


Yang Jiankun, Kunming Institute of Botany, Kunming, China.

An aerial sketch of a landscape in Xishuangbanna, China. The image shows a winding river flowing through a valley. On the left, there are terraced fields and a line of trees. On the right, there are more fields and a path. In the background, there are mountains and a small village with traditional houses. The overall style is a detailed pencil or ink sketch with some color washes.

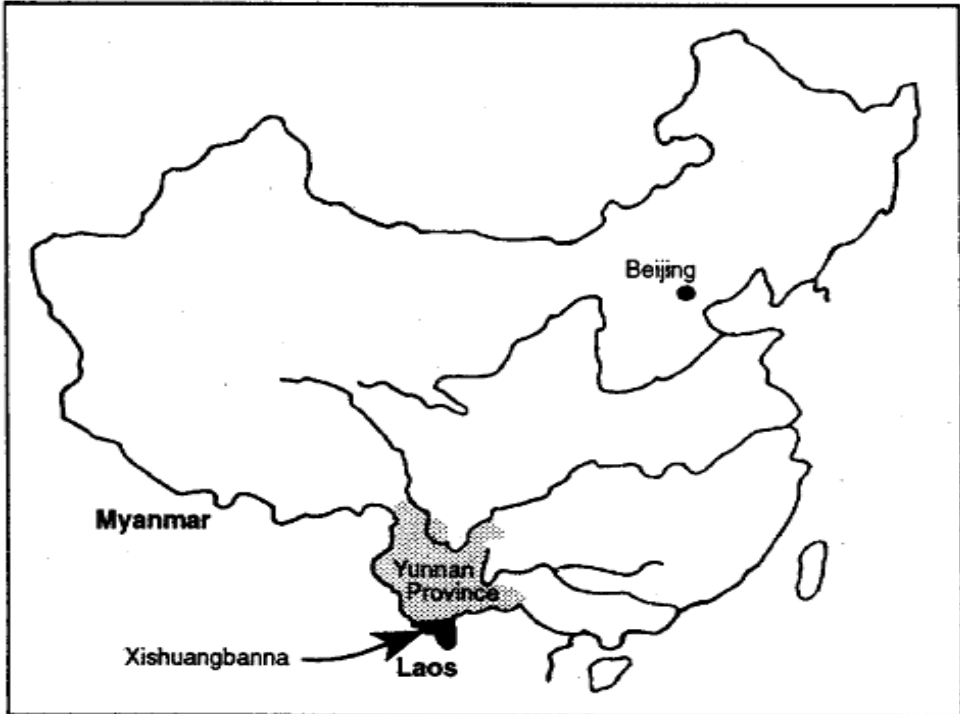
# Transformations of Indigenous Identity and Changing Meanings of Sacred Nature in Xishuangbanna, Southwest China

