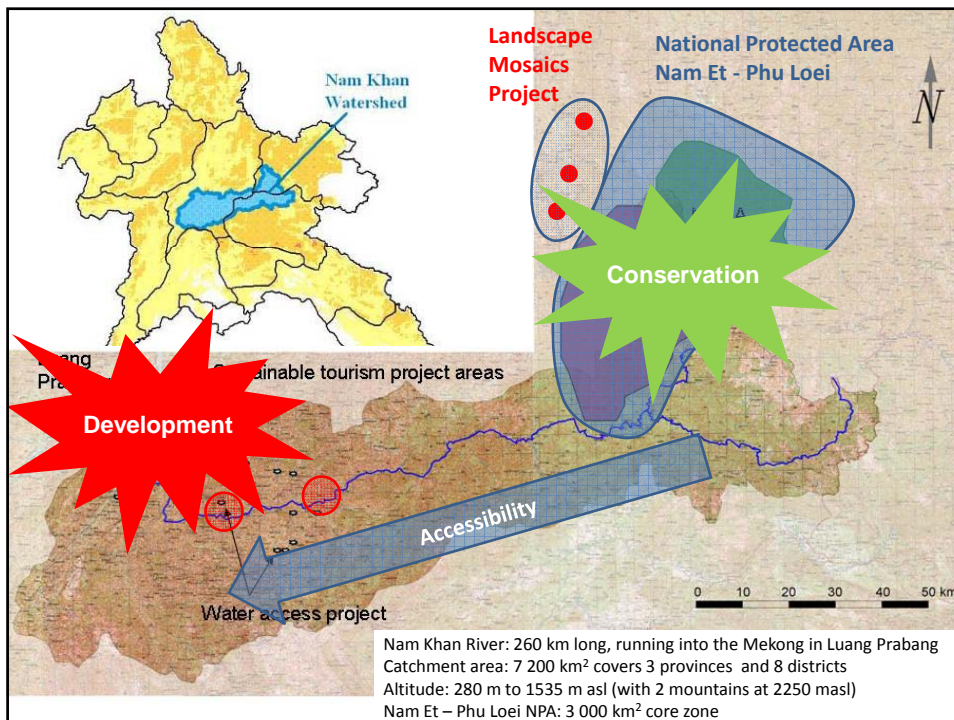


Integrated Conservation – Development in the Nam Khan Watershed, Lao PDR

**Preserving Luang Prabang’s natural and cultural heritages
in a time of rapid socioeconomic changes**

Jean-Christophe Castella
Kim Valakone
Linkham Douangsavanh



Nam Khan Eco-valley Program

- **1993 Establishment Phu Loei – Nam Et National Biodiversity Conservation Area (NBCA)** later changed into NPA.
- **1995 Luang Prabang: nominated UNESCO World Heritage** for “outstanding universal value”, founded in the harmonious relationship between the natural and built environment
- **2005 Candidate to UNESCO's *Man and the Biosphere (MAB) Programme*** – stresses protecting natural and cultural environment while creating development opportunities for local communities.
- Collaborative program since 2004
-> to document natural and cultural diversity
- Towards a watershed management committee
-> to preserve natural and cultural diversity

PART1: DIVERSITY OF CULTURES AND NATURES IN THE NAM KHAN WATERSHED (NKW)

