



MSc European Forestry
Applied Period:
*The protection of forests under
global biodiversity and climate
policy*

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Description

- Participation in the project:
 - The protection of forests under global biodiversity and climate policy (Sub project 1)
- Task :
 - Case of study: Deforestation, biodiversity and REDD+ initiatives in Guatemala



Case of study: Guatemala

Why is Guatemala relevant for biodiversity and REDD+?

- One of the most extensive and diverse forest systems in Central America. In 2010 forest cover > 3,657,000 ha (44% primary forest)
- Home to 1,246 known species of amphibians, birds, mammals, and reptiles, and 8,681 species of plants, of which 13.5% are endemic
- Current annual deforestation ~ 73,000 ha/year (1.5% per year in 2009)

(www.rainforests.mongabay.com)



Case of study: Guatemala

- ✓ *Initial premises (Sticking to the project)*
- ✓ *Literature review (official/published documents)*
- ✓ *Interviews with key national actors*
- ✓ *Analysis*
- ✓ *Discussion and Conclusions*



Premise 1

- *“REDD+ attributes a value to forest ecosystems based on just one of the many ecosystem services they provide - the quantifiable storage of carbon and the ability to sequester CO₂. ”*

(Pistorius et al. 2010)



Premise 2

- *“Biodiversity with all its components is crucial in this context because it is the fundamental basis of all ecosystems for adapting to climatic changes.”*

(Pistorius et al. 2010)



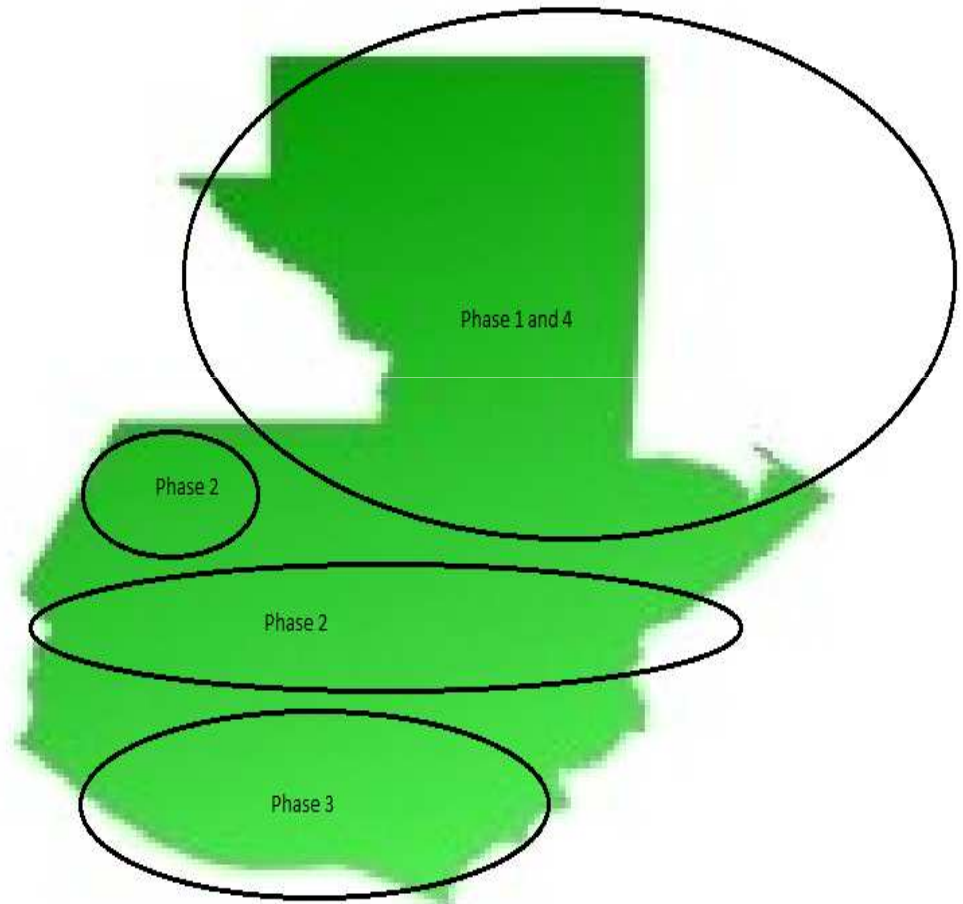
Literature review

- ✓ *Historical background of deforestation*
- ✓ *Current deforestation rates and figures*
- ✓ *Driving forces of deforestation*

