9th Meeting of the
Ad Hoc Open-ended Working Group on Access and Benefit Sharing
Cali, Colombia March 2010

Erwin Beck
University of Bayreuth, Germany
Deputy Speaker of the Research Unit

Side Event:

Non-commercial benefits resulting from basic research - an Ecuadorian Case

organized by

German Research Foundation DFG

and the

DFG - **Research Unit # 816**
Biodiversity and Sustainable Management of a Megadiverse Mountain Ecosystem in South Ecuador

TMF

March 23, 2010

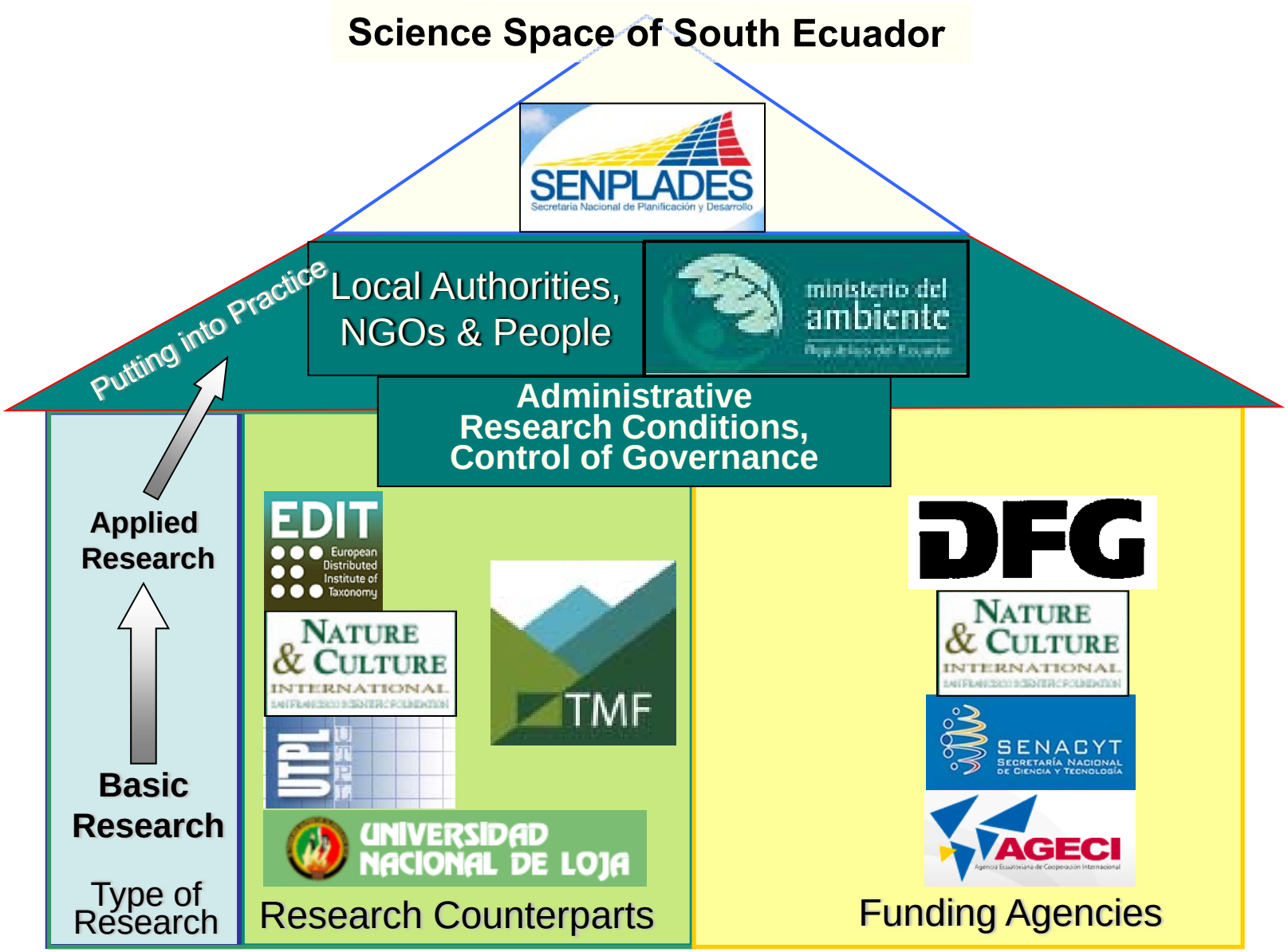
www.dfg.de, www.tropicalmountainforest.org

The German Research Unit: Biodiversity and Ecosystem Research in South Ecuador

Four Pillars for Research into Ecosystem Biodiversity

- **Long-term basic biodiversity research** (funding) is necessary to understand ecosystem functioning and services, particularly in hot-spot areas.
- **Multidisciplinary research**, **academic education** and **capacity building** are preconditions for continuous increase of knowledge in the biodiversity-rich tropics, regarding all issues of biodiversity.
- **Transfer knowledge** from basic science to application is required for the sustainable development especially of biodiversity hot spot areas.
- **Environmental education** boosting the **public awareness** for the importance of biodiversity research and conservation for safeguarding ecosystem services and human well-being helps to attain **acceptance by the local people.**

Counterparts and of Collaboration in South Ecuador



Programme of the Side-event

Time	Section	Topic	Speaker
13:00 – 13:05	**Introduction**	Welcome & Programme of the side-event	**Prof. E. Beck**
13:05 – 13:20	**The scientific programme**	The Research Unit 816: The Start; Aims, statistics and findings	**Prof. E. Beck**
13:20 - 13:35	**Benefit Sharing (1)** University & staff development by research	Visions and perspectives of Latin American Universities: **The example UTPL:** Successful capacity building & implementation of research infrastructure	**Dr. Omar Malagon** **UTPL**
13:35 – 13:50	**Benefit Sharing (2)** University development with joint infrastructure	**The example UNL:** Staff recruitment and research evelopment. Use and importance of joint research infrastructure for a University	**Ing. Carlos Valerezo, UNL**
13:50 – 14:00	**Benefit Sharing (3)** Reserach Transfer – The UNESCO Biosphere Reserve	Other Benefit-sharing results**: The example: Naturaleza y Cultura Internacional**: • The Biosphere Reserve • Environmental education	**MSc. Bruno Paladines, NCI**
14:00 – 14:15	**DFG compliance with CBD and ABS-principles**	• Legal basis and the ABS implementation in Ecuador • Licensing process	**Monica Ribadeneira-Sarmiento, DFG**
14:15 – 14:30	**General Discussion**		**Prof. E. Beck**
14:30	**End of side-event**		

Presentations given by

Dr. Omar Malagon
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Prof. Dr. Dr. Erwin Beck
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Deputy Speaker of the DFG – Research Unit
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Southern aspect: Natural forest

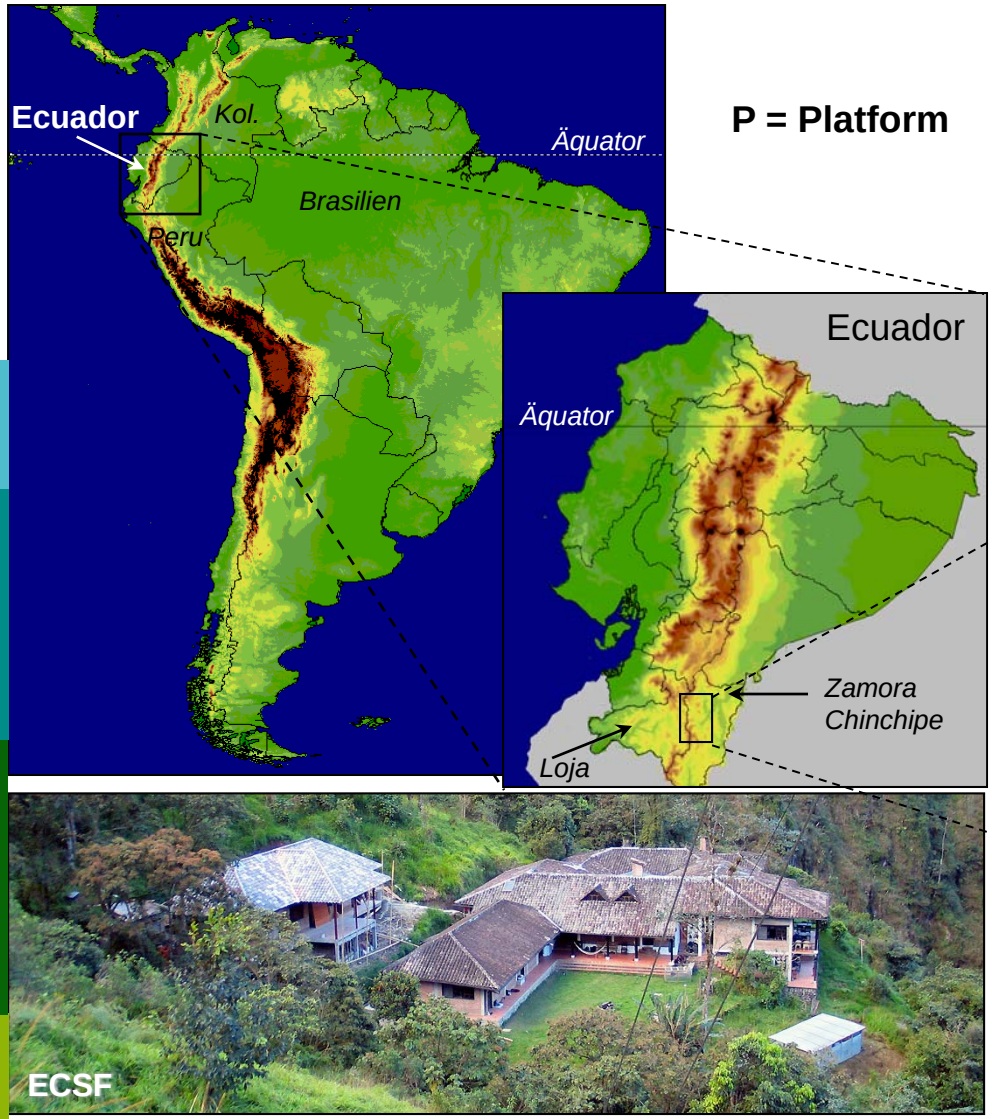
The Project in the Valley of the Rio San Francisco

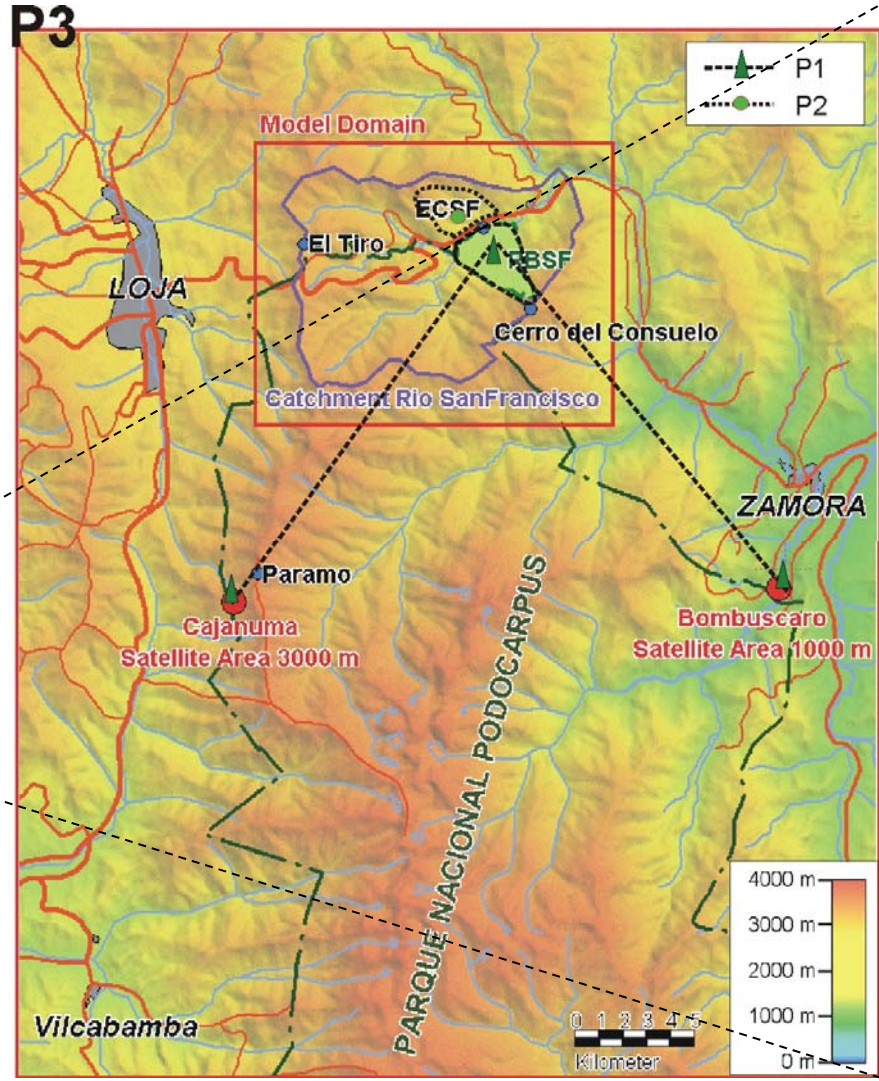
Northern aspect: Pastures (active,abandoned), exotic tree plantation

Location of the Study Area

ECSF = Estacion Científica San Francisco
RBSF = Reserva Biologíca San Francisco

P = Platform





The German Research Unit: Biodiversity and Ecosystem Research in South Ecuador

1997 – 2001

Ecosystem Parameters of Intact and Disturbed Tropical Mountain Forests

6 – 11 Projects

Focus: Abiotic and biotic inventories, altitudinal gradients of biotica and abiotic components

Infrastructure: Station Building (A), basic equipment, transects and plots, individual data storage.