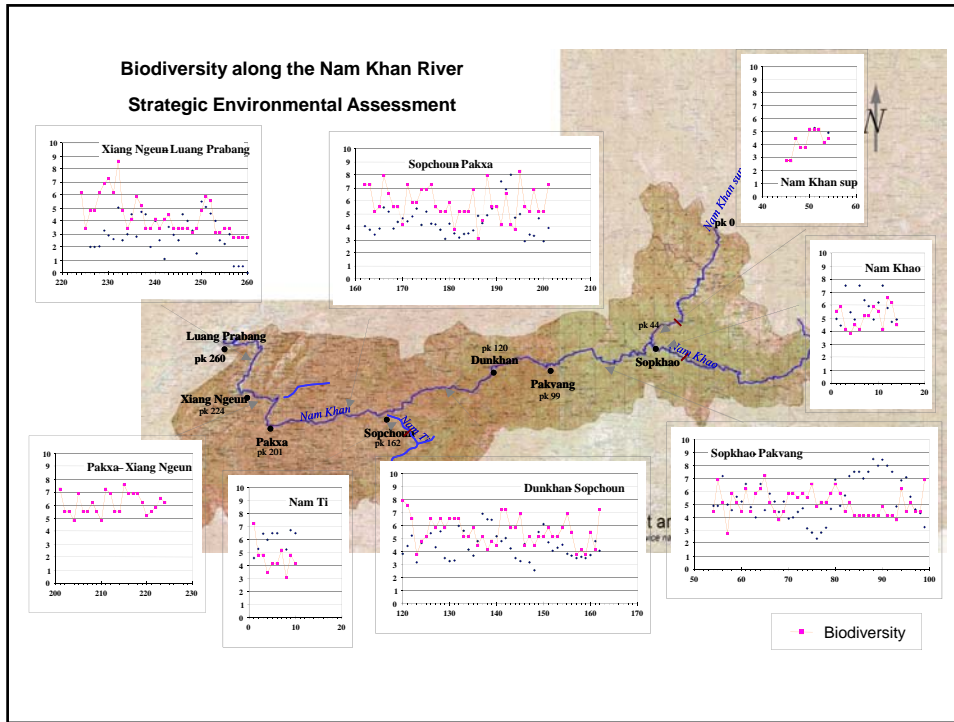
Chapter 1. What makes the NKW a natural heritage?

Biogeographic approach: characterizing the diversity of natural and human environments from landscape to watershed scales.



Land Use Type	% of total land cover	Biodiversity coefficient
Old Forest	OF = 0	0
	0 < OF < 10 %	1
	10 % < OF < 25 %	2
	25 % < OF	4
Young Forest	YF = 0	0
	0 < YF < 10 %	1
	10 % < YF < 25 %	2
	25 % < YF	4
Fallow	...	

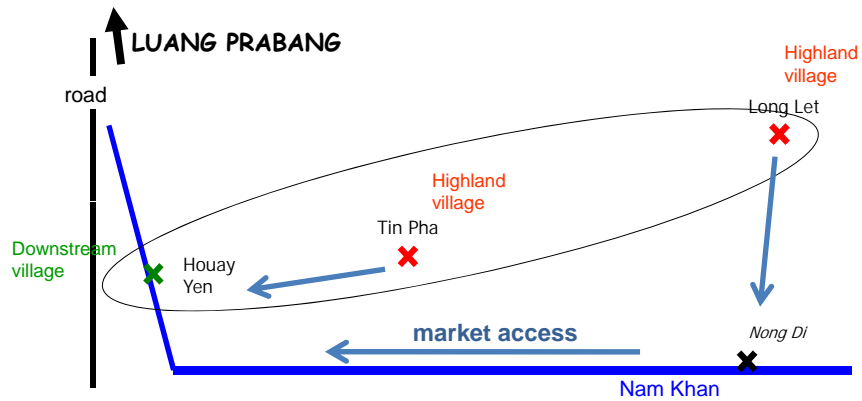
Old forest	Young forest	Fallow	Ray	Paddy	Teak
15 %	15 %	30 %	30 %	0 %	10 %



PART1: DIVERSITY OF CULTURES AND NATURES IN THE NAM KHAN WATERSHED (NKW)

Chapter 2. Patterns of human settlements and social interactions

Socioeconomic approach: history of human settlements, migrations, social and economic interactions across the watershed.



