



**International Conference on Sustainable Development of Non-Timber Forest
Products and Services**
26-28 September 2007

**Promoting sustainable utilization of bamboo through
community participation in sustainable forest
management in Myanmar**
[ITTO project PD 146/02 Rev.1 (I)]

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Introduction

Area	- 676577 km ²
Boundaries	- China, Laos, Thailand, Bangladesh and India
Climate	- 3 seasons (summer, rainy and winter)
Temperature	- 0° C to over 40° C
Rainfall	- < 1,000 mm to >5,000mm
Population	- 53 million (2006)
Population growth rate	- 1.3 %
Rural population	- 69.4%
Religion	- Buddhism (80%), Hindu, Christian, Muslim and others



Bamboo resources in Myanmar

- 17 genera and over 90 species of bamboo
- Only 16 species are commercially important
- In Bago Yoma region, bamboos occur in mixture with trees
- Pure stands of *Melocanna bambusoides* occur about 8,000 km² in Rakhine State in the west, growing stock of 21.34 million metric tons (830,000 metric tons of pulp) annually
- Pure bamboo stands also occur in Tanintharyi Division in the south, growing stock of 6.09 million metric tons (247,904 metric tons of pulp) annually
- If the bamboo forests are managed under a cutting cycle of 10 years

Bamboo production for commercial and Household use in Myanmar (Pieces in million)

Bamboo production	1998-99	1999-00	2000-01	2001-02	2002-03
Commercial use	114.97 (12%)	121.85 (12%)	118.45 (12%)	139.92 (13%)	158.43 (14%)
Household use	855.74 (88%)	890.34 (88%)	899.26 (88%)	917.29 (87%)	935.59 (86%)
Total	970.71	1012.17	1017.71	1057.21	1094.02

Key problems to be addressed

- **economic stress or less income generation**
- **illicit felling and marketing of bamboo by bamboo traders**
- **exploitation of the rural population by the affluent bamboo plantation owners**
- **lack of awareness and having very little knowledge**
- **absence of cooperation, partnership and management, responsibility, sharing**

Sectoral policies

- Myanmar agenda 21 identifies the forestry sector as "very important to economic development in Myanmar".
- Myanmar Forest policy (1995) recognizes the sustainability of forest resources, basic needs of the people, public awareness
- Also states to develop and exploit the potential of NTFPs for meeting local needs and supporting small-scale rural forest-based industries and off-farm income.
- Myanmar Forest Law (1992) declares to develop the economy of the State and to meet the basic needs of the public through the conservation and protection of forests.

Sectoral policies contd.

▪ **The salient points of the Community Forestry Instructions (1995) are:**

- **Land is given freely to the users' group for CF (30 years)**
- **Users' group can exploit the forest products of CF**
- **No taxation on the forest products from CF**
- **Surplus forest products can be sold with no taxation**
- **The users' group can market the surplus forest products to areas outside**
- **The users' group can use surplus fund to development works**

Project Objectives

Development Objective

- To enhance the socio-economic benefits of bamboo to rural communities through their participation

Specific Objectives

- To develop and disseminate technical guidelines
- To increase income of local communities in 3 project sites

Project Contribution

Implementing Agency

- Forest Department, Ministry of Forestry

Duration

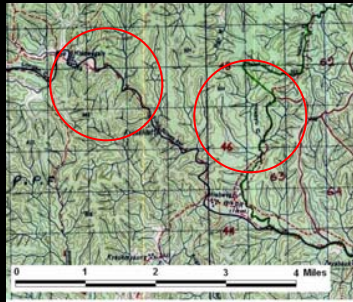
- 1st January 2003 – 31st March 2007(48 + 3 Months)

