



# Capacity Building Support for the Payment Environmental Services Program

## Monitoring Experience

By: Cristian Díaz-Quesada

November,  
2020



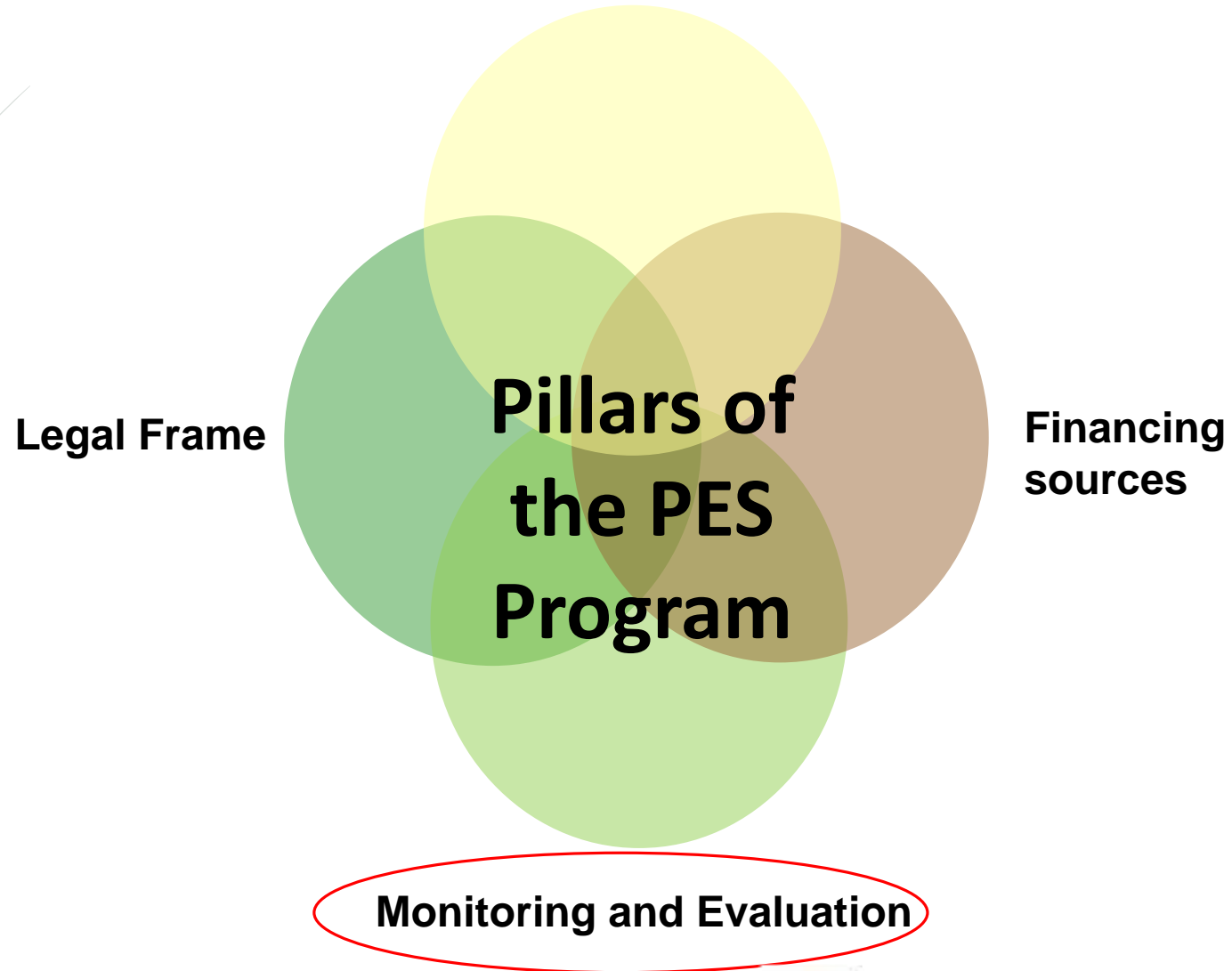


## Content:

- Monitoring events.
- Actors.
- Monitoring Tools.
- Other activities: Geographic layers and statistics of PES Program.
- Detected Issues.

