

TABI UPdate



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TABI's Special Focus on.... Non-Timber Forest Products

"TRADITIONAL MEDICINE PROTECTS BIODIVERSITY"

An Overview of Medicinal NTFPs in the Lao PDR

"Biodiversity is of vital importance to traditional medicine as the source of our raw materials" explained the Institute of Traditional Medicine. Established in 1976 by the Ministry of Health, the Institute of Traditional Medicine is the only institution of its kind in the Lao PDR dedicated to the on-going research in traditional Lao medicine and the use of medicinal plants.

In a survey of 600 households, 77% stated that, based on their perceptions of the effectiveness of traditional medicines, they regularly use these to treat both acute and chronic diseases.

It is believed that the use of traditional medicine is ever on the increase, especially in their use in prophylaxis and also as products for everyday use; for example health supplements taken to improve or maintain their general bodily health such as Moringa tea, known for its nutrient content and anti-oxidants properties.

The Institute is working with 10 traditional medicine stations throughout the country in the preservation and sharing of knowledge of the collection of medicinal plants. In some regions, traditional healers are finding it more and more difficult to gather the necessary plants from the forest. Two causes cited are the increased pressure on forest lands [e.g. by land concessions] and the growing demand for medicinal plants like Cosilium and orchids in neighbouring countries.

As part of the response to this pressure, the Office of the Prime Minister issued a Decree [No 115] in April this year in order to stop the collection and export of Dendrobium orchids. The Government is also encouraging the domestication of medicinal plants, where possible.

Through training, the Institute provides not only a platform for collecting and sharing knowledge but also acts as a channel for raising awareness of the need for the careful collection, management and conservation of medicinal plants.

The Institute of Traditional Medicine is working with TABI in order to provide advice to the District Health Department and stakeholders on traditional medicines and to give technical support.

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More on NTFPs

*"Growing
Medicines"*

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“Growing Medicines”

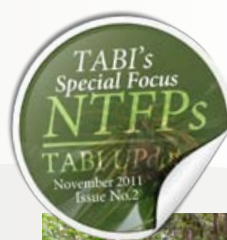
Medicinal Plants Sub-Project – Luang Prabang

In Luang Prabang, TABI is assisting the District Health Office of Phonexay District in their work with six villages of the kumban of Houay Khing in the conservation and sustainable use of forest products as well as in the promotion of village gardens for the growing of home remedies. The idea is to generate and promote the sustainable use of NTFPs resources but also the domestication of plants for medicinal purposes.

After the initial collection of information on the use of traditional medicine and its local practitioners, the villagers and traditional healers began to make an inventory of the commercial medicinal plants, their use and their habitats. Currently, this ever-growing inventory includes 78 medicinal plants. The villagers have established so-called “collection zones” based on the identified habitats to allow the regeneration and conservation of herbal medicinal plants.

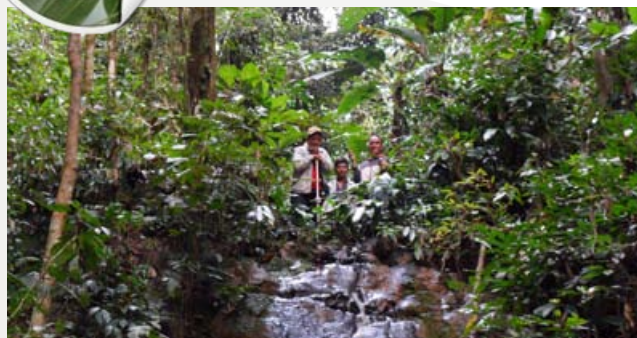
In parallel with this, in order to increase household income, medicinal plants, suitable for domestication and marketing, have been identified and villagers are currently beginning their cultivation.

To sum up, this TABI supported Sub-Project is aimed at the sharing of indigenous knowledge, advocating the benefits of local medicinal plants, increasing family income from domestication and marketing of selected species while contributing to the sustainable use of forest resources.



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Houay Khing villagers collecting medicinal plants. Photographer: TABI



Used for medicinal purposes, the *Diplazium esculentum* is also the most commonly eaten of all the fern species in Southeast Asia. Photographer: Mr. Khamphone Sengdala



Establishing a “collection zone” with the objectives of regeneration and conservation of medicinal plants. Photographer: TABI

1

The main benefit of biodiversity for rural population of Lao PDR is related to the use of forest products.

