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AND



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Promoting Sustainable Utilization of Bamboo through Community Participation in Sustainable Forest Management

Bamboo Products Market Survey in Myanmar



Yangon
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Executive Summary

According to their respective market natures, the bamboo products of Myanmar are categorized into three groups: bamboo products for export market; bamboo products for domestic market; and bamboo products for souvenir market. Some products could be found in both export and domestic markets.

Products for Export	Charcoal, Chopsticks/Flower Sticks, Hats, Bamboo Culms, Bamboo Shoot, Bamboo Parquet, Bamboo Split, Bamboo Slice, Fishing Rods
Products for Domestic Market	Bamboo Curtain, Bamboo Chair, Bamboo Rulers, Sieves (Sakar), Bamboo Round Trays (Sakaw), Baskets, Bamboo Culms, etc.,
Products for Souvenir Market	Bamboo Bag, Bamboo Mat(Slivers), Bamboo Mat(Weave), Tissue Box, Bamboo Tray, Flower Basket, Stationery Holder, Lamp Shade, Bamboo Strip Hat, Photo Frame, Wallet

Myanmar exports a variety of bamboo products. From 2000-01 to 2002-03, the export of bamboo products grows steadily in values, followed by sharp rises in 2003-04 and 2004-05. Total export values of bamboo products from Myanmar in the 2004-05 fiscal year accounts for US\$ 1,624,972 according to the Customs figures. Singapore ranks first among the export destination countries of bamboo products export from Myanmar. Bamboo products from Myanmar are distributed to other countries like Taiwan and Indonesia via Singapore. Pakistan occupies the second place followed by Hong Kong. Mostly, Myanmar bamboo products are exported to the countries in Asia. The Netherlands is also among the top export destinations.

Export Product	2004-05 (US\$)	2005-06 (up to Dec) (US\$)
Bamboo Charcoal	34,810	48,068
Bamboo Chop Stick	198,085	123,110
Bamboo Flower Stick	120,728	120,182
Bamboo Parquet	403,226	263,378
Bamboo Culms	62,249	1,320
Bamboo Shoot	10,336	2,138
Bamboo Split	795,538	442,982
Total	1,624,972	1,001,178

Source: Customs Department

According to the Directorate of Border Trade, raw bamboo culms are exported to Bangladesh via Maungtau border check point, generating an export earning of about US\$ 50,000 in 2005. As Myanmar is endowed with natural bamboo forests throughout the country, the local people make use of a wide range of bamboo products for regional use. Basket (commercial use), basket (construction use), basket (household use), crab basket, sieve (sakar), bamboo round tray (sakaw), bamboo mat, conical hat with wide brim, bamboo chair, bamboo wall, bamboo fence (wa-katt), bamboo curtain and bamboo culms are the common products in the cities for household use and business use.

Selling only bamboo products cannot guarantee the survival of souvenir shops in the cities. Products made of rattan and water hyacinths are more popular in the market since bamboo products are vulnerable to the natural phenomenon of insect and fungus growing. For souvenir, only Asian people are buying Myanmar bamboo products occasionally.

There are market expansion potentials for some bamboo products from Myanmar. Japan is seeking to buy bamboo charcoal from Myanmar and Indonesia instead of buying from China. Other developed countries may also be the potential market for Myanmar bamboo charcoal. The Myanmar people have started to notice the usefulness of bamboo charcoal and there will also be a potential market within Myanmar.

The market for bamboo flower stick can be expanded. The export of bamboo flower stick reached its peak in the middle of 1990s. Although, the major market—the United States—was lost for some reasons, bamboo flower sticks are being exported to the markets in the Western Countries.

Myanmar bamboo culms are used in date palm plantation in the United Arab Emirates. There may be a potential market for bamboo culms in the countries of the Middle East.

The domestic market for the crab basket could be expanded due to the export promotion of marine products nation-wide. Large scale construction projects will demand more and more bamboo culms.

It is apparent that there are large scale illegal export of raw bamboo and bamboo products to China and Thailand. The finished bamboo product factories in Thailand largely rely on the availability of raw bamboo culms from Myanmar. Efforts should be made to control illegal export in border areas.

To gain confidence from the foreign buyers and to reach the export deal in large quantity, more coordination among the government departments and institutions must be materialized so as to have smooth and timely export transactions and to reduce unnecessary steps.

I. Introduction

1.1. Background of the Study

More than 100 species of bamboo grow throughout Myanmar. It is the main source of food, shelter, energy, and others for the rural community in Myanmar. Annual Production of bamboo in Myanmar stood 1094.02 million no. in 2002-03 fiscal year.

Unsystematic extraction and overexploitation of bamboo in some areas in Myanmar may lead to the gradual depletion of natural bamboo forests. In order to prevent the situation and enhance the socio economic status of bamboo related rural community in Myanmar, Forest Department under the Ministry of Forestry has been implementing a project entitled Promoting Sustainable Utilization of Bamboo through Community Participation in Sustainable Forest Management since 2003.

In order to fulfill the overall objectives of enhancing the socioeconomic benefits of bamboo to rural communities through their active participation in sustainable bamboo forest management and utilization of bamboo forests, and developing technical guidelines for quality production of bamboo products in Myanmar, the Project established the following three sections: Bamboo Forest Management, Bamboo Products Processing, and Bamboo Products Extension and Marketing.

The primary responsibility of the Bamboo Products Extension and Marketing Section is to provide market information for the products to be manufactured by the two co-operatives formed by the Bamboo Products Processing Section for the formulation of appropriate marketing strategy, and for the necessary guidance in project implementation.

1.2. Objectives of the Study

The objectives of this research are to collect information on current market situation of bamboo products in Myanmar, and to explore market expansion potential, particularly export market. The findings of this survey will be disseminated to all parties involved in bamboo product industry in Myanmar to enhance the production of quality products. Eventually, this study will contribute to the overall objective of rural community participation in sustainable forest management in Myanmar.

1.3. Research Methodology

The methodology applied in this research project included two parts: literature review and field survey. Firstly, the research team reviewed all news, statistical figures, and facts published in newspapers, journals, magazines, booklets and books in Myanmar; official data released by the relevant government departments. Secondly, the field survey was conducted interviewing with bamboo product makers, exporters, bamboo product shop owners, and souvenir shop owners. Well-structured questionnaires were used throughout the survey.

1.4. Research Team

The research project was undertaken by a team of 12 researchers: six from the Forest Department led by U Kyaw Win, Assistant Director of Forest Department (Deputy Project Manager of ITTO Bamboo Project), and six from the Myanmar Survey Research led by U Kyaw Hlaing, Research Director of MSR.

1.5. Research Place and Period

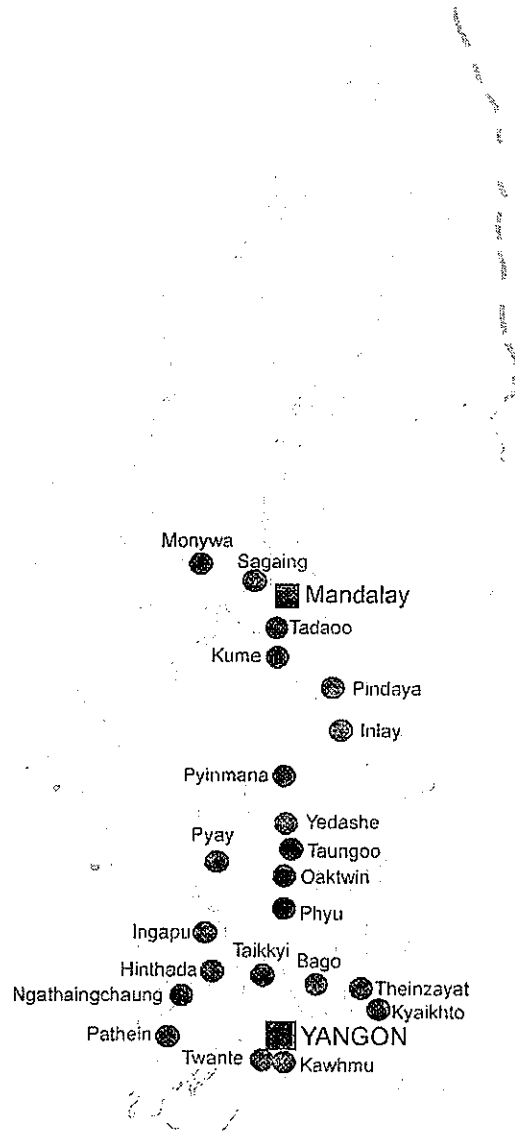
Interviews were conducted:

- with product makers and factories in Monywa, Sagaing, Pyinmana, Taungoo, Bago, Theinzayat, Kawhmu, Kunchangon, Twante, Ngathaing Chaung, Pathcin, Yaykyi, and Hinthada Townships, and Mandalay District;
- with exporters in Yangon,
- with wholesalers and retailers in Yangon and Mandalay.

Sr	Location	Product for domestic market	Product for export market
1	Twante	Basket	Bamboo Culms
2	Kawhmu	Sieve, basket	Bamboo Culms
3	Pathcin	Fishing Rod	Fishing Rod
4	Ngathaing Chaung	Bamboo Hat, Bamboo culms	Bamboo Hat, Bamboo Charcoal, Bamboo Culms
5	Hinthada	Basket, Sieve, Bamboo Hat, Bamboo Leaf	
6	Ingapu	Bamboo Charcoal	Bamboo Charcoal
7	Bago	Basket, Bamboo Chair	
8	Pyinmana	Sieve, Basket	Parquet, Bamboo Chop Stick
9	Taungoo	Bamboo Chair, Bamboo Hat, Sieve, Basket	Bamboo Chop Stick, Charcoal, Bamboo Split, Flower Stick
10	Yedashe	Bamboo Chair	Bamboo Split
11	Oktwin	Hat, Sieve	
12	Taikkyi	Hat	
13	Mandalay	Bamboo Chair, Bamboo Roofing	
14	Sagaing	Basket, Sieve	
15	Mingun	Ruler	Bamboo Chop Stick
16	Tada Oo	Basket, Sieve	
17	Monywa	Bamboo Roofing	Bamboo Chop Stick
18	Kume	-	Bamboo Chop Stick
19	Yangon	Handicraft	Handicraft
20	Pindaya	Hat	
21	Inle	Hat, Basket, Sieve	
22	Theinzayat		Bamboo Charcoal, Flower Stick
23	Kyaikhto	Bamboo Chair	
24	Phyu	Mat	

This research project was started on 13 January 2006 and completed on 20 March 2006.

Bamboo Products by Location



Survey Townships	Products by Location
Yangon, Twante, Kawhmu, Taikkyi	Basket, Bamboo Culms (Exp), Bamboo Stick (Exp), Sieve, Hat, Handicraft (Exp)
Mandalay, Tadaoo, Pyinmana, Kume	Sieve, Basket, Bamboo Parquet (Exp), Chair, Bamboo Chop Stick (Exp), Bamboo Roofing
Bago, Phyu, Oaktwin, Yedashe, Taungoo	Bamboo Chop Stick (Exp), Basket, Chair, Hat, Mat, Bamboo Charcoal (Exp), Bamboo Split, Sieve
Pathein, Hinthada, Ingapu, Ngathaingchaung	Fishing Rod (Exp), Hat (Exp), Bamboo Culms (Exp), Bamboo Charcoal (Exp), Basket, Sieve, Bamboo Leaf
Sagaing, Monywa, Mingun	Basket, Sieve, Ruler, Bamboo Chop Stick (Exp), Flower Stick (Exp)
Kyaikhto, Theinzayat	Bamboo Chacoal (Exp), Flower Stick (Exp), Chair
Inlay, Pindaya	Hat, Basket, Sieve

II. Bamboo Production in Myanmar

2.1. Production of Bamboo by State & Division

Number in Million

No.	State/ Division	1998- 99	1999-00	2000- 01	2001- 02	2002- 03
1	Kachin	39.46	42.50	45.75	47.75	49.33
2	Kayah	5.14	5.42	5.52	5.66	5.77
3	Kayin	26.12	26.97	27.19	28.32	28.76
4	Chin	7.64	8.02	8.23	8.57	8.82
5	Sagaing	186.15	192.90	198.77	208.74	220.25
6	Tanintharyi	24.57	25.65	26.38	26.93	27.47
7	Bago	123.51	128.00	113.98	119.31	125.92
8	Magway	64.41	65.02	66.91	71.47	72.62
9	Mandalay	85.56	92.82	93.30	96.72	100.92
10	Mon	38.92	38.47	38.59	40.02	42.11
11	Rakhine	62.64	61.18	64.47	65.10	67.25
12	Yangon	53.07	59.13	59.65	61.73	62.27
13	Shan	94.95	99.00	99.80	101.95	104.01
14	Ayeyarwady	158.57	167.09	169.17	174.94	178.52
	Total	970.71	1012.17	1017.71	1057.21	1094.02

Source: Resource Paper 8: "Study on the Utilization of Bamboo in Myanmar" presented at the first National Forum

Bamboo production in Myanmar grows gradually year by year. In 2002-03 fiscal year, the highest production volumes are in Sagaing, Ayeyarwady, and Bago divisions.

