

**Project: PD 24/00 Rev. 1(I)
Promotion of Sustainable Utilization of Rattan
from Plantation in Thailand**

Report of the Study Tour to the Philippines

21–27 January 2004

by

**Panee Denrungruang
Rungnapar Pattanavibool
Paiwan Lek-u-thai
Mayuree Jitkaew
Chanatip Kuldilok
Smit Boonsermsuk**

**Royal Forest Department
and
Department of National Park, Wildlife and Plant Conservation**

**under financial support of
International Tropical Timber Organization (ITTO)**

A group of 6 researchers of the Royal Forest Department (RFD) and the Department of National Park, Wildlife and Plant Conservation (DNP), staff of the project **Promotion of Sustainable Utilization of Rattan from Plantation in Thailand : (PD 24/00 Rev. 1(I))** as names listed below, had undertaken a 7-day study tour to the Philippines during 21 to 27 January 2004. The entire expenses of the study tour were provided by the **International Tropical Timber Organization (ITTO)** through the **PD 24/00 Rev. 1(I) Project**.

- 1) **Ms. Pannee Denrungruang**, Project Leader, RFD
- 2) **Dr. Rungnapar Pattanavibool**, Assistant Project Leader, DNP
- 3) **Ms. Paiwan Lek-u-thai**, project staff, RFD
- 4) **Ms. Mayuree Jitkaew**, project staff, RFD
- 5) **Mr. Chanatip Kuldilok**, project staff, DNP
- 6) **Mr. Smit Boonsermsuk**, project staff, DNP

The objectives of the study tour were as follows.

- 1) To provide the opportunities for the project staff to participate in the **Regional Conference on Sustainable Development of Rattan in Asia** during 21-23 January 2004 in order to deliver and share experiences/information on rattan research and development, which gained from the past and during the operation of the project with researches from ASEAN countries.
- 2) To visit the well-organized experimental plots of rattan research and development in the Philippines.
- 3) To allow the study tour members to gain broader perspectives on the production of value-added rattan furniture products and to be familiar with the product flows of successful rattan furniture factories in the Philippines.
- 4) To perceive the ideas of sustainable utilization of rattan resources.

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Report of the Participation in the Regional Conference on Sustainable Development of Rattan in Asia



**21 – 23 January, 2004
Manila, the Philippines**

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**PD 24/00 Rev. 1(I) Project Staff
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Report of Participation in the Regional Conference on Sustainable Development of Rattan in Asia

21 – 23 January, 2004

Manila, the Philippines

The **Regional Conference on Sustainable Development of Rattan in Asia** was organized by the **Forest Products Research and Development Institute (FPRDI)** of the Philippines under the support of ITTO Pre-Project entitled **Application of Production and Utilization Technologies for Rattan Sustainable Development in ASEAN Member Countries: [PD 51/02 Rev.1(I)]**. The project has 2 specific objectives: 1) to conduct the analysis of the sustainable rattan commodity and the socioeconomic, production, harvesting, processing, utilization, and market dimension of rattan in local communities in the ASEAN member countries, and 2) to determine the future actions needed to enhance ASEAN regional cooperation through collaborative research in sustainable development of rattan. There were 43 participants from 10 ASEAN countries, a representative of ITTO, an expert from India and researchers from the Philippines. Names of key persons organizing the Conference and the representatives of each country are listed below.

ITTO's representative	Mr. Emmanuel Ze Meka
Organizers of the Conference	Dr. Celso P. Diaz and Dr. Aida B. Lapis
Brunei Darussalam	Mr. Jof Bin Haji Ali Ahmad
Cambodia	Mr. Pen Samphan
Indonesia	Mr. Bambang Wiyono
India	Dr. C. Renuka:
Lao PDR	Mr. Sounthone Ketphanh
Malaysia	Dr Raja Barizan Raja Sulaiman
	Mr. Mat Rasul Sidek
Myanmar	Mr. U Win Myint
the Philippines	Dr. Florentino O. Tesoro
Thailand	Mr. Chudchawan Sutthisilapa and 6 participants from PD 24/00 Rev. 1(I) Project
Vietnam	Ms. Do Thai Ngoc Bich

Contents of the Conference

- Welcome remarks from Director of ERDB.
- Two technical presentations from invited speakers.
- Country reports by representatives of ASEAN countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Vietnam).
- Conference Workshop.
- Presentation of Workshop Outputs.