2001 – 2007

Functionality in a Tropical Mountain Rainforest Ecosystem: Diversity, Dynamics and Potential of Use

17 - 29 Projects

Focus: Interactions ⟶ Functions of biodiversity, Gradients of use and disturbance (pastures)

Infrastructure: Laboratories (B), specific equipment (e.g. remote sensing, molecular biology) also for counterparts, joint plots and extention to pastures, Meta-Database

2007 – 2013

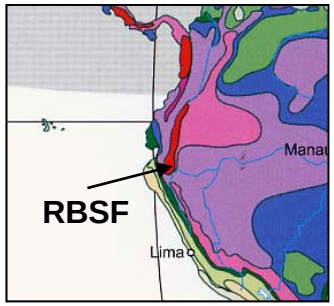
Biodiversity and Sustainable Management of a Megadiverse Mountain Ecosystem in South Ecuador

21 - 25 Projects

Focus: Functioning ⟶ Ecosystem services and global change scenarios

Infrastructure: Lecture Hall Building (C), more equipment for counterparts, specific instrumentation of joint experimental sites, Data warehouse (DW), numerical Models

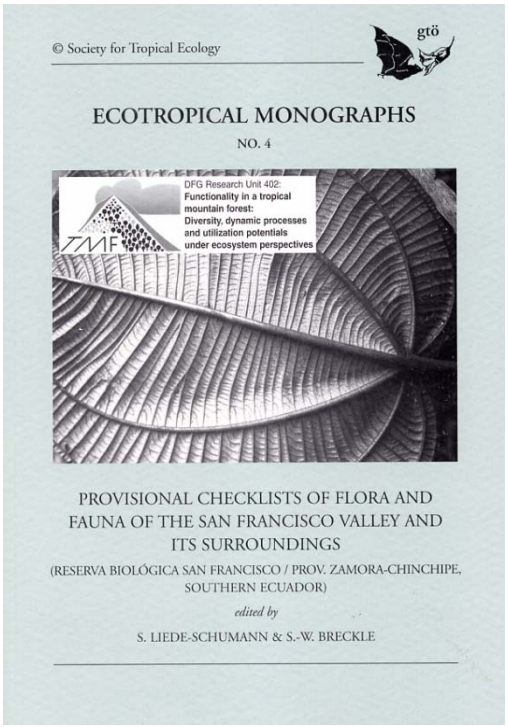
The Research area: A Biodiversity Hotspot

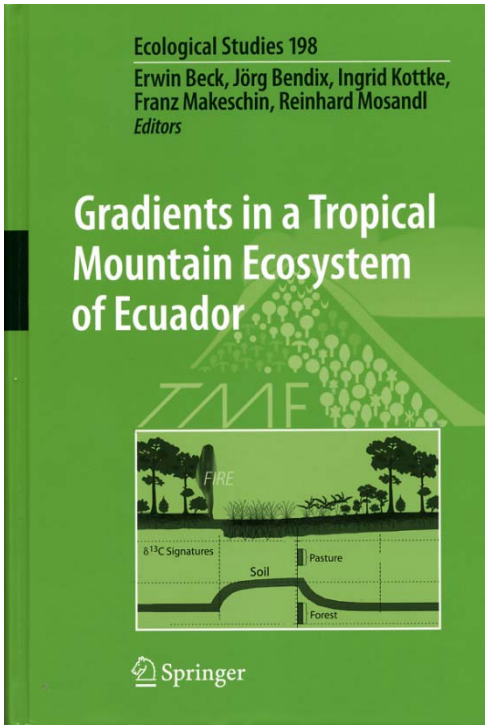


red = Hotspot >5000 species/ 10,000km²

Barthlott et al. Erdkunde 2008

The Andes of Ecuador belong to the „**hottest“ hotspots** of vascular plant biodiversity worldwide (e.g. Jørgenson & Ulloa Ulloa 1994, Barthlott et al. 2008)





Books by the Research Group

- Inventory of species → still to be **completed** (every month detection of new species
- Many **extraordinarily diverse** groups as e.g. birds (397), plants (2200), soil fungi etc.; **World record** of moths diversity ~2400)
- However, some groups **poor in species** (170) (soil fauna)
- Excellent for testing **biodiversity theories** (e.g. role of biodiversity in ecosystems)

One Ecosystem – Two Manifestations (due to local land use)

Anthropogenic replacement system

„Natural system“

Generated by Mestizo-Colonos slash and burn of the natural forest

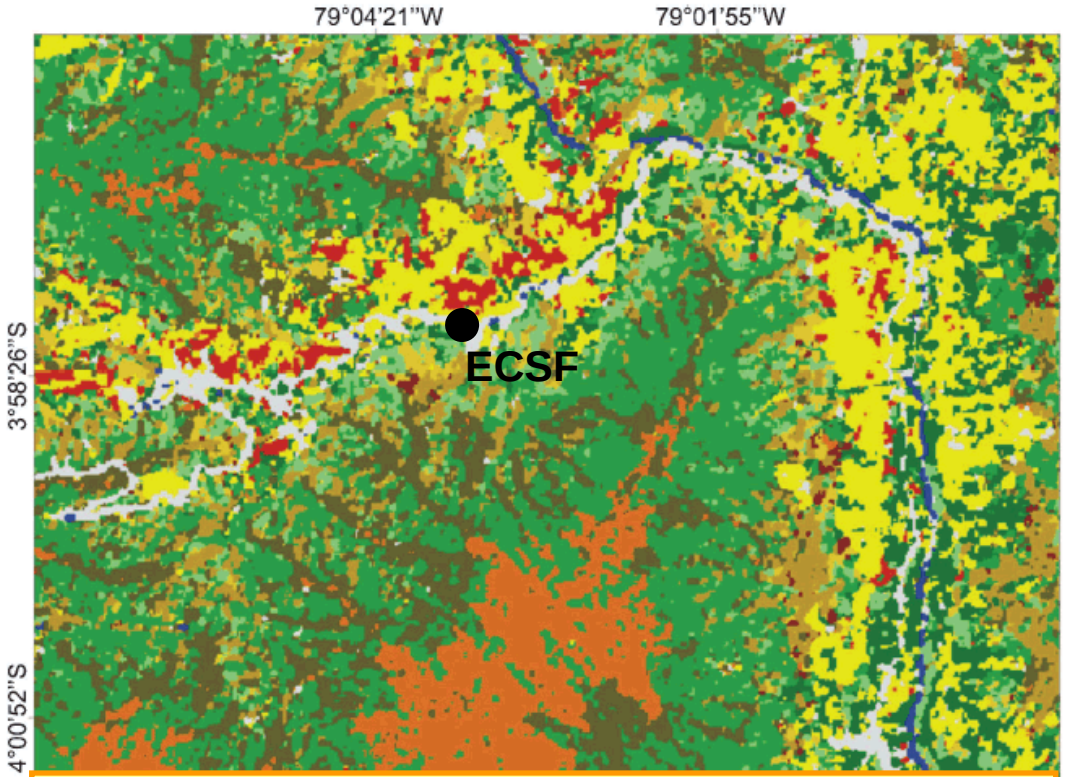
Pasture Platform in use

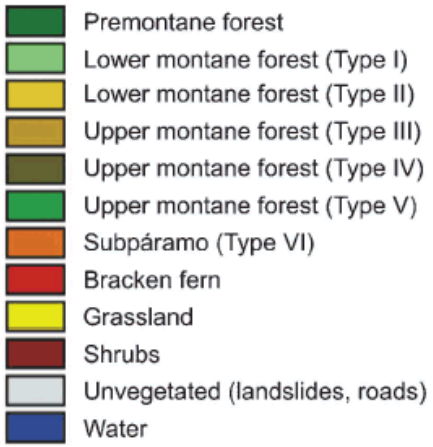
Abandoned

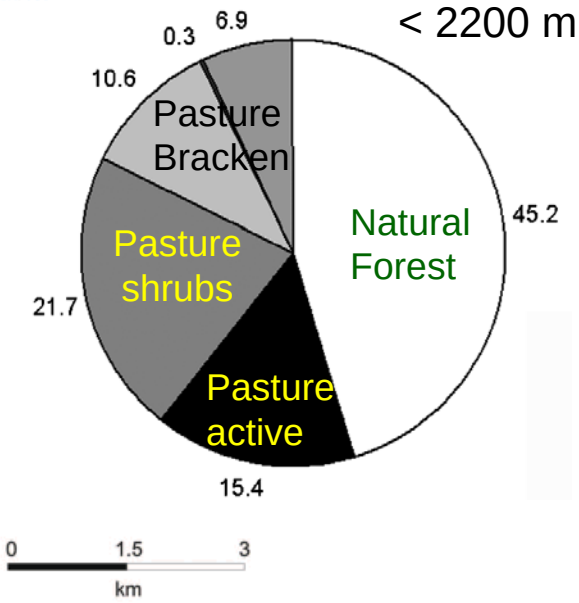
Rio San Francisco

Forest Platform

Quantifying Land Use Change – The Problem







Göttlicher et al. 2009

→ Current land use strategy (slash and burn) is not sustainable

→ Degradation of ecosystem and its services

→ Livelihood threatened

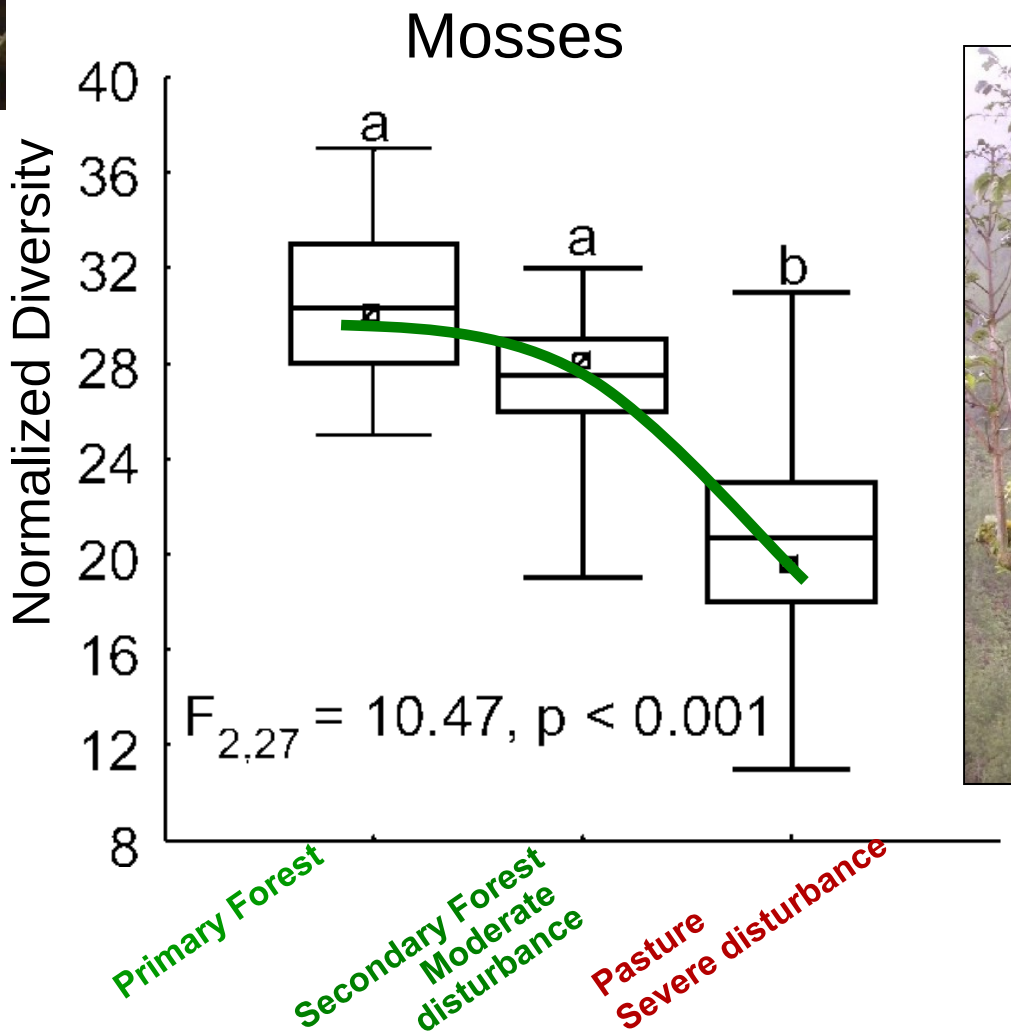
Beck et al. 2008

Situation Landsat ETM 2001: Pastures: ~ 67% with lost usability

Example: Biodiversity of Mosses and Disturbance

Decrease humidity, moisture availability

Increase radiation, temperature



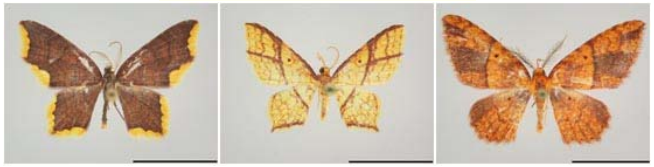
(Nöske et al. 2008)