2.2. Production of Bamboo by State & Division (Household Use)

Number in Million

No.	State/Division	1998- 99	1999- 00	2000- 01	2001- 02	2002- 03
1	Kachin	35.42	36.87	37.26	38.04	38.84
2	Kayah	5.10	5.36	5.46	5.57	5.68
3	Kayin	25.08	26.12	26.41	26.94	27.40
4	Chin	6.84	7.07	7.10	7.24	7.38
5	Sagaing	172.43	179.64	181.69	185.32	189.03
6	Tanintharyi	23.71	24.78	25.14	25.65	26.16
7	Bago	89.13	92.55	93.29	95.16	97.06
8	Magway	52.44	54.61	55.20	56.31	57.43
9	Mandalay	77.83	81.17	82.18	83.82	85.50
10	Mon	31.50	32.93	33.42	34.09	34.77
11	Rakhine	47.92	49.75	50.14	51.15	52.17
12	Yangon	50.41	52.56	53.20	54.26	55.35
13	Shan	93.02	96.38	96.94	98.88	100.86
14	Ayeyarwady	144.91	150.55	151.83	154.86	157.96
	Total	855.74	890.34	899.26	917.29	935.59

Source: Resource Paper 8: Study on the Utilization of Bamboo in Myanmar

The highest production volumes for personal use are seen in Sagaing division, Ayeyarwady division and Shan state in 2002-03 fiscal year.

2.3. Production of Bamboo by State & Division (Commercial)

Number in Million						
No.	State/Division	1998-99	1999-00	2000-01	2001-02	2002-03
1	Kachin	4.04	5.63	8.49	9.71	10.49
2	Kayah	0.04	0.06	0.06	0.09	0.09
3	Kayin	1.04	0.85	0.78	1.38	1.36
4	Chin	0.80	0.95	1.13	1.33	1.44
5	Singaing	13.72	13.26	17.08	23.42	31.22
6	Tanintharyi	0.86	0.87	1.24	1.28	1.31
7	Bago	34.38	35.45	20.69	24.15	28.86
8	Magway	11.97	10.41	11.71	15.16	15.19
9	Mandalay	7.73	11.67	11.12	12.90	15.42
10	Mon	7.42	5.54	5.17	5.93	7.34
11	Rakhine	14.72	11.43	14.33	13.95	15.08
12	Yangon	2.66	6.57	6.45	7.47	6.92
13	Shan	1.93	2.62	2.86	3.07	3.15
14	Ayeyarwady	13.66	16.54	17.34	20.08	20.56
	Total	114.97	121.85	118.45	139.92	158.43

Source: Resource Paper 8: Study on the Utilization of Bamboo in Myanmar

In 2003-03, Sagaing Division is the highest in production of bamboo for trade, followed by Bago and Ayeyarwady divisions.

2.4. Percentage Distribution of Bamboo Production by Trade and Personal Use in Myanmar

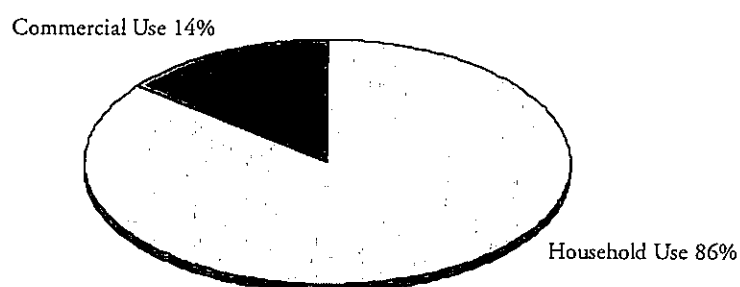
	1998- 99	1999- 00	2000- 01	2001- 02	2002- 03
Production of Bamboo (Commercial)	12%	12%	12%	13%	14%
Production of Bamboo (Household Use)	88%	88%	88%	87%	86%
Production of Bamboo (Total)	100%	100%	100%	100%	100%

During the 5 year period, the production for commercial is less than 15 percent out of total production in the country.

III. Overview of Bamboo Products Market in Myanmar

Bamboo Production in Myanmar 2002-03

Usage	Number in Million
Household Use	935.59
Commercial Use	158.43
Total	1094.02



In 2002-03 fiscal year, the total production of bamboo in Myanmar accounts for 1094.02 million numbers. Out of total production, 935.59 million numbers (86 percent) of bamboo are used for household purpose. The rest—158.43 million numbers (14 percent)—is for commercial use in export market, domestic market and souvenir market in Myanmar.

In this study, bamboo products in Myanmar are categorized according to their target market: bamboo products for export market, bamboo products for domestic market, and bamboo products for souvenir market.

IV. Bamboo Products for Export Market

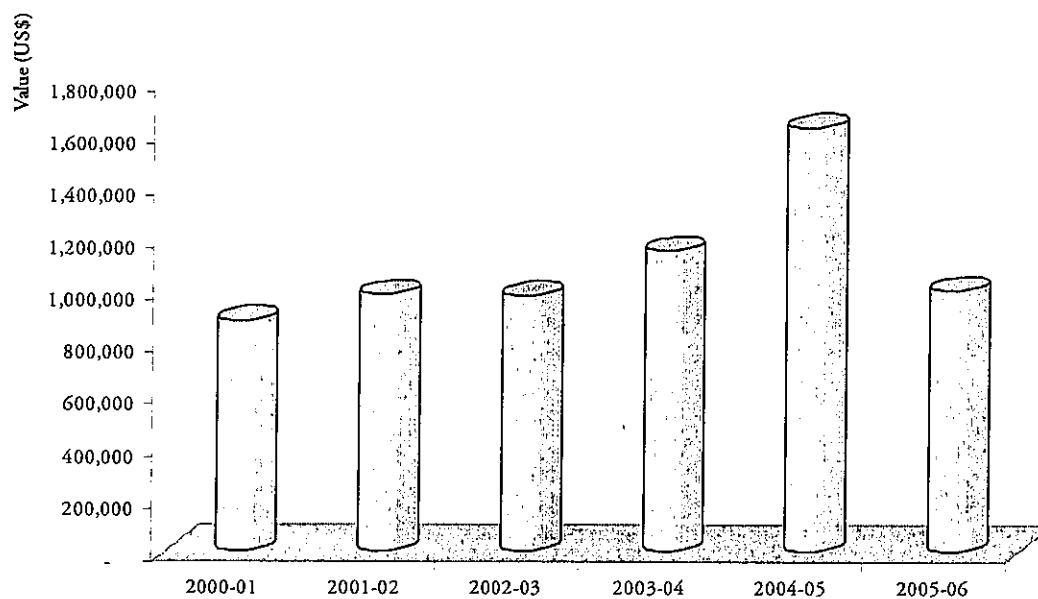
Products for Export Market	Charcoal, Chopsticks/Flower Sticks, Bamboo Hats, Bamboo Culms, Bamboo Shoot , Bamboo Parquet, Bamboo Split, Bamboo Slice, Fishing Rods
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4.1. Export of bamboo product by normal trade

Myanmar exports a variety of bamboo products by normal trade. From 2000-01 to 2002-03, the export of bamboo products grows steadily in value, followed by sharp rises in 2003-04 and 2004-05.

Fiscal Year	Export Value (US\$)
2000-2001	882,524
2001-2002	982,501
2002-2003	979,154
2003-2004	1,151,656
2004-2005	1,624,972
2005-2006 (up to Dec. 2005)	1,001,178

Source: Customs Department



4.2. Export of bamboo product by Border Trade

According to the figures of the Directorate of Border Trade, raw bamboo culms are exported to Bangladesh via Maungtaw border check point, earning about US\$ 50,000 in 2005. Raw bamboos are cut from the natural forests in Buthidaung and Maungtaw townships in Rakhine State for export to Bangladesh. Export of bamboo culms to Bangladesh fetches from US\$ 0.2 to US\$ 0.4 per culm. Bangladesh is also interested in buying pulp apart from bamboo culms. Discussions were held between the businessmen from Bangladesh and the authorities from the Union of Myanmar Chamber of Commerce and Industry and Rakhine Chamber of Commerce and Industry.

Export of bamboo by Border Trade in 2005

Export Product	Check Point	Country	Unit	Quantity	Total Value (US\$)
Bamboo	Maungtaw	Bangladesh	NMB	1,828,650	53,900

Source: Directorate of Border Trade

There are many valuable species of bamboo and they are abundant along the border areas with China and Thailand. About 100 bamboo charcoal manufacturing kilns exist in those areas. Most of the bamboo veneer factories in provinces of Thailand, adjacent to Myanmar border, totally rely on the supply of raw bamboo from Myanmar. However, most of the exports of raw bamboo culms and bamboo charcoal are illegal.

4.3. Export of various bamboo products

Export Product	US\$					
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 (Dec)
Bamboo Charcoal	21,422	43,507	61,226	37,377	34,810	48,068
Bamboo Chop Stick	607,695	554,322	381,495	302,262	198,085	123,110
Bamboo Flower Stick	121,256	96,917	146,713	115,447	120,728	120,182
Bamboo Hats	335			593		
Bamboo Parquet		15,096	233,227	431,452	403,226	263,378
Bamboo Culm	127,828	26,001	64,282	101,942	62,249	1,320
Bamboo Shoot				4,400	10,336	2,138
Bamboo Split	3,988	246,659	92,210	158,183	795,538	442,982
Total	882,524	982,501	979,154	1,151,656	1,624,972	1,001,178

Source: Customs Department

The export of bamboo products from Myanmar basically includes bamboo charcoal, bamboo chopsticks/flower sticks, bamboo hats, bamboo culms, bamboo shoot and bamboo split (bamboo parquet, bamboo split, etc.). In the 2004-05 fiscal year, the export of bamboo split was the highest, followed by bamboo parquet and bamboo chopstick/flower stick.

4.4. Export of Bamboo Products from Myanmar in 2004-05

Export Destination Countries by Products

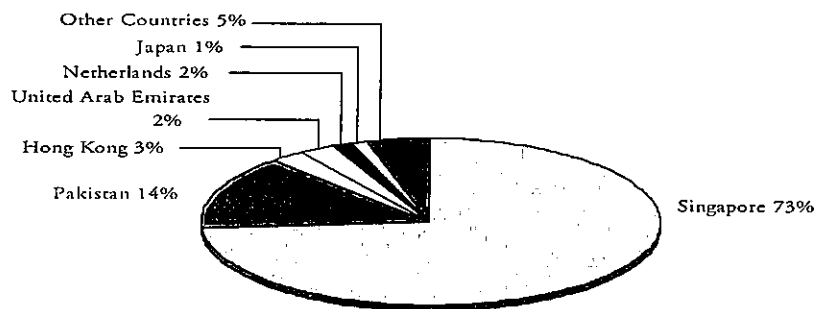
No	Product	Country of destination
1	Bamboo Charcoal	Japan, Taiwan, Korea
2	Bamboo Chop Stick	Taiwan, Korea
3	Flower Stick	Taiwan, Holland
4	Parquet	Indonesia
5	Fishing Rod	Singapore
6	Bamboo Culms	Pakistan, Singapore
7	Bamboo Split	Pakistan, India, Taiwan, UAE
8	Bamboo Handicraft	Japan, Korea
9	Bamboo Hat	Thailand, USA

The following table indicates that Singapore ranks first among the export destination countries of bamboo product export from Myanmar. Most of the exported bamboo products to Singapore found their way to Taiwan. Pakistan occupies the second place and Hong Kong third. Mostly, Myanmar bamboo products are exported to the countries in Asia. The Netherlands also imports a considerable amount of bamboo products from Myanmar.