Project Cost

- Myanmar Government's Contribution: 1,309,620 Kyats

ITTO's Contribution : 453,256 US\$

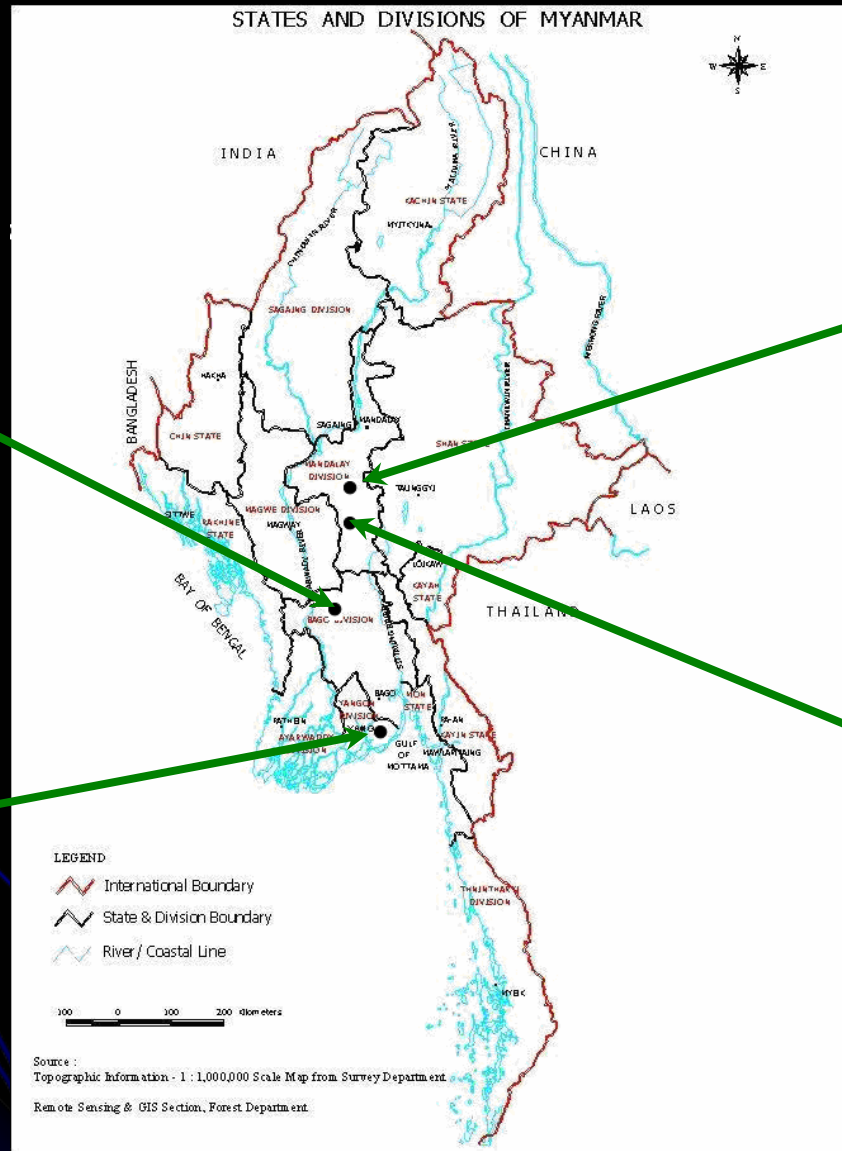
Project Sites in Myanmar



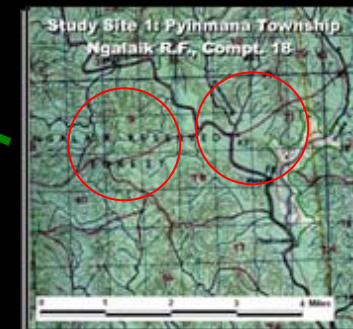
Paukkaung



Kawhmu



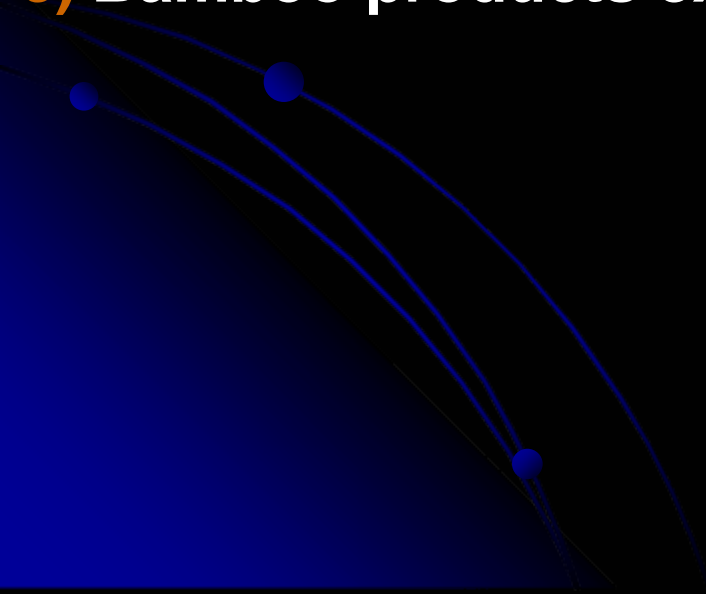
Tatcone



Pyinmana

Project Activities

- a) Bamboo Forest Management section**
- b) Bamboo products development and processing section**
- c) Bamboo products extension and marketing section.**



