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**The importance, role and value of Non -Wood Forest Product for
Laotian food Security, nutrition and livelihoods
(final draft)**

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The importance, role and value of Non -Wood Forest Product for Laotian food Security, nutrition and livelihoods* .

Abstract

This paper presents conceptual framework of forest foods and food security link to forest resource management to well being. NWFPs studies in different areas, important species to Lao people's livelihood, household uses and commercialization, nutrition study on forest foods, NWFPs research projects in the past and going on project and the concepts note of one activity to be implemented on enhancing food security through sustainable management plan for Non-Wood Forest Products in the Agriculture Biodiversity Programme.

The paper also describes the concept of NWFP activity to be implemented in the year 2006 to 2007 on sustainable NWFPs resource management plan in five villages living around Dong Kapok forest area, Pine District, Savanakheth Province. The main tasks to be carried out in this activity in order to achieve food security, adequate nutrition levels and sustainable livelihood.

I. Introduction

In the symposium on biodiversity for food security organized in October 2004 by Food and Agriculture Organisation of the United Nations (FAO) and Ministry of Agriculture and Forestry (MAF) presented the high proportion and high variety of gathered forest products in the daily diet of rural Lao families. Over 450 of these edible Non-Wood forest products (NWFPs) have been recorded so far: edible shoots and other vegetables, fruits, tubers, mushrooms, small water animals, wildlife etc. The diversity of NWFPs consumed reflects the rich agricultural biodiversity of the rural landscape in Lao PDR.

The Lao definition of food security is “to assure enough food and foodstuffs for every person at any time, both in material and economic aspects, with increasing demand on nutritional quality, hygiene and balance so as to improve health and enable normal development and efficient work”(NAPP).

Gathering of Non-Wood forest products (NWFPs) is an important element in the livelihood of most Lao rural families, especially in for those living in the uplands. NWFPs contribute in two ways to food security (see also figure 1):

- Direct consumption of forest foods next to rice
- Selling NWFPs to buy rice in times of shortage

The direct contribution of NWFPs to food security in valuation studies is roughly 50 % compared to that of rice, the staple food, together these foods



Figure 1: Forest foods and food security link forest resource management to well being (source: Clindon 2001)

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take up around 80% of total value of family subsistence expenditures. NWFPs also contribute indirectly to food security, as they can be sold to buy rice in times of shortage. NWFPs are estimated to contribute 40-50% of cash income of Lao rural households. A similar amount of 50 % of average household cash income is used to buy rice (more for the poorer families). NWFPs are therefore the most important safety net or coping strategy for the rural poor in Lao PDR.

The availability of this safety net is declining rapidly with rapid deforestation for timber logging and conversion of forests to agriculture. The challenge is to adopt land use systems that will keep enough forests in the landscape and allow access to forest resources for the poor. Another option is to domesticate wild species in agro-forestry systems and gardens. Lao forest foods also have potential in niche markets for export of gourmet foods. Awareness raising strategies could be applied to maintain popular pride in this rich Lao cultural tradition of having such a diverse range of natural food products.

The objective of this paper is to present conceptual framework forest foods and food security link to forest resource management to well being. NWFPs studies in different areas, important species, household uses and commercialization, NWFPs research projects in the past and going on project and to present the concepts note of one activity to be implemented on enhancing food security through sustainable management plan for Non-Wood Forest Products in the Agriculture Biodiversity Programme.

II. Activities

Recent studies on importance, role and values of NWFPs in Laos.

The largest diversity of NTFP species is found among edible plant products, edible animal products and ornamental plants (mainly orchids). These resources and others contribute significantly to the national economy due to their important role in the household economy, and in rural food security, which is one of the main government policies for the agriculture and forestry sectors (Clairon, 1998). Based on IUCN/NTFP Project has assessed the importance of NWFPs for the household economy in 28 villages of three provinces.

