

SGA of the Dry Corridor in Guatemala:

Environmental Services, Productivity and Human Well-Being

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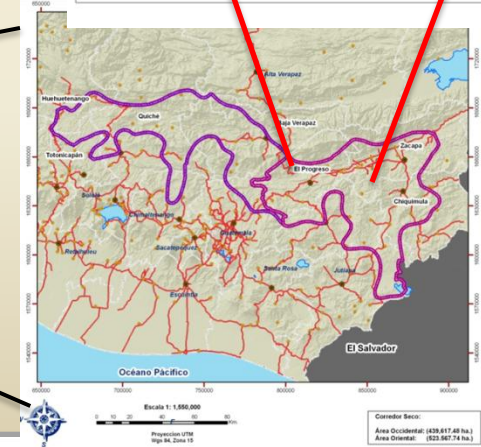
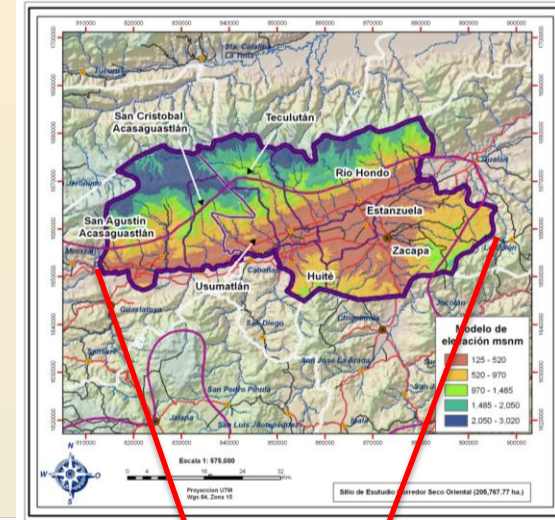
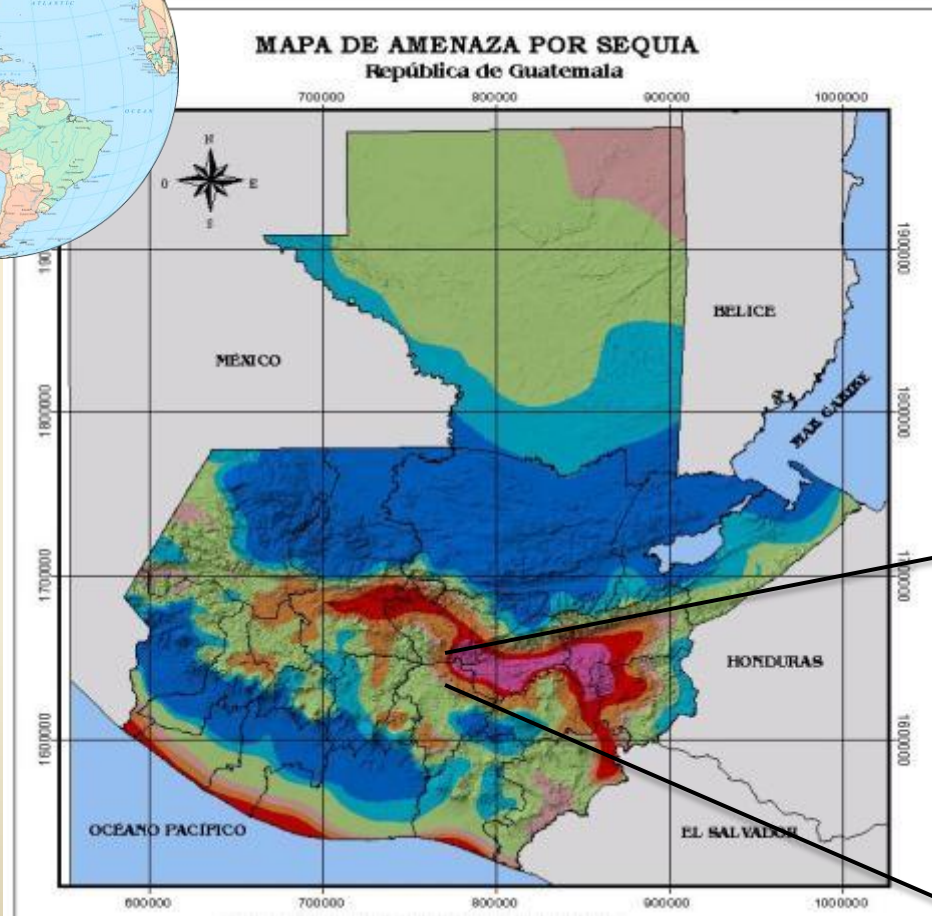
SGA Annual Meeting
27 November, 2012



Al servicio
de las personas
y las naciones



Where is Guatemala and what is the Dry Corridor?