2

757 plants and 150 animals have been identified as NTFPs, but the real figure is probably 4 or 5 times higher.

3

The diversity of NTFPs is an essential part of rural food security, by direct consumption, as well as by selling in times of rice shortage.

4

In the uplands NTFPs provide up to 50% of cash income of rural villages.

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“Moving Towards Domestication”

NTFPs Sub-Project – Xieng Khouang

In the province of Xieng Khouang, NTFPs are now one of the main sources of villagers’ incomes, as a result of the boom in the demand of traders. However, the province in general, and Phoukoud District in particular, are facing a serious decline in the availability of various commercially valuable NTFPs and thus TABI sees it as very important to initiate activities to improve of the management of NTFPs and trials in their domestication.

After a survey carried out in April this year, 210 families from six villages of Phoukoud District were identified as resource users and interested in the cultivation of NTFPs like bamboo, rattan, orchids, broom grass, “pom” [a medicinal tuber] with the objective of achieving their domestication, conservation and improved management, as well as income generation. TABI also hopes that these projects will help to reduce the encroachment on forests resulting from NTFP harvesting as well as providing valuable ideas and lessons for villagers in the sustainable management and use of NTFPs.



Clockwise from the the left | Plantation of *Dendrobium friedericksianum* | Farmers planting a field of *Amorphophallus* | *Bamboosa Tulda* domesticated for its tasty shoots | Stems of *Dendrobium formosum* are dried for medicinal purposes
Photographer: Mr. Khamphone Sengdala

In these six villages of Phoukoud, NTFPs now come in third place, after livestock and rice, in terms of their importance in the generation of household incomes. As a result of the essential role played by NTFPs in people’s livelihoods and in agrobiodiversity, a series of village interviews were conducted. The following threats were identified: over-harvesting, detrimental harvesting techniques, forest fires and land clearing for upland rice.

Over the coming year, five TABI Sub-Projects will address these issues and work towards the domestication and better management of NTFPs through a series of preparatory activities [selection of NTFPs, preparation of land and seedlings] and practical training of 210 families on the collection, cultivation, as well as on management and harvesting methods. The production of bamboo, rattan, orchids, broom grass and “pom” is now on-going and will hopefully lead to the successful harvesting and sale of NTFP products.

TABI aims to gain further insights from these Sub-Projects in terms of the lessons learnt and the possibility for the further expansion of the domestic cultivation of these five NTFPs in the future.

More... NTFP Facts

- 5 NTFPs contribute to roughly US\$ 6-7 million per year or 2% of total export volume of Lao PDR.
- 6 Cardamom [*Amomum sp.*] and malva nuts [*Scaphium macropodum*] both used in Chinese medicine, are the most important export products, together representing 60-70% of the total NTFPs export value for Lao PDR.
- 7 The main NTFPs export destinations are China, Thailand and Vietnam.
- 8 The local and macroeconomic values of NTFPs provide strong economic incentives for biodiversity management and conservation.
- 9 The fast changes from subsistence farming to market economy, with a rapid expansion of mono-culture plantations and the resulting transformations of the small-scale agriculture landscapes, lead to an increased pressure on the still rich NTFP resources and biodiversity.

CONCLUSION

NTFPs are uniquely essential for food security and local as well as national economy. They are a key element in poverty alleviation, forest and biodiversity conservation.

REFERENCES

“Non-Timber Forest Products in Lao PDR: a practical application of the ecosystems approach?” Joost Foppes and Rachel Dechaineux IUCN-NTFP Project

Summary of Lao PDR National Report on Protected Areas and Development, ICEM, 2003

“NTFP use and household food security in Lao PDR” Joost Foppes and Sounthone Ketphanh, Forest Research Centre [FRC] and SNV, the Netherlands Development Organization

Improving the Planning of Rotational Agriculture and Village-based Forest Management

by participatory forest and land use planning [pFLUP]

TABI website: Maps of Phonexay and Phoukhoud Districts
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Developing effective processes and pilot implementation of pFLUP is a core focus of TABI, and its aim includes sustainable upland agricultural for food security and effective village forest management and utilisation. pFLUP is well progressed in 17 villages in the village clusters of SopJia and Khueng-Longhang in Phonexay and Phoukhoud Districts. The dry season 2011-2102 will see pFLUP initiated in 3 or 4 more village clusters.