Table 1: Villagers' ranking of 50 most important NWFPs

Ranking	Product	Ranking, %		
		Men	Women	Total
1	Bamboo shoots	13	17	13
2	Fish	13	7	10
3	Vegetables	11	11	9
4	Wildlife	11	6	8
5	Cardamom	7	7	7
6	Rattan canes	6	6	6
7	Damar resin	2	4	5
8	Frogs	5	5	5
9	Mushrooms	3	6	4
10	Yang oil	4	4	4
Total top 10 products		75	73	71
Other 40 products		25	27	29
Total 50 products		100	100	100

Source: “*The Use of Non-Wood forest products in Lao PDR*”, DoF / IUCN Vientiane, Foppes J., Ketphanh S., November 1997.

When ranking NWFPs bamboo shoots stand out as the single most important product women usually attach more importance to products such as vegetables and bamboo shoots, while men prefer products such as wildlife and fish. Most other products seem to be collected by both men and women.

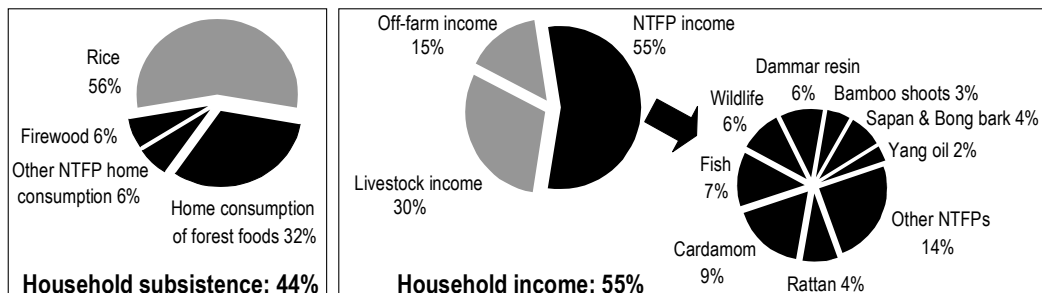
Household use of Non-Wood forest products

Non-Wood forest products play a central role in the rural economy of the Lao PDR, and have been studied extensively (Clendon 2001, de Beer 1991, de Vletter 1997, Enfield *et al* 1998, Foppes and Ketphanh 1997, 2000a, 2000b, Foppes *et al* 1997, IUCN 2002a, Lamxay 2001, Raintree and Soydara undated). It is known that wild plant and animal species provide a wide range of products for consumption and production, including animal proteins from foods such as wild meat, fish, frogs, shrimp, soft-shelled turtles, crabs and molluscs; plant foods such as mushrooms, bamboo shoots, wild fruits and vegetables, and honey; materials for house construction and handicraft production from bamboo, rattan, pandanus, broom grass and paper mulberry; traditional medicines; and livestock fodder and pasture.

NWFPs are known to be a particularly important component of household subsistence, especially food consumption. Villagers rank wild foods consistently as the most important forest resource (Clendon 2001), and it is thought that wild meat and fish are the most important source of protein in most people’s diet (Foppes and Ketphanh 1997). It is estimated that wild foods contribute between 61-79% of non-rice food consumption by weight, and provide an average of 4% of energy intake, 40% of calcium, 25% of iron and 40% of vitamins A and C (Clendon 2001). They are also commonly used as buffers against seasonal and emergency food shortages (de Beer 1991).

National studies have found that sales of NWFPs are worth an average of 11% of cash income, rising to 55% in forest-rich areas (NSC 1999). In many parts of the country NTFP cash income is far in excess of the national average. For example surveys carried out in Houapanh Province found that NWFPs contributed an average of 38% of village cash income, rising as high as 56% for households living within and adjacent to forests (IUCN 2002a), and on the Nakai Plateau NWFPs account for over three quarters of family income (Foppes *et al* 1997).

Figure 1: NWFPs in the household economy



Source: Foppes and Ketphanh 2000a.