Historical background

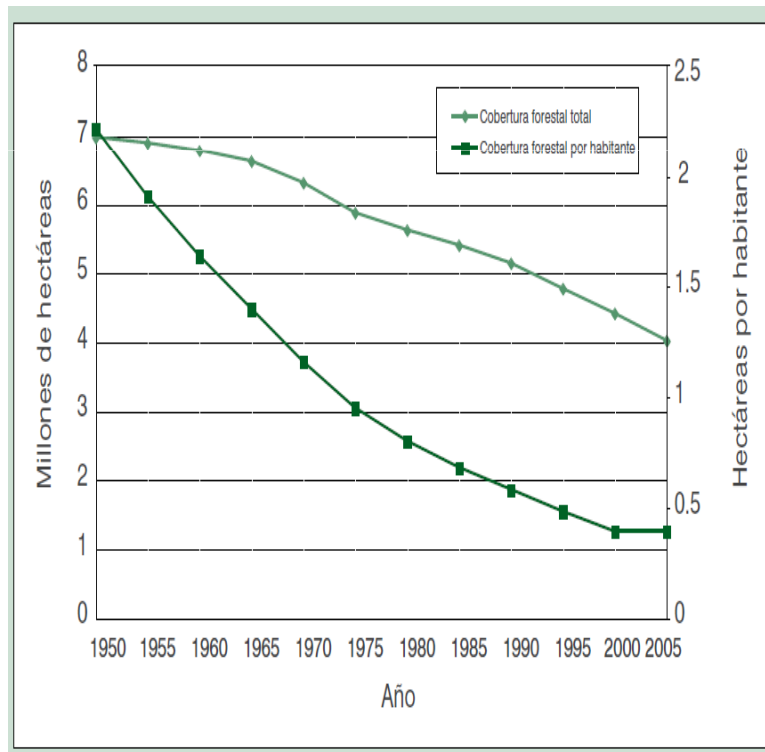
Four space-time phases of deforestation

1. *Mayas in the lowlands of the north*
2. *Mountainous regions during the Colonial epoch*
3. *Pacific Coast and agro-exportations*
4. *Agrarian Conflicts and back to the lowlands of the north*

