The slide features abstract green geometric shapes. On the left, a solid green triangle points downwards. On the right, a complex arrangement of overlapping translucent green triangles and polygons creates a layered, forest-like effect. The text is centered on a white background between these two green elements.

The Developmental Experience of Forest-Dependent Communities in Developing Countries

Lissel Hernandez-Gongora

Rural studies PhD Candidate

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Crisis in forestry

- Alarming forest loss in the tropical climatic domain and in low-income countries, which will continue if prevention measures are not taken.

Income categories by Gross National Income per capita per year: low US\$1045 or less; lower-middle US\$1046 to \$4125; upper-middle US\$4126 to \$12,745; and high US\$12,746 or more (World Bank, 2013).

Crisis in forestry

Agriculture, forestry and other land uses (AFOLU) contribute with 24% of GHG emissions.

QE research

Types of forest management:

1. Forests managed by the government
2. Forest managed by private companies
3. Forests managed by communities

Search for cases from the 3 regimes in Latin America, Africa and Asia

Comparison of outcomes using the Sustainable Livelihoods Framework:

- Financial capital
- Physical capital
- Social capital
- Human capital
- Natural capital

Characteristics of forests managed by the government

- Different levels of protection depending on national and regional laws: some collection of forest products allowed, all harvesting permits cancelled, eviction of local people.
- Management responsibilities are given to government agencies and they hire staff for monitoring and law enforcement.

Bukit Barisan Selatan National Park. Indonesia

Despite of the levels of protection, monitoring and law enforcement, poor people with limited livelihood alternatives do sometimes illegally collect forest products.

Characteristics of forests managed by private companies

- Two main types of operations: industrial logging and commercial plantations
- Companies operate through concessions granted by governments that give them the right to extract and sell forest products.
- Concessionaires are required by law to submit management plans that detail harvest volumes and operation areas

Industrial logging. Democratic Republic of Congo

Motivated by short-term profits, companies might engage in illegal logging or poor management practices when monitoring and law enforcement are not adequate.

Characteristics of forests managed by communities

- Local people participate in decision-making regarding how to use forest resources and with what purpose.
- Community institutions for governance exist: user groups, producer associations, forest councils or committees.

Community concession in MBR. Guatemala

Co-management arrangements might exist: The government usually plays an important role but with different levels of involvement, NGOs act as facilitators, private companies might also engage in partnerships with communities.

Countries included in case studies analyzed

General findings in forests managed by the government

Natural Capital: Most cases showed low deforestation rates or reforestation, however, forest fragmentation, presence of patches of open forest and some biodiversity loss were also observed inside and surrounding protected areas.

Financial Capital: Local people living in surrounding villages with no access to external alternative income generating activities usually engage in collection of forest products for self-consumption or commercial trade. These activities supplement household income and/or reduce household expenditures, however in most cases, they are illegal.

The cases analyzed did not provide enough information regarding the impacts of protected areas managed by the state on **physical, social and human capitals**.

General findings in forests managed by private companies

Physical Capital: Provision of public infrastructure such as roads, schools and clinics. Taxes paid by private companies might be used to construct or repair public infrastructure.

Financial Capital: Logging operations or commercial plantations usually create employment for local people, however jobs are often low level and short-term. Some companies provide voluntary contributions to local communities.

Social Capital: Conflict because local people are forced to leave their lands and they lose access to forest resources

General findings in forests managed by private companies cont.

Human Capital: Companies might provide some technical training for their employees, however they also promote an unsafe work environment.

Natural Capital: Deforestation, biodiversity loss because of commercial plantations replacing native forests, and timber selectivity were observed in forest managed by private companies.

“Forestry continues to be one of the most hazardous industrial sectors in most countries...Logging work has the highest accident rate” (International Labour Office, 2012).

General findings in forests managed by communities

Financial Capital: Community members reduce their household expenditures by collecting forest products and obtain income from selling forest products (individually or collectively), employment in forest management activities, alternative income generating activities and subsidies. Income generation depends on the forest use with the higher revenues identified in communities where high value timber species are commercialized.

Physical Capital: Forest user groups often allocate financial resources to the construction of community buildings and other public infrastructure.

