Proceedings of the Non-Timber Forest Product (NTFP) Workshop and Seminar

7 – 8 December 2006 Phnom Penh




Edited by Community Forestry International (CFI)

List of Acronyms

BFDK	*Buddhism for Development Kompong Thom*
BPS	*Buddhism for Progressive Society*
CANDO	*Cambodian NTFP Development Organization*
CBCL	*Cambodia Biologicals Co. Ltd*
CBO	*Community-based Organization*
CBNRM	*Community-based Natural Resource Management*
CBNRM LI	*Community-based Natural Resource Management Learning Institute*
CDA	*Children's Development Association*
CDRI	*Cambodia Development Resource Institute*
CED	*Community Economic Development*
CEDAC	*Centre d'Etude et de Developpement Agricole du Cambodge*
CNIBI	*Cambodia National Indigenous Beekeeping Institute*
CMCC	*Custom Made Modi Crafts Centre*
EPDO	*Environment Protection and Development Organization*
FA	*Forestry Aministration*
FAO	*Food and Agriculture Organization*
FFI	*Fauna & Flora International*
ICS	*Istituto per la Cooperazione allo Sviluppo*
MDG	*Millenium Development Goals*
MOE	*Ministry of Environment*
NSDP	*National Strategic Development Plan*
NTFP	*Non-Timber Forest Product*
NTFP EP	*Non-Timber Forest Product Exchange Programme*
OAUS	*Oxfam Australia*
OGB	*Oxfam Great Britain*
RGC	*Royal Government of Cambodia*
RPFD	*Rural Poor Family Development*
TERRA	*Towards Ecological Recovery and Regional Alliances*
UNDP	*United Nations Development Program*
VSO	*Volunteer Service Organization*
WP	*Wathnakpheap*
WCS	*Wildlife Conservation Society*
WMC	*Women's Media Center*
WWF	*World Wilde Fund for Nature*

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Background

NTFPs (non-timber forest products) play a vital role in sustaining rural communities in Cambodia, particularly those living close to forest areas. NTFPs include a wide array of forest products, such as resins, mushrooms, bamboo, rattan, medicinal plants, wild fruits and vegetables, as well as firewood and wildlife. NTFPs not only serve as a safety net in times of food shortage, but also as a valuable source of household materials and income.

Despite the high dependence on NTFPs among forest users, there are still many barriers inhibiting the generation of greater benefits from these resources. In Cambodia, such barriers include issues of tenure security, lack of processing skills and limited market access. In order to address these issues, numerous NGOs are working with communities to advocate for national laws and policies that would be supportive of community-based forest management and NTFP livelihood development, and develop skills in processing NTFPs and accessing markets.

A number of researchers have carried out studies to try to gain a better understanding of NTFPs in Cambodia and their relevance to local people; NGOs have worked with communities to develop skills in processing NTFPs and accessing markets; and national laws and policies have been put in place, which relate to management of NTFPs. The challenge of developing NTFPs towards livelihood and forest conservation improvement is not unique to Cambodia, but applies equally to neighboring countries.

In partnership with the Forestry Administration and the Ministry of Environment, several local and international NGOs concerned with rural livelihoods and environmental conservation decided to organize the National Non-Timber Forest Product (NTFP) Workshop and Seminar in order to draw together data and experience related to NTFPs. The objectives were identified as follows:

1. To provide an opportunity for a range of stakeholders to share their experiences, strategies and solutions related to NTFP development.
2. To identify common issues and challenges with neighboring countries, to allow mutual learning.
3. To promote coordination and networking amongst the broad spectrum of stakeholders at every level (local, regional and international) for further exchange of knowledge and more holistic responses to NTFP development.
4. To develop strategies for improving NTFP production

The event was attended by nearly 100 representatives of government, academia, nonprofit and private sector organizations, and local communities concerned with NTFP issues. The first day was organized as a workshop with participants primarily from local NGOs and communities in the provinces in an effort to collect and summarize local experience. The second day was organized as a seminar with more in-depth presentations on specific issues related to NTFPs, including presentations on legal, economic, processing, and marketing issues.

The event took place on December 7 and 8, 2006, at the World Vision Auditorium in Phnom Penh. The Workshop and Seminar received most of its funding from the Non-Timber Forest Product Exchange Programme based in the Philippines. The event was co-hosted by NTFP EP, CFI, and Oxfam, in partnership with the Forestry Administration and Ministry of Environment. The CBNRM Learning Institute moderated and facilitated the 2-day event. A number of other organizations and institutions provided input and advice in the organization and preparation for the workshop, including CDRI, ICS, VSO, CAN-DO, and WWF.

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Proceedings of Day One (7 December 2006)

Introduction: Mr. Ken Serey Rotha, Facilitator

There are representatives from NGOs, civil society, communities and government agencies who are involved in the NTFP sector. The meeting today will last the whole day with high level representatives from government participating. NTFPs play a very vital role in supporting livelihoods of local communities. The discussion on NTFPs today is of crucial importance. I would like to take this opportunity to say our workshop has been organized by the NTFP Exchange Programme, Community Forestry International (CFI), Oxfam, the Ministry of Environment (MoE), Traidcraft, WWF, CAN-DO, CBNRM Learning Institute and other NGO partners.

Welcome Remarks: The Importance and Potential of Non-Timber Forest Products in Asia, Dr. Mark Poffenberger, Community Forestry International (CFI)

For centuries, non-timber forest products have been a key element in the economy and trade of Asia. Despite the globalization of the World's economy on the rise of industry, NTFPs remain an important source of income for hundreds of millions of rural people. The Asian rattan trade alone is valued at well over one billion U.S. dollars. This conference brings together producers, buyers and researchers to explore how Cambodia's NTFP sector can be developed to benefit rural people and the national economy.

There is tremendous potential to further develop NTFPs as a source of rural livelihoods. Three areas where attention is needed include NTFP production systems, processing techniques, and marketing strategies. Production can be enhanced through forest protection, especially the control of fire and grazing, while productivity can also be enhanced through improved culturing and harvesting techniques. Improved processing can substantially enhance NTFP values, often raising the gate price of a product by 300 to 1,000 percent. Finally, improving marketing linkages can directly benefit producers by reducing the number of middlemen involved in bringing a product to market. Part of this strategy involves connecting NTFP gatherers with private sector outlets, while reforming forest policies to remove restrictive transit fees.

Developing NTFPs as a major economic sector requires cooperation between communities, forest departments, private sector firms, and other institutions. The organizers of this meeting hope that this will be a first step in establishing a collaborative effort to strengthen NTFP production, processing and marketing systems in Cambodia.

Workshop Objectives and Expectations from Participants: Mr. Ken Serey Rotha, Facilitator

Four main objectives for the workshop in regards to NTFP development were discussed and posted:

1. To provide an opportunity for a range of stakeholders to share their experiences, strategies and solutions related to NTFP development.
2. To identify common issues and challenges to allow mutual learning.
3. To promote coordination and networking amongst the broad spectrum of stakeholders at every level (local, regional and international), as a forum for the exchange of knowledge between communities to allow more holistic responses to NTFP development.
4. To develop strategies for improving NTFP production.

Presentations

Concept of NTFPs: Mr. Jenne de Beer, Executive Director, NTFP Exchange Programme

Definitions:

- Non-timber forest products (NTFPs) are all biological materials other than timber, derived from forests for human use.
- NTFPs can also be defined as 'looking at the forest from a local (indigenous) community's perspective'. Forest-based communities have been harvesting a wide range of NTFPs since ancient times - both for household use and as a source of income.

Major NTFPs in the region:

- Bamboo & Rattan.
- Forest Honey.
- Resins & Gums.
- Aromatic & Medicinal plants.
- Forest Fruits & Nuts.

About Us:

- The NTFP Exchange Programme for South & Southeast Asia (NTFP-EP) is a collaborative network of NGOs and community-based organizations in the region.
- We have partners in India, the Philippines, Indonesia, Malaysia, Vietnam, and since recently Cambodia.
- Our shared goal is to strengthen the capacity of forest-based communities for the sustainable use and management of forest resources.

How & What:

The NTFP-EP works towards its goal by:

- Facilitating the exchange of expertise, experiences and approaches.
- Providing technical support.
- Documenting best practices and success stories.
- Mobilizing resources and essential contacts.

Ratanakiri Situation on the Issues and Challenges, Initiatives and Solutions for NTFP Development: Mr. Heang Sarim, CAN-DO

Ratanakiri is located in the northeast of Cambodia and is one of the most remote provinces. The current population of Ratanakiri is approximately 130,000. There are several indigenous groups including Jarai, Tumpuon, Kreung, Brau, Kravet, Kachok, Lun and some Phnorng and Rodei. These groups depend heavily on NTFPs. Ratanakiri is primarily an upland area and is rich in forest, wildlife, water, and mining resources with high potential for NTFP development. In Ratanakiri there are 3-5 main types of rattan: big, medium and small sizes which can be used to make a variety of products. There are also 3-5 main types of bamboo. There are more than 20 types of wild fruit species, such as malva nuts, contributing to sustaining livelihoods by providing cash income. Resin is another NTFP product with high potential.

There are 7 species of trees which provide resin in Ratanakiri. We also have 3 types of honeybees which produce a lot of honey. There are many other NTFPs including mushrooms, creepers or vines and traditional medicinal plants.

NTFPs are important for daily use in the family, traditional practices, and for marketing and generating income. People use rattan to build their houses and make household materials. The rattan leaf can also be eaten. Minority groups use rattan to tie buffalos during spirit offerings. They also use rattan and bamboo to make baskets, which they sell. Since local people often lack technical skills in processing, they often sell rattan as a raw material. Rattan is generally bought by external traders who primarily buy from areas outside community forestry areas.

The situation for bamboo is similar. Local people use bamboo for house building. In O Chum district you will see houses made almost entirely from bamboo except for pillars which are made from small trees. Bamboo is also used to make musical instruments, while bamboo shoots are used for food. Traditional houses for the bride and the groom are made from bamboo. Bamboo baskets may be sold for between $2.00-$5.00.

Malva nuts are used to make sweets or soaked in water to make medicine which sells in the market for between $1.50 - $2.50 per kg. Honey is used as food and traditional medicine and sold for between $0.60 - $2.50 per liter to traders who come to the village.

In 1995 and 1996, logging in the Dragon's Tail area intensified and threatened NTFP resources. If the forest is lost, the supply of rattan is also threatened since logging causes the loss of wetlands which are conducive to rattan growing. Forest fires also threaten rattan, particularly in areas without community forestry. For bamboo, the threats were strongest in 1995 and 1996 when there was large scale exploitation of bamboo for export to Vietnam to make chopsticks. The impact was particularly high in O Yadao district. People also cut bamboo to sell domestically. Every year traders from Stung Treng come to Ratanakiri to cut bamboo and float it down the river. Another problem encountered is the natural dying off of bamboo after flowering. Some districts are currently facing this problem, such as O Chum.

In the case of malva nuts, the problem is that people sometimes cut the tree, since the fruits are high and hard to reach. From 2002 to 2004 we faced this problem, but it is not clear if it will continue. In the case of honey, people collect it without appropriate techniques, according to traditional practice. The quality of honey is spoiled by the traders who mix it with sugar in order to increase the quantity, causing people to lose confidence in the quality.

I will present a case of NTFP management in Kong Kuy and Kres villages in Ratanakiri. They established community forestry in 1998 with support from the local NGO, NTFP. The project focused on tenure rights to the forest linked with community forestry (CF). We aim to conserve resources by linking them to economic values and improving the livelihoods of ethnic minorities. Communities are participating actively, and CAN-DO is identifying markets for the products so that local people can get a higher value.

In conclusion I have several recommendations for sustainable NTFP development:

- Promote sustainable harvesting of the resources.
- Improve production.
- Protect the forest ecology and biodiversity.

- Empower the community to make decisions in NTFP development, encouraging them to manage their own resources and respect traditional values and practices.
- Ensure that communities are officially and legally recognized by the Government to process and market their products.
- Ensure that the benefits from NTFP processing are spread throughout the community, not only among the harvesting group.
- Strengthen the capacity of the community for business, production, and financial management.
- Implement our work in accordance with the laws and policies of the Government in order to get its support.

Oddar Meanchey Situation on the Potential in Marketing, Processing and Improving NTFPs: Mr. Chee Boreth, Children's Development Association (CDA)

My presentation covers the situation of NTFPs in Oddar Meanchey. People in Oddar Meanchey lack knowledge in processing NTFPs and generally sell raw materials across the border. This is the case with rattan. During harvesting, the roots are often destroyed and the entire rattan is sold to traders. Villagers harvest according to the demands of traders and generally sell at a low price. The members of community forestry groups are often exploited by middlemen. When we study the price differential at the local level we observe exploitation. CDA has established community forestry committees in order to protect forest resources for local people. In Oddar Meanchey, the forest is rapidly being destroyed by powerful people. In Anlong Veng district, many resin trees have been destroyed and community income has decreased. CDA creates local management structures and provides training on NTFP processing like rattan mat weaving as an alternative to selling raw materials. CDA disseminates the importance of harvesting techniques in NTFP collection. We teach local communities how to harvest bamboo shoots so that the plant will continue to grow. Most of the NTFP products are exported.

We have conducted a study on the use of NTFPs in 8 communes in Anlong Veng district. We found that people generally own 50 – 250 resin trees and earn 250,000 – 300,000 riel per month from selling resin. There are also two types of mushrooms which are important income-generating products. A challenge with one of these types of mushrooms is that it cannot be stored for any length of time and gets rotten quickly. Another type lasts longer and is sold to Thailand. When we compare the difference between the prices villagers receive and the price in the market, we can see that local people are exploited. (See Table)

Village Prices and District Prices for Important NTFP Products		
Product	*Village Price in Riel*	*District Price in Riel*
Wood mushroom	500-1,000/kg	1,500-2,000/kg
Liquid Resin	17,000-20,000/ 30 liters	21,000-25,000/30 liters
Banteng mushroom	1,500-2,000/kg	3,000-4,500/kg
Honey	8,000-10,000/liter	11,000-12,000/liter
Solid resin	700-100/kg	1,500/kg
Rattan mat	35,000-45,000	50,000-61,000
Bamboo shoot	500-700/kg	600-1,000/kg
Sluk prich *(Melientha suavis)*	1,000-8,000/kg	1,500-15,000/kg
Wild ginger	300-500/kg	500-700/kg

The supply of honey in Oddar Meanchey is limited. Rattan is collected every month. Some children can assist in making the rattan mats while their parents go to the rice fields. Local people also collect and sell plants such as wild ginger.

