Installation of permanent plots
for forest management and biodiversity monitoring

in Brazil, Peru and Mexico

(Jorge Mattos Olavarria, GITEC-IGIP)

Main projects in Latin America

Mexico

- Forest management platform

- Validation of FM technology by CONAFOR

- Carbon monitoring in coffee

- Biodiversity monitoring and monitoring for integrated landscape planning

Brasil

- Permanent monitoring plots

- Pilot Project for forest management planning

- Validation of Field Map Technology for the Brazilian market

Peru

- Validation of forest census data done by traditional methods in Field-Map
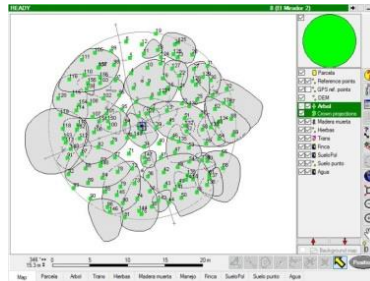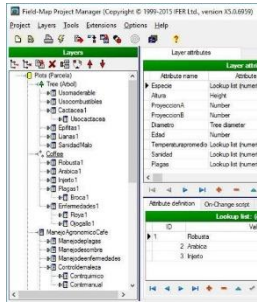
- Generation of stem profiles for volume

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Permanent monitoring plots installed in CESMO I
Focusing on ecosystem services and good practices

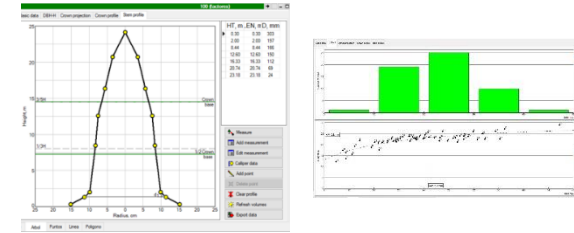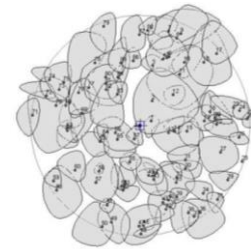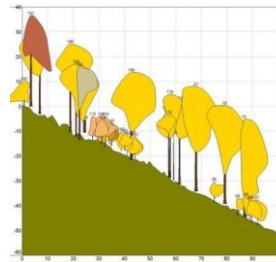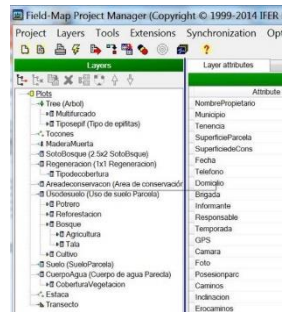| Database design	Field data collection	Analysis and validation