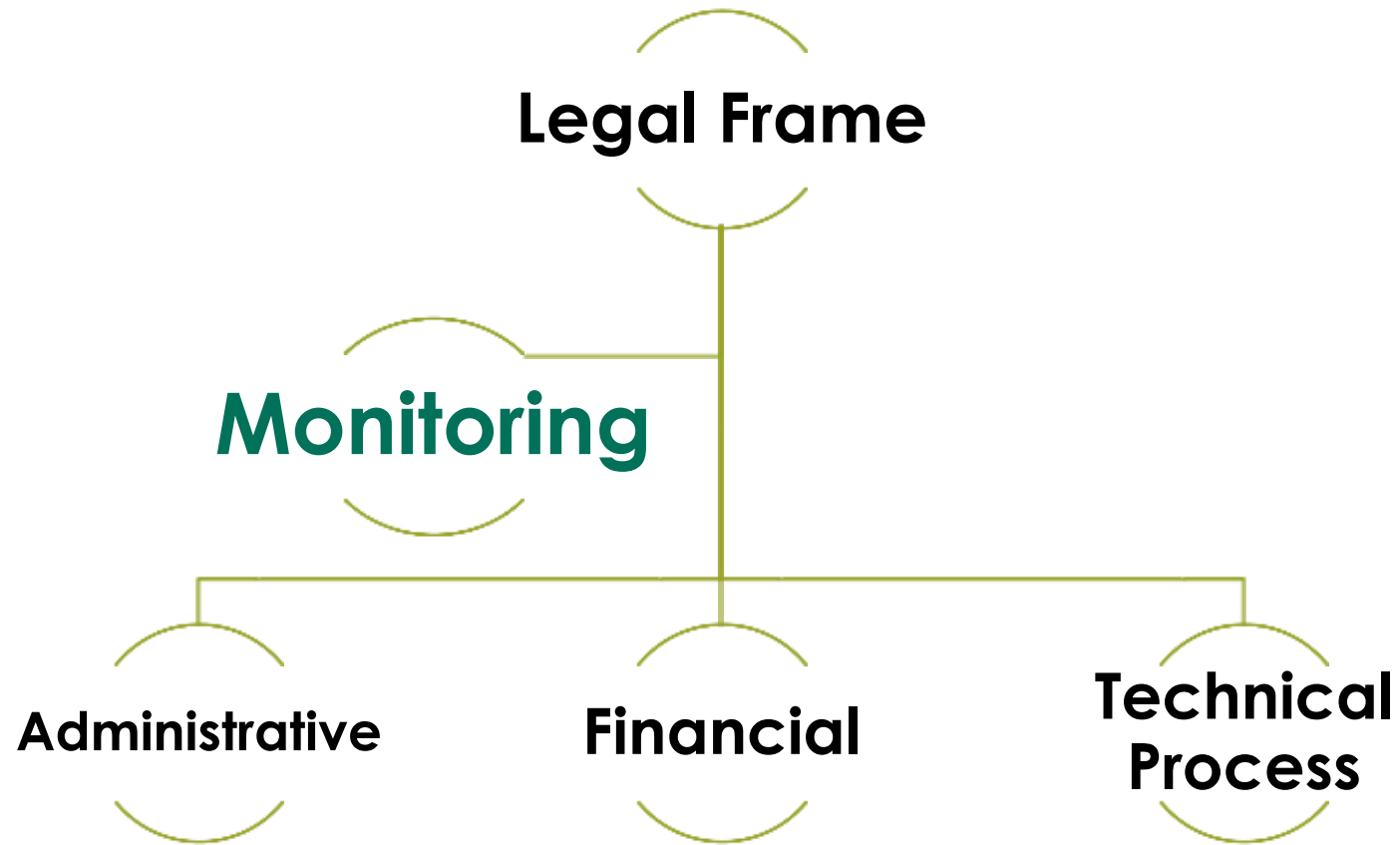


# Institutional Framework



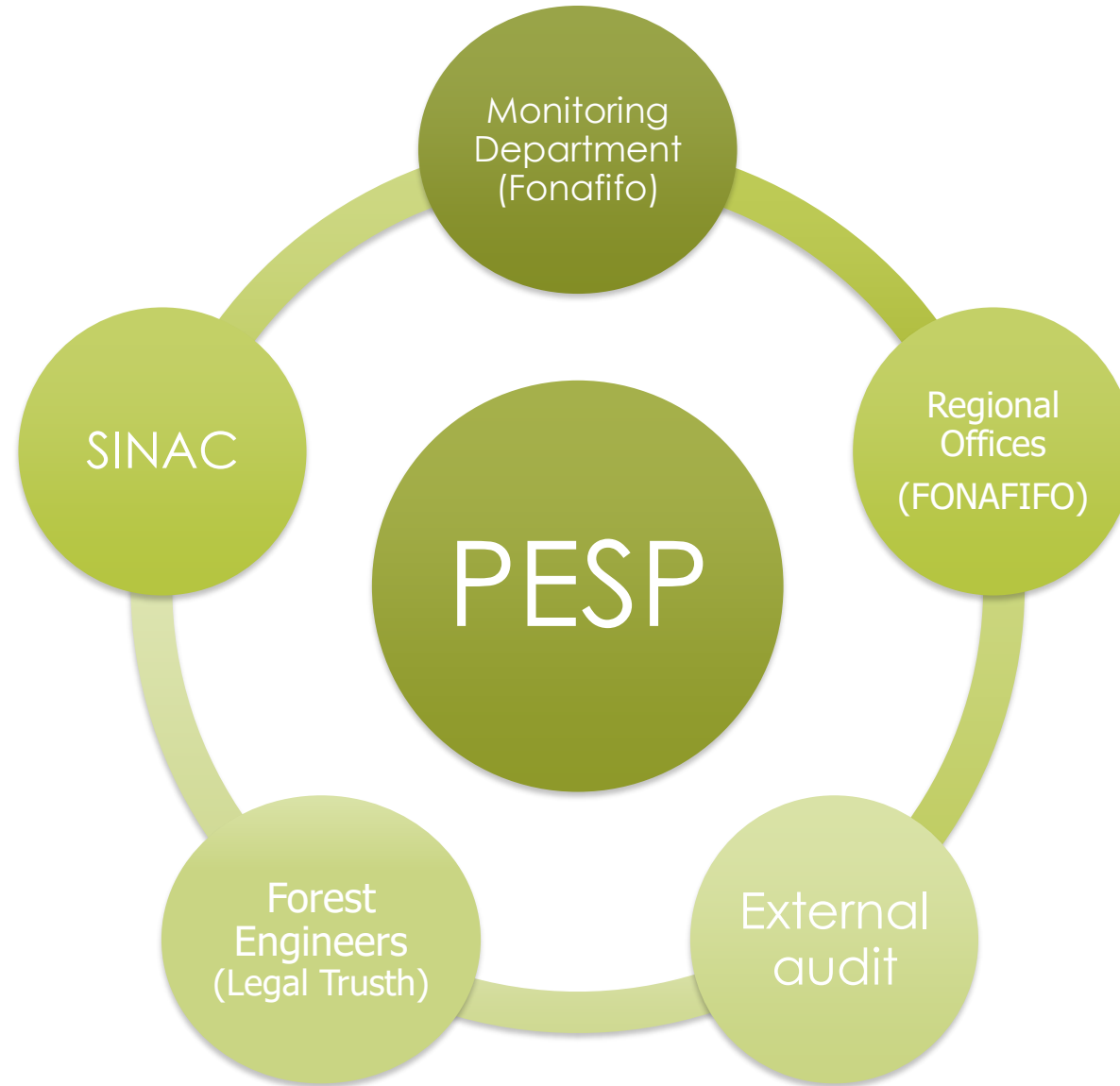


# Payments for Environmental Services Program (PESP)





# ¿Who make monitoring?





# Monitoring tools



- ✓ Management of data.
- ✓ (by a File of farm's owner or by information on line)
- ✓ Field Visit by sample.
  - Geographic Information System (GIS)
  - Satellite images
  - Sampling Plots
  - UAV (Unmanned aerial vehicle) or Drones
- ✓ Other activities: geographic data base management & forest cover layer.
- ✓ The next year: Monitoring Web App & mobile App for Android.





# Management data:

**Sistema de Control de Gestión Institucional (SCGI)**

<b>Citas PSA</b> Reservar entrega de doc.	<b>siPSA</b> Gestión de PSA	<b>OGC</b> Servicios Espaciales
<b>moCYM</b> Módulo Control y Monitoreo	<b>ediPSA</b> Expediente PSA	<b>siGAFI</b> Gestión Admin - Financiero
<b>geNOTI</b> Gestión de Notificaciones	<b>siCAD</b> Solicitud de Información	<b>PCB</b> Conserv. de Biodiversidad



# On line data: for Technical and legal topics



## Consultas y Reportes





Next January!!