Bamboo forest management section

A. Trial plots (30 ha)

- Different propagation methods
- Two bamboo species mixed with tapioca and banna
- Different weeding intensities

B. Demonstration plots

- 25 ha, 10 species in Paukaung Tsp.
- 25 ha, 10 species in Pyinmana Tsp.
- 10 ha, 23 species in Kawhmu Tsp.
- 1 ha, 6 species in Tatkone Tsp. (Dry Zone)

C. Community owned bamboo forest

- 30 ha in Paukaung Tsp.
- 10 ha in Pyinmana Tsp.

Bamboo Plantations



Paukkaung

Natural Bamboo Forest Management



Pyinmana



Paukkaung

Bamboo product development and processing section

- 1. Bamboo properties test (15 commercially important species)**
- 2. Publishing manuals**
 - 15 commercially important species**
 - Bamboo shoot production**
 - Charcoal and Vinegar production**
- 3. Production of value-added bamboo products**
- 4. 3 training courses conducted**

Chemical Properties and Anatomy Research



Chemical properties such as Hot water soluble, NaOH soluble, Alc/Benz soluble, Cellulose, Hemicellulose, Lignin and Starch contents are tested in wood chemistry section

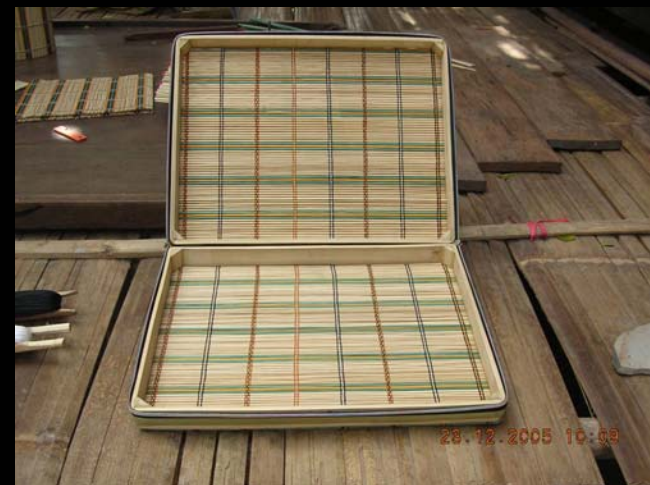
Physical and Mechanical Properties Research



Physical and Mechanical properties are Tested in Timber physics and mechanic section