The Conference program is shown in Annex I. After the opening ceremony, the Conference was started with 2 technical presentations. The first presentation was given by Dr. Florentino O. Tesoro, Undersecretary for Field Operations, Department of Science and Technology (DOST) of the Philippines on the Sustainable Rattan Management and Utilization in Southeast Asia. The second presentation was given by Dr. C. Renuka, a senior scientist from Kerala Forest Research Institute (KERI), India on the “Challenges and Prospects on Rattan Research and Development: The Asian Region Scenario”. Then the representatives of 9 countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand and Vietnam, delivered presentations of it’s current status on rattan resources and production including resources management, processing and utilization technologies, market and socioeconomics, and the policy and institutional aspects for the promotion of rattan sector. After each presentation the floor was opened for recommendations and discussions which helped to fill up the gaps on rattan research and development in each country. Important points of discussions are summarized in the Conclusions and Recommendations.

Conference Workshop (23 January 2004)

The Workshop session was taken place on the second day in order to allow participants to address the needs and trends in rattan research and development using the drafted Matrix provided by the Organizers (Annex II). The directions of future trends and priorities of rattan research and development of rattan in each ASEAN country were compiled and presented. The inputs from other countries were taken into account and summarized into the perspectives and the needs in rattan research and development for ASEAN countries. The research needs on rattan of each country were different due to the basis of resources, utilization, and country’s perspectives. The directions of rattan research and development for Thailand were prioritized as shown in Annex III.

Field Trip (24-26 January 2004)

After the conference, all Thai participants proceeded to visit rattan furniture industries, rattan gene bank, and Ecosystem Research and Development Bureau (ERDB) as shown in Annex IV.

Contents of the Field Trip

- Rattan Chamber of Furniture Industries of the Philippines in Quezon city.
- Chamber of Furniture Industries of the Philippines at Bangiad Taytay, Rizal.
- Office of the Ecosystems Research and Department Bureau.
- Rattan Gene Bank at Los Banos Experiment Station.

At the Rattan Chamber of Furniture Industries of the Philippines in Quezon city, the group had an opportunity to experience the use of integrated materials for producing rattan furniture/products, such as metal, manila rope, bamboo, and wood. The properties of metal and wood are suitable to be used as interior parts of rattan furniture. Crafted manila rope and bamboo can be used to decorate a variety of rattan products. These integrated materials can substantially reduce the volume of rattan raw materials and the production cost.

At the Chamber of Furniture Industries of the Philippines in Bangiad, we had observed the using of metal and leather as integrated materials. The metal was used as the main structure of the furniture such as chair, table and folding bed. The production cost of the furniture was reduced so much by substituting rattan canes with metal and rattan skin with leather. With the design technology the finished products looked elegance and could be exported with higher price than those of total rattan. The integrated designs also received highly demands from European markets.

The group also observed rattan propagation, harvesting and protection techniques at the sites administered by Ecosystems Research and Department Bureau. The field trip included the visit to bamboo and rattan gene banks at Rattan Gene Bank in Los Banos Experiment Station.

Conclusions and Recommendations

The participation in the Conference, the Workshop and the field trip in the Philippines brought about the initiation of collaborative rattan research and development among researchers of Thailand and ASEAN countries. It was a great opportunity for the group to gain more knowledge and information on rattan research and development in ASEAN countries which represent the world's largest rattan resources and the largest supplier of rattan raw materials. The workshop also helped broaden the vision of sustainable management and utilization of rattan.

Rattan furniture making with integrated materials is one of the good concepts/achievements due to new design, more durability and lower cost of rattan raw materials. This concept will be incorporated in further rattan research in Thailand through the project PD 24/00 Rev. 1(I) during the extension period, *i.e.*, July 2004-June 2005.

There were some important points of discussions including opinions from the PD 24/00 Rev. 1(I) Project as follows.

1) Rattan resources in ASEAN

How much do we know and what are the economically important species.

It was realized that identification of rattan is one of the major problems in rattan research and development. Manual of Asian rattan identification should be prepared with the support from ITTO and rattan taxonomists from the Royal Kew Botanic Gardens.