Coffe

Mapping of trees and coffee plants

Monitoring of plague and diseases

Forest

Transect   Mapping trees
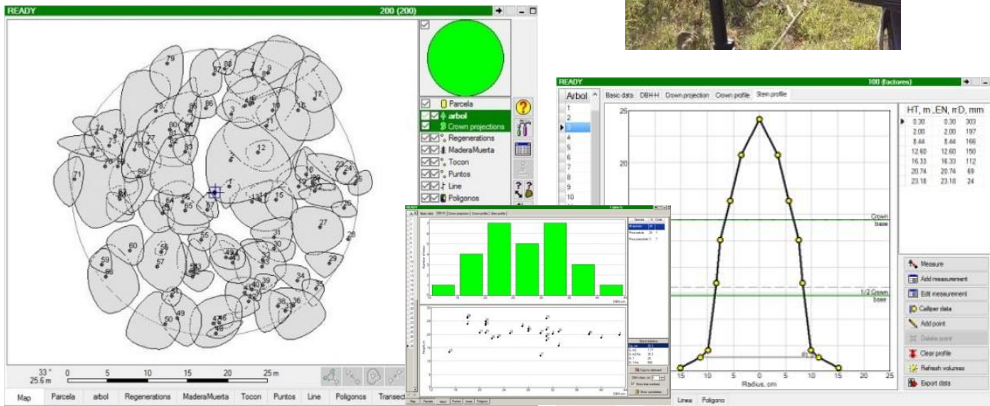

Stem profile - volumen

Agrosilvopastoril
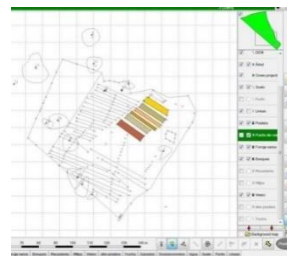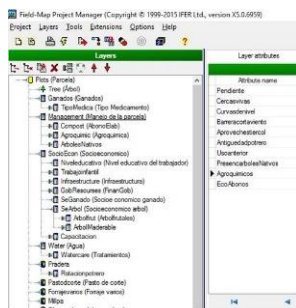
Detailed cartography

Monitoring

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Validation of Field-Map by forest producers and CONAFOR (National Forestry Commission)

- Validated in the pilot project funded by GIZ with the winning companies of the Innovation Award.
- Forest producers of the state of Puebla and Hidalgo
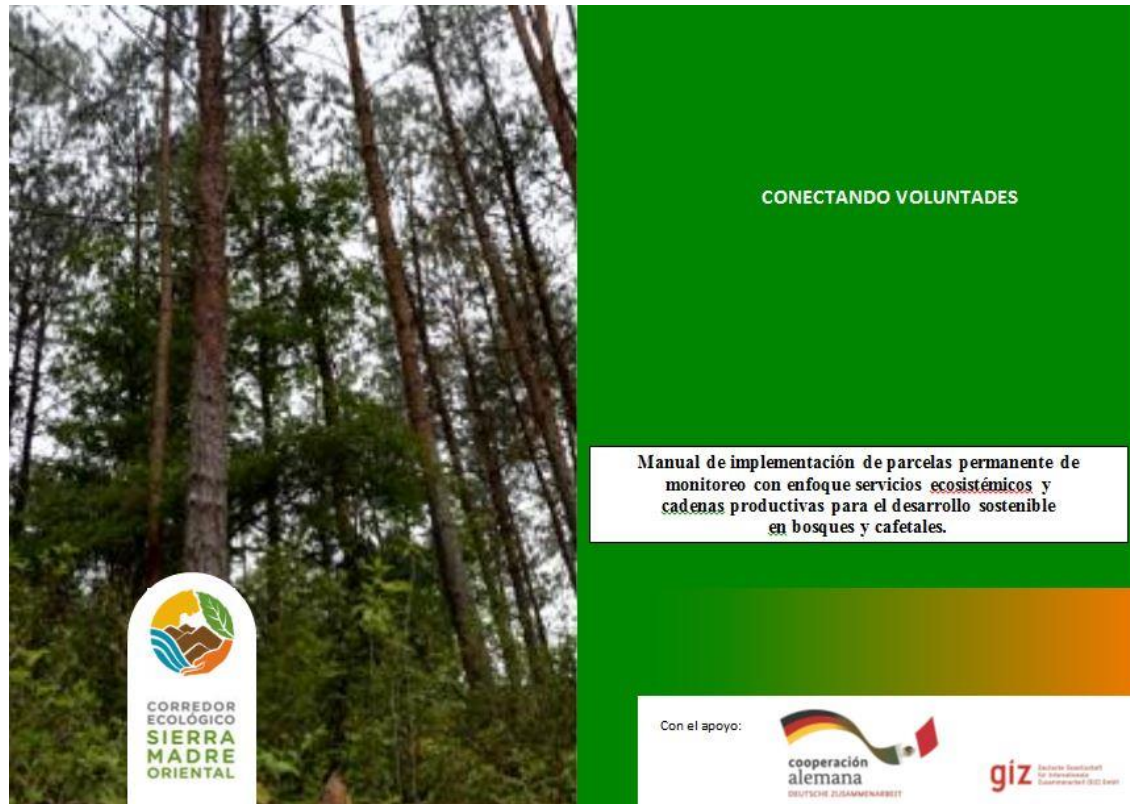- Supervision by CONAFOR