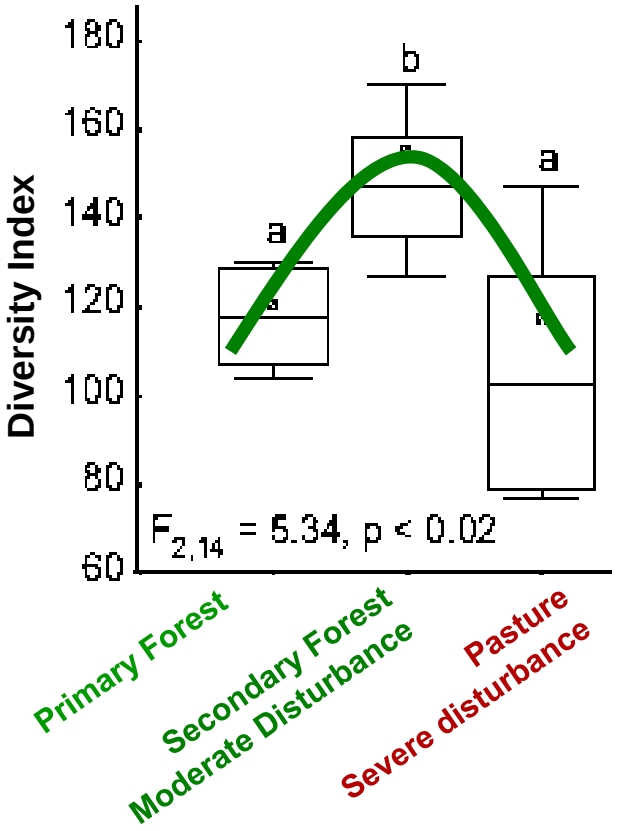
Example: Biodiversity of Moths and Disturbance

Decrease humidity, moisture availability

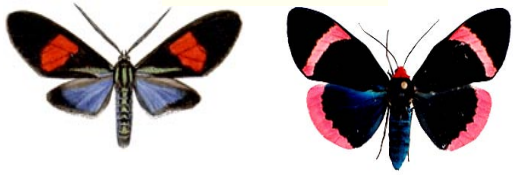
Increase radiation, temperature

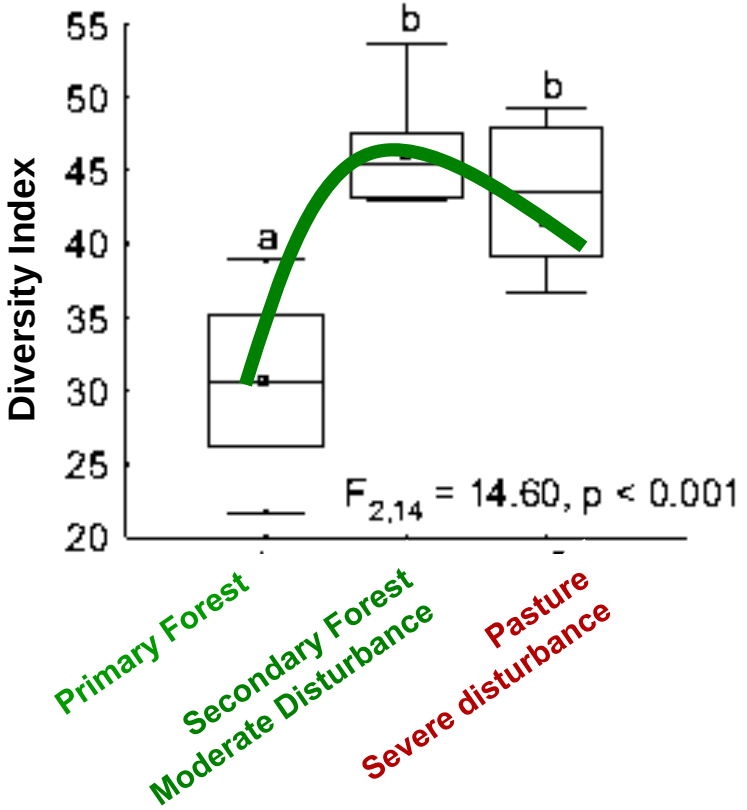
Geometridae





Arctiidae





Overall Objective

Based on a **comprehensive understanding of the ecosystem functioning**, we work on the following problem:

Can we achieve science-directed sustainable land use systems that at the same time

- **preserve biodiversity, ecosystem processes and services (functioning),**
- **rehabilitate attenuated diversity and lost usability, and**
- **guarantee better livelihood for the local population?**

Indirect ecosystem services: → Conservation / stability of the natural systems
e.g. regulatory functions etc.

Direct Ecosystem Services
(Provisioning Services)

→ Timber products – Afforestation with indigenous potential crop tree species

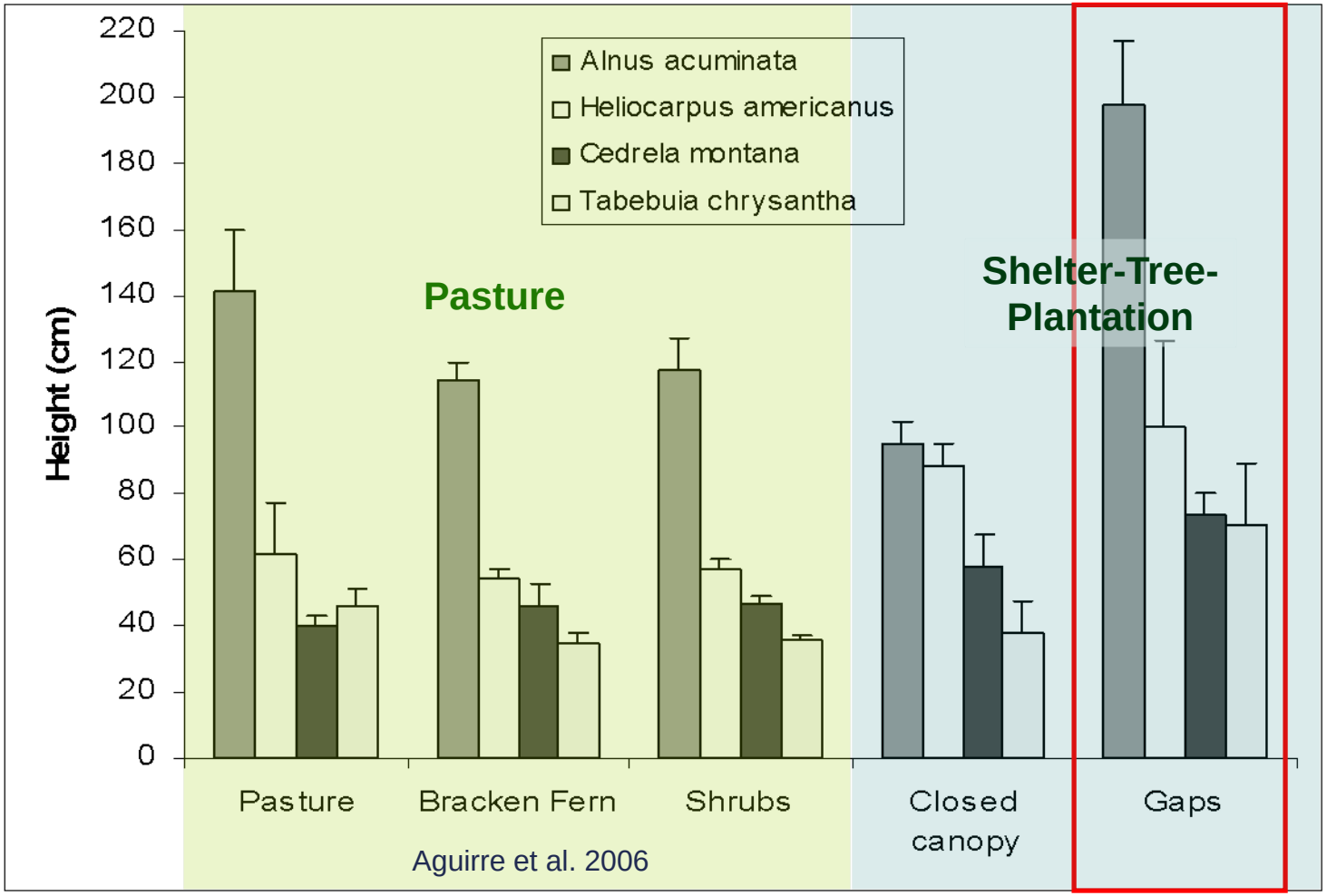
→ Rehabilitation of abandoned pastures (Repasturization)

Example: Land Use Option

Reforestation with indigenous (crop) trees

(growth after one year; shelter trees: *Pinus patula*).

