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Multipurpose use of forest land - assessing changes, their drivers and their impacts to society and environment

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Forestry is not mainly about trees, it is about people.
It is about trees only when trees can serve the needs of people

Jack Westoby, World Forestry Congress , 1978

Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spirtual needs of present and future generations.

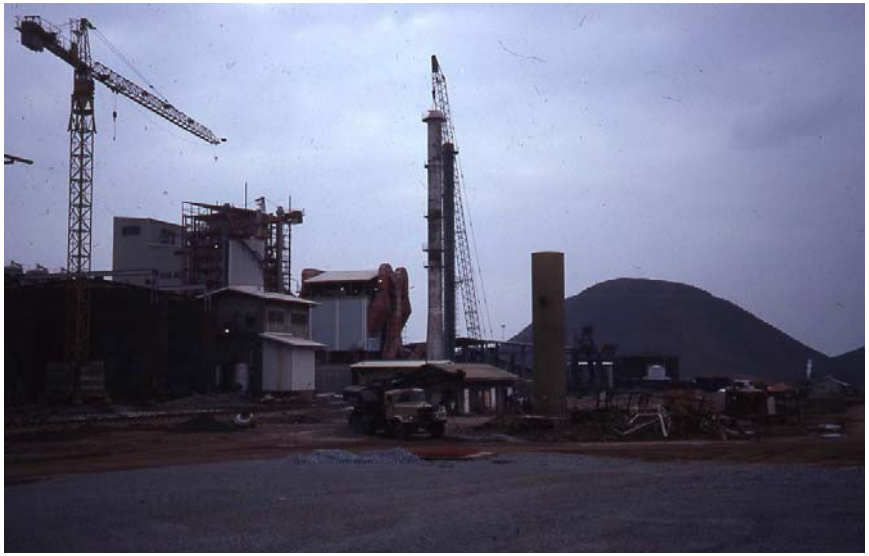
These needs are for forest products and services such as wood and wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, wildlife diversity, landscape habitats, carbon sinks ....

(UN Non-legally binding Forest Principles, item 2b, 1992)

FRAMEWORK FOR ASSESSING AND MONITORING FOREST GOVERNANCE (FAO/World Bank, 2011)

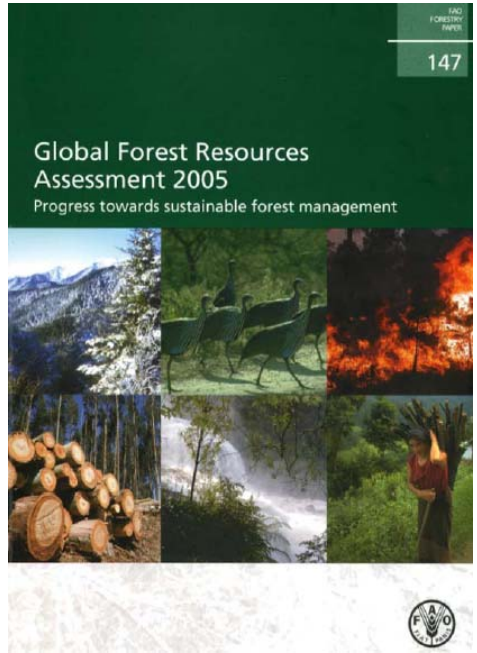
Figure 1: Proposed description of pillars and principles of REDD+ governance

Forest management - for whom and by whom?



Means for National level evaluation:

Global (FRA) and National (NFA) ”Forest Assessments” by FAO



1940s: Timber oriented surveys

1970s: Forest cover and wood resource inventories, no standard fomat

1990s: Division into Global FRA and national NFA , includes land use changes

2000s: Inventories incl. biodiversity, socio-economics, other aspects of SFM

- Standardised format. Systematic sample plot clusters design. Introducing socio-economic survey based on interviews .
- NFA also supports individual countries’ capacity building

FAO:s approach to defining SFM used in the NFA

1. Extent of forest resources
2. Biological diversity
3. Forest health and vitality
4. Productive functions of forest resources
5. Protective functions of forest resources
6. Socio-economic functions
7. Legal policy and institutional framework

The case of Nicaragua (Rosita, NE region)