SGA Process: Exploratory Stage

- 2010: Initial visit by PEI (UNDP and UNEP) officials to Guatemala. The Ministry of Environment suggested the Dry Corridor as the area of interest.
- Mid 2011: Latin American Faculty for Social Sciences FLACSO completes the exploratory and design stages of SGA. They recommended to focus on the productivity of subsistence agriculture (corn and beans), agro-export industry (melons) and agroforestry production (coffee).
- End of 2011: UNDP Guatemala signs agreement with consortium of 3 institutions to carry out SGA with a mandate to work closely with government officials.
- The process is to be completed between January and December of 2012.



SGA Process: Design Stage

- Technical team: 7 specialists from 3 institutions.
- Advisory board: 1-2 directives from each participating institution, including UN (8 members).
- Identified end users: National government: National Planning Office, Ministries of Environment and Agriculture, Secretary for Food Security.
- Local governments: local offices from the same national institutions, Mayors and Municipal and Departmental Development councils.

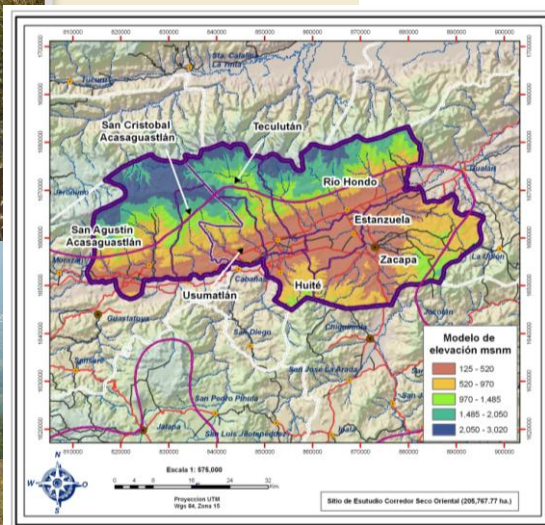
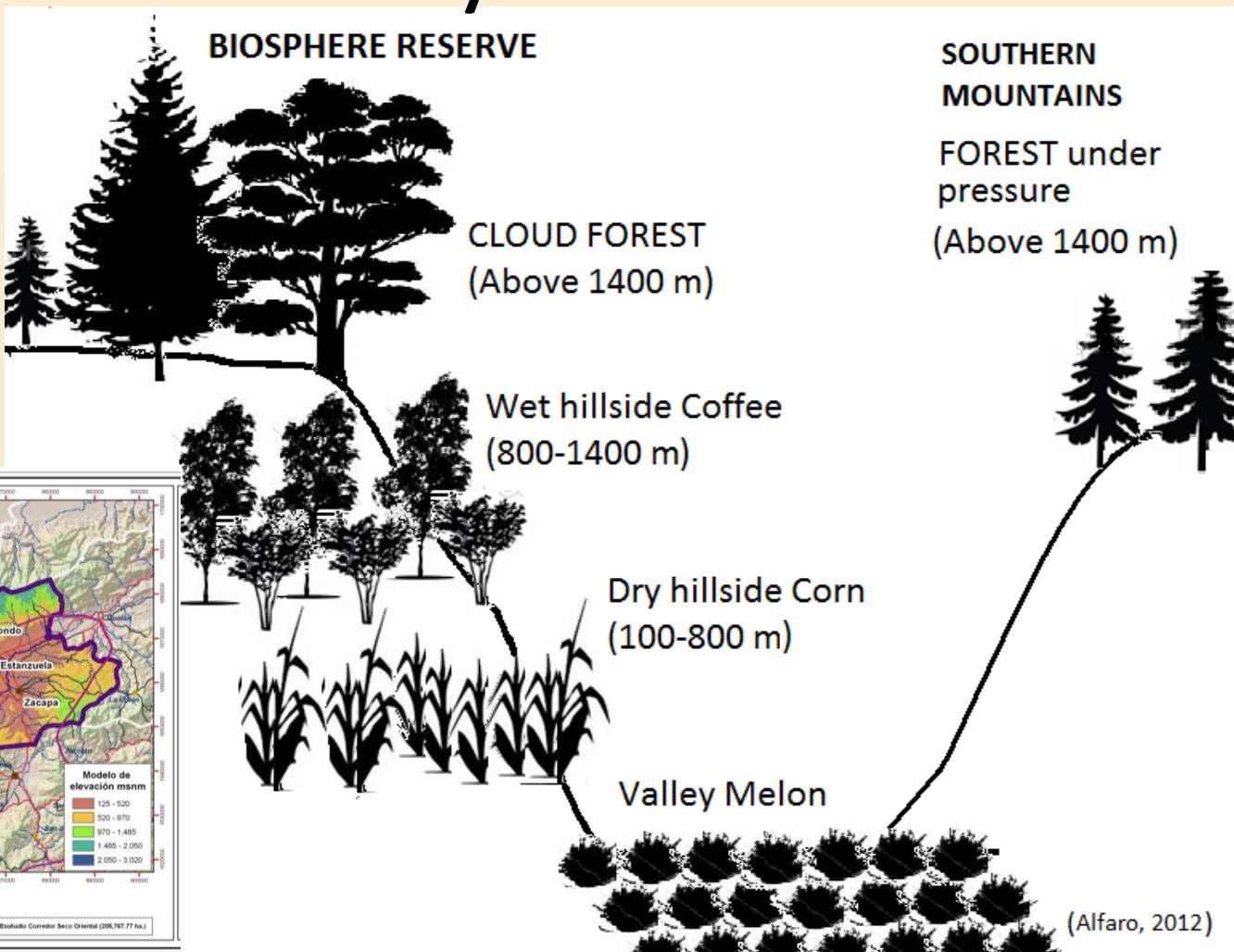
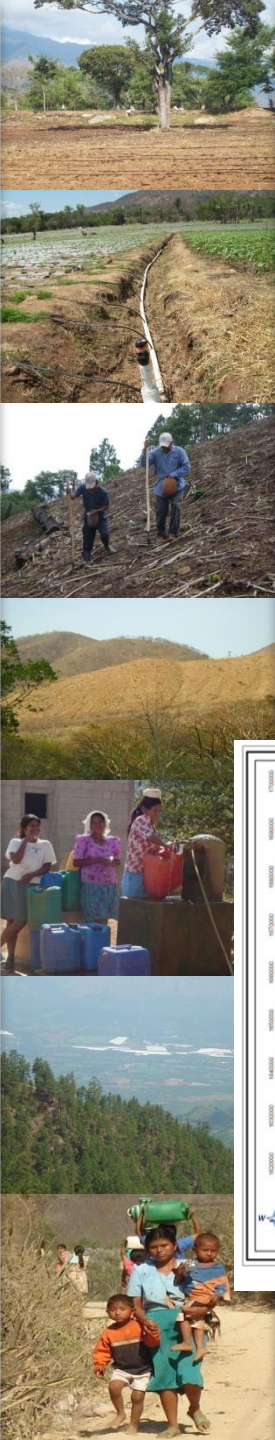


Policy Question Addressed by the Assessment

- How can one strengthen the planning and decision making processes at the departmental level to reduce the vulnerability of the area, improve food security, increase equity and maintain the environmental services under a climate change situation?



Productive and Natural Systems in the Dry Corridor



Current situation in the Dry Corridor

- Semi-arid area with at least 6 months of no rainfall during the year.
- Impoverished families live on subsistence agriculture with limited technology and low yields from degraded soils on dry slopes.
- Irrigated valleys are more productive but are dominated by production of melons for exportation and industrial developments.
- Most communities in the area show a high risk of food insecurity due to recurrent droughts or changes in rainfall patterns.
- Poverty levels in rural populations reach 70%.