Manual in Spanish for installation of permanent monitoring plots for producers

1. Basic field manual v1 for the producer

2. Manual of stem profile equations for volume analysis v1

http://support.field-map.com

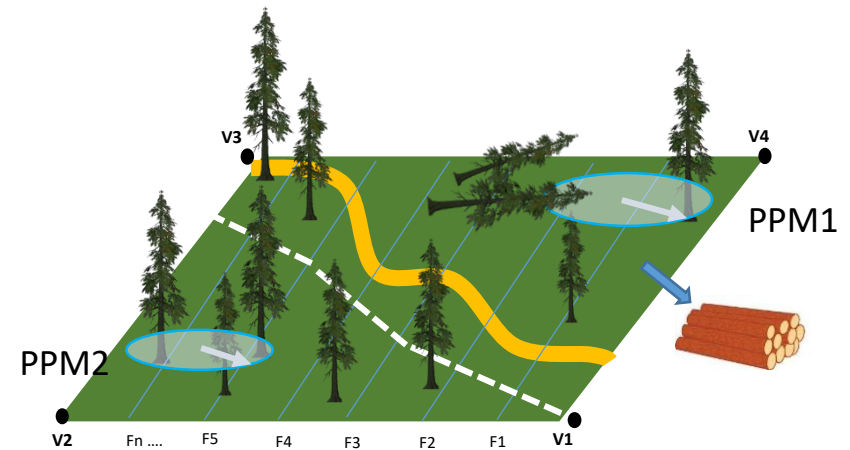# Forest management planning and monitoring of biodiversity