Country characteristics

Type of change /impact studied

Deforestation /land degradation

Drivers of change

:Competing sector policies Forestry – Agric. Livestock

Demographic changes

Infrastructure development and new markets

Natural disasters

Use of forest land

NTFP (Indigenous)

Agriculture crops

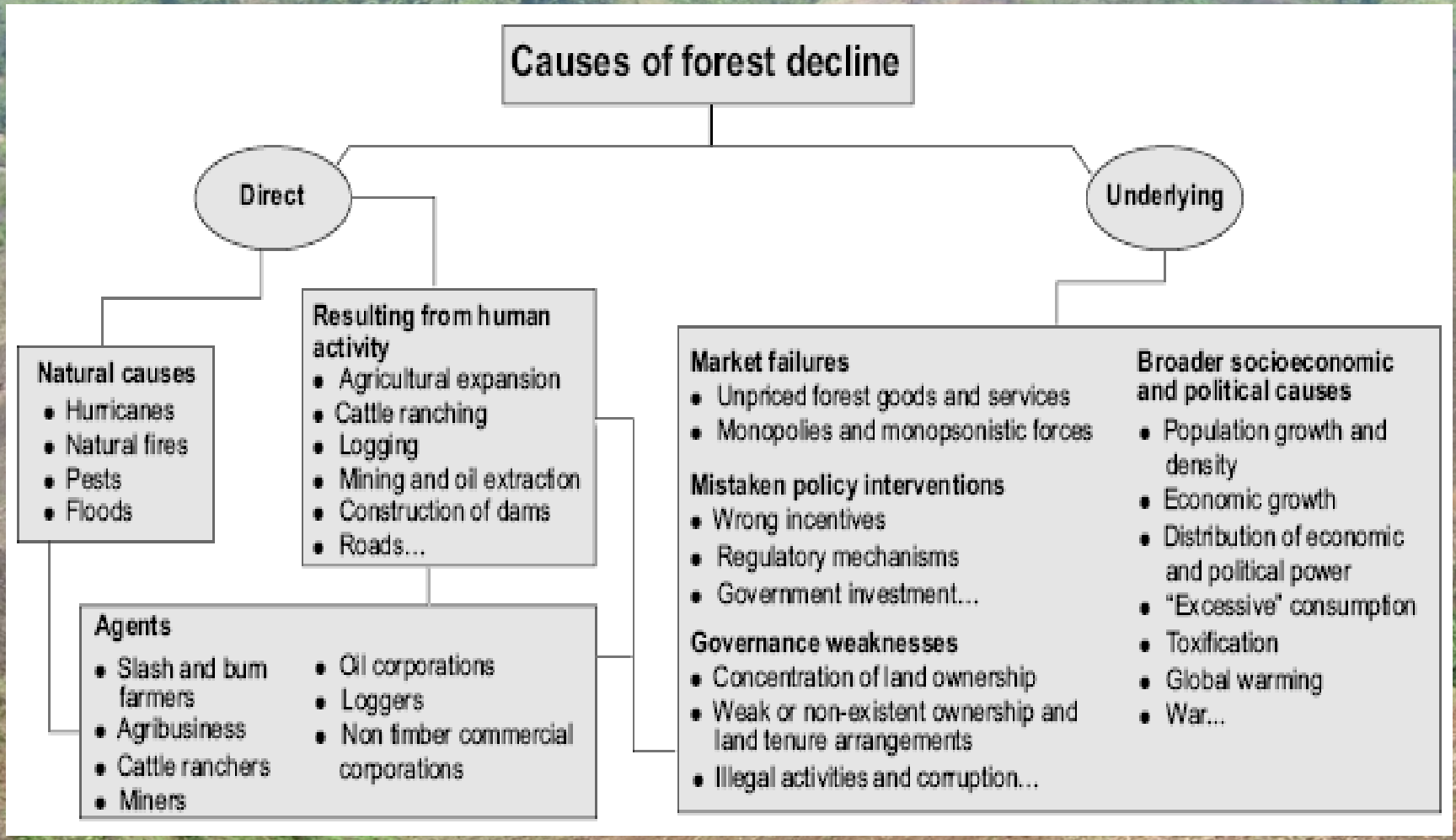
Livestock (migrants)

Timber (state)

Mining (company)

Plantations (entrepr)

