

Summary

Training has been designed and implemented for each of the 4 target sites to transfer skills and techniques related with management and utilization of NTFP resource. So far, one study tour was organized for each site and NTFP processing trainings have been provided to a number of villages in Kg Chhnang and Kg Thom. As a result, various types of final products can be made by the target villagers. Currently, the people living in Tum Or and Chorm Svay Village of Kg Thom target site can produce bookshelves, tables, and chairs from rattans, the people living in Svay Bakao Village can make *chang-er*, *kanhchreng*, *kanhcheu*, and *laey* and the villagers in Kanhchoung can produce tables, chairs, stools, and other products from bamboos, and, moreover, the villagers in Saray Andeth can make woman baskets, *kantrak*, *cheung chang*, *kheng*, *reav chaan* etc. from *lapaek* (small rattans). More training will be provided for the target people in Mondulkiri and Ratanakiri.

Of course, transferring concept and techniques to the target people is very important to improve villagers' participation and increase local benefits. Unfortunately, finding markets for the final products and availability of raw materials of and from the site have become the major issues to be dealt with. The reason is market competition is increasingly high and the final products made by the target people are of low competitive. Moreover, the available NTFP resources at the target sites are decreasing to an alarm level at the moment. However, it depends on willingness and efforts of the target communities to overcome the barriers for their lives.

1-Introduction

The Project on Improvement of Sustainable Management and Utilization of Non-Timber Forest Product (NTFP) in Cambodia has been formulated with the aim at improving benefit to the target people through NTFP collection and processing in a sustainable way in term of environmental impact. The Project has been implemented by Cambodian Forestry Administration (FA) in cooperation with ITTO. Five areas have been designed to achieve the purpose, including community empowerment, socio-economic development, silviculture improvement, botanical research/conservation, and capability development to the target villagers on how to collect, enrich, process and trade their NTFP resources in a sustainable way with maximum benefit. Currently, the project is focusing on poverty alleviation of local communities who are strongly depending on natural forest resources by selecting 4 Cambodian provinces with 16 target villages, Kg Chhnang: Svay Bakao, Oroung, Kanhchoung, Saray Andeth, and Svay Kroam, Kg Thom: Tum Or, Chorm Svay, and Sam Aung, Ratanikiri: Soam Kul, Soam Kaninh, Soamtrak Chas, and Soamtrak Thmei, and Mondulkiri: Pouloung, Poukroch, Poukrenh, and Pouradeth as target areas.

Training Component has been designed to be responsible for training the local people related with NTFP collection, processing, enrichment, and trade. Technically, to complete the task, it is required to carry out a training need assessment, formulate training action plans, conduct training sessions, and document the training results and activities. Five months have been allocated for National Training Consultant to carry out the tasks.

2-Methodology

To provide training to the target villagers, a series of activities were carried out:

- conducting training needs assessment,
- formulating of training plan,

- development of training guideline
- development of training action plans
- carrying out training sessions, and
- documentation of the training activities and result

2.1- Training Needs Assessment

Training need assessment (TNA) is conducted with the aims at:

- clarifying and confirming training need of the target people
- identifying potential NTFP species/types at the target sites
- grasping important topics for training the villagers
- understanding the current levels of existing local knowledge and skills
- figuring out how appropriate training shall be provided for each target village.

To complete the task, the following methods were applied:

- Literature review of existing documents formulated by pre-project
- Questionnaire development for semi-structure interview
- Semi-structured interviews with the target people to identify problems related with their NTFP resources and their livelihood
- Data analysis:
 - Demographical analysis
 - Problems analysis
 - Potential NTFP resources assessment
 - Needs analysis

Analysis methods include comparison, pair wise ranking, graphs, tables, problem trees, and discussion. Detail of these methods was described in the TNA report.

- Consultation with the project coordinator, assistant coordinator, and national experts.