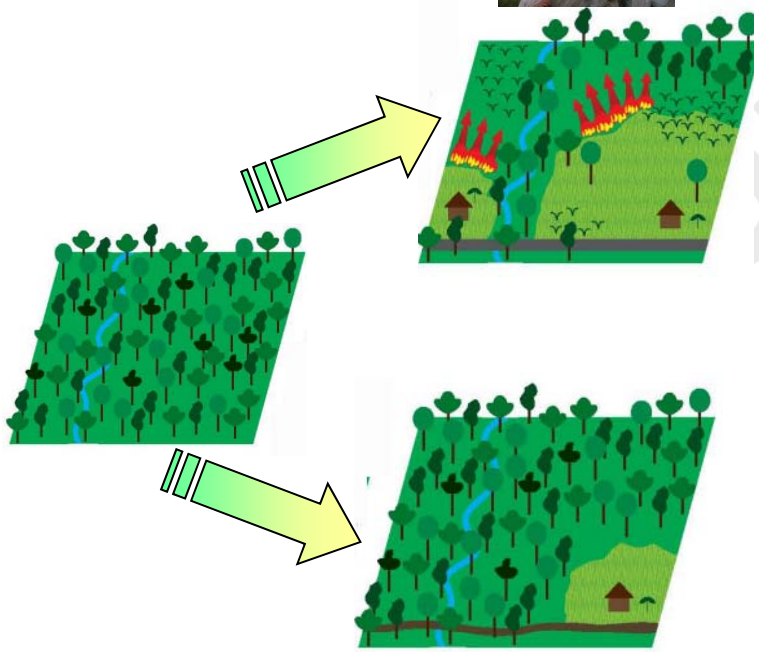
Radiation ± Understorey

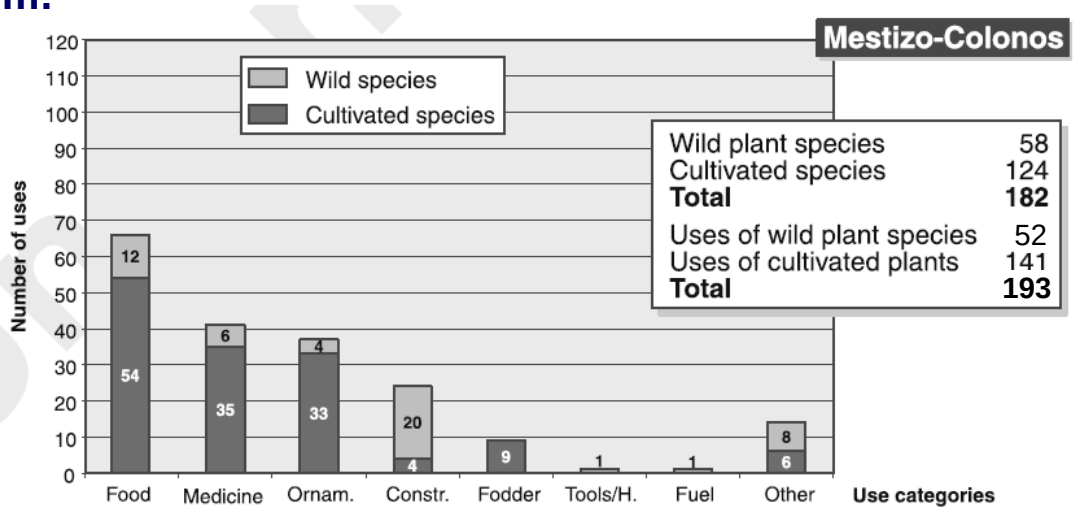


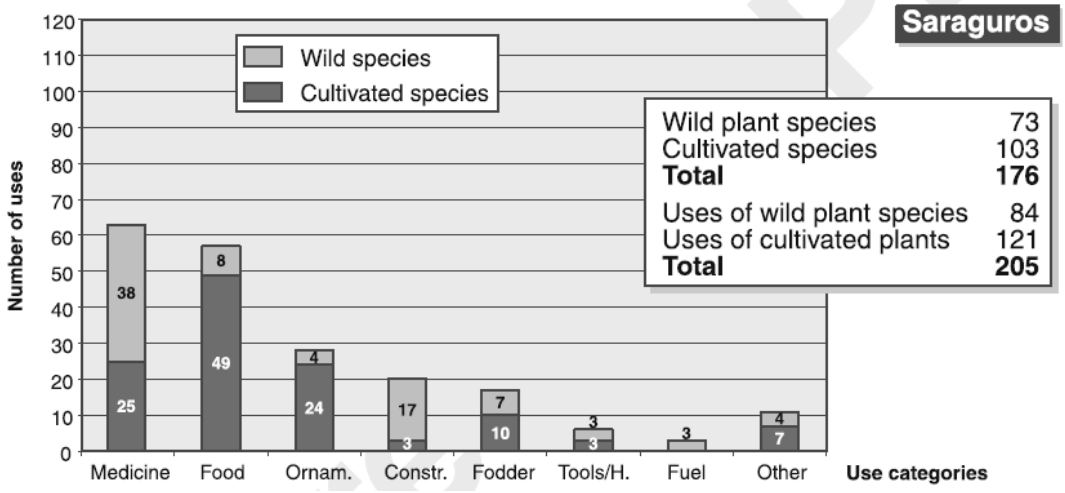
Indigenous Land Use Systems – Market Level

Origin:
Mountain Forest

Current System:





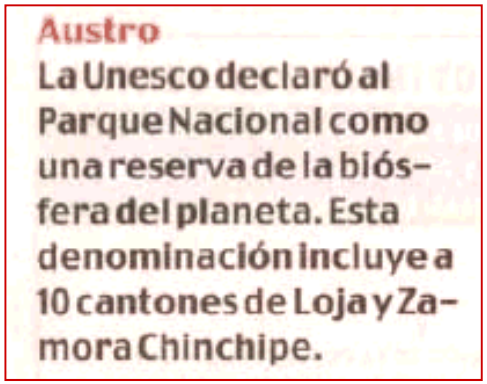


Pohle & Gerique 2008
Gerique 2009

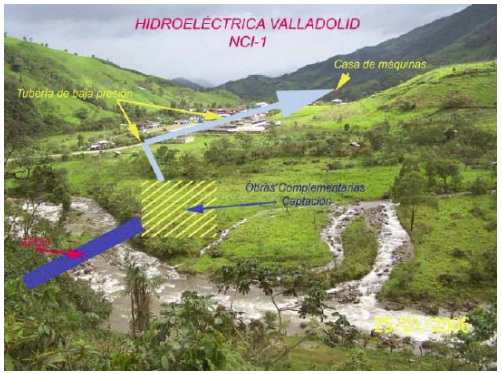
Benefit Sharing

Modes of Benefit Sharing by the Research Group

- Education and training of scientists of all levels by joint research and publication
- Promoting autonomous university staff development
- Improving the scientific infrastructure of the cooperating institutions
- Jointly organising international conferences (in Loja)
- Participating in local efforts in environmental education
- Supporting environmental planning (biosphere reserve, watershed management etc.)


Austro

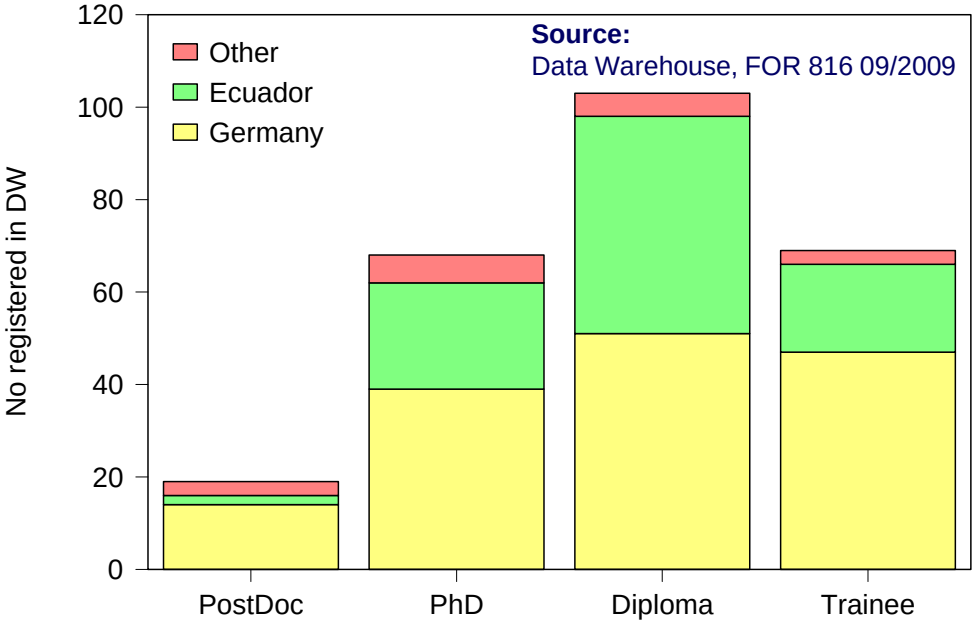
La Unesco declaró al Parque Nacional como una reserva de la biósfera del planeta. Esta denominación incluye a 10 cantones de Loja y Zamora Chinchipe.



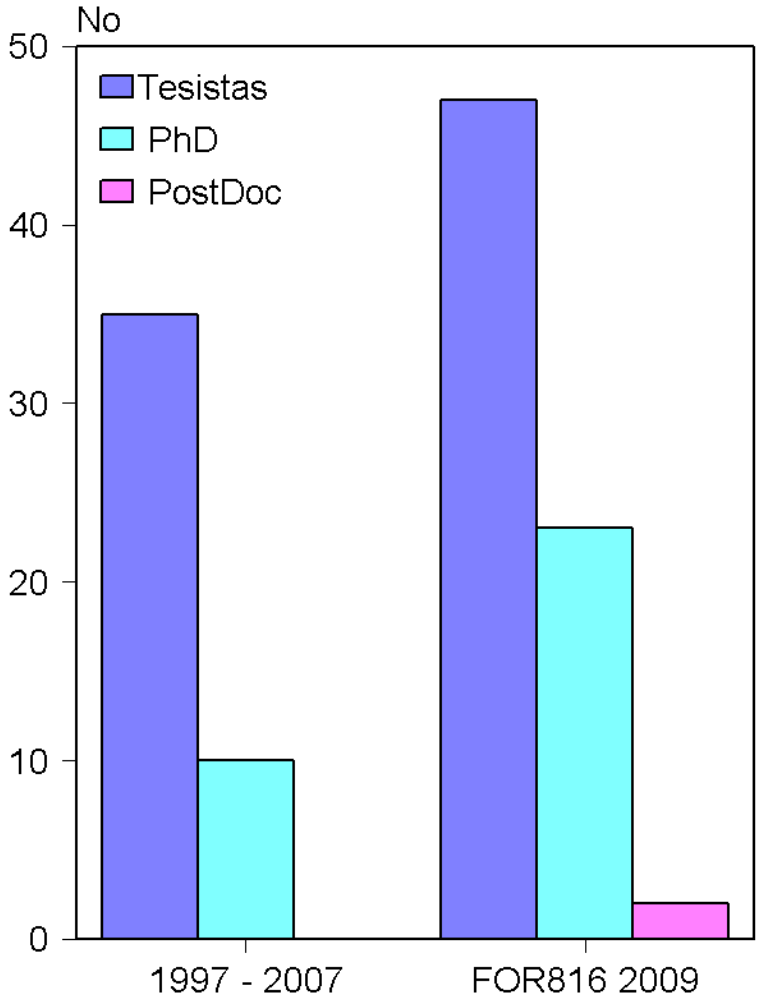
Example: Education

Tesistas, PhDs, PostDocs

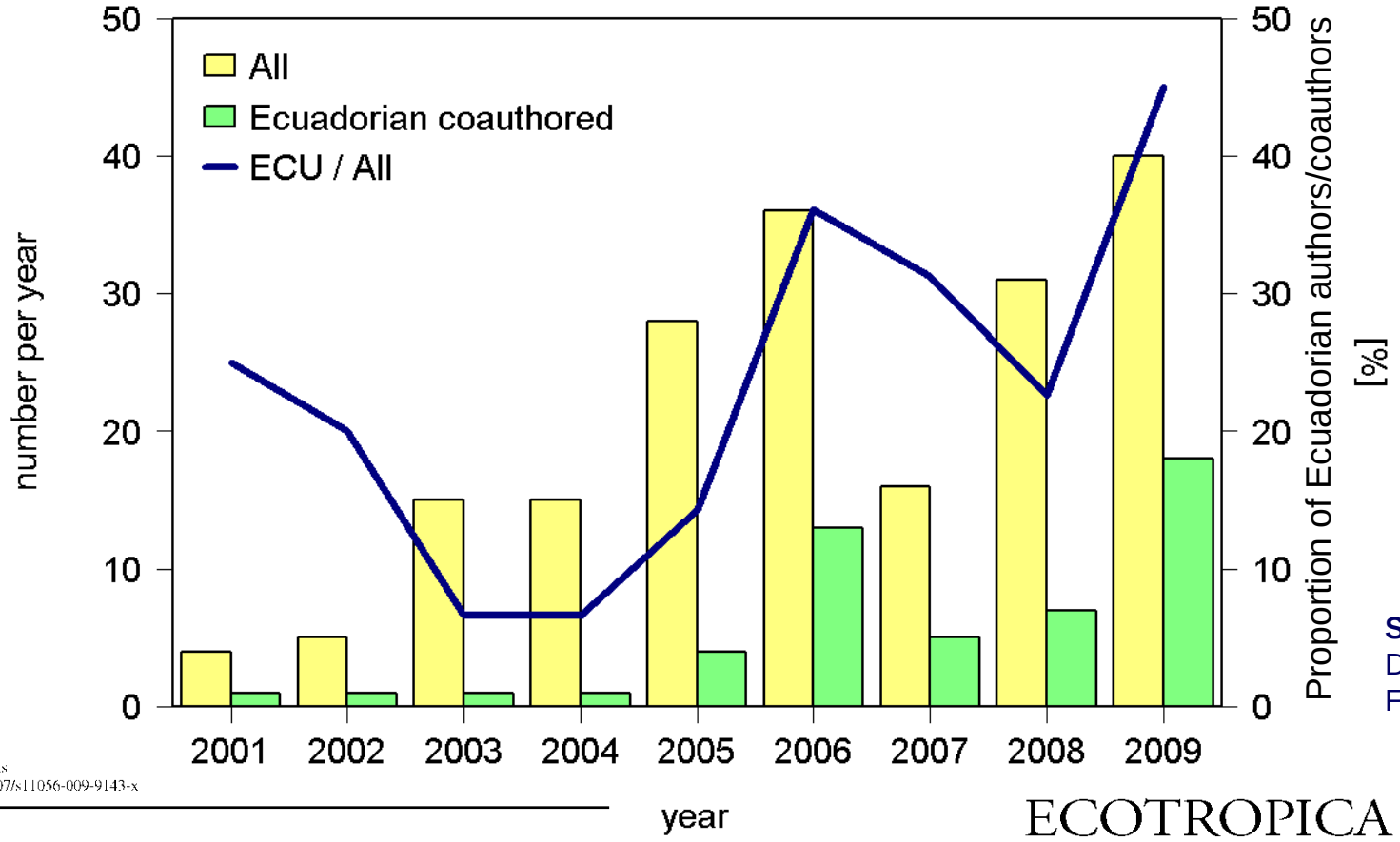
- Project design German PI & Counterpart
- Funding DFG



Development of Ecuadorian Researchers



Example: Promoting scientific staff : Publications in peer-reviewed journals



Source:
Data Warehouse
FOR 816 01/2010

New Forests
DOI 10.1007/s11056-009-9143-x

Application of mycorrhizal roots improves growth of tropical tree seedlings in the nursery: a step towards reforestation with native species in the Andes of Ecuador

Narcisa Urgiles · Paúl Loján · Nikolay Aguirre · Helmut Blaschke · Sven Günter · Bernd Stimm · Ingrid Kottke

Received: 13 June 2008 / Accepted: 2 April 2009

Abstract Most tree species in tropical mountain rain forests are naturally associated with arbuscular mycorrhizal fungi. Previous studies in southern Ecuador of 115 tree species

ECOTROPICA

Volume 12 2006 No. 2

ECOTROPICA 12: 69–85, 2006

SEASONALITY IN AN EVERGREEN TROPICAL MOUNTAIN RAINFOREST IN SOUTHERN ECUADOR

Eduardo Cueva Ortiz[1] Jürgen Homeier[2], Siegmar-Walter Breckle[3], Jörg Bendix[4], Paul Emck[5], Michael Richter[5] & Erwin Beck[1]

Example: Staff & Infrastructure Development

Cooperation Project (Local Universities - DFG)

- Project design: Counterpart
- Funding of PhDs by Ecuadorian counterparts
- DFG funds for stay of PhD in Germany at co-adviser‘s institute

→ **Current state: 4 projects UTPL, 1 Uni Cuenca**

Topics: Not FOR816, but related → synergetic data use

First funded phase: June 2009 – May 2010 → 3 years

Institutional Cooperation → Common Infrastructure

- National Administration (Ministry of Environment etc.)
- Ecuadorian Universities (Genetic/Soil Labs, Meteorology, Greenhouse…)
- Foundation Nature and Culture International NCI (ECSF, transfer public)
- Acceptance by the locale population
- Excellent embeddedness in the science space southern Ecuador

omalagon@utpl.edu.ec

Development of Research capacities at UTPL and the DFG Research units RU402 & RU816

Omar Malagón PhD
Biological Area Director
Universidad Técnica Particular de Loja
LOJA, Ecuador19

Vision and context

Key role of universities in scientific capacity building in developing countries.

