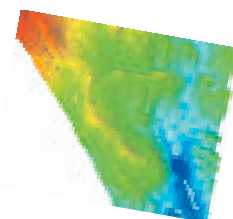


Participatory 3-D Landscape Modeling

Towards a “common spatial language” among researchers and local stakeholders

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In the mountains, the spatial organization of crop-livestock interactions is a key component of sustainability of the village agroecosystems. Promoting changes in the spatial management of natural resources requires a good understanding of the underlying social organization of the community, as well as its historical evolution and response to policy and institutional changes. We present a research tool that we tested in Phieng Lieng village (Ngoc Phai commune, Bac Kan province) to facilitate such a collective learning process.



Why 3D modeling?

- ▶ Farmers are great sources of local knowledge.
- ▶ **How to collect most effectively spatial information from farmers?**

In seminars on innovation diffusion, and land-use planning... it is necessary to have a “common spatial language” among managers, stakeholders, and scientists.



Participatory landscape modeling session in Ngoc Phai Commune



3 Dimension images enable users to capture and understand village agro-ecosystems more easily than 2 Dimension images.

How it works?



- ▶ A 3-D landscape model is created based on a topographic map. It is cut out from carton paper.



- ▶ Information is collected from group discussion to document the model.



Color paints are applied to present different spatial uses (considered as an information layer).



- ▶ Geographic information is transferred from the 3-D models into a Geographic Information System (GIS).

A case study in Phieng Lieng

- ▶ Participatory mapping of past and current land cover/use and other themes (e.g. livestock movements, land tenure, conflict areas).
- ▶ A common language is used for consensus building among various stakeholders in order to prioritize development issues, and facilitate collective process of problem solving.
- ▶ A stage in the continuum from research to action: the 3D model is used as a mediation tool to insure compatibility between individual practices and the common good in natural resource management at the village level.