2.2-Training Plan

After TNA was completed, a training plan was formulated. However, to formulate the training plan, an exploratory survey was conducted to identify key specialist for training the target villagers, to identify final products popular at the domestic markets, and production alternatives in transforming the potential NTFP resources. To achieve the purpose, the followings were carried out:

- Observing final products sole at various shops in cities and towns, especially Phnom Penh, to identify the sources of the products.
- Visiting the sources of the products to identify specialists
- Negotiate with the specialists to clarify possible trainings for the villagers.

Detail of the methods was described in the report on Training Plan.

2.3-Training Guideline

After a training plan was developed, a training guideline was also formulated based on information and experiences of the expert and other projects, such as DANIDA Tree Seed Project, JICA Capacity Building Project for Forestry Sector, RECOFTC Capacity Building for Sustainable Land Management and Forestry Project etc. However, most of experiences were obtained from the Training Center of Forestry and Wildlife under the Institute of Forest and Wildlife Research and Development of the Forestry Administration (FA). However, the training guideline is just to determine the methods, principles,

policies, and strategies that training should be carried out in transferring of innovation and/or new technologies to the forest communities:

- Principles:**
- No discrimination
 - Training for all target villages
 - Based on the selected NTFP species/types
 - Focusing on 4 areas of sustainable NTFP management including sustainable collection, enrichment, processing, and trade.
 - Equipments and materials are given to the participants as incentive or in kind support after each training course
- Strategies:**
- One village one product is suggested by H.E. Ty Sokhun, Head of FA and Delegation of the RGC
 - Learning by doing/ on-the-job training
 - Training in 4 steps: study tour, processing, planting, & follow up
- Policies:**
- Participants must be key NTFP users, member of target villages with a strong willingness to learn and share new technologies.
 - Only minimum DSA would be provided
 - 5 days in minimum and 30 days in maximum for each course
 - Training by village
 - Certificate will not be provided
 - Trainers shall be recruited by NTE
- Methodology:**
- Training in a very simple way (practical base)
 - Using effective methods (learning by doing)
 - Course planning before training sessions
 - Course composes of orientation, objectives, group norm, training activities, daily feedback, evaluation and report

2.4 Training Action Plans

After the need assessment, work plan preparation, policies, strategies, and methodologies were set up, training action plans have been developed village by village and training sessions were carried out one by one. However, the action plans were developed based on time and resource availability both human resource and natural resources including the budget. Each training action plan is described:

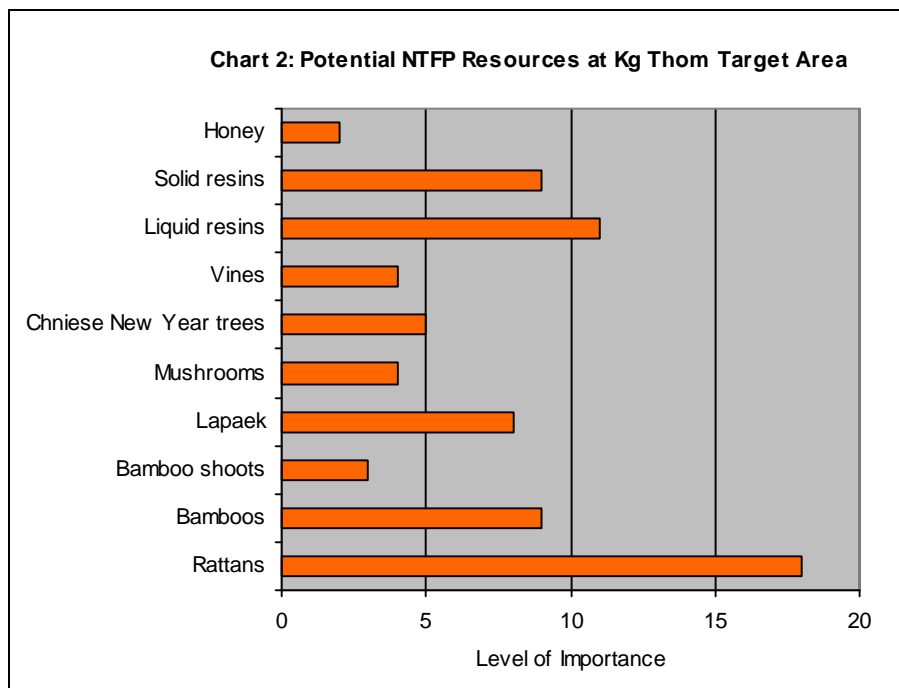
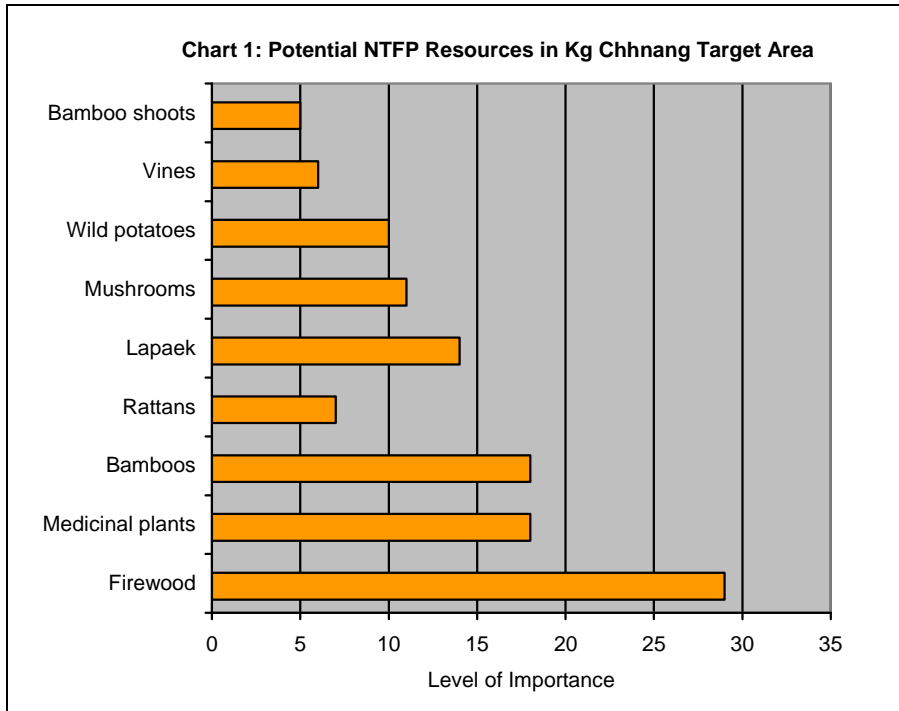
- reason for taking action of the training
- objectives
- target and number of participants
- equipments and raw materials for processing
- name of specialist to be the trainer
- expected output, and
- cost of the training including coaching fee, DSA of participants, procurement of tools, equipments, and raw materials, and transportation.