Types of Universities in Latin American

- **3% Complex, high quality**
  - Similar to developped universities
  - Clusters in México, Chile, Argentina and Brazil
- **7% Teaching Universities, medium quality**
  - Main cities
  - Some research units
  - Certain local and national impact
- **90% Only Teaching Universities**
  - Very few professors full time
  - No research and Technology Transfer

Overlooking the main problem: Developing science and social relevance

- TEACHING **********
- MANAGEMENT *********
- SERVICES ****
- RESEARCH **
- VALUES ??? *

In Latin America, quality and relevance are directly related to scientific capacity building and Technology Transfer to society.

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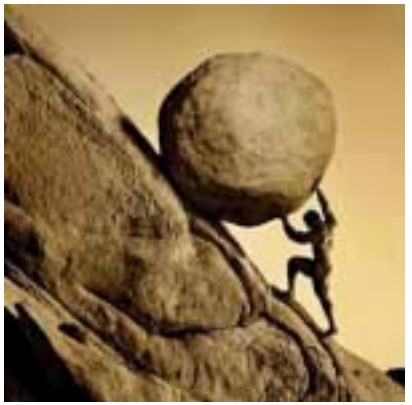
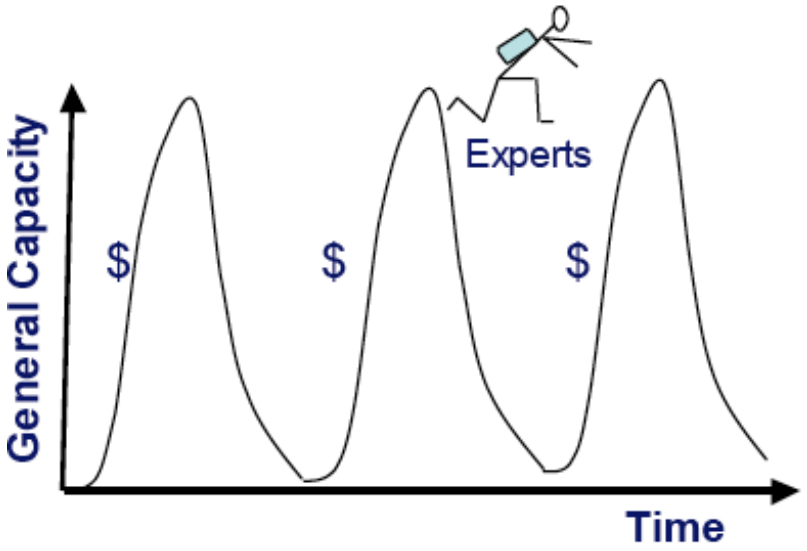
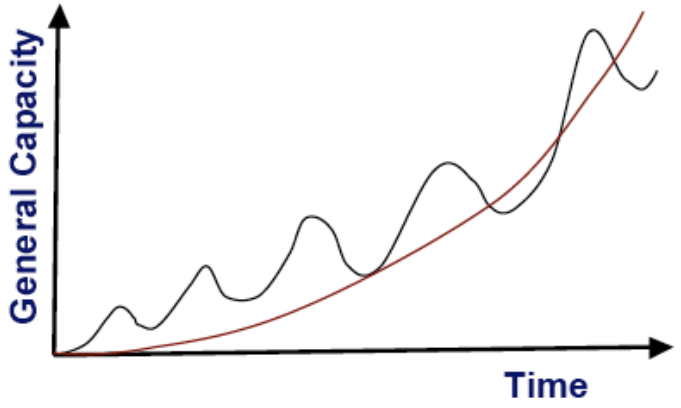
“Growth Cycles” (the myth of Sisyphus)





“Universities as social accumulators of knowledge or “know-how” and general capacity”



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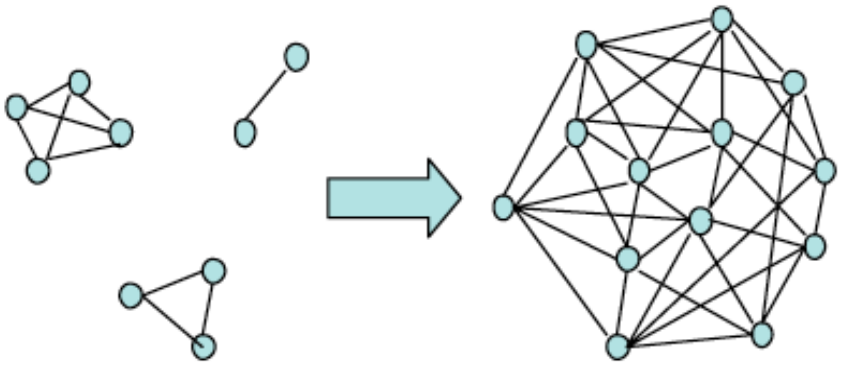
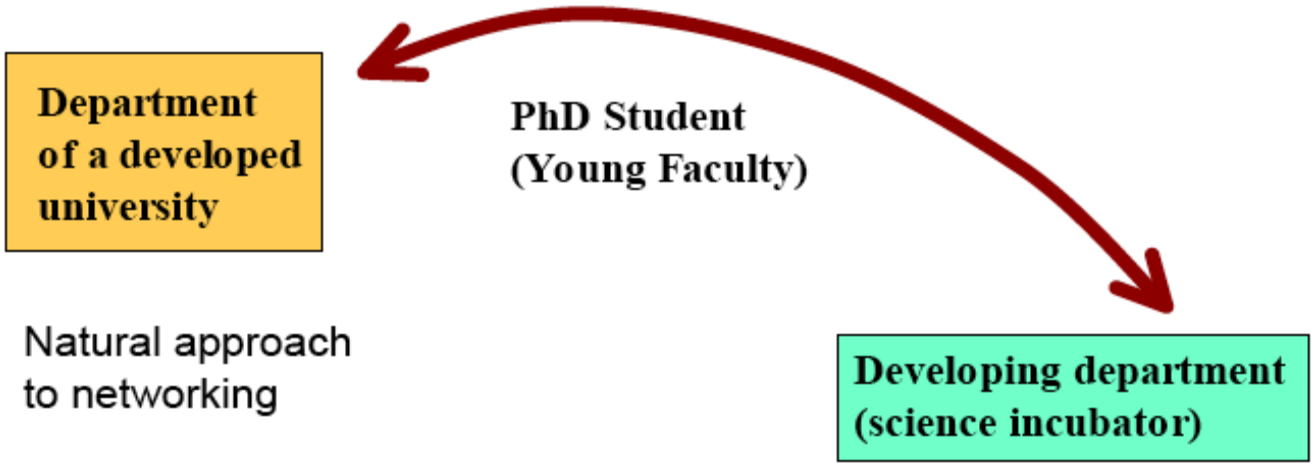
“Matthew Effect” (R.K.Merton):

- The need for a critical mass of scientists and operational elements that need to be put in place before an exponential increase in results can be expected (Pioneer effect)



SHARED-TIME PhD “SANDWICH” MODEL

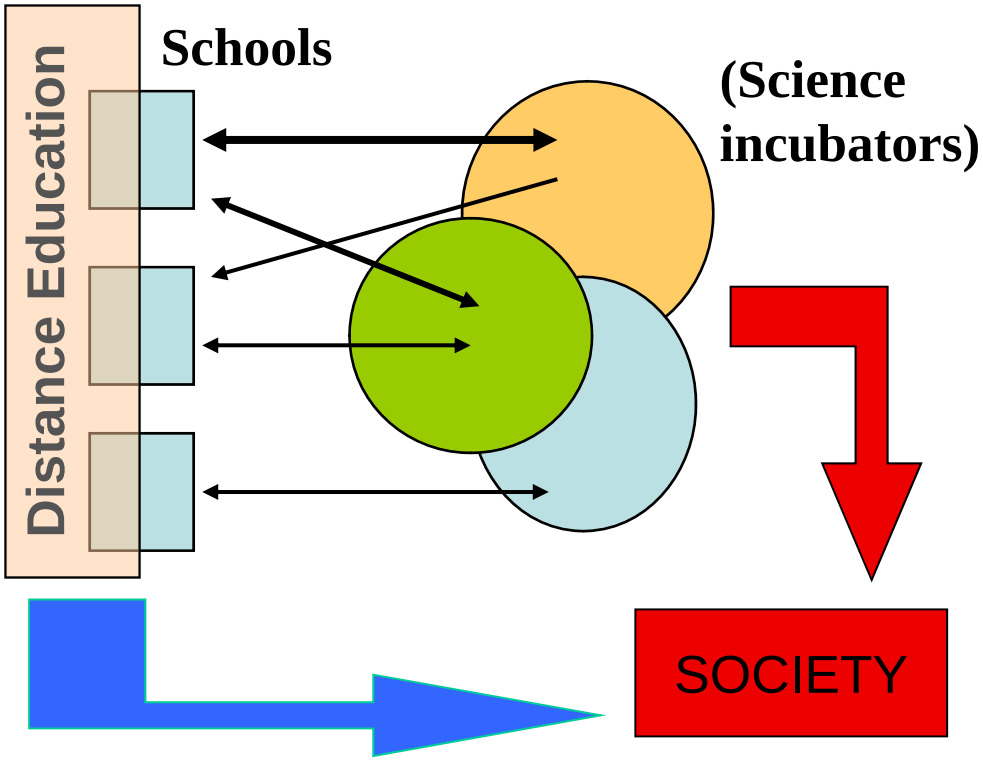


Brain Drain

- In LA the general rate of return of PhDs is approximately 30%
- " Effective return: rate of return of PhD students who go back to their university of origin, that is, once they have completed their academic stay abroad, and includes there a work placement in a department that is provided with the minimum conditions to continue the research work done at the host university abroad.
- " Effective rate of return: 1-10%
  - Internal Brain Drain
  - Lack of research units
  - Academic bureaucracy
  - Lack of effective international connections

Science Incubators

Teaching Research + Outreach

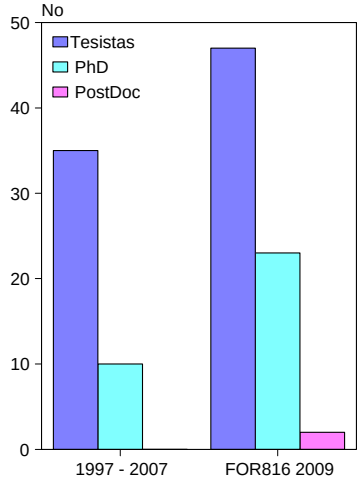


The baseline: UTPL in 1997

- Teaching University
  - 10% Full time professors
  - 2 PhDs (foreigners), no PhD students
- No research and no publications (international)
  - Few operative labs
  - Small IT infrastructure
  - No Technology transfer to society
- Few international relationships
  - “Loja is the last corner in the world” (a Lojanean Writer)
- No Biological studies (except Food Sciences)
  - But the southern part of Ecuador is one of the hottest hot spots in biodiversity in the world!

