Loss and Damage Assessment on Land and Forest Degradation: Overview of the Philippine Study

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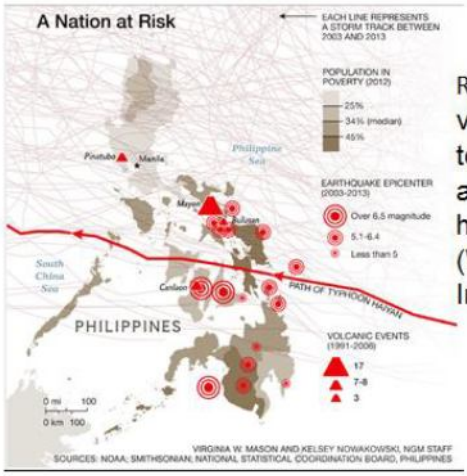


Ranked 3rd in vulnerability to disaster and natural hazards (World Risk Index 2011)

Why Loss and Damage an important concern in the Philippines' forest lands?

- More then 50% of the country's total land area of 30 M ha classified as forest land under various forms of degradation
- As disasters hit degraded ecosystems including deforested areas, they put pressure on jobs and the economy, increasing the social vulnerability of poor communities (WB, 2013)
- Disasters result to loss and damage to property, territory, lives and livelihoods.
- Increasing population in forest lands increases vulnerability to climate-related risks

Philippine historical forest cover, all forest types (1575-2005)

Year	Forest Cover (million ha)	% of Total Area
1575	27.5	91.67
1863	20.9	69.67
1920	18.9	63.00
1934	17.8	59.33
1970	10.9	36.33
1980	7.4	24.67
1990	6.7	22.33
2005	7.2	24.00

Source: RMPFD, 2003 (Note: 2005 data based on PFS, 2011) Cited from Carandang, et.al.2013.

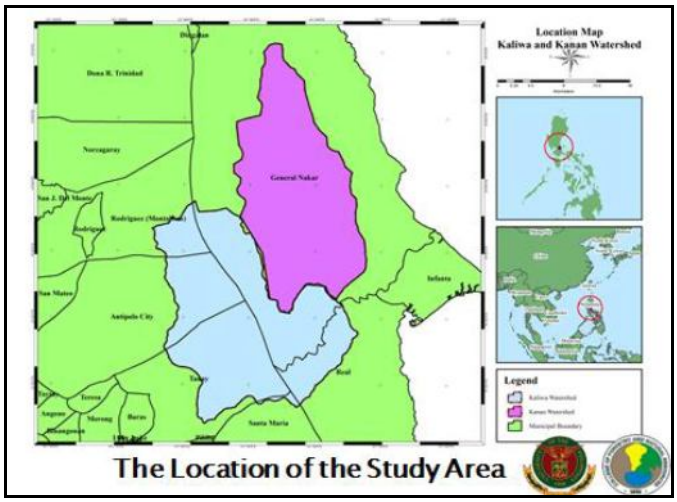
Loss and damage associated with land and forest degradation one of the least explored areas of research

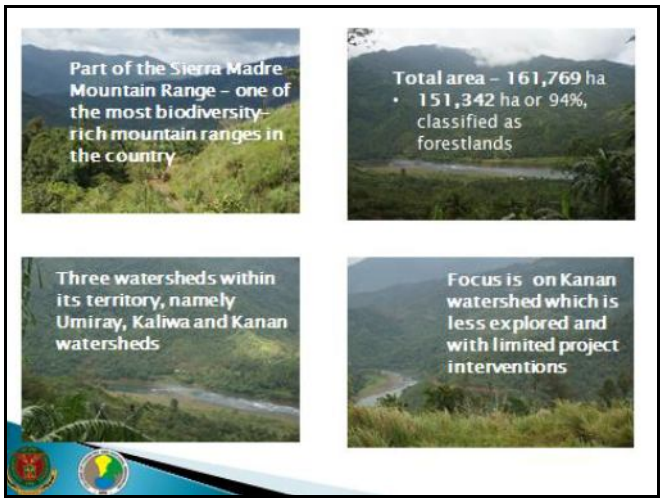
Fishbone diagram of the underlying causes of drivers of deforestation and forest degradation in the Philippines

Source: Carandang, et.al.,2013

Objectives of the study

- Determine the loss and damage associated with land and forest degradation in watershed areas in Kanan Watershed, General Nakar, Quezon Province, Philippines
- Identify characteristics, priorities and emerging issues related to loss and damage associated with land and forest degradation in the watershed area that impacts the livelihood and well-being of the communities
- Assess limits to adaptation based on the "best available science" and propose risk-based approaches that integrate CCA and DRR
- Develop methodologies to evaluate prospective L+D (both economic and non-economic) associated with adverse and cascading impacts of climate change



