Sentinel Landscape Nicaragua-Honduras advances to 2014 Updated June 2014

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Sentinel Landscapes workshop
Costa Rica 3-7 March 2014

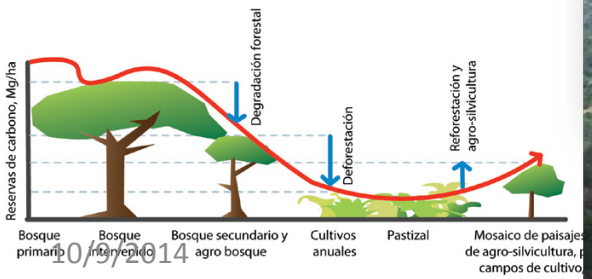
The Nicaragua Honduras SL

68 000 km^2 which includes 2 biosphere reserves and 13 protected areas in Nicaragua and Honduras

Map by Norvin Sepulveda and Noel Ulloa

The Nicaragua Honduras SL

The largest remaining forest area in Central America, surrounded by a mosaic of agricultural land, cattle ranching and agroforestry systems.

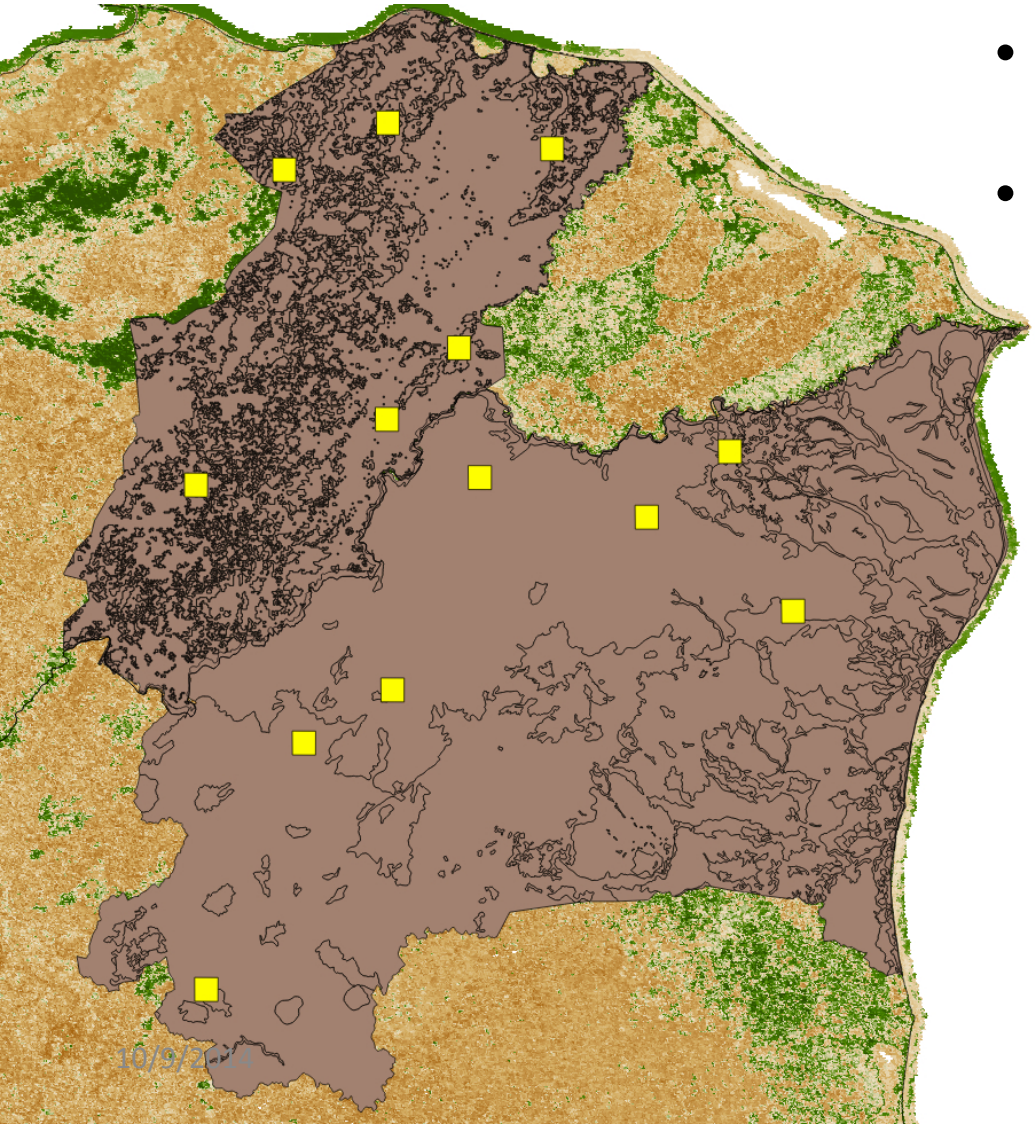


Incepción workshop

- National and international participants, agreed in the boundary of the NH- sentinel landscape. The Nicaragua-Honduras Sentinel Landscape is a long transect from the highly agricultural area in highland Matagalpa, down the road to Waslala, Siuna, Waspán in Northern Nicaragua, crossing the border into the Rio Platano Reserve in Honduras.