The scientific capacity building process : DFG RU402 & RU816

- **A clear vision within the UTPL to become a Research University**
  - Enrolment of empowered young professors
  - IT and infrastructure development
  - Funding science development (university budget)
  - Focus on international relationships
  - Environment and Biology as an strategic area
- **Impact of an international Research Unit at home**
  - A clear vision of local scientific development and good relationships
  - Bilateral scientific cooperation with well-qualified cooperating scientists
  - Shared time work (Loja-Germany) by researchers and local counterparts
  - High level courses and seminars, and International
  - Conferences, in Loja
  - The culture of environmental science



Some results in UTPL

- Starting up of a Research University
  - 80% Full time young professor-researchers
  - 12 PhDs, 200 PhD Students (abroad "sandwich model"), 7 with DFG
  - Development of research infrastructure
  - Exponential rate of publications: 20 indexed, 10 in ISI (2009)
  - Strong Technology Transfer to society
  - Biological Area development: Environmental Sciences, Chemistry, Biology, Agronomical Sciences, Pharmacy and Biochemistry, and Medicine
  - ECTS Academic Model and students working in research projects
  - 600 visiting professors per year, and more than 300 stays abroad
  - National funding for science development (4 Million US$ in 2009)
- Collaborative Shared Time PhD Model linked to a Research Incubators development with universities abroad.

Representative Example

- Juan Pablo Suárez as a Case-Study
  - 1) Enrolment in UTPL as part of the first team of Biologists
  - 2) Working as young-Professor helps the creation of the Micropropagation Lab and Molecular Biology lab
  - 3) Start the collaboration with RU402 and begun the project with Dr Kottke
  - 4) Several stays in Tübingen and research work in UTPL
  - 5) Excellent PhD Student (joint staff development)
  - 6) After PhD responsible position as UTPL Research Director and, at the same time, build up of a research group for genetics
  - 7) Release of own staff in this group with own funds (autonomous staff development) for the generation of a research basis at UTPL
  - 8) Post-doc collaboration with peers in Germany (RU816) and others
  - 9) Networking the experience in Ecuador and Latin America

New goals: Bilateral cooperation with South Ecuadorian universities in ecosystem research

- **1. Vegetation and climate dynamics in Ecuador**
  - Ecuadorian PhD: Ing. Víctor Hugo González Jaramillo (UTPL Loja)
  - German applicants: Prof. Dr. J. Bendix, Dr. R. Rollenbeck (Univ. Marburg)
- **2. Hydrologic runoff generation in paramó ecosystems in response to natural and anthropogenic impacts**
  - Ecuadorian PhD: Mr. Vicente Iñiguez (Univ. Cuenca)
  - German applicants: Dr. L. Breuer, Prof. Dr. H.-G. Frede (Univ. Gießen)
- **3. Definition of areas with high conservation priority in Southern Ecuador's mountain forests**
  - Ecuadorian PhD: María Fernanda Tapia A (UTPL Loja)
  - German applicant: Dr. J. Homeier (Univ. Göttingen)
- **4. Models of sustainable development on farms in the southeast region of the province of Zamora Chinchipe in Ecuador**
  - Ecuadorian PhD Lic. Leonardo Izquierdo (UTPL Loja)
  - German applicant: Prof. Dr. F. Makeschin (TU Dresden)
- **5. Tulasnellales as saprophytic and mycorrhizal fungi of tropical orchids: morphology and molecular taxonomy**
  - Ecuadorian PhD: Dario Cruz (UTPL Loja)
  - German applicants: Prof. I. Kottke (Univ. Tübingen), Prof. M. Piepenbring (Univ. Frankfurt/Main)

New goals: Master in Tropical Ecology

- UNIVERSIDAD TÉCNICA PARTICULAR DE LOJA
- UNIVERSITY OF IDAHO (USA)
- UNIVERSIDAD REY JUAN CARLOS (SPAIN)
- UNIVERSITY CONSORTIUM DFG (GERMANY)

cvalarezo@softhome.net

Experiences, Benefits and Perspectives of more than twelve years of collaboration

between National University of Loja (UNL) and the DFG German Research Unit in southern Ecuador 1997 – 2009

Ing. Carlos Valarezo Monosalvas M.Sc
General Research Coordinator
Universidad Nacional de Loja – UNL
Loja, Ecuador

www.unl.edu.ec

UNL: General Information

Secular state university since 1859

12.800 students

37 careers

Academic Organization: Five Great Areas

- Human Health
- Agriculture and Renewable Natural Resources
- Education, Arts and Communication
- Energy, Industries, Geology and Mining
- Law, Economics, Social Development and Business Management

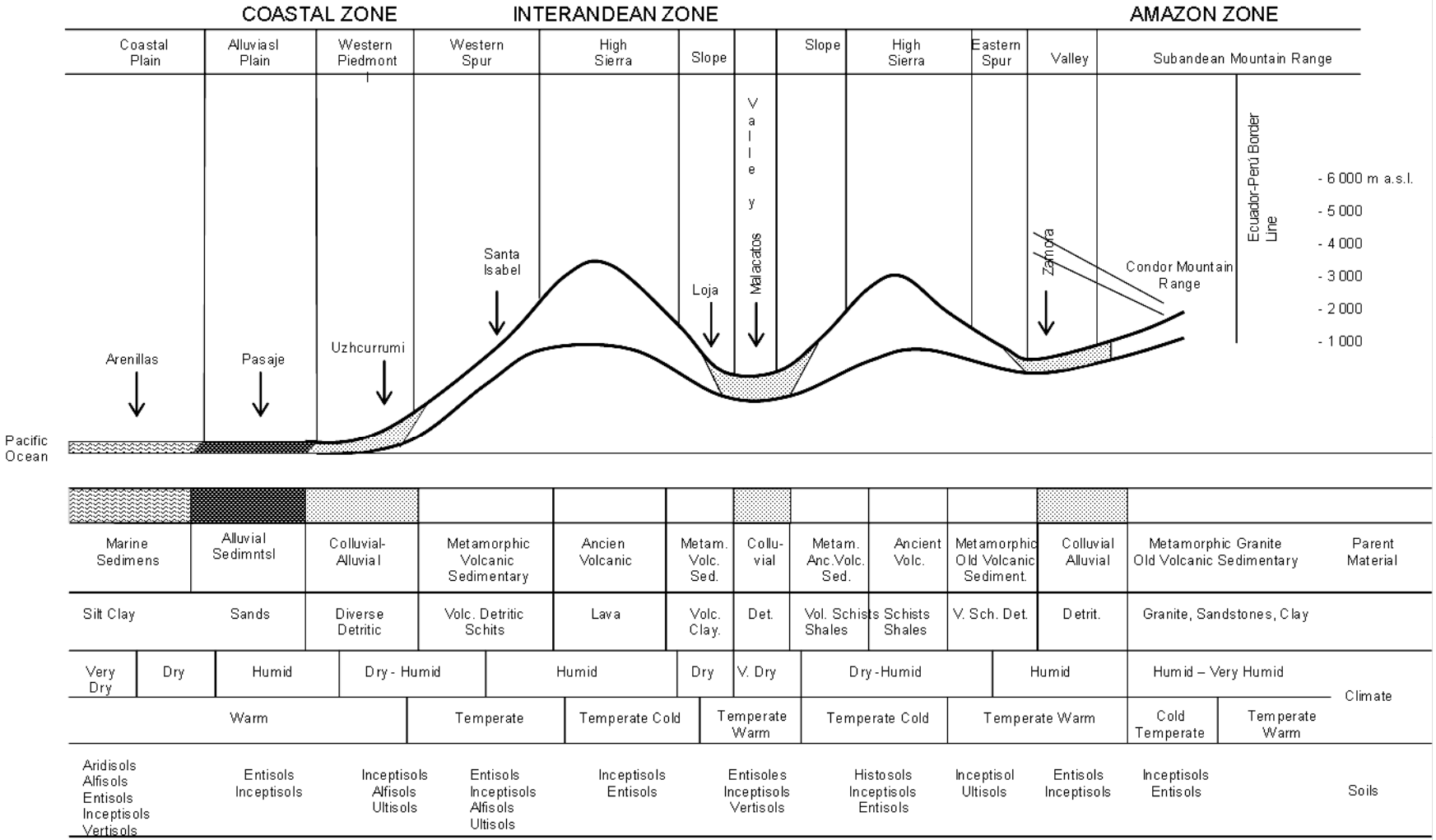
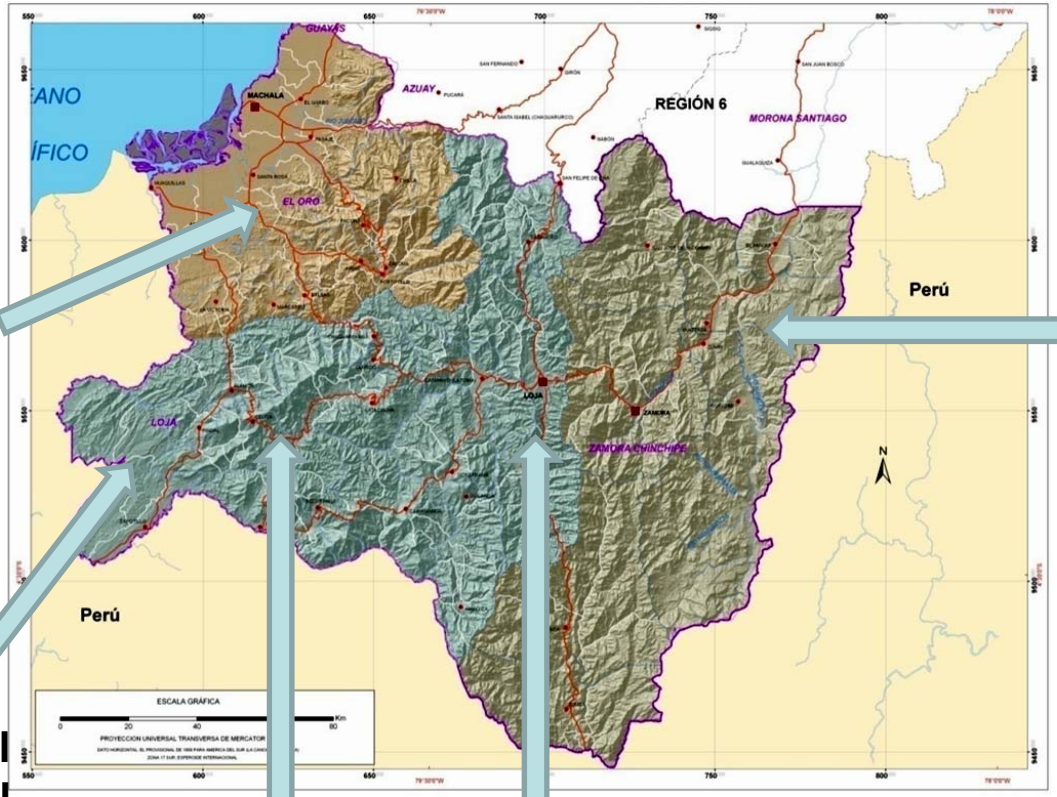


Fig. 2. Southern Region of Ecuador. Transverse Cross Section (Adapted from Soil Map of Ecuador, Ecuadorean Soil Science Society, 1986).

SRE: UNL GEOGRAPHIC AREA OF IMMEDIATE INFLUENCE

UNL FACILITES FOR THE STUDY OF BIODIVERSITY IN THE SOUTH REGION



BINATIONAL CENTER SANTA ROSA
10 m a.s.l
(In proccess)

EL CHILCO
Very dry tropical
305 – 425 m a.s.l
Botanical Garden

BINATIONAL CENTER ZAPOTEPAMBA
Dry subtropical
950 – 1200 m a.s.l

LA ARGELIA -PUNZARA
Sub-humid temperate
2200 – 2600 m a.s.l.
Botanical Garden
Center for Biotehcnology
Herbarium

EL PADMI
Humid tropical and subtropical
780 – 1560 m a.s.l.
Botanical Garden

Center for studies and development of the Amazon CEDAMAZ

The Collaborative Process: First Phase

- May 1997 First agreement for academic cooperation with the Research Programme of German Universities: on the parameters of altered and unaltered cloud mountain forest in southern Ecuador

- June 2005 Second agreement of academic cooperation with Unit 402: Functionality of a mountain forest in southern Ecuador, Diversity, Dynamic Processes and Use Potential

The Collaborative Process: Second Phase

- Biodiversity and sustainable management of a Megadiverse Mountain Ecosystem in Southern Ecuador

- Third agreement for academic cooperation between the National University of Loja and the Research Unit FOR 816 of the DFG, September 2008 - March 2010

Cooperative Actions carried out by FOR 816

- Effective long-term participation of selected UNL teachers in some of the research projects
- Involvement of the UNL students in some of the research projects to complete their Diploma thesis: Field training, internships in Germany and work in the laboratories of German universities
- Joint implementation of seminars and short courses with the participation of professors and doctoral students of FOR816.
- Provision of scientific literature to the UNL counterparts.
- German professors acting as international partners in the projects submitted by UNL to SENACYT: Two Projects (Prof. Wolfgang Wilcke and Prof. Achim Bräuning)

Cooperative Actions carried out by UNL

- Provision of selected UNL teachers as scientific partners for some of the research projects.
- Provision of selected students as research assistants
- Use of the Experimental Station “La Argelia” facilities: herbarium, nursery, greenhouse, and the Geographic Information Center (CINFA).
- Conducting some analysis in the laboratories of the UNL.
- Access to libraries of the institution.
- Provision of relevant available information (GIS, publications, etc.).
- Translation from English to Spanish of scientific publications of some projects.

