

RESEARCH STATION “AGUA Y PÁRAMO”

Knowledge at the service of investment in natural infrastructure

Concept and objectives

Stockholm WWWeek, 28 August 2018

Bert DE BIEVRE, Head FONAG



Research coordinators: Luna DELERUE, FONAG, and Homero Castanier, EPMAPS

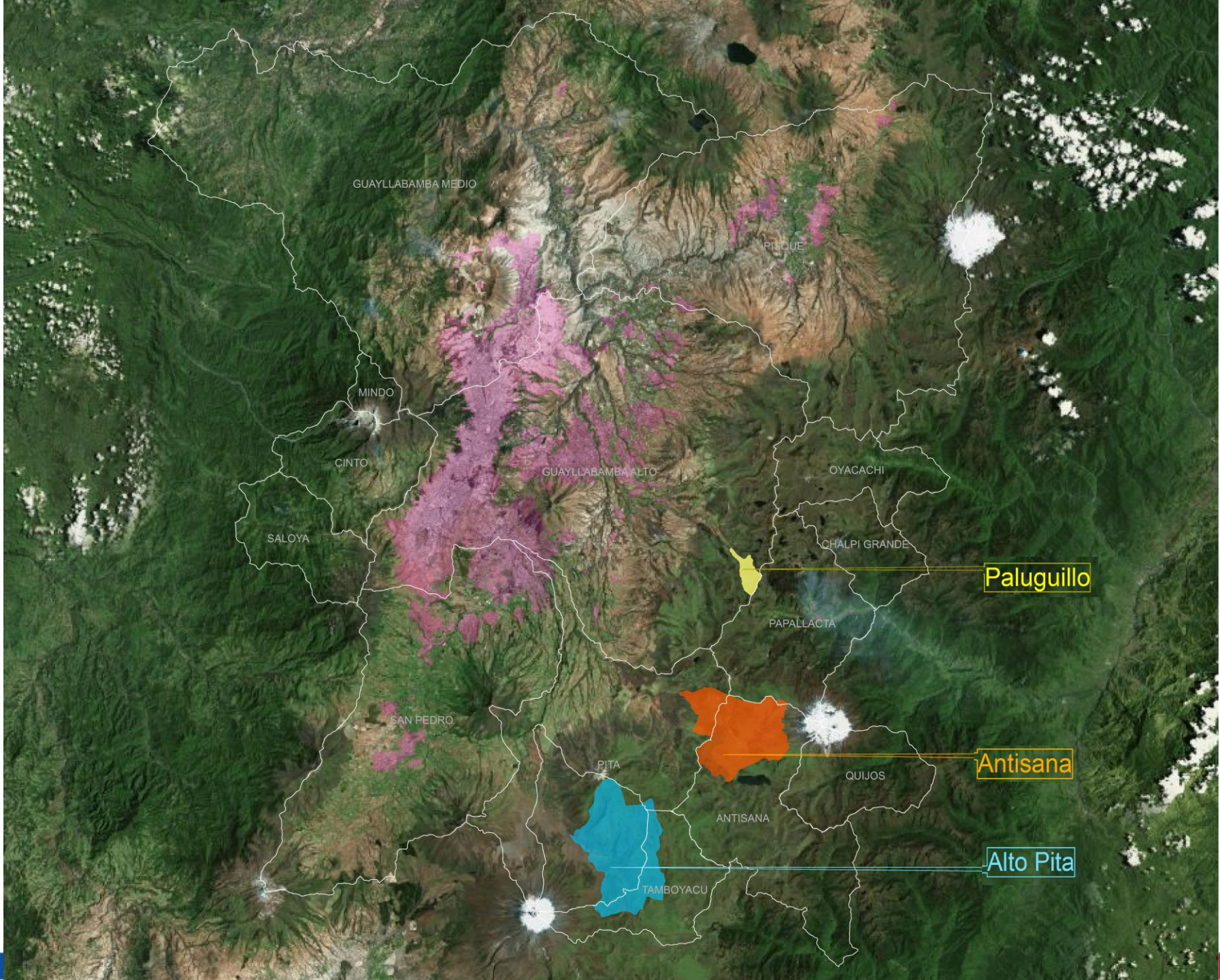
CONTEXT

EPMAPS & FONAG

- Needs **evidence-based** decision making
- **Gap** between management and research
- **20.000 hectares** of own land for conservation and restoration

Researchers

- **Limitations in our understanding** of ecosystems
- **Isolated efforts** and **duplication**
- **Existing research** is **not systematized and capitalized**, as a basis for future research