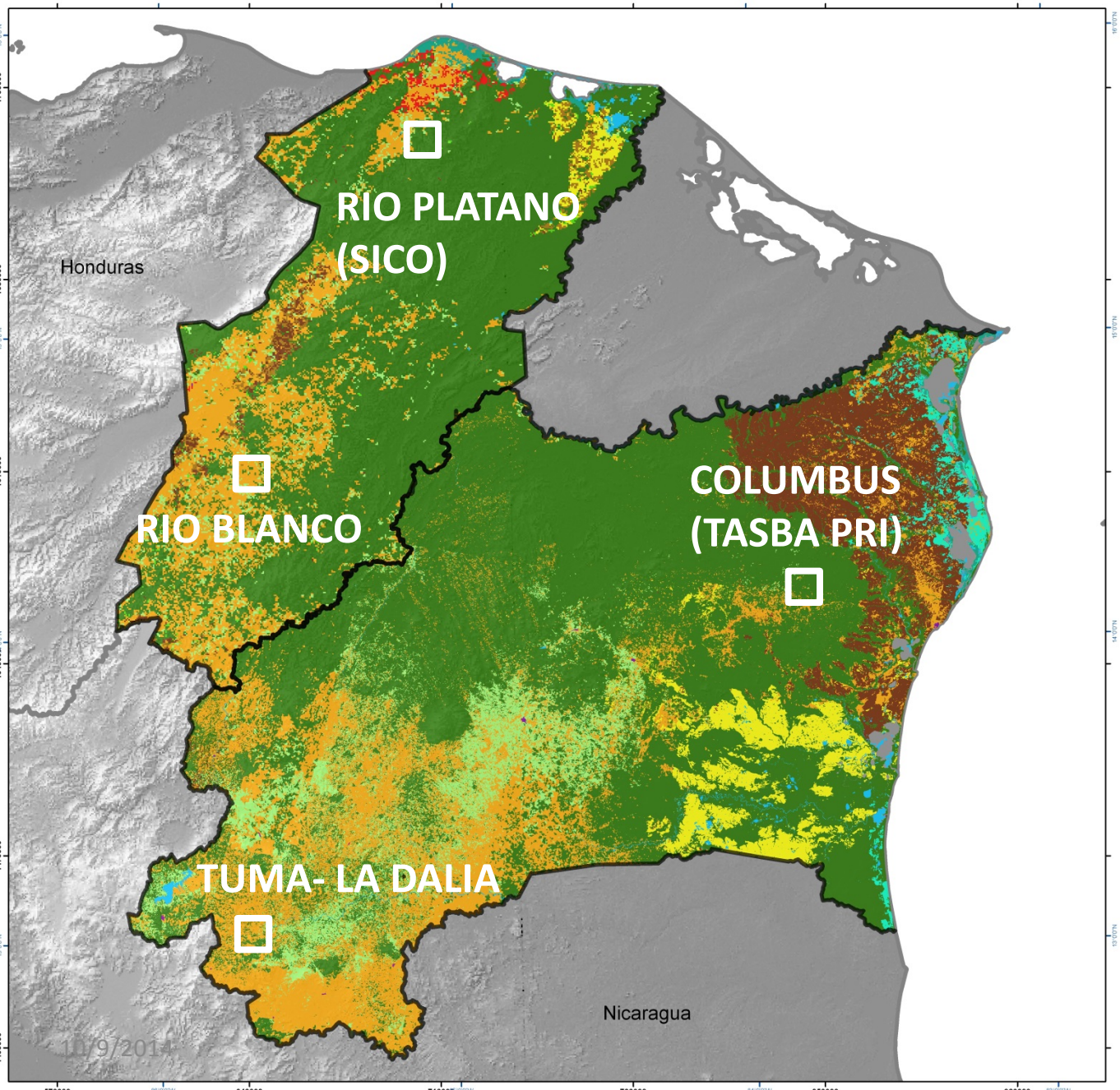
  The transect is a perfect example of a forest transition curve, from the highly agricultural landscape and little cover of natural forests in the coffee producing areas (800-1000 m) of Tuma-LaDalia, Matagalpa; to Waslala at 400 m altitud, with small farms, double purpose cattle, slash-burn fallowed corns and beans, and cocoa as a cash crops; to the plains of Siuna with extensive cattle ranching and little forests; and finally, to the un-populated surroundings of the large massif of intact native forests in the Bosawás and Río Plátano Biosphere Reserves in Northern Nicaragua and Honduras

Ni-Ho-SL: Site selection



- 13 candidate sites
- 4 sites chosen in discussion with local partners:
  - Cover the forest transition curve
  - Representative of main land use and forest types in the landscape
  - Presence of partners in the site
  - Security and accessibility

Landuse and vegetation types in Nicaragua - Honduras Sentinel Landscape



Simbology

Sentinel Landscape

Landuse

- Agriculture
- Agro-export agriculture
- Broadleaf forest
- Broadleaf mix forest
- Dense pine forest
- Land flooding
- Land without vegetation
- Mangrove forest
- Savannah with trees
- Shrubs
- Sparse pine forest
- Urban areas
- Water

Projection: UTM Zone 16 N

Datum: WGS-84

Scale 1 : 1.000.000

N W E S

0 10 20 40

Kilometers

Sources:
ICF 2009 (Honduras) and MARENA 2006 (Nicaragua)

Elaborated by:
Juan Carlos Zamora P. (CATIE)

December 2013

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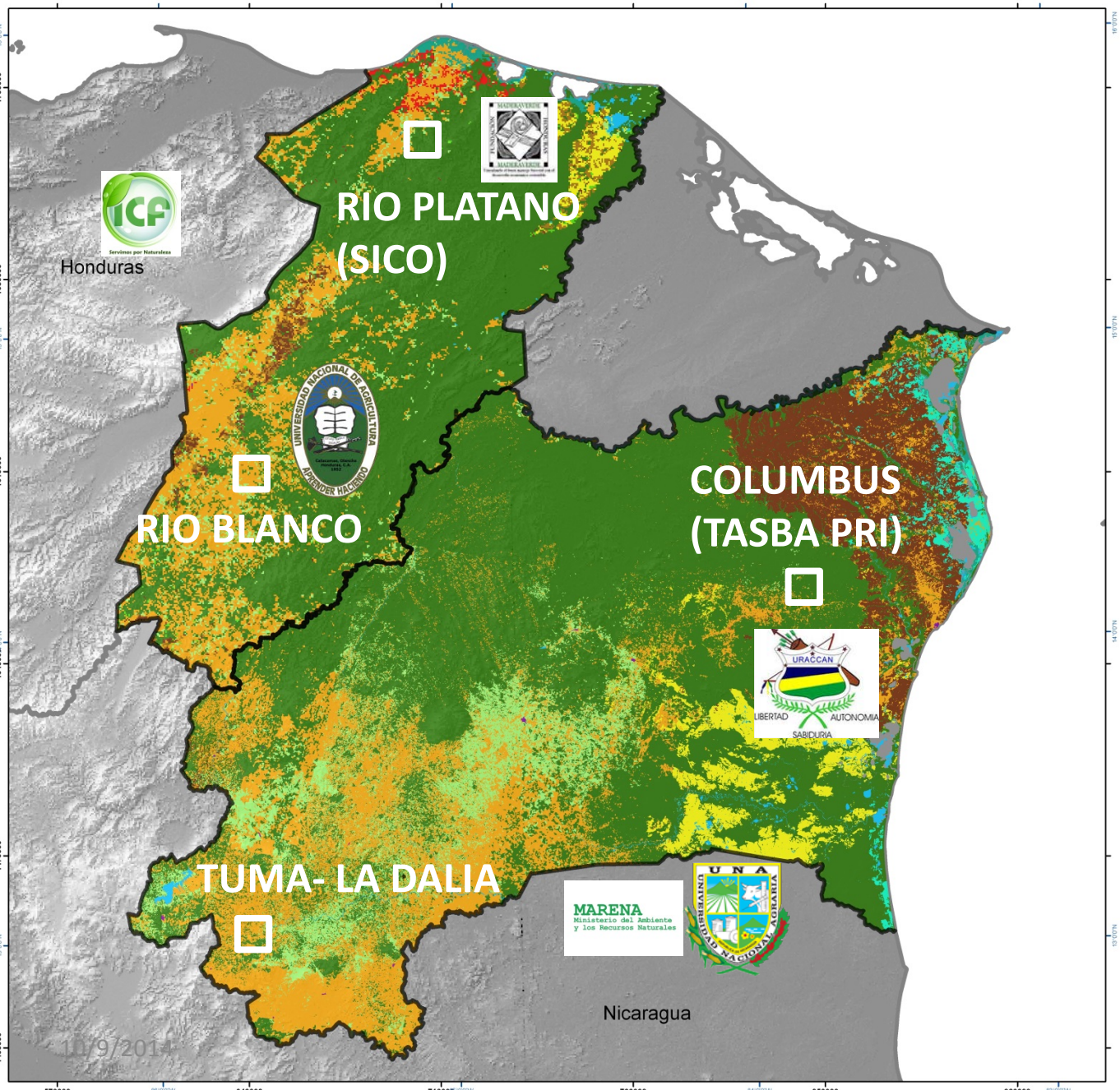