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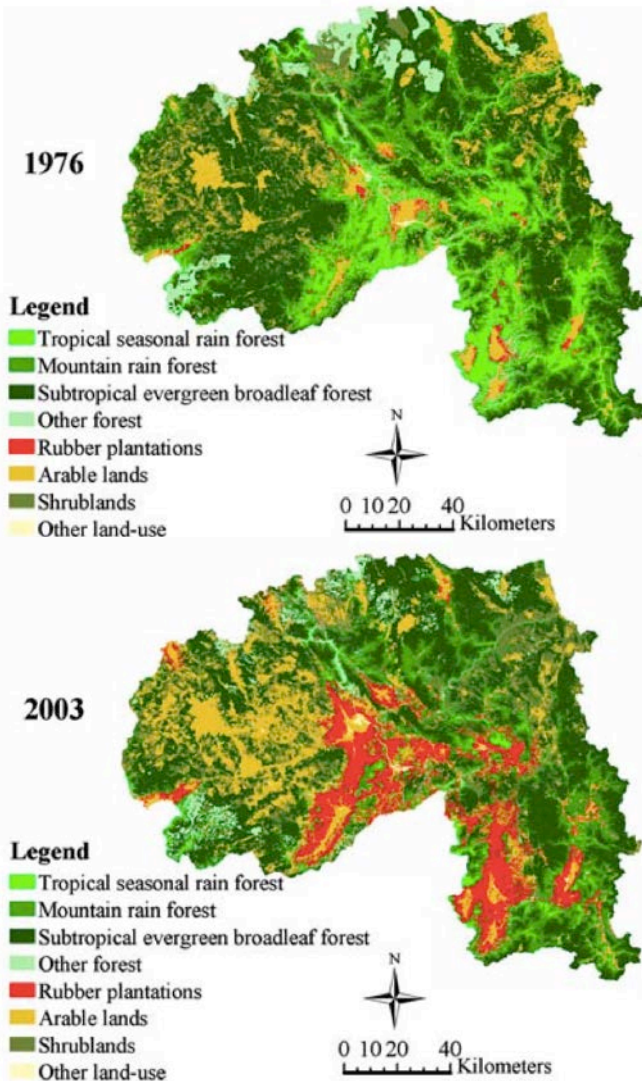
*Yale School of Forestry and Environmental Studies*

*New York Botanical Garden*





# Environmental Concerns



(Li et al. 2007)

# Why sacred groves?

1. Fragments of primary forest containing high biodiversity
2. Includes ecosystems underrepresented in nature reserves
3. Network of sacred forests can be connective “stepping stones” in biodiversity corridors
4. Protected through cultural ties to local (often indigenous) people, so they can persist despite economic pressures
5. Moves beyond “fortress conservation”

# Additional Considerations

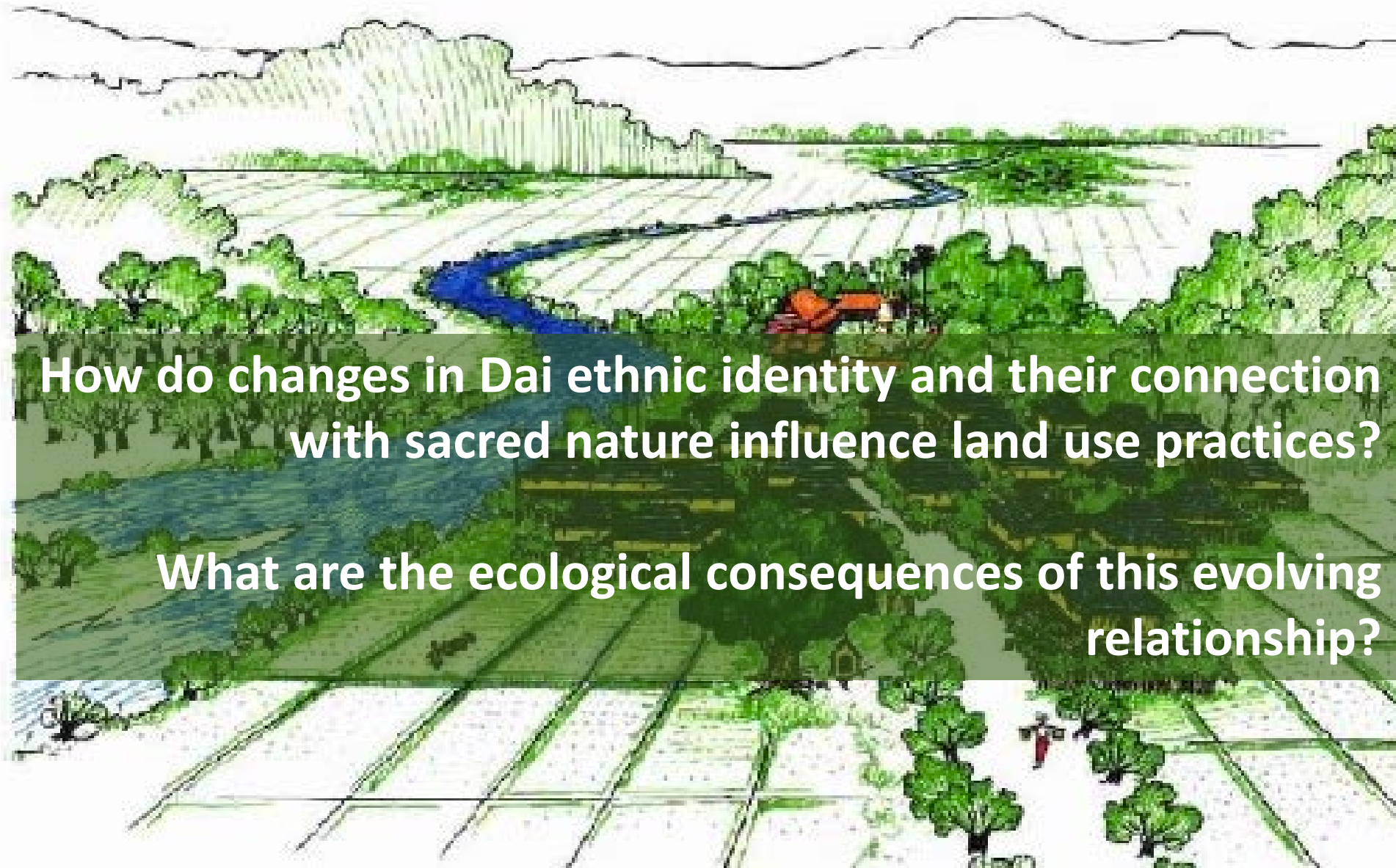
1. Perpetuates indigenous identity in terms of “noble savage” or “tribal slot”
2. Portrays sacred groves as strongholds against change
3. Sacred/secular dichotomy, “pure nature”
4. Sacred groves are not apolitical