GUAYLLABAMBA MEDIO

PISQUE

MINDO

CINTO

GUAYLLABAMBA ALTO

OYACACHI

SALOYA

CHALPI GRANDE

Paluguillo

PAPALLACTA

SAN PEDRO

Antisana

PITA

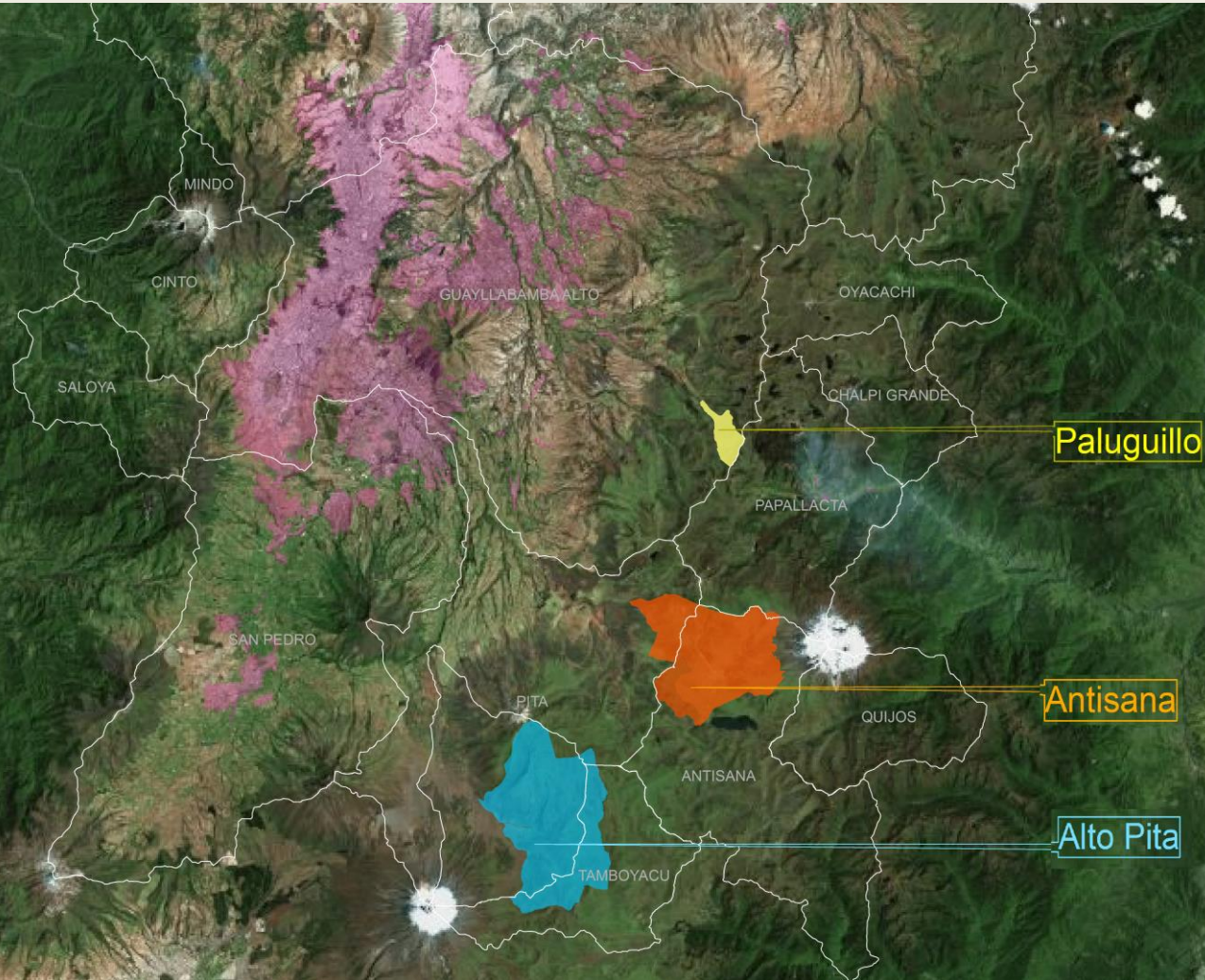
QUIJOS

ANTISANA

Alto Pita

TAMBOYACU

This Research Station is NOT a building on a single location. It is about mobilizing research, promoting agenda, for our own use and use of many others, taking advantage of our own land.