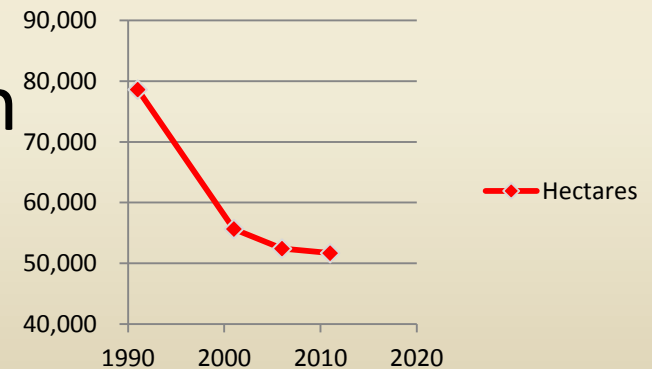


Main Ecosystem Services Assessed

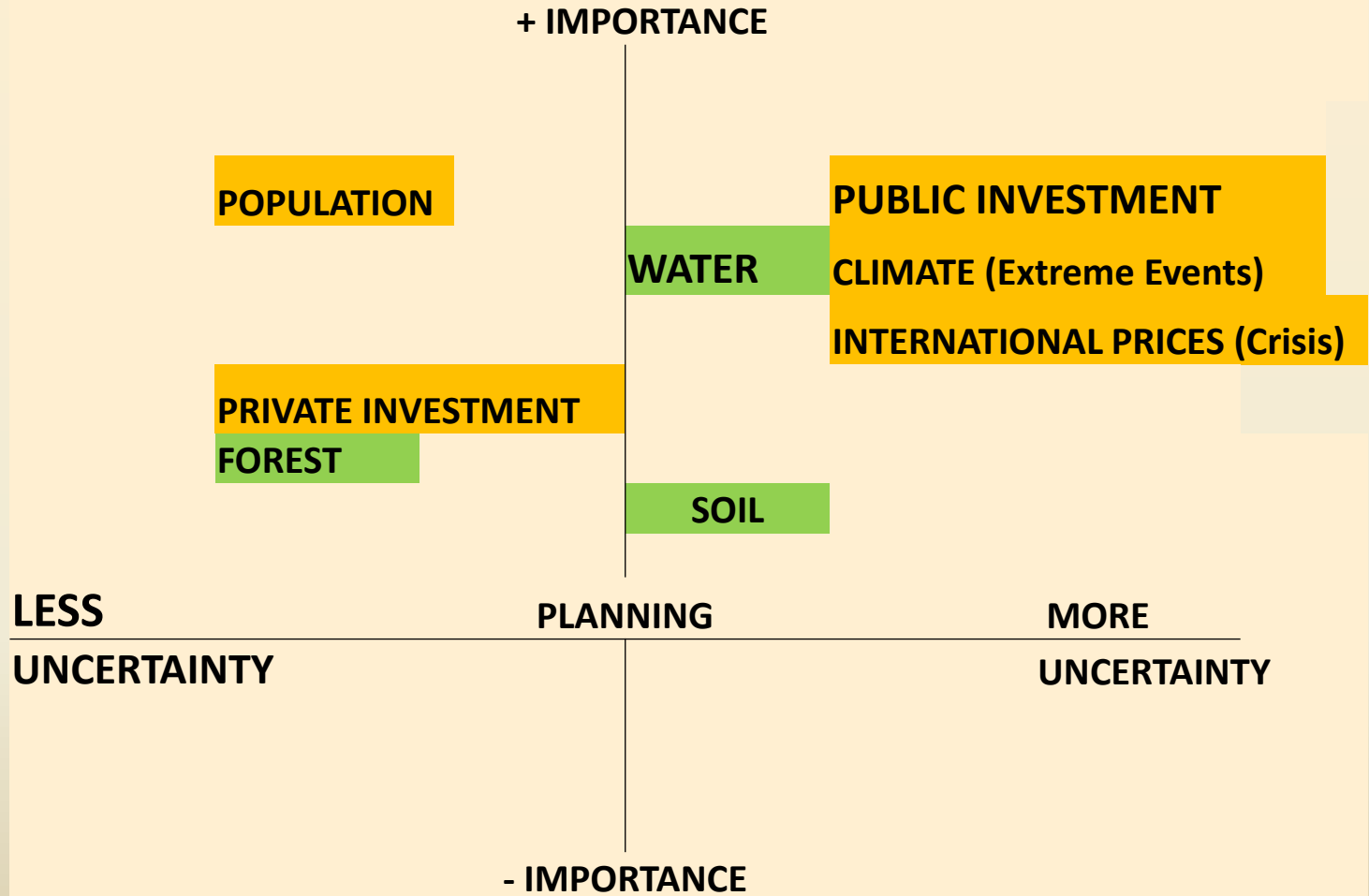
Biophysical changes in the area derived from forest cover change analysis.

