

# **Household Vulnerability and Adaptation to Land and Forest Degradation Associated with Climate Change in Kanan Watershed, Philippines**

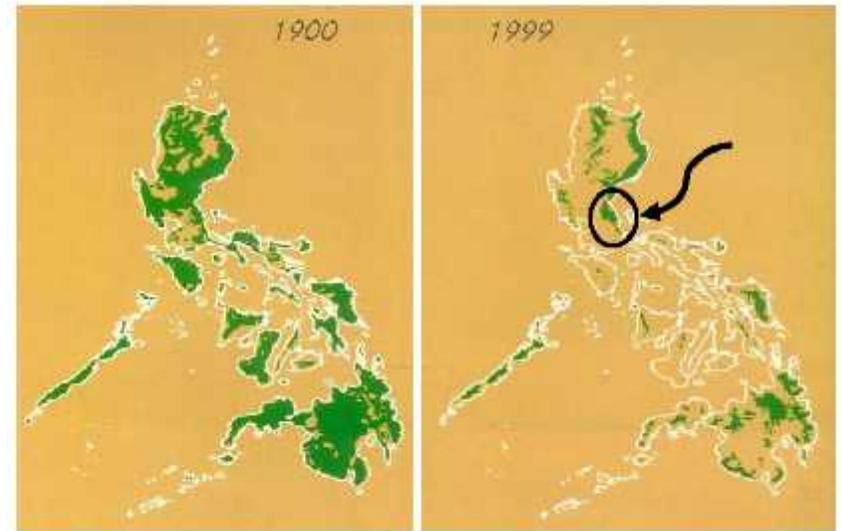
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# Introduction

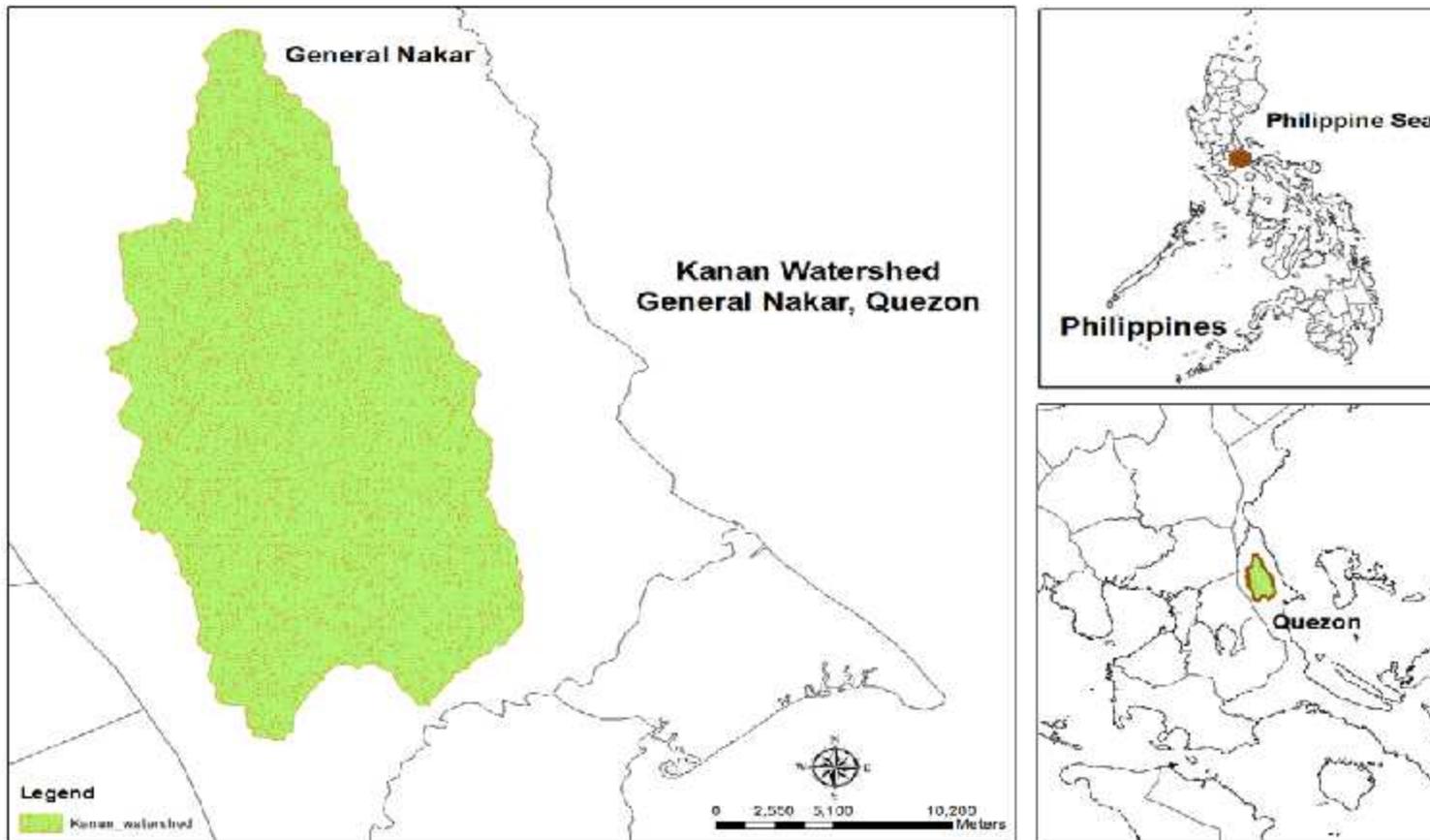
- In the Philippines, land and forest degradation in watershed areas is primarily caused by a number of interacting human, institutional, governance and climatic factors.
- Climate change vulnerability has to be understood from a broader, socio-economic and political context, not simply from a climate science perspective.



