestry (Cocoa, coffee, mixed) and company Fruit orchards and pastures	plant F sch 'A pply & rstem rs owners silvo-ps	ship & ma	Environn - ProAves - Unión Te (renatura - Natura (f	ministrational organisms of the control of the cont	on PPs ststs
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Mater supply company Water supply sewage sy group andividual Farmers (male & female) with Agroforestry (Cocoa, coffee, mixed) and	plant F sch 'A pply & rstem rs owners silvo-ps	ship & ma	Environn - ProAves - Unión Te (renatura - Natura (f	ministrational organisms of the control of the cont	on PPs ststs
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Mater supply company Water supply company Water supply company Water supply company Mater supply company Water supply company Water supply company Sewage symmetry Brown associations (mixed & female) with company Agroforestry (Cocoa, coffee, mixed) and company Fruit orchards and pastures	plant F sch 'A pply & rstem rs owners silvo-ps	ship & ma	Environn - ProAves - Unión Te (renatura - Natura (f	ministrational organisms of the control of the cont	on PPs ststs
level (San Vicente) Ward (vereda) level	San Vicente Town hall Community Action Groups (JAC)	National producer federations' local representatives Local farmers associations (mixed & female) Mater supply company Water supply company Water supply company Water supply company Mater supply company Water supply company Water supply company Sewage symmetry Brown associations (mixed & female) with company Agroforestry (Cocoa, coffee, mixed) and company Fruit orchards and pastures	plant Sch Apply & sstem ss owners silvo-pa de the I	ship & mo	Environn - ProAves - Unión Te (renatura - Natura (f	ministrational organisms of the control of the cont	on PPs ststs



Configuration of the linkages between ecosystem and biodiversity changes, their direct and indirect drivers and corresponding policies and actions

This project has contributed to the following Sustainable Development Goals (SDGs):







This project has contributed to the following Aichi Biodiversity Targets (ABTs):









Project Achievements

Name	Description
FiNCO initiative	The creation of the FiNCO initiative allows for the promotion of
	farms as a source of knowledge.
La Germania Project	Establishment of the Agri-eco-touristic project in La Germania
	maps farms through a common route which gives tourist various
	options to choose from.
Inventories of Fauna	Production of inventories of ants, birds and mammals in San
	Vicente de Chucurí as a further contribution to science.

Lessons Learned

Description	Recommendation
Bad relationships between farmers and	Stakeholder engagements needs to be
institutions, and distrust of external actors	done so that the community members
made difficult data collection	become the owners and drivers of the
	project.
Social fracture hinders community	Networking initiatives such as exchanges
organization and collective action	between farmers, workshops and the La
	Germania project are ways to overcome
	this difficulty.

Outputs

Туре	Details
Video	FiNCO Los Laureles
	https://www.youtube.com/watch?v=KpRE8FOjhOA
Video	FiNCO Vista Hermosa
	https://www.youtube.com/watch?v=FqOC5x1VTZY
Video	FiNCO Varsovia
	https://www.youtube.com/watch?v=jGOMXYooMWs
Thesis	Capacidad de resiliencia socio-ecológica del paisaje de la micro-
	cuenca Las Cruces de San Vicente de Chucurí
	http://tangara.uis.edu.co/biblioweb/pags/cat/conbas.jsp
Publication	Monitoring ecological change during rapid socio-economic and
	political transitions: Colombian ecosystems in the post-conflict era
	http://www.sciencedirect.com/science/article/pii/S146290111730
	3805
Thesis	Sistemas de Producción Rural en San Vicente de Chucuri: Fincas en
	La Microcuenca Las Cruces
	http://tangara.uis.edu.co/biblioweb/pags/cat/conbas.jsp
Publication	Land-use heterogeneity by small-scale agriculture promotes
	amphibian diversity in montane agroforestry systems of northeast
	Colombia
	https://www.sciencedirect.com/science/article/pii/S016788091830
T1 .	2019
Thesis	La Producción Agrícola Familiar y Las Practicas de Manejo
	Ambiental Que Permiten la Conservación de Los Paisajes
	Agroforestales, Un Aporte Etnográfico Desde el Trabajo Social
Dublication	http://tangara.uis.edu.co/biblioweb/pags/cat/conbas.jsp
Publication	Guía ilustrada mamíferos y aves registradas con fototrampeo,
	Microcuenca Las Cruces, San Vicente de Chucurí, Santander
	http://gef-satoyama.net/wp/wp-content/uploads/2019/05/72
	<u>Catalogue-of-Vertebrates-compressed.pdf</u>

Publication	Catálogo ilustrado Hormigas en monocultivos y sistemas agroforestales con cacao Microcuenca Las Cruces, San Vicente de		
	Chucurí, Santander http://gef-satoyama.net/wp/wp-		
	content/uploads/2019/05/71Catalogo-de-Hormigas-		
	<u>compressed.pdf</u>		
Publication	Aves de la Microcuenca de Las Cruces http://gef-		
	satoyama.net/wp/wp-content/uploads/2019/05/70Aves-		
	compressed.pdf		
Website	Fincas de Intercambio de Conocimiento https://finco.pasoeco.co/		

For more information please contact

Name	Björn Reu
Address	Cra 27 Calle 9 Ciudad Universitaria
Telephone	+58-634-4000
E-mail address	breu@uis.edu.co
Website	http://www.uis.edu.co/webUIS/es/index.jsp