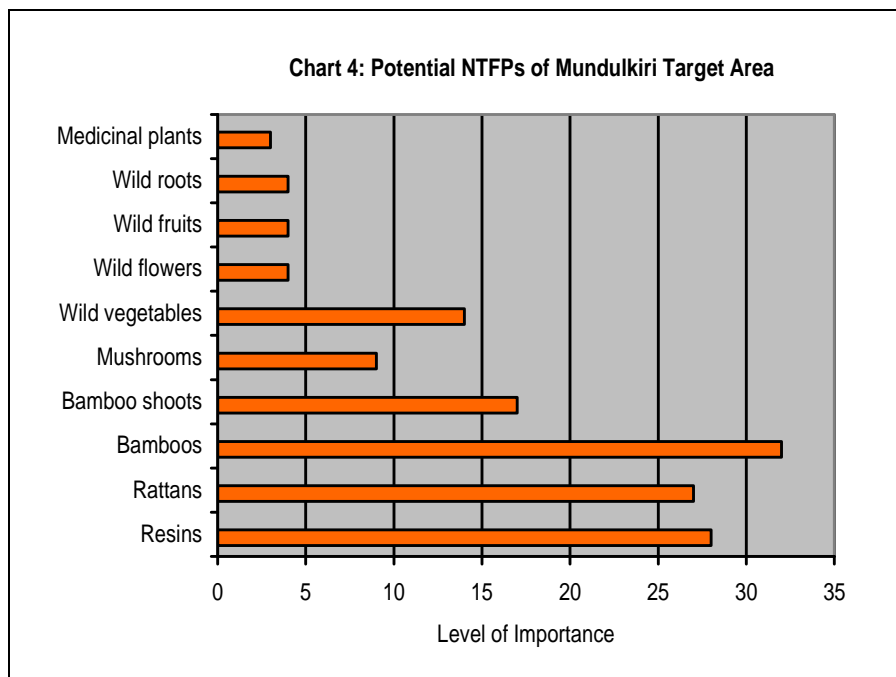
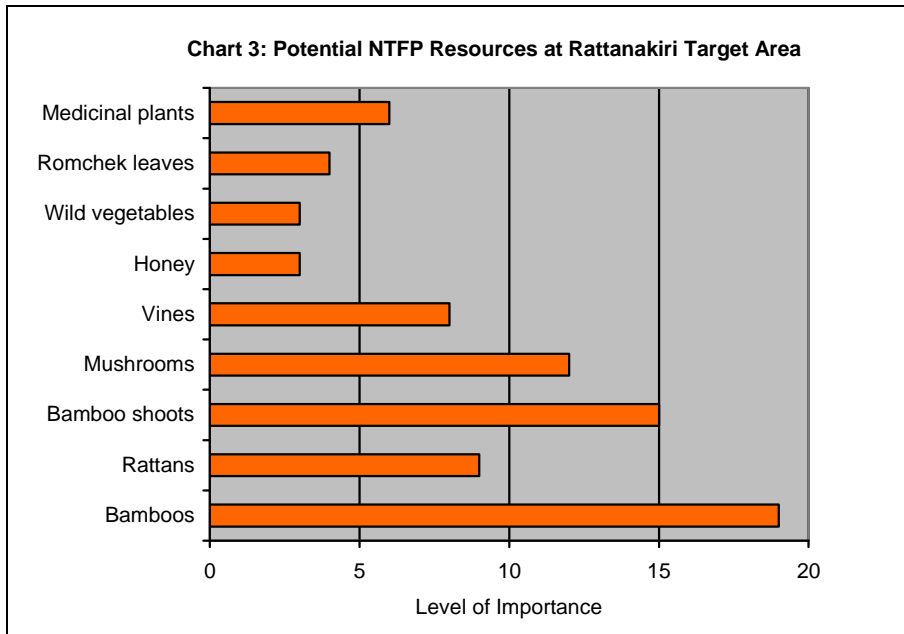
It is noted that times of the target people and market for the final products are usually the main barrier for full participation of the trainees since all of them devoted their time for daily subsistence or income generation and the final products were hardly access, even, to domestic markets. However, when action was taken, a compromise is usually applied to make training possible. After each training action, an evaluation was often made to assess effectiveness of the training.

3-Data Presentation

3.1-Important NTFP Resource

Potential NTFP resources at each target site were identified during the need assessment. According to the purpose of need assessment which is focused on economic value of the NTFP, the NTFP resources were typically grouped as bamboos, rattans, mushrooms, etc. and result of the assessment is shown below:





3.2-Topics for Training

Topics prioritized by the target people are shown in the below tables:

Table 1: Prioritized Topics at Kampong Chhnang

No	Requested topics	Scores	Ranked
1	Rattan cultivation techniques	90	1 st
2	Bamboo cultivation techniques	80	2 nd
3	Lapaek cultivation techniques	80	2 nd