PART1: DIVERSITY OF CULTURES AND NATURES IN THE NAM KHAN WATERSHED (NKW)

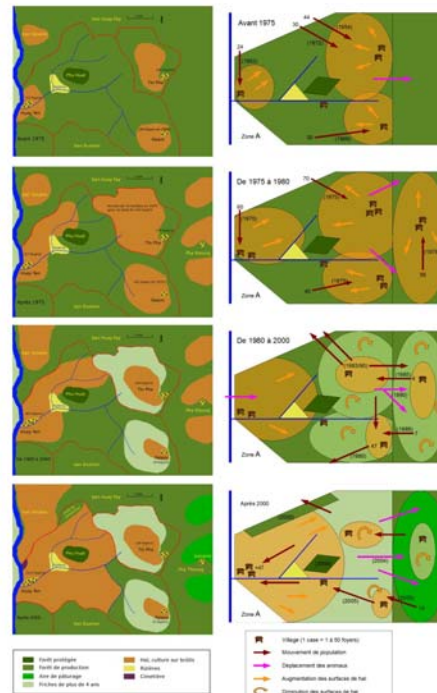
Chapter 3. Evolving relations between cultures and natures

Anthropological approach: relations between ethnic groups and with their natural environments, traditional land management systems and local knowledge.



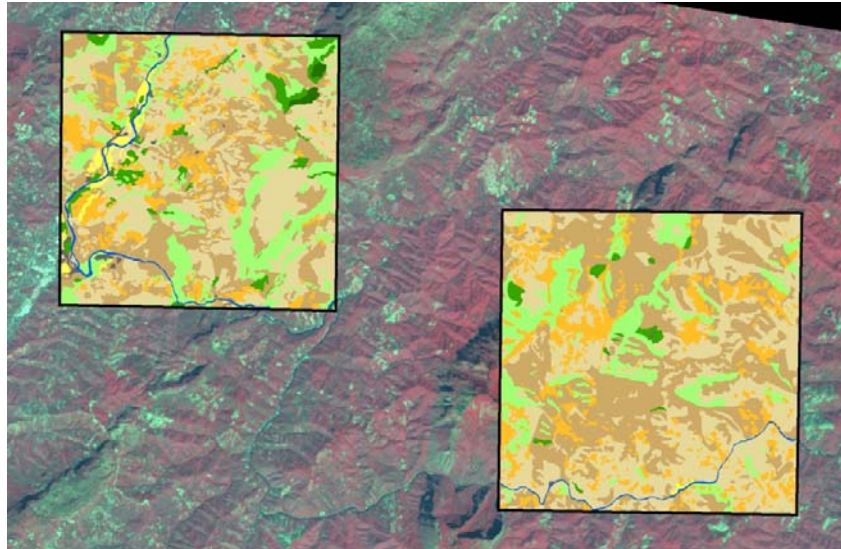
Chapter 4. Changes in landscapes and livelihoods

Drivers of land use/cover changes are analyzed as interacting natural and human factors that have impact on landscape mosaics.



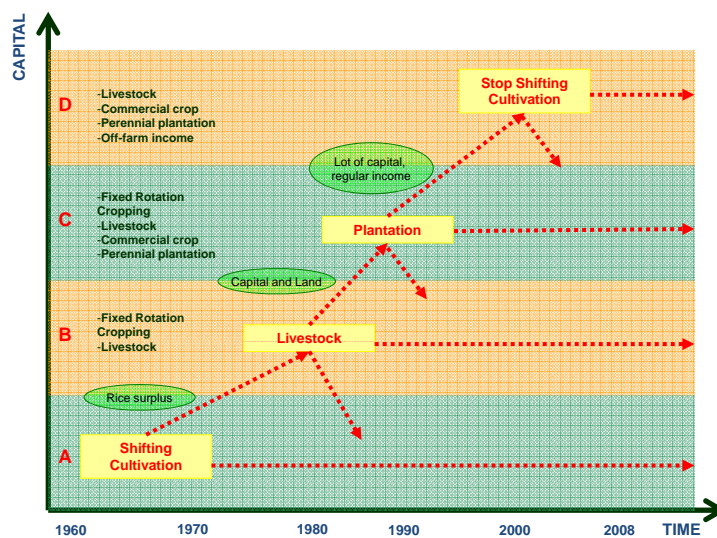
Chapter 4. Changes in landscapes and livelihoods

Drivers of land use/cover changes are analyzed as interacting natural and human factors that have impact on landscape mosaics.