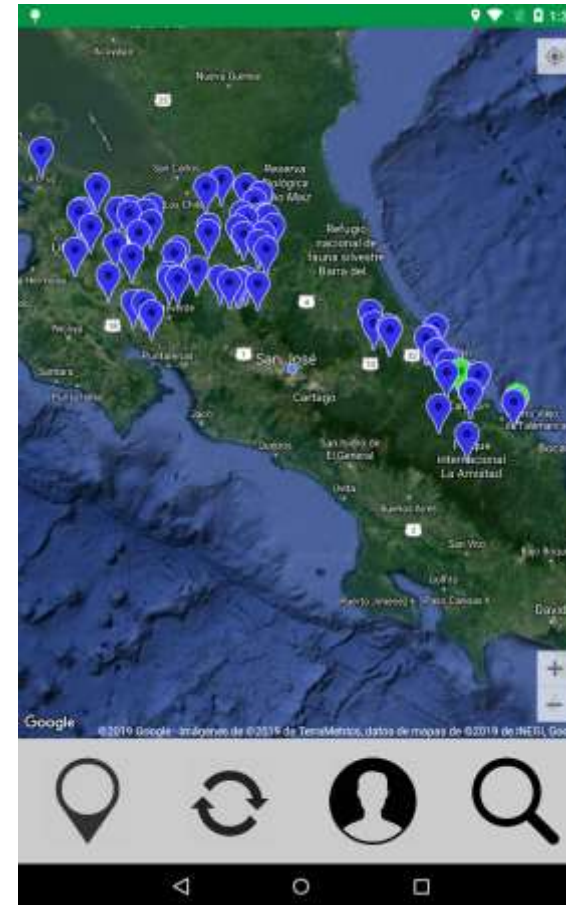
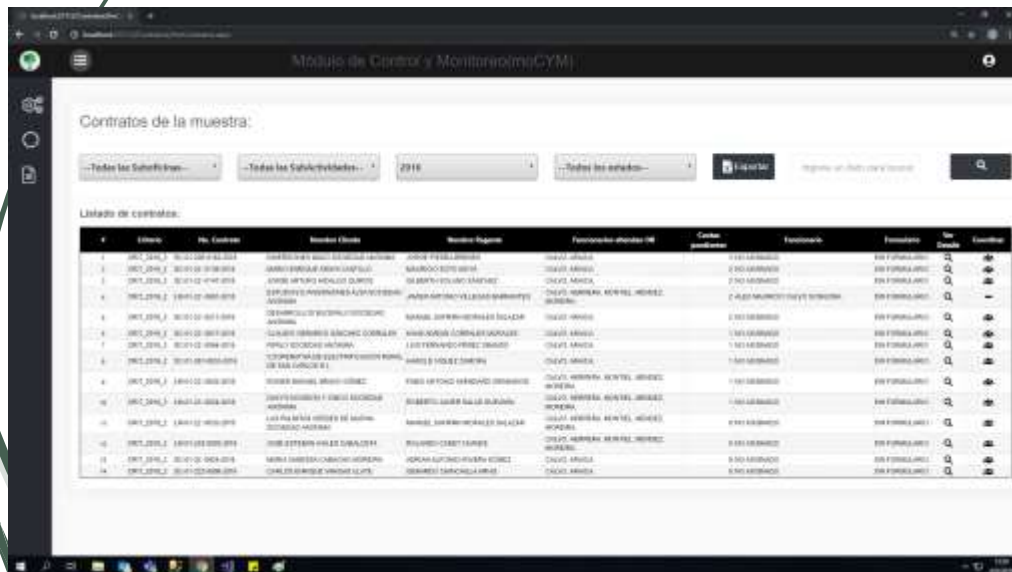
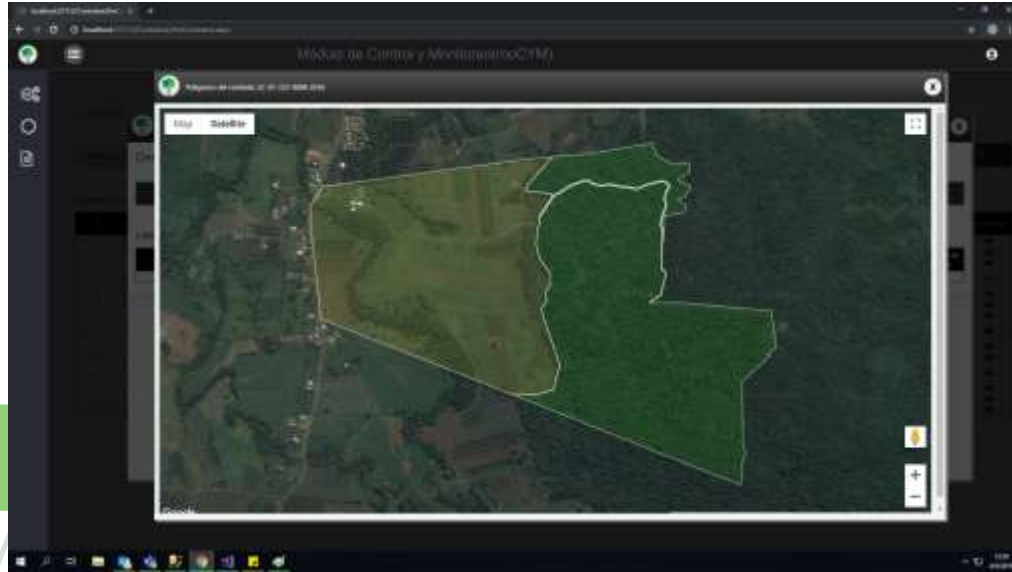
Make Field visit by “on line”  
coordination

Sistema de Control de Gestión Institucional  
( SCGI )

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# Web App & mobile App for Android.





## Field Visit (by sample)



How we choose the farms to visit?  
Random sample  
(10%)

- Weight by:
- ✓ Regional Office
  - ✓ PES activities



# Field Visit

- Check the file of each project
- Upload data to GPS
- Check Access roads (GIS)
- Check geolocation of the farm and additional farms (neighbors)

## Data Preview

## Before in office

- Announce 8 days before our visit to owner or forest engineer. (email or call)

- Take GPS Waypoint
- Walk by limits of farms
- Confirm activity
- Take Pictures
- Make measurements (plots)
- Drone view