Design a platform with Field-Map technology for the management and monitoring plans of the areas of intervention or regeneration of the Foresters Association of Tulancingo, Hidalgo (> 3,000 foresters)
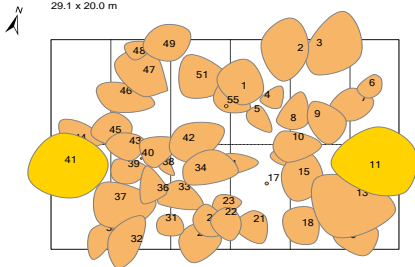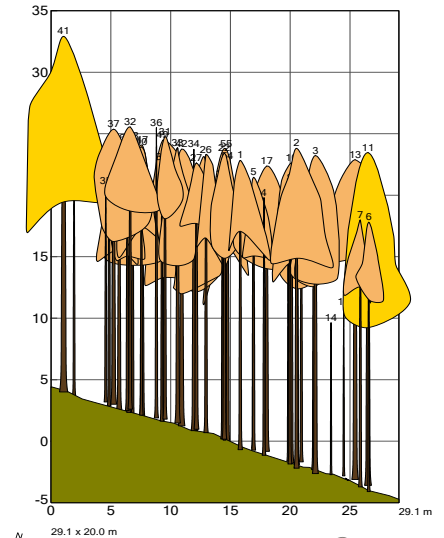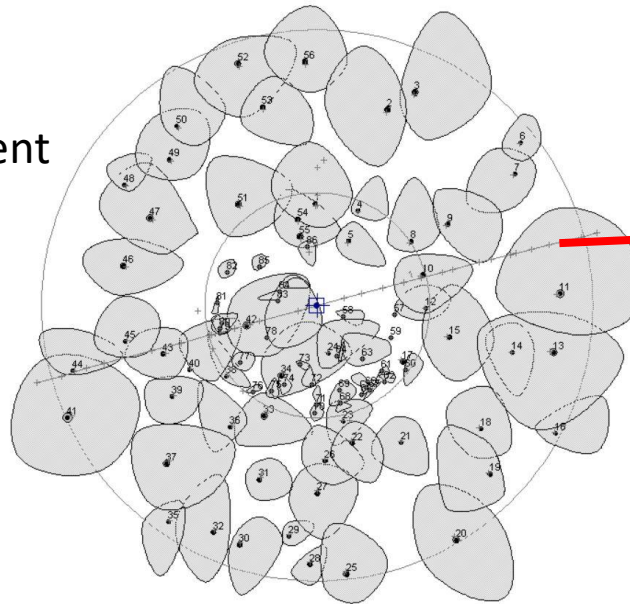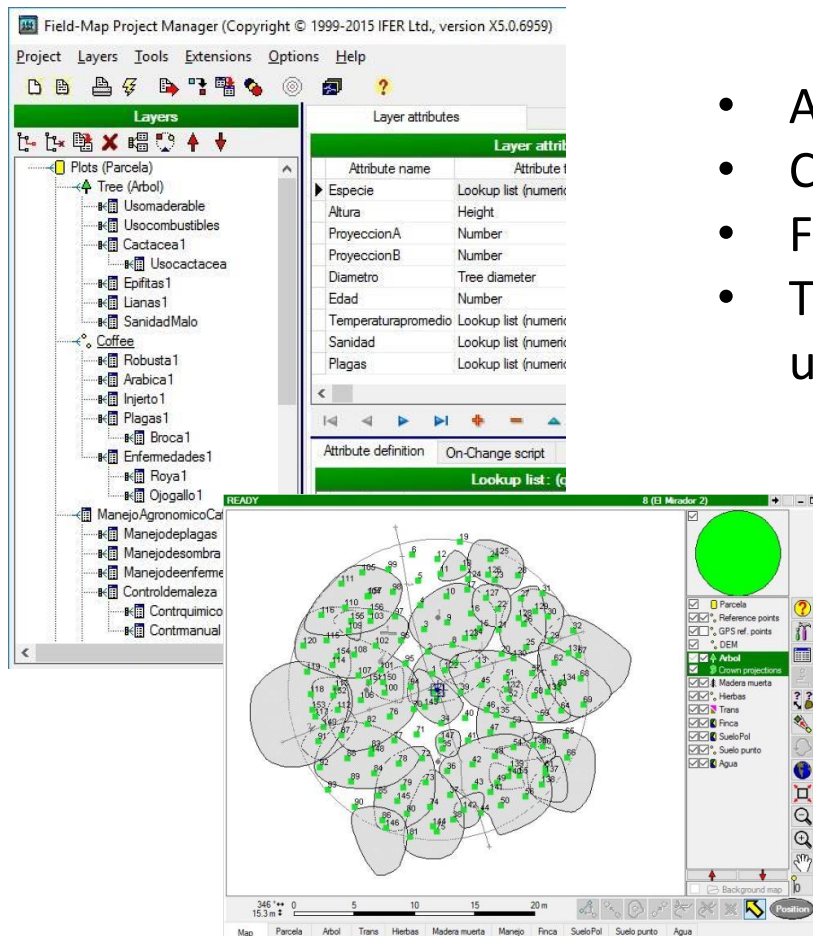
Multifunctional integrated forest management
Forest Reserve El Manantial

- Acquisition of Field-Map
- Monitoring of biodiversity
- Integrated forest management
- Clonal gardens
- Christmas trees
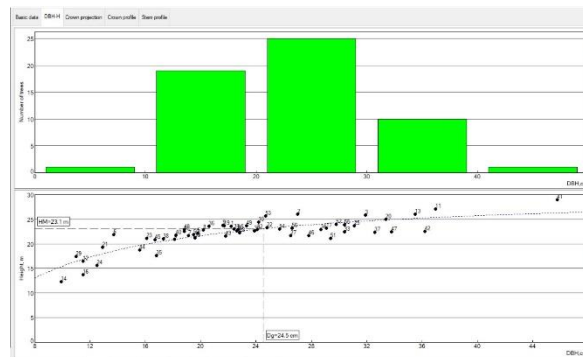
Forest management plan and carbon foot print in coffe plantations