Chapter 5. Changes in NRM practices and farming systems differentiation

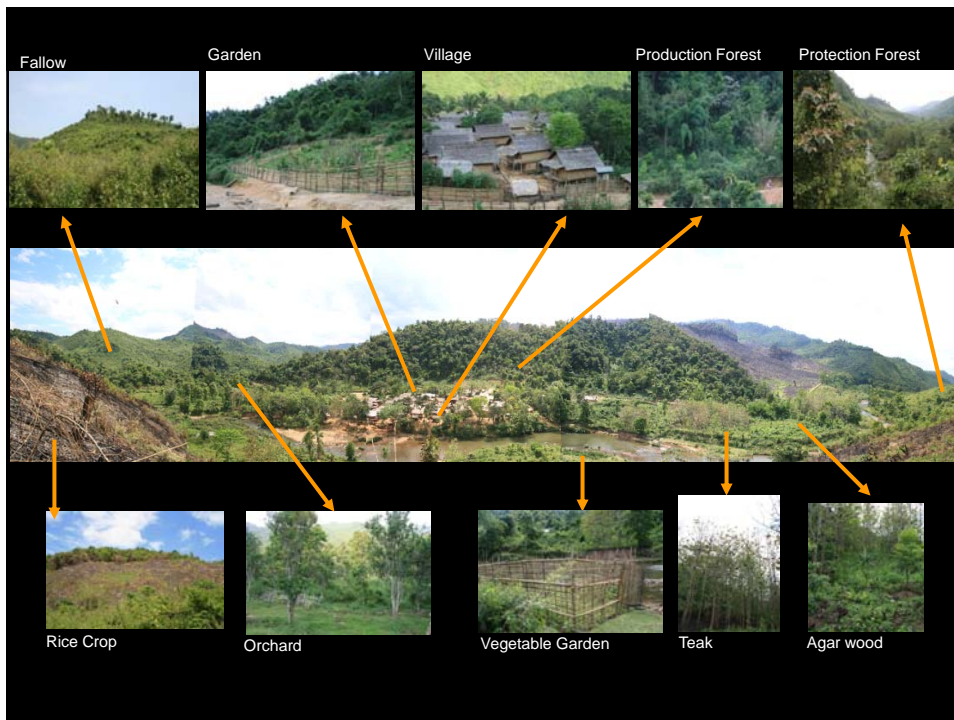
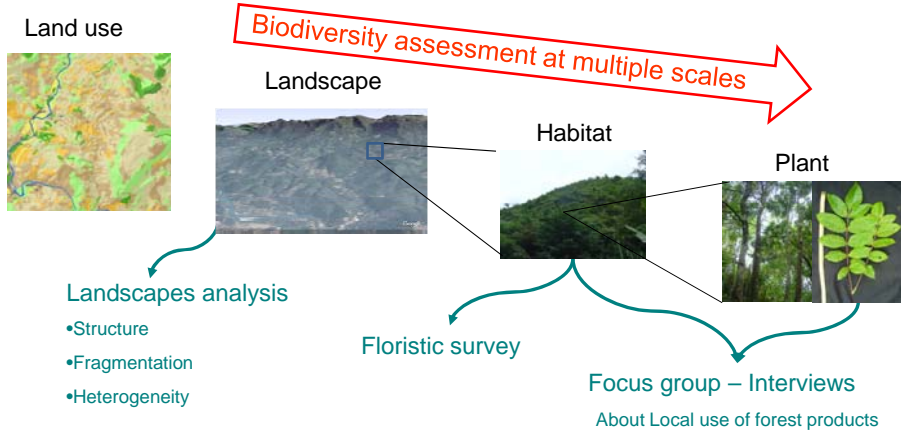
Tend to modify the interactions between local populations and natural environments and to increase agrodiversity.