The Government should participate in managing NTFPs, and we should enhance small scale business related to NTFPs. We need to improve the techniques of harvesting and production. The CF committees can manage funds and avoid exploitation by middlemen. NGOs can strengthen markets and assist communities to avoid transit fees at the border.

Bridging Culture and Commerce - Craft Development in the Philippines: Ms. Lulu Delgado, CMCC

My presentation is about crafts development in the Philippines. The Non-Timber Forest Products Task force is a network of organizations in the Philippines working with upland and rural communities on matters of land tenure, resource management and livelihoods. The Crafts Program started in December 2002 in response to the marketing needs of community partners involved in handicraft enterprises.

The objectives of the network are:

- To establish a regular demand for indigenous crafts, ensuring a stable source of income for the artisans.
- To develop marketing strategies that are based on specific needs of partner communities and that give proper value to culture-bound products.
- To strengthen livelihoods based on non-timber forest products as a long term means of forest conservation.
- To preserve and promote the continuation of traditional arts and lifestyles of upland craft makers.

We have faced a number of challenges, including:

- Production is bound by cultural practice and environmental sustainability (different work culture, slower processes, etc.).

- Most products are culture-bound (designs are not as flexible; limited function).
- Establishing a fair price for both producer and consumer.

Our marketing principle is to 'provide additional value to handicrafts by offering new products and designs to the right markets without compromising the cultures of the indigenous communities while keeping the sustainable utilization of the natural resources.' We aim for the products to meet the requirements of the market, and we recognize that the social value of the product will only be recognized by the buyer if the product meets his/her requirements for quality, function, and timeliness.

We employ different marketing strategies for different market segments. (See Table)

Market Segment	**Market Strategy**
High-end (Class A) households and industrial users (e.g., 5-star hotels)	Market development
Ethnic-appreciating consumers and commercial buyers	Market penetration
Tourists and general buyers	Market penetration

In order to add value, we focus on community capacity building. We have area marketing staff who work on diversification of the product lines. To ensure that the introduction of modern concepts to the traditional crafts would be sensitive to the customs and skills of the artisans, consultation and design clinics were held in Mindoro, Palawan, South Cotabato and Negros. So as not to add unnecessary pressure on the artisans, traditional skills are complemented by modern manufacturing processes for some designs.

Q&A

Question: (Khou Eang Hourt/WWF) Where do traders in Ratanakiri come from to buy rattan? Today we have two rattan businessmen here with us.
Answer: (Heang Sarim, CAN-DO) We do not have clear statistics on rattan sales and our study is based on information from villagers who inform us such as in Vensai district, traders come from Stung Treng to cut rattan for processing. For the export or delivery on the Sesan River, we are not sure if the rattan is processed in Stung Treng or exported to Laos. Where CF committees are established, they can manage well and the rattan does not cross the province borders.

Question: (Oxfam Australia) You mentioned exploitation by traders. How can you reduce the exploitation with the CF Committees?
Answer: (Chee Boreth, CDA) The community needs to strengthen its network for collection of products. When they are collected as a network, they are aware of the market price since CF members study the price so they can negotiate. When the middleperson comes to the village they have to contact the committee.

Question (Khan Vanna, Mlup Baitong). I was impressed by the remark that we need to improve income for forest-based communities. How do we improve income?
Answer (Lulu). We should focus on improving communication, increasing skills, and improving design.

Question: (Radio Journalist): What percentage of our population gets income from NTFPs? What

percent of the rural people depend on NTFPs?
Answer: (Sok Khim, OGB): According the OGB research with its NGO partners, we found that in the provinces where we researched (Kg Chhnang and Kg Thom) 70% of the villagers depend and rely on NTFPs.

Bamboo Growing Initiative – Issues and Lessons: Ms. Heng Chanthorn, Wathnakpheap (WP)

Wathnakpheap (WP) is a development NGO in Cambodia. We have projects on bamboo growing in Svay Rieng, Pursat and Siem Reap provinces. Our target beneficiaries include women and children who are vulnerable to trafficking. The outline of my presentation covers several points: first the experience of villages in bamboo growing, second, issues and challenges, and third, bamboo furniture and handicrafts production.

In the past, people grew bamboo mostly around their houses and in uplands. There were no large scale bamboo plantations. Bamboo growing and harvesting has been practiced according to traditional practice passed from generation to generation. First, villagers prepare the soil by digging a hole and planting a one-year-old seedling. If the seedling is more than one year old, the bamboo will not grow well. The seedlings are generally planted in the rainy season. When the bamboo is one year old, we separate it from the main bamboo without cutting the roots. Then it is soaked for 12 hours. We trim the top of the bamboo making sure it is one meter high. Then we use tree branches to support the bamboo to prevent wind damage. After 10- 15 days, the bamboo grows and produces blossoms. If insects try to destroy the bamboo (causing a black scar), villagers use pesticides. After the bamboo is 4-10 years old we start harvesting. Harvesting is also based on traditional practice. When villagers observe that the bamboo is slightly purple or red, they harvest it with a saw. In general, villagers harvest for household consumption and do not sell in volume (by ton). For example, they use bamboo to make fences, chicken coops, stables, etc.

Based on past experience, WP has faced some challenges:

- Villagers are not interested in bamboo growing and claim it is not beneficial to them.
- No dissemination on bamboo growing techniques, especially in poor areas.
- Villagers sometimes mistakenly believe that bamboo growing causes soil to become infertile.
- The selling price of bamboo is very low.

To address these problems, WP has some strategies and solutions. WP advertises bamboo products among the rural handicraft centers. WP encourages growing bamboo on barren land, not State land, but small, privately owned land around houses, which is upland or hilly. Third, we identify one or two village activists to participate on study tours in Vietnam to see the practice there. We encourage people to grow bamboo. WP disseminates that if one family grows one bamboo WP will give them 2000 riel as an incentive if the bamboo is grown properly. WP also provides vocational training for the production of bamboo furniture. This vocational training strategy encourages moving towards small scale enterprise. WP has established two enterprises and three groups in Svay Rieng. Skilled students receive facilitation support from WP, in terms of market price and identifying markets. We produce chairs and interior decorations. In Pursat we have two groups that involve youth participation as well.

In conclusion, the community is recognizing the importance of growing bamboo for household use, and taking the initiative to cultivate bamboo. With the introduction of furniture production, people are motivated to continue to grow bamboo. WP has established a stall for selling community bamboo and rattan products in Toul Kork, Phnom Penh.

Community Perspective on Honey: Mr. Im Noeum, WWF Cambodia Country Programme

I would like to talk about honey collection techniques. I am a Community Development Officer with WWF, working in Mondulkiri province. In order to present on honey I would first like to give an overview of Mondulkiri. Mondulkiri is one of the northeastern provinces in Cambodia. It is very remote and road conditions are very poor in the rainy season. The population is 82% ethnic minority, mostly Phnong ethnicity, and their livelihoods depend on natural resources and shifting agriculture. The map shows the forest area in Mondulkiri. The protected area, located in the district of Koh Nhek and Pich Chreada, covers 100,000 hectares.

WWF is working with the Cambodian Government to conserve the biodiversity of the Dry Forests, especially threatened wildlife. According to studies, the Dry Forests of Mondulkiri are rich in biodiversity. In 2009, the area will become an international ecotourism destination for wildlife viewing.

Ethnic minorities in Mondulkiri depend on swidden agriculture. In addition to swidden agriculture they also depend on the collection of NTFPs, such as honey. NTFPs are a secondary source of livelihoods after agriculture. Some 52% of ethnic minorities collect honey from the forest during the collection season. Bees like to build hives in cooler areas of the forest or along streams because they can access water to produce honey. Villagers use traditional methods to collect the honey. They use “fire balls” to collect honey to avoid being stung by bees. Another method is using traditional herbs to prevent being stung. They put bitter plum in the “fireball” to stop the poison from bees. When people go to the forest and see a beehive from which honey is not yet available, they make a mark to claim it. These are the traditional methods used and they are considered effective. They collect honey from February to May depending on the type of honey. Ethnic minorities make a lot of offerings to spirits. They use the beeswax candle made from wax to light the offerings. Honey is also used as a traditional medicine.

There are several types of bees in Mondulkiri. The type of bees that honey is collected from are called *Apis florea* bees, which have hives in trees of 1-2 meters in height. The bees produce honey from February and the hives produce between 1-10 liters. Another bee, called *Apis dorsata*, builds about 30 hives in a tree and produce between 60-150 liters per tree. They like to build hives in large trees. The reason *Apis dorsata* bees produce so much honey is because they fly to other areas for pollen collection, but the hive is in the same tree throughout the year. Recently, because of the clearing of other vegetation away from the large trees the bees have changed their behavior. Each time honey collectors collect between 30-60 liters; the amount, however, depends on the team member’s ability, the type of honey being collected, and the season.

There are a lot of problems in relation to honey collection:

- There is a problem with the quality of the honey sold; some people mix honey with sugar to earn extra profit in the market.
- Honey production decreases every year because even though traditional tools and methods are used, the collection has some impact on young bees.
- Increased collection of honey has reduced the availability of honey. This is due to population growth and collection by both young and old people; in the past only older people collected honey.
- Lack of rain also causes a decrease in honey production, as does the decline in the size of the natural forest.
- Pollution of water sources impacts bees.

It is very important for ethnic groups to have a marketing strategy to attract customers to buy honey, including improved packaging techniques. There has yet to be a project to assist people in making sure their products are attractively and appropriately packaged. Traditionally, honey has been used as a medicine in households, whereby people divide it among neighbors and friends in the village without selling. As of 2003, a honey market was established as more migrants came to the area and road improvements made it easier to get to Phnom Penh. There has also been a small market established in Sen Monorom (a town in Mondulkiri), due to an increase in tourists and visitors.

Honey can be sold in the community or exported to other districts such as Sen Monorom. Villagers also ask neighbors or friends to sell the honey in other districts. In 2006, honey sold for 8,000 - 9000 riel per liter in the community, and in Sen Monorom, the price ranged from 10,000-12,000 riel per liter. Middlemen sell the honey from 15,000 - 20,000 riel per liter.

Villagers have requested that WWF train them in sustainable techniques for honey collection, in packaging and storing techniques, and for assistance in finding markets. WWF plans to work with two village communes, to assist the communities in the harvesting and commercialization of honey. The project will coordinate training in sustainable collection techniques, processing and packaging and assist the communities to link with appropriate markets. A study tour of other sites will be undertaken with the community honey collectors so they can learn and improve their techniques.

Q&A

Question: (Prak Marina, FAO, Siem Reap) Based on experience, can we grow bamboo in a forest with tall trees? When you take bamboos to transplant, do you put them in water or grow them as soon as you uproot them?

Answer: (Ms. Heng Chanthorn, WP) We get information from the community. People we work with mostly grow bamboo around their houses and on high ground. Bamboo is not grown successfully on an open field. We grow them if there is sparse forest or forest with big trees. Big trees create favorable conditions in upland areas. Forest and hills are favorable for growing bamboo as compared with open fields. People find good bamboo seedlings and put them into water for one week or more. After one week they transplant them. They have roots so they can start growing. In the past, people grew them based on their traditional practice, but now they start to grow them in a triangle form. They put three bamboos together to make sure they support each other. If we grow one alone the wind blows it over and it dies, but in a triangle form they grow very quickly. We learned this from farms and private plantations.

Emerging Experiences around Sustainable Harvesting, Production and Marketing of Resin: Mr. Thaong Sophet, RPFD

This presentation covers several areas including: a background on resin, learning and benefits of resin, problems and impacts on resin, recommendations to help communities promote or improve resin, and next steps or future directions for RPFD.

Cambodian people have utilized resin for centuries, since ancient times. We cannot identify the starting point of use of resin. We have some documents available and pictures of resin use from ancient times, such as from Prey Kuk temple in the Jayavaraman period. Resin is important throughout Cambodia. Some resin has been exported to neighboring countries. Resin is part of our heritage and is a valuable product for households and communities, especially those living in or close to forest areas.

The resin business is a widespread business for rural people who generate a lot of income from it. Communities have legal ownership of resin trees. The Forestry Law stipulates clearly in Article 40, Chapter 49 on the use and management of resin trees for tapping. Based on our study, we learned a lot regarding the benefits of resin in not only generating income but also in contributing to the protection of forest resources. Both men and women can tap resin. Resin is an incentive for the community to manage the forest sustainably. At RPFD, we observe that resin trees are left standing while other trees are cut down. The community members respect each other and they are united in maintaining their cultural base. No community violates this trust by tapping resin from someone else's trees. They help each other to protect the resin trees and divide trees based on tradition and customary practice. Resin tapping is a major source of income. The RPFD study found that households with more than 150 resin trees can earn 75,000-120,000 riel, and this resin serves both their interest and the interest of fishers who use the resin to seal their boats. The income from resin promotes food security for families that may face food shortages for 3 to 4 months during the rainy season. Farmers who have resin trees and suffer from food shortages can buy rice on credit at the market because rice sellers know they have resin trees and will be able to repay in the dry season. Resin trees are also a source of supplemental cash income which can be used to buy school clothes for children and pay for health care. Tapping resin does not harm the tree because tappers are very careful to protect trees. After they burn the tree for resin they extinguish the fire because they are afraid it might spread and burn the forest. They may keep a store of resin in the forest for collection later. Prior to 2000, villagers stored resin in petrol tanks, but now they prefer to use 30-liter plastic containers, which make it easier for them to transport resin to the market. The study identified some issues affecting resin collection, including:

- loss of trees.
- loss of income and livelihoods of families.
- loss of links with markets including those of neighboring countries.
- loss of cultural values of local people living close to the forest.
- loss of confidence and trust among local people and communities.
- impacts on the rights of local communities.