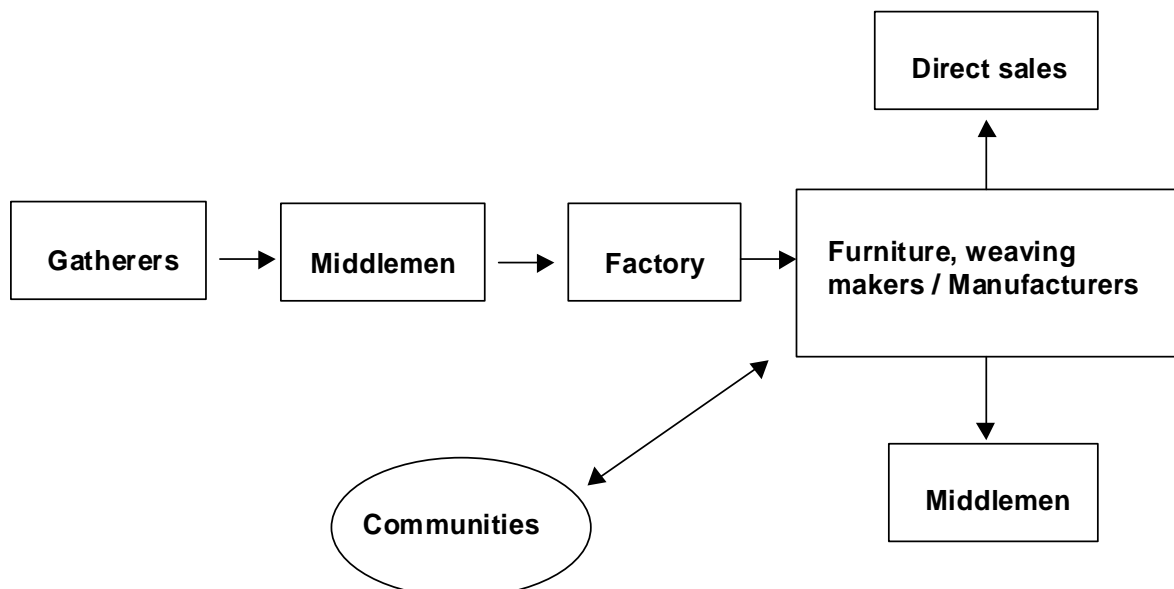
2) Production and resource management: Many countries still needed to improve the techniques on propagation, inter-planting rattan with forest tree species and production of value-added products. The group noticed the shortages of rattan raw materials in some countries that many factories had to be terminated and the skillful employees lost their jobs. It was recommended that the rattan resources of each country be harvested and utilized on sustainable basis, rattan plantation establishment be promoted. In addition, the rattan materials should be used in effective ways by integrating rattan with some others materials. The integrated materials may vary from country to country. In this regard, the design and technology should be at international standards.

3) Rattan product flow:

Indonesia, the largest exporter of rattan raw materials, intends to enhance the capabilities of people in manufacturing of rattan products, which would strengthen the local economy. The export of rattan raw materials had been replaced by that of the finished products.

The Philippines is one of the successful exporters of well-designed rattan furniture, which is much more having enough their owns resources. For Thailand, we have drawn a rattan product flow chart as shown below. Most of the rattan raw materials used in the factories in Thailand are the ready-to-use materials. Only a small amount of the raw materials used by the communities are cultivated products or the products harvested from the community forests. The gathering process for a large amount of rattan is not really existed in Thailand. At present, the product flow in Thailand starts at the middlemen level. Most of the

rattan raw materials used in Thailand are imported from neighboring countries such China, Myanmar and Indonesia. Thailand needs to develop successful and sustainable rattan plantations so that the gap of the product flow is completed and can be controlled. The factory in the chart means factory that produces ready-to-use materials, where the raw rattans have already been peeled, split in designed diameters and bleached. This process might have been done in the exporting countries such as China and Indonesia. The diameter of the cane can also be done by ordered as required. By the evaluation of the project PD 24/00 Rev. 1(I), the step having this factory helps facilitating and saving so many processes/steps of the rattan industries in Thailand. In term of resources conservation, it helps reducing the loss of raw materials during the peeling process and saving a lot of raw rattans that need to be process immediately after harvesting. In term of small- and medium-scale community craftsmanship it provides ready-to-use materials so the costs on all machines are cut and also saving all their time on the processes of negotiating/buying raw materials.



