

Appendix 1. Relationship Between Forest Stability and Fallow Period

If forest stability has been achieved by reducing the period of swidden fallow, the result is to cultivate and fallow a smaller expanse of swidden/forest mosaic *per capita*, but more frequently. If done in response to increasing population, the resulting landscape pattern will be more cleared area (regardless of how they organize it, villagers will have to plant a larger area of swidden each year to feed larger populations) and increasingly younger secondary forest within the mosaic, but stability (at least temporarily) of surrounding mature forest. In contrast, if villagers adhere to traditional long fallow regimes as their population increases, the landscape pattern will also be more cleared area but coupled with progressive erosion of mature forest as traditional swidden/forest mosaics expand. There is some evidence for fallow reduction from this study: Landsat data show that the area of mature forest has been stable, whereas the FIPD SPOT analysis, when corrected, indicates that secondary habitats saw an increase of about 9% in proportion of cleared land from 1990–2000. However, the average range of fallow periods reported in 1996 for four sample NNT villages, 4–10 years (Chamberlain et al. 1996), is still longer than the range of 3–6 years reported from two provinces in northern Laos at about the same time (Fujisaka 1991). In addition, in the course of field studies in the past decade by social scientists and agronomists, villagers in Nakai-Nam Theun (NNT) frequently reported declines from overexploitation in local natural resources (fish, wildlife, and non-timber forest products) and poor rice yields due to intermittent floods and pests, but few seem to have reported declining rice yields due to reduced fallow periods, something that is frequently mentioned in more densely populated areas of Laos (Chamberlain et al. 1996, Chazee 2000). Finally, given NNT's low population density and abundant forest, intensification rather than expansion of swidden seems an unlikely option. For these reasons, agricultural intensification through reduction in fallow period alone is unlikely to account for stability of the area's forest cover.