

Universität **Hohenheim**



Biodiversity and Land Rehabilitation in the Tropics and Subtropics

Participatory survey of allocated degraded land in the Northern Mountains of Vietnam: the 3:3:3 pattern

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Background and research objective

The 3-year period given to households to reclaim degraded, so-called "unused" or "barren" land is decisive for their subsequent acceptance of the formal allocation contract and the legal commitment to use this land for agriculture or forestry, and thus for the overall success of the governmental land policy. This work aims at providing an insight into mechanisms and driving forces of utilization dynamics of this land.

Methods

- Participatory survey of 109 households (Mai Van, 2005) with allocated barren land in four representative communes (with and without the activity of afforestation/land rehabilitation projects) in the Northern Mountains region (Bac Kan and Son La provinces)
- Land cover change analysis at the commune level

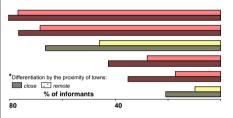
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Results

How do households manage the allocated land?

On average, one third $(35.3\% \pm 9.5)$ of the total commune land is classified as "unused"; of this, a third $(34.2\% \pm 8.4)$ is allocated to farmers Interviewed households received 0.5-1.5 ha of this land, 70% on slopes >25° in scattered plots smaller than 200 m².

Major incentive for reclamation of degraded land is the anticipated immediate gain in food and money. Food security is not achieved, and highly unsuitable land is often cultivated:



Why? Incentives from projects

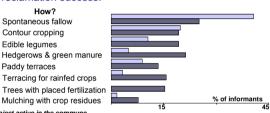
Arable land for food crops
*Penalties for land misuse
Plantation forest

Perennial crops & fruit trees
*Environment improvement

ment improvement Mulching with crop residues

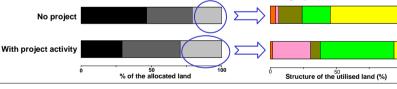
Land rehabilitation project active in the commune

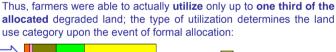
Rehabilitation mostly relies on labour- and capital extensive methods. Main problem is perceived in poor soils, lack of inputs and uncertain reclamation success:

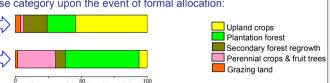


Farmers do not attempt to reclaim, on average, 37% of the allocated land, keeping it as a latent asset for the future. On the remaining land, reclamation fails on about half of the area:

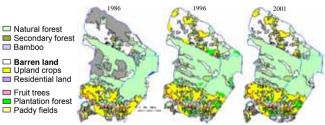








Dynamics of "unused" land at the commune level



Example: Sap Vat commune, Son La

Inaccessible mountainous areas, populated by traditional swiddeners (H'mong and Simun), are more severely degraded



Rehabilitation efforts (mostly fruit and other tree plantations) are concentrated in flatter areas with Thai population who practice fixed cultivation Most of the change takes place at forest margins, on barren land, which is almost exclusively derived from upland fields. Upon reclamation (20-40% for 15 years), 20-40% of this land is again used for upland crops. Land use dynamics, characterised by a continuous exchange of areas between the different categories, reflects the nature of the predominant shifting cultivation system.

Conclusions

"Unused" land is cyclically generated by the nature of the predominant, but officially not acknowledged, shifting cultivation system. Without support (rehabilitation/afforestation projects), reclamation approaches with a long delay of direct benefits are not likely to be adopted by resource-poor farmers. As food insecurity forces them, instead, to grow upland crops in the initial 3-year period, they are in the position to formally accept this land only for agricultural use. Thus, in the long run, this fragile land degrades faster and accelerates the vicious cycle of impoverishment. Moreover, even if a land rehabilitation project exists in the commune, these poor farmers are commonly in areas with poor infrastructure and hence less likely to be targeted.

Reference

Mai Van, P. 2005. Characterization of barren hills and perspective for rehabilitation in Northern Vietnam. PhD thesis. Grauer Verlag, Stuttgart, Germany