## Field visit



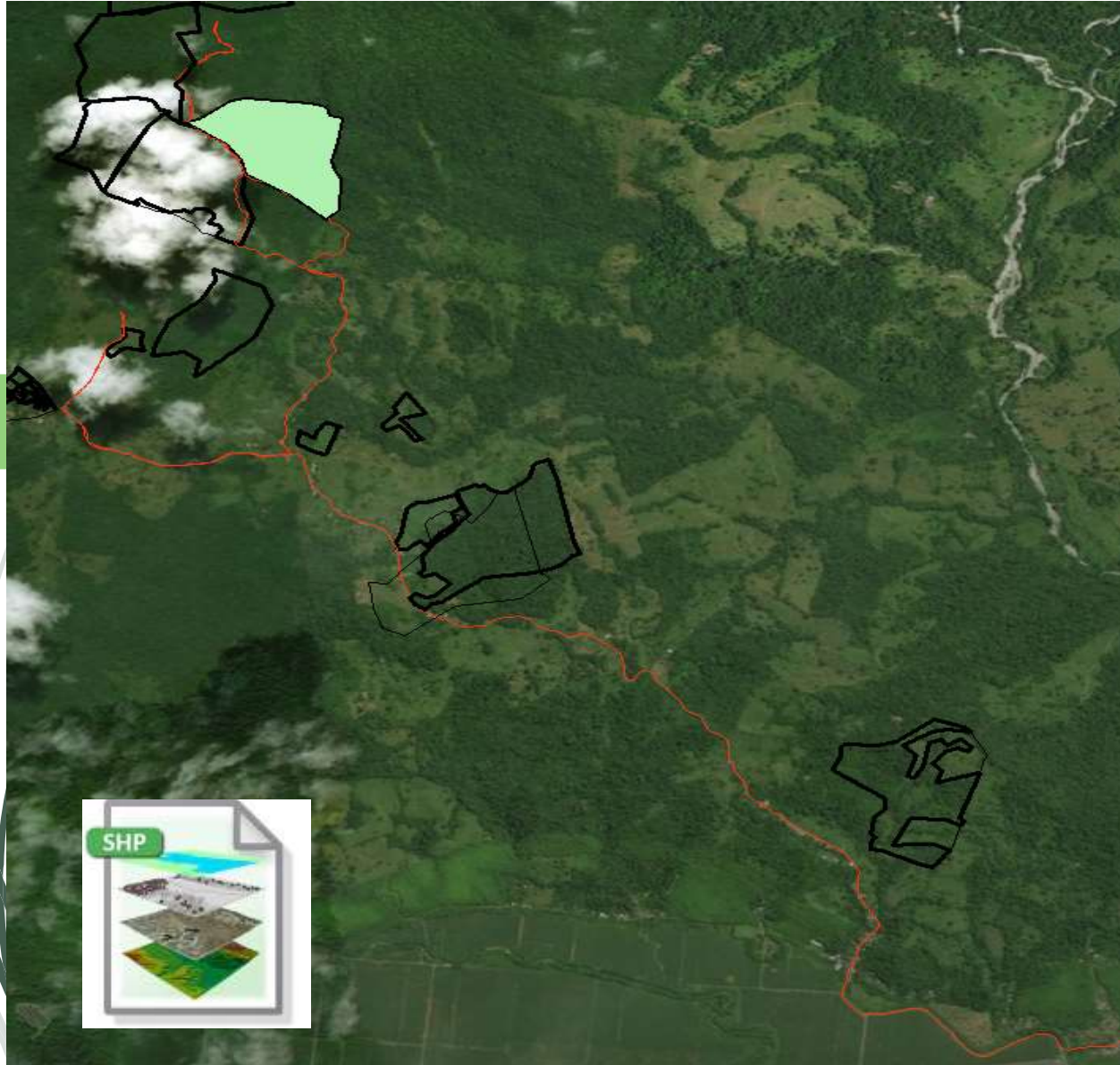


# Field Visit: Use of GPS waypoints





# Field Visit: Use of Geographic Information System (GIS)



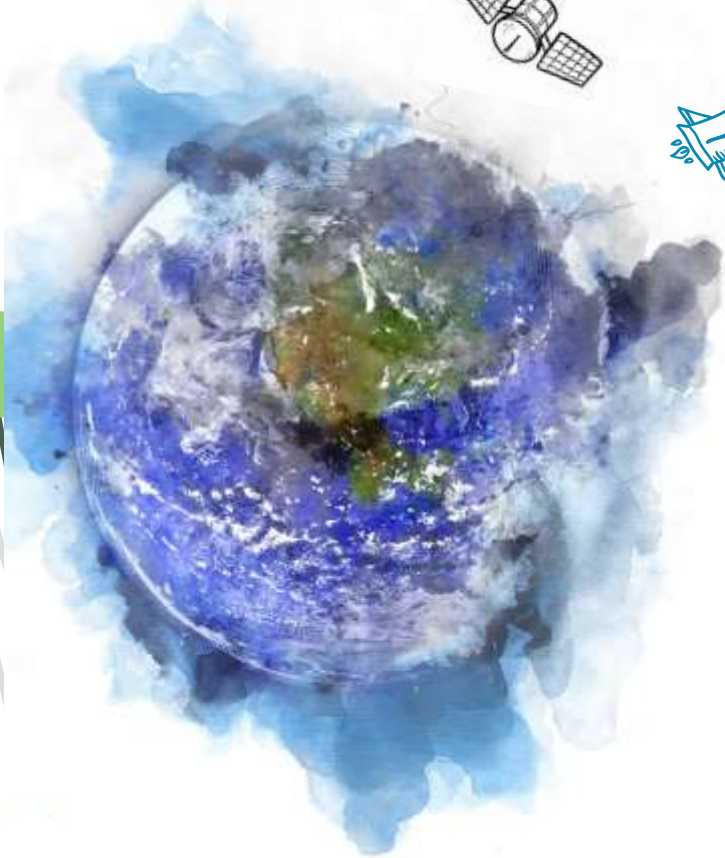
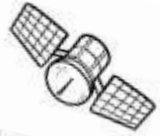
- ✓ Strategic Planning to save human and economical resources.







# Field Visit: Satellite images use



**CCAD** Comisión Centroamericana de Ambiente y Desarrollo - CCAD  
COMISIÓN CENTROAMERICANA DE AMBIENTE Y DESARROLLO  
Sistema de la Integración Centroamericana