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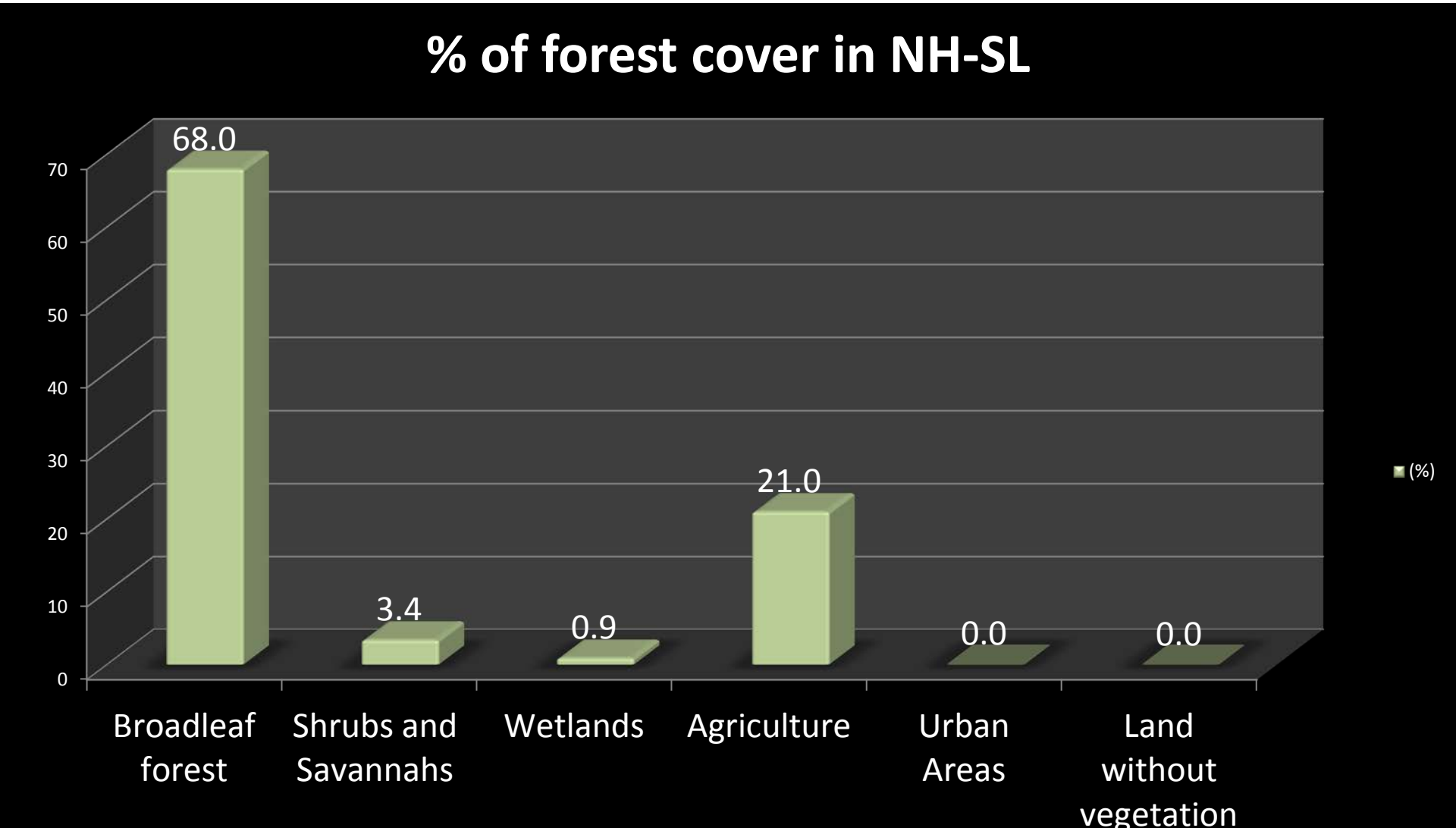
10/9/2014

Forest cover in NH-SL



Tuma-La Dalia-Ni

- Fragmented landscape with low forest cover
- Land use: basic grains production, coffee agroforestry and cattle ranching.
- Farm sizes ~0.5 ha - 300 ha, most commonly smallholders with individual private land tenure
- Good accessibility
- Part of the CATIE key territory
- Very high population density >250 persons/km2 (CIESIN estimates for 2010)



Columbus - Ni

- Part of the Tasba-Pry indigenous territory (indigenous reserve - Miskitu)
- High percentage of non indigenous settlers 50% in the area = source of conflicts
- Indigenous communities, recognized by the government, communal land. Settlers individual private land tenure
- Forest in recovery phase from a large event disturbance: Felix Hurricane in 2007
- Migratory agriculture and livestock encroachment in tropical forest – particularly after Felix.
- Very low population densities 1-5 persons/km2 (CIESIN estimates for 2010)



Rio Blanco-Hn

- Main land use: pasture - cattle ranching and basic grains production
- Small pockets of forest remnants (mostly along rivers)
- A massive conversion from forest to cattle ranching started in 80's.
- Located between three protected areas (e.g. Patuca, Sierra de Agalta and Tawahka National Park).
- Low population density, 5-25 persons/km2 (CIESIN estimates for 2010)