**ANNEX I
PROGRAM OF THE CONFERENCE**

**Regional Conference on Sustainable Development of Rattan in Asia
Manila Pavilion, Ermita, Manila, Philippines**

21 – 23 January 2004

PROGRAMME

Day 1 JANUARY 21, 2004 (Wednesday)	
Arrival of Participants	
Day 2 JANUARY 22, 2004 (Thursday)	
Morning	
7:30 – 8:30	Registration
8:30 – 9:15	Opening Programme
Philippine National Anthem	
Welcome Remarks	Mr. Celso P.Diaz Director, ERDB Overall Project Coordinator
Message	Dr. Emmanuel Ze Meka Assistant Director, ITTO
Presentation of Participants	Dr. Aida B.Lapis Project Leader – Management, ITTO Project
Introduction of Keynote Speaker	Mr. Celso P.Diaz
Keynote Address	Hon. Elisea G.Gozum Secretary, DENR
I. PHOTO SESSION	
	Master of Ceremonies: Dr. Merlyn N. Rivera
9:15 – 9:30	COFFEE BREAK
9:30 – 9:55	Technical Presentation 1 : Plenary Session “Sustainable Rattan Management and Utilization in Southeast Asia” by: Dr. Florentino O. Tesoro, Undersecretary, Field Operations, Department of Science and Technology (DOST)
9:55 – 10:20	Technical Presentation 2: Plenary Session “Challenges and Prospects on Rattan Research and Development: The Asian Region Scenario” by: Dr. C. Renuka, Scientist, Kerala Forest Research Institute (KFRI), India
12:00 – 1:00	LUNCH BREAK
10:20 – 12:00	Open Forum
Afternoon	PRESENTATION OF COUNTRY REPORTS
1:00 – 1:25	Brunei Darussalam: Mr. Joffre Bin Haji Ali Ahmad
1:25 – 1:50	Cambodia: Mr. Pen Samphan

1:50 – 2:15	Indonesia: MR. Babang Wiyono
2:15 – 2:50	Open Forum
2:50 – 3:05	COFFEE BREAK
3:05 – 3:30	Lao PDR: Mr. Sounthone Ketphanh
3:30 – 3:55	Malaysia: DR. Raja Barizan Raja Sulaiman
3:55 – 5:00	Open Forum
6:30	Dinner and Cultural Presentation
Day 3 JANUARY 23, 2004 (Friday)	
Morning	CONTINUATION OF COUNTRY REPORTS
8:00 – 8:05	Recap of Day 1 activities
8:05 – 8:30	Myanmar: Mr. U Win Myint
8:30 – 8:55	Philippines: Mr. Celso P. Diaz
8:55 – 9:55	Open Forum
9:55 – 10:10	COFFEE BREAK
10:10 – 10:35	Thailand: Dr. Chudchawan Sutthisrisilapa
10:35 – 11:00	Vietnam: Ms. Do Thi Ngoc Bich
11:00 – 12:00	Open Forum
12:00 – 1:00	LUNCH BREAK
Afternoon	
1:00 – 3:00	Workshop
3:00 – 3:45	Presentation of workshop outputs
3:45 – 4:00	COFFEE BREAK
4:00 – 4:30	Dialogue of the ASEAN delegates and ITTO Representative on Future Actions for the Full Project: Application of Production and Utilization Technologies for Rattan Sustainable Management in the ASEAN Member Countries
4:30 – 5:00	Closing Program
Impression of 2 representatives from the Participants	Brunei Darussalam and Lao PDR
Awarding of Certificates to Participants and Guest Speakers	Dir. Celso P. Diaz and Dr. Emmanuel Ze Meka
Closing Remarks	Dr. Florence Soriano Director, FPRDI
5.00	Tour (Optional)
Day 4 JANUARY 24, 2004 (Saturday)	
Home sweet Home !!!	

FACILITATORS:

Ms. SOCORRO FELICIANO
MS. JACQUELINE BACAL

Annex II **MATRIX I. Rattan Production: Technology Needs and Prioritization¹**

PRODUCTION and RESOURCE MANAGEMENT	Brunei Darussalam		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines		Thailand		Vietnam	
	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L	Specific Needs	H L
1. Resource Inventory a. Taxonomy b. Extent of natural stand/plantation																		
2. Nursery activities a. Propagation b. seedling care and maintenance																		
3. Plantation establishment a. site requirement b. site preparation c. outplanting d. maintenance and protection																		
4. Harvesting system																		
5. Grading standards																		
6. Transporting/hauling																		
7. Post-harvest activities																		
8. Marketing																		