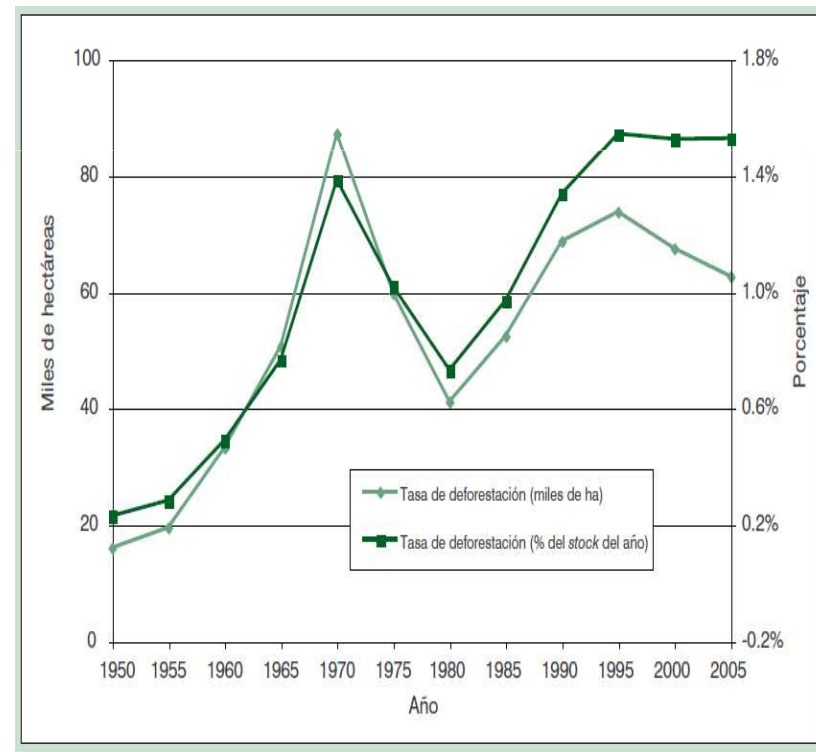


Current deforestation figures

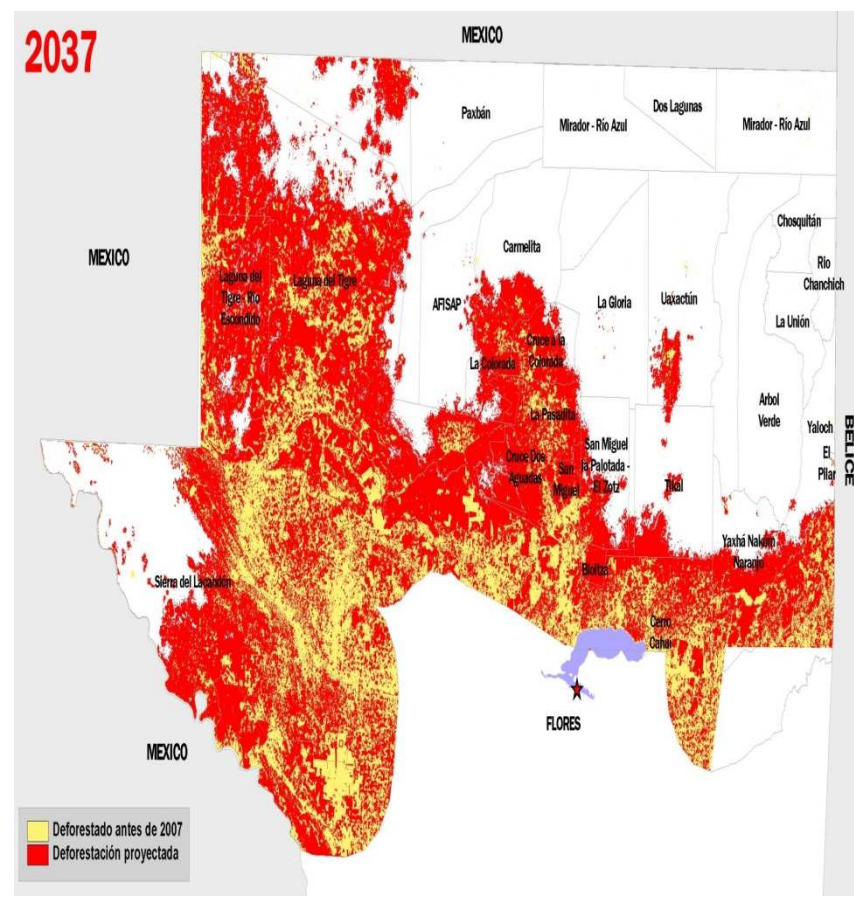