- Acquisition of Field-Map
- Carbon footprint
- Forest management plan
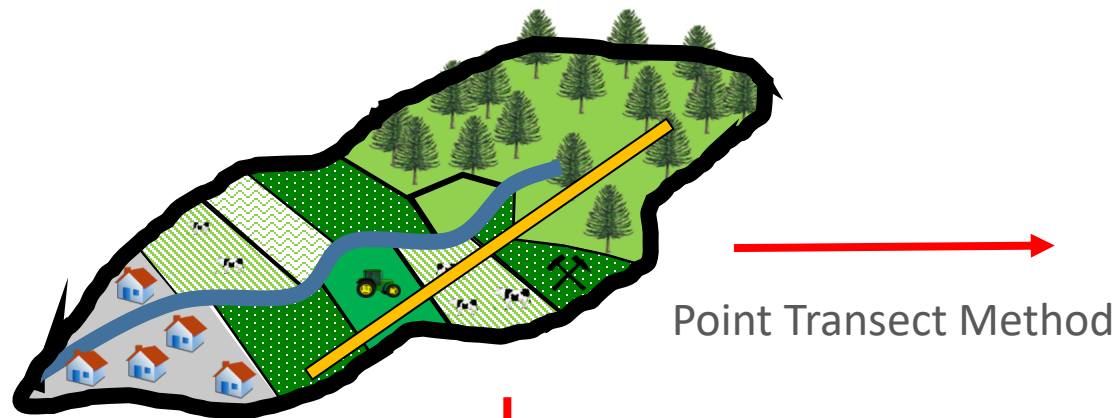- Thesis and research projects with local universities

Design of database for coffee monitoring

Programming in Field-Map: Protocol Point Transect Method (MTP)

MTP: Generate information that allows to know the relationship between biodiversity and ecosystem services and measures in forest management in plots, habitats and landscapes
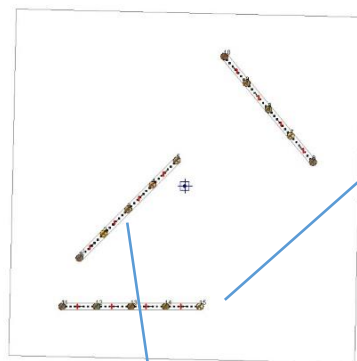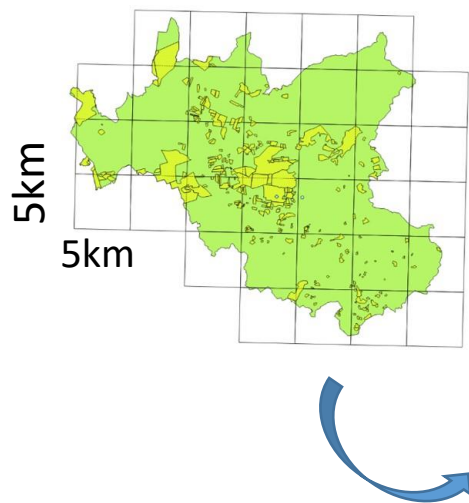
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MTP

Plot crosses several productive strata and relates it to the landscape unit

Point Transect Method
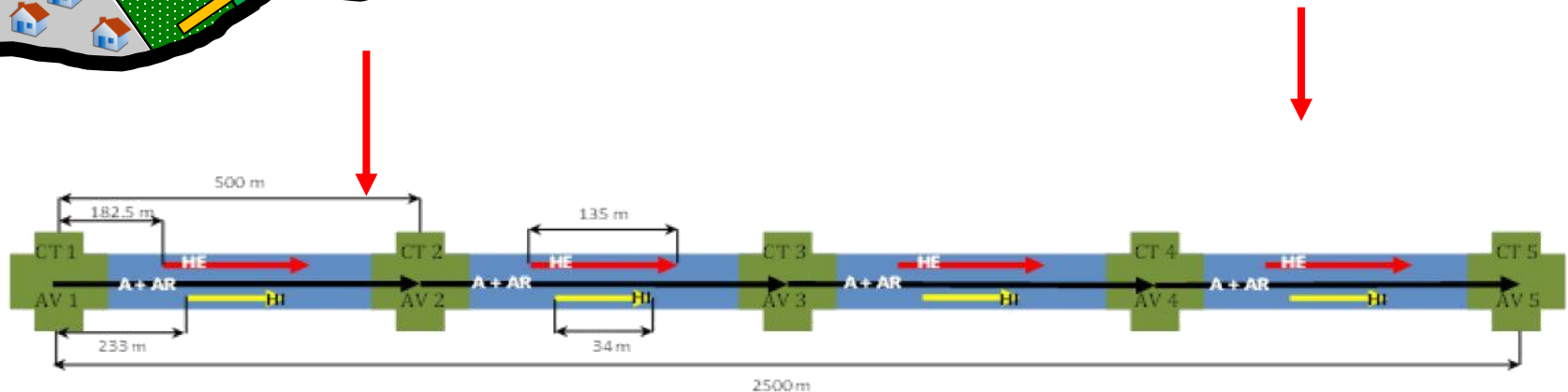
MTP: Transect focuses on flora (herbaceous, shrub and arboreal stratum), mammals, birds, amphibians and reptiles.