Although it is difficult to aggregate these data at the national level, because of wide variations in social and cultural systems, livelihoods, dependence on forest, and access to other sources of production and consumption, estimates have been generalised for the whole country. On

average NWFPs are worth a total of almost \$320 per year for rural households in the Lao PDR, contributing about 44% of subsistence value, 55% of cash income, or 46% of the total household economy (Foppes and Ketphanh 2000a.).

Taking these average household data suggests that NWFPs may be worth some Kip 2.6 million per household per year or Kip 1,837 billion in total (Table 2). Firewood, fish and aquatic resource consumption values are excluded from this figure, as they are dealt with elsewhere in this study in Sections

Table 2: Annual value of NWFPs for household income and subsistence

	\$ per household	Kip per household	Kip billion total
Household subsistence	223	2,209,680	1,582.66
Household income	36	354,470	253.89
TOTAL	259	2,564,150	1,836.55

Non-wood forest products Trading.

Non-Wood forest products also have a high industrial and trade value. The most important components of the commercial NWFP harvest are mainly plant exudates (resin, oleo-resin, Siam benzoin), medicinal plants, spices/condiments, plant barks (paper mulberry or “po sa” / *Broussonetia papyrifera*, *Persea kurzii*, *Boehmeria malabarica*,) fruits (Malva nuts / *Sterculia lychnophora*), Sugar Palm (*Arenga pinnata*, *Dialium indum*), and stems (bamboo, rattan, broom grass) (Lamxay 2001, SoE 2000).

NWFP trade is mainly through middlemen who travel to different villages to buy the products from the villagers. In some cases, the sale of products goes through a long chain of middlemen before reaching the export companies. Most of NWFPs from the Lao PDR are exported to China, Vietnam, and Thailand, although certain products are also exported to Japan and Europe. China has been the biggest importer of medicinal products from the Lao PDR (Ingles *et al.*, 1998).

Much of the commercial harvest of NWFPs is exported to neighboring countries, where it is often processed and sometimes re-exported to other parts of the world. The reported export value of NTFP was about \$US 6.3 millions in 1993 representing 3% of the country total export (Sengdara. & Ketphanh 1996, cited by Ingles *et al.*, 1998) and dropped down to 2% in 1996.

Between 1994-1998 recorded exports of NTFP were worth almost \$160 million, or an average of \$31.8 million a year[†] (World Bank, Sida, and Government of Finland 2001b). Annual export values however varied greatly over this period (between \$1.1 million and \$73.2 million), and have now declined substantially from a high of over \$70 million a year in the mid-1990s.

Estimates of the quantities, values and current prices of major NTFP exports would suggest that today official NTFP exports are worth between \$6-7 million a year (Lamxay 2001, World Bank, Sida, and Government of Finland 2001a), or an average of Kip 64 billion (

[†] In addition, a large proportion of commercial extraction and trade takes place unofficially. It is however impossible to obtain reliable data on the scale or value of this utilisation.

Table 3).

Table 3: Commercial value of NWFPs

	Value (Kip billion/yr)
NTFP export value	64.35

Among all the exported products, medicinal plants score highest at about 70% of the total export value, followed by fibre products 15%, resin 8%, edible products 6%, and incense 2%. However, the total actual export value is suspected to be higher than the figure presented in the table as data for some products such as orchid stems, berberin vine, and *Smilax glabra* are still missing.

NWFPs market surveys in NWFPs marketing System Development project (TCP/LAO/3002).

According to provincial surveys on NWFPs trading in three pilot provinces of NWFPs marketing System Development project (TCP/LAO/3002) showed in the below:

Luang-Prabang province is rich in NTFP and trading is important within the province but also with Thailand, China and Vietnam. The potential NTFP products listed for increased production and also marketing are: mulberry, keam, pearmek, peack kea, bitter bamboo shot, sugar palm, chandai, orchid, pearkhat, marpee, bamboo (shoots and canes), cardamom, orchid, aquatic and wild vegetables, fruits, insect larva, fish, berberin, mushrooms, ngaka, medicine plants, marko, Kikang.