Hand weaving





Sample of hand weaving Bamboo Curtains and handicrafts

Bamboo handicrafts

- Bamboo hat
- Bamboo bag
- Bamboo file cover
- Bamboo photo frame

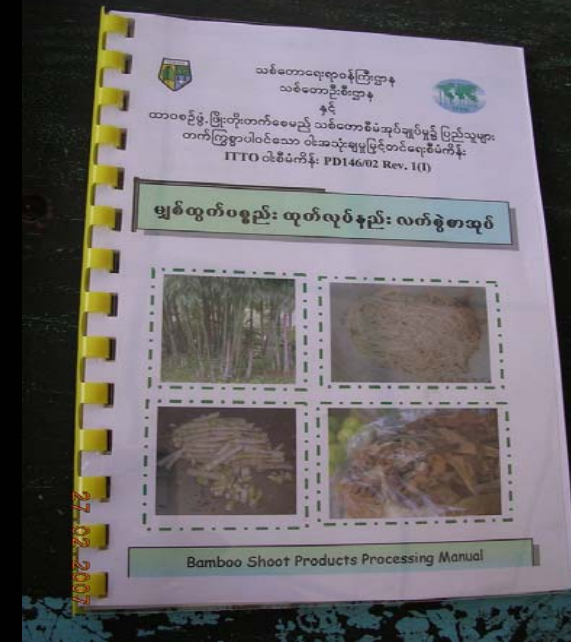




Bamboo furniture

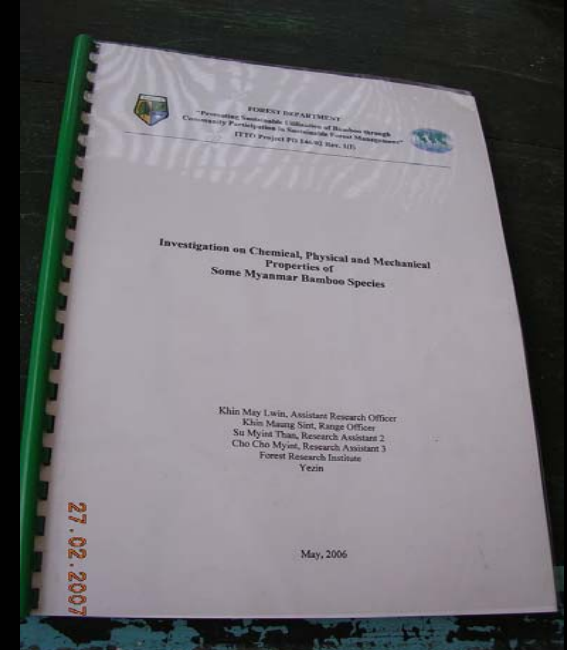


Bamboo shoot manual



Bamboo Properties Handbook

- 6 species
 - Kyathaung (*Bambusa polymorpha* Munra)
 - Thaik (*B. tulda*)
 - Wabo (*Dendrocalamus brandisii*)
 - Hmyin (*D. strictus* Nees.)
 - Tin (*Cephalostachyum pergracile*)
 - Wanet (*D. longispathus*)



Bamboo product extension and marketing section

- ❖ Bamboo market survey
- ❖ Socio-economic and educational status survey conducted
- ❖ 6 training courses and 2 National Forum conducted
- ❖ 2 bamboo products producer groups formed

Ledi Village BPP group (Paukkaung) [128 members]		Le Lu Aing Village BPP group (Pyinmana) [102 members]	
Project contribution*	Members' contribution	Project contribution*	Members' contribution
3, 035, 800 (~ 3, 000 US\$)	3, 950, 000 (~ 3, 900 US\$)	6, 370, 000 (~ 6, 300 US\$)	667, 000 (~ 660 US\$)
* Includes cost of equipments.			

Working capital of two bamboo products producer groups (in Kyats)



Daily used bamboo products



Local Training Courses and National Forums



Bamboo Products Production Groups

Achievements

- Establishment of four demonstration plots
- Research works : bamboo plantation management, natural bamboo forest management, production of edible bamboo shoots, processing and utilization of selected bamboo species
- Trainings and workshops : six training courses on bamboo plantation, management and utilization, two national workshops on the development of the bamboo sector
- Capacity building and experience sharing : oversea trainings for bamboo management and utilization, participating international seminars or workshops concerning sustainable management and utilization of bamboo

Achievements Contd.

- **Market surveys and socio- economic surveys**
- **Establishment of two bamboo products production groups**
- **Quality bamboo products initiation and facilitating processing technologies and equipments necessary**
- **Publications : workshop and training proceedings, technical manuals (plantation management, harvesting, processing and utilization), a technical report on assessment of the economic and socio-cultural characteristics of the project sites and their potential of bamboo development**

Lessons learned from the project

- **The procedure and process of the project should be disseminated to local communities to know what to do in the project period.**
- **Only those rural populations who are keen and willing to participate in the bamboo project should be allowed to participate**
- **Constant awareness should be inculcated into the mind and thought of the rural people.**
- **Without their acute awareness and willing participation, their future social and economic conditions will be very bleak.**

Lessons learned from the project contd.

- **The bamboo species chosen for establishing bamboo plantation should be planted on sites and climate well suited to them.**
- **The time and season, and days of the lunar month for planting is an important factor for successful establishment of bamboo plantation.**
- **The project covered only a limited project site when compared to the whole bamboo forest areas.**
- **There is urgent need to further enhance development of bamboo resources in the vast declining bamboo areas in the country.**

Further research needs

1. Resource base dynamics

- to identify a priority list**
- to restructure forest inventory scheme**
- to monitor harvest impacts**
- to enhance silvicultural knowledge**

2. Livelihood strategy of primary users

- to address intra- and inter- household differences in reliance**
- to identify relationship between roles**

3. Market dynamics

- to observe spatial and temporal pattern**
- to evaluate the values of NTFPs and reactions to market forces**

Impacts of Project

Impacts of Project	Before	During and After Project
1. Public awareness	minimum	high
2. Commercial bamboo Plantation	nil	5000 ha +
3. Publication	very few	more
4. Bamboo Products Producer Group	nil	2+
5. Value Added Products	few	diversified
6. Income	low	high
7. Bamboo cottage industry	35	100+
8. Research	-	15+

Thank you !