Formation of young UNL scientists at the Ph.D level

PROFESSIONALS WHO HAVE COMPLETED DOCTORAL STUDIES

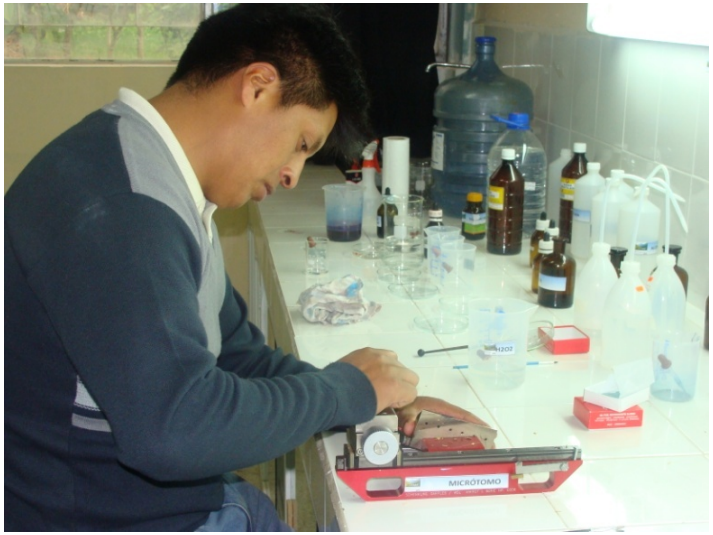
Nikolay Aguirre
Pablo Lozano

PROFESSIONALS CURRENTLY DOING DOCTORAL STUDIES

Oswaldo Ganzhi Tacuri
Johanna Muñoz
Baltazar Calva
Narcisa Urgilez
Darwin Pucha Coffre
María Palomeque
Melania Quishpe
José Luis Peña

Contribution in expanding the collections of the UNL Herbarium “Reinaldo Espinosa”: 3.500 new species

Development of joint infrastructure: Improvement of the equipment of UNL Dendrochronology Laboratory and Plant Physiology Laboratory



Development of joint infrastructure: nursery facility

BENEFIT SHARING

- Joint publication of books and papers in peer reviewed journals
- Joint organization of local symposia for the presentation of results
- Exchange of scientific and documental information
- The objectives proposed in the agreements have been successfully completed
  - To contribute to scientific understanding of the components, functioning and potential of the montane rain forest, as well as to the generation and dissemination of alternatives for sustainable use and preservation
  - To use its development and results in the teaching-learning processes and institutional strengthening

UNL Commitment for Sustainable Use and Preservation of Biodiversity

To contribute to the knowledge, conservation and use of biodiversity of the southern region of Ecuador in the framework of sustainable development, through specialized training of professionals, the generation and transfer of knowledge, and the design and implementation of development proposals in agreement with other social actors and partners.

bpaladip@natureandculture.org

Knowledge Transfer – UNESCO Biosphere Reserve

MSc Bruno Paladines
Director of NCI International Programs
Foundation Nature and Culture International NCI
Loja – San Diego

NATURALEZA & CULTURA INTERNACIONAL

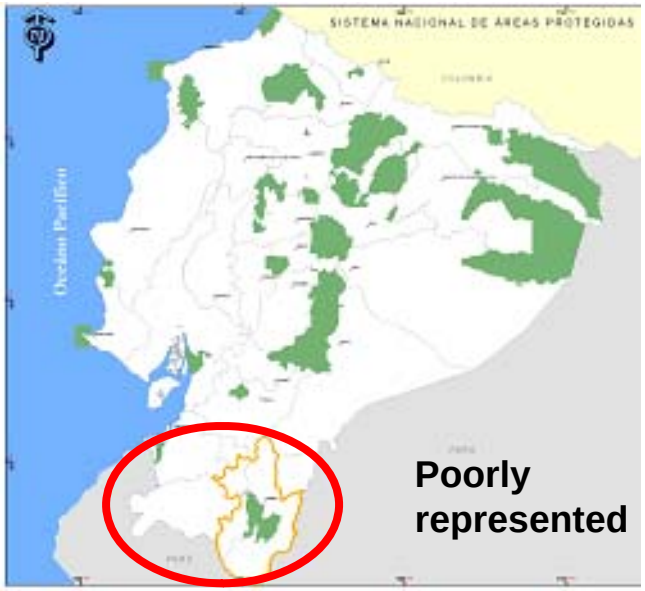
Conserving biological and cultural diversity

- Non profit international organization.
- Agreement with the Ecuadorian Ministry of Foreign Affairs, since 1997.
- Main office in Loja, Ecuador

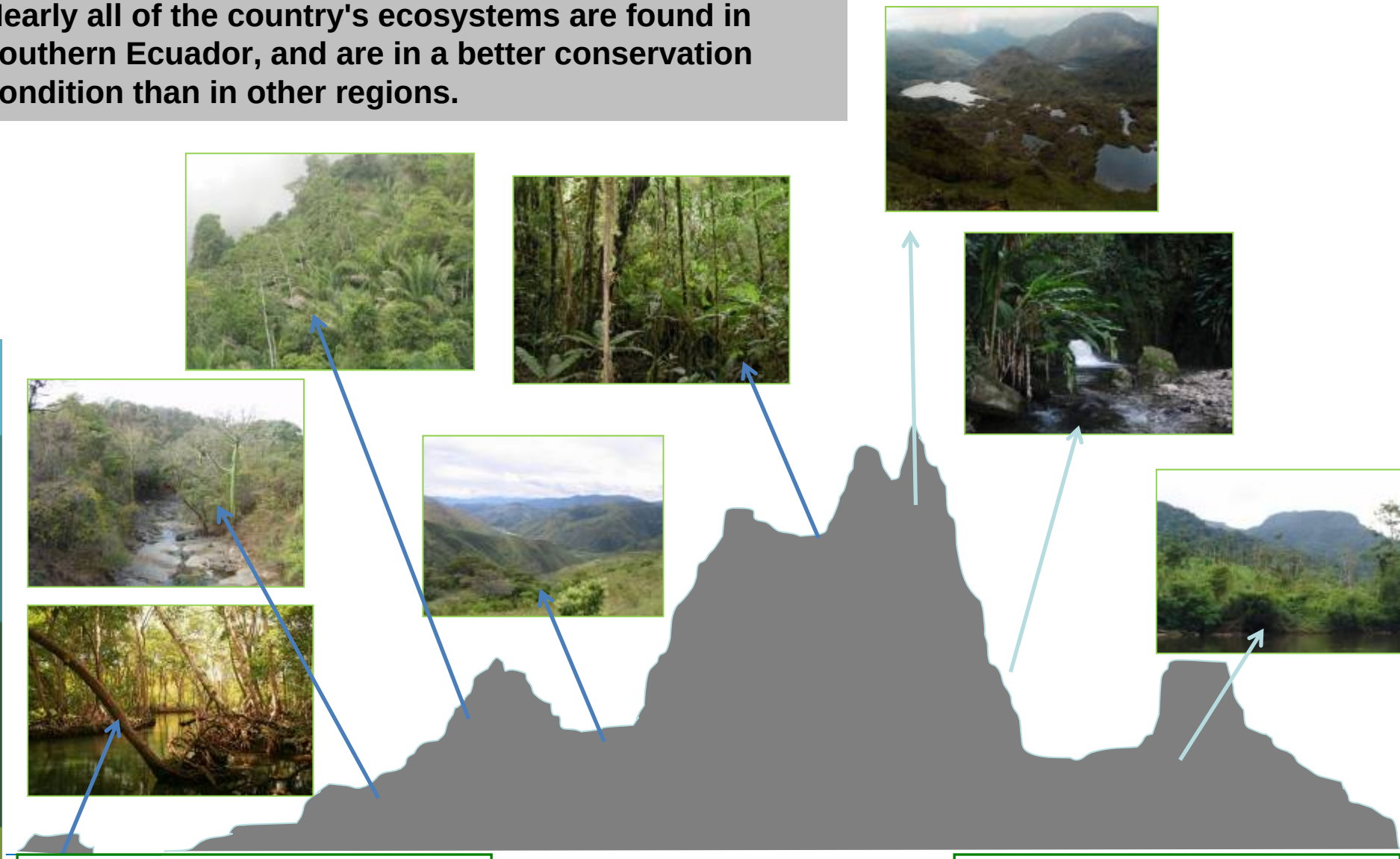
Southern Ecuador … “Megadiverse”

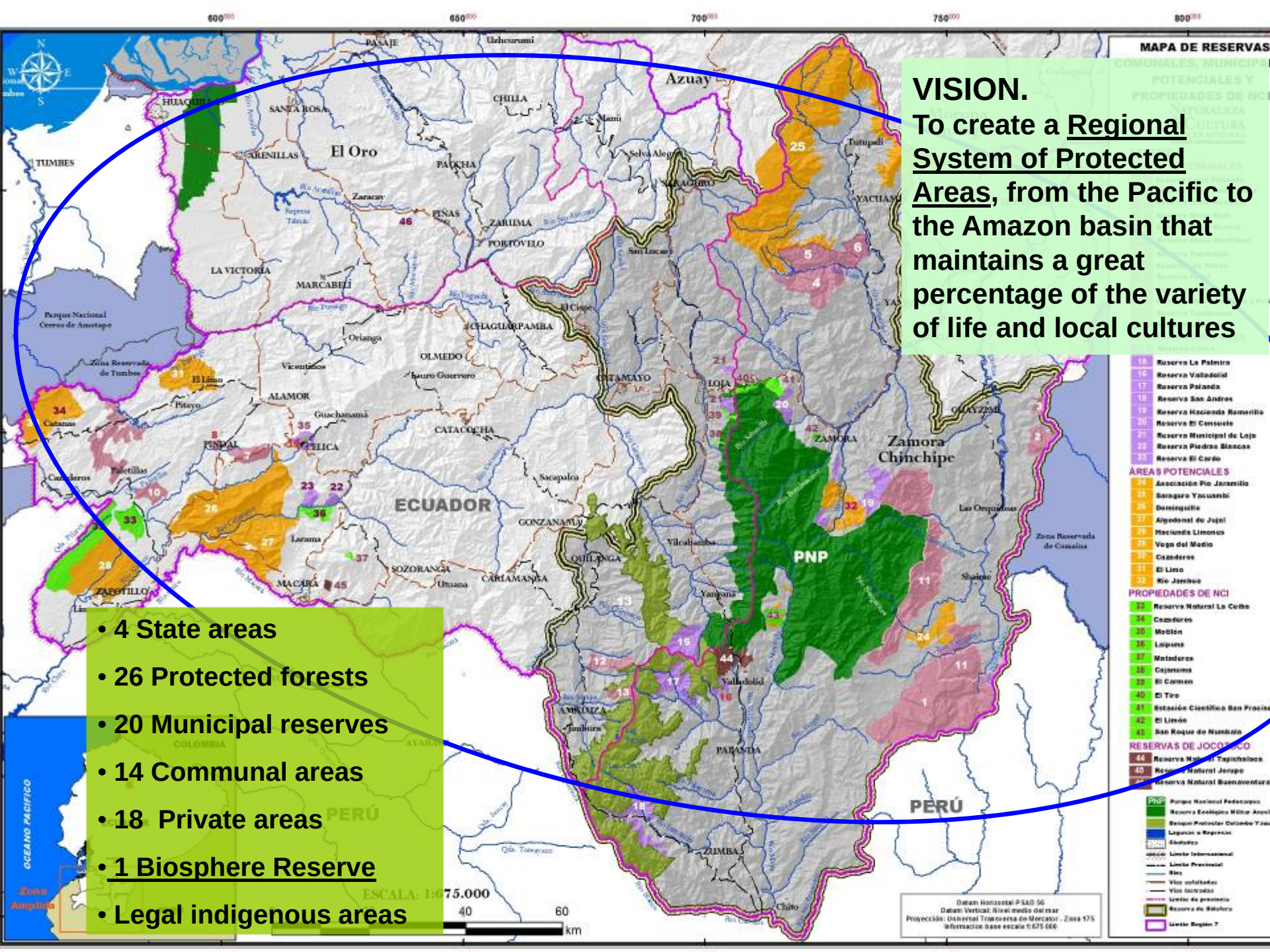
- Composed of El Oro, Loja and Zamora provinces. (27100Km2 / 10% of the national territory)
- 40% of Ecuador’s biodiversity. Poorly represented in the National System of Protected Areas.
- Minimal industrial development.
- Conservation opportunity (aprox. 1mill. Ha of natural ecosystems - 40% of the territory)
- Institutions committed to sustainable development and conservation

National System of Protected Areas



Nearly all of the country's ecosystems are found in southern Ecuador, and are in a better conservation condition than in other regions.