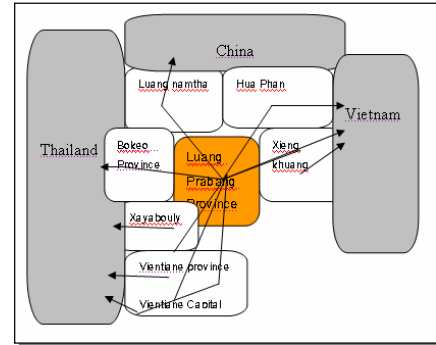


Figure 2. NWFPs Market Chain from Luang Prabang to neighbour countries

Savannakhet province is located in a strategic position between Thailand and Vietnam. The NTFP products currently traded and identified by the survey are: Rattan (6 species), mushroom (8 species), Bamboo shoots (6 species), Sang, Orchid, Cardamom, wild fruits, wild vegetables, Damar resin, Honey, Persia (Bong), insect, fish, frog, and bird.

Champasak province is also rich in NTFP resources and NTFP trading is an important source of income for the province. The main products identified during the survey are: Rattan (Wai Ta Leuak, Wai Sa Vang, Wai Deng/Kam Lao, Wai Hangnou), malva nut, bamboo (shoots and canes from 4 species), damar resin, berberin vine (Haem), cardamom, oleoresin, kha douk, frog, fish, and birds, wild fruits, mushroom (3 species), aromatic snail, wild vegetables. The trade of the NTFP from Champasak is mainly done with Thailand, Vietnam but also Vientiane capital. Handicraft (bamboo and rattan) is becoming an important activity in the province. More and more villages started to develop rattan and bamboo handicraft.

In the three provinces, the companies interviewed mentioned that there is no capacity (skills and equipment) in value adding techniques and processing, product quality management, and marketing. Some companies mentioned that they need capacity building training through government or project on processing and other value addition techniques, product development, and also marketing. Two important issues raised by most of the trading companies but also by provincial and district officer are (i) poor quality of raw material and (ii) fluctuation of the prices. The taxes system is complex with multilevel taxation and not often clear for the private sector.

Nutrition study on NWFPs.

Forest foods have high nutritional value than domestic animal or garden foods (FAO,1996). Chemical analysis of some traditional Katu foods corroborates this (Krahn 2005): Many wild plants and animals provide foods with greater nutrient densities than alternative foods imported through market networks in remote mountain areas. In some areas of Laos moreover, market food supply is highly restricted, with many days when even bananas are not available. The table below presents some important keys of NWFPs.

Table 4. Important key nutrients of NWFPs[‡]

Food Groups	Examples	Key Nutrients
Leaves, Stems, Sprouts	Leaves, ferns, Bamboo, rattan, ect..	Carbohydrates, beta-carotene, iron, Zinc, Calcium
Mushrooms	Polyporaceae and Russulaceae species, etc.	Calcium, Iron, Protein
Fresh water snails, crab, shrimp	Thiara aspernata	protein, fat, calcium, iron, Vit E,
Insects	Termites, dung and long horn beetles	proteins, fat, iron, calcium.

NWFPs research projects in the past and going on.

As the NWFPs play an important role to Lao people, particularly in rural areas, who are depends on natural resources for their livelihood, when the shortage of agricultural foods, they can collect NWFPs for their consumptions and sale to buy rice. In the other hand, Forest resources in Laos is still better condition comparing to neighbors countries like Thailand and Vietnam. The followings are some NWFPs projects have been carried out and going on:

Rattan & bamboo Research Project.