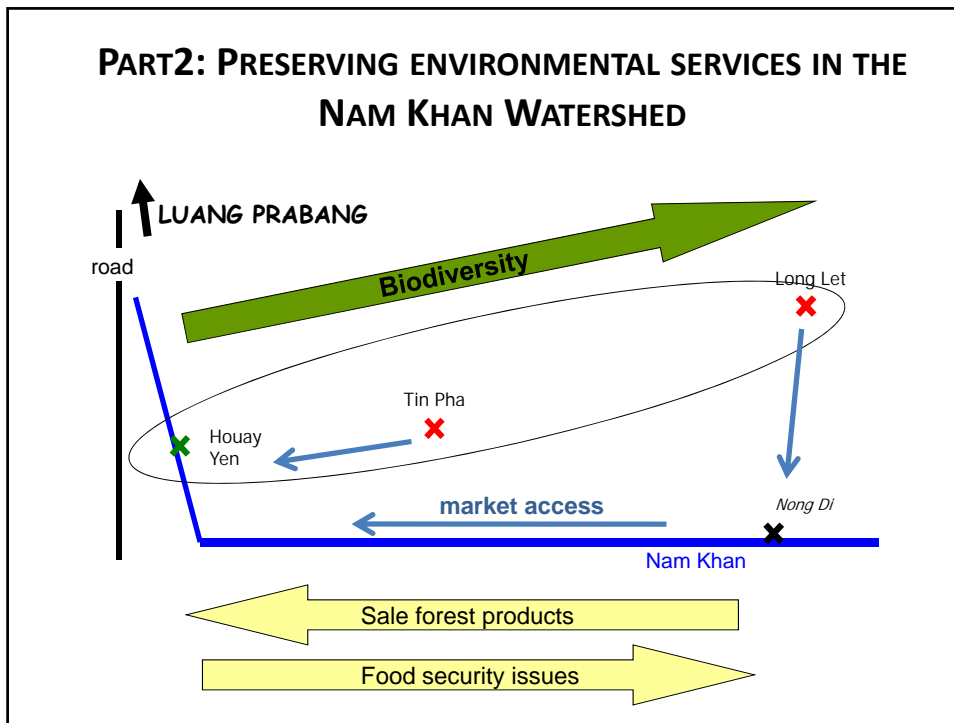


PART2: PRESERVING ENVIRONMENTAL SERVICES IN THE NAM KHAN WATERSHED

Chapter 6. Biodiversity

Assessing the sustainability of shifting cultivation systems on shrinking areas. Impact of decreasing fallow periods on biodiversity and ecosystemic services.





PART2: PRESERVING ENVIRONMENTAL SERVICES IN THE NAM KHAN WATERSHED

Chapter 7. Wildlife

Implications of wildlife hunting and use on livelihood systems. How can local populations contribute to wildlife conservation?

Chapter 8. Forest products

Perceived environmental services and changing behaviors of rural and urban populations toward NTFP.

Chapter 9. Water

Aquatic resources, water uses and water management issues (quantity & quality). Who will benefit and who will provide services?



Chapter 10. Policy mechanisms towards integrated conservation – development: Exploring conservation - development strategies

- *Land use planning:* multifunctional landscapes, protection of fragile natural environments, management of national parks and buffer zones, towards new territories and land rights.
- *Payment for environmental services:* avoided deforestation (REDD), reduced erosion and land degradation (hydropower), biodiversity, ecotourism.
- *Socio-technological innovations:* agricultural intensification of lowlands, terracing, conservation agriculture (no tillage, cover crops and mulching, etc.), ecological engineering for land slide protection of roads and river banks, flood control, etc.

+ Facilitating the emergence of institutions, negotiation mechanisms between multiple groups of stakeholders with diverging interests across the landscape.

+ Role of action-research in supporting watershed management committee.

+ Long term commitment...