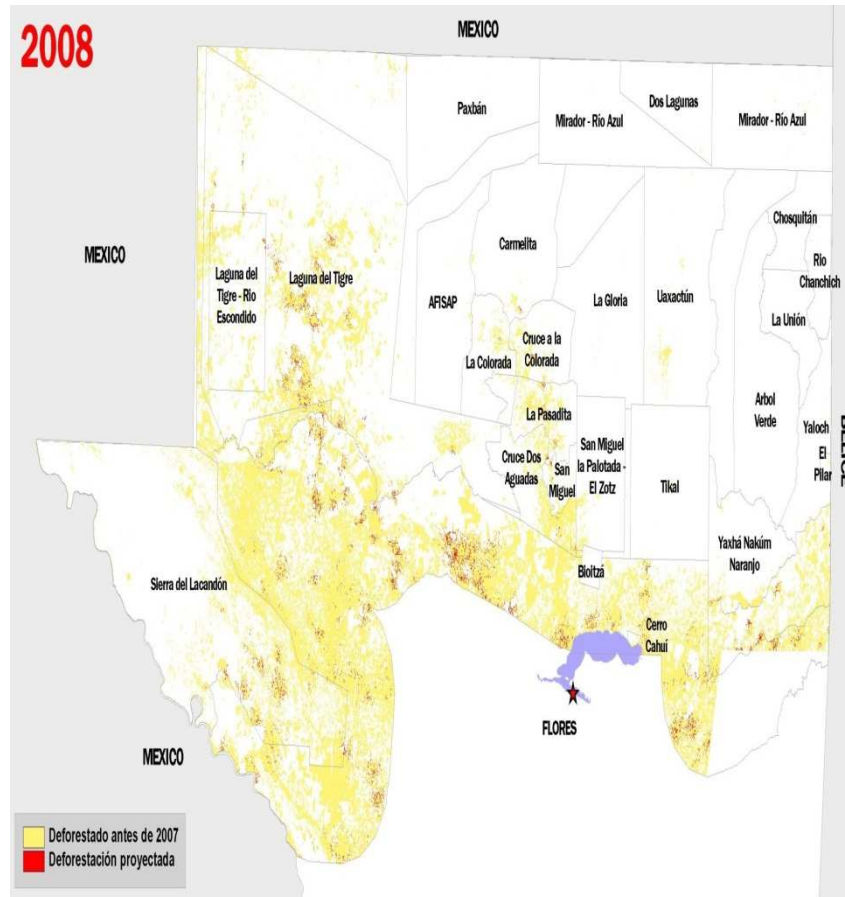
Forest cover change during the 1950-2005 period