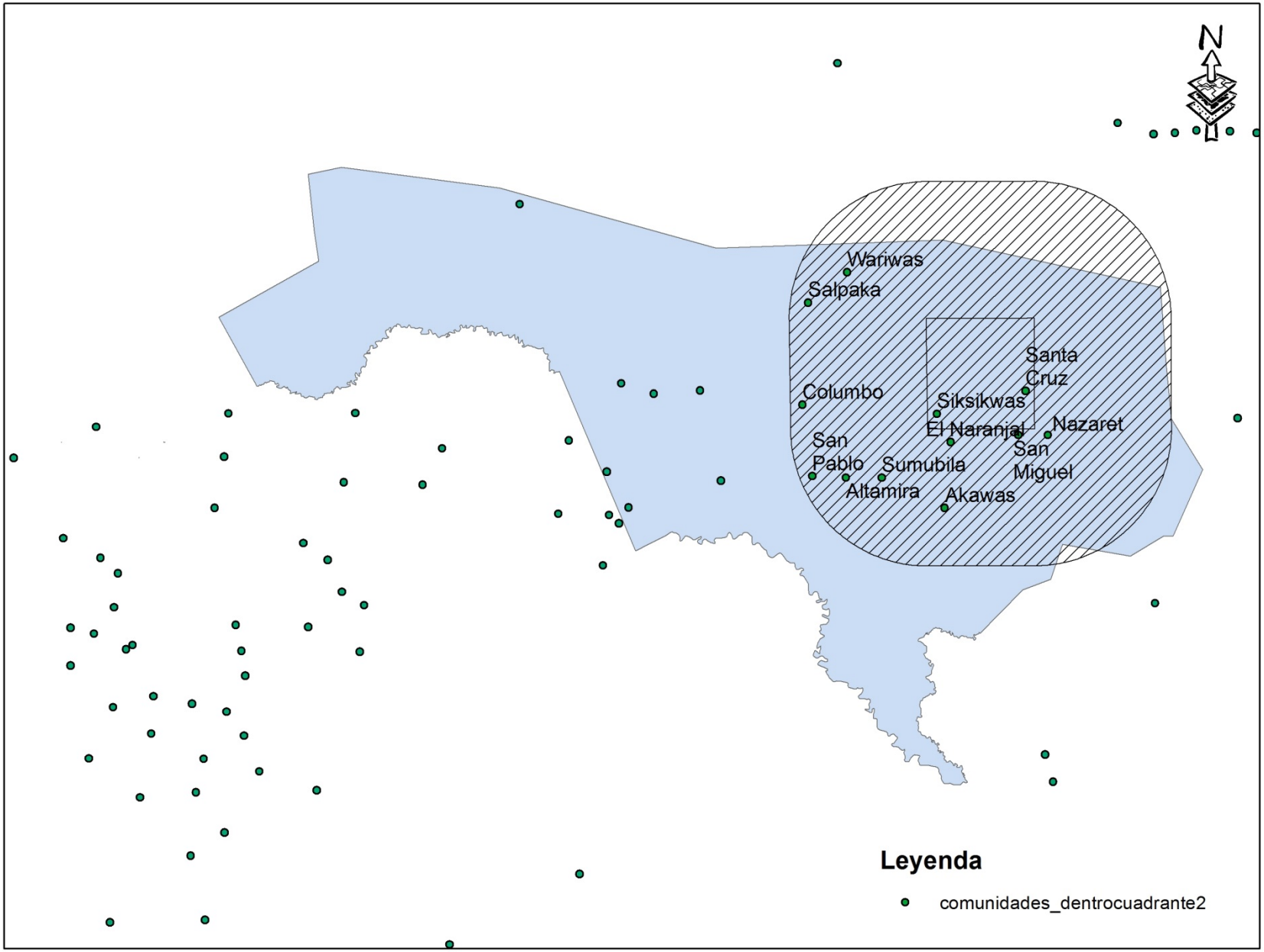
Rio Platano-Hn

- Still largely covered by primary forests (in the mountainous areas within the reserves)
- Reserves land belong to the government
- Cattle ranching in fertile valleys, where population settle, managed as private land tenure (even within national territories).
- People share agricultural activities and forest management (concessions) as sources of livelihood.
- Home to several indigenous groups, within the reserve. Rights over land not recognized by government.
- Low population density, 5-25 persons/km2 (CIESIN estimates for 2010)
- Securities issues drug traffic , land grabbing