***Instead, sacred groves as “palimpsests”***

(Sheridan 2009; Dove et al. 2011)

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**How do changes in Dai ethnic identity and their connection with sacred nature influence land use practices?**

**What are the ecological consequences of this evolving relationship?**



# Changing Meanings of Sacred Nature

- Tai Lü (Dai) kingdom Sipsongpanna:  
*zhao pianling, zhaomeng, bolang ban*
- *Nong* = “God Forest,” home of *devata*  
 (“ancestor spirits” → political leaders)
- *Gam* = rituals to pray for protection
  - Taboos, offerings, sealing boundaries
  - Modified to accommodate rubber
- Rubber as a traditional way of life →  
*devata* protection
- Transformations of taboo:  
ancestor spirits → “wild ghosts”  
(Mueggler 2001)





# Since Communist China

- 1950s-70s: Collectivization & Militant Atheism
  - Ethnic categorization by “social development”
  - Rubber introduced to Yunnan in state farms
- Since 1980s: De-collectivization & Enviro Concerns
  - Rubber incentivized as a smallholder crop
  - Reforestation  $\leftrightarrow$  Deforestation

***Environmentalism and “indigenous conservation”***



# Part 1: Ethnographic Questions

- In what ways is the relationship between Dai communities and sacred nature changing?
  - How does this affect land use practices?
  - How does this affect the way in which Holy Hills are incorporated into the community?
- How does the “environmental layer” interact with previous layers of meaning in Holy Hills?
  - Dai identity and indigeneity
  - Everyday practice vs. formal civic engagement
  - De-spiritualizing vs. hyper-spiritualizing

# Qualitative Data Collection

Purposely sample for:

- Age groups: village elders (60+ yo), young adults (20-30 yo)
- Other key informants: village leaders, forest rangers, etc.