RPFD has some recommendations to help local communities. First, communities need to protect and preserve resin trees to make sure they can prevent looting or illegal logging. Second, local communities need to work together to maintain the commercial value of resin. The community needs to

avoid selling resin according to the price imposed by traders. Poor people often end up being forced to sell resin at a sub-standard price. RPFD plans to organize a resin cooperative to increase the selling price for local communities.

Traditional Medicine: Dr. Heng Punley, Ministry of Health

I would like to talk about the situation in Cambodia with regards to traditional medicine. My presentation will cover the types of species of traditional medicinal plants in Cambodia and production in Cambodia, and other types of important threats and factors. There are between 2,000 and 3,000 species of medicinal plant identified in Cambodia according to documents. In Cambodia we know the scientific names of approximately 1,000 species of traditional medicinal plants.

We compiled information on plants that have scientific names using existing research. We have many plants that our traditional doctors use which are endangered species. Due to improper collection of NTFPs in Cambodia the roots of the plant are destroyed, causing loss of the resources. In the markets, there are many traditional medicinal plants sold both as raw material as well as processed products. Traditional medicine doctors make pills for sale at clinics, some which are licensed and others which are not. The Ministry of Health and the Ministry of Interior are planning to ensure that these businesses have a legal status to operate. With about 50 years of experience in our traditional practice, we observe the export of traditional medicine products, but we don't have access to statistics as these are handled by the Ministry of Commerce. The Ministry of Health has received five hectares of land from the Government to cultivate medicinal plants. We hope to encourage hospitals, schools and other facilities to grow traditional plants. We encourage more research on traditional medicine. Not many traditional medicines are tested or controlled by laboratories. We would like to encourage the local community to sustainably collect forest products. The Ministry of Health has a traditional medicine team and our research team is preparing documentation of traditional medicines.

Q&A

Comment: My name is Hak Ponee. I am from the Phnong ethnic group in Mondulkiri. We collect honey in the forest. We use dry wood to make a fire ball. We put fresh leaves of Pongor (local name of the tree species) around the dead wood to produce smoke and lessen the impact of heat on the bees. The leaves of this tree species emit a certain smell that prevents bees from stinging. After we make a fireball we put a string on it and wear it on our shoulder. We wear military uniforms or thick clothes. If we have gloves we wear them and put on a mask or something to cover our faces. Then we climb the tree to the beehive. When we climb the tree we light the fireball. Sometimes the bees don't want to leave the hive and they're afraid the larvae will die.

If we leave the comb there when we collect the honey, the bees will come back again two or three months later. We will not lose anything when we come back. Khmer people from Kampong Cham and Kratie eat the comb. Many of these people buy honeycomb from ethnic people and they say the comb is delicious. We collect honey in a group of eight persons together and in one day we can find five beehives with about 25-30 liters.

We make beeswax by pressing the comb and boiling and drying it. Sometimes there are some larvae in the comb so we make sure it is clean and that there are no larvae. After boiling we put the wax in a plate or small bowl, and let it dry. When it is already hard, we remove it from the bowl. We roll the wax, cut it, and use the candle to make offerings to the spirits when we have a house-warming party, a wedding, or a rice harvesting party. We collect honey during the day for Apis Florea bees (a bee species that makes one or two hives in a tree). *Apis dorsata* bees make 30 - 60 beehives on a tree. We collect them towards the end of March and early April. We always collect at night during the full moon.

For Apis Florea bees in the past our ancestors started at the end of March or early April but now we start in February because we want to get it early and avoid competition with each other. In the past, when we collected in March and April we got 5-10 liters of honey from *Apis florea* bees. Nowadays it is rare and we are able to collect only 10 liters from one beehive.

Q & A

Question: (Khou Eang Hourt, MoE/WWF) I am impressed by resin collection because resin is vital for people, especially in Ratanakiri and Mondulkiri. Resin supply is not stable, for example some trees will yield three liters in the first year and only 0.5 liters or less in the second year. Have you studied this issue? Also, who are the model collectors of resin among communities? Most often we see resin collection is based on traditional practice. If resin supply decreases from year to year, it may not be sustainable.

Answer: (Sophet, RPFD) We do observe the decline in collection of resin, although this depends on the tree that provides resin. The amount of resin may also fluctuate, for instance in the first year, there might be 1 kg, in the second year 0.5 kg, and in the third year, an increase again. The yield also depends on where the resin tree grows. If it grows next to streams or wetlands, the yield increases. If however, it grows on high ground, the yield is variable. For some resin trees, the yield declines over time. Another factor influencing resin yield is the market price. People collect a lot of resin when the price increases but when the price falls, they move to other occupations. So there are really two factors in the decline and variation.

RPFD will organize collection sites in the community and work on improving the quality of resin (avoiding mixing with oil or water which causes the price to decline). RPFD also plans to disseminate information on relevant laws so that people understand their rights in managing NTFPs such as resin.

Comment: (Thaong Sophet, RPFD) Households tend to own at least 100 resin trees per family, and they can earn 75,000-150,000 riel/30 liter container depending on the market price. For families with more than 500 trees, they generally need to hire someone in the village to help them collect resin.

Comment: (Sok Khim, Oxfam Great Britain)
Regarding the management of resin trees by communities, based on my observation the problem is that the number of trees managed is not high enough. Due to problems that have occurred, the loss of resin trees and impacts on people are severe. If we consider access to tree ownership, households can manage 300-500 trees easily, but in some areas the impact or the loss in ability to manage depends on other issues. Even those who manage 100 trees cannot manage well in areas where the Government wants to develop or invest. In regards to overall management, I'm not going to comment but I can say that households can manage 100-200 trees well.

Comment: (n/a) I would like to give an example of the impact of imported products on local livelihoods. In the past, communities collected 20,000 bunches of vines with good benefits for the community, but now nylon rope or string is imported and people have lost their income. There is a similar case with mats. Now people buy nylon mats and don't use mats made from natural materials anymore. The price of NTFPs has fallen and a source of income for people has disappeared.

Presentation of Group Discussions

Break-out groups were asked to discuss the three questions listed below. A summary of the results of the discussion on each question follows.

Are there other issues you face regarding NTFPs in your community not heard from in the presentations?
What specific initiatives being undertaken need to be supported? What type of support is needed?
What opportunities are there to develop NTFPs in your community/region/Cambodia?

Q1: Are there other issues you face regarding NTFPs in your community not heard from in the presentations?

- There are no appropriate techniques to estimate the productivity of resin.
- Lack of access to market information on NTFPs.
- Quality issues such as mixing sugar or water with honey.
- Wild forest fires.
- Hydro-electric projects.
- Forest clearance to make farmland or collect fuel wood leading to the loss of natural forest and loss or decline of NTFPs.
- Large scale investment, including economic concessions. Requires integrated plan for sustainable development.
- Mining extraction.
- Lack of promotion of small scale rattan handicrafts.
- Forest destruction and land grabbing.
- Improper or unsustainable harvesting techniques (such as for malva nuts).
- Lack of cooperation from local authorities.
- Difficult transport to markets due to informal taxation and middlemen who exploit local people.
- Low selling costs.
- Lack of linkage between buyers and sellers in the community.
- Illegal cutting of vines.
- Loss of agricultural land leads to overexploitation of forests.
- Resource security for communities.
- Exploitation of wildlife, endangering species and causing fire.
- Selling of resin trees to non-indigenous people (migrants).
- Pesticides poison bees.

Q2 What specific initiatives being undertaken need to be supported? What type of support is needed?

- Encourage forest regeneration and replanting of trees, distinguishing between forest and tree plantation.
- Request provincial authorities to provide assistance for commercial activities and ensure that there is advertising and implementation of marketing strategies. Also request assistance in conservation efforts.
- Implement CF management plans with exemptions from royalties and premiums on NTFPs during transportation and prevent illegal harvesting.
- Support an association of user groups.
- Improve technology to process and promote quality or to improve quality.
- Encourage conservation of endangered or rare species and encourage research and joint study with local communities.
- Work together on economic analysis.
- Establish stalls for selling and buying NTFPs.
- Provide more assistance and funding for CF and encourage cooperation with local authorities and NGO partners and government.
- Support enforcement of existing laws.
- Clearly demarcate forest areas and NTFP collection zones.

- Organize training courses on NTFPs.
- Conduct further research on NTFPs with participation of local communities.
- Establish more pilot projects for NTFP processing.
- Provide microfinance for NTFP enterprises.

Q3 What opportunities are there to develop NTFPs in your community/region/Cambodia?

- Access existing and increasing market demand for NTFPs
- Sell NTFPs to eco-tourists who come to visit other attractions such as Angkor Wat and the Mekong river dolphins.
- Seek job creation related to NTFPs.
- Establish a market network for NTFPs.
- Promote export of NTFPs to other countries.
- Encourage the use of local products processed from NTFPs.
- Provide training in techniques and skills in extraction of NTFPs.
- Increase capacity of villagers for the Thai market, especially in export of finished rattan products. Raise awareness of local communities on use and processing of NTFPs we process.
- Reinforce quality standards.
- Use community forestry as a base for NTFP development.
- Create market network for NTFPs to access international markets.
- Create trademarks for products coming from indigenous communities.
- NTFP cultivation to promote sustainability.

Synthesis of Day One

This morning we opened the session with welcoming remarks from Dr. Mark Poffenberger, Director of CFI, who focused on important lessons on NTFPs. He talked about the value of NTFPs which are essential for local communities. He also discussed the possibility of increasing the productivity of NTFPs, related to marketing and processing. For example, now we use bamboo to produce chopsticks which we dispose after one use, but what else can we make from bamboo? Souvenirs or other valuable objects can be sold at a higher price. He said there is an opportunity for us to work together on this. In the next session we discussed the objective of our workshop including the four points posted. Then we had several presentations. Mr. Jenne de Beer provided us with the concept of NTFPs. He shared his experience with us and raised a lot of issues in the region that provided a basis for our discussion today.

Then we had a presentation on the situation of NTFPs; first a presentation on rattan, then we went to the Philippines and we heard a very important presentation which can be applied as an experience for us, related to strategy and cultural challenges regarding design of NTFP products. This was very interesting, especially for those who want to process NTFPs. After the Philippines we returned to Cambodia to look at small scale bamboo enterprises and the cultivation of bamboo. We next moved to Mondulkiri and heard about interesting experiences from a Phnong ethnic minority man who explained how to collect honey. There were questions about beeswax and how it is used, with good explanations. From Kompong Thom, Mr. Thaong Sophet of RPFD shared with us the issues related to resin. We learned how trees are tapped and how much benefit they provide to families in terms of income (up to 25,000 or 150,000 riel per month/family). A family generally manages between 100 and 500 trees. Lastly in the morning session, we discussed traditional medicine. We heard about the types of species and plants that are available, how they are documented and how many are available locally. Many are found in forest areas. Finally, we split into break-out groups to consider three discussion questions.

Closing Remarks: Ms. Femy Pinto, Oxfam America East Asia Regional Office
On behalf of the organizing team, I would like to congratulate all the participants for what has been accomplished on the first day. The highlight of the day was the sharing of community knowledge about NTFPs in Cambodia, and the sharing of community and CBO perspectives on the issues and challenges related to NTFP development in Cambodia. In particular, I would like to make a special mention of the interesting contributions directly from NTFP gatherers.

This level of sharing is fundamental to any future action. Future NTFP development in Cambodia has to be grounded on local community needs and context. While Day 1 uncovered some gaps in information, this was to be expected given that this is the first time that such a broad group from different parts of Cambodia have gathered with a focus on NTFPs. This occasion also helped us identify what further topics can be discussed in future workshops.

I encourage all of us to continue this level of engagement and interest, especially from the community and CBO/NGO representatives, on Day Two where other stakeholders will be participating in the seminar. An interaction and further exchange of information with other stakeholders such as government representatives, international NGOs/donors, research groups and the private sector is expected to enhance our knowledge base about NTFPs in Cambodia, its challenges as well as potentials.

I was pleased to listen to the presentation from the Philippines where one of the honey projects cited was of a group I was involved with 10 years ago. It is an example of success cultivated over a long period of commitment, cultivated skills building, networking and visioning. For Cambodia it may take similar requirements of long-term commitment, capacity building, good networking and visioning to develop the NTFP development interests of communities and NGOs into project ideas, and then onto sustainable projects. This is a challenge for all of the workshop participants, and I am optimistic that this willingness and commitment will translate into enthusiasm and interest in NTFPs for livelihoods, and into positive and concrete action.

All participants proceeded to a hosted buffet dinner at the CFI office. The film "Voices from the Forest" was shown.

Proceedings of Day Two (8 December 2006)

The session formally started with a welcome address by Mr. Ken Serey Rotha. He acknowledged the partners who organized the workshop, explained the workshop's objectives and acknowledged the contribution of the participants. He then introduced the keynote speakers: Mr. Jenne de Beer, of NTFP-EP, Mr. Brian Lund of Oxfam America, and Mr. Chea Sam Ang, of the Forestry Administration.

Keynote Speech: Mr. Jenne de Beer, Executive Director, NTFP Exchange Programme

In his address, Mr. Jenne de Beer cited:

The two, equally important purposes of promoting NTFP development:

- Improve the livelihood of communities in (often remote) forested areas.
- Conservation of forests and their precious natural resources.

Livelihoods and the possibility to improve livelihoods through product development and value addition through better:

- Marketing & market linkaging.
- Processing.
- Grading.
- Packaging.

Optimize resource management through:

- Identifying and promoting best harvesting practices.
- Encouraging enrichment planting.
- Overall conservation measures and monitoring.
- Offering security of tenure as an incentive for long-term planning.

An unfortunate example from Vietnam:

- Roots of *Cinnamomum partenoxylon* can be used as an ingredient for biological pesticides.
- The price for this product sky-rocked in the early 1990s.
- When this was brought to the attention of a university-based company in Vietnam, this company took immediate action.
- The action consisted of setting up distillation units in all the areas where the plant occurred.
- Against advice, they did not put a resource management plan in place first.
- Therefore, they made good money, but only for a year of two. Then the resource was already depleted.
- Over the years, they could have earned much more, had they not 'killed the goose with the golden eggs'.