Goal

Develop research projects and knowledge generation on
Páramo-water relation, for decision making

Objectives

- 1- Improve understanding of paramo ecosystem services
- 2- Meet FONAG and EPMAPS scientific information needs
- 3- Improve research efficiency, providing access to available information
- 4- Promote effective application of research results

RESEARCH THEMES

Cambio climático y global



Energía renovable



Geología
Sismología
Vulcanología

Restauración de
la cobertura
vegetal



**Integrated
focus on
paramo**



Ecología de
páramo

Economía ecológica
Economía ambiental



Análisis
socioeconómicos
y ambientales



Hidrología

Hidrogeología

Manejo de
embalses

ACHIEVEMENTS

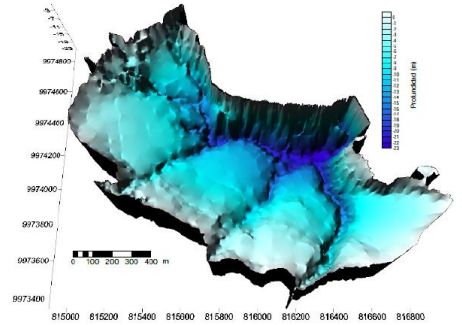
Research partnerships and Projects



UCL
Université
catholique
de Louvain



FIGURA 24 SUPERFICIE 3D DEL EMBALSE SALVE FACCHA 2007



Elaborado por: Cabascango Jonathan y Guachamin Daniel

18
research
efforts



RES



Instituto
Investig
Minero



Modelo InVEST

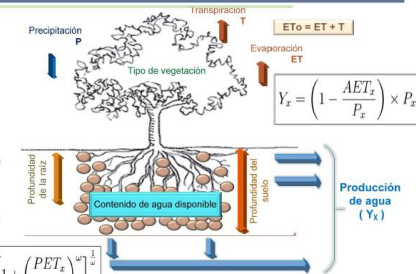
Descripción General

(Sharp et al., 2015)

- Base física
- Espacialmente distribuido (diferentes escalas)
- Modelo a escala espacio-temporal y se basa en los principios del balance hídrico, bajo un entorno SIG.

Permite:

- Herramienta geoespacial que permite evaluar los servicios ecosistémicos

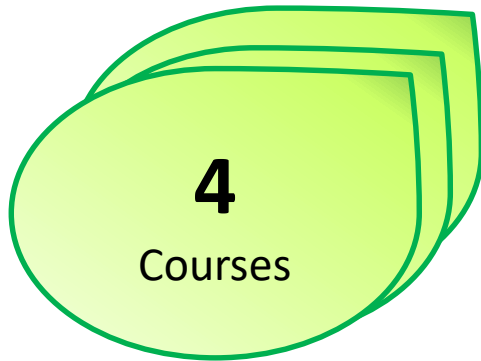


$$\omega = Z \frac{AWC_x}{P_x} + 1,25 \frac{AET_x}{P_x} = 1 + \frac{PET_x}{P_x} - \left[1 + \left(\frac{PET_x}{P_x}\right)^2\right]^{\frac{1}{2}}$$

Fuente: Sharp et al. (2015)

ACHIEVEMENTS

Research partnerships and projects



Workshops, Conferences,
Training events



ACHIEVEMENTS

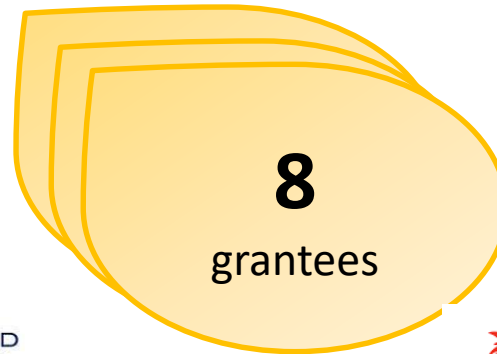
Research partnerships and projects

Conferences, Workshops and
Training

Grant programme



ESCUELA
POLITÉCNICA
NACIONAL



8
grantees



UNIVERSIDAD
INTERNACIONAL
SEK
SER MEJORES



UNIVERSIDAD SAN FRANCISCO



ACHIEVEMENTS

Research Partnerships and Projects

Grant Programme

Conferences, Workshops,
Training Events

Web Page implementation

Registration and Promotion of
Research efforts



Virtual
Library
online

BENEFITS

- ✓ Optimization of investment in natural infrastructure
- ✓ More complete results at lesser cost
- ✓ Research agenda rather than research projects
- ✓ Own capacity building
- ✓ Preparation of future technical staff in specific thematic niches



CHALLENGES

- ❑ Provide information for research efficiently
- ❑ Promote subjects with very limited offer of research
- ❑ Apply research results correctly
- ❑ Consolidate ourselves as the regional leaders in scientific knowledge dialogue



EPMAPS



AGUA DE QUITO