International concept for deforestation used in Nicaraguan policy study



Evaluation approach in Nicaragua: Framework, NFA data analysis + case studies, interaction with sector representatives and stakeholder groups

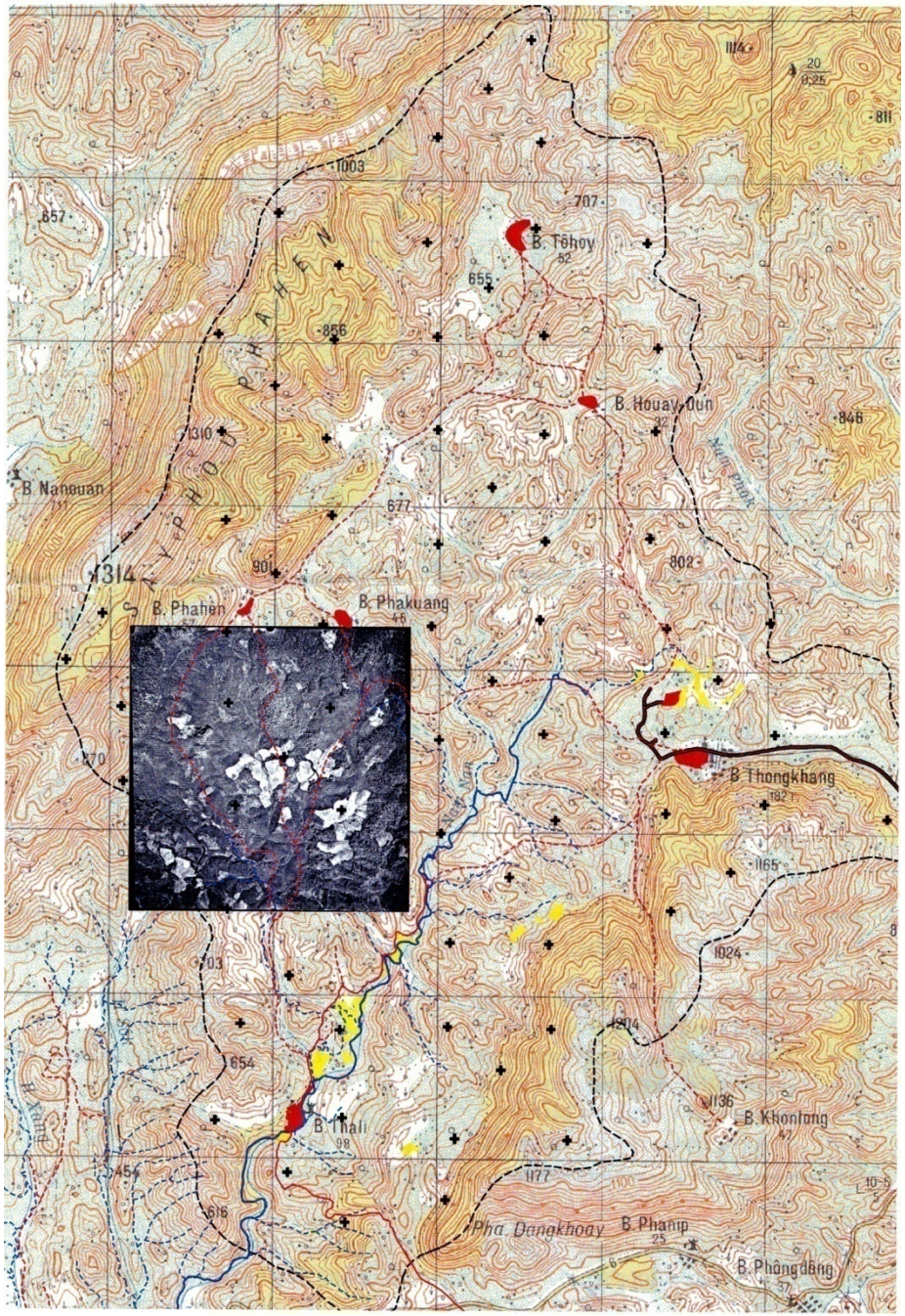
The case of Sweden

1800	Shifting agriculture and mining
	Traditional ”everyones right” to use the forests for livelihoods
1850	Rapid population growth, out-migration
	Extensive deforestation
	Industrialisation
	Strengthened land property rights for private smallholders
1900	First forest policy was established focusing on reforestation (1903)
	State forest authority established (1904)
	Start continuous forest monitoring ”National Forest Inventory” (1923)
	Extensive reforestation
	Rights to the use of the forests contested by indigenous people and by the environmental movement
1994	New forest policy - forest production and biodiversity equal status
2011	Everyones right still valid but globalisation and EU provide challenges
	Evaluations made by Forest Agency using NFI, other data and special studies in consultation with concerned ministries.