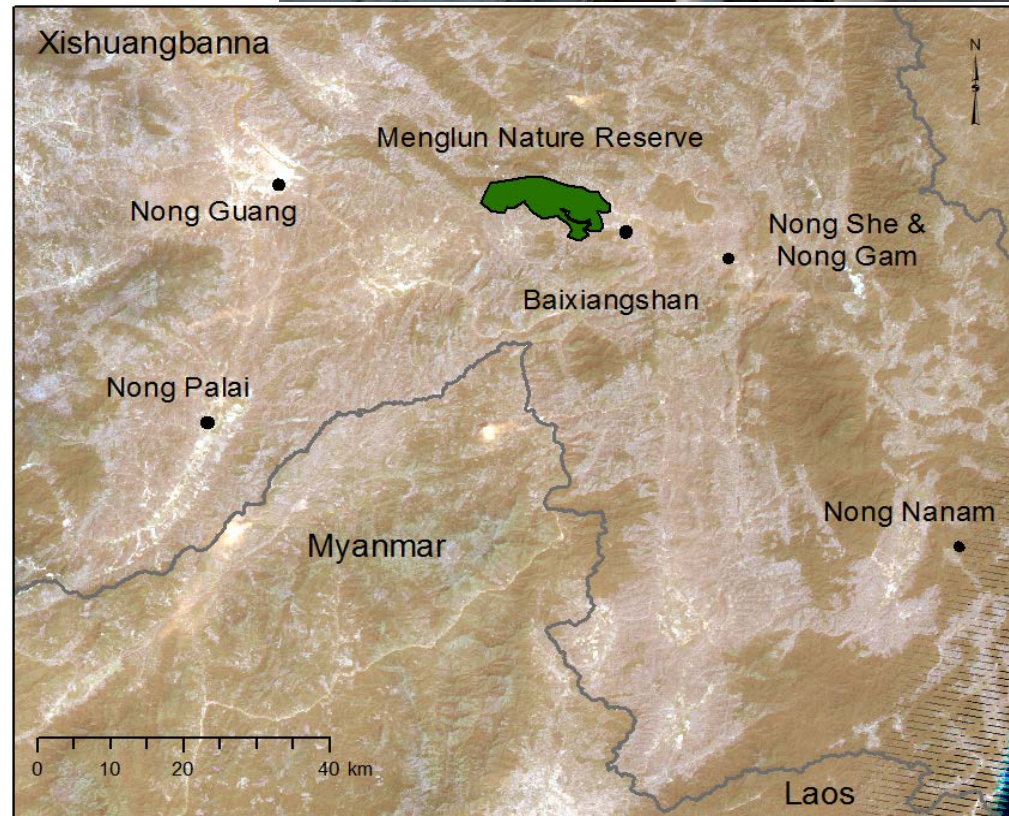


Data Collection Methods:

- Participant observation
- Semi-structured interviews
- Focus groups

Important themes:

- 1) Holy Hill beliefs, practices, ethnobotanical knowledge
- 2) Livelihoods, rubber
- 3) Lifestyle values and changes
- 4) Identity, culture across gens