(2004-05)

Destination Country	Value(US\$)	Percent
Singapore	1,197,901	73
Pakistan	232,041	14
Hong Kong	40,668	3
United Arab Emirates	39,600	2
The Netherlands	25,329	2
Japan	16,214	1
Republic of Korea	14,996	1
Thailand	13,906	1
Greece	13,557	1
Sri Lanka	11,689	1
Other Countries	19,071	1
Total	1,624,972	100

Source: Customs Department



4.5. FOB Prices of Exported Bamboo Products in 2004-05

US\$ per unit

	Unit	Price		
		Minimum	Average	Maximum
Bamboo Charcoal	TNE	80	220	500
Bamboo Chop Stick	TNE	185	265	375
Bamboo Flower Stick	TNE	280	318	373
Bamboo Parquet	NMB	0.10	4.87	51.59
Bamboo Culm (Ordinary)	TNE	12	33	59
*Bamboo Split	NMB	0.01	0.77	4.5
*Bamboo Slice	NMB	0.04	0.29	0.48

* One unit of bamboo split is believed to be 100 numbers of 22 inch-long bamboo splits

* One unit of bamboo slice is believed to be 300 numbers of 9 feet-long bamboo rolls

FOB Prices of Exported Bamboo Hats in 2003-04

US\$ per unit

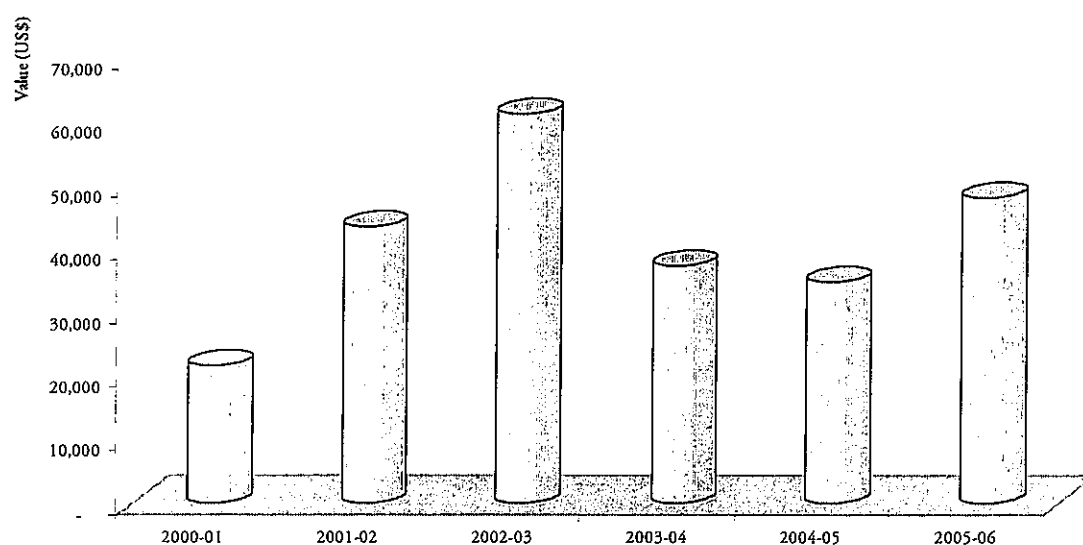
	Export Destination	Unit	Price		
			Minimum	Average	Maximum
Bamboo Hats	Hungary	NMB	0.36	2.37	-
	USA	NMB	-	-	4.39

4.4.1. Bamboo Charcoal

The export trend of bamboo charcoal is not stable: the upward trend was apparent for three years from 2000-2001 and then significantly down in the following two fiscal years. In the 2005-06 fiscal year (up to December 2005), export value of bamboo charcoal increases again.

Fiscal Year	Value(US\$)
2000-2001	21,421
2001-2002	43,505
2002-2003	61,226
2003-2004	37,378
2004-2005	34,810
2005-2006 (up to Dec 2005)	48,068

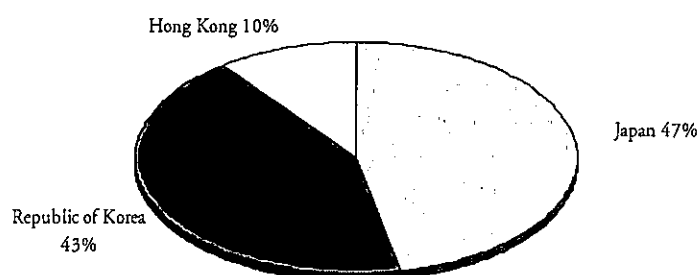
Source: Customs Department



Country of Destination for Bamboo Charcoal Export in 2004-2005

Country	Value (US\$)	Percent
Japan	16,214	47
Republic of Korea	14,996	43
Hong Kong	3,600	10
Total	34,810	100

Source: Customs Department



Roughly 45 percent each of Myanmar export of bamboo charcoal goes to Japan and Republic of Korea respectively.

Bamboo Charcoal Export by Exporter in 2004-2005

Exporter	Value (US\$)
Rectangle Co Ltd	19,274
Thet Ka Aung Enterprise	5,280
Mikimoto Co Ltd	4,492
Wa Mink Co Ltd	2,084
Eastern Silver Star Co	2,000
Myanmar Japan Production Co Ltd	1,680
Total	34,810

Source: Customs Department

Rectangle Co Ltd is the top exporter in 2004-05, which maintains its own manufacturing kilns in Taungoo Township, Bago Division. ACB Co Ltd under the SPA group of companies produces high quality bamboo charcoal with its production site located in Theinzayat, Mon State. ACB Co Ltd was established in 2002 as a joint venture with a Japanese firm, receiving the Japanese technology and Japanese technicians. At present, ACB Co Ltd is a 100% Myanmar Company. According to the market information, bamboo charcoal labeled "Made in Myanmar" is exported only through the network of ACB Co Ltd, Yangon Land Co Ltd, and Mikimoto Co Ltd under the aegis of SPA group. Mikomoto Co Ltd has its branch in Japan.

According to the figures for 2005-06 fiscal year (up to December 05), Yangon Land Co Ltd is the top exporter in 2005-06, exporting its products to Japan. Other exporters sent their products to Korea and China where Myanmar bamboo charcoal is believed to be upgraded for re-export to Japan.

There are two types of kilns for manufacturing of bamboo charcoal: brick kiln and earth kiln. Only systemically built brick kiln produces quality bamboo charcoals. In order to achieve finished bamboo charcoal, the whole production process usually takes between 3 and 4 weeks. It takes about 4 months to produce 2 container-load of charcoal.

The bamboo charcoals exporters mostly maintain their own kilns. Production sites of bamboo charcoal are situated mostly in Taungoo Township and Oathar Myothit in Bago Division; Ingapu Township and Ngathaingchaung township in Ayeyawady Division; Hlegu Township in Yangon Division; and Thein Zayat township in Mon State. The producers find these areas convenient for availability of raw bamboo.

The bamboo charcoal producers use Kyathaung, Tin, Thaik, Wa-gok, Hmyin-wakyit, and Waphyu as base materials. Among the raw bamboo, Waphyu is the best for producing quality bamboo charcoal. Out of 100 percent of raw bamboo, 20 percent or 25 percent of bamboo charcoal is produced. All the producers totally rely on the natural forest to avail raw bamboo, although ACB Co Ltd has started to develop its own bamboo plantation over 9 acres of land, growing Waphyu, Wanet, Thaik, and Wabo species. Currently, the producers comment that collecting raw bamboo from natural forest is cheaper than producing bamboo from plantation.

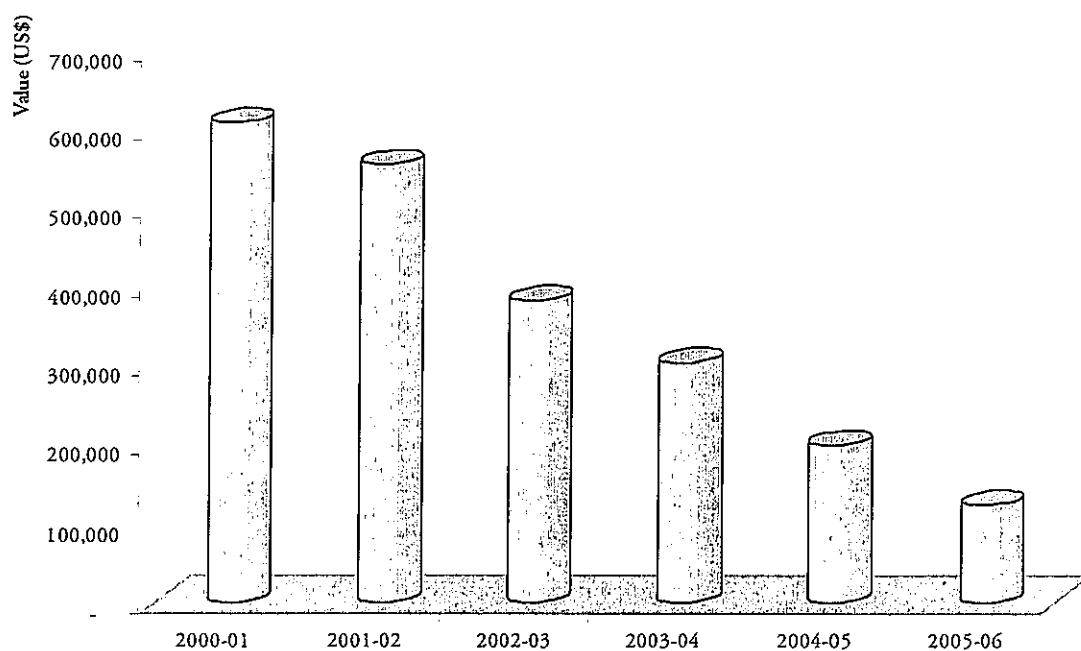
According to the bamboo charcoal exporters, there are many bamboo charcoal kilns in areas bordering China and Thailand, and the Bamboo charcoal from those areas enters China and Thailand, greatly saving transportation cost.

4.4.2. Bamboo Chopstick

From its peak in 2000-01 fiscal year, the export of bamboo chopsticks suffered a downward trend for five consecutive years. The demand from the major export destination countries, such as Singapore and Hong Kong, has remarkably decreased. The decline of the number of chop stick manufacturing factories in Myanmar is one of the causes. The top exporters in 2000-01 and 2001-02, such as Thida Shwesin Co Ltd, Golden Bamboo Trading, Shwe War Yone Co Ltd, Thwin International, and Farmer Phoyarzar, had stopped their export of bamboo chopsticks in the following years due to various constraints and problems.

Fiscal Year	Value (US\$)
2000-2001	607,695
2001-2002	554,322
2002-2003	381,495
2003-2004	302,262
2004-2005	198,085
2005-2006(Up to Dec 05)	123,110

Source: Customs Department

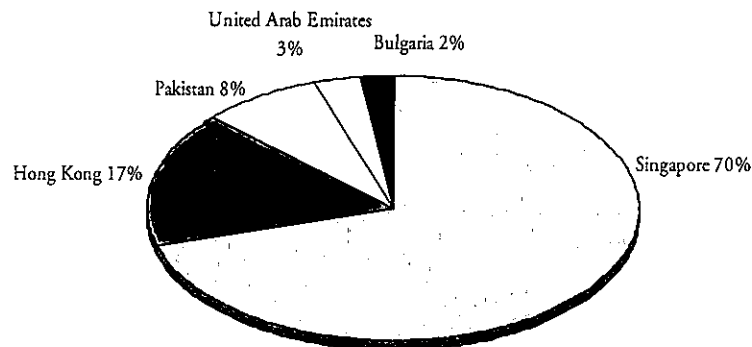


Countries of Destination of Chopsticks Export in 2004-05

Singapore ranks first among the export destinations of bamboo chopstick exported from Myanmar, absorbing 70 percent of total export value in 2004-05 fiscal year. At a distance second place, Hong Kong takes less than 20 percent of export. Singapore re-exports Myanmar bamboo chopsticks to Taiwan, according to the market information.

Country	Value (US\$)	Percent
Singapore	139,361	70
Hong Kong	33,118	17
Pakistan	14,984	8
United Arab Emirates	6,000	3
Bulgaria	4,623	2
Total	198,085	100

Source: Customs Department



2004-05

Exporter	Value (US\$)
Yangon Development	47,158
Super Stainless Production	44,496
Pauk Kan Trading Co Ltd	37,741
New Asia Plastic Trading	17,212
Golden Palace Enterprise Ltd	16,884
Standard Int'l Trading	12,210
Asia Golden Lion Ltd	8,392
Mall Impex Enterprise	6,000
Kyaw Yadana Co Ltd	5,220
Paragu Enterprise Ltd	2,600
Yacoob Desai Enterprise	174
Total	198,085

Source: Customs Department

Most of the manufacturing and export of bamboo chopstick started in 1995 and accelerated in the following years. However, the export trend gradually declined starting from 2000-01 fiscal year due to a variety of constraints and problems.

In accordance with the export figure of 2004-05, Yangon Development Co Ltd is the top exporter, which handles only export activities and orders bamboo chopsticks from a factory in Taungoo. Although, Super Stainless Steel Production Co Ltd is enlisted as the exporter of bamboo chopstick, Kyaw Yadanar, in practice, undertakes the chopstick export of Super Stainless Steel Production Co Ltd. Together with its own export values; Kyaw Yadanar Co Ltd becomes the top exporter of bamboo chopstick in 2004-05.

Bamboo chopstick factories are manufacturing the products not only for export market but also for domestic use. According to expert opinion, 30 percent of total production is for export and the rest 70 percent targets to the domestic use.

Main species of raw bamboo for manufacturing of chopstick are Kyathaung, Kyalo (Wabo), Wabo-myet-san-gye and Hmyin. Among them, Kyathaung is largely used. Between 2000 and 2500 chopsticks can be manufactured from a raw bamboo culm. Most of the factories employ between 50 and 200 workers.

Most of the bamboo chopstick factories are located in Pyinmana and Taungoo townships due to abundant supply of raw bamboo in those areas. Factories in Pyinmana, in fact, depend on the bamboo forest of adjacent Pinlaung Township in Shan state. There are a few bamboo chopstick factories in Mandalay and Sagaing divisions.

According to the survey, almost all of the machineries installed in chopstick factories are made in Taiwan, but the Sittaung Paper Factory used Japanese made machine.

The most important export market for Myanmar bamboo chopstick is Taiwan, which also imports bamboo chopsticks from China and Vietnam. Compared to the Chinese and Vietnamese products, the quality of Myanmar bamboo chopstick is relatively poor; thus, it fetches low prices.