Natural Capital: Low deforestation rates, improvement in forest conditions and biodiversity conservation were also reported in most community forest management cases.

General findings in forests managed by communities cont.

Social Capital: Social organizations exist in all cases analyzed, however inequity in benefit-sharing and internal conflict might exist as well.

Human Capital: Technical training to improve forest management skills is another common element across cases, however administrative training is also needed.

Community forestry project in Nepal.

General conclusions from QE research

- The cases selected and analyzed exemplify **the heterogeneity and lack of consistency** on the outcome indicators of forest management.
- Although positive or potential positive impacts on the five capitals were identified in most community forest management cases, **the outcomes were not quantified**.
- Future research must provide **more homogeneous indicators and data to allow for a comparative assessment** of the quantity and quality of forest management outcomes.

Research proposal:

Polycentric governance

- Combination of multi-level and multi-sectoral centers of authority
- Shared system of rules
- Different terminology :
Multilateral cooperation, multiple jurisdictions, global governance, governance by networks, multi-level governance.

Hooghe & Marks, 2003; Ostrom, 2010; McGinnis, 2011; McGinnis & Ostrom, 2012; Aligica & Tarko, 2012; Galaz et al., 2012; Pattberg et al. (2014); Van Asselt (2014); Hsu et al., 2017

Reduction of emissions from deforestation and forest degradation (REDD+)

➤ Mechanism for climate change mitigation in the forest sector that expresses the principles of polycentric governance:

- **Multi-level** (local, regional, national, international) and **multi-sectoral** (public and private sector, NGOs, local communities)
- **Rules** and methodologies negotiated at international level (UNFCCC), implementation at national and sub-national levels in developing countries.

➤ Five activities:

1. Reduction of emissions from deforestation;
2. Reduction of emissions from forest degradation;
3. Conservation of forest carbon stocks;
4. Sustainable management of forests;
5. Enhancement of forest carbon stocks

Mexico REDD+ System				
Level	Institutional arrangements	Stakeholders	Planning Instruments	
National	Technical Advisory Council	NGOs, local communities representatives, academia, private sector, government	REDD+ National strategy	Emissions Reduction Plan
	Work group	Government officers from different agencies		
State	Technical Advisory Council	Government, NGOs, local communities representatives, academia, private sector	REDD+ State strategy	
	Work group	Government officers from different agencies Representatives from federal and municipal governments.		
Local	Public Association for Territorial Development	Federal, State and Municipal government, NGOs and academia.	Investment programs	
	<i>Ejidos</i>	Community members	Activities for integral landscape management	

Alianza REDD+ Mexico, 2017; Comision Nacional Forestal, 2017

Methodology proposed – Criteria & Indicators

Question	Criteria	Indicators
In Mexico has the implementation of REDD+ allowed for the tasks of polycentric governance.	Information Sharing	Mechanisms to request information; forums to present progress/results; online resources ; printed resources
	Technical coordination	Courses, workshops/training sessions, manuals (online/printed)
	Financial coordination	Joint investments for project implementation
	Conflict resolution	Forums for dialogue, mechanisms to make decisions (consensus, majority), rules to solve conflicts, mechanisms to report irregular behaviour
In Mexico has the implementation of REDD+ contributed to reduce deforestation rates.	Deforestation reduction	Deforestation rates, change in dimension of forest areas
In Mexico has the implementation of REDD+ contributed to socio-economic benefits at local level.	Income generation at community level	Sale of forest products, employment (salaries), government programs (subsidies)
	Community benefits	Infrastructure construction/maintenance, support to community members

Methodology - Study Area

Quintana Roo

- One of the five REDD+ early action states
- Instruments needed for REDD+ implementation (state strategy, state advisory committee and work group, Public Association for Territorial Development, investment program)
- Local communities have had access to subsidies from the REDD+ Special Program since 2012
- Collaboration agreement with the neighbouring states to implement REDD+ as a region

Methodology - Data Collection

- **Qualitative data:** Interviews to government officers (federal, state, municipal), NGOs representatives, private sector, academia, community members
- **Observation** of REDD+ related activities (public meetings, workshops)
- **Quantitative data** regarding deforestation rates and socio-economic indicators from statistics, forest inventories and reports

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Thank you for
your attention

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