4	Mushroom cultivation techniques	80	2 nd
5	Medicinal plants cultivation techniques	60	3 rd
6	Handicrafts production skills	60	3 rd
7	Marketing skills	40	4 th
8	Tree planting techniques	40	4 th
9	Bee keeping methods	20	5 th

Table 2: Prioritized Training Topics for Kampong Thom

No	Requested topics	Scores	Ranked
1	Bamboos and rattans processing	99	1 st
2	Marketing and business skills	99	1 st
3	Sustainable resin collection method	66	2 nd
4	Bamboo cultivation techniques	66	2 nd
5	Resin processing techniques	66	2 nd
6	Rattan cultivation methods	33	3 rd
7	Bee keeping skills	33	3 rd

Table 3: Prioritized Training Topics for Ratanakiri

No	Requested topics	Scores	Ranked
1	Rattan and bamboo cultivation methods	99	1 st
2	bamboo & rattan processing techniques	99	1 st
3	Marketing skill	99	1 st
4	Mushroom cultivation techniques	66	2 nd
5	Sustainable honey collection method	66	2 nd
6	Bamboo shoot processing method	33	3 rd

Table 4: Prioritized Training Subjects for Mundulkiri

No	Requested topics	Scores	Ranked
1	Handicrafts from rattans and bamboos	99	1 st
2	Bamboo cultivation	99	1 st
3	Women baskets waving	99	1 st
4	Tree planting	50	2 nd
5	Medicinal plant cultivation	50	2 nd
6	Meum Thnam Chin cultivation	50	2 nd
7	Mat waving	50	2 nd
8	Waving of tribe clothes	25	3 rd
9	Hats making	25	3 rd
10	Mushroom culture	25	3 rd
11	Establishment of community forestry	25	3 rd

3-Result

3.1 Training needs of the target people

Based on the economic requirement, resource availability, and local interest, the below topics were prioritized and selected for training the target people:

Kg Chhnang Target Area

- Bamboos, rattans, Lapaek, mushroom, and medicinal plants cultivation methods
- Bamboo and Lapaek processing techniques
- Tree planting techniques
- Marketing skills

Kg Thom Target Area

- Business and marketing skills
- Resin, bamboo, and rattan processing techniques
- Bamboo and rattan cultivation methods
- Sustainable resin collection method

Ratanakiri Target Area

- Rattan, bamboos, and mushroom cultivation techniques
- Bamboo and rattan processing techniques
- Bamboo shoots processing techniques
- Marketing skills

Mundulkiri Target Area

- Techniques for processing bamboos and rattans
- Women basket weaving skills
- Techniques for bamboo, medicinal plants, mushrooms cultivation
- Techniques of tree planting for fruits

The reasons why only above topics were selected for training the target people are described in the next section and full report of TNA is attached as Appendix 1.

3.2 Selection of Target NTFPs

Potential NTFP resources were identified during the TNA process. In addition, botanical expert prioritized 10 NTFP species/types at each target village. However, due to time and budget constraint, the project experts selected only few species/ types in each target village for direct intervention and the final selection is shown below.

Table 5: Selected NTFP Species/Types

Target Site	Target Village	Species
Kg Chhnang	Svay Bakao	<i>Bambusa bambos</i> (L.) Voss. ex Vilm. ឫស្សីស្រុក
		<i>Thryostachys siamensis</i> (Kurz ex Munro) Gamb. ឫស្សីពឹងពង
	Svay Kroam	<i>Thryostachys siamensis</i> (Kurz ex Munro) Gamb. ឫស្សីពឹងពង
		<i>Memecylon scutellatum</i> (Lour.) Naud. ដើមឃ្នាស
	Kanhchoung	<i>Thryostachys siamensis</i> (Kurz ex Munro) Gamb. ឫស្សីពឹងពង
		Mushroom ផ្លូវិតក្រូក
	Saray Andeth	<i>Thryostachys siamensis</i> (Kurz ex Munro) Gamb ឫស្សីពឹងពង
		<i>Calamus salicifolius</i> Becc. រំពាក់
	Oroung	<i>Thryostachys siamensis</i> (Kurz ex Munro) Gamb ឫស្សីពឹងពង
		<i>Bambusa bambos</i> (L.) Voss. ex Vilm. ឫស្សីស្រុក