The Judge Is Still Out:

- The forests in northeast Cambodia are known for their vast malva nut resources
- Malva trees are wild-growing and endemic to Indochina.
- The market for this product has been steady for decades.

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- Cashew is now being planted everywhere – and not only in Cambodia!
- The price of malva and cashew nuts is currently about the same, but it seems that malva can only go up, while cashew has nowhere to go than down….
- However, poor harvesting practices combined with logging and forest conversion now critically threaten the remaining malva stocks.
- Time is running out, but it appears still possible to turn the tide.

Active involvement of local communities is key, because:
- They are close to the forest and are knowledgeable about it.
- As such, they are able to routinely monitor the condition of the forest and its NTFP resources.
- As their livelihood is largely based on the forest, a commitment to preservation of the forest and its NTFP resources can be expected.

Collaboration:- There are other important stakeholders as well, and tapping the potential of NTFPs depends much on close collaboration between communities and:
- Policy makers & government agencies.
- NGOs.
- Scientists and technicians.
- Forward thinking people in trade and industry.

Keynote Speech: Mr. Brian Lund, Regional Director, East Asia Regional Office, Oxfam America

To our esteemed keynote speakers, Deputy Director Chea Sam Ang from the Forestry Administration and Mr. Jenne de Beer from NTFP-Exchange Programme, the organizing team, ladies and gentlemen, good morning.

On behalf of Oxfam, an international humanitarian and development confederation of 13 affiliates from both the global north and south, it is my privilege to be welcoming you to this auspicious occasion of the first national seminar on Non-timber Forest Products in Cambodia. I am here also representing my colleagues from other Oxfam affiliates in Cambodia: Oxfam Australia, Oxfam GB and Oxfam Hong Kong. The work of Oxfams combined represents partnerships with over 20 organizations and projects in Cambodia. I see some of these partners here today.

In the East Asia region, including Vietnam, Laos, Philippines, Indonesia and Thailand, we work with over 60 partners in ensuring men and women, natural resource gatherers and communities greater access to, and control over their land, water, fisheries and forests for food security and sustainable livelihoods. Our work with partners is underpinned with a fundamental belief that all people should enjoy and realize their right to livelihoods and to a fair and equitable share of the benefits of good development.

Yesterday there was a rich discussion of the community issues and emerging NTFP initiatives in rural Cambodia. Congratulations. We are encouraged with the community and local voices taking forward their NTFP livelihoods needs and recommendations to a broader stakeholder group today. Oxfam believes that it is partly in dialogue and an open exchange of knowledge and ideas that we can meaningfully address poverty and social injustice.

It has been estimated that about 70% of the population of rural Cambodia rely on NTFPs for food and cash income, and that about 90% of farmers' income, especially in northeast Cambodia, comes from NTFPs. The estimates may not be far from the real statistics and economic value of NTFPs in the rest of the country but we are hoping that by convening this seminar today, we will be able to generate enough shared interest and common curiosity to seek more robust information.

We hope we can gather more evidence of strong linkages between the security of land and resource rights of rural communities and security of livelihoods.

Finally, we hope we can determine the linkages of NTFP development with sustainable livelihoods and ultimately poverty reduction.

Half of Oxfam's business is about tackling the structural issues that keep people in poverty, but the other half is to search for solutions and to leverage the opportunities that can take people out of poverty. It is my hope that today we can tackle the problems and threats as well as the opportunities for developing the NTFP sector in Cambodia.

A recently concluded study commissioned by Oxfam Hong Kong on the bamboo sector in the Mekong region (Cambodia was part of the study) found out the world market for bamboo products is $7 billion from a diversified range of potential value-added bamboo products like handicrafts, furniture and other industrial processing. A huge potential! I am curious of what we may find for rattan, resin, honey and others that grow in natural abundance in this region.

In Cambodia today, there is a sizable area covered by community forestry projects. Several community based organizations are poised to support over 260 community forestry areas (yet to be officially recognized) for community-based participatory management. In addition, there are several initiatives – both in country and in the regions – that are committed to local capacity building and community enterprise development and self-help group activities that could complement these. These are only a few opportunities to leverage and I am not surprised if you can share with me more.

At the heart of this is meaningful action to ensure that the rights of the forest communities and indigenous communities are respected, the integrity of the environment is maintained and that pro-poor strategies and real impact on Cambodian peoples' lives are realized.

I look forward to the presentations and a dynamic discussion for the rest of the day. Good morning again to everyone.

Keynote Speech: Mr. Chea Sam Ang, Deputy Director of FA

In forest management, there is universal recognition that the use of forest resources is vital to well-being:

- The FA acknowledged the role played by the UN, particularly the UNDP and other bodies organized to address sustainable forest management.
- The positive response of the Cambodian Government to the universal strategies adopted by the UN, namely, the forest reform in managing forest resources, sustainable forest management; and promoting participatory resource management.
- The recognition of the local community and other organizations in the management of the forest resources.
- The FA developed policies related to forestry management including guidelines and legal documents for sustainable forest development: e.g. National Forestry Law and other government programs.
- The importance of NTFPs in developing the lives of the community.
- The technological need to improve the traditional harvesting method of NTFPs.
- The need to improve benefit sharing.
- The need for value-adding to increase income from NTFPs, increase the quantity, quality and storage or shelf-life of NTFPs.
- The need of improving the marketing of NTFPs in order to make the income from NTFPs sustainable, i.e. produce better quality and quantity for domestic and export markets.

- The achievements made by Community Forestry. To this effect, a Five Year Plan for CF was formulated to ensure the involvement of CF in the development of NTFPs.
- The need for CF to conform to the technical guidelines of CF development.
- The need for CF to build strong relationships with local development partners
- The need to consider the future generations on the management of NTFPs.
- The need for cross learning for the sustainable management of NTFP management.

Mr. Chea Sam Ang also pointed out the fact that some processors get higher income than the NTFP collectors.

Review of NTFP Research, Mr. Khou Eang Hourt, Ministry of Environment/World Wide Fund for Nature

Khou Eang Hourt presented the studies conducted on NTFPs since 1979.

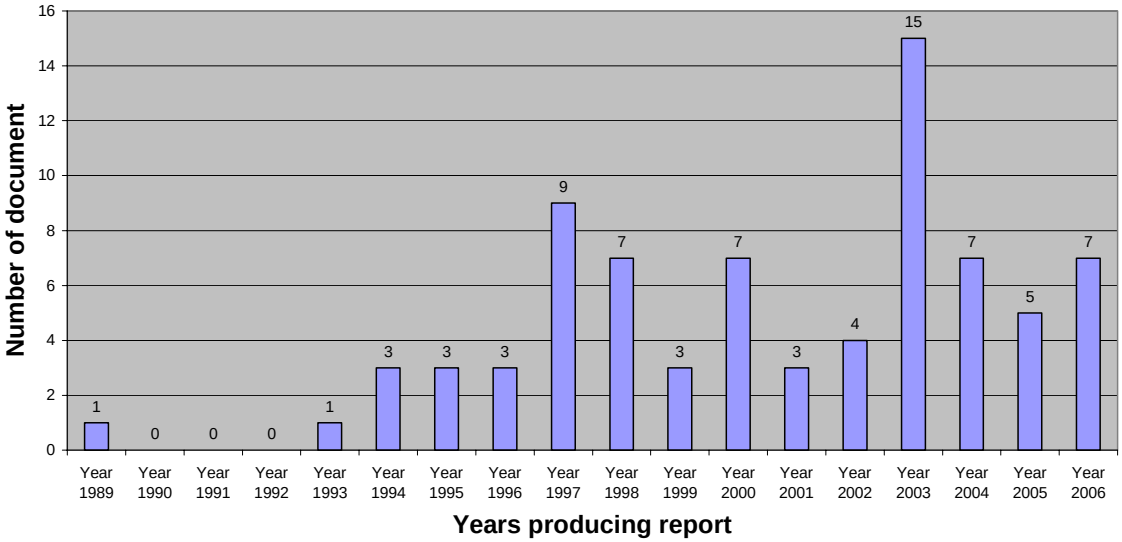
Non Timber Forest Products are critical to rural livelihood, especially for forest dwellers. They provide local communities with a wide array of marginal income in terms of household consumption and commercial trade. Some NTFPs like resin, yellow gum, honey, thatches, rattan, medicinal plants and bamboo are particularly important. However, NTFP resources and traditional use are still poorly documented by scientists. Existing documents are not widely disseminated. This article summarizes the existing research to date on NTFPs and provides recommendations for future study. The specific objectives are as follows:

- To demonstrate the trends, types and scope of NTFP research in Cambodia to date and their importance in contributing to sustainable natural resource management and rural livelihood development.
- To identify the gaps of past and current study of NTFPs and major needs for the current and future research of NTFPs in order to develop a strategy for sustainable use.
- To draw together the opinions of participants for the current and future study of NTFPs.

Many types of documents relating to NTFPs and traditional use were collected from libraries of State agencies and NGOs. The documents have been classified into clusters of similar types of research. Documents from different years were collected to analyze the research trends.

Only one document, entitled *Introduction a l'ethnobotanique du Cambodge* was produced by Martin in 1971. This document studied the relationship between people and plants. Due to the civil war, no NTFP studies were conducted again until 1989 when the study '*The issue of fuelwood supply in Phnom Penh'* was conducted by a forestry student, Chea Sam Ang (current Deputy Director of the Forestry Administration). NTFP studies stopped again from that year until 1993. In the succeeding years many studies of fuel wood were carried out by a number of forestry students. Possibly, a lack of (or perceived lack of) firewood at the time led to a greater interest in this topic. From 1995, general NTFP studies were conducted by both forestry students and government officers with more attention and support from many institutions and NGOs. The number of studies increased from 3 documents in 1997 to 9 documents in 1997, but slightly decreased to 7 documents in 1998. NTFP research reached a peak in 2003. Even though the number of NTFP research studies has fluctuated over the years, there is a growing interest among conservationists and development workers.

Trends in NTFP Research



There is a diversity of NTFP study titles, but they may be grouped into three main subjects: 1) Natural resource use and socio-economic issues, 2) General NTFP study, and 3) Specific NTFP study:

- Natural Resource Use and Socio-Economic Issues: 23 documents were compiled regarding the relationship between rural livelihoods and natural resources, socio-economic issues and forest use and products. Most of these studies were conducted by international and national experts.
- General NTFP study: 25 documents on general NTFP issues were written by many forestry students from different years. This type of study generally identified types of NTFPs utilized by local communities.
- Specific NTFP study: 30 documents on specific NTFP products were researched, reflecting the perceived importance of these products for livelihoods and conservation. (See Table)

Types of Specific NTFP Studies

Study type	Report
Cardamom	1
Fruit tree	1
Agarwood	2
Bamboo	2
Cardamom	1
Fuelwood	10
Liquid resin	7
Medicine	6
Mreah Prove Phnom	1
Rattan	2
Plant use	1

NTFPs have commonly been included as one part of general studies on rural livelihood, natural resource use and indigenous knowledge. These documents only mention the types of NTFPs available in a particular area, and indications of sustainability. The volume of the wild stock of NTFPs and the proportion of their contribution to rural livelihoods was hardly covered by many researchers. Some NTFP reports were scientifically documented with precise objectives and could be used for the purpose of conservation and development in the study areas.

Many NTFP documents are based on indigenous or local knowledge rather than scientific knowledge. For instance, plant names are generally written down in local language rather than with scientific or botanical names. Documents without botanical information may not be used internationally. Moreover, local names of plants may vary by region, causing confusion. There is a need for better field guides and increased botanical background among local NTFP researchers.

Cambodian government institutions in charge of forestry and exports, namely the Forestry Administration and the Ministry of Commerce have inadequate national data on the export of NTFP products. One of the major reasons for this is that most NTFP products exported were not sufficiently recorded or not recorded at all, especially in the case of NTFP products exported to neighboring countries through small border checkpoints. Due to the lack of such national data, it is hard to compare the volume of NTFP trade by years and impossible to conclude a reduction or enlargement of NTFP trade.

Recommendations:

Networking

- A NTFP network of Cambodia should be built with participation from NGOs, government institutions, local communities and companies to share knowledge and experiences. Besides a national network, international networks should also be considered for information and experience sharing among countries.
- A website of Cambodian NTFPs should be developed to share information locally and internationally.

Major Needs of NTFP research

- An economic study comparing NTFP livelihood activities with other livelihood activities should be conducted. Local communities use various types of NTFPs to support their livelihoods but they usually do not realize that these are NTFPs. For instance, a number of household materials such as basketry made from bamboo, thatches for roof and fodders are NTFPs, but as they are not sold, their economic value may be ignored.
- The wild stock of NTFPs should be studied in order to compare density in the forest and daily demand by local communities. The study should encompass the size of NTFP producing forest areas and the population of NTFP producing species using plot or transect methods
- NTFPs that provide income for local communities should be thoroughly studied. Such studies should include botanical descriptions, density in the forest; volume of extraction and trading; market chains, and the possibility of sustainable management.
- In the case of NTFPs that are under threat through over-harvesting, studies should be conducted on the possibility of domestication to reduce pressure on populations and secure rural livelihoods.
- Certain NTFPs like malva nuts and rattan are often unsustainably collected, leading to an exhaustion of their supply. To cope with such problems, guidelines for the sustainable collection of NTFPs should be developed based on experiences from local communities of other regions or countries. Law enforcement to deal with those who break the law or regulations, like felling a tree to collect fruits, should be implemented.