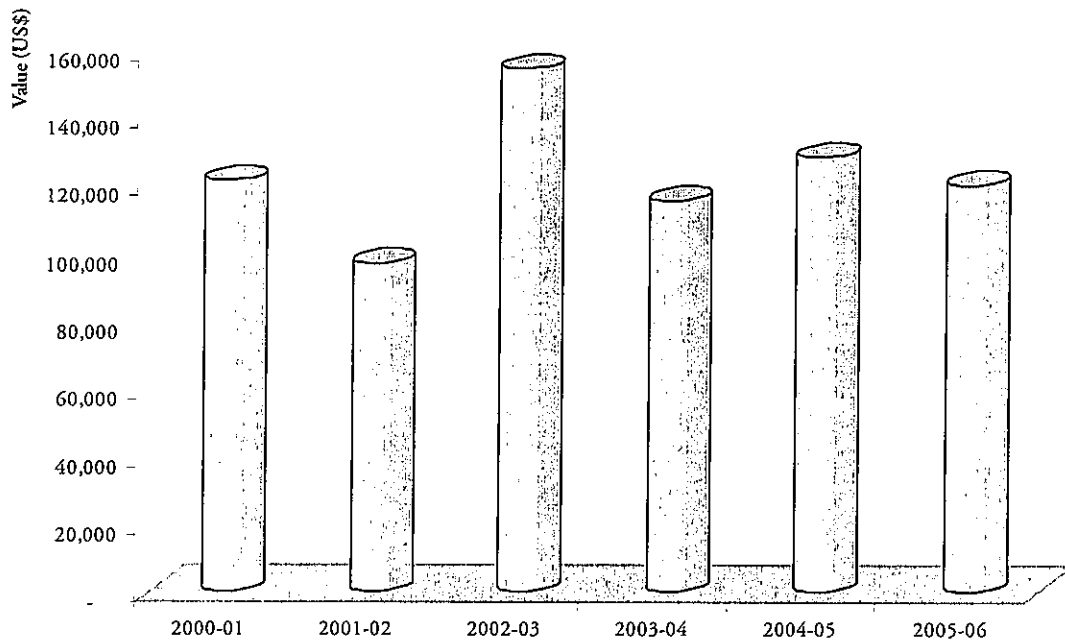
Gradual decline in the supply of raw bamboo is a major constraint for the factories, resulting in the closure of 2 chopstick factories in Mandalay and Sagaing divisions. During the boom of chopstick industry in the middle of 1990s, factories were established most notably in Thandaung Township in Kayin State, where Wabo was abundant. The shortage of electricity, scarcity of raw material, and security concerns had finally compelled the factories to move to Taungoo and Pyinmana, where another species of bamboo, Kyathaung, is readily available.

4.4.3. Bamboo Flower Stick

The export trend of bamboo flower stick has not remarkably fluctuated from the 2000-01 fiscal year to the present. However, the export of bamboo flower stick was at its peak around 1996-97. According to the manufacturers and the exporters, a huge amount of bamboo flower stick was shipped to the United States.

Fiscal Year	Value (US\$)
2000-2001	121,256
2001-2002	96,917
2002-2003	154,305
2003-2004	115,447
2004-2005	128,337
2005-2006	120,182

Source: Customs Department

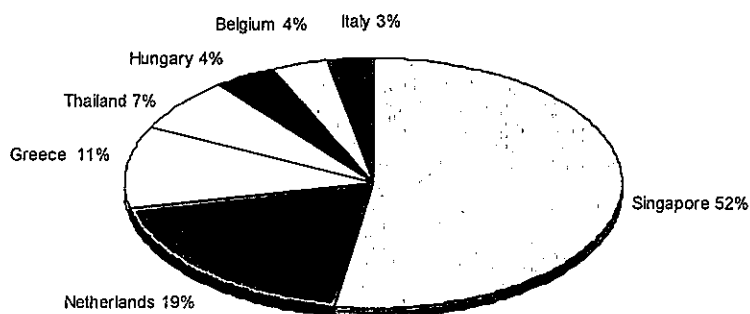


Although Singapore is the top export destination for flower stick, it is mostly for re-export to Taiwan. Unlike other bamboo products, flower sticks from Myanmar succeeded in getting market shares in some European countries, such as the Netherlands, Greece, Hungary, Belgium and Italy.

(2004-05)

Country	Value (US\$)	Percent
Singapore	67,400	52
Netherlands	24,684	19
Greece	13,557	11
Thailand	8,634	7
Hungary	5,347	4
Belgium	4,647	4
Italy	4,069	3
Total	128,337	100

Source: Customs Department



2004-05

Exporter	Value (US\$)
Delta Marketing Int'l Co Ltd	90,343
Kyaw Swa Garden Supply	37,995
Total	128,337

Source: Customs Department

At present, there are only two exporters of bamboo flower sticks: Delta Marketing International Co Ltd and Kyaw Swa Garden Supply. Both exporters do not maintain their own factories. Amimyay Manufacturing Cooperative in Pyinmana produces semi-finished products for Delta Marketing, which further processes it into finished products at Shwe Pokkkan Industrial Zone, Yangon. Similarly, Sittaung Paper Factory under the Ministry of Industry (1) produces flower sticks for Kyaw Swa Garden Supply.

Sittaung Paper Factory and ELHOLCO Co Ltd from Singapore reached an agreement in 1994 to manufacture bamboo flower sticks and started the production soon thereafter. Currently, Sittaung Paper Factory produces bamboo chopsticks for local market.

Kyathaung, Kyalo (Wabo) and Wabo-myet-san-gye are the main bamboo species used for manufacturing of flower sticks.

Amimyay Manufacturing Co-operative has installed Taiwan-made machines and applied Taiwanese technology. Sittaung Paper Factory, on the other hand, uses Japanese machinery.

According to the expert opinion over bamboo flower stick exports, the exporters expect that the export will be increased gradually.

Since the manufacturers or exporters of bamboo flower sticks do not have their own bamboo plantation, they totally rely on the natural bamboo forests and supply from local community. In doing so, the uncontrolled exploitation leads to low quality raw bamboo and even to the gradual depletion of bamboo forest. The obstacle for export to the US market is a major challenge for the flower stick exporters.

4.4.4. Bamboo Parquet

Manufacturing and export of bamboo parquet has been undertaken by the business groups which manufactures Mikko brand coffee mix in Myanmar. New Golden Bamboo Industry Co Ltd handles the manufacturing process, and Golden Key Co Ltd is responsible for the export. Semi-finished products are manufactured in Pinlaung Township, Shan State. The main factory situated in Pyinmana further processes the semi-finished into finished products. The main factory was established in 2000 with the Chinese technicians and technology. Myanmar staff were also sent to China for advanced training. Total staff strength is about 150 in both factories.

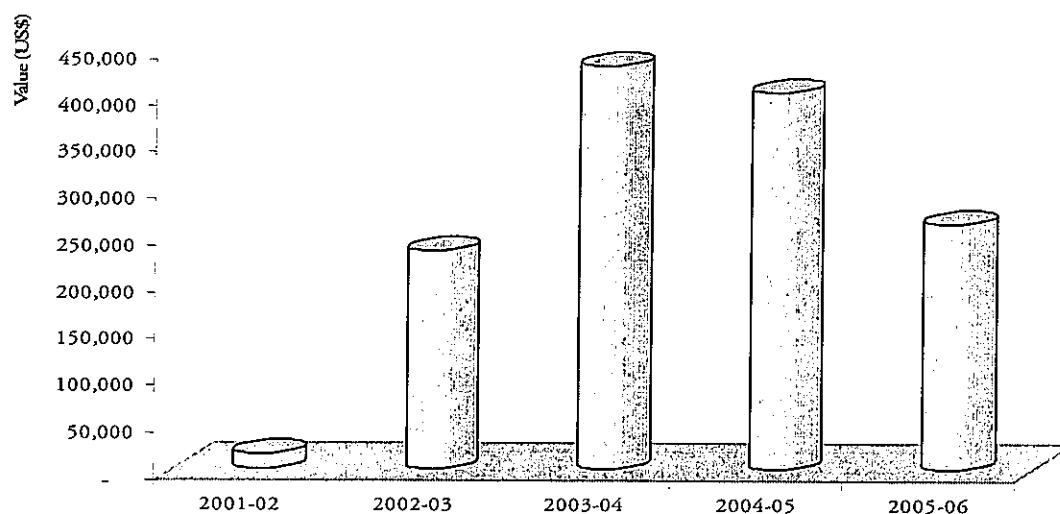
The machineries installed are all made in Taiwan. Domestic machinery is also installed. The export destination is Indonesia.

Main species of raw bamboo are Tin-wa, Kyathaung, and Kyalo. In Pinlaung township, Shan State, the factory opened a collecting center. Monthly requirement of raw bamboo culm is about 150,000. During the rainy season, it is difficult to collect raw bamboo due to the transportation problems.

The crucial problem is the shortage of electricity supply. The two factories depend heavily on diesel oil for the overall operations, putting extra cost on production in recent years. Although there is a regular demand from Indonesia, the board of directors reached the decision to stop the overall business operation, resulting the shutting down of the both factories in January 2006.

Financial Year	Value (US\$)
2001-2002	15,096
2002-2003	233,227
2003-2004	431,452
2004-2005	403,226
2005-2006	263,378

Source: Customs Department

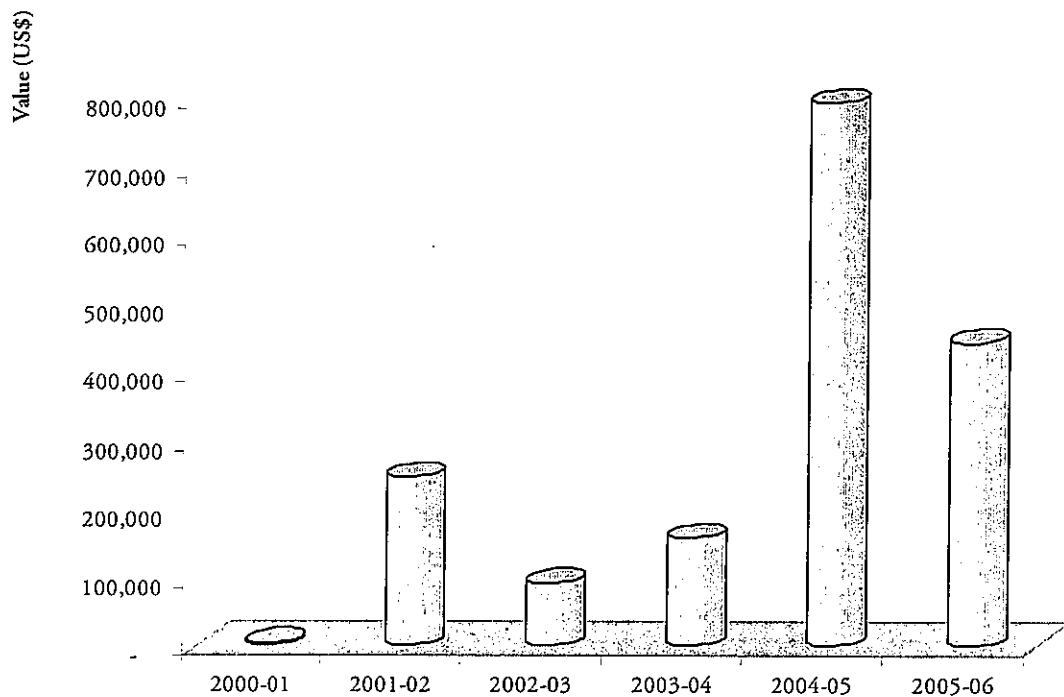


4.4.5. Bamboo Split

The export trend of bamboo splits has fluctuated from 2000-01 to 2005-06 (December 2005). The fiscal year 2004-05 is the peak year since the demand for bamboo split from Pakistan and Singapore surged.

Fiscal Year	Value (US\$)
2000-2001	3,988
2001-2002	246,659
2002-2003	92,210
2003-2004	158,183
2004-2005	795,538
2005-2006	442,982

Source: Customs Department

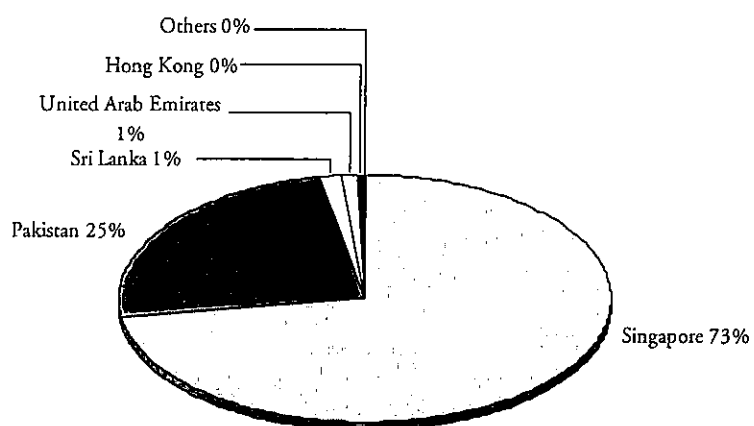


The top export destination for Myanmar bamboo splits is again Singapore; but, they are believed to be re-exported to other countries including Taiwan. Pakistan ranks second followed by Sri Lanka.