TABI's pFLUP works in all villages of a village cluster in parallel - we do not aim to finish one village, then move to the next, but to conduct specific tasks in all villages before then moving to the next task. The main tasks undertaken in all villages of a village cluster, sequentially, are:

1. Understanding and mapping village geography: so that staff and villagers are working 'on the same page-map'.
2. Defining and surveying village boundaries, starting with inter-village networking.
3. Understanding and mapping current forest and land use and management.
4. Data collection to understand village and household level production of crops, NTFPs etc.
5. Inter-village and District meetings to review current land-use and develop strategies to improve forest and land use management.
6. Forest and agricultural land zonation and management planning.

pFLUP is difficult to implement correctly and usefully, especially in the uplands. There are few examples that reflect the realities and needs of the villages, and are also used by the villages. Why is pFLUP so difficult?

1. Difficulties in understanding the land use situation in landscapes dominated by shifting cultivation

Left: A Satellite Image Map (SIM) is the first step. | Right: Mapping of current land use, including upland fields and forest. Photographer: TABI



Left: Villagers and staff survey Donsai village boundaries. | Right: Mapping the rivers of Huay Dong is essential to obtain maps reflecting the reality. Photographer: TABI

- agriculture, and planning for the improvement and development of these farming systems.
2. Confusion in the interpretation of various laws and policies, for example:
 - [i] shifting cultivation eradication or stabilisation policies. TABI is proposing a re-focus on promoting stabilised rotational agriculture as appropriate.
 - [ii] the three national level forest categories cannot be directly applied to the village situation. TABI thus uses forest categories that villagers use and understand, which in most cases are types of use managed forest.
3. Difficulties to produce maps that reflect the real situation re. forest and land use, and maps that are comprehensible to both staff and villages.
4. Language difficulties: Often the main language of staff [and the laws and policies they talk about] is not the language used daily by villagers, which leads to misunderstandings.

To overcome these difficulties and to produce land management plans that are meaningful and used by villages, TABI has taken various initiatives, including:

- [a] Allow for and identify 5 to 8 year rotations for upland rice/crops, but with all villagers cropping as a group.
- [b] Identify households who cultivate land and would be affected by designation of a particular area as a forest zone.
- [c] Focus on clearly defining and marking the boundaries between agricultural and forest zones – also essential for community land titling.

Another important principle is not to rush, or set unrealistic targets, for the completion of pFLUP – this invariably leads to a PLUP which may be 'finished' but is wrong and will not be used by villages or the relevant government agencies. TABI is currently working with the Lao Government and project partners to encapsulate the above principles and approaches into a revised toolkit for participatory forest and land use planning [pFLUP].



NOVEMBER 2011

International Day for Biological Diversity Celebrated Xieng Khouang & Vientiane Capital - Lao PDR



Mr. Douangchit Changxayvang, Xieng Khouang Vice-Governor, chairing this special meeting. Photograph courtesy of IUCN.



FURTHER INFORMATION ←

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IUCN and The Department of Forestry were very glad to be involved in the first ever International Day for Biological Diversity [IDB] celebration in Paek, Xieng Khouang province. On May 24th 2011, representatives of the Ministry of Agriculture and Forestry, the Xieng Khouang governor's office, and the provincial offices of Xieng Khouang, Luang Prabang, Houa Phan and Vientiane, TABI, IUCN and SDC gathered to exchange ideas about important biodiversity issues in Lao PDR, specifically in the provinces represented.

Loss of biodiversity - the variety of animals, plants, their habitats and their genes - on which so much of human life depends, is one of the world's most pressing crises since it is occurring at an alarming rate. In Laos, where a diverse range of species support the livelihoods of many, for example through the collection of many types of non-timber forest products, the decrease of biodiversity is worrying. In Laos, IUCN is working to preserve biodiversity through: engaging the private sector, raising public awareness of biodiversity, targeting conservation of specific endangered species [e.g. gibbon, saola], supporting sustainable management of natural resources [particularly in Protected Areas and key wetland sites], and supporting Convention on Biological Diversity [CBD] institutional planning.