Overview of NTFPs in Cambodia, Mr. Sok Khim, Oxfam Great Britain

Oxfam GB (OGB) operates community forestry projects with financial resources from the European Union. OGB works with eight NGO partners. This presentation covers the species of NTFPs and an overview of the issues related to NTFPs. OGB has conducted two studies on NTFPs. One study was about the basic information on NTFPs in the seven provinces that are OGB's target areas. We have completed the field work for this study, but the report has not been published. Another study was an assessment on NTFP use in three target provinces: Kompong Cham, Kompong Thom, and Oddar Meanchey. My presentation is related to the second study that I just mentioned. OGB found that natural resources are very important for the national economy and crucial for rural people, particularly in remote forest areas. We found that in the three target areas about 70% of the target population living near the forest relies on NTFP to sustain their livelihoods. Approximately 26 % of the households in each target area collect NTFPs for sale to support their livelihoods. NTFP collection is seasonal. Another issue is related to the processing of NTFPs. Processing is simple, according to tradition, and primarily for household use. We also found that sustainability of NTFPs is still not well understood. Our citizens still lack knowledge of sustainable management of NTFPs.

The study found that the important NTFPs used for food include:

- Bamboo shoots.
- Mushrooms, either dried or fresh.
- Wild fruit and edible leaves.
- Wild potatoes.
- Honeys.

Some commonly collected NTFPs for commercial purposes include:

- Bamboo poles;.
- Rattan.
- Mushrooms in dried or fresh form.
- Potatoes.
- Resins.
- Barks and flowers.
- Honey.
- Vines.

In Kompong Chhnang, families may collect 5 kg of mushrooms per day that they can not eat themselves, so they sell them to the market. Resin is another important product, as is firewood. Bark is collected for traditional medicine.

The issues and problems in NTFP development are related to the legal aspects. We observed that taxation on NTFPs is high. Transportation to market requires paying police at various checkpoints, so the middleperson who buys the products pays a lower price to the local people to compensate for the transit fees. Our Government is failing to support the marketing and promotion of NTFP products. Another issue is that the Forestry Law and CF Guidelines are not yet broadly disseminated. Transport is difficult due to distance and poor roads. There is a lack of research on NTFPs and few NTFP development projects. People lack knowledge in processing. Another issue is related to the rights to manage NTFPs. More than 200 community forestry sites are not yet officially recognized

by the Government. Furthermore, the sale of NTFPs is not in the form of collectives. Villagers sell NTFPs as individuals so they get a low price. In some places local people can not find a market. Local people also lack capital to increase their business, and rely on a middle person. NTFPs are in decline due to forest destruction. Deforestation also results in the decline of wildlife. Another issue is related to occupation of forest land. Powerful people occupy the forest land and sometimes threaten local people who are forced to leave their own land. I leave the group to discuss and find solutions to these problems.

Summary of Issues

Legal and Political	Issues on tariffs and fees collected by the local authority from the village. The cost from illegal fees collected by some policemen from traders or middlemen at checkpoints are passed to the collectors by lowering the local buying prices of NTFPs. Lack of support from the Government on NTFP development. Lack of dissemination of the Forestry Sub-decree.
Socio-economic	Increase in population in the forest. Inaccessibility/roads in poor conditions in many forest areas. Lack of research to support NTFP development. Limited skills of many poor CF communities or organizations. Monopoly of traders and middlemen of the NTFP marketing. Low market prices of NTFPs. Inadequate or lack of financial support: No capital for microfinance. Debt cycle and high interest. Lack of capacity to market NTFPs.
Environmental	Depletion of resources resulting in difficulty in NTFP collection. Decline of wildlife. Occupation of the forest by powerful entities that causes degradation to the forest resources.

Sustainability of NTFP, Management and Planning, Dr. Tom Evans, Wildlife Conservation Society (WCS)

[Editor's Note. Due to a technical problem the spoken presentation could not be recorded and so only a brief summary is given here.]

This is a presentation about the sustainability of NTFP management systems. There is a very high diversity of NTFP products. For example, Dy Phon (2000) lists 1,254 useful vascular plants in Cambodia, many of the wild. NTFPs contribute a high percentage to total livelihoods in many villages (e.g. recent studies by Cambodia Development Resource Institute). There is a widespread belief that NTFPs can provide greater benefits to more people, by creating better livelihoods and reducing poverty, promoting better forest management and empowering communities.

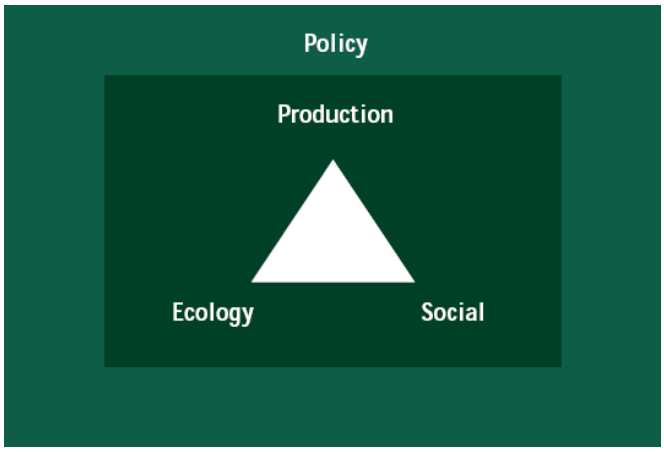
But do NTFPs work? Are they sustainable? These projects can and do fail. In fact, it is difficult to succeed. NTFP projects face many of the same problems that affect development projects in general. Some of the common problems encountered are:

- resources cannot support the harvest.
- environmental damage.

- profits too low.
- systems too complicated.
- key activities stop when project funding stops.
- the strong benefit but the weak lose out.

In order to design and monitor more effective projects, we need to consider all of the factors related to production, ecology and the social context. A failure in any one of these can cause a project to fail.

The Sustainability Triangle



Source: CIFOR Criteria and Indicators Toolkit

First, we should ask if the policies are supportive. For example, is there land tenure or a harvest agreement? Is the land protected from other uses? Is there enough start-up funding? Are there any policy controls on marketing? These facts are relatively simple to find out but can be very difficult to modify, and if they cannot be modified, success will be very difficult to achieve.

In considering production harvest levels, we should ask: Can the resource be harvested without declining seriously? Many NTFPs are difficult to harvest sustainably. For example, they may be slow-growing, rare, harvested destructively, hard to count, easy to steal, mobile, or may fluctuate due to weather. Although scientific methods are well-developed, using them can be expensive and difficult. In some cases simple rule-of-thumb indicators can be used, especially if the harvest levels are quite low or if the species harvested can regenerate rapidly after over-harvesting (and so there is a greater margin for error).

In considering profitability, we should ask whether there will be any net profit at long-term stable harvest levels. It is important to consider whether the product can be sold or used at all and if the benefits will cover the costs. We should also consider if the market and use of the product will continue long into the future. We observe that most small businesses fail in any sector. NTFP businesses are especially difficult as there are long supply lines, markets which are often narrow and unstable, and high variability in quality.

Good management systems are hard to set up. The Government needs to be supportive and willing to share responsibility. The community needs motivation and skills. Plans need to be effective but simple. Everyone needs to be flexible since things change.

One key measure of sustainability is ecological impacts on species other than the target species. Specialists disagree about what to measure, and there are differing opinions as to what levels of ecological change are acceptable. Under strict systems, e.g. in some Protected Areas, even small changes are unacceptable, and this can make financially viable harvests all but impossible. There is an argument that larger levels of ecological change should be acceptable in 'production forests', as long as they retain their key natural features. In this case one can simplify monitoring by focusing on the main effects of harvesting. The relative abundance of different species can change, but it is important to avoid severe declines or extinction of any part of the ecological community. Having non-harvested refuges can help to ensure this.

In terms of social considerations, we need to look at whether or not users really wish to be involved. Do they understand the system and are they involved in decision-making? Is conflict resolution working and is there secure and fair access to resources, even for poor and marginalized groups? We should also recognise that most rural communities are undergoing rapid changes and whilst NTFPs are important now, they may not be so in the future as opportunities and aspirations change.

To take a brief example of an unusually easy-to-manage NTFP, consider liquid resin (tapped from the genus *Dipterocarpus*), which has high livelihood significance in Cambodia. A study in 2002 in Mondulkiri (Evans *et al.* 2003) found that prices ranged from $0.13-0.26/litre (seasonal) and individual resin trees may yield 25-35 litres/yr. The mean was about 80 trees per family (villages differ) with a mean income of $340/yr (a few >$1,000), spread through the year and sufficiently regular to act as collateral for loans. The direct impacts of resin collection were found to be low. In this area,

some 78% of taps have the surrounding bark completely intact with only minor damage to the tree in most of the remainder. Taps do sometimes dry up, but only 6% of trees cease to yield in the first 5-10 years of tapping. There are many signs that resin trees are well cared for, and notably this is not a result of collective community action per se, but rather mutually recognised systems of private ownership, which is probably much easier to organise and more stable (when the characteristics of the resource make it possible). Formal participatory monitoring of resin collection does not take place would be easy to institute if required. Some indirect ecological effects are significant. Hunting is mostly not linked to tapping, but hunting with dogs is linked. Long-trip tappers are able to hunt around camps, tappers hunt at other times, and resin-traders also trade in wildlife.

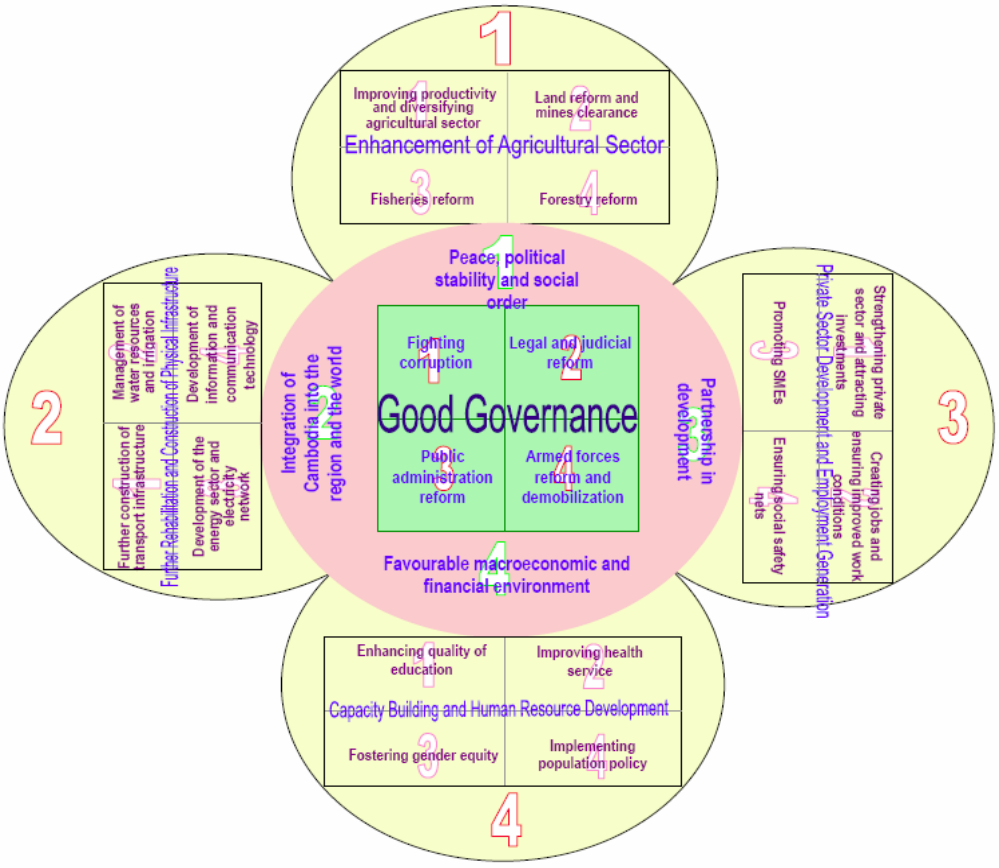
In conclusion, the sustainability of NTFP harvests is important to achieve but rare. Success is most likely with simple technology, common, robust species that are already traded, local markets, and simple management systems that don't depend too much on community action. We should not expect huge livelihood gains, perfect ecological sustainability, or for local people to stay with NTFPs for ever.

Dy Phon, P. (2000) *Les plantes utiles de Cambodge*. Olympic Press, Phnom Penh.
Evans, T. D., Hout, P., Phet, P. and Hang, M. (2003) *A study of resin-tapping and livelihoods in southern Mondulkiri, Cambodia with implications for conservation and forest management.* WCS Cambodia Program, Phnom Penh.

Importance of NTFPs in National Policies and Strategies, Mr. Kasper Hansen, CDRI

My presentation will first give a brief review of the main national policies and strategies and areas of special relevance to NTFP management and marketing. First, why is pro-poor sustainable management and marketing of NTFPs important for national policies?

The Rectangular Strategy



National Strategic Development Plan (NSDP) 2006 - 2010

- Forestry reform
  - ♦ Strengthening of forest management and conservation.
  - ♦ Promoting man made plantations.
  - ♦ Promoting forestry contribution to social and economic development.
  - ♦ Promoting forestry contribution to poverty reduction by strengthening community forestry initiatives and by involving local communities in forest exploitation plans.
  - ♦ Creating public awareness to use community plantations for firewood and charcoal production.
- Environmental conservation
  - ♦ Enhance environmental sustainability and contribute to sustainable economic growth, poverty reduction and livelihood improvements.
  - ♦ Promote eco-tourism, bringing benefits to local people.
- Small and medium sized enterprises
  - ♦ Enhance enabling environment for grass root-based processing and value-adding of products.