Ni-Ho Baseline- village selection

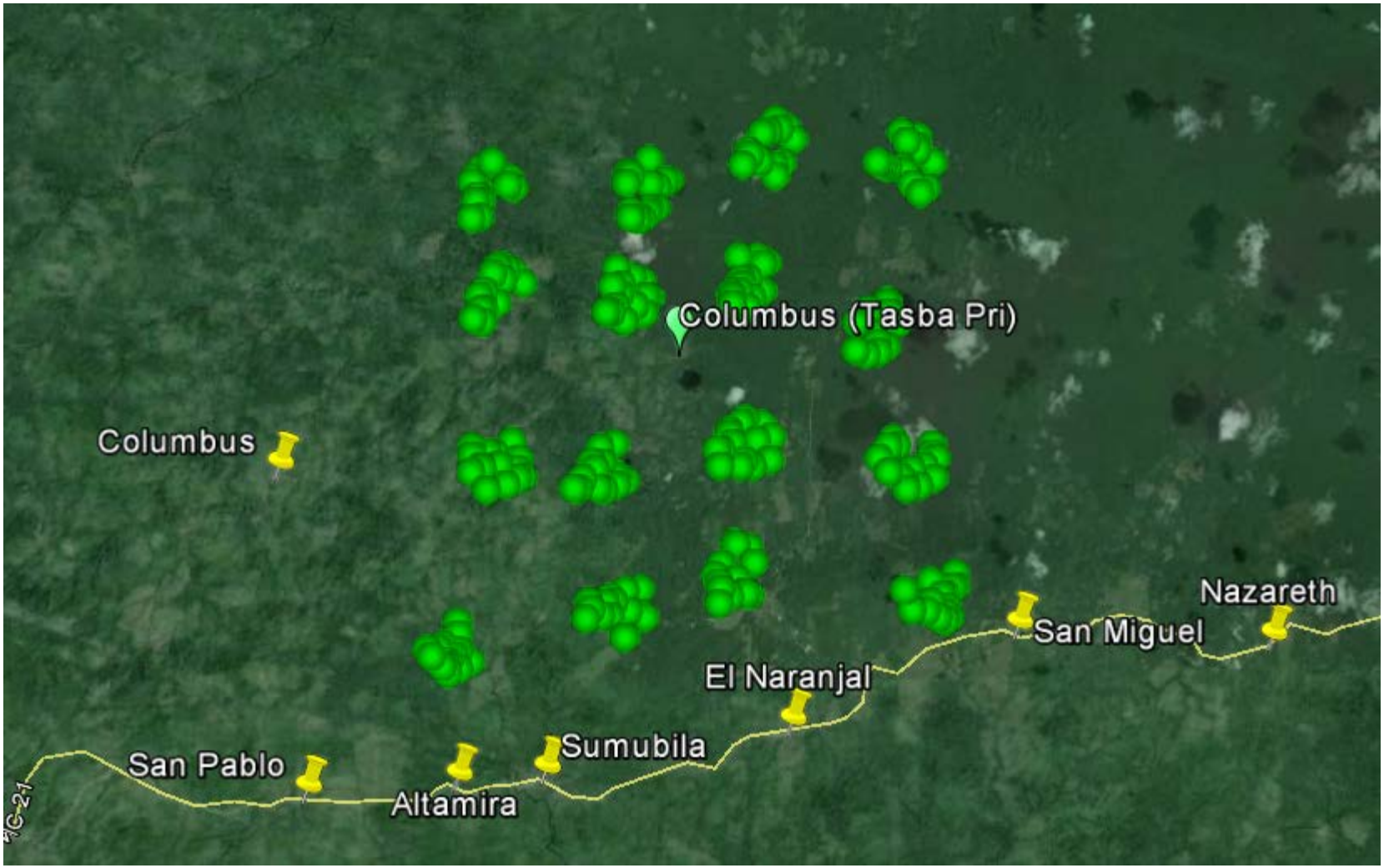
- Initial listing of villages with census data, regional census, (scarce, not up to date)
- National maps, regional maps
- visit to municipalities, knowledge of partners
- Check location of villages within or near the block
- Criteria for selection:
  - Distance to the road – forest (in Nicaragua used exchangeable)
  - Partners recommendation based on accessibility and security
  - Previous knowledge and availability of datas
  - No existence of conflicts
  - Quickly and easily to get permits (with villages leaders)


N
Wariwas
Salpaka
Santa
Cruz
Columbo
Siksikwas
El Naranjal
Nazaret
San
Pablo
Sumubila
San
Miguel
Altamira
Akawas
Leyenda
comunidades_dentrocuadrante2

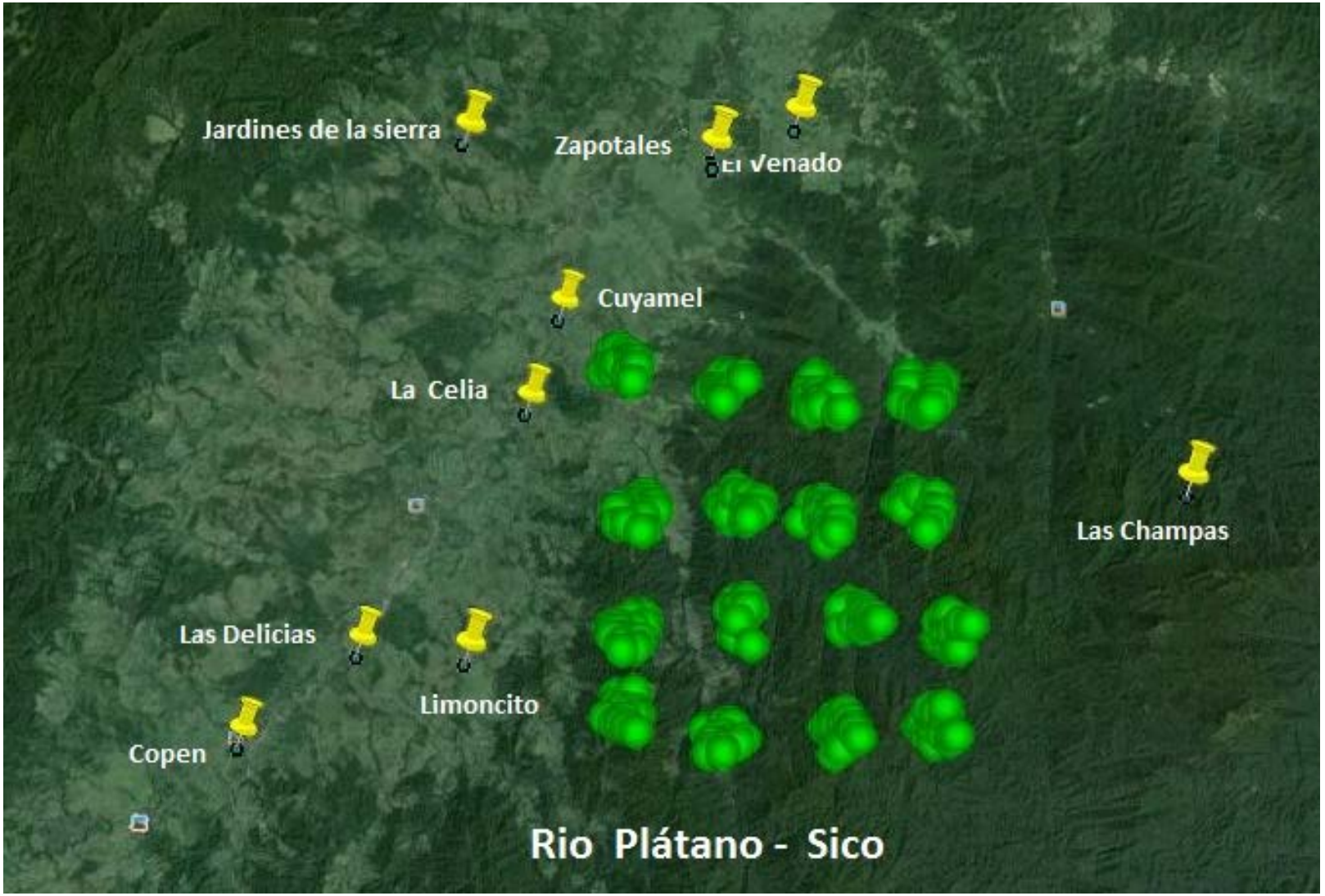
La Dalia


Verapaz
Ilipo
La Chimpinilla
El Roblar
Santa Ana
Rio Negro
Los limones
San Antonio de Upa