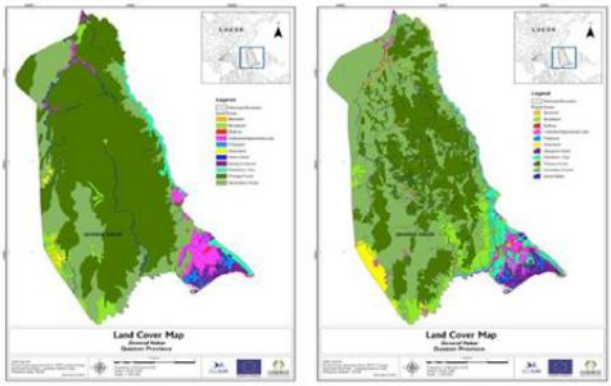


What interesting in the Study Site? The Kanan Watershed

- A Key Biodiversity Area
- Typical of watershed areas in the Philippines under pressure from increasing human activities
  - flora and fauna are threatened by disruption and fragmentation of their habitat.
  - forest lands converted to upland agriculture

Sub-watershed	AAD, hectares	CPF, hectares	Forest Lands, hectares	Total Area	Number of Rivers	Barangays within	Percent AAD	Percent Forest Lands
Kanan	1,652	0	38,882	40,534	35	Pagsanghan, Malabanag Lalim	4%	96%

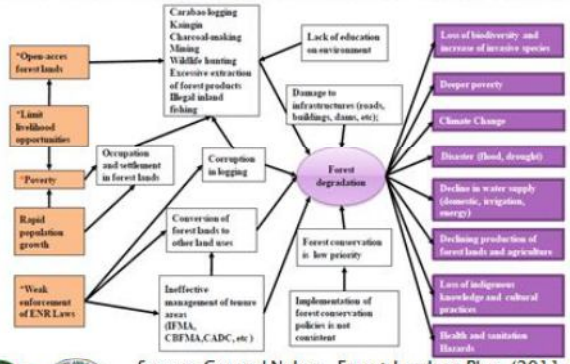
- slash and burn cultivation increases brought about by migration.
- small-scale illegal extraction of timber, charcoal production, and small-scale mining becoming rampant



(a) (b)

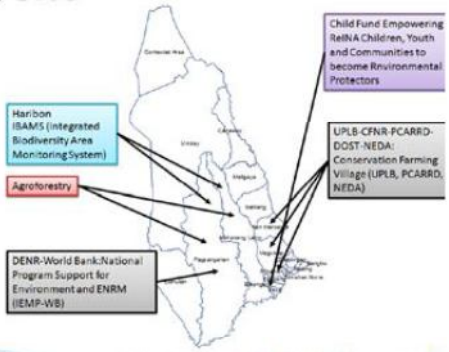
Change in land cover from 1993 (a) to 2005 (b). A 45% decline in primary forest of General Nakar (Haribon Foundation, 2010).

Forest Degradation as a Focal Issue

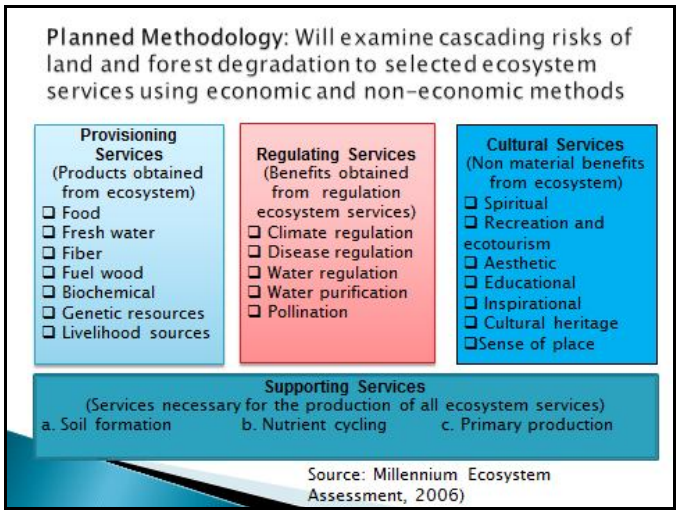


Source: General Nakar _ Forest Landuse Plan (2011-2016)

Institutional Adaptation in the Study Site



Source: General Nakar, FLUP 2011-2016


Planned Methodology: Will examine cascading risks of land and forest degradation to selected ecosystem services using economic and non-economic methods
Provisioning Services
(Products obtained from ecosystem)
❑ Food
❑ Fresh water
❑ Fiber
❑ Fuel wood
❑ Biochemical
❑ Genetic resources
❑ Livelihood sources
Regulating Services
(Benefits obtained from regulation ecosystem services)
❑ Climate regulation
❑ Disease regulation
❑ Water regulation
❑ Water purification
❑ Pollination
Cultural Services
(Non material benefits from ecosystem)
❑ Spiritual
❑ Recreation and ecotourism
❑ Aesthetic
❑ Educational
❑ Inspirational
❑ Cultural heritage
❑ Sense of place
Supporting Services
(Services necessary for the production of all ecosystem services)
a. Soil formation b. Nutrient cycling c. Primary production
Source: Millennium Ecosystem Assessment, 2006)


Thank You Very Much for Listening