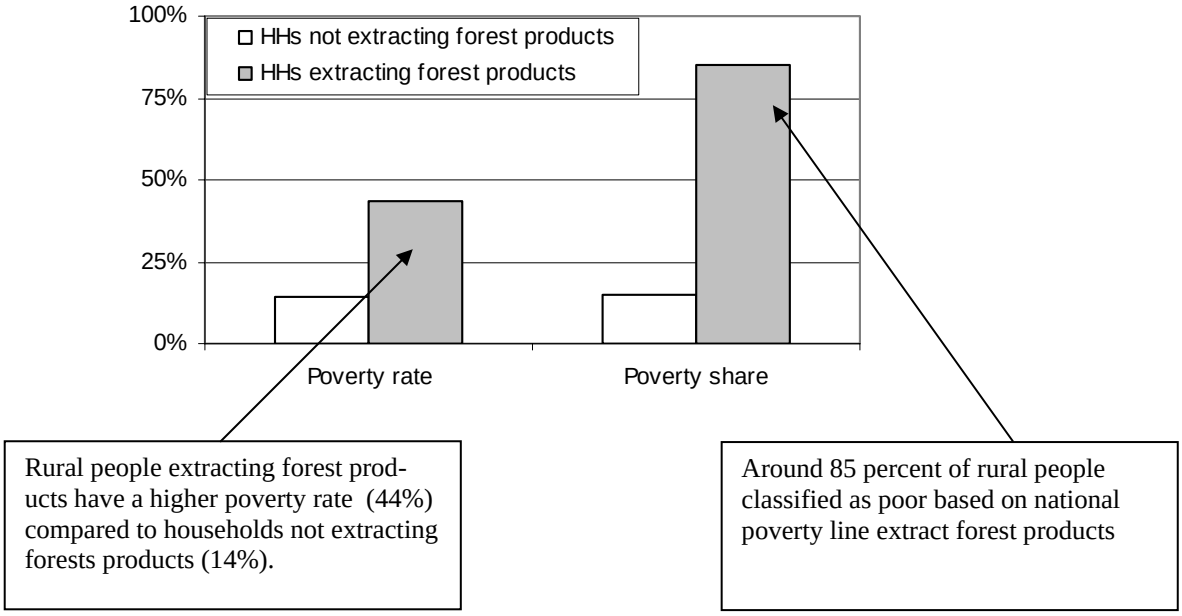
Millennium Development Goals prepared in 2003

- Ensure environmental sustainability.
- Maintain forest cover above 60%.
- Reduce wood fuel dependency to 52%.
- Halve poverty by 2015 (1993 baseline).

NRM and NTFP Related Legislation

- 1993 Royal Decree on Protected Areas.
- 1996 Law on Environmental Protection and NRM.
- 2001 Land Law.
- 2002 Forestry Law.
  - ♦ "Customary user rights" to harvest NTFPs for own use.
  - ♦ Permits are needed to stock, transport and export NTFPs as well as for establishment of kilns.
- 2003 Community Forestry sub-decree.
  - ♦ General rules for community forestry.
- 2005 Prakas forbidding harvest of certain timber and NTFPs.
  - ♦ Protection of trees used by local people for resin and dye.
- 2006 Prakas on Community Forestry Guidelines
  - ♦ Specific details for enactment of CF Sub-Decree.
  - ♦ Around 180,000 ha. allocated, but few yet officially approved.

Cambodia Socio-Economic Survey

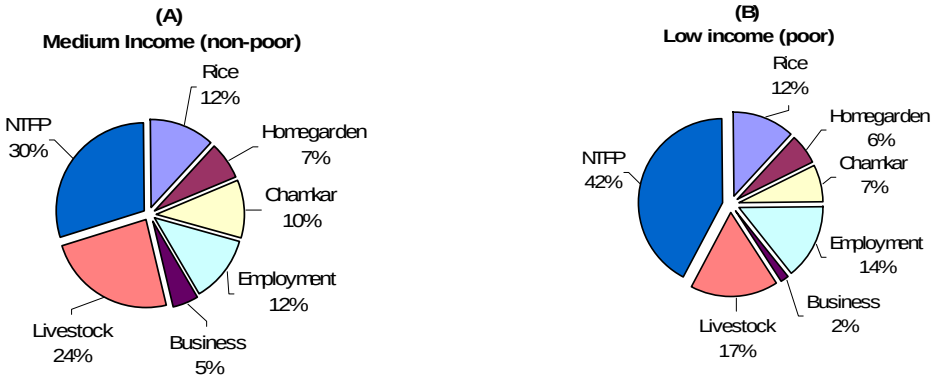


Poverty Rates and Income Source (CSES data 2003/4 15,000 HH)

Main income source	**Poverty Rate (%)**
Rice and crops	40.5
Livestock	37.5
Fishery	44.7
Forests	**45.8**
Total	39.2
Based on 2003/2004 CSES data (15,000 HH)	

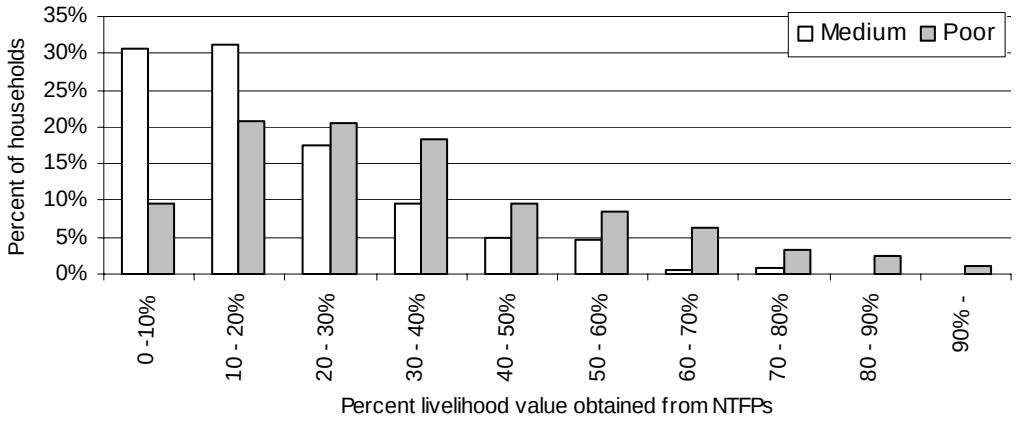
- Poverty rates for households whose main income source is from forests are above rural and national average in the survey.
- Main products extracted from forests by local people are NTFPs.
- Mainly representative for households living adjacent to forests.
- Share of value obtained from NTFPs was high for both groups.

Livelihood Value Obtained from NTFPs (CDRI survey of 502 households in four provinces)



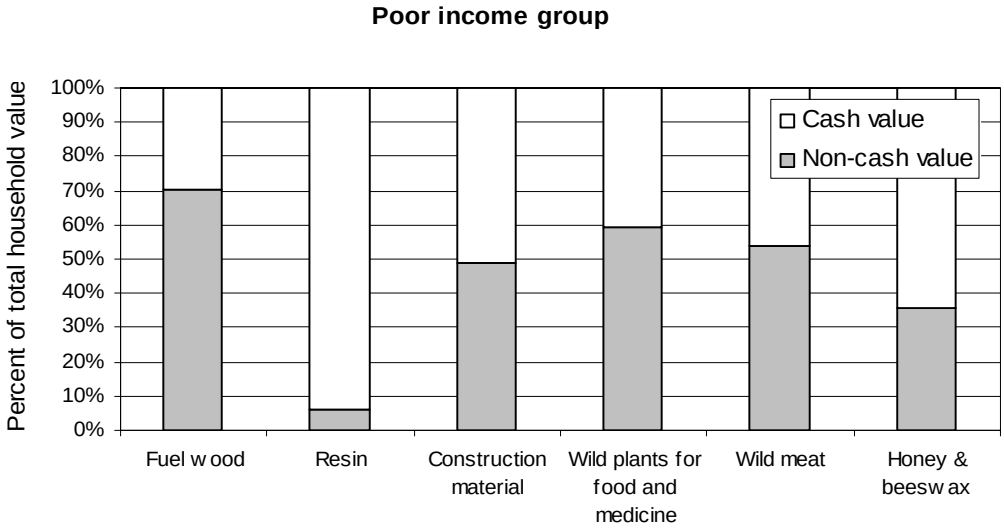
- Mainly representative for households adjacent to forests
- Share of value obtained from NTFPs was high for both groups
- NTFP collection is especially important to poor rural households. (42% vs. 30%)

Distribution of NTFP Value

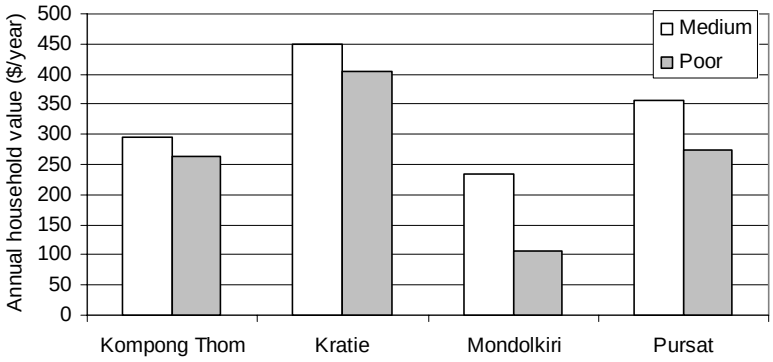


- Most poor households derive between 10% and 40% of their livelihood value from NTFPs.
- Most better-off derive between 0% and 20% of their livelihood value from NTFPs.
- A few poor households are highly specialized in NTFP collection.

Consumption and Sale of NTFPs



- A large share of livelihood value from forests is consumed and therefore not included in official statistics.
- There is potential conflict between conservation and livelihoods



Livelihood Value and Poverty

- Livelihood values obtained from forests vary from area to area.
- In all four areas, poor households gain less on average.
- Difference was mainly in value from sale of NTFPs.
- How can policies better reach the poorest segment?

Participatory Poverty Assessment

(Qualitative data from 22 villages around the Tonle Sap)

- Mainly representative for the Tonle Sap Area.
- Consistent reports of declining availability of NTFPs.
- NTFP collection was still an important safety net, especially for poor.
- Poor households lack the financial, physical, and social capital needed to gain full benefit from NTFP markets.
- External stakeholders seem to play an important role in resource degradation and local access to NTFPs (land concessions, illegal logging, etc.).
- Poverty seems to be deepening in forest-dependent communities.
- Increased migration, but often not an option for poor households, who stay behind depending on NTFPs and local wage labour opportunities.

Conclusion

- NTFPs are not directly mentioned in national strategies, but poverty reduction and forest conservation are important factors in both NSDP and MDGs.
- Poverty is more and more becoming a rural problem.
- NRE and poverty studies show that rural households mainly relying on forests have a higher poverty rate than households mainly relying on other income sources.
- Currently, poor rural households are the most dependent on NTFPs for their livelihoods, but tend to gain less than better-off rural households.
- Consistent reports of declining availability of NTFPs due to lack of management, over-exploitation and external interests.
- All the above underline the importance of incorporating pro-poor sustainable management of NTFP resources and improved processing and marketing of NTFPs into national poverty reduction and conservation efforts.
- The challenge is; how do we do that in practice?

The Role of the Private Sector in Processing and Marketing of Forest Honey, Mr. Andrew McNaughton, Managing Director of Cambodia Biologicals Co. Ltd.

Mr. McNaughton presented a view on the private sector's role on NTFP development, focusing on indigenous honey. Cambodia Biologicals promotes the marketing of high quality Cambodian products, including organic, fair-trade, and nutritional. Indigenous wild honey is one component of the product line. Work at present is concentrated on products (honey, wax, pollen) from the giant honey bee: *Apis dorsata, but other species will also be worked on, especially Apis cerana and Apis florea.* The practice of collecting the whole honeycomb including the brood (larvae) will have serious impact on the sustainability of the resource. Cambodia Biologicals is promoting sustainable harvesting through community organization and technology introduction (rafters etc).

Resource management issues include:

- Effect of open access to honey bee colonies.
- Seasonal migration of honeybees.
- Conservation needs for habitat of honeybees.
- Colony population dynamics.
- The potential for managing the colonies of Apis *dorsata*.
- Dangers to Cambodian biodiversity and indigenous honeybee populations associated with introduction of European honeybees (*Apis mellifera*).

Issues and considerations in the marketing of wild honey products include:

- Importance of maintaining quality (testing and certification) for high-value products.
- Quantity (economies of scale, especially for exports).
- Timeliness in the delivery of products (seasonality).
- Price-competitiveness.
- The need to introduce honey extraction/processing technology which is affordable, yet meets modern standards for hygiene and other quality elements.

In terms of the outlook for the development of the honey industry, wild honey has unique qualities and can command a high price in the market if properly managed. There is a need for certification, especially organic certification, as is now being done in Indonesia. Cambodia Biologicals Company Ltd is attempting to facilitate the organization of a Cambodian indigenous beekeeping institution (CIBI), which will provide a forum and a focus for developing this flagship NTFP industry in Cambodia. Please see our website at www.cambodiabiologicals.com

India Perspective on NTFPs, Ms. Anuja Krishna Mujumdar of EcoNet

EcoNet is promoting NTFPs in India, particularly honey and a native fruit (*Carrisa congesta)*. EcoNet has been facilitating the Maharashta NTFP Forum for the last four years since its inception. The Forum involves consultation, action research and advocacy in India. It facilitates consultation on the management of NTFPs based on the field experiences of the members for further dialogue with the Government.

This presentation includes the following main points:

- Honey is the most commonly found NTFP identified for development with a State-level network in Maharashta with further linkage with other partners working on honey in India, like Keystone.
- The honey product varies according to the species of bees and type of flora. Thus there is a need to segregate the honey products according to the species of bees and the floral sources. The trick is to classify the collected honeys according to the season of collection since these can be related to the availability of pollen sources. The analysis of honey is done by the Central Bee Research Institute. The idea is to have different packaging as a strategy in marketing.
- The major species that are the source of honey in India are: *Apis dorsata* and *Apis cerana*.
- The Forum offers training in the harvesting and processing of honey products as well as legal education governing NTFPs in the state and advocacy support.
- NTFPs are very diverse and technology is an important factor in developing the product. One type of locally grown fruit, Karvand (*Carrisa congesta)*, is abundant. It grows on a bush and the fruit has a short shelf life. Marinating the product prolongs its shelf-life.
- The areas of training are identified vis-à-vis NTFPs and sources of expertise are sought to train villagers in the collection and processing of NTFPs.
- Despite there being so many networks in India, experience shows that establishing a network is a very long process, and time commitment has an impact on the quality and strength of the network. The organization EcoNet was a precursor of network establishment.
- Legislative support is provided to the community and organization partners of the Forum by EcoNet as NTFPs are collected from forests which are owned by the Government (however, in some of the areas, the forests are legally owned by the people). Different states within the country have different legislation, and therefore the legal aspect is complex but there is a definite need that the community should understand.
- NTFPs in India are taxed and the taxation system in different states differs in a few cases. Thus villages located in the border area between two different tax regimes face a lot of problems due to the multiplicity of such systems.
- The NGO works closely with the Forestry Department and other stakeholders in the state to find long term solutions.