Please identify specific needs/concerns and indicate urgency: H – high priority
L – low priority

Matrix II. Rattan processing and utilization: technology needs and prioritization¹

Area of concern	Brunei Darussalam		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines		Thailand		Vietnam	
	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	H/L	Specific Needs	HL
1. Post harvest technologies																		
Preservative treatment																		
Scraping																		
Drying																		
2. Secondary processing																		
Preservative treatment																		
Bleaching																		
Drying																		
3. Finished products production																		
Weaving																		
Bending																		
Jointing																		
Finishing																		
Pollution control																		
4. Finishing																		

¹ Please identify specific needs/concerns and indicate urgency: H – high priority; L – low priority

ANNEX III
THAILAND PRIORITY

Rattan Processing and Utilization: Status, Problems, and Needs

Country : THAILAND

Area of Concern	Status/Problems	Needs
Post Harvest		
1. Preservation	-Being practised	-Improved
2. Bleaching	-No natural raw materials to be processed as the logging operation was banned since 1989	
3. Drying		
<u>Secondary Processing</u>		
4. Preservative Treatment	-Being practised -Imported materials have been preserved but not meet the standard requirements	-Improve processing technologies -Research and study -More information, Knowledge/experiences exchange -Standard regulation in quality controls
5. Bleaching	-Being practised -Suitable technique, time and concentration of bleaching solution for different rattan species have not been determined	-More researches related to these topics
6. Drying	-Being practised -Problem on moisture re-absorption during wet seasons	-Suitable technique to prevent re-absorption of moisture
<u>Finished Products Production</u>		
7. Weaving	-Being practised	-Well trained to produce high quality and value added products -Research and study tours
8. Bending	-Lack of experiences and skillful	
9. Jointing		
10. Finishing		
11. Pollution Control	-Not so strict and usually harm the crops and environment	-Strong regulation in safety controlling system
<u>Other Concerns</u>	-These assessments are based on the local community or small enterprise	

Rattan Production: Status, Problems, and Needs

Country : THAILAND

Area of Concern	Status/Problems	Needs
1. Resource Inventory	-Not yet done	-Appropriate method for resources survey -Bio-diversity of resources base -Funding required -Well-trained taxonomists
a. Taxonomy	-Lack of rattan taxonomists	
b. Extent of natural stand/plantation	-Natural stand not started/ Plantation started/ -Lack of incentive and conflict on legal	-Proper method of existing natural stand -Monitoring and evaluation of uses by indigenous people -Document collection -Proper promotion and compromise policies from the government -Species selection, provenance trials
2. Nursery activities	-Slightly developed	-Developed techniques required
a. Propagation	-Slightly developed / Pest and diseases (not serious) and amount of seed supply per season	-Developed techniques required
b. Seedling care and maintenance		-Pest and diseases studied
3. Plantation establishment		-Exchange knowledge and information -nil
a. Site requirement	-Started	
b. Site preparation	-Enough	-Training and study tour required
c. Outplanting	-Developed	- Pest and disease studied
d. Maintenance and protection		
4. Harvesting system	-Not developed	-Training of staff -Cross visit -Well developed techniques and post harvest research and studied
5. Grading standards	-Not started	-Training of staff -Cross visit
6. Transporting/hauling	-Not developed	-Training of staff -Information required
7. Post-harvest activities	-Wastage -Infection with staining fungi and attack by insect	-Treatment within 24 hours
8. Marketing	-Insufficient of information	-Information -Research and study

ANNEX IV PICTURES SHOWING ACTIVITIES AT THE CONFERENCE AND FIELD TRIP



Figure 1 Welcome address by Mr. Celso P. Diaz: Director, ERDB Overall Project Coordinator.

Figure 2 Group picture of participant and organizing committee.

Figure 3 Dr. Emmanuel Ze Meka: Assistant Director, ITTO is sharing his opinion.

Figure 4-6 Visit the Chamber of Furniture Industries of the Philippines at Quezon city.



Figure 7-12 At the Chamber of Furniture Industries of the Philippines, Bangiad Taytay, Rizal, Philippines. Most of the furniture use Palasan (*Calamus merrillii* Becc.) for the strucure.



Figure 13-15 Visit Office of the Ecosystems Research and Department Bureau
Figure 16-18 Visit rattan gene bank at the Los Banos Experiment Station,
 Ecosystems Research and Development Bureau