Programming in Field-Map: Protocol Point Transect
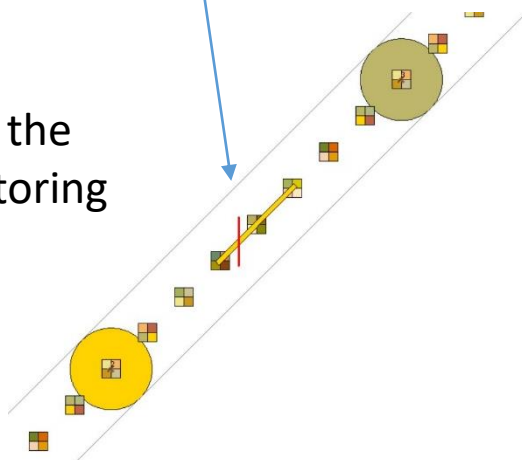# Method (MTP) - First version

5km

5km

Mammals
Trap cameras

Trees

Amphibians and Reptiles

Birds

herbaceous

Integrated MTP to the
Field- Map for monitoring

Database

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MIP Project : Integrated landscape management project – GIZ/GITEC

- Acquisition of Field-Map licenses for GIZ Mexico
- Creation of a technical support platform with universities
- Training for government institutions CONAFOR (Forest), SEMARNAT (Environment), SAGARPA (agriculture)
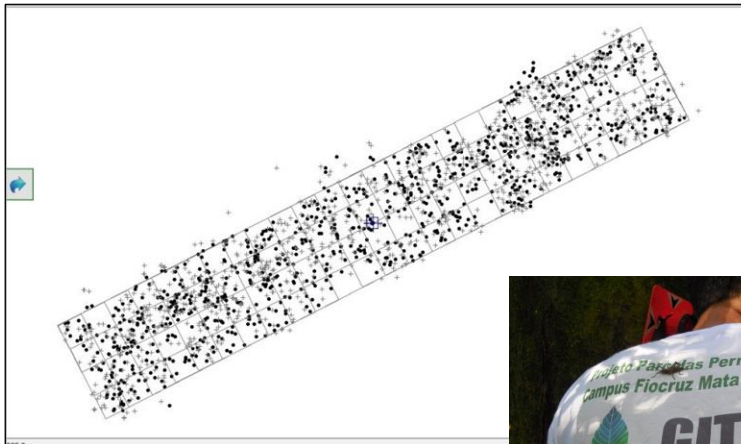- Research projects with universities and producers

Permanent monitoring plots and forest management

**1. Permanent monitoring plots in Campus Fiocruz Mata Atlântica**

Main objectives:

- Establish plots to monitor biodiversity and the relationship with tropical diseases

- Established between the urban area and Mata Atlantica

2. Pilot project of inventory and volume analysis in a pine plantation São Francisco de Paula / RS

Pilot Project: Validation of Field Map technology for the Brazilian market
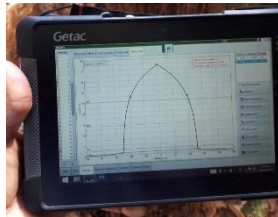
Etapa I: Training of Brazilian researcher (UFLA) in Peru

- Census and Forest Inventory
- Generation of stem profile equations for volume
- Traceability of wood
- Monitoring and validation
- Forest management and management plans
- GITEC Brasil, Universidad de Lavras y clúster forestal Ucayali de Perú