How do we deal with evaluation of
landscape-and-society-changes
in research studies when there is not so much time and resources available ?

Framework for local landscape-based approach to assess land use dynamics

Sphere	Focus	Methods and sources of data and information
Physical situation	Morphology, land use, crops, location, infrastructure	Aerial/satellite images, field measurements
Macroeconomic situation	Market economy, infrastructure, linkages with general economy	PRA, surveys, District authorities, other research
Local socio economic situation	Subsistence economy, knowledge and skills, household livelihood strategies, local institutions, land use and property rights.	Village based information, PRA, deep interviews
Policies, strategies and legal framework. National, regional etc. and household levels	Externalities – exercised by the Government, international community and market. Present or not present. Local strategies.	Documents, local authorities, legal and professional systems. PRA and observation of actual behavior, discussions with villagers, stakeholder meetings
Linkages between the different Spheres		



Case 1: Land use study in a Lao watershed with extensive shifting cultivation

Aimed to follow land use changes over time but also population and socio-economics trends

Combined remote sensing change study with field inventory

PRA based historical and livelihoods survey

Systematic field sampling

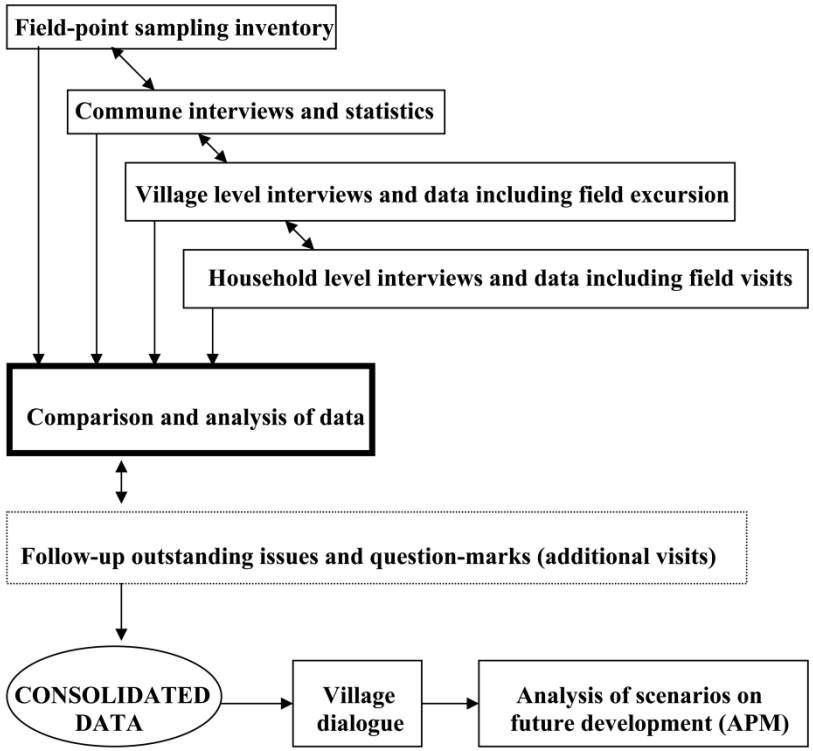
Difficult terrain and a bit time consuming but useful data