CONSERVATION INTERNATIONAL



FONAFIFO

FUNBAM  
Fundación Banca Ambiental



FBS

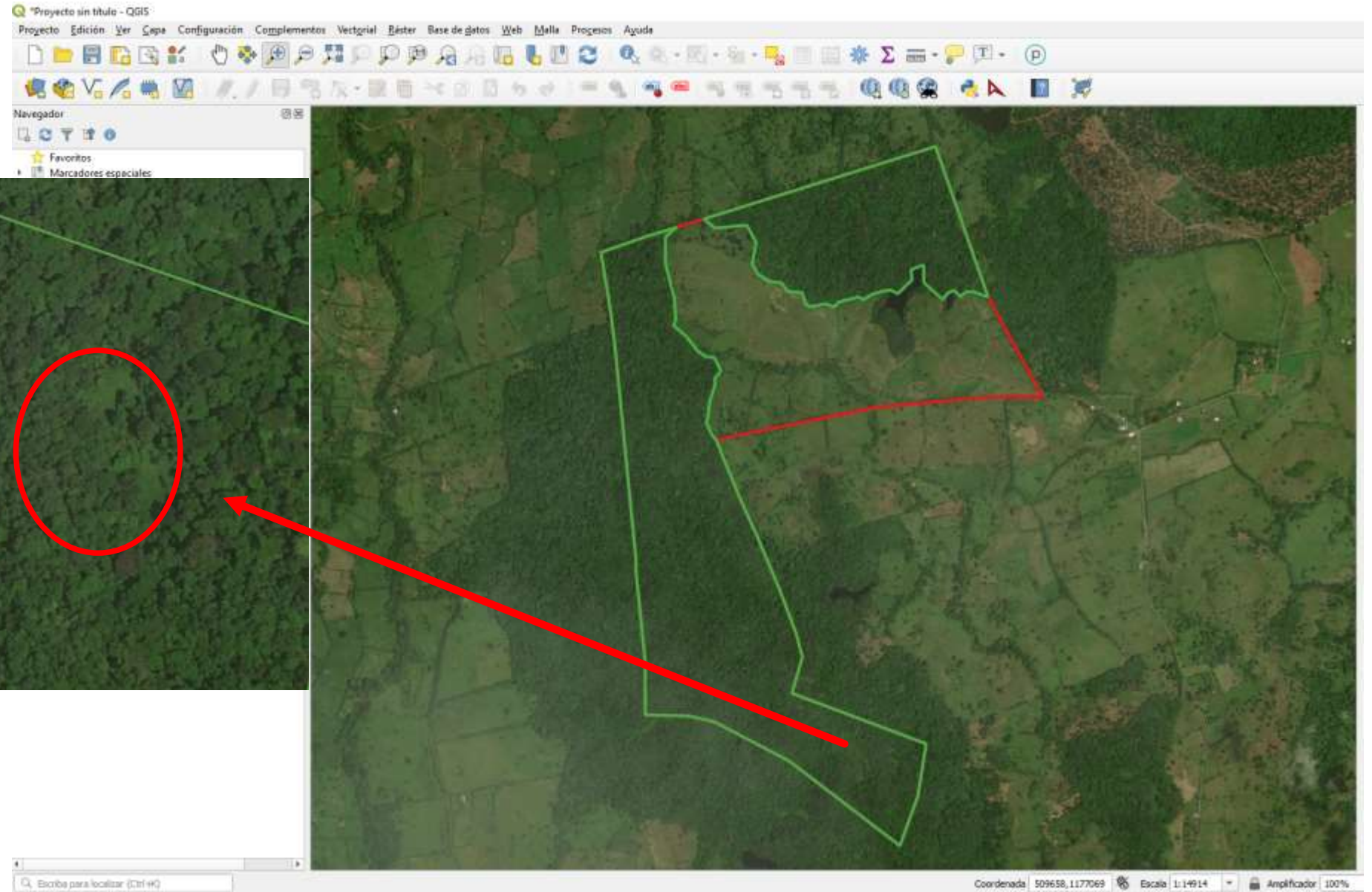


minae

SwedBio  
a program of the Swedish Research Council



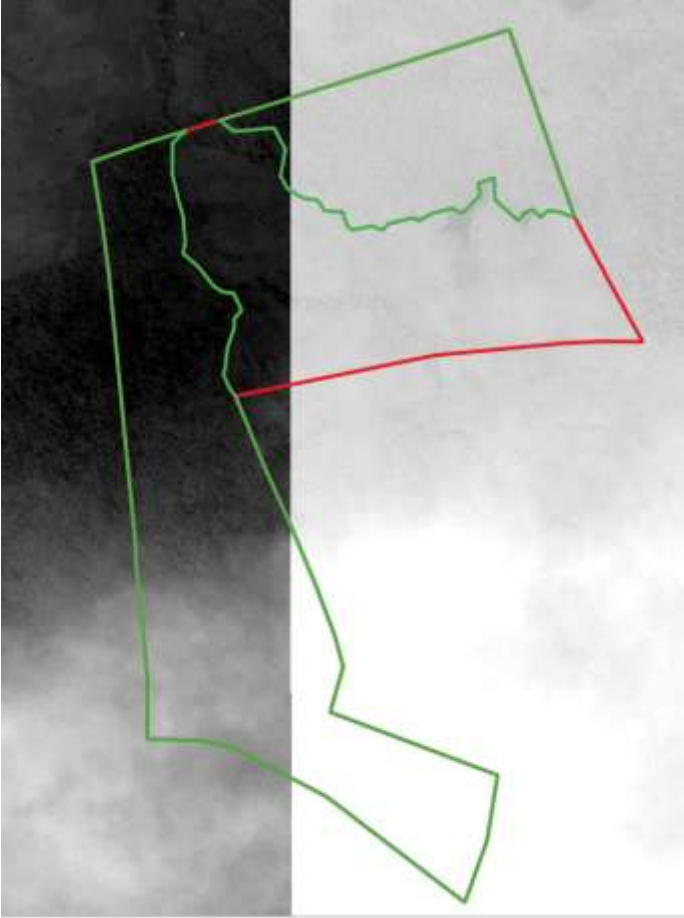
# Field Visit: Satellite images







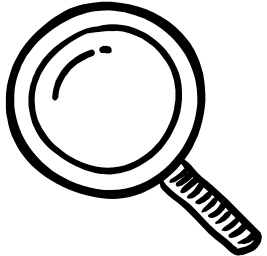
# Field Visit: Satellite images



**April, 22**



**March, 