(2004-05)

Country	Value (US\$)	Percent
Singapore	575,904	72.40
Pakistan	194,563	24
Sri Lanka	11,689	1
United Arab Emirates	8,400	1
Hong Kong	3,950	0.50
Others	1032	0.13
Total	795,538	100.00

Source: Customs Department



Exporter	Value (US\$)
Formula One Co Ltd	542,445
M/S Prime Trading Enterprise	74,343
Mall Impex Enterprise	55,814
Yadanar Family Int'l	27,568
Bamboo Star Co Ltd	25,851
Peerless Marketing Co	12,524
Home Floral Decoration Industry	11,689
Mall Co Ltd	8,101
Delta Marketing Int'l Co Ltd	7,609
Aster Co Ltd	7,047
Goldwin Co Ltd	5,658
Polo Int'l Ltd	3,950
Seedat General Trading	3,520
Yacoo Desai Enterprise	2,980
Paragu Enterprise Ltd	2,500
Tri Star General Trading Co Ltd	1,807
Trade Plus Co Ltd	1,100
Dream Weavers Co Ltd	1,014
Individuals	18
Total	795,538

Source: Customs Department

Formula One Co Ltd is the top exporter in 2004-05 fiscal year. Its exports bamboo splits to Singapore. M/S Prime Trading Enterprise also exports bamboo splits to Pakistan.

Bamboo split is the major export item among the bamboo products. Singapore and Pakistan place high demand for Myanmar bamboo split. Kyathaung is the most suitable species for making bamboo split. Hmyin-wakyit, Tapindaing-wa and Htiyo-wa are also used for bamboo split. Kyathaung from Pynmana in Mandalay Division; Taungoo, Swa, Yedashe, Thonze, Tharyawady, Pyi in Bago Division; and Hmyin-wakyit from Tawnte in Yangon are also good for bamboo split.

Most of the bamboos are split between 19 inches and 22 inches in length. Prices are fixed including the transportation cost to Yangon.

In Pakistan, Myanmar bamboo splits are used to make kite frame as kite-flying is an all year round game in Pakistan.

Bamboo Star Co Ltd exports small bamboo splits to Singapore where they are made into bamboo curtains. Bamboo Star opens a production site in Ngathaing Chaung Township, Ayeyawady Division, to collect Talagu bamboo. Bamboo culms are cut into 9 feet and split into the width of 5 cm or 3cm.

4.4.6. Bamboo Conical hat with wide brim (Khamaut)

According to the market information, Japan places order for conical hats with wide brim made in Zegon Township in Bago Division.

Bamboo conical hats with wide brim are made in Mong Naung, Mong Ne and Linnkhay townships in Shan State (South), applying the methods from Thailand. The products are exported to Thailand through border trade.

4.4.7. Bamboo Hat

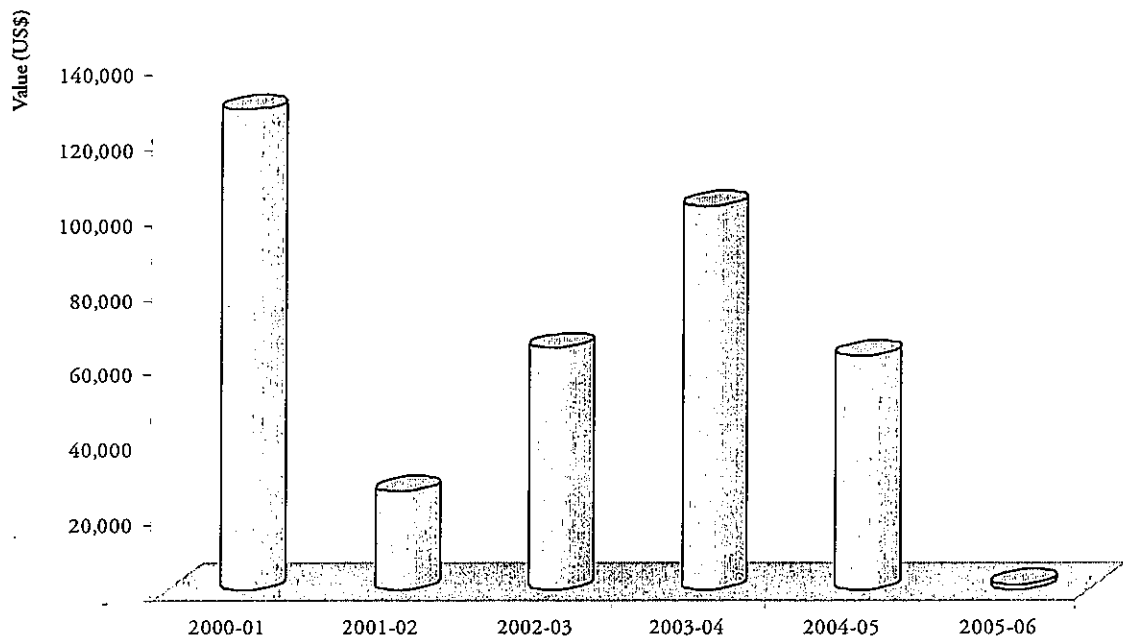
Bamboo hats were exported to the United States and Hungary in 2001 and 2004 by Gems Star Impex Co Ltd, Mandalay Express Co Ltd, and some individuals. At present, bamboo hats from Ngathaingchuang Township are making their way to Thailand and appeared in Thai beaches.

4.4.8. Bamboo Culm

Bamboo culm export trend has fluctuated during the period under study. From the highest export value in the 2000-01 fiscal year, the export values were down in the following year. Although the upward trend is apparent in the subsequent years, it could not meet the peak, the 2000-01 fiscal year. The export in 2005-06 fiscal year (up to December 05) is the lowest.

Fiscal Year	Value (US\$)
2000-2001	127,828
2001-2002	26,001
2002-2003	64,282
2003-2004	101,942
2004-2005	62,249
2005-2006 (up to Dec 2005)	1,320

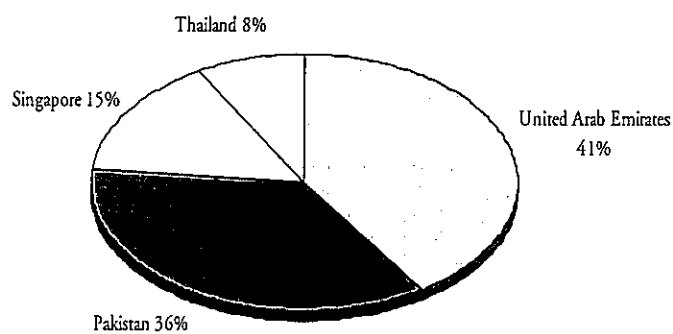
Source: Customs Department



In United Arab Emirates, bamboo culms from Myanmar are used for agricultural works. Plastic coated bamboo culms are exported to Taiwan via Singapore for decoration purpose in Chinese traditional festivals and for drying clothes.

2004-05		
Country	Value (US\$)	Percent
United Arab Emirates	25,200	40
Pakistan	22,494	36
Singapore	9,282	15
Thailand	5,272	8
Total	62,249	100

Source: Customs Department



Exporter	Value US(\$)
Mall Impex Enterprise	32,555
Yacoob Desai Enterprise	6,138
Yadanar Family Int'l	5,560
Polo Int'l Ltd	5,102
M/S Prime Trading Enterprise	4,499
Bamboo Star Co Ltd	4,181
Aster Co Ltd	2,772
Tri Star General Trading Co Ltd	1,443
Total	62,249

Source: Customs Department

In the 2004-05 fiscal year, Mall Impex Enterprise is the top exporter, exporting bamboo culms to United Arab Emirates. It has been exporting bamboo culms since 1996 and major species are Hmyin-wakyit and Tapindaing-wa. The company also exports bamboo culms to Pakistan. Hmyin-wakyit and Tapindaing-wa are collected from Pyinmana, Thonze, Tharyawady, Paukkhaung, and Kanma townships. In the United Arab Emirates, bamboo culms are used in date palm plantation.

Bamboo Star Co Ltd exports plastic coated bamboo culms to Taiwan via Singapore. Kayin-wa from Nga Thaing Chuang is used for plastic coated bamboo culms. Small plastic pipes with a variety of colors are imported from Taiwan for the coating.

Fishing rod is manufactured in Pathien, Ayeyarwady Division. Fishing rod manufacturing started by the Pathein (East) Co-operative Society with the assistance of Singaporean technicians in 1985. Currently, a former employee of the cooperative has taken over the manufacturing activities and is now exporting fishing rods to Singapore himself. Hityo-wa is used for fishing rods. Production can be undertaken in open season from November to May. Between 15,000 and 20,000 fishing rods are exported annually.

V. Products for Domestic Market

Products for Domestic Market	Bamboo Curtain, Sieves (sakar), Bamboo Round Trays (sakaw), Baskets, Bamboo Chair, Bamboo Rulers, Bamboo Culms, etc.,
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Since the bamboo forests are spread out throughout the country, there are many local markets trading a wide range of bamboo products mostly for local markets. Some products are for use in business and almost all of the bamboo products are for household use and some are for use in business in the commercial hubs. The most common products in the cities like Yangon and Mandalay are as follows: basket(business use), basket(construction use), basket (household use), crab basket, sieve(sakar), bamboo round tray(sakaw), bamboo mat, conical hat with wide brim, bamboo chair, bamboo wall, bamboo fence(wa-katt), bamboo chair, bamboo curtain and bamboo culms.

Product Name	Business Use	Household Use
Baskets	✓	✓
Crab basket	✓	
Sieve(Sakar)	✓	✓
Round bamboo tray(Sakaw)	✓	✓
Bamboo curtain		✓
Bamboo mat (5' x 6')		✓
Conical hat with wide brim		✓
Bamboo strips hat		✓
Bamboo Chair		✓
Chicken Basket	✓	
Yaing-but		✓
Bamboo fence(5' x 3')	✓	✓
Wa-hta-yan		✓

5.1. Baskets, Sieves (Sakar), Bamboo round trays (Sakaw), and other bamboo products

For Yangon market, a variety of sieves (sakar), bamboo round trays (sakaw), and baskets are produced from Kawhmu, Hlegu, Tharyawady, and Twante townships. There are bamboo products shops in Tharkayta, Pazuntaung, Kyimyindine, Dagon Myothit, Hlaing Tharyar, Insein, South Okkalar, North Okkalar townships in Yangon. Various kinds of bamboo products for domestic markets, their applications, and their prices are shown in the following tables.

Product Name	Average Retail Price(Kyat)
Basket(business used)	400 - 800
Basket(construction used)	250 - 400
Basket(household used) Small	350 - 400
Basket(household used) Medium	450 - 600
Basket(household used) Large	1200 - 1500
Basket(household used) Special quality	1800 - 2500
Crab basket	450 - 500
Sieve(sakar)	250 - 400
Round bamboo tray(sakaw)	350 - 600
Bamboo mat (5' x 6')	1600 - 1800
Conical hat with wide brim	250 - 300
Bamboo strips hat	500 - 650
Bamboo chair	900 - 1200
Chicks basket	450 - 600
Yaing-but (2 x 10)	500 - 600
Rough bamboo mat (5 x 3)	400 - 500
Wa-hta-yan (1' X 1')	25 - 35

5.1.1. Baskets

For Yangon market, various kinds of basket are produced in Twante Township, where most producers and local collectors operate. Some people have their own bamboo plantations. Bamboo businesses are active in Phayargyi, Kyeikthale, Lagapone, Pauktaw and Kanbe (Sanpya) villages.

Baskets for business use are applied mostly for carrying and placing fish, vegetables, snacks, betel leaf and other variety of products. Baskets in various sizes for household use are also applied in measuring paddy, rice and pulses/beans in wholesale centers and retail shops. Baskets for construction use are for carrying sand and pebbles/gravel in construction sites. Trading of crab baskets is active. Crab baskets are sent daily to Yangon, Pathein, Phyarpone and Daydaye. There are also basket producers in Bago, Hinthada, Pyinmana and Taungoo for local consumption only. Baskets in Bago division are used for carrying mangoes and ovoid fruits.

Wanet is used for making a variety of baskets in Twante Townhsip. About 200 baskets (small size) and 400 baskets (large size) are sent daily to Yangon market. About 100,000 crab baskets are produced annually. Tin-wa, Waya and Wabo are used for making baskets in Hinthada and Pyinmana regions. On the other hand, Wathabut is largely used in Bago for making baskets.

For Mandalay market, the inflow of baskets is from Khin Mon village, Chaung Oo Township, Sagaing Division. Baskets are used in the wet markets in Mandalay area. Thaik-wa is used in making baskets there.

5.1.2. Sieve (sakar) and bamboo round tray (sakaw)

Sieves (sakar) and bamboo round trays (sakaw) are produced mostly in Kawhmu Township, Yangon Division, especially in Taungchaung village. Only traditional methods are used for making sieves and bamboo round trays. Sieves and bamboo round trays are categorized according to the quality and their size.

		Large	Median	Small
Sieves	High Quality	✓	✓	✓
	Low Quality	✓	✓	✓
	Rattan Added	✓	✓	✓
Bamboo trays	High Quality		✓	
	Low Quality		✓	

Raw bamboo species applied in making sieves and round trays are Waya, Wabo, Wakyit (Waya), Wapwa (Waya), Tin-wa and Wa-phayaung, all of which are available in Kawhmu Township. Particularly, Waya and Wapwa (Waya) are used for making high quality sieves and round tray. Almost all the sieves and round trays are handmade. Other raw materials such as glue, nylon thread, wool, soda, sulphur, and potassium nitrate-are also used for the durability of the products.