We realised the local guide had a lot of knowledge of the land use history

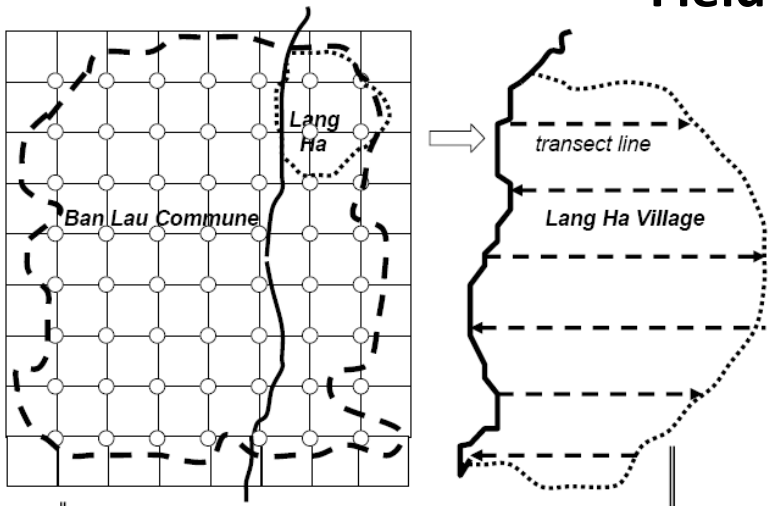
Case 2: Land use policy study in Vietnamese upland commune

Aim: Compare government lu - plans and policies with farmers actual land use for discussing strategies

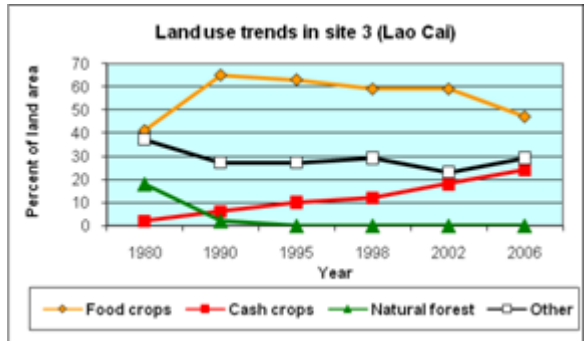
- No air photos available
- Much official data but confusing
- Little time available (2 weeks)