Validation of data in Field-Map measured by traditional methods in forest concessions
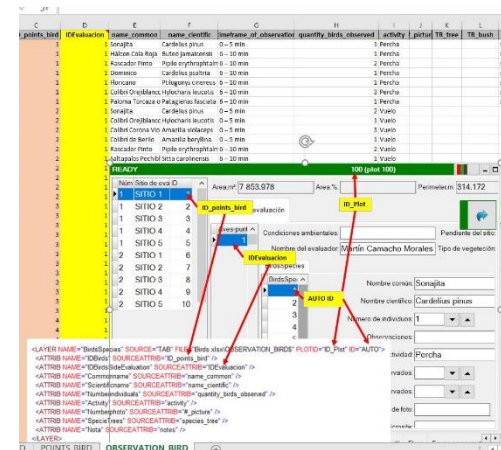
Data taken by traditional methods
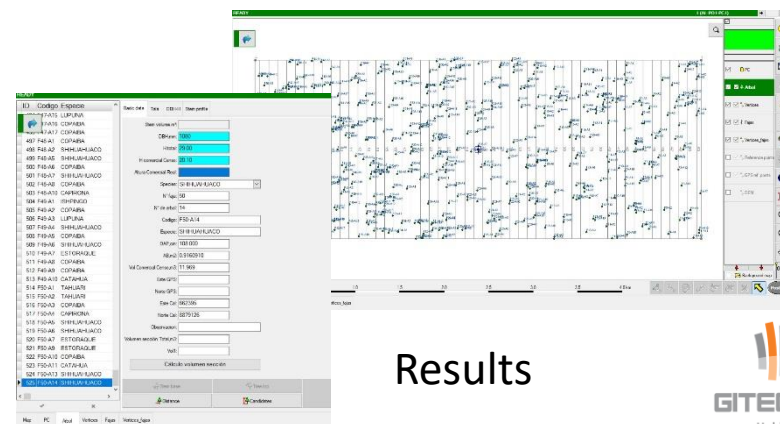
Import2FieldMap format in Excel

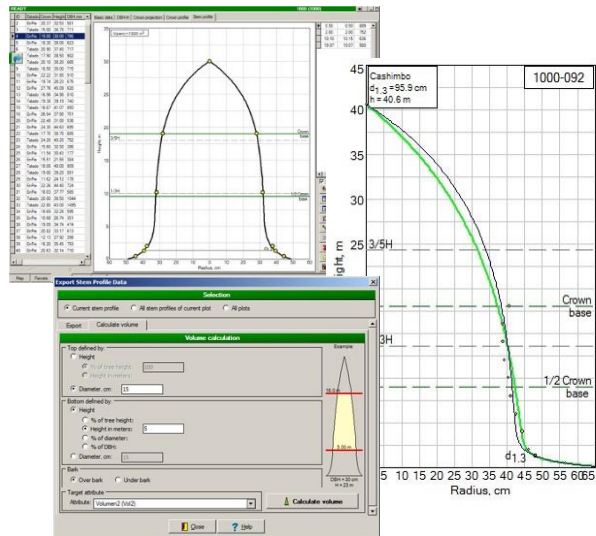Annotation by hand in field format

Enter Excel

Results

Generation of stem profiles for volume calculation for commercial species in the Amazon

- Ucayali Forest Cluster
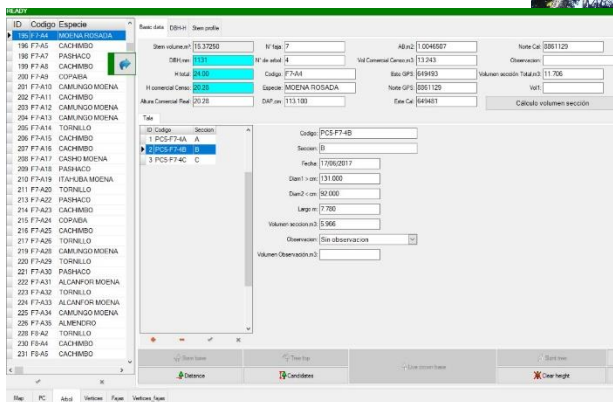- Ucayali National University

Thank you

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