04**







# Field Visit: aerial images







# UAV (Unmanned aerial vehicle) - Drones





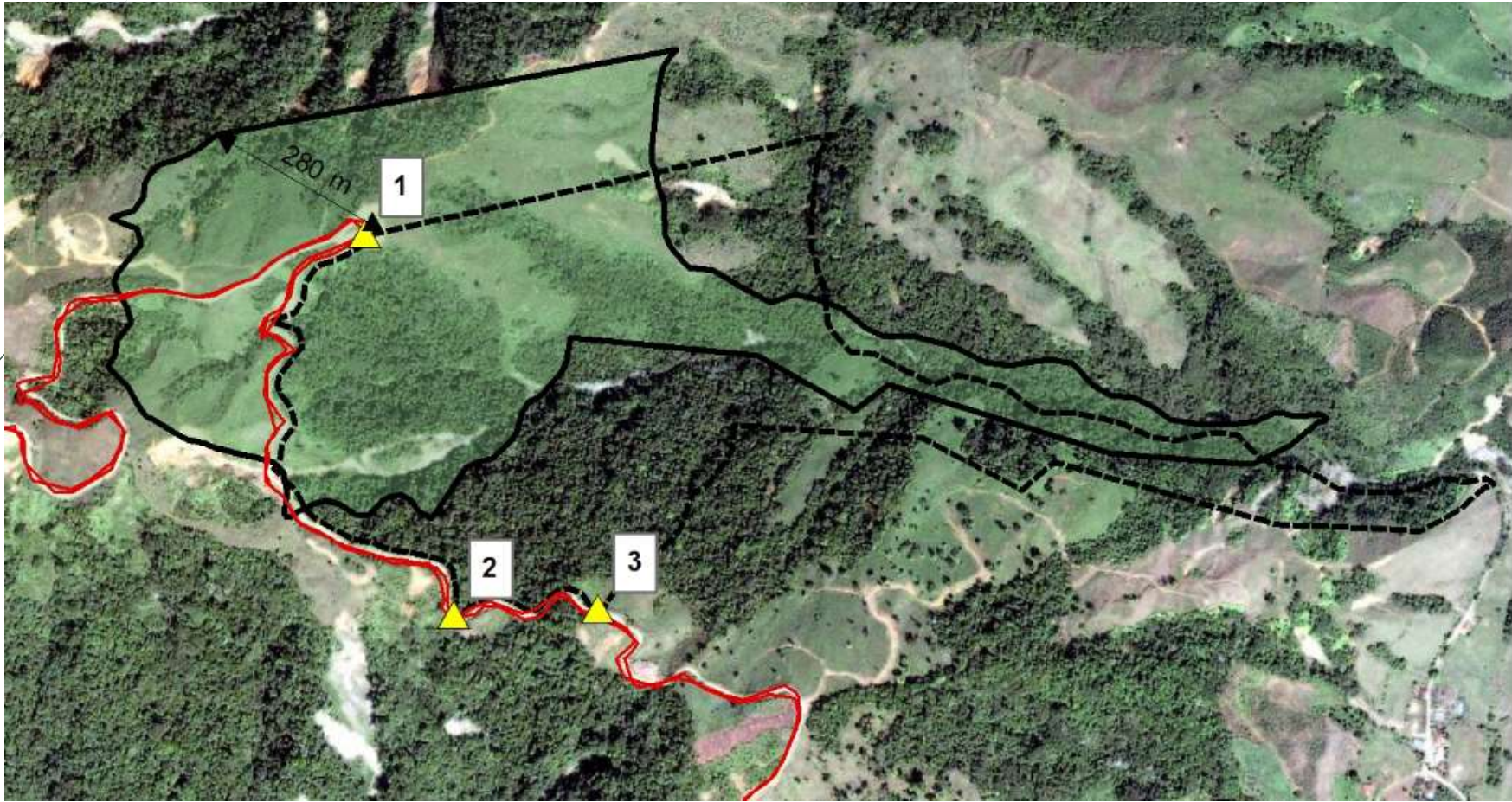
# Reforestation activities from Dron







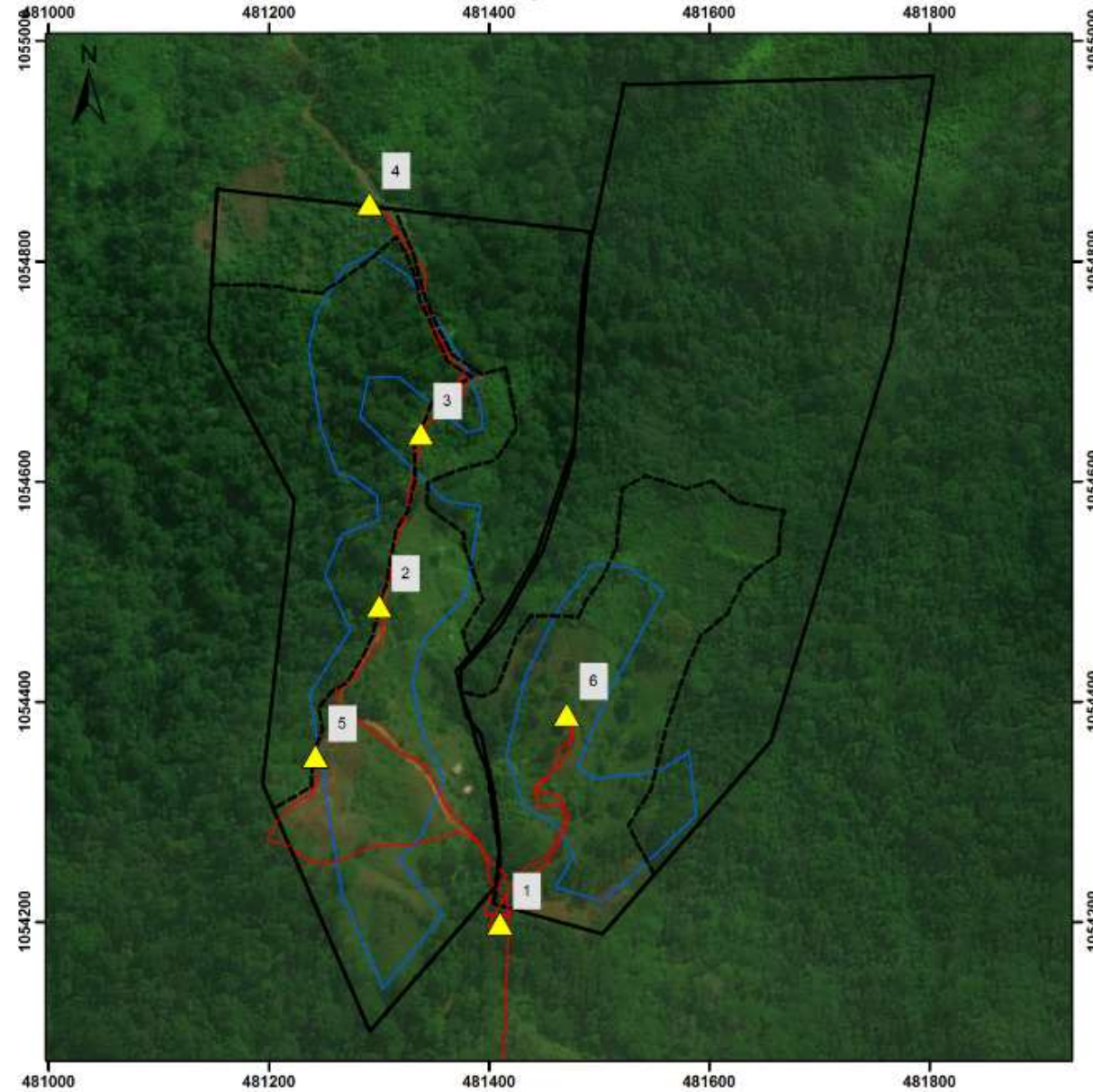
# location Issues







# Coverage issues





# Deforestation







# Plantation management Issues







# Forest Fire







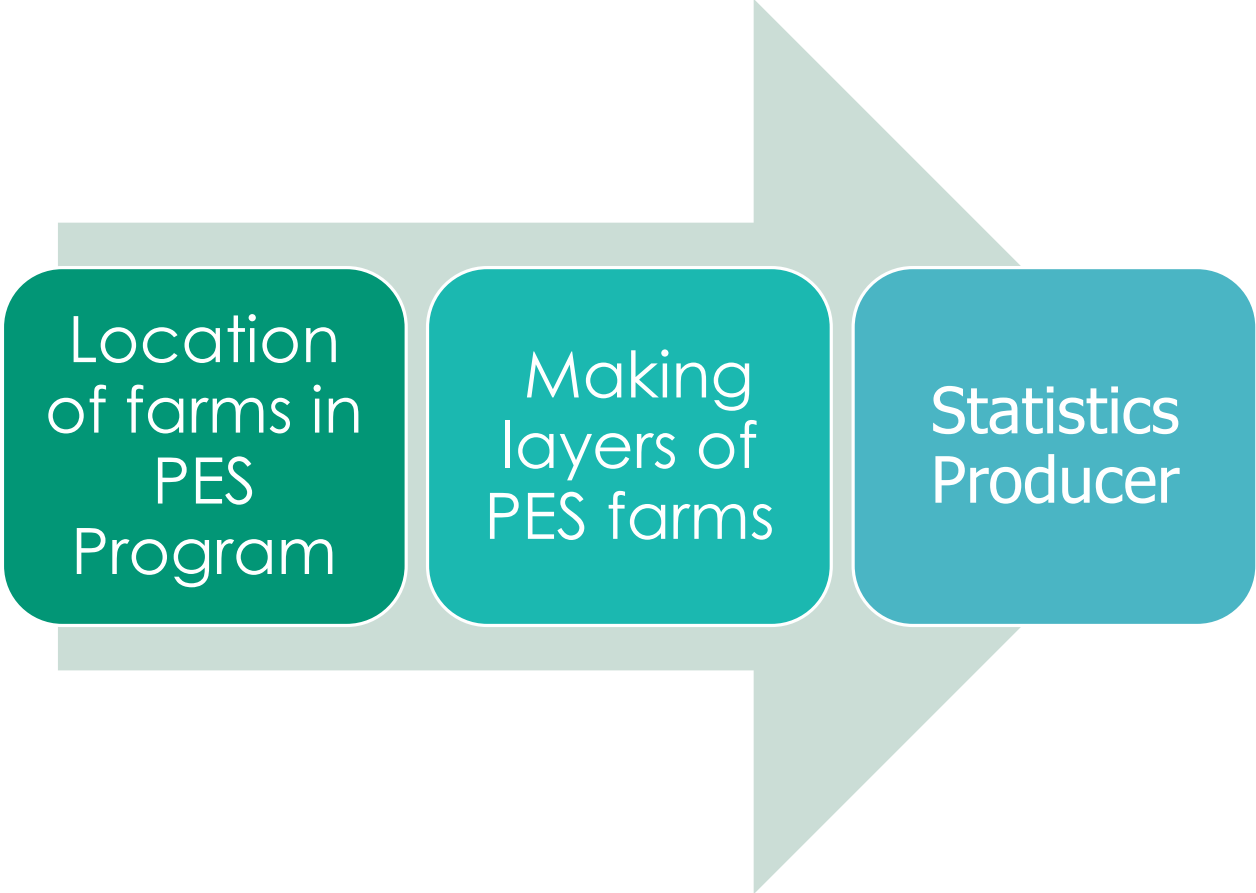