Rattan and bamboo Research project have been carried out from 1992 to 1995, with financial and technical support by International Research and Development Centre (IDRC), Canada and implemented by International Bamboo and Rattan Organization (INBAR) with Department of Forestry, Lao. PDR and Forestry Research Centre. The objectives of the project are to carry out taxonomic study on rattan and bamboo in Laos and establish germplasm collection plantation of bamboo and rattan. The project collected more than 30 species of rattan and 50 species of bamboo. However, there were lack of knowledge and human resources in this field, there were some species of bamboo and rattan could not identify properly in scientific way.

[‡] Extracted from important key nutrients of traditional upland non-rice foods.

IUNC-NWFPs Sustainable management and use.

The biggest research project on NWFPs has been carried out from 1996 to 2000 by International Union for Nature Conservation (IUCN) with Department of Forestry, Lao. PDR and Forestry Research Centre. The purpose of the project is to set up sustainable management plan on utilization of NWFPs. Project worked in three provinces Oudomxay, Champasack and Salavan. Project has played important role to natural forest conservation and

demonstrated to policy makers to pay more attention to NWFPs. The bitter bamboo shoots forest management in Ban Nam Pheng, Mor District, Odomxay province has proved to all development projects and policy makers on the importance of NWFPs very well for improving livelihood of rural people.

Bitter bamboo shoots (*Indosasa sinica*)

Oudomxay, North Laos

- Fresh vegetable, this variety sprouts in the dry season, high demand for off-season product
- Exported to nearby Yunan Province of China, big demand
- SME: Harvesting organized by a village selling group of 50 families (December-April), can collect 50 tons each year. They keep 10% of proceeds in village fund.
- Average income per family \$100 or 40% of total family income.
- Bamboo forest of 550 ha,
 - managed by villagers

Figure 3. Successful case of Ban Nampheng, Oudomxay province in bitter bamboo shoot

ASEAN- EU Biodiversity Programme

NWFPs cultivation Promotion project has been carried out in between 2002 and 2004. Project supported by ASEAN -EU Biodiversity Programme. The main activity was to promote villagers to grow rattan for edible shoots for consumption in Vientiane Province and Vientiane Capital. The project was good success, villagers adopted the technologies from this activity, e.g. rattan seed germination, maintenance of plantation and shoots cutting technique. In addition, the project also set up cardamom trial plantation in Oudomxay province.

Improving Benzoin Production Project.

Improving Benzoin Production Project is one of FAO-TCP Projects, working on NWFPs. The project was implemented in Luang Prabang province with focusing on improvement of benzoin production through application of different tapping techniques from Southeast countries, namely Thailand, Vietnam, Malaysia, Indonesia and Lao techniques. Due to short period of monitoring time, it was difficult to adopt which method is the best, however, there were three methods have been suggested to be the better results in term of benzoin production. The project has been continued and supported by EU in Luang Prabang province in 2nd phase.

FAO-SNV NWFP Marketing System Development Project (TCP/LAO/3002).

FAO in partnership with SNV is assisting the Forest Research Center (FRC) from the National Agriculture and Forestry Institute (NAFRI) in the implementation of the “Marketing system development for non-wood forest products project”. The Project started in September

2004 and is implementing its activities in three Provinces, Luang-Prabang, Savannakhet and Champasack.

The project objective is to establish a model for developing marketing systems for priority NWFP through the Market Analysis & Development (MA&D) approach, which will enable local communities to identify potential products and develop markets that will promote income generation through strengthening the capacity of stakeholders for NWFP marketing and sustainable management of NWFP resources. Developing and strengthening environmentally and socio-economically sound market development with enhanced marketing systems will provide income as well as incentives to local communities to manage NWFP resources in a (more) sustainable way. Consequently it will contribute in reducing the pressure on existing natural forest resources.

During the past two year of implementation the project supported to set-up of 10 Pilot enterprises (involving more than 239 people), which started activities – production, processing and marketing of their products. To strengthen the management capacity of the pilot enterprises, technical, financial and group management training were carried out in each villages. The 10 pilot enterprises are involved with 4 products such as 2 enterprises works on paper mulberry, 3 enterprises work on mushroom production, 3 enterprise work on bamboo handicrafts and 2 enterprise works on rattan handicrafts. Although, the enterprises have been set up and implemented for a short period of time, it is difficult to make sure that they can work sustainable without support and guidance from the project.