Daily production of a variety of sieves and round trays is estimated to be about 2000 from the whole Kawhmu Township.

Hmwe Bamboo Products Shop in Lanmadaw Township, Yangon collects various kinds of sieves from Kawhmu for sale in Yangon market and other regional markets such as Mawlamyaing, Sittway, Myiek, and Pha An. There are also many individual vendors selling sieves and round trays in Yangon.

The highest sales are evident from November to May. Trading is lower in the rainy season.

Sieves and round trays for Mandalay market come mostly from Ponnarchan and Myayngu villages, Tada Oo Township, Mandalay Division; Kangyi, Ywathar, and Leikkone villages in Monywa Township, Sagaing Division. About 1000 sieves and bamboo round trays enter Mandalay market daily. Thiak-wa is used for making sieves and bamboo round trays.

5.2. Bamboo Curtain

Bamboo curtains are manufactured mostly in Yangon and Ayeyarwady Divisions. In Yangon there are about 3 or 4 bamboo curtain manufacturers. Sales are conducted mostly near the Shwegonedine Intersection. The sales of bamboo curtain of 6 feet long and 5 feet wide are the most active in Yangon market. For a sale shop in Yangon, daily average sale is about 200 square feet of bamboo curtains. Price is around 160 to 180 kyats per square feet. Both local people and foreigners residing in Yangon buy bamboo curtains.

According to the retail shops in Yangon, the sales of bamboo curtains have increased in recent years. Peoples prefers bamboo curtain to wooden curtain due to its reasonable price. Bamboo curtains from Yangon are also distributed to Bagan, Mandalay, Taunggyi and Myiek. A bamboo curtain shop in Yangon receives regular demand from the hotels in Bagan.

Manufacturing is undertaken in the suburb of Yangon: North Okkalar, Dagon Myothit and Hmawbi townships. Almost all bamboo curtain manufacturing are family business with 5 or 7 family members. Production methods are all traditional, handed down by generation of producers. For a bamboo curtain producer, average monthly production capacity is 4000 square feet.

Bamboo curtains produced in Ayeyarwady Division are, in fact, for use in fishing operation, and also known as rough bamboo curtains. The production is found around Hinthada and nearby townships. Each business maintains about 20 workers. Production activities usually delay in the winter and summer. Fishing businesses in Ayeyarwady Division are the main customers for rough bamboo curtain. Annual production volume for a producer is between 800 and 1500 rough bamboo curtains.

According to the interviews, the production volume has not remarkably changed for producers in Yangon. For producers in Ayeyarwady Division, production depends on the fluctuation of fishing business around.

Obviously, Kyathaung is the major bamboo used for making bamboo curtain around Yangon areas. Producers in Yangon collect Kyathaung from nearby bamboo wholesale centers. Hmyin is also applied in small portion in making bamboo curtain.

According to the producers, Kyathaung from the area around Yenwe Creek, Bago Division, and Hmyin-wa from Taikkyi, Yangon Division, are the best for making bamboo curtain.

Kayin-wa is used for making rough bamboo curtain in Ayeyawady Division. Between 6000 and 10000 bamboo culms are used monthly for making the products. Kayin-wa from Nga thaingchaung is applied for making rough bamboo curtains.

The producers of bamboo curtain in Yangon lack the knowledge on the technology for keeping the durability of the products. They have a major weakness in fungus control.

5.3. Bamboo Culms

Bamboo culms shops are located in Pazuntaung, Dawpone, Tharkayta, Dagon Myothit, Hlaing Tharyar, Insein, Kyimyindine townships in Yangon market. The shops along the Yangon river in Shwe Pyithar Township are the main wholesalers of bamboo culms for Yangon market. The following table shows the major bamboo species in Yangon market and their usages.

Bamboo	Source	Usage
Kyathaung (big)	Phunggyi, Hmawbi	Flooring
Waya	Kawhmu, Kunchangon, Twante	Scaffolding, Chicken Firm Fence
Hmyin-wa	Western Part of Bago Division	Roofing, Scaffolding
Kyathaung (small) Wa-chat	Phaunggyi	Matting for construction
Tin-wa	Taikkyi, Okkan, Thonze, Hlegu	Wall, Scaffolding
Kayin	Ayeyawady Delta	Wall
Wabo-gyi		Decoration

Average retailed prices of bamboo in Yangon market

Bamboo Name	Average Length	Average Retail Price(Kyat)
Waya	20' - 30'	300 - 500
Hmyin	15' - 20'	200 - 300
Kyathaung-wa	14' - 15'	450 - 600
Kayin-wa	15' - 18'	150 - 200
Tin-wa	15' - 20'	250 - 300
Wanet	20' - 30'	600 - 800
Wa-chat	15' - 20'	250 - 300
Wa-gok (Small)	14' - 15'	80 - 100
Wabo-gyi	20' - 30'	2000 - 2500
Hityo-wa	14' - 15'	100 - 150

In Mandalay Market, the major bamboos which are active in trading are Tin-wa, Waphyu, and Thaik-wa. These bamboos flow into Mandalay market from Katha and Htikhyint regions along Shweli River. The use of bamboo in Mandalay is not different from that of Yangon. The trading of bamboo culms, in fact, depends on the situation of construction industries on one hand and on the socio-economic situation of the people on the other, who depend largely on the bamboo for their housing. The impact of bird flu on the chicken firms also compels the decreasing sales of bamboo culms. Usually, trading of bamboo culms is active in April and May, and very thin in July and August of the year.

5.4. Bamboo Chair

Bamboo easy chairs for Yangon and nearby markets are produced in Twante Township. Approximately 50 bamboo easy chairs production businesses lie in Kanbe village. Merely the traditional production methods are used. Everyday, about 600 bamboo chairs are sent to Yangon market. For making bamboo chair, two ordinary-size bamboos are used. It takes about one hour to make a bamboo chair. Bamboo chair production is also found in Kyaikhto and Bago where Shwe-hmon-wa, Tin-wa, Hmyin-wa, and Wathabut are used.

5.5. Bamboo Rulers

Bamboo rulers are made in Mingun by using Tin-wa. Foreigners visiting Mingun area usually buy bamboo rulers. In addition, about 2000 bamboo rulers are sent weekly to the stationery shops in Mandalay.

VI. Bamboo Products Souvenir Market

Products for Souvenir Market	Bamboo Bag, Bamboo Mat(stick),Bamboo Mat(strip),Tissue Box, Bamboo Tray, Flower Basket, Stationery Holder, Lamp Shade, Bamboo Hat, Photo Frame, Wallet, etc.
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Bamboo products souvenir shops are mostly in Yangon. The market is rather small as local high class people are the only major customers for bamboo souvenir products. According to the market information, foreigners prefer rattan wares to bamboo products. The sales of bamboo hats are active. Only Japanese people and other Asian citizens occasionally buy bamboo souvenir products. For some products, it is necessary to add rattan. Some bamboo souvenir shops hire permanent skilled workers and some place order from producers from Mingaladone Township in Yangon Division and Ngathaingchaung Township in Ayeyarwady Division. Kyaukse Sin Bamboo Souvenir Production distributes the products not only to Yangon but also to Bago, Pathein, Bagan, Ngwesaung Beach, and Chaung Tha Beach.

Handicraft Name	Average Retail Price (Kyat)
Bamboo hand bag	4000 - 5000
Table mat (sticks)	1800 - 2000
Table mat (strips)	1000 - 1500
Table mat (strips) under cup	300 - 500
Tissue box	1800 - 2000
Flower basket	1000 - 1500
Bamboo tray	1500 - 3000
Bamboo strips hat	1200 - 1500
Stationery holder	1500 - 2000
Bamboo lamp shade	4000 - 5000
Bamboo strips hat	500 - 650
Photo frame (various sizes)	2000 - 4500
Bamboo wallet	1200 - 1500

Monthly sales volume of each souvenir shop is about 350,000 kyat for normal trading activities in Yangon. Producers usually receive occasional export orders. Although table mats and flower baskets were exported in 2003, there is no regular export order for the products from Myanmar. Bamboo hats from Ngathaingchaung Township are exported to Thailand via border trade.

The souvenir shops in the cities could not stand by selling bamboo products only. Currently, the trading activities of the products made of rattan, water hyacinth and other raw materials are more active than that of bamboo products. Bamboo products are very sensitive with the outbreak of bacteria and fungus. Handmade Myanmar bamboo souvenir products cannot compete with the

machine made Chinese and Thai products. The Chinese and Thai products are better quality and lower priced in the international market.

Tin-wa is the most suitable bamboo for making bamboo souvenir products. Although the control of fungus and durability pose problems, the advanced control measures have been made available to some producers. Lack of skilled labor is another problem. Higher income from other business sectors leads to the shortage of skilled workers in making bamboo souvenir products. The producers in Ayeyarwady Division are facing shortage of raw bamboo supply due to the newly built Thabaung Pulp and Paper factory.

According to the exporters, the bamboo souvenir products from Myanmar are comparatively low in quality since all the products are handmade.

In Mingun, Mandalay Division, bamboo boxes decorated with lacquer arts are also in the market. Some foreigners usually buy them.

VII. Import of bamboo related products

Import of bamboo related products by fiscal year

US\$

Product	2001-02	2002-03	2003-04	2004-05	2005-06 (up to Dec)
100% Bamboo Textile				22,233	
95% Bamboo Textile				269	
Bamboo Chopstick	110		4,410.		
Bamboo Fine Splitting Machine					188
Bamboo Knot Removing Machine					696
Bamboo Shoot		432			
Bamboo Slicing Machine	33,318				
Bamboo Stick Making Machine					1,610
Cutter Bamboo Machine	6,950				
Dryer For Bamboo		11,692			
Globe Bamboo Shoots		1,059			
Knifergrinder Bamboo	5,400				
Saw For Bamboo Cutting Machine					10,000
Spare Parts For Bamboo Chop Stick Machine	810				
Total	46,588	13,183	4,410	22,502	12,494

Source: The Customs Department

The import amount of bamboo related products to Myanmar is not very large in terms of import value. Most of the products imported during the period from 2001-2002 fiscal year to 2005-2005 fiscal year (up to December) are machinery and spare parts for bamboo related industries.

Import of various bamboo products

Fiscal Year	Importer	Product	Country	Unit	Quantity	Value (US\$)
2001-02	City Mart Holding Co Ltd	Bamboo Chopstick	Singapore	KGM	23	110
	Delta Marketing Int'l Co Ltd	Cutter Bamboo Machine	Singapore	NMB	1	6950
	Formula One Cooperative Ltd	Knifergrinder Bamboo	Singapore	NMB	1	5400
	Myanma Paper & Chemical Ent.	Spare Parts For Bamboo Chop Stick Machine	China	KGM	400	810
	Kyaw Yadana Co Ltd	Bamboo Slicing Machine	Taiwan	NMB	5	33318
2002-03	All Top Products Co Ltd	Dryer For Bamboo	Singapore	NMB	1	11692
	Smile World Co Ltd	Globe Bamboo Shoots	Singapore	KGM	560	1059.02
	Traders Yangon Co Ltd	Bamboo Shoot	Singapore	KGM	406.8	432.02
2003-04	Pauk Kan Trading Co Ltd	Bamboo Chopstick	Singapore		15750	4410
2004-05	Ngwe Kantkaw Industry Ltd	95% Bamboo Textile	Thailand	KGM	78	269.01
	Thiri Sandar Garment	100% Bamboo Textile	China	KGM	4467	22233.31
2005-06 (Up to Dec 2006)	Bamboo Star Co Ltd	Bamboo Fine Splitting Machine	China	NMB	1	188
	Bamboo Star Co Ltd	Bamboo Knot Removing Machine	China	NMB	1	696
	Bamboo Star Co Ltd	Bamboo Stick Making Machine	China	NMB	2	1610
	Verano Co Ltd	Saw For Bamboo Cutting Machine	China	NMB	1000	10000

Source: The Customs Department

Bamboo related products are imported to Myanmar from Taiwan, Singapore, Thailand and China.

VIII. Brief Profiles of Surveyed Areas Related to Bamboo Business

8.1. Kawhmu Township, Yangon Division

Agriculture and making bamboo products are the main livelihoods in Kawhmu Township. Taungchung village is the main production village of bamboo products in the township. The total household is about 280 in Taungchaung village. About 250 households are engaged in bamboo related business. Wabo, Wakyt (Waya), Wapwa (Waya), Tin-wa, Waya and Waphayaung grow around the village. Waya and Wapwa (Waya) are mostly used for making bamboo products. Except for a few, all bamboo products are hand-made, applying traditional methods. The major products are sieves (sakar) and bamboo round trays (sakaw). Other bamboo products, such as bamboo box, curtain, quality basket, lamp shade, are only in the stage of test production and marketing. Bamboo products producers are encountering difficulties such as lack of skilled labors and proper machinery, low demand, weakness in creating neat and tidy products, shortage of quality raw bamboo, and difficulties in mass production. There are also some local collectors of bamboo products in town, who provide money in advance to the producers in the villages.