# Forest Fire







# Other activities

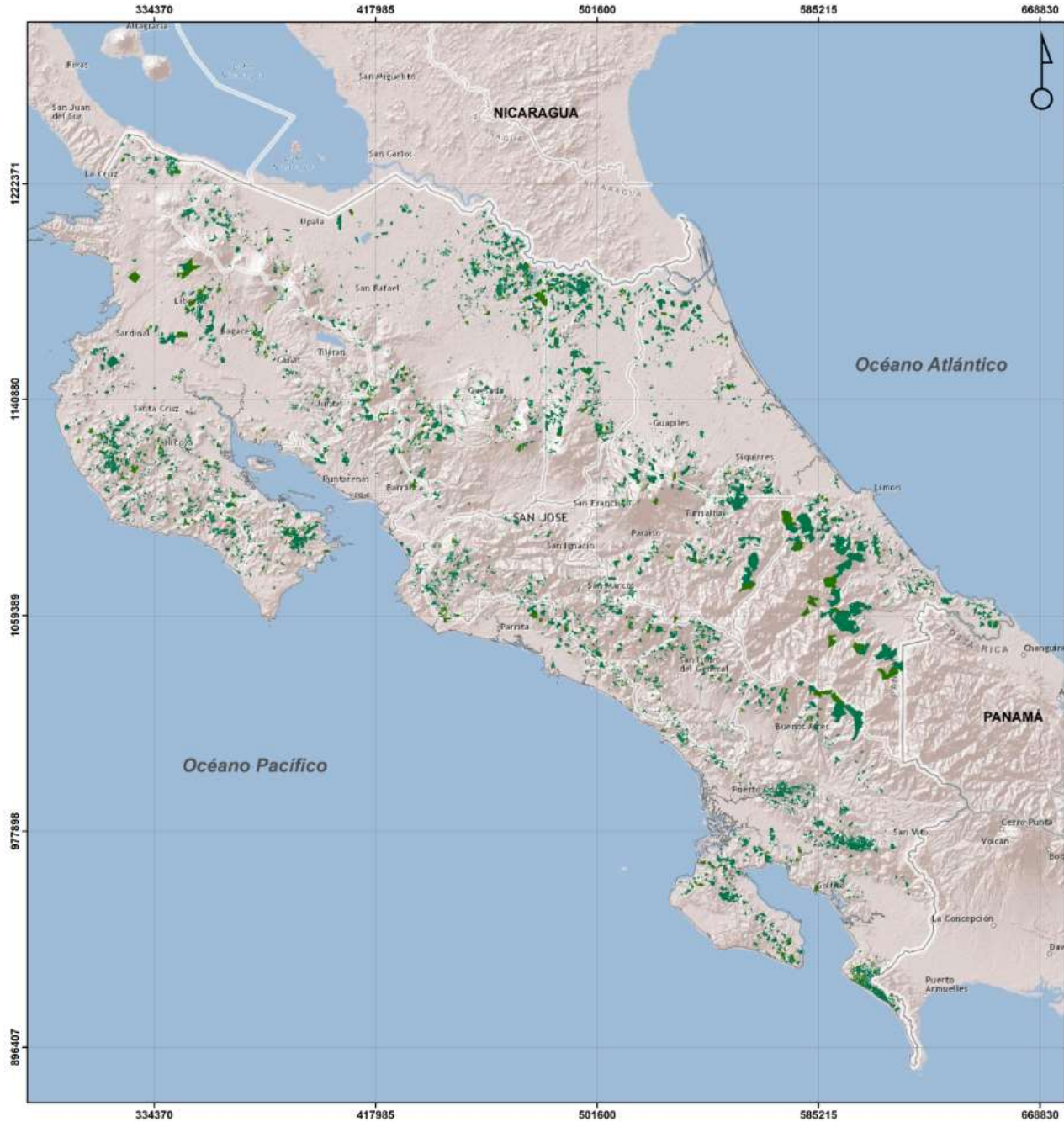


Location  
of farms in  
PES  
Program

Making  
layers of  
PES farms

Statistics  
Producer








**FONDO NACIONAL DE FINANCIAMIENTO FORESTAL FONAFIFO 2018**

Mapa Proyectos de Pago por Servicios Ambientales (PSA) en Costa Rica para el periodo 2012-2018