Rattan sustainable harvest and production project.

Rattan, listed under Non-Wood forest products (NTFP), is one of important resources from the forests that drives local economy. Similar rattan species are used locally and commercially for both food and cane material/handicraft

The project is implemented by Forestry Research Centre, NAFRI in two provinces within the Central Laos, Vientiane Province and Bolikhamxay province.. It is a part of The WWF and IKEA Co-operation on Forest and Cotton Projects and has a duration of 36 months and divided into two phases . The first Phase of 6 months aims at closing knowledge and information gaps in order to complete the implementation plan for Phase 2 (duration: 30 months). The project aims to identify the key species of rattan harvested, used, traded, and produced in Lao PDR and define status and potential to develop sustainable rattan harvesting model. The project will also identify and document patterns and trends of the regional rattan market at all stages to support improved marketing systems and thus local livelihoods.

Within the project sites, WWF and FRC will study threats and potentials for sustainable harvest of rattan as an incentive for local forest management regimes and to identify most preferred alternative to rattan harvesting and investigate and develop pilot studies at community level to assess the potential of alternative products and agro-forestry plantations
Rattan sustainable harvest and production project receives funding support form

Activity funded through the FAO-Netherlands Partnership Programme (FNPP).

The Non-Timber Forest Product and other terrestrial biodiversity is one of the five main components of national Agricultural Biodiversity Programme (NABP) in support of national priorities for food security and development. The project team prepared project proposal to

continue the marketing system development for NWFP project (TCP/Lao/3002) in Pine District to implement in five villages including one TCP project site village. The activity will focus on enhance food security through sustainable management plan for Non-Wood Forest Products .

The development objective of the project is to assist the Government of the Lao PDR in reducing rural poverty in the country and promoting sustainable use and management of forest resources through the development of appropriate NWFP management plan associated with sound marketing system. More specifically, it is important to understand the strong links that exist between food security, forest foods, and resource conservation and to incorporate this understanding into sustainable village forest management strategies.

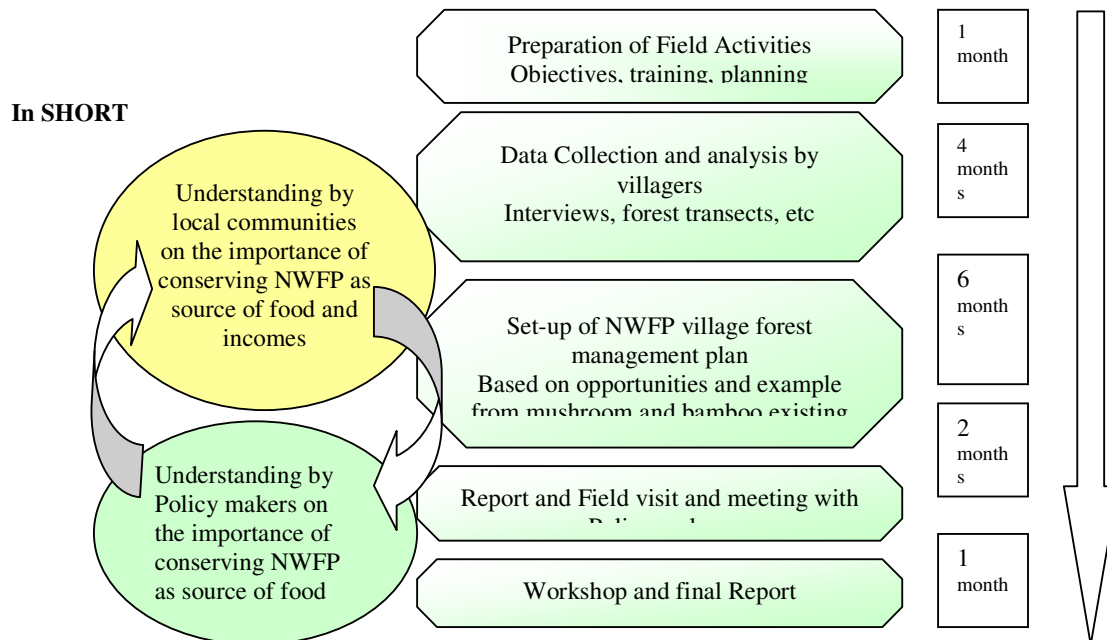
The specific objectives are:

- Demonstrate to policy makers the importance of NWFP biodiversity existing and its importance for food security as well as poverty alleviation and the need to integrate them into forest management plan to ensure long-term access to food for the rural community.
- Demonstrate to local community the importance of NWFP biodiversity in regards to the socio-economic development of the village (food, culture, medicine, incomes)
- Demonstrate to policy makers and provincial and district staff on the usefulness of the Market Analysis & Development (MA&D) approach tested by the TCP/LAO/3002 in regards to support local community in managing in a sustainable manner the NWFP resources for food but also income generation.

The outputs of activity (project) are:

- Model approach of integrating NWFP resource management into forest management plan and village development plan to sustain food security and sustainable socio-economic development of the villages
- From field activities and in linkage with Forestry Strategy 2020 and National Biodiversity Agriculture Programme, Policy makers (District, Province and National level) aware of the importance NWFP biodiversity existing in the forest and the need to integrate them into forest management plan to ensure long-term access to food for the rural community and support to replicate the model approach.

The main tools will be used in this project are Market Analysis & Development (MA&D) approach, Participatory Rapid Appraisal (PRA), Interviews forms and NWFP forest survey and prepare field activities planning with all project stakeholders. Project will work around Dong Kapok forest area (Evergreen/Dipterocarp forest) and will involve 5 villages including Ban alouay kham noy (village pilot of TCPLAO3002). The total period of project is 14 months, from October 2006 to November 2007. By the middle of year 2007, the project will have finalized NWFP sustainable management plan, through implantation of this project , it can demonstrate to policy makers how villagers manage their NWFP resources sustainable through field visit and documentation. The conceptual framework is presented below.



III. Analysis

The activity will take place around Dong Kapok forest areas in Pine District, Savanakheth province. Around 60 households in five villages, estimated about 360 people will get benefits from this project.

Through integrating NWFP resource management into forest management plan and village development plan to sustain food security and sustainable socio-economic development of the villages. To ensure that sustainable NWFP resource management plan contribute to achieve food security, nutrition levels and sustainable livelihoods. The following activities need to be done in the project:

- Assessment by the villagers of the NWFP resources available in the surrounding forest. Tools to be used – Seasonal calendar, forest transect (mixed groups, man and woman), Forest food resource matrices for dry and rainy season, participatory resource mapping, livelihoods system diagram, and so forth. NWFP inventory methodology will be developed depending of the NWFP products.
 - Villages meeting – organisation interviews and forest transect
 - Field survey (forest transect) and interviews with selected villagers
- Forest transects
- Interviews– group and individual interviews (semi-structure interview)
 - Record of the biodiversity of NWFP resources present in the forest (main species collected) and linkages with different uses (food, marketing, medicine, shelter, social activities, etc)
 - Record of the biodiversity of NWFP used by the villagers in their home gardens