8.2. Kunchangon Township, Yangon Division

Kunchangon Township is the main provider of bamboo culms to Yangon areas. There are bamboo plantations on the one side of the township and paddy fields and betel leaf gardens on the other. Raw bamboos are also used for agricultural works in the township. Main economy is agriculture and fishery. Compared to Kawhmu, Kunchangon is more developed. There are many bamboo plantations in Sankauk, Htipa, Makalar Kone, Mahnkaleik, Thapyusan, Poppa, and Hmawtaw villages. Waya, Wanet, Thiak Wa, Htiyo, Kayin Wa, Wabo and Wapwa (Waya) are common in Kunchangon township. Trading of Wabo-gyi, Waya, and Wanet is active. There are about 10 bamboo shops in Kunchangon town. They buy raw bamboos from the villages via brokers. Full or half advance payment system is widely practiced in the township. Daily average sale is between 500-1000 bamboo culms for each shop. According to the bamboo shop owners, the gradual depletion of bamboos is evident in the township. Some people were used to engage in making of bamboo products, but mostly shifted to agricultural works as income from agricultural work is much more paying.

8.3. Twante Township, Yangon Division

Twante township is known for its bamboo products. The main businesses of the township are bamboo products production, agriculture, livestock, and fishery. Twante possesses not only natural bamboo forest but also bamboo plantations. Some villages have their own bamboo plantation. Waya, Wanet, Htiyo, Wabo-gyi and Wa-phyu are common in the township. Various kinds of baskets are used for a variety of purposes: they are used for carrying sand and pebbles in construction sites, and for carrying crabs, fish, vegetables, fruits, and snacks. Almost all of them are for Yangon market. Crab baskets are sent not only to Yangon but to Patheingyi, Phayre, and Daydaye. Bamboo chairs and toothpicks are also made for Yangon market.

8.4. Hinthada Township, Ayeyarwady Division

There are abundant bamboo plantations throughout the township. Wabo-gyi is the main bamboo grown in the township. Wa-phyu, Waya, and Htiyo-wa are also found.

There are 9 wholesale shops in Hinthada town collecting baskets, sieves (sakar) and bamboo trays (sakaw) from the production villages. All the productions are cottage industries or family businesses. There are also 3 or 4 local collectors in each village. The wholesale shops distribute the products to 26 townships in Ayeyarwady Division, and also to Thayet, Aungmye, and Yangon. The trading is active during the harvesting time.

Trading of conical hat is also active during the rainy season, and is sent to various towns in upper Myanmar: Aungmye, Thayet, Yenanchaung, Chauk, and Magway. Wabo-gyi sheath is also one of the bamboo products from Hinthada. In addition to the local sales in Hinthada, Wabo-gyi sheaths are also sent to Taikkyi and Taungtha townships, for making conical hat.

Since the main business of Ayeyarwady Division is fishery, the demand for rough bamboo curtain (for fishery use) is high. From Hinthada, rough bamboo curtains (for fishery use) are also sent to Kyonepyaw and Latpantan townships. Trading is active during the rainy season.

8.5. Pyinmana Township, Mandalay Division

Bamboo parquet factory and bamboo tooth-pick factories are situated in Pyinmana, and raw bamboo came from Pinlaung Township, adjacent to Pyinmana. In Pinlaung, Kyalo (wabo), Wabo-gyi, Tin and Kyathaung are available and used as raw materials for bamboo chopstick factory and bamboo parquet factory.

The Bamboo Parquet Factory was closed due to the increasing production cost. The main problem is the lack of electricity which resulted in the rise in production cost. A Bamboo chopstick factory is located in the cantonment and it gets electricity and runs regularly. But, there is a problem in transportation of bamboo raw material due to lack of security in the area.

The whole village of Leluaing in Pyinmana Township weaves bamboo round trays and sieves by traditional methods. Kyathaung and Tin-wa are used. Raw bamboos are available abundantly, and there is always the market for the finished products. The ITTO bamboo project has provided Leluaing village 2 sewing machine, 1 stripping machine, 1 polishing machine, 1 slicing tool, 1 peeling tool, and 1 hand weaving and 300,000 kyats to produce quality bamboo products.

8.6. Taungoo Township, Bago Division

Raw bamboos are obtained in Taungoo, Yedashe, and Thandaung (Kayin State) townships. In Taungoo and Yedashe townships, situated at the foot of Bago Yoma, Kyathaung, Tinn-wa, and Thaik-wa are available. In Thandaung, Wabo (Kyalo), and Kyathaung are abundant. Bamboos are transported by cars and some are floated down the Swa creek. In Taungoo and Oktwin townships, there are many family businesses manufacturing round trays, sieves, baskets, conical bamboo hats, and bamboo hats. Traditional methods are largely applied in the whole area. Most people are engaged in bamboo product manufacturing as the main source of income, while some people are working in agriculture. As chopstick factories are in the cantonment areas in order to get regular electricity supply. Bamboo chopsticks are largely produced not only for local market but for export. Bamboo-charcoal is also being produced in the cantonment areas. Especially Thaik-wa is used for making high quality charcoal.

8.7. Sagaing Township, Sagaing Division

Bamboo rulers and bamboo pillows produced in Mingun, Sagaing Division were exported about 5 years ago. The scarcity of raw bamboo had effectively stopped the export activities. Bamboo strip hats are produced in Sinkyun village; various sorts of round bamboo trays, bamboo sieves, hand fans are produced in Khinmun village, Monywa Township. There is also a bamboo chopstick factory in Monywa. Although bamboo chopsticks were exported in the previous years, it was stopped due to the difficulty in getting raw bamboo. There are raw bamboo collecting centers in Ahlone cantonment which is situated on the bank of Chindwin River. They collect raw bamboos from Kalaywa and Phaungpyin for sales in other areas.

8.8. Ngathaingchaung Township, Ayeyarwady Division

Ngathaingchaung Township produces a variety of bamboo products such as bamboo matting, bamboo fence, bamboo curtain rolls, bamboo culms, bamboo charcoal, and bamboo splits. The products are sent to Yangon where rolls of bamboo and bamboo culms are made into value added goods and sent to Singapore by Bamboo Star Co. The popular bamboo products are flower pots, tissue boxes, home decoration materials, bamboo baskets, bamboo purses and hats. The major product of Ngathaingchaung is bamboo hats that are distributed across the country. Bamboo hats from Ngathaingchaung are exported to Thailand via border checkpoints. Kayin, Talagu-wa, Kyathaung and Tin-wa are used for making bamboo products.

In production process, people in villages and suburbs usually make semi-finished goods, normally with advanced payment from the wholesaler in the town, who makes finished products for distribution. Kyauk Sein Sin bamboo products factory is the largest producer of a variety of hats and other quality bamboo splits.

8.9. Mandalay District, Mandalay Division

The businesses relating to bamboo products are being carried out regularly in Mandalay and nearby villages. Htonbo village at the roadside of Mandalay-Pyinoowin highway produces bamboo chair, bamboo matting, and bamboo tables. Trading of bamboo culms, bamboo matting, bamboo roof is active all along Ayeyawady river bank at Mandalay. All kinds of baskets flow to Mandalay market from Ponna-chan and Myayngoo villages in Ta-da-oo township. There is one bamboo chopstick factory in the compound of Kinda reservoirs in Kume Township.

Bamboo chair, bamboo matting, and bamboo tables are made by families as cottage industries, and bamboo sieve, round bamboo tray and all sorts of baskets are made year round to meet the market demand. KKA Co Ltd produced bamboo veneer two years ago and it stopped the production due to the difficulties in getting raw bamboo.

The bamboo chopstick factory exports its product, but the volume decreases at present, owing to the difficulty in getting bamboo raw material. As a result, the factory produces only for local market.

Bamboo matting, bamboo roof, and bamboo floor are mostly for commercial purpose. There are about 20 to 30 sales centers for bamboo culms and each centre has an upward tendency of sale up to 400,000 to 500,000 bamboo culms per year. Thiak-wa is the major species of bamboo in Mandalay area. Raw bamboos are cut along the Shwe Li River and floated down along the river.

There also are many bamboos coming from other regions for sale in Mandalay market in addition to bamboo products in the township. Manufacturing and trading of quality bamboo products are not significant in Mandalay.

IX. Market Expansion Possibilities

According to the exporters, Myanmar bamboo charcoal may gain a market share in Japan. Bamboo charcoal is used in the developed countries for a variety of purposes such as for making barbeque, placing bamboo charcoal before foundation process of a new building, water purifying, placing bamboo charcoal in mats and pillows for health reason, making toiletries and personal goods, placing in refrigerators and rooms for removing unwanted scent and bacteria, applying in air conditioners and dish washing machines, and others. Due to its advantages in connection with health and environmental awareness, the use of bamboo charcoal has accelerated gradually.

The technology applied in Myanmar is not that far beyond the reach. The Bamboo Product Processing Section of the Project has published a booklet for systematic manufacturing of bamboo charcoal in Myanmar. The investment for setting up a bamboo charcoal manufacturing firm is not too high since there are numerous kilns along the border with China and Thailand. According to an exporter, the Japanese buyers desire to reduce reliance on the supply of bamboo charcoal from China due various reasons while studying the potential supply from Myanmar and Indonesia. Not only Japan but also other developed countries can become potential markets for bamboo charcoal from Myanmar due to the wide spread use of the product.

According to the exporter of bamboo charcoal, Waphyu, the best raw bamboo for making quality bamboo charcoal is available mostly in Myanmar. It is not found in China, the main exporter of bamboo charcoal to Japan.

At present, the Myanmar people have started to notice the usefulness of bamboo charcoal thereby making a local marketing of bamboo charcoal under way.

The market for bamboo flower stick can be expanded. As discussed earlier, the export of bamboo flower sticks was at its peak in the middle of 1990s. Although, the major market– the United States – was lost for political reasons, bamboo flower sticks are being exported to the market in the Western countries.

For bamboo culms, there is a market potential in the countries where date palm plantations are abundant as Myanmar bamboo culms are used in the date palm plantations in the United Arab Emirates.

For domestic market, the market for crab baskets is expandable. The crab culture and export has been risen up in the recent years. The more export of crab is witnessed; the higher will be the domestic demand for crab basket.

Another business related bamboo product for possible market expansion is the basket for construction use. The construction activities throughout the countries, including the national development projects, are the potential markets.

The ever increasing sales of bamboo curtains are apparent among the retail shops in Yangon. Peoples prefers bamboo curtain than wooden one due to its reasonable price. The sales of quality bamboo curtain can be increased not only for household use but also for the use in offices and hotels.

For souvenir market, at present, there is no considerable product for possible market expansion. The making of quality souvenir bamboo products requires advanced technology to which

Myanmar manufacturers are not accessible currently. With the products currently in the market, the supply and demand are in harmony.

A Myanmar bamboo product exporter has received samples of small pot for steamed food and tiny small bamboo boat from his business connection in Taiwan. It seems that there are demands for souvenir bamboo splits of high quality from Taiwan.

Some bamboo splits such as quality basket and table mat made by the village community of Taungchuang village in Kawhmu Townhsip, trained by the Bamboo Products Processing Section of the ITTO Project are sent to Taiwan as a sample via Kyaw Yanadar Co Ltd.

Some exporters, such as Mikimoto Co Ltd which has a branch office in Japan, are also interested in quality bamboo splits from Myanmar to penetrate into the Japanese market.

Currently, there are demands from Pakistan for buying Tapindaing-wa of 2 feet in length from Myanmar.

X. Constraints on Market Expansion

As bamboo charcoal is rated as Dangerous Cargo by the shipping lines. Only a few shipping lines undertake the transportation of bamboo charcoal. In Myanmar, the exporters of bamboo charcoal rely on the Myanma Five Star Line for export transportation to the destination.

There are about a hundred bamboo charcoal kilns along the border with China and Thailand due to the abundant supply of raw bamboo in Myanmar. Bamboo charcoals manufactured by those kilns are exported to China and Thailand at a relatively low price. The legal bamboo charcoal manufacturers and exporters cannot compete with them.

High freight charge is another constraint for bamboo charcoal export. Although the charge for ordinary export item is about US\$ 600 per container to Japan, bamboo charcoal export costs US\$1475 per container. Additionally, in comparison, the freight charge of bamboo charcoal is just about US\$ 599 per container from China to Japan.

The Japanese market is very sensitive. The quality of the products, packaging, and timely delivery of the exported items are essential requirements for penetrating international market like Japan. Frequent delay in obtaining necessary documentation from the various government departments affects the timely delivery to overseas buyers. On the other hand, Myanmar exporters lose their confidence on the timely delivery, and dare not close export deal or sign contract in large quantity. Currently, the bamboo product exporters have to deal with the Ministry of Commerce, Ministry of Forestry, the Union of Myanmar Chamber of Commerce and Industry, banks, and ports in Myanmar.

Obviously, the shortage of electricity and rising prices of other fuel broadly hinder the development of not only bamboo related industries but also other industries in Myanmar. The decline of bamboo chopstick factories and a recent closure of bamboo parquet factory in Pinyinana Township are the vivid examples.

A number of problems exist in transportation of raw bamboo from the natural forests to the production sites. The security check-points along the route cause frequent delays and extra transportation cost.

Although some producers of bamboo products receive export orders, they could not provide the required amount within the limited timeframe due to shortage of skilled workers. On the other hand, recruitment of permanent skilled workers could not be possible as there is no continuous order for export.