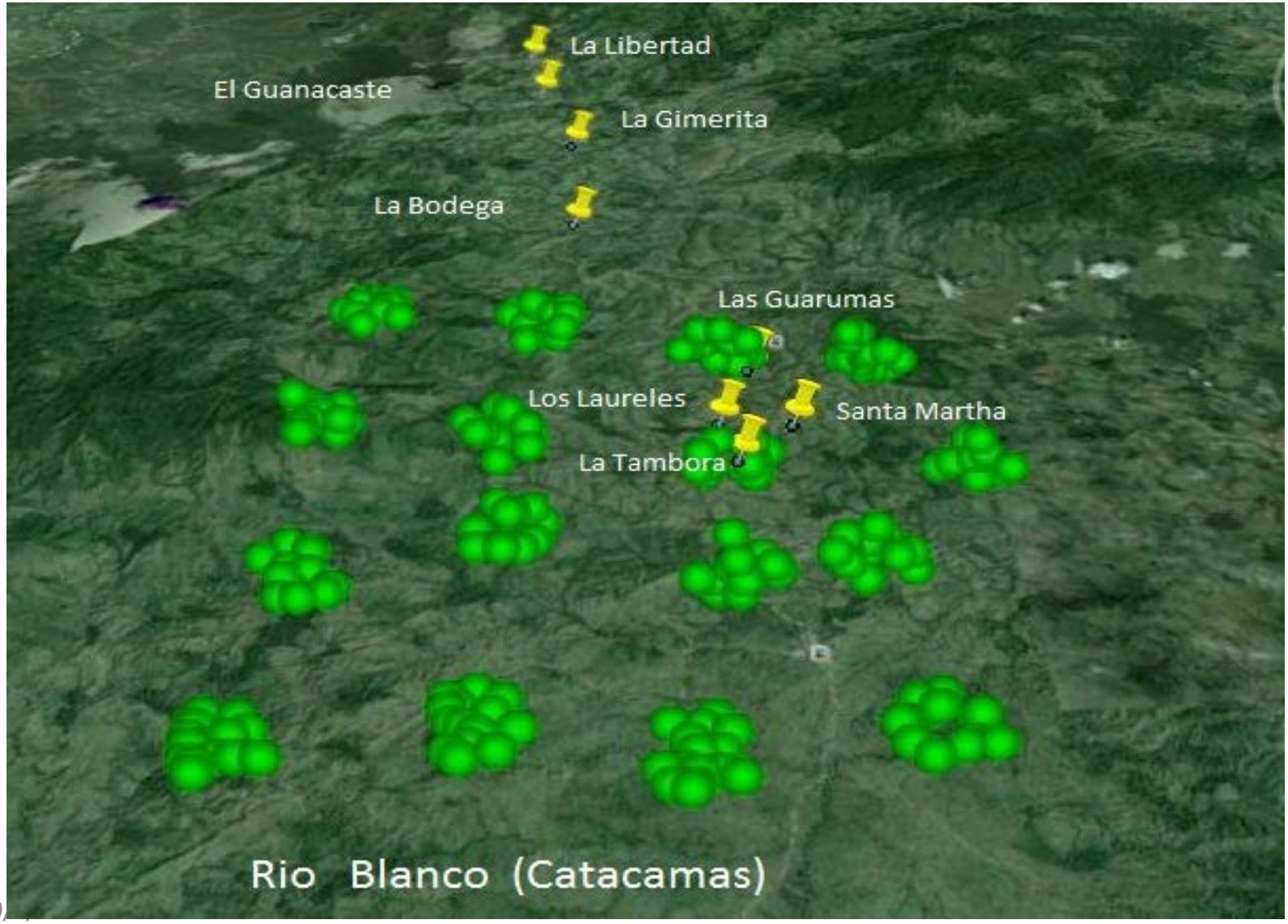
Columbus


Columbus (Tasba Pri)
Columbus
Nazareth
San Miguel
El Naranjal
Sumubila
San Pablo
Altamira