During the meeting, Provincial Deputy General Governor, Mr. Douangchit Changxaywang strongly highlighted the importance of conserving wildlife and other natural resources that support local livelihoods. During breaks, participants enjoyed looking at species identification posters made by school children and shopping for sustainably harvested goods that demonstrate the diversity of the area's resources.

IDB was also celebrated in Vientiane Capital, on 20th May, with an additional focus on launching International Year of Forests, through technical seminar hosted by the Minister and Vice Minister of WREA. Both of these IDB events contributed to TABI's goal of raising awareness of the importance of biodiversity conservation in Lao PDR.



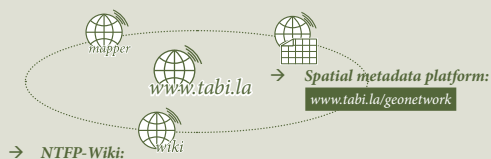
www.tabi.la

TABI Resources

Selected online TABI resources available through the TABI webpage:

→ NTFP-mapper:

www.tabi.la/articlemapper



→ NTFP-Wiki:

www.tabi.la/lao-ntfpwiki

TABI information & knowledge capturing and communication tools for Sub-Projects:

→ Sub-Project Info Sheets:

<http://www.tabi.la/en/knowledge-base/infosheet.html>

→ Sub-Project Insights:

<http://www.tabi.la/en/knowledge-base/sp-insights.html>

→ Voices from the Field [video]:

<http://www.tabi.la/en/knowledge-base/fieldvideo.html>

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Agrobiodiversity Curriculum - Launching Phase 2!

Phoukhoud District - Xieng Khouang



Photographer: TABI



The Sub-Project on "Agrobiodiversity awareness raising and curricula development" was implemented last year with great success. The five target schools of Phoukhoud District

with their 700 students experienced the importance of agrobiodiversity by documenting species in herbaria, establishing botanical gardens, and collecting information for curriculum. One of the major impacts is undoubtedly the children's raised awareness of the value and importance of biodiversity and its better understanding in the community. [See TABI Voices from the Field video: <http://www.tabi.la/en/knowledge-base/fieldvideo.html>].

Based on the success of the first phase of this Sub-Project, a certificate of merit was awarded to TABI by the Deputy Governor of Xieng Khouang in recognition of TABI's contribution to the development of the local agrobiodiversity curriculum.

To expand the approach implemented in the first phase to other districts and to further develop the local curriculum on agrobiodiversity, the Xieng Khouang Provincial Department of Education has applied for further support from TABI for a second phase of the Sub-Project, which is foreseen to run until April 2012.

A Survey on Use of Chemicals in Agriculture

Khoun District - Xieng Khouang

In Laos, pesticides are widely available on the market, mostly imported from neighbouring countries, with no translated instructions available in Lao language. In recent months, the Khoun District Khangpho Agriculture Development Centre's fish rearing activity was affected by the use of pesticides in surrounding villages.

TABI provided support to conduct a survey on the use of pesticides in these areas and found that most of the used herbicides, insecticides and chemical fertilizers are from neighbouring countries. Farmers could not read the foreign instructions and hence did frequently not use the pesticides properly, which caused excessive residues in the natural streams and led to the death of fish in the lower ponds.

Learning from this experience, TABI is preparing to work with the Khangpho Centre in raising awareness on the risks of pesticides misuse, and in reducing the use of agrochemicals through alternatives like biological pest control and composts. TABI is expecting from this initiative to minimize the on and off site impacts of agrochemical thereby contributing to the protection of agrobiodiversity.

TABI SUB-PROJECT Initiatives

TABI supports the implementation of Sub-Project [SP] Initiatives in two provinces and at the central level.

Currently, there are 33 Sub-Projects being implemented and 7 already finalised.

More information on SPs can be found in TABI SP Info Sheets and once completed, the results and lessons learnt are capitalised in TABI SP Insights.