NTFP Markets – Resin, Mr. Prom Tola, Independent Consultant

Forests support rural livelihoods in Cambodia in a number of important ways. Almost all rural Cambodians use forest resources for cooking fuel and construction materials. Many also collect other products for household use and income generation through trade, such as bamboo, rattan, resin, wild fruits and vegetables, and medicinal materials. In addition to products, forests provide habitats for flora and fauna diversity, essential ecological services, and in some areas have important cultural and spiritual significance to surrounding communities.

Recent estimates indicate that about one quarter of the Cambodian population lives in or near forest areas, and several hundred thousand rural Cambodians depend, at least in part, on income from the collection of forest products (World Food Programme 2001). These estimates, in combination with

numerous case studies conducted on the role of forest resources in rural livelihoods, suggest that forest product collection and trade plays a significant role in Cambodia's rural economy. But with the bulk of attention in the forestry sector focused on commercial timber operations, this economic activity has often been overlooked.

To explore the conditions under which forest products are traded in Cambodia, and how such conditions may affect rural livelihoods, this study focuses on one of Cambodia's most important forest products – resin. Tapped mainly from the evergreen tree species Dipterocarpus alatus, but also from a variety of other species, resin is used domestically for sealing/waterproofing boats and exported for these uses as well as for paint and varnish manufacturing. Tapping occurs across most of Cambodia's forest areas, in at least 10 provinces, with activity most prevalent in the north and northeast regions. Improving trade conditions for resin in a manner that increases returns to producers/tappers would have a positive impact on many forest communities.

For this study, research was conducted on resin trade from four resin-producing areas – Mondulkiri, Preah Vihear, Kompong Thom, and Oddar Meanchey/Siem Reap – between August and November 2002. Information and data were collected through nearly 60 semi-structure interviews with resin traders, wholesalers, transporters, exporters, retailers/distributors, and government officials, observations made on a trip with a shipment of resin, and a brief survey of community representatives from resin-producing areas in nine provinces. Key objectives included describing resin tapping methods and uses, examining the threat of logging to tapping activities, analysing the market structure for resin production and trade, describing the current regulatory framework and actual practices, assessing the key challenges to resin trade, and identifying policy recommendations.

Tapping, Tenure, and Logging Threats

Tapping resin involves cutting a backward sloping hole in large trees, burning the hole briefly to stimulate resin flow, and collecting the resin in plastic containers after a few days. Using this method, trees can reportedly continue to yield resin for several decades. Tapping does not damage the trees, and the risk of forest fires appears negligible due to the brevity and control of the burning. According to custom, the first person to find and mark a resin tree is considered its owner. Nonetheless, because resin trees are by custom considered private property, it is possible to transfer tree ownership through sale, inheritance, or donation, or sell the rights to tap trees for a specified period of time. This tenure system appears unique for resin trees; other trees and non-timber forest products are not "owned", and access to these resources is open to all.

Although resin tree "ownership" lacks a formal legal basis, Cambodian law does ensure the user rights of tappers and also prohibits the logging of resin trees (Article 29, *Forestry Law*, 2002). But cutting of resin trees reportedly continues despite the illegality of the practice. Loggers harvest resin trees because they are a commercially attractive source of timber. Indeed, logbooks for six forest concessionaires indicate that species tapped for resin comprised a significant proportion of the trees harvested in 2001. Unfortunately, in some forest areas there appears little room for a "win-win" solution – maintenance of resin tapping income *and* commercial logging. A clear forest management decision is needed about whether commercial logging will be permitted in any manner in areas with resin trees. Without such interventions, the cutting of resin trees will likely continue, conflicts over resin

trees could increase, and thousands of rural Cambodians dependent on resin tapping could lose a vital source of income - an outcome that clearly runs counter to national poverty reduction objectives.

Resin Production and Trade

Approximately 20,000 tons of resin are collected annually across Cambodia, and this activity provides an important source of income for roughly 100,000 people living in/near forest areas. Resin tappers sell their product to a marketing chain that includes traders, wholesalers, transporters, domestic retailers and exporters. From forests, resin is often transported significant distances to domestic markets around the Tonle Sap, south to the Mekong Delta region, and exported to Vietnam, Thailand, and Laos (which reportedly re-exports resin to Thailand). Domestic demand for resin is mainly driven by the need of more than 250,000 Cambodian households to seal and waterproof their boats each year. Export demand for resin appears to be mainly driven by the needs of paint and varnish manufacturers in Vietnam, but CDRI could not confirm primary export uses. The annual market/export value of resin production in Cambodia is approximately $6 million.

Regulatory Framework and Actual Practice

The current regulatory system requires a number of permits, licenses, and fees to stock, transport, and export resin. But in practice, almost no one active in the resin trade holds the appropriate permits and licenses. Instead, trade operates through an informal process involving a range of fee payments to a variety of institutions, including the Department of Forestry, Provincial Forestry Offices, the Ministry of Environment, as well as district officials, police, economic police, military, and military police. One of the most common practices is to charge fees when "checking" the transport permit, since officials know that transporters will either have no transport permit, or a permit with a significant underestimation of the actual shipment amount. Compliance with the official regulatory system governing resin marketing is extremely difficult. This is especially true for small businesses, which lack the means to pay official fees or to travel to Phnom Penh to obtain a transport permit and/or export license. Therefore, almost all resin trade and export must be conducted on (technically) an illegal basis. Consequently, the system generates almost no formal government revenue.

Analysis of Costs and Fees for Resin Trade

The main constraints on resin trade are transportation costs and multiple informal fees. Although these costs are imposed on the marketing of resin, rather than resin tapping, the costs can nonetheless have a significant impact on tappers' incomes. When marketers of resin incur significant costs, they may not be able to absorb them and continue to make a profit. In such cases, they must pass on costs to tappers in the form of lower prices for resin. As one trader put it, "when the authorities raise the fees, I cannot pay all of it and make a profit, so I must reduce the price I pay to villages for resin."

Across the four resin trade routes studied, there is significant variation in trade practices, prices and margins, costs, and fees. For example, the average price received for resin by tappers in Mondulkiri is three times the price in Kompong Thom and about twice the prices in Preah Vihear and Oddar Meanchey. Such price differences can be explained by a number of factors, including resin quality, distance from tappers' villages to a final market, level of fees along the trade route, and end markets (export prices are higher than domestic prices).

The market price of resin ranges from $172 per ton (domestic market) up to $325 per ton (export market). Trading resin from tapping villages to these end markets costs an average of $93 per ton in trade costs ($56 per ton) and fees ($37 per ton)[1]. Thus, fees add 65% to the total costs of resin marketing and sharply reduce profits. If applied to all 20,000 tons of resin produced and traded annually in Cambodia, total fees on resin range from about $500,000 to $1 million per year.

[1]Trade costs refer to all operating, capital, and working capital costs involved with storing, aggregating, and transporting resin from the tappers' villages (or forest gate) to end markets, *excluding fees*.

Fees on resin trade are paid along the road and at different transaction points. All fees are either informal payments or payments made on an official basis but not at the official rate. Detailed examinations of shipments for two trade routes illustrate the variance in fee amounts, number of payments, and collecting institutions. For a 20-ton shipment of resin from Preah Vihear to the Vietnamese border, fees amount to $1,344 (or $67 per ton)[1]. This trade involves 43 payments in 14 different locations. Forestry officials dominate fee collection for this trade route, accounting for 20 of the payments and about 75% of the overall fee amount. Another 17 payments are made to police, economic police, military police, and military. Fees play a lesser role in resin trade from Mondulkiri to the Vietnamese border. For a 1.2-ton shipment of resin, fees amount to about $30 (or $25 per ton). This trade only involves 11 payments in three locations.

In addition to fees actually paid, the threat of fees causes economic losses due to trade inefficiencies. Resin traders will go to great lengths to avoid paying high fees, since their payment would often result in a loss rather than profit. For example, rather than shipping resin efficiently in a large truck (and paying high fees), it is common to avoid fees by shipping smaller quantities in the trunks of taxis. Likewise, traders avoid some border points where fees are known to be high, opting instead to travel longer distances to other border points despite the additional transport and fuel costs. Stepping up enforcement to counter such fee payment evasion is not recommended, however, because it would make much of the trade unprofitable and perhaps cause a collapse in the trade altogether. Prior to any efforts to improve compliance, the fee system itself needs to be reformed.

Recommendations

The government has indicated in its National Poverty Reduction Strategy 2003–2005 the need to review and improve the regulatory system for non-timber forest products in order to support better market conditions. Such improvements would be in line with national objectives to reduce poverty, ensure food security, increase pro-poor trade and rural development, and improve forest management. To support such improvements, a number of policy recommendations based on the research findings of this study are summarized below:

1. Improve governance and transparency for resin marketing, including an overhaul and simplification of the current regulatory system.
   - Eliminate the transport permit and associated fees.
   - Eliminate fees collection by checkpoints/institutions with no legal basis for collecting fees.
   - Remove the export tax and simplify procedures for obtaining an export license.

2. Improve and localize forest management by decentralizing authority over revenue-raising mechanisms.
3. Enforce Article 29 of the Forestry Law prohibiting the harvest of resin trees.
4. Establish resin/NTFPs as a focal sector for pro-poor trade initiatives and value-added processing improvements.
5. Review and revise the regulatory framework for all NTFPs.

Small Group Discussion on Needs Assessment and Future Priorities

In the open forum, the following issues were raised. They are grouped under a number of themes:

Policy and Legal

- The Royal Government of Cambodia (RGC) should enforce existing laws related to land and forests to promote community resource security related to NTFP development.
- Community forestry should be promoted as an important strategy to ensure resource security. Community Forestry Management Committees have a role to play in forest/NTFP protection.
- The RGC should reduce fees for NTFP transport and crack down on corruption by local authorities.
- Devolve responsibility of monitoring of NTFP to the local level.
- The RGC should prepare and implement a Strategic Plan for NTFP development.

- Resin collection should be prioritized over plantations.
- The export regulation framework for NTFPs should be made cheaper and simpler.
- Communities should be trained to understand the relevant laws, including their rights and responsibilities for managing NTFPs.
- The RGC should give special attention to the needs of indigenous people in NTFP development.
- The RGC should prevent the import of NTFPs in order to promote local production.
- Investment companies should not be allowed to fence forest areas in which local people depend on NTFPs.
- This workshop should produce a "position paper" with specific requests to the RGC for support in dealing with issues identified in the workshop.

Sustainable Management

- All stakeholders should participate in managing natural resources.
- Encourage sustainable NTFP management of raw materials. Develop community management plans to establish sustainable harvesting levels.
- In order to aggregate the supply of NTFPs, establish better regulation for communities and develop models that will work for Cambodian communities.
- Promote community traditions of sustainable management (e.g. resin).
- Reforest areas of degraded or barren land to increase supply of NTFPs.

Production and Processing

- Provide capacity building on NTFP production.
- Organize practical training on bamboo and rattan processing.
- Establish producer groups in the community.
- Improve production technology to meet customer requirements.
- Provide credit to communities to establish NTFP manufacturing plants.

Marketing and Livelihood Development

- Establish community NTFP cooperatives to improve skills and negotiations.
- Identify and access markets for NTFP products domestically and internationally.
- Reduce or eliminate taxes on NTFP products made by local communities.
- Increase recognition of community products and branding.
- Private sector should serve to access markets outside the country.
- Encourage the use of NTFP products in Cambodia.
- Establish an information network to share information on demand and prices for NTFPs.

Research and Learning

- Research is recommended in the following areas:
  -NTFP ecology and species.
  -sustainable harvest levels.
  -impact of NTFPs on local livelihoods.
  -problems related to NTFP development.
  -market research both domestically and overseas.
- Train the community about natural resource management and collection.
- Organize study tours to learn best practices.
- Organize workshop and short training to develop skills and knowledge of NTFPs.
- Promote education on NTFPs for all people.

Funding and Support

- Provide donor funds to support NTFP development strategies.
- Provide capital for NTFP enterprise development.

Conclusion

The National NTFP Workshop and Seminar concluded with a final summary by Mr. Ken Serey Rotha, the Moderator.

The NTFP Workshop and Seminar was a highly successful collaborative effort by a large number of stakeholders to draw together the experiences of NTFPs in Cambodia to date. The presentations and discussions were an important first opportunity to share information on NTFPs and to raise issues and challenges confronted in the field.

The participants prioritized the following recommendations for follow up:

1. The transit fees and informal taxation on NTFPs is inhibiting the growth of the NTFP sector and their contribution to local livelihoods and alleviation of poverty. Ways should be sought to reduce or eliminate these fees, either through legalization of harvesting (possibly through community forestry management plans) and mobilizing of communities to cooperate in seeking higher value for their products.

2. The sustainability of NTFP resources is important to ensuring long-term benefits and conservation of the species. In order to achieve sustainability, additional research is important, along with education and capacity building among local harvesters. Common pool NTFPs require management systems.

3. Gains from NTFPs could be greatly enhanced by improving local capacity for processing and marketing. Investments in training, greater cooperation with the private sector, and methods for better quality control are important.

4. Effective NTFP development requires Government support in enforcing laws and preventing forest loss.

The Core team involved in the preparations committed to follow through on the recommendations from the participants. A summary of the reflection meeting on the day following the event is attached in the Annex. In addition, a press conference was conducted directly following the seminar during which a group of radio and newspaper reporters were given an opportunity to ask questions to the presenters and organizers. In particular, the craftmakers from Ratanakiri were extensively interviewed. As a result, a number of national broadcasts and articles were disseminated on the results of the workshop and seminar.

The future of NTFP development in Cambodia will depend on broad collaboration between a number of stakeholders. The NTFP Workshop and Seminar established a starting point from which to begin this collaboration.