The establishment of huge manufacturing project of the state level such as the Thabaung Pulp and Paper factory leads to the shortage of raw bamboo for the small and medium scale bamboo related product producers. Moreover, unsystematic and unsustainable cut of young bamboo also leads to the gradual depletion of bamboo forest. If the necessary enforcement is not undertaken, bamboo related rural and business communities will encounter the shortage of quality raw bamboo in the future.

XI. Recommendations

There are valuable bamboo species along the border with China and Thailand. Illegal export of bamboo products and raw bamboo culms are evident. The finished bamboo product factories in Thailand largely rely on the availability of raw bamboo culms from Myanmar. Efforts should be put to control the illegal export in the border areas.

To gain confidence from the foreign buyers and to reach the export deal in large quantity, more coordination among the government departments and institutions must be materialized so as to have smooth and timely export transactions.

Another alternative of fuel supply for bamboo product factories must be found.

As in the neighboring countries, there may be foreign visitors who are interested in making of bamboo products by traditional methods. Arrangements should be made for interested visitors to visit traditional bamboo product making villages in the nearby townships of the cities such as Kawhmu Township and Twante Township in Yangon Division and Ngathaing chaung Township in Ayeyarwady Division.

The Myanmar people still lack knowledge on usefulness of bamboo charcoal. Emphasis should be put to raise the awareness of the people on the usefulness of bamboo charcoal to expand the local market.

The artistic skills and methods for making bamboo products are to be maintained and disseminated as far as possible. In addition, preserving and making more stylish methods from foreign countries should be sought. In doing so, a regular training institution should be set up by the coordination of all parties involved.

The fair interconnection between the bamboo-product-making rural community and the business community is also a prerequisite.

The bamboo product manufacturing and exporters association, representing the rural and business communities, is also necessary to present the real situations and to avoid some hindrances such as unnecessary price-fixing by some organizations.

In order to compete in the international market, advanced technology for bamboo products manufacturing is a prerequisite. A favorable climate for foreign investment particularly from Thailand and China must be fostered.

Neither foreign investors nor large scale local investors can rely only on raw bamboo from natural forests for the long term. The responsible government institutions have to encourage bamboo plantation in large scale in order to reduce the heavy reliance on the natural forests.

Competition in the international market needs accurate and timely information over the business. A database and information center must be set up collecting domestic and international information on planting, harvesting, manufacturing and trading of bamboo products.

In order to gain international experience, arrangements must be made for local entrepreneurs and technical experts to participate in foreign study tours, seminars, and international trade fairs.

Providing training courses on management, marketing, finance, and accounting are also recommended to local bamboo product manufacturers and traders for effective business transaction.

A tripartite coordination among the product makers, exporters and potential FDIs will play a key role in formulating right marketing strategy for bamboo products for penetrating international market.

APPENDIX

Major Bamboo Species Used for Making Bamboo Products in Surveyed Areas

Common Name	Scientific Name
Kyathaung	<i>Bambusa polymorpha</i>
Tin	<i>Cephalostachyum pergracile</i>
Thaik	<i>Bambusa tulda</i>
Wagok	<i>Oxytenanthera albociliata</i>
Waphu	<i>Dendrocalamus membranaceus</i>
Wanet	<i>Dendrocalamus longispachus</i>
Wabo	<i>Dendrocalamus brandisii</i>
Wabo-myet-san-gye	<i>Dendrocalamus hamiltonii</i>
Hmyin	<i>Dendrocalamus strictus</i>
Tapindaing	<i>Bambusa longispiculata</i>
Wapwa	<i>Oxytenanthera Spp</i>
Htiyo	<i>Thyrsostachys siamensis</i>
Talagu	<i>Giganiochloa compressa</i>
Kayin	<i>Melocanna bambusoides</i>
Waya	<i>Oxytenanthera nigrociliata</i>
Wathabut	<i>Neohouzeaus helferi</i>

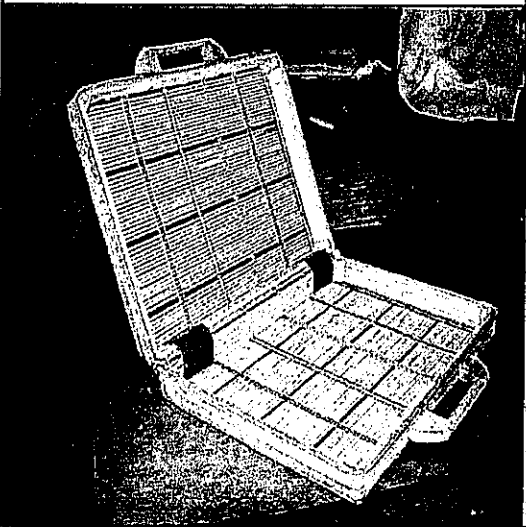
Exportable Bamboo Products



Bamboo Charcoal



Bamboo Parquet



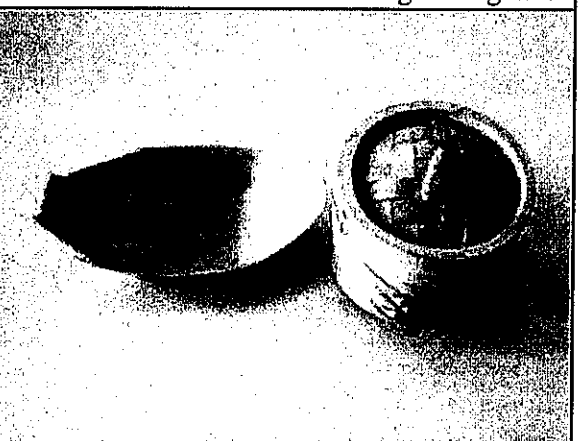
Bamboo Case



Bamboo Conical Hat from Mong Naung area

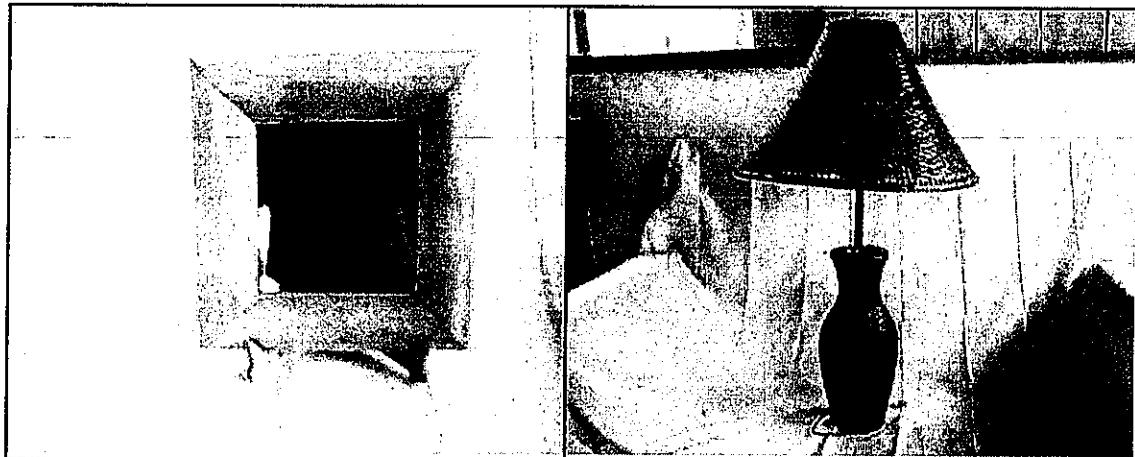


Bamboo Hat



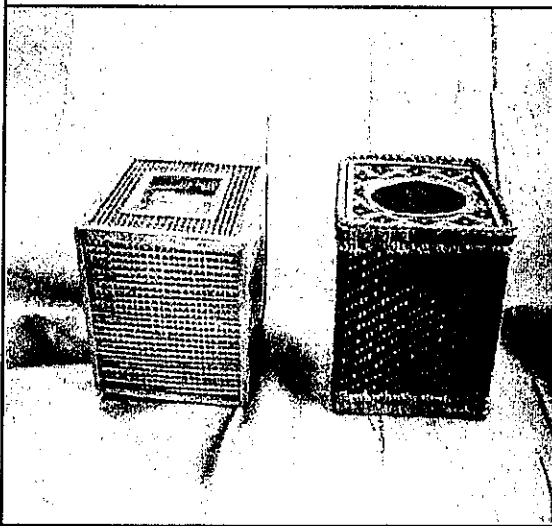
Export order sample from Taiwan

Products in Souvenir Market

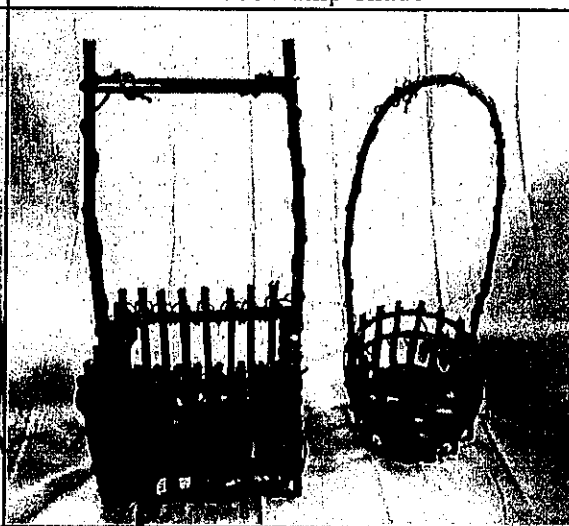


Bamboo Photo Frame

Bamboo Lamp Shade



Bamboo Tissue Box



Bamboo Flower Basket

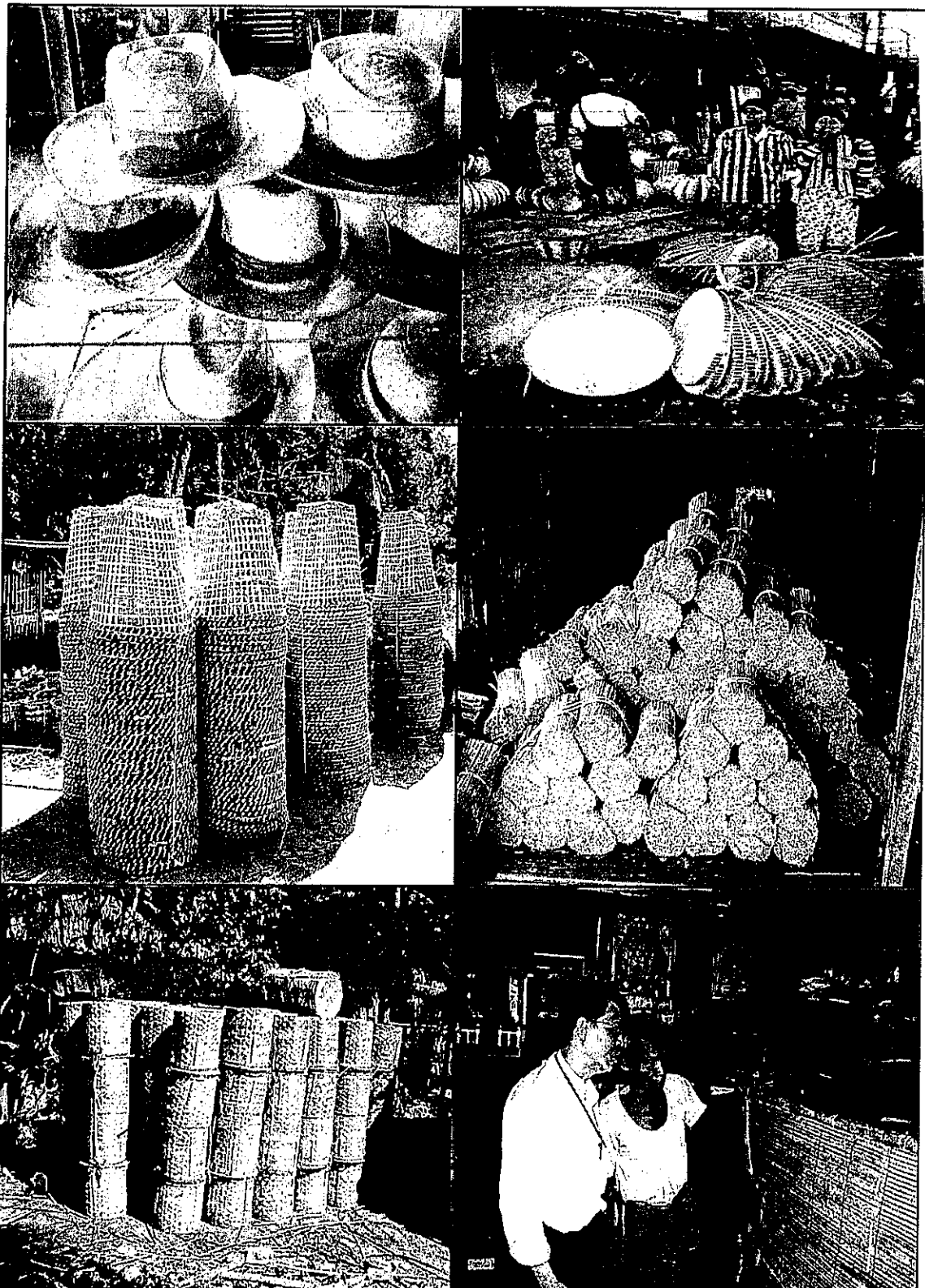