Xieng Khouang Province

Completed Sub-Projects

Dissemination of agrobiodiversity related information by Khoun Community Radio

The Sub-Project supported 7 broadcasted programs on the importance of agrobiodiversity for local livelihoods, and raised awareness on conservation and use of local biodiversity.

Implemented by Khoun Radio;
Partners: DAFO

Promoting and establishing organic/GI production of Khao Kai Noi local rice variety
Protecting and enhancing the status of this local variety rice was done by increasing productivity and gaining market recognition and by contributing to sustainable agrobiodiversity management. Phase 2 currently on-going.

Implemented by DAFO; Partners: PAFO and NAFES

Raising students' and communities' awareness about agrobiodiversity
5 schools and more than 700 children have experienced the importance of agrobiodiversity through a variety of activities: establishment of 5 botanical gardens, documenting over 200 species, planting almost 1,000 trees.

Implemented by DoE and villagers

Indigenous water wheel training and pilot construction

Co-financed by CARE and TABI, this Sub-Project provided on-the-job training and the means to 10 farmers to not only build their own water wheel but to also support other farmers to implement the same technologies.

Implemented by CARE/PARUA; Partners: DAFO and villagers

On-going Sub-Projects

Promotion of native chicken raising, and the establishment of sustainable breeding, for consumption and marketing.

Phase 1 and Phase 2
Implemented by PLO and DAFO and villagers

Initiating "Crispy river-weed" processing and marketing
Implemented by D-LWU

"Little Chicken Rice from R2": cultivar and seed development
Implemented by DAFO; Partners: NAFES

Bamboo: forest plantation management, bamboo shoots processing-packaging, and marketing
Implemented by DAFO; Partner: PAFO

Paper umbrella production from Bor Sa
Implemented by Prov. Industry and Commerce

Biogas facilities development integrated with ABD conservation and management. Phase 2
Implemented by DoI; Partner: SNV

Orchids: forest management, plantation and marketing
Implemented by DAFO; Partner: PAFO

Kaem – Broom grass growing
Implemented by DAFO; Partner: PAFO

Rattan for shoot
Implemented by DAFO; Partner: PAFO

Nor cha Bamboo in Kheung Zone
Implemented by DAFO; Partner: PAFO

Pom – Medicinal plant in Kheung Zone
Implemented by DAFO; Partner: PAFO

"Little Chicken Rice": organic production and marketing. Phase 2
Implemented by DAFO; Partners: NAFES

Promotion of local medicinal knowledge and sustainable agrobiodiversity conservation
Implemented by PLNFC

Agrobiodiversity awareness raising for the students and communities in Khoun District, through incorporation of local curriculum into central curriculum. Phase 2
Implemented by DoE; Partner: DAFO

Phousan tea development
Implemented by PAFO; Partner: DAFO

Luang Prabang Province

Completed Sub-Projects

Improved native pig production systems for agrobiodiversity enhancement and livelihood improvement

The status and the role of the native pig production were raised through establishment of production groups and training of more than 120 villagers. As a result, the income of the pig farmers has increased significantly.

Implemented by PAFO; Partner: DAFO

On-going Sub-Projects

Conservation, improvement and utilisation of local rice varieties, linked to organic production
Implemented by PAFO; Partner: DAFO

Promotion of quality production and marketing: Crispy river-weed
Implemented by P-LWU; Partners: Provincial offices of Industry and Commerce, Health and WREA

Conservation, plantation and promotion of indigenous medicinal plants
Implemented by DoH; Partner: DAFO

Forest fire protection and community forest regeneration
Implemented by PAFO; Partner: DAFO

Fish reserve management, native species re-stocking and conservation of endangered species
Implemented by NAFREC; Partners: PAFO and DAFO

Management, restoration and market management of freshwater shrimp
Implemented by PAFO and DAFO

Regenerating fallow by *Macaranga denticulate*
Implemented by PAFO and DAFO

Domestication of broom grass planting
Implemented by PAFO

Development and promotion of organic vegetable production
Implemented by PAFO

Traditional upland rice seed quality improvement
Implemented by NAFES and DAFO

Establishment of a teak cultivation garden
Implemented by NAFREC and PLFO; Partner: DAFO