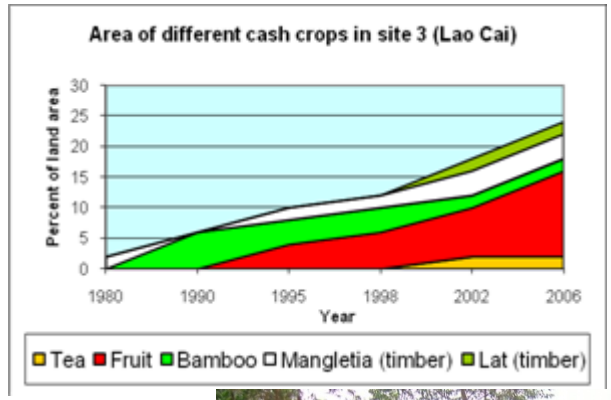


Field point sampling with local key informants

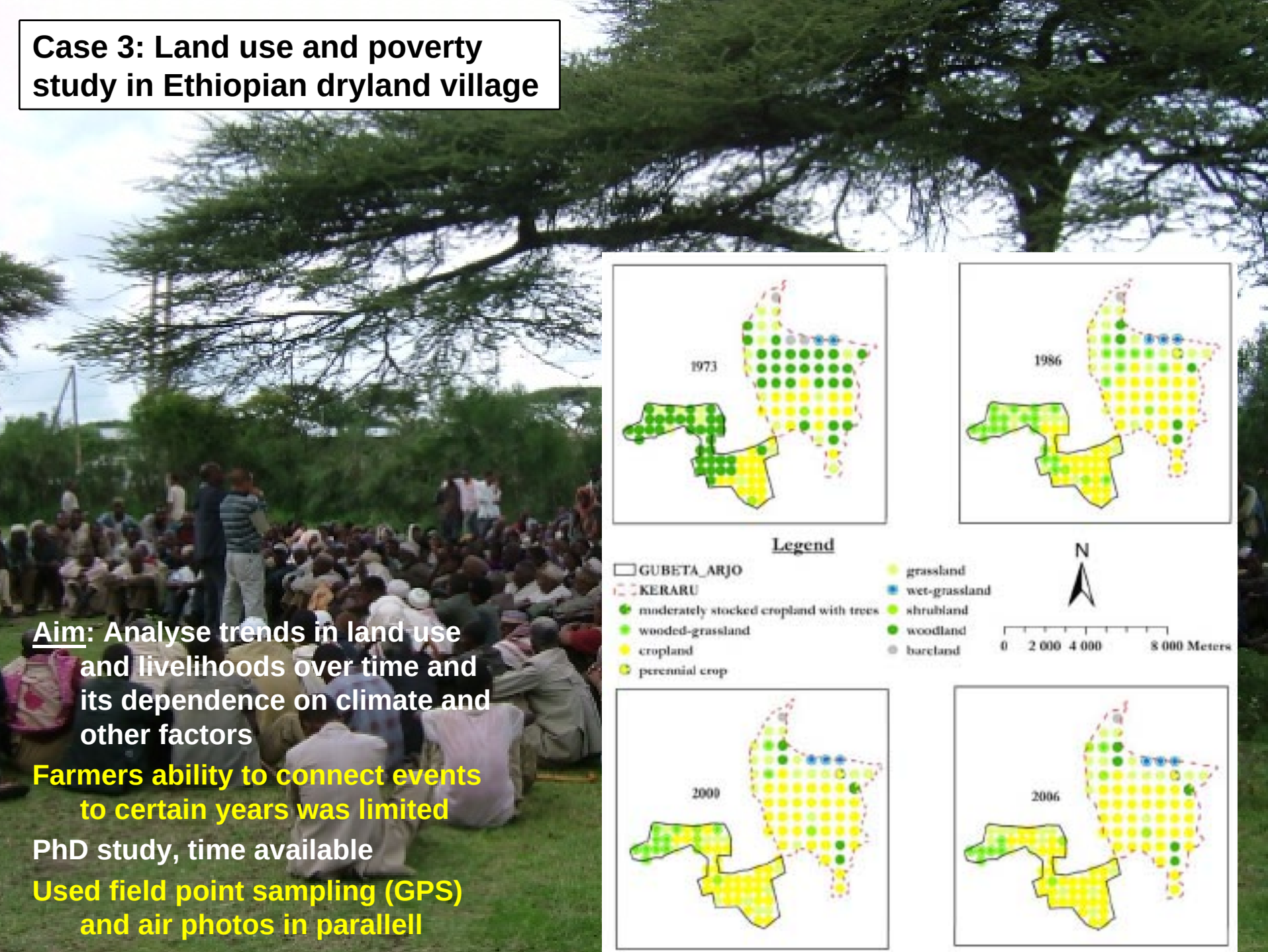


Data collected	Verification
1) Current land use	Observation on the spot
2) Past land use	Old air photos
3) Official land status	Confirmed on the spot by the cadastral officer
4) Other information	





Case 3: Land use and poverty study in Ethiopian dryland village



Aim: Analyse trends in land use and livelihoods over time and its dependence on climate and other factors

Farmers ability to connect events to certain years was limited

PhD study, time available

Used field point sampling (GPS) and air photos in parallell

Field point sampling with local key informants – some experiences

Risks:

- Requires key informants who remember and give you correct information (trust).
- Some form of sample verification is desirable

Opportunities:

- Fast and flexible to data needs (preliminary data analysis made while you are still in the field and can confirm and discuss)
- Statistically sound and unbiased re. current land use
- Makes use of local knowledge and observations
- Connects researcher to the local stakeholders and communities
- When combined with other methods, e.g, interviews with households, focus groups etc. it becomes quite powerful

Observations and conclusions

1. In a development context forest (land) management aims to address societal goals
2. Trend in forest management (globally) is away from centralised and diciplinary views towards multidisciplinary land-use oriented concepts adapting to the local situation.
3. Globalisation and changes in property rights have meant many dramatic changes in rural life. Some people have a better life, while resource poor people have difficulties to make use of new opportunities and often fall behind.
4. Policies often have great impact on land use and society. Through policies and good governance it is possible to influence the future. Conflicting sector policies hamper development.
5. Rural people consider all aspects of life (not only policies) in their land use decisions.
6. Therefore policies may generate a range of outcomes (not only the anticipated ones)
7. Adequate monitoring and local studies are often required by decision makers for good understanding of the situation and for good (policy) decisions.
8. Data is not enough, communicating is crucial .
9. For evaluating landscape-and-society changes in a policy contextyou need to address 1) state objectives (policies), 2) local objectives/priorities and 3) external drivers.


Thank for your attention!