Kg Thom	Tum Or	<i>Myrialepis paradoxa</i> (Kurz) J. Dransf. ផ្លែឈូ ផ្លែសោម ផ្លែអាចន៍មាត់
		<i>Calamus salicifolius</i> Becc. រំពាក់
	Chorm Svay	<i>Cananga latifolia</i> <i>Mitragyna hirsuta</i> Hav. ដើមផ្លែស្រែង
		<i>Daemonorops jenkinsiana</i> (Griff.) Mart. ផ្លែសោម
		<i>Dipterocarpus costatus</i> Gaertn. f. ជីវលើទាលប្រើស
	Sam Aung	<i>Daemonorops jenkinsiana</i> (Griff.) ផ្លែសោម
<i>Black Spider</i> សត្វអាពឹង		
<i>Dipterocarpus costatus</i> Gaertn. F. ជីវលើទាលប្រើស		
Ratankiri	Soamkul	Mushroom ផ្សិតត្រចៀកកណ្តុរ
		<i>Dendrocalamus nudus</i> Pilg. Graminae, Bambusoidae ឬស្សីស្រុក
	Soamkanih	<i>Bambusa bambos</i> (L.) Voss. ex Vilm. ឬស្សីព្រៃ
		<i>Lisea glutinosa</i> (Lour.)C.B Rob. ក្រពុលបាយ
	Soamtrak Chas	<i>Dendrocalamus nudus</i> Pilg. Graminae, Bambusoidae ឬស្សីស្រុក
		<i>Calamus vininalis</i> Wild. Palmae ផ្លែ
Soamtrak Thmei	<i>Dendrocalamus nudus</i> Pilg. Graminae, Bambusoidae ឬស្សីស្រុក	
	<i>Calamus vininalis</i> Wild. Palmae រំពាក់	
Mondulkiri	Poukreng	<i>Vandopsis gigantea</i> (Lindi.) Pfitz ផ្កាអ័រតិដេ
		<i>Shorea siamensis</i> Miq. var. <i>siamensis</i> ជីវរាំង
	Poukroch	<i>Vandopsis gigantea</i> (Lindi.) Pfitz ផ្កាអ័រតិដេ
		<i>Shorea siamensis</i> Miq. var. <i>siamensis</i> ជីវរាំង
	Pouradeth	<i>Vandopsis gigantea</i> (Lindi.)Pfitz ផ្កាអ័រតិដេ
		<i>Shorea siamensis</i> Miq. var. <i>siamensis</i> ជីវរាំង
Pouloung	<i>Vandopsis gigantea</i> (Lindi.) Pfitz ផ្កាអ័រតិដេ	
	<i>Shorea siamensis</i> Miq. var. <i>siamensis</i> ជីវរាំង	

3.3 Training Plan

Training plan for the target people is developed based on availability of selected NTFP resource, willingness and preference of the villagers, available budget and specialists, time of the local people, and market demands of the final products. Possible trainings related with NTFP collection, plantation, processing, and trade include:

- Rattan plantation and the sustainable harvesting techniques
- Rattan processing for furniture and women baskets
- Bamboo plantation and sustainable harvesting methods

- Bamboo and bamboo shoot processing for furniture, women' baskets and vegetables, respectively
- Vine processing for home baskets
- Sustainable resin taping techniques
- Resin processing for standard quality
- Orchid flowers cultivation, cutting, grafting, and processing.