Deforestation rates from 1950 to 2005



2037 Scenario in Petén





Driving forces of deforestation

- Proximate forces:
 - *Human activities or immediate actions at a local level*

- Underlying driving forces:
 - *Social processes that underpin the proximate causes and can operate at the local level or have an indirect impact at the national or global level*

(Geist & Lambin, 2002)



Proximate forces in Guatemala

- ✓ *Land use change to agriculture*
- ✓ *Drug traffic and cattle ranching in remote areas*
- ✓ *Mining & oil exploitation*
- ✓ *Illegal logging and wood consumption*
- ✓ *Forest fires*

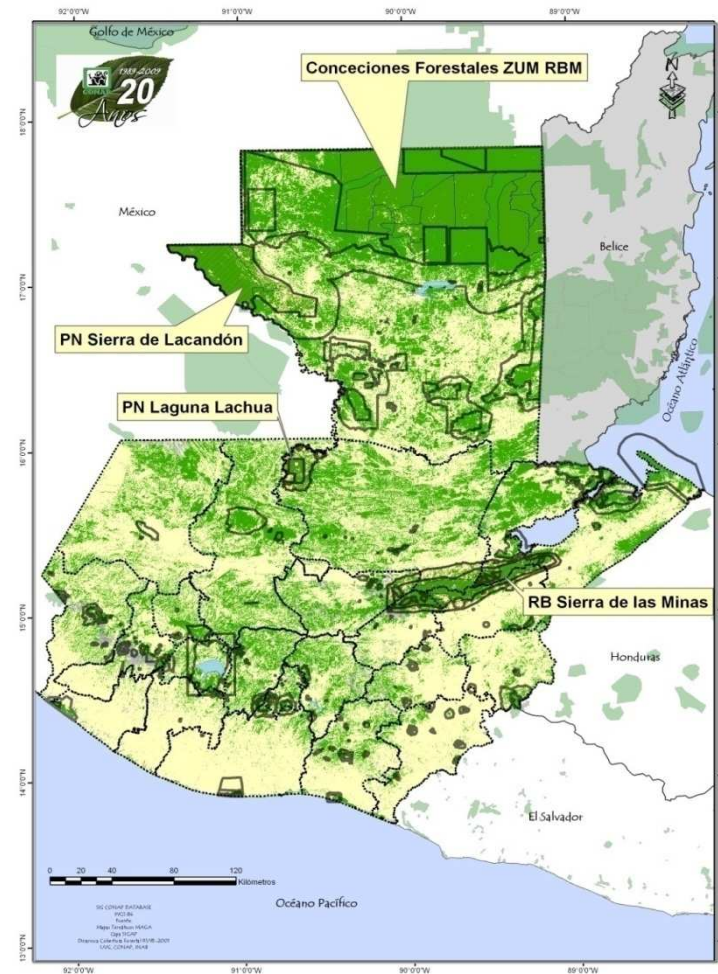


Underlying forces in Guatemala

- ✓ *Agrarian and socioeconomic problematic*
- ✓ *Protected areas and weak forest governance*
- ✓ *Historical absence of forestry culture*

REDD Pilot projects

- ✓ Rainforest Alliance and FSC certified concessions : GuateCarbon Project
- ✓ Defensores De La Naturaleza: Sierra Lacandón and Sierra de las Minas
- ✓ FUNDALACHÚA: Laguna de Lachúa
- ✓ San José and San Francisco Municipality and Global Carbon Group





Interviews to national experts and key actors

- ✓ **Dr. César Azurdia** : CONAP, Coordinator of The Genetic Resources Management Department
- ✓ **Ing. Andrea Juárez and Ing. Mario Rojas** :Defensores de la Naturaleza, REDD project in Sierra Lacandón
- ✓ **Dr. Elke Mannigel**: OroVerde - Die Tropenwaldstiftung Internationale Projektkoordination
- ✓ **Vivián Villegas Rivas**: AGEXPORT, Guatemalan Exporters' Association



Questionnaire

1. Which components of biodiversity are especially valuable and should have priority for conservation on the national/subnational level?
2. Which components of biodiversity are likely to be affected by REDD+?
3. What are the necessary preconditions for monitoring the ecological impacts of REDD+?



Additional questions

- Which of the REDD+ activities has priority when implementing the project?
- What is the definition of forest used in the conception and design of a REDD+ project?
- Are the current forest incentives applicable in the design of a REDD+ national strategy?



Ongoing work

✓ Analysis and wrapping up:

➤ Discussion and Conclusions



References

- ✓ Cabrera (1996): Síntesis histórica de la deforestación en Guatemala. Facultad Latinoamericana de Ciencias Sociales. Guatemala.
- ✓ Entenmann S (2011): REDD+ as a mechanism for forest conservation in developing countries: evaluation of national strategies and REDD+ pilot projects regarding ecological conservation targets. PhD thesis progress document, University of Freiburg Germany.
- ✓ Geist H, Lambin E (2002): Proximate Causes and Underlying Driving Forces of Tropical Deforestation. ProQuest Biology Vol 52 No.2 Journals pg.143 .
- ✓ Mongabay (2011): Guatemala Forest Information and Data. Accessed: March 29th 2011 [<http://rainforests.mongabay.com/20guatemala.htm>]
- ✓ Pistorius T, Schmitt CB, Benick D and Entenmann S (2010): Greening REDD+: Challenges and opportunities for forest biodiversity conservation. Policy Paper, University of Freiburg, Germany.
- ✓ URL, IARNA. (2009): Perfil Ambiental de Guatemala 2008-2009: las senales ambientales críticas y su relación con el desarrollo. Guatemala.



Additional activities

- Present in the WP2 Freiburg Meeting 28th March 2011-30th March 2011
- Purposes of the workshop: discussion on theoretical approaches, methods and data, agree on a common framework for papers integration



Thank you for your attention

Questions?