ANNEXES

Annex I: Agenda

National NTFP Workshop and Seminar, Phnom Penh, Cambodia, 7-8 December 2006

Day 1 Workshop Schedule

Thursday 7 December 2006		
8.00-8.30	Workshop Registration	
8.30-8:45	Welcome Remarks	**Dr. Mark Poffenberger** CFI
8:45-9:00	Workshop Objectives and Expectations from Participants	**Mr. Ken Serey Rotha** Facilitator
9:00-9:20	Presentation: Concept	**Mr. Jenne de Beer** NTFP-EP
9:20-9:40	Presentation: Ratanakiri Situation on the Issues and Challenges, Initiatives and Solutions for NTFP Development.	**Mr. Heang Sarim** CAN-DO
9:40-10:00	Presentation: Oddar Meanchey Situation on the Potential in Marketing, Processing and Improving NTFPs.	**Mr. Chee Boreth** CDA
10:00-10:20	Presentation: Bridging Culture and Commerce - Craft Development in the Philippines	**Ms. Lulu Delgado** CMCC
10:20-10:35	Q&A	**Mr. Ken Serey Rotha** Facilitator
10:35-10.55	**Coffee Break**	
10:55-11:15	Presentation: Bamboo Growing Initiative – Issues and Lessons	**Ms. Heng Chanthorn** Wathnakpheap
11:15-11:35	Presentation: Community Perspective on Honey	**Mr. Im Noeum** WWF Cambodia Country Programme
11:35-11:55	Presentation: Resin – Emerging Experiences around Sustainable Harvesting, Production and Marketing	**Mr. Thaong Sophet** RPFD
11:55-12:15	Presentation: Traditional Medicine	**Dr. Heng Punley** Ministry of Health
12:15-12:30	Q&A	**Mr. Ken Serey Rotha** Facilitator
12:30-1:45	**Lunch provided at World Vision**	
1:45-2:45	Small group discussion Are there other issues you face regarding NTFPs in your community not heard from in the presentations? What specific initiatives being undertaken need to be supported? What type of support is needed? What opportunities are there to develop NTFPs in your community/region/Cambodia?	**Mr. Ken Serey Rotha** Facilitator
2:45-3:15	Presentations of group discussions	**Mr. Ken Serey Rotha** Facilitator
3:15-3:35	**Coffee Break**	
3:35-4:05	Synthesis	**Mr. Ken Serey Rotha** Facilitator
4:05-4:35	Close	**Ms. Femy Pinto** Oxfam America East Asia Regional Office
4:45-5:00	Bus from World Vision to CFI	
5:00-7:15	Mini Film festival at CFI	
7:15-8:15	Dinner and music at CFI	

Day 2 Workshop Schedule

Friday 8 December 2006		
8.00-8.30	Seminar Registration	
8.30-835	Welcome and Introduction to Seminar	**Mr. Ken Serey Rotha** Moderator
8:35-9:05	Key note speech panel	**Mr. Jenne de Beer** NTFP-EP **Mr. Brian Lund** Oxfam America **Mr . Chea Sam Ang** FA
9:05-9:20	**Coffee Break**	
9:20-9:40	Summary of Field Issues and Initiatives from Day 1	**Mr. Ken Serey Rotha** Moderator
9:40-10:05	Presentation: Overview of NTFPS in Cambodia Review of research reports and major findings, and identification of research needs, types of NTFP, dependence, and overview of main issues.	**Mr. Khou Eang Hourt** MoE/WWF **Mr. Sok Khim** OGB
10:05-10:25	Q&A	**Mr. Ken Serey Rotha** Moderator
10.25-10:45	Presentation: Sustainability of NTFP, Management and Planning Overview of criteria used to assess sustainability of NTFPs. Factors that improve sustainability.	**Dr. Tom Evans** WCS
10:45-11:00	Q&A	**Mr. Ken Serey Rotha** Moderator
11:00-11:20	Presentaion: Importance of NTFPs in National Policies and Strategies Overview of national policies relevant to NTFP utilisation Analysis of linkages between poverty and NTFPs in recent surveys Importance of NTFPs in national policies	**Mr. Kasper Hansen** CDRI
11:20-11:35	Q&A	**Mr. Ken Serey Rotha** Moderator
11:35 - 11:55	Presentation: Role of the Private Sector in Processing and Marketing of Forest Honey	**Andrew McNaughton** Cambodia Biologicals
11:55-12:10	Q&A	**Mr. Ken Serey Rotha** Moderator
12:10-1:20	**Lunch provided at World Vision**	
1:20-1:40	Presentation: India Perspective on NTFPs Processes initiated in Maharashtra as a forum Case study on Honey and Karvand (local berry)	**Ms. Anuja Krishna Mujumdar** EcoNet
1:40-2:00	Presentation: NTFP Markets – Resin, Resin trade value chain; covering the problem of informal taxation in marketing	**Mr. Prom Tola** Independent Consultant
2:00-2:20	Q&A	**Mr. Ken Serey Rotha** Moderator
2:20-3:00	Small Group Discussion on Needs Assessment and Future Priorities Identification of priority needs and actions for future Identify specific product development if any	**Mr. Ken Serey Rotha** Moderator
3:00-4:00	Presentations of group discussions	**Mr. Ken Serey Rotha** Moderator
4:00-4:30	Synthesis and Wrap-up	**Mr. Ken Serey Rotha** Moderator
4:30-4:35	Close	**Mr. Jenne de Beer** NTFP-EP
4:35-4:55	Press conference and joint assessment	

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Annex 2: Minutes of Review

Review of NTFP Seminar and Workshop,
December 9, 2006
9:30 am-12nn
Oxfam America office

Attendance:
CFI – Amanda Bradley, Joanne Jordan
OA- Femy Pinto
OGB – Sok Khim, Rose Nillasca
WWF – Amy Maling
NTFP-EP – Jenne de Beer, Lulu Delgado
CAN-DO – Heang Sarim
CDRI – Kasper Hansen
CBNRM LI – Ken Serey Rotha
EcoNet – Mujumdar Anuja Arun (India)
WWF/MoE – Khou Eang Hourt

Agenda:
2. Reflections on last 2 days
   -Overall organization – logistics
   -Content
   -Facilitation
   -Participants
   -Media
2. Summary / Review of Priorities, Issues and Recommendations
3. Next Steps:
   -Reporting/Documentation
   -Plan for this group
   -Funding
4. Other Business

Discussion:

1. Reflections on last 2 days

- Discussion on Press Conference

  Reporters from Mlup Baitong, Cambodge Soir, Radio Free Asia, etc. asked questions about national statistics on NTFP, interviewed local people about threats to NTFP (missed some of this). They will broadcast in the next week.

- Feedback from Committee members

Highlights:

- The workshop and seminar were able to capture the current situation in Cambodia in terms of resource tenure and land security issues.
- There were good small group discussions. The seating arrangement was effective for creating groups efficiently.
- There was well targeted donor participation, eg. DANIDA who stayed for most of the morning. FA Deputy Director also present for most of the morning. His personal interest in NTFP was highlighted – he is a potential ally and there is an opportunity here to follow up with him.
- Side discussions were happening on specific products, eg. honey, bamboo and rattan.
- Day 1 started with community issues and needs.
- Meeting generated good information and data on status of NTFPs in Cambodia.
- Positive feedback from community/local participants.
- Good to facilitate in Khmer language.
- Logistics were well done. A debt of gratitude for Joanne/CFI.

Gaps:

- On Day 2, community members may not have been integrated well in the discussion. Local people's inputs were not heard. A recommendation that in the future, the presentation to have a complement of both NGO and community speakers.
- There were not enough direct questions to the people on the ground, such as to honey collectors. Same people tended to comment from the floor. We were not able to bring the richness of the small group discussion into the summary.
- There was no detailed discussion of priorities and recommendations. A better synthesis of issues was needed in order to prioritize.
- Recommendations were not focused on NTFPs, but strayed to more general issues like land encroachment and deforestation. But this reflects the current situation in Cambodia.
- There was no response from the government participants regarding requests from participants, such as fee collection. Therefore, the media coverage was very important.
- One DANIDA participant could not stay for the whole meeting, while one woman did stay. Also, top Government representative (Mr. Chea Sam Ang) could not stay, but did stay for most of the morning.
- We couldn't issue a joint statement. It would have been interesting to try to ascertain how the situation for NTFPs is changing over time.
- Private sector participants were participating, but the strategy of connecting communities with private companies was not well-developed.
- Some participants were interested in specific products, not a general NTFP discussion.
- We did not hear clearly about the plans of the FA regarding NTFPs (limited to opening speech).
- There were too many presentations. More information booths or other methods of information sharing could have been used.
- Find ways to make sure indigenous participants understand and follow the discussion, especially women.
- English translation was very good but some Khmer was not so clear and for more technical issues he couldn't translate clearly (quality of translation on Day 2 declined due to this). Good to allow time for preparation with the interpreter beforehand.

2) Summary/Review of Priorities

- Informal fees and bribes.
- Quality improvement of end product.
- Marketing support.
- Tenure security. CF is one mechanism, but often does not cover NTFP collection areas.
- Destructive harvesting.
- Sustainable supply.
- Sustainable management plans.
- Need to support research (extraction and supply level. This group could focus on specific products).
- Access to credit.
- Community organization and management, building capacity.
- Cultivation techniques.
- Information sharing, awareness raising, networking.

3) Recommendations / Suggestions

- Joint statement/press release on the workshop (not possible).
- Product-specific workshop, supply, production meeting.
- Honey networking – organize exchange visit between Vietnam and Cambodia and visit to Indonesia; Ratanakiri and Mondulkiri (honey and craft development).
- Craft development workshop in March (CAN-DO) and can be back to back with a workshop on Liquid resin – issues are feed, tapping, processing, land conversion. A small workshop with Dr. Truong in March would be possible. (OGB and maybe Eang Hourt will help to organize. EP will cover for regional expert).
- Participate in meeting on 19th Supreme Economic Council Forum, present a summary of workshop (Rotha, Femy, Amanda, Amy).
- Find priority cards (CFI) from discussions on Days 1 and 2 - check with Sona and Bunnath, ask them to type up.
- Amy and Joanne will do transcription.

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- Information-sharing.
- Send concrete funding ideas to Jenne to present to donor.
- NTFP Coordinator position (OGB - Khim and Rose) – initially and will be open for rotation as needed; funding can be secured to hire someone but this will be when needed and if individuals within the informal network cannot take on this role.
- Meeting once every 2 months – first meeting will be 26 January (2pm OGB).
- Transcribe workshop proceedings, summarize some sections and send out for comment (1 week), Rotha, Amanda, Joanne.
- Send keynote speech to Joanne.
- Network with CF Network (Could we have presentation on the NTFP workshop?), Dec 14-15.
- NTFPs can be integrated to next OGB Forestry Network meeting in March.
- Technical workshop on rattan in second half of 2007 (IKEA) including harvesting, production, markets, product, enrichment planting, cultivation.

NEXT MEETING: January 26, 2007 (at OGB), 2pm

ANNEX 3: Contacts List

Organization	Name	Position	Location	Telephone	E:mail
ABC Australia	Mr. Mom Sophon	Journalist	PP		
Anagut Komar	Mr. Khem Sokhun	Director	Pursat	012 583 862	anakotkumar@yahoo.com
	Ms. Som Bopha	Community person	Pursat	n/a	n/a
BFDK	Mr. Sin Choun	Project CF Manager	Kampong Thom	012 190 7664	n/a
	Ms. Soeun Heyii	Member of CFMC in Bos Veng, Prasat	Kampong Thom	n/a	n/a
	Ms. Soeun Leyii	Member of CFMC in Bos Veng, Prasat	Kampong Thom	n/a	n/a
BPS	Mr. Ang Cheatlom	Director	Preah Vihear	012 547 699	cheatlom@yahoo.com
	Mr. Luk Chantha	Community person	Preah Vihear	n/a	n/a
Cambodia Modern Rattan	Mr. Lip Cheang	Owner	PP	011 947 882 016 328 212	ehk_huy@yahoo.com
	Ms. Oun Seang Hay	Manager	PP		
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	Andrew McNaughton	Director	PP	012 800 931	amcn46@gmail.com
Cambodian Soir	Mr. Sok Chhay	Reporter	PP	n/a	n/a
	Kuy Soklim	Reporter	PP	n/a	n/a
CAN-DO	Mr. Heang Sarim (presenter)	Executive Director	Ratanakiri	092 286 383	sarimheang@yahoo.com
	Ms. Kameik Veat	Community person	Ratanakiri (from Kres village)	n/a	n/a
	Ms. Chanort Creng	Community person	Ratanakiri (Koy village)	n/a	n/a
	Mr. Veang Lum	Community person	Ratanakiri	n/a	n/a
CBNRM LI	Mr. Ken Serey Rotha (Facilitator)	Project Team Leader	PP	012 404 065	sereyrotha@everyday.com.kh
	Mr. Rous Chanthy	Field Team Facilitator	PP	011 348 294	chantyrous@yahoo.com
CDA	Mr. Chee Boreth (presenter)	Director	Oddar Meanchey	012 180 1758	cdacambodia@yahoo.com
	Mr. Em Orn	Community person	Oddar Meanchey	n/a	n/a
CDRI	Mr. Kasper Hansen	Technical Research Advisor	PP	4520 4664 43	kasperkaad@jmail.com
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CED	Mr. Huot Sodyna		Kratie	092 968 449	n/a
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NTFP	Mr. Chhou Vak	Member of CFMC	Ratanakiri		
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OHK & Enterprise Opportunities	Mr. Nigel Smith				
Radio Free Asia	Ms. Ouk Savborey	Reporter	PP		
Rattan factory (2nd largest in PP)	Mr. Khun Thorn	Owner	PP		
	Mr. Thaong Sophet (presenter)	Director	Kampong Thom	012 574 581	rpfdkgthom@yahoo.com
	Ms. Lay Kul	Community person	Kampong Thom	n/a	n/a
RPFD	Ms.Nha Sophanarat	Community person	Kampong Thom	092 731435	n/a
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Wathnakpheap	Mr. Thai Pheng	Community person	Pursat		
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