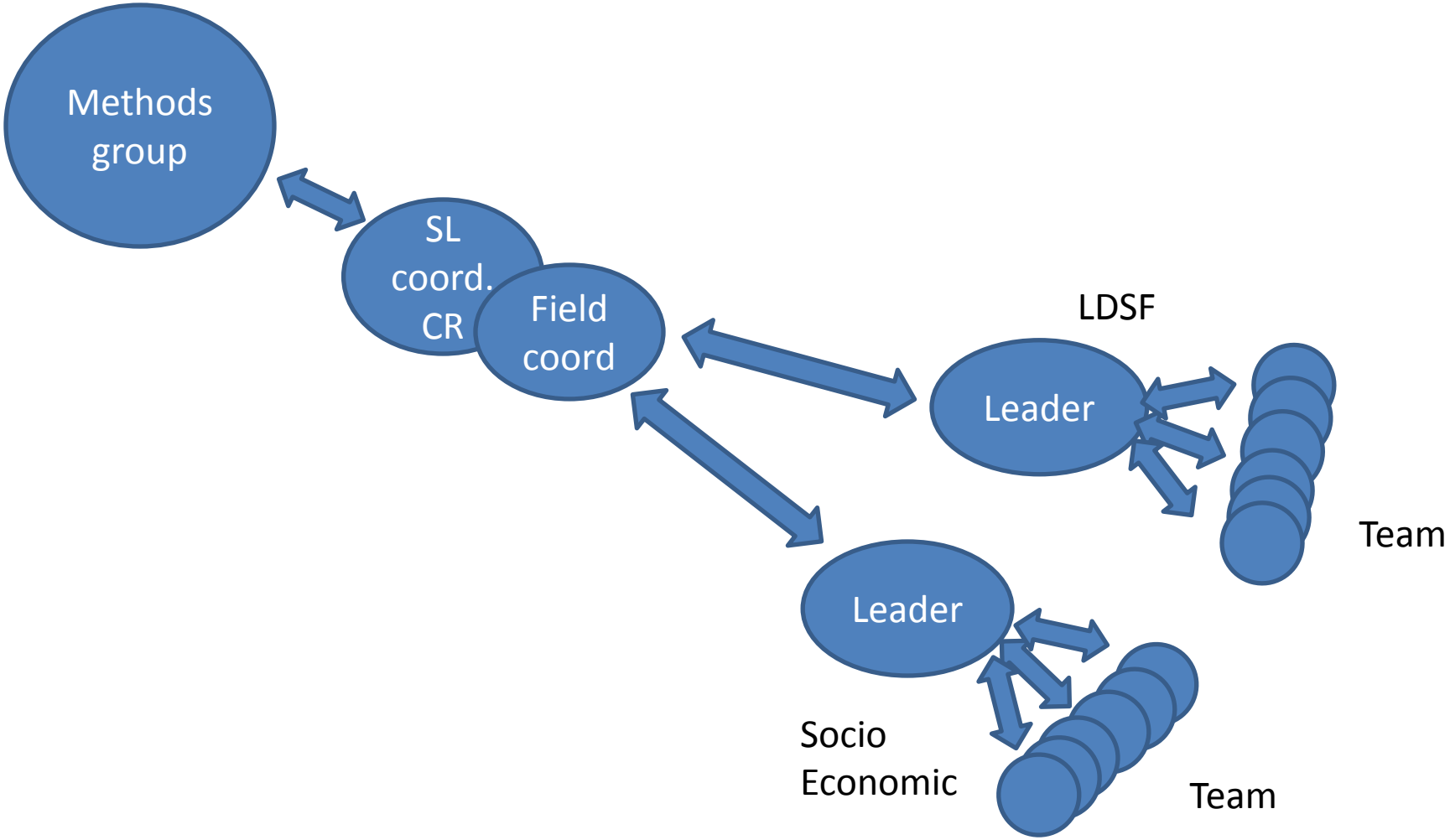
Rio Plátano-Sico



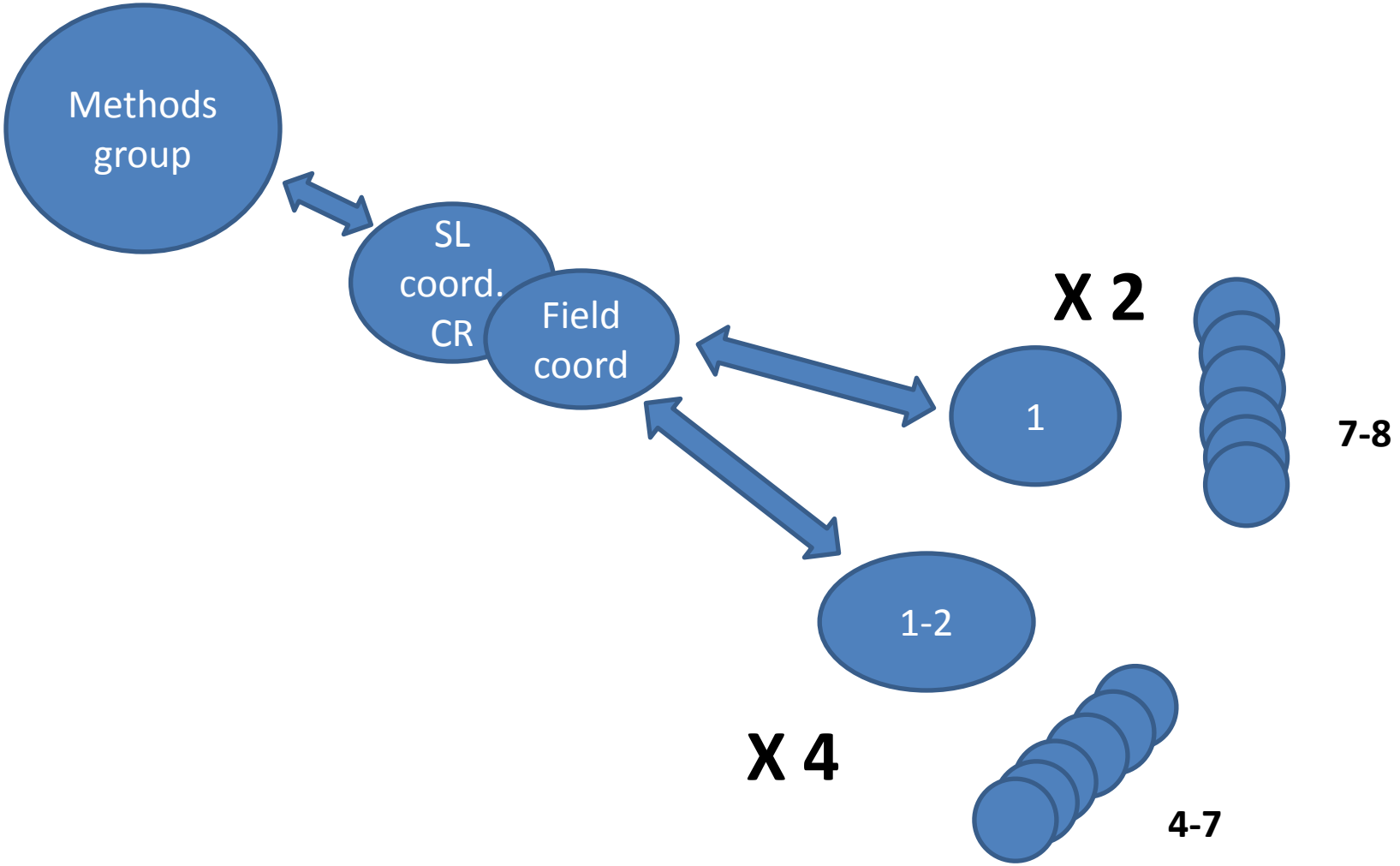
Rio Blanco-Catacamas



The Team


Methods group
SL coord. CR
Field coord
LDSF
Leader
Team
Leader
Socio Economic
Team

The Team



Socio – economic survey

- Tuma:
  - 8 communities
  - 297 HH, 158 forms (IFRI and ISOP)
- Columbus
  - 8 communities
  - 298 HH, 137 forms (IFRI and ISOP

3-5 days per village

Socio – economic survey

- Rio Plátano (Sico):
  - 9 communities
  - 146 HH, 82 forms (IFRI and ISOP)
- Rio Blanco (Catacamas)
  - 8 communities
  - 104 HH, 88 forms (IFRI and ISOP)

  3-5 days per village

Collection of information – village level

- Random selection of HH, based on lists of households from leaders, and snowball.
- IFRI survey:
  - Mostly workshops ideally at least 30 participants
  - Focal groups smaller groups (particularly for user and products)
  - Key informants leaders, teacher
  - Individual interviews (users and products)
  - People chosen in coordination with the leaders of the villages
  - As much as possible 50% men and 50% women