VISION.
To create a Regional System of Protected Areas, from the Pacific to the Amazon basin that maintains a great percentage of the variety of life and local cultures
• 4 State areas
• 26 Protected forests
• 20 Municipal reserves
• 14 Communal areas
• 18 Private areas
• 1 Biosphere Reserve
• Legal indigenous areas
MAPA DE RESERVAS
ECUADOR
PERÚ
COLOMBIA
OCEANO PACIFICO
El Oro
Azuay
Zamora Chinchipe
PNP

Sharing conservation benefits: In 2007 Ecuador succeeded in gaining the declaration by UNESCO of one million hectares of Andean cloud forests as a biosphere reserve to conserve the pristine forests of the Loja and Zamora regions and a number of local cultures.

40 INSTITUTIONS

The Biosphere Reserve becomes the central mechanism to articulate conservation and sustainable development initiatives in the southern region.

Research units FOR 402 and FOR 816 of the German Research Foundation and the declaration of the biosphere reserve.

- Critical role to promote the biodiversity of Southern Region at world level: More than 300 scientific publications
- Scientific basis for the preparation of the UNESCO proposal (vegetation, climate, fauna, ethno botany, conservation)
- Generator of information shared among conservation organizations and Universities.
- Key role in generating basic information for environmental education proposes.
- Key role in the new transfer projects for reforestation developed with local municipalities.

Podocarpus-El Condor

Research units FOR 402 and FOR 816 of the German Research Foundation have been critical to support NCI`s conservation and sustainable development work.

NCI achievements over the last 12 years:

- 50 educational institutions, more than 150 events. 30000 participants
- 18000Ha of private reserve managed together with local people.
- Creation of the Regional System of Conservation (in process)
- Regional Water Fund **–FORAGUA-**
- National institute for bio-knowledge generation (Project developed with the National Government)

Monica.Ribadeneirasarmiento@dfg.de

Deutsche Forschungsgemeinschaft DFG

General Information on ABS and the Licensing Process of the Project

Mónica Ribadeneira Sarmiento
Programme Officer Life Sciences German Research Foundation
Convention on Biological Diversity CBD/ABS

Introduction

- **DFG activities on CBD and ABS**

General Information on ABS in Ecuador

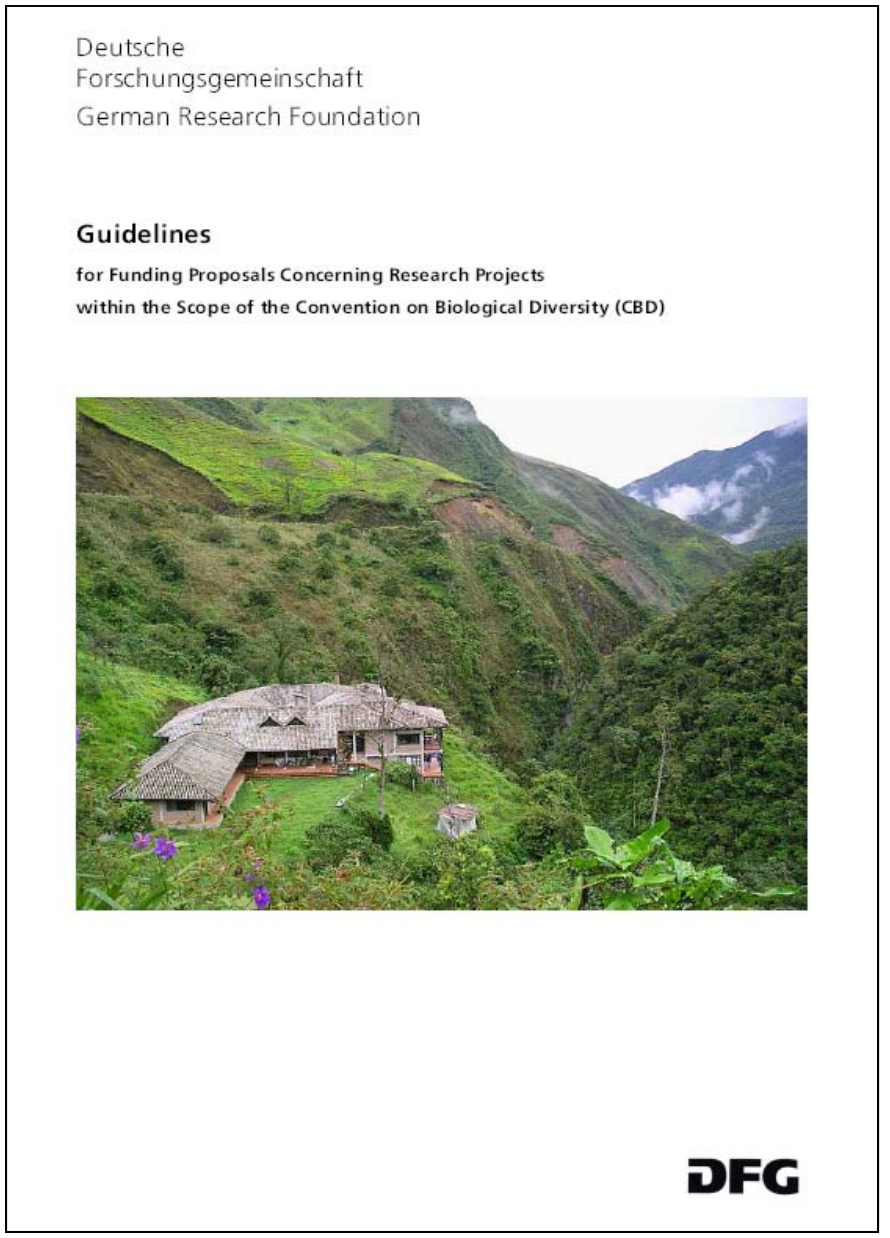
- **Ecuador as a part of CAN**
  - Andean Community
  - Andean ABS Decision 391
- **Andean Decision 391**
  - **General Information**
  - **Characteristics**
- **Andean Decision 391 implementation in Ecuador**
  - General information
  - ABS and other efforts

Licensing process and licenses

- **Non commercial benefits for Ecuador arising from scientific research**

DFG activities on CBD and ABS

1. DFG ABS Group
2. DFG Senate Commission on Biodiversity Research
3. Office for ABS Issues
4. DFG monitoring ABS at international level
5. Guidelines for DFG projects with CBD-context
   - *grant conditions*
6. Other activities



Ecuador as a part of CAN

Andean Community (CAN)

- started in May 1969
- members:
  - Venezuela which left in April 2006
  - Colombia
  - Ecuador
  - Peru
  - Bolivia
  - Chile which left on 1976

Andean ABS Decision 391

General information

- established in 1996
- Andean ABS Decision 391 was signed by

  - Venezuela: no national instrument
  - Colombia: no national instrument
  - Ecuador: no national instrument (*)
  - Peru: brand new national instrument (Feb 2009)
  - Bolivia: national instrument since 1997

Andean ABS Decision 391

Characteristics

- First regional framework on ABS
- Defensive position from developing countries
  - fear of misappropriation
  - way to protect regional traditional knowledge
  - lack of trust in a *bona fide* position of companies, researchers, cooperation projects
- Consequences:
  - Few national real cases of ABS agreements

Andean ABS Decision 391 implementation in Ecuador

General Information

- ABS Focal Point: wrojas@ambiente.gov.ec
- National instrument: Ecuador had already drafted 3 national procedures to apply the Decision 391
- The 2020 vision of Ecuador's National Strategy has been established. It includes strategies and goals regarding access to genetic resources
- The official web-page of the Ministry of Environment provides guidelines, legal and general information about access and benefit-sharing

Andean ABS Decision 391 implementation in Ecuador

Negotiation and ABS Procedure

- Contracts: No one ABS contract has been signed by Ecuador since CBD and not even before that

- Procedure: Purely scientific research and projects should fullfil the same procedure and request as commecial research

  The application of a "*research licence*" (as in the case of the Project 816 Biodiversity and Sustainable Management of a Megadiverse Mountain Ecosystem in Loja, Ecuador) is an administrative decision of the environmental authorities

Licensing Process and Licenses for the Research Group

1. There is one research licence per Subprogram

2. RU Project has 3 Subprograms:
   A. Biodiversity: Mechanisms and Processes
   B. Disturbances and Anthropogenic Replacement System
   C. Human Drives and Land use System

3. Each Subprogram has +/- 8 subprojects (total 24)

4. Coordination measures:
   A. All members of the Research Unit receive an introductory speech
   B. Following the licensing process it is one of the duties of the Coordinators
   C. There are 2 coordination meetings per year : one in Germany, and one in Loja.

AUTORIZACION DE INVESTIGACION CIENTÍFICA

Nro.- 0014-IC-FAUNA-DRLZCH-VS-MAE
Loja, 06 de Agosto del 2007

FLORA X **FAUNA X**

El Ministerio del Ambiente, en uso de las atribuciones que le confiere La Codificación a La Ley Forestal y de Conservación de Áreas Naturales y Vida Silvestre, autoriza a: **Dr. Jürgen Homeier, Pasaporte Nro. PP 5532093731; Dr. Felix Matt Pasaporte Nro. PP321407561 y Geoecólogo Jörg Zeilinger Pasaporte Nro. PP 8923280321** de nacionalidad **ALEMANA**, para que lleve a cabo la investigación **"Proyecto A "BIODIVERSIDAD-MECANISMOS Y PROCESOS".**

De acuerdo a las siguientes especificaciones:

1.- Solicitud de: **Dr. Jürgen Homeier, Dr. Felix Matt y Geoecólogo Jörg Zeilinger**
2.- Valoración técnica del proyecto: (**Ing. Luis H. Cuenca E**):
3.- Auspicio de Institución Científica Extranjera: **Universidad del Marburg**
4.- Institución Científica Nacional Responsable: **Universidad Técnica Particular de Loja y Universidad Nacional de Loja**
5.- Contraparte del Ministerio del Ambiente: (**Distrito Regional 8 Ing. Luis Cuenca E. Líder de Biodiversidad)**
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ING. FOR. RENATO PAREDES POZO
CC: Líder de Biodiversidad

LHCE/ltc

ministerio del ambiente
DIRECCION REGIONAL
LOJA - ZAMORA CHINCHIPE

CONDICIONES PARA LA VIGENCIA DEL PERMISO DE INVESTIGACIÓN

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LA TASA POR CONCEPTO DE EMISIÓN DE AUTORIZACIÓN ES DE: USD$ 20 (veinte dólares) , DEPOSITADA EN LA CUENTA 0010000785 DEL BANCO NACIONAL DE FOMENTO PAPELETA No.**158882** DE FECHA **26 de julio del 2007 FORMULARIO DE RECAUDACION DE TASAS No. 008822**

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- EL REGISTRO DE LA LOCALIZACIÓN EXACTA DE LOS ESPECIMENES COLECTADOS U OBSERVADOS ASÍ COMO EL INFORME PARCIAL O FINAL DEBERÁ SER ENTREGADO EN FORMATO DIGITAL PDF (INCLUYENDO INFORMACIÓN SOBRE LAS COORDENADAS UTM) Y PARA LA PÁGINA WEB DEL MINISTERIO DEL AMBIENTE.
- EN CASO DE QUE LA INVESTIGACIÓN PRODUZCA INFORMES PARCIALES, ESTOS DEBERÁN ESTAR CONTEMPLADOS EN EL INFORME FINAL TANTO FORMATO IMPRESO COMO DIGITAL.
- **EL INCUMPLIMIENTO DE CUALQUIERA DE ESTAS DISPOCISIONES ASÍ COMO EL USO INDEBIDO DE ESTE DOCUMENTO, O EL INCUMPLIMIENTO DE LAS DISPOSICIONES LEGALES, ADMINISTRATIVAS O TÉCNICAS ESTABLECIDAS EN LA MISMA, SERÁN SANCIONADOS CONFORME A LA LEY FORESTAL Y DE CONSERVACIÓN DE ÁREAS NATURALES Y VIDA SILVESTRE CODIFICADA, TEXTO UNIFICADO DE LA LEGISLACIÓN AMBIENTAL SECUNDARIA Y CON LA SUSPENSIÓN INMEDIATA DE LA PRESENTE AUTORIZACIÓN.**

LA TASA POR CONCEPTO DE EMISIÓN DE AUTORIZACIÓN ES DE: USD$ 20 (veinte dólares) , DEPOSITADA EN LA CUENTA 0010000785 DEL BANCO NACIONAL DE FOMENTO PAPELETA No.**158882** DE FECHA **26 de julio del 2007 FORMULARIO DE RECAUDACION DE TASAS No. 008822**

Non commercial benefits for Ecuador arising from scientific research

1. Capacity Building specially with Universities
2. Training of students and young scientists
3. Strengthening of the role of the national authority and the national focal point (CBD as well as ABS)
4. Research alliances
4. Contributions to the national collections
5. Improving the access to research information and supporting the conservation and sustainable uses
6. Sharing the information
7. Social recognition

Discussion

UTPL

NATURALEZA & CULTURA INTERNACIONAL

DFG

TMF

Thank you very much for your attention!