### Simbología

- Proyectos PSA 2012-2018
- Línea Continental de Costa Rica

Proyección CRTM05  
Datum WGS84

Proyectos PSA para el periodo 2012-2018

Elaborado por:  
Departamento de Control y Monitoreo

Fuente: Bases de Datos FONAFIFO

Octubre 2018

**UBICACIÓN EN CENTROAMÉRICA**



1:1 000 000

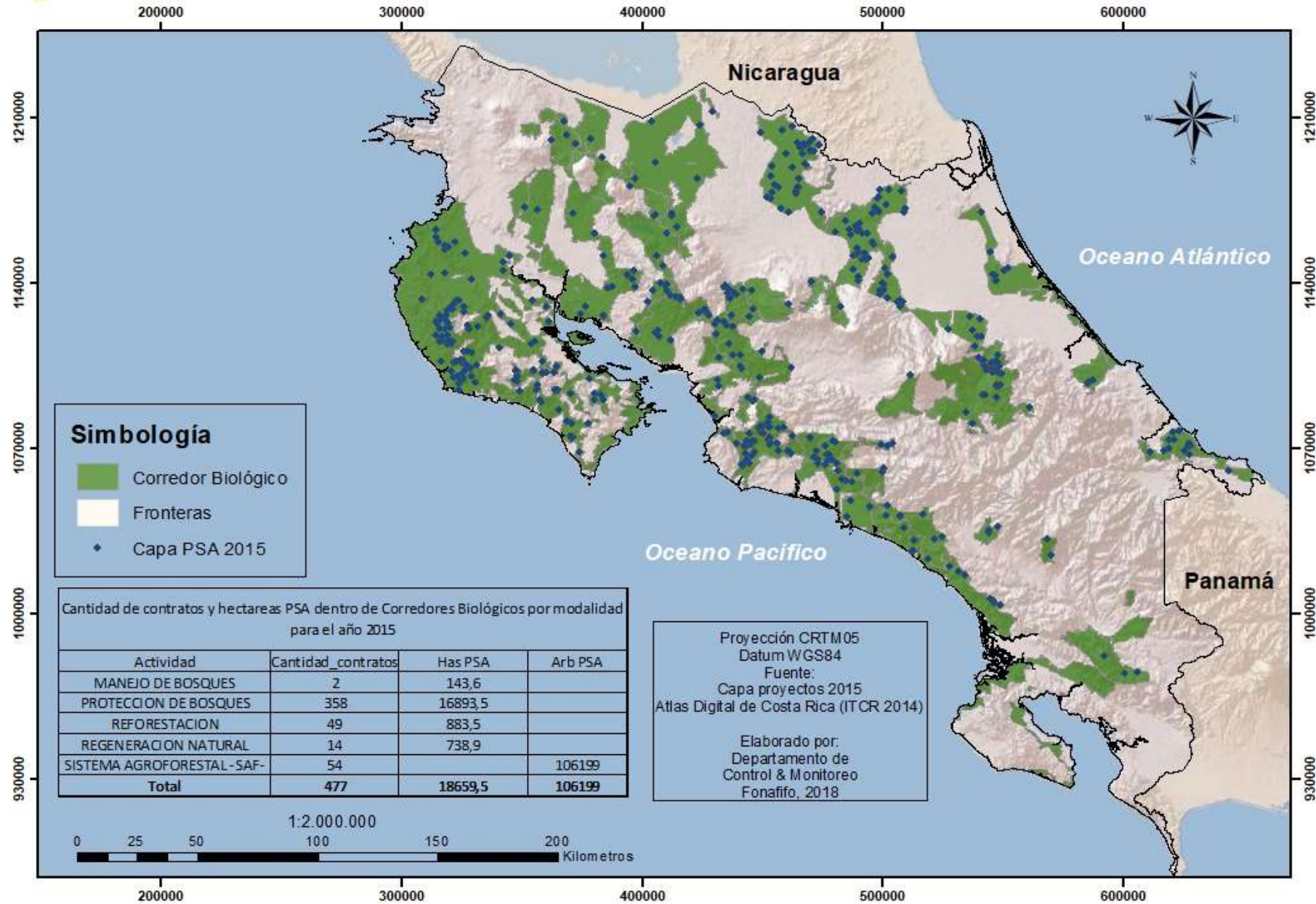
40
20
0
40
Kilómetros

**Update of PES layers**





# PES In biological corridors



Statistics producer





# GIS management



Land Coverage



Public Sector



Academics



Carbon data



# Some Pictures







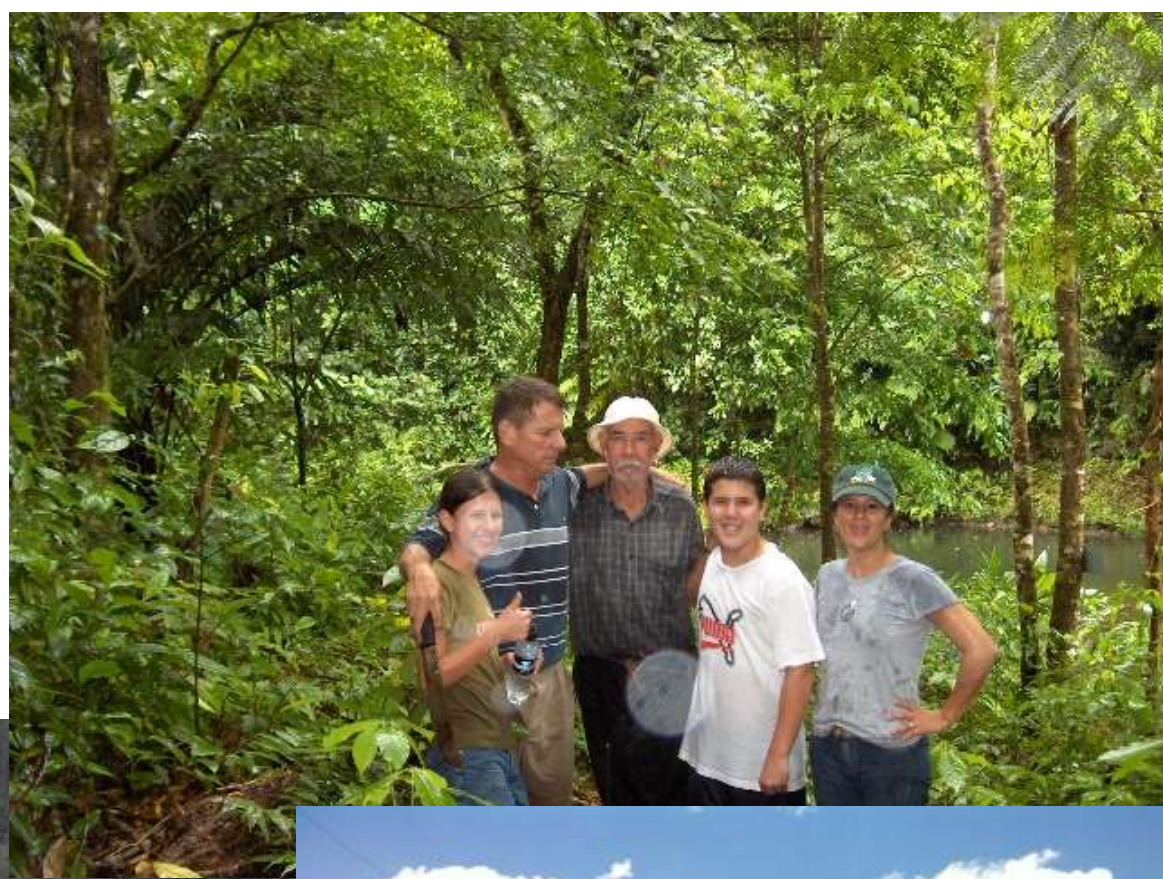














# Thanks!

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