# Ecological Implications

*What are the results of these social changes for Holy Hills plant communities?*

## *Previous Ecological Research on Holy Hills:*

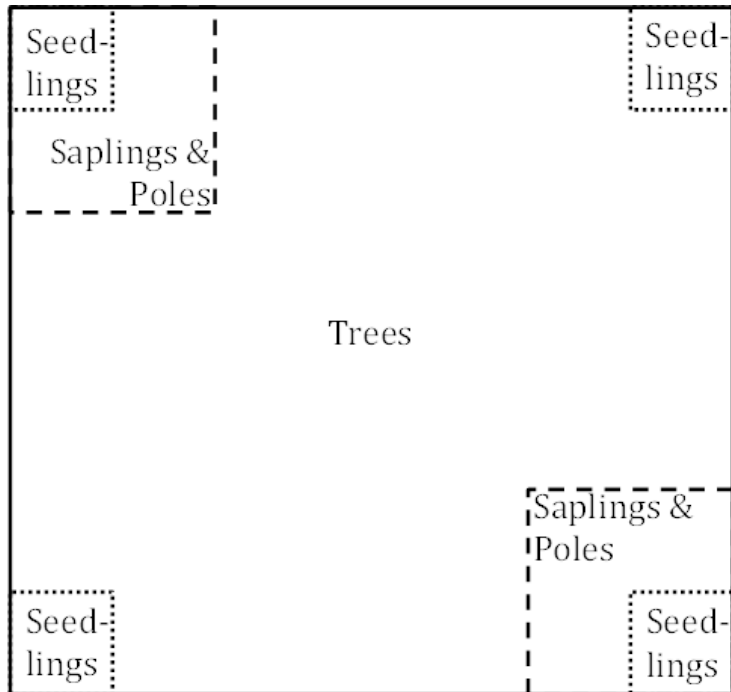
- Holy Hills contain endangered plant species from China's Plant Red Data List  
(Liu et al. 2002)
- There is a shift towards early successional species in some Holy Hills  
(Zhu et al. 2004)
- In one Holy Hill over 48 years: species diversity maintained, but shift in floristic composition  
(Zhu et al. 2010)

# Part 2: Ecological Questions

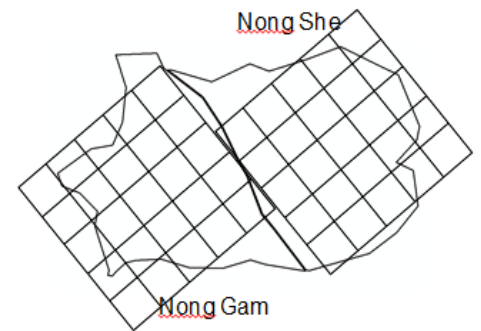
- Population Structure:
  - Holy Hills vs. NR: Species regenerating? Differences in regeneration success?
  - Holy Hills vs. NR: pop structure of same species
  - Successional guilds, dispersal modes, small pop size, and threatened status: which groups of species regenerating?
- Community Structure:
  - Holy Hills vs. NR: differences in community structure? Species composition?
  - Floristic shifts likely occurring in Holy Hills or NR?



# Quantitative Data Collection



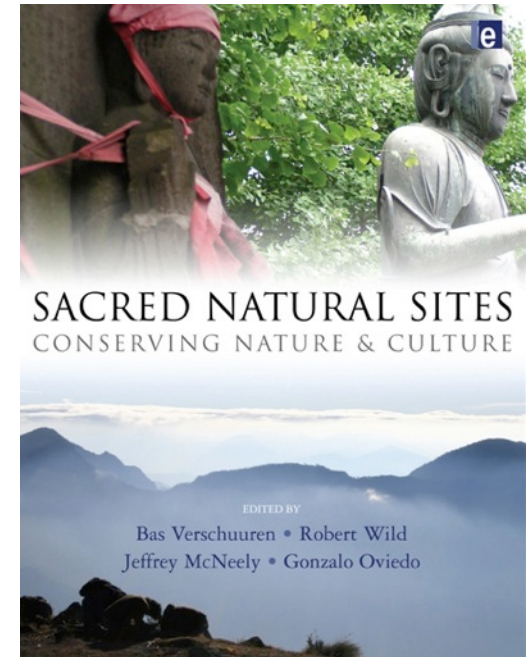
- a) Trees: 20mx20m → DBH
- b) Saplings & Poles:  
5mx5m → height
- c) Herbs and seedlings:  
1mx1m → %cover





# Conservation Implications

- Multiple levels of analyses
  - Hybrid-science
  - Hybrid-policymaking
  - Conserve biodiversity and allow cultural self-determination
- To understand how and under what circumstances community goals for protecting sacred groves are compatible with conservation goals



World Parks Congress

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# Questions?

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