Source: Environmental Science for Social Change (199) cited in FLUP, 2010



# Study Location



Kanan Watershed, Municipality of General Nakar  
Province of Quezon, Philippines

# Research Design and Methods

- ***Household survey*** involving 189 respondents with the aid of stratified random sampling with proportional allocation
- It was complemented Focus group discussion, field observations and with secondary data



- **Vulnerability** was assessed based on developed indicators from biophysical and socio-economic parameters using equal and unequal weighting methods.

# Key Findings

- Typhoons and heavy rainfall which cause floods/flash floods and landslide are the common climate risk events experienced by the communities in the study area.
- Households vulnerability fall into low to moderate vulnerabilities with the majority, being moderately vulnerable.

Level and percentage of households' livelihood vulnerability using equal and unequal weighting

Barangay/n o. of samples	Level* and Percentage equal weighting			Level* and Percentage unequal weighting		
	Low	Medium	High	Low	Medium	High
Mahabang Lalim (n= 56)	62.5	37.5	0	91.07	8.93	0
Pagsangahan (n=133)	11.28	87.97	0.75	18.80	81.20	0
<b>Total (N = 189)</b>	26.46	73.02	0.53	<b>40.21</b>	<b>59.79</b>	<b>0</b>
*Legend: (0.00-0.33 – Low); (0.34-0.66 – Moderate); (0.67-1.00 – High)						

# Key Findings

## Current adaptations :

- nursery and agroforestry establishment
- establishment of evacuation center
- adopting soil and water conservation
- formation of Barangay (village) law enforcement team



## Potential adaptations:

- riprap along river banks
- enhancement of ecotourism

# Conclusion

- “Band aid” forms of adaptations commonly identifies by farmers will not effectively address present and future vulnerability considering the multifaceted factors that drives vulnerability
- Transformational adaptation is key to minimize the disaster risks and reduce climate change vulnerability including its associated loss and damages.
- There is a need for transformation of the socio-economic, political, governance structures and processes that perpetuate and reproduce households’ and communities’ vulnerability.