For effectiveness and efficiency of the technical transfer, trainings have been carried out in 4 steps:

- Step 1: to build concept to the target communities on plantation, harvesting, processing, and trade of the target NTFP through study tours
- Step 2: to build necessary skills and techniques related with NTFP processing and marketing of the final products to the target communities through NTFP processing training
- Step 3: to improve necessary skills and methods related with plantation and sustainable harvesting of the target NTFP resources through enrichment training
- Step 4: to follow up the transferred skills, technologies, and methods which are expected being applied by the target communities through follow up actions.

Full report of the Training Plan is attached as Appendix 2.

3.4- Action Trainings

Action trainings have been carried out at each site based on natural, human and fund resource availability, time, and market demand of the final products. Before providing the training to them, a rough study tour was conducted for each site to build concept to the participants on sustainable utilization of NTFP resources (bamboos and rattans). The study tours were joined from the people of all villages of the site. Record of the study tours is summarized below:

Table 6: Study Tours of the Target People

Site	Observation Objects	Dates	Participants	Destinations
Kg Chhnang	-Bamboo processing for women baskets -Bamboo plantation for bamboo shoots and bamboo products -Leaves weaving for women baskets	30-31 Aug 2009	Total 22: -16 villagers (6 women) -5 Project staffs -1 expert	Cheungkreav, Phnom Bath, Prek Anchanh, Beung Deng, and Beung Nai
Kg Thom	-Rattan processing for furniture: bookshelves, tables, chairs, etc. -Rattan plantation -Rattan final products at shops	16-18 Aug 2009	Total 20: -14 villagers (2 women) -5 Pro. staffs -1 expert	Kg Thmor, Prek Anhchanh, Kg Seila, Veal Rinh, and Prek Thnout

Rattanakiri	-Bamboo plantation for bamboos and bamboo shoots -Bamboo processing for souvenir products -Rattan processing for furniture -Rattan plantation	30 Nov-04 Dec 2009	Total 21: -17 villagers (6 women) -3 Project staffs -1 expert	Beung Deng, Beung Nai, Chambak, Leachbo, Beung Touk, Prek Thnout
Mondulkiri	-Bamboo plantation for bamboo shoots and bamboos -Rattan processing for flower and fruit baskets, tables, chairs, bookshelves and other products -Rattan plantation	12-15 Nov 2009	Total 21: -16 villagers (no woman) -4 Project staffs -1 expert	Beung Deng, Boseth, Prek Thnout, and Prek Ho (Kandal Province)
Total	-Bamboo and rattan processing -Bamboo and rattan enrichment -Wild leaves weaving	14 Days	84 participants	16 destinations

After the 4 study tours finished, NTFP processing trainings were started. However, so far, only rattan and bamboo processing techniques were transferred to the target people and only Kg Chhnang and Kg Thom target villagers have been trained. Furthermore, 2 villages in Kg Chhnang (Svay Kroam and Oroung) and 1 village in Kg Thom (Sam Aung) have yet been trained. The reason includes, the selected NTFP types are not sufficiently available for processing, Svay Kroam and Oroung, or the target people have not interested in processing, such as villagers of Sam Aung. Record of the training sessions is summarized below:

Table 7: NTFP Processing Training of the Target People

Site	Target Village	Topics	Date	Participants	Final Products
Kg Chhnang	Svay Bakao	Bamboo processing	14-23 Oct 2009	8 (6 women)	Kanhchreng, Laey, Changer, Kralor, Kanhcheu
	Kanhchoung	Bamboo processing	06 Jan- 08 Mar 2010	4 (2 women)	Tables, stools, hairs
	Saray Andeth	Lapaek processing	24-28 Oct 2009	8 (all women)	Kantrak, kanhchher, Cheungchang, kheng, Reav Chaan
Kg Thom	Tum Or	Rattan processing	-Sep 11-30 -Dec 8-14 2009	8 (5 women)	bookshelves, tables, chairs
	Chorm Svay	Rattan processing	17-31 Jan 2010	6 (1 woman)	Bookshelves, tables, chairs
Total	5 villages	3 topics	117 days	34 people	16 types of final products