- Presentation of the survey results and identification by the villagers (listing, group meeting) on main NWFP with their importance to food security and nutrition, but also roles in the livelihoods of the villagers (source of cash income (to buy food)). Evaluate their potential and constraints and prioritize them based on local conditions, such as ecological systems, socio-economics, traditional knowledge and cultures, land use, NWFP resources and also market opportunities (used product Assessment Table, and others tools from MA&D).
- Awareness session for the village target group on the presence of the NWFP biodiversity in the forest, their used in home garden and their importance to food security, nutrition and cash incomes at village level.
- Assist villagers to identify activities based on the constraints and opportunities identified for the selected NWFP according to (i) food security, (ii) natural resources, (iii) marketing, (iv) social and policy; and (v) technology.
- Review the status of the existing mushroom and bamboo handicraft pilot enterprise – provide assistance according to the needs identified by the groups.
- Villagers and DAFEO to develop NWFP village sustainable forest management plan – such as community based NWFP harvesting rules and multi-village NWFP conservation rules for the selected NWFP in linkages with the Forest Management Plan and Village Development Plan. Organize working group meetings between the representative groups on each of selected villages. Establish village cluster management group, whom will have some responsibility on the implementation of the NWFP sustainable forest management plan.
 - Training on domestication and/or replanting (enrichment) in natural forest depending on the selection of the NWFP species selected by villagers.
 - NWFP village sustainable forest management plan forest established by villagers and officially recognised and apply in the target villages and by District and Province Authorities.

VI. Conclusion

To keep NWFPs component of agricultural biodiversity to be addressed in national policies, it is important that all of NWFPs activities, particularly forest management be linked to all national development programmes such as national forestry strategy 2020, national growth and poverty reduction strategy, national socio-economic plan 2006-2010 ..etc.

It is important to build capacity and extension programmes to all levels to raise awareness and make possible to act. To Promote more on successful cases on NWFPs e.g the bitter bamboo shoot management in Ban Nam pheng, Oudomxay province.

The funding supports from governments, donors, development organizations and Non-Government Organizations have to allocate to this important programme.

In general, NWFPs plays important role for national economic, livelihood of rural people, it brings income to them, particularly in the rice shortage period, NWFPs as source of food and

income for them. However, NWFP trading in Laos, mostly are raw materials, there is no capacity (skills and equipment) in value adding techniques and processing, product quality management, and marketing.

The taxes system is complex with multilevel taxation and not often clear for the private sector. There is a need to formulate a project to study on this issue by testing with key NWFP commercial species in different phases.

The major constraint on NWFPs utilization and development is lack of knowledge. There are critical gaps concerning propagation, silviculture, enrichment, harvesting and sustainable management of wild populations of NWFPs as well as of their domestication. There is also a need to identify NWFPs species with importance for food security, commerce and biodiversity conservation and to determine which of these are currently threatened so that appropriate interventions may be taken. Knowledge for developing of in-situ conservation efforts is also needed

The extent and nature of domestic utilization, trade and markets of NWFPs is unknown. Similarly, the market forces driving unsustainable as opposed to sustainable use of NWFPs are poorly known and there is little information on prices, quality standards and international market access requirements. This limited capacity to observe, identify, measure and control NWFPs trade has a negative effect on sustainable use of NWFPs by providing conditions under which trade in prohibited products has flourishes.

Currently, there are few government officials responsible for NWFPs development and these are split among a number of agencies with limited capacity, in terms of both human resources and equipment, to undertake the tasks required. Therefore, implementation of policy regulating marketing and development of NWFPs resources will require substantial capacity building both within Government and with respect to other stakeholders, including villagers, traders and processors.

Under activity funded through the FAO-Netherlands Partnership Programme (FNPP). In order to demonstrate to policy makers to understand the importance of NWFPs to Lao people, particularly to rural people. The following tasks to carry out:

- Developed leaflet and poster on the model approach .
- Report to policy maker presenting the model approach (MA&D framework) including the NWFP village sustainable forest management plan, and recommendation to be taken at policy level in order to scale-up the model approach.
- Organise field visit with policy makers to present results and lessons learnt of the field activities. Meeting with villagers.
- Organize final workshop with stakeholders and others organizations (NTFP network members, UNDP, etc) to present the model approach, results and recommendations.
- Filed visits by villagers to exchange lesson learns from different areas.

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