

1-2. Non-Timber Forest Product Use and Food Security: The Lao Case

The Importance of Non-Timber Forest Products (NTFPs)

People living in agricultural villages in Laos are self sufficient, growing crops and collecting and consuming food from forests and rivers. Approximately 70% of people live in mountainous regions and practice shifting cultivation as one of a variety of agricultural practices (NAFRI et al. 2005). Non-timber forest products (NTFPs) have a very important significance for their livelihood¹.

NTFPs are taken from the mosaic of forest and fallow lands created by swidden agriculture (NAFRI et al. 2005), and the amount consumed is second only to the staple of rice (Foppes and Ketphanh 2004).

In agricultural communities in Laos, because farming depends on the natural environment, it is difficult to maintain a steady level of food production. The role that edible NTFPs play is therefore very important. In addition, less than 1/4 of a household's total income is cash, of which income from NTFPs is 40-50% (Foppes and Ketphanh 2004; NAFRI et al. 2005). There is a tendency for households with lesser cash income to depend more heavily on NTFPs (Greijmans et al. 2007; Rosales et al. 2003).

NTFPs can be directly consumed as food, and they also support livelihood by being sold in domestic markets or exported internationally. When people do not have enough rice, selling NTFPs enables them to purchase rice, so NTFPs are especially important for people living in areas where rice production is limited (Foppes and Ketphanh 2004). It can be said that the traditionally sustainable agricultural practices of Lao agricultural communities have actually conserved the rich natural environment, because the way they have managed and venerated forests ensures that NTFPs are not exhausted.

The importance of NTFPs in Laos can be summarized in the following categories: (1) food security; (2) cash or non-cash income; (3) agricultural community small-scale businesses; (4) construction materials for houses, building tools; (5) medicine; and (6) conservation of biodiversity in wild animals and wild and cultivated plants (NAFRI et al. 2005).

Use of NTFPs

It has become known that up to now, 700 varieties of NTFPs have been used in Lao agricultural villages (See Table). There are many different types of NTFPs, and it is clear that biodiversity has been made use of in agricultural life. For people living in agricultural villages, aquatic animals (fish, frogs, shrimp, snails, shellfish, etc.) and land animals (birds, rodents) are also forest products. These are important sources of protein in the daily diet (Foppes and Ketphanh 2004).

There are about 25 varieties of NTFPs that are for commercial use, and NTFPs are important sources of income for agricultural communities. Edible products are bought and sold in domestic markets, and medicinal plants and spices are often exported to neighboring countries like Thailand, China, and Vietnam. Benzoin is used for perfumes and exported to France, and aromatic trees are exported to Japan and Arab countries (NAFRI et al. 2005).

Category	# of products	Examples
fruit, seeds	87	sugar palm fruits, <i>Baccaurea</i> berries, <i>Irvingia</i> nuts
leaves	86	<i>Barringtonia</i> , <i>Lasia</i> , <i>Azadirachta</i> , <i>Centella</i>
shoots (spouts, stems)	23	bamboo shoots, rattan shoots, palm hearts
tubers, roots	22	yam tubers (<i>Dioscorea</i>), galangal roots
mushrooms	16	ear mushrooms, <i>shiitake</i> mushrooms, termite mushrooms
flowers	4	<i>Sesbania</i> , <i>Butea</i>
all plants (subtotal)	238	
fish	300	<i>Cyprinidae</i> (<i>Cypriniformes</i>), <i>Pangasiidae</i> , <i>Siluridae</i> (<i>Siluriformes</i>), <i>Notopteridae</i>
birds	63	doves (<i>Columbidae</i>), partridges (<i>Phasianidae</i>), pheasants (<i>Phasianidae</i>), bulbuls (<i>Pycnonotidae</i>), estrildas (<i>Passerinae</i>)
mammals	54	squirrel, wild boar, rats, civets, mouse deer
reptiles and amphibians	41	frogs, monitor lizards, snakes, turtles
mollusks	7	freshwater shrimp, crabs, snails, shells
insects	5	red ant eggs, bamboo grub, dung beetles
All animals (subtotal)	470	
Total	708	

Table: NTFPs used in Laos (based on Foppes and Ketphanh 2004)²

The Lao government understands the importance of NTFPs. However, because it decided to increase the percentage of forest cover to 70% by 2020 (Lao PDR 2005), local governments tend to look only at this numerical target. Afforestation projects are being emphasized in order to increase forest cover, but some of these projects are implemented after logging natural forests first, so increasing forest cover does not necessarily mean conservation of biodiversity, or villagers' stable access to NTFPs.

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1. There are various definitions of NTFP, but here we will define it as materials from the forest that people use and that are not made of wood.
 2. According to one Japanese survey, there are 17 insect species, including stink bugs (*Pentatomoidea*), scarabs, cicadae, and earth-boring scarab beetles (Nonaka et al., 2008).