1. Food provision
2. Timber and firewood provision
3. Water Provision
4. Soil erosion regulation
5. Carbon sequestration

Forest Cover Change



Main Variables Considered for Scenario Development



Three Scenarios Considered

- Scenarios and models developed for year 2020.
- The scenarios center around level and quality of private and public investment.
- The first scenario follows the tendencies observed for the past ten years (BAU).
- The second scenario is one of higher private investment focused on industrial development (Techno garden).
- The third scenario complements the higher private investment with public investment more focused on rural development (Techno-Social).



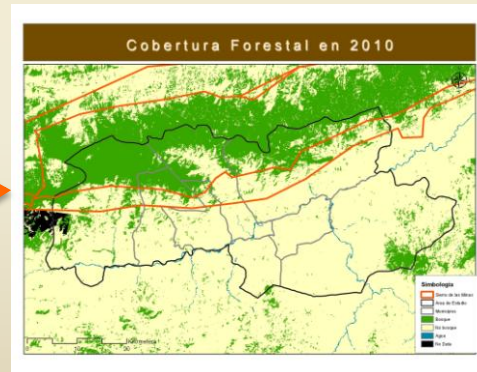
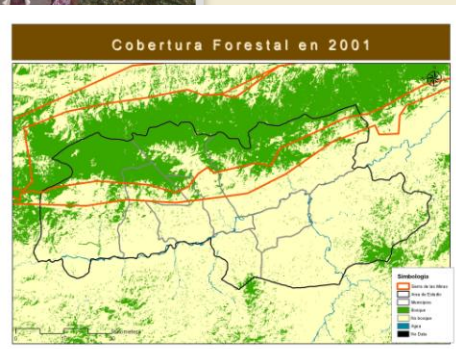
Ecosystem Services modeled using INVEST

- Models of future ecosystem services derived from modeled **forest cover change**.

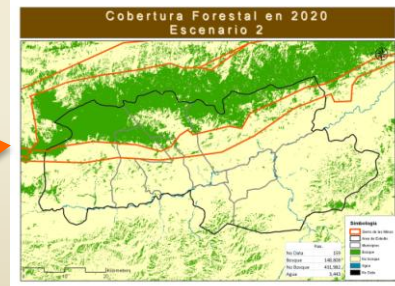
Year 2001

Year 2010

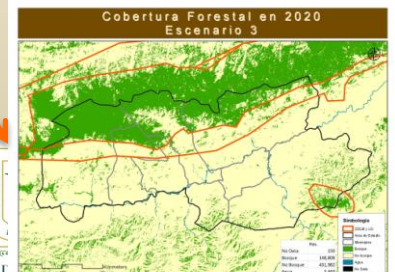
Year 2020



Sce. 1



Sce. 2



Sce. 3



Policy Recommendations

Focused institutions to preserve social and natural capital.

1. Policy, Planning and Investment

* Public Investment Programs:

"Forests for Water Security", "Water for everyone", "Secure feed".

* Climate Fund for the Dry Corridor

* Farmer insurance for small producers.

2. Information for Decision Making

* Improved National Strategic Information Systems

3. Incentives to promote agro-ecological production systems.

4. Improved production and commercialization chains.

Potential New Private-Public Developments.

1. Solar energy parks and hydropower energy.

2. Duty free industrial zones



Lessons Learned through the SGA process

- Process highlighted connection among poverty reduction, increased productivity and ecosystem services.
- Difficult to reconcile visions and demands from different stakeholders in different locations.
- Challenge in communicating complex analyses and scenarios in simple yet comprehensive ways.
- Analysis limited by scale and detail of available data.
- Difficult to engage public officials with agendas not necessarily aligned with SGA objectives.
- Project originally designed to provide policy recommendations; scientific assessment might be at odds with this objective.



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Thank you for your attention

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