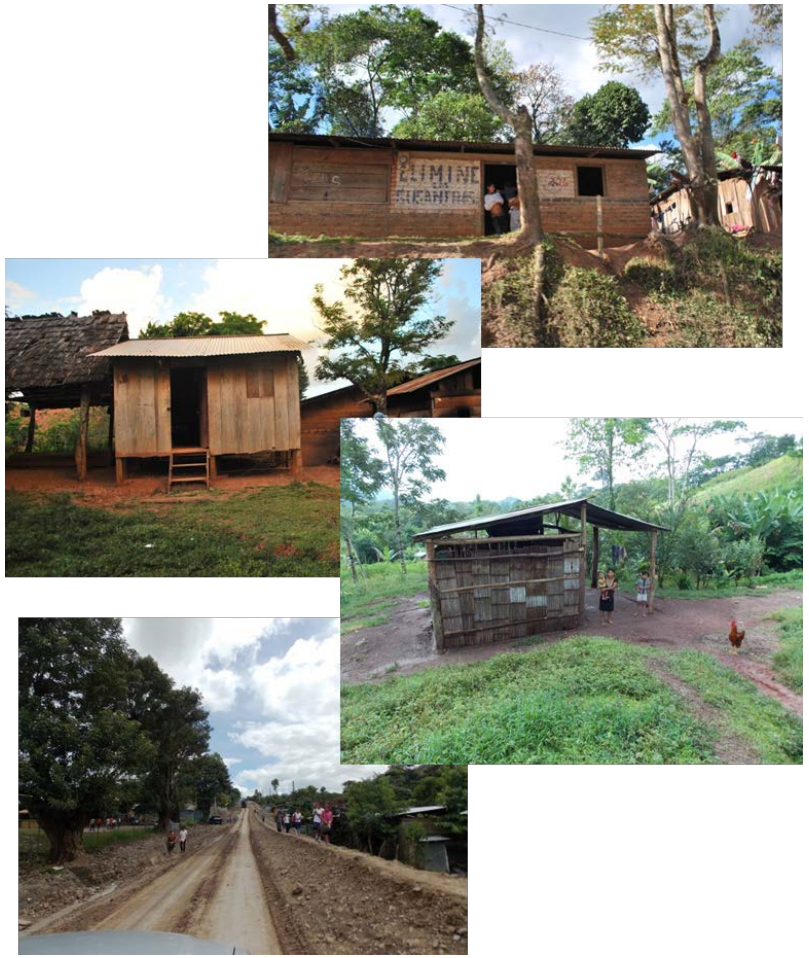
Type of villages

La Dalia

- Village with a core area (church, school, mayor building) and houses around.
- Spread households

Columbus

- Village is set along the road



Type of villages

Rio Plátano

- Spread households
- Village is set along the road

Rio Blanco

- Village is set along the road

Institutional mapping

- For the implementation of the institutional mapping, CIRAD, Nitlapán and CATIE-Honduras have developed a pluri-disciplinary approach within a team formed with agro-economists, foresters, and sociologists. A Protocol for Institutional mapping at a landscape scale led by Sandrine Fréguin-Gresh (CIRAD) working with UCA-Nitlapán and CATIE-Honduras has been developed and implemented

Gender components

- Try to get more participation of women
- Consider not only farming activities but also household activities to plan interviews
- Perhaps other approaches needed to go beyond conditions (this is a good starting point), but we need to get to power relations.

2014 Activities in SL

- Base line field studies and production of clean data bases COMPLETED!!!!.
- We will co-organize a national Symposium-Workshop on Linking science to rural development and education, as part of the Science Week, Government of Nicaragua. Current research on NHSL to be presented for first time. The symposium-workshop is jointly designed, sponsored and implemented by FTA-CATIE, CIAT, CIRAD, CONICYT, FUNICA, CNU, ICRAF, MAPNoruega. Others will surely joint the group of sponsors in the coming weeks.
- Information on trees on farms collected in household baseline survey, analyzed and presented in: 1) a comprehensive technical report, and b) a short manuscript to submit to a peer-reviewed journal once the quality of the manuscript is improved.

2014 Activities in SL

- New Mind-Power on board. Dr Geovana Carreño, 2 years post-doc, will work on the inventory of trees and forest patches in farms in the four study blocks. One exchange student has been gathering technical information on cameras, remote sensors and un-manned flying vehicles to provide cartographic information in real time to lead the sampling of the trees on the farms
- One exchange student has been working on putting CATIE's agroforestry databases in Open Access using the DATAVERSE platform. Some data bases are already available in that platform. The goal is to incorporate to dataverse all the survey and experimental data on agroforestry with cocoa and coffee collected by Eduardo Somarriba. Once this is completed, we will do similar exercises with researchers with organized data, and eventually will take a look at the databases produced by the MSc research. In the mean time, it has been recommended to CATIE's graduate school that all MSc studendts shall submit their data bases in DATAVERSE as part of the graduation process.

2014 Activities in SL

- Networking. Various CGIAR centers and CRPs are operating in various sections of the NHSL. An alliance between CIAT-CATIE-CIRAD has started a process to put everybody in contact and well informed. Jenny is involved in the preparation of various project proposals in alliance with colleagues from Bioversity, CIRAD, CATIE and others. More research will be conducted in the NHSL. More integration between ICRAF and MAPNoruega is taking place.
- We will design 4 master level research projects, field work in first half of 2015. All studies will focus on issues along the forest transition curve, tree botanical and functional diversity, livelihoods, etc.

Participation in the international landscape governance workshop

- NH-SL was presented as a case study in the international workshop, as a part of SL iniciative
- coordinated by CIFOR and ICRAF, three members of SL the participated in the worshop

Biophysical Baseline coordination within the Western Amazonia Sentinel Landscape

- As a part of the activities to support to others landscape teams, the Sentinel Landscape Nicaragua-Honduras field coordinator Norvin Sepúlveda traveled to Peru, in order to share not only the methodology, but also the experiences and lesson learned about potential problems and alternatives to how to solve them
- Agreement to start the biophysical baseline with training about the Land Degradation and Surveillance Framework. LDSF Training will be given by Norvin Sepúlveda (CATIE) and Noel Ulloa (CATIE), around 20 people from the organizations of three countries involved in the site

What would we would do different looking back

- Prepare a differentiating budget according with local conditions
- Visit all the sites proposed in order to have a better understanding of the local conditions and local actors
- Considering the wheatear condition and dates along the year to avoid conflict and low participation
- Avoid conflict and insecurity sites
- Better training (more field and data analysis), specialty in the socioeconomic base line
- Obtain more precise data of the household (more time visiting previous of the applying of the survey)
- More time and budget to supervising all the sites and teams
- Better training in data processing and clearing, and only one team to concentrated the work
- More workshop with national and local political leader and organizations, which implies more budget

Thanks