4-Problems/Finding

Actually there are 11 topics were required to train the target people including:

- ✦ Processing skills for value-added products from bamboos, rattans, Lapaek, bamboo shoots, resins
- ✦ Sustainable harvesting method for honey, bamboos, rattans, resins, medicinal plants
- ✦ Environmental awareness

- Cultivation techniques for bamboo, rattan, Lapaek, fruit trees, mushroom, medicinal plants
- Marketing and communication skills
- Forestry Law Awareness and enforcement
- Community forestry development knowledge
- Land use planning method
- Mat and tribe-clothes waving skills
- Sustainable agriculture method
- Health care awareness

However, some of the topics could be dealt by other components of the project, such as cultivation techniques (bamboo and rattan cultivation, fruit tree planting, medicinal plants cultivation, mushroom culture technique) would be covered by Silviculture, business and marketing skills could be covered by Socio-economic, and laws related knowledge (community forestry development, law-based knowledge and law enforcement) could be covered by Community Component. Moreover, some topics, such as environmental knowledge, land use planning method, sustainable honey collection methods, tribe-clothes weaving skills, sustainable agriculture method and health care awareness could be done in collaboration or cooperation with non-governmental organizations or/and government agencies. Therefore, only sustainable NTFP collection methods and processing techniques are transferred to the target people by the Training Component.

On the other hand, when we conducted study tours, many villagers preferred to join the events. Surprisingly, when official trainings were provided, the majority of villagers had escaped. The reason is those villagers preferred the ones which can return benefit as soon as possible. They cannot wait until tomorrow because they are living with only daily subsistence, no time, no resource, and no opportunity to think for tomorrow. Furthermore, raw materials were available within their forests and the project promised to pay for the raw materials, still they neglected to collect the products. This doesn't mean they are lazy. It is because of communication, one is the information was poorly or vaguely disseminated, another is the information was kept or protected at or by the persons.

5-Conclusion

It is clarified that:

- There is absolutely necessary to train the target people
- 11 topics are required to train them but can be done by different sources:
 - by the training component
 - by other components of the project
 - by cooperation with other agencies
 - by the target people themselves

So far, the achievement obtained includes:

- Four study tours were carried out, and
- A total number of 84 participants joined the study tours during 14 days to 16 destinations

- Six bamboo and rattan processing sessions were conducted, and
- A total number of 34 villagers from 5 villages were trained during 117 days on bamboo or rattan processing, and
- 16 kinds of final products can be made by the trainees.

During 4 months of works, the training expert produced the following outputs:

- 1 training need assessment report,
- 1 training plan for the 4 target site,
- 1 training guideline,
- 4 study tour plans,
- 4 study tours reports,
- 5 training action plans,
- 6 training sessions, and
- 14 activities and technical reports

6-Recommendations

-It must be ensured that the principle, strategies, policies, and methods set are properly and consistently implemented by the project.

-Each village shall be given at least one specific training related NTFP processing.

-Final products should be access to domestic markets through technical assistance and information exchange with socio-economic expert. If possible create a middle group to purchase all the products made by the target people and sale at domestic markets without thinking of interest. However, risks must be minimized.

-All project activities shall be carried out in a participatory way focusing on local interests, participation, and participatory decision making, to ensure sustainability of the project

-Improve relationship and communication between local project staffs and communities through rotated activities of all project components.

-Project manager shall visit the target areas at least once a month to understand the process and effectiveness of the project.

7-Implication for Practice

In any occasion, do not hire any persons to work for the local people. Instead the local people who participate in the project activities should be encourage through reasonable incentive to show benefit of their participation. This can make other villagers who did not yet joined the project activities purposefully participated. On the contrary, if hire some persons to do any work for them, it could become a habit for the next activities and as a result the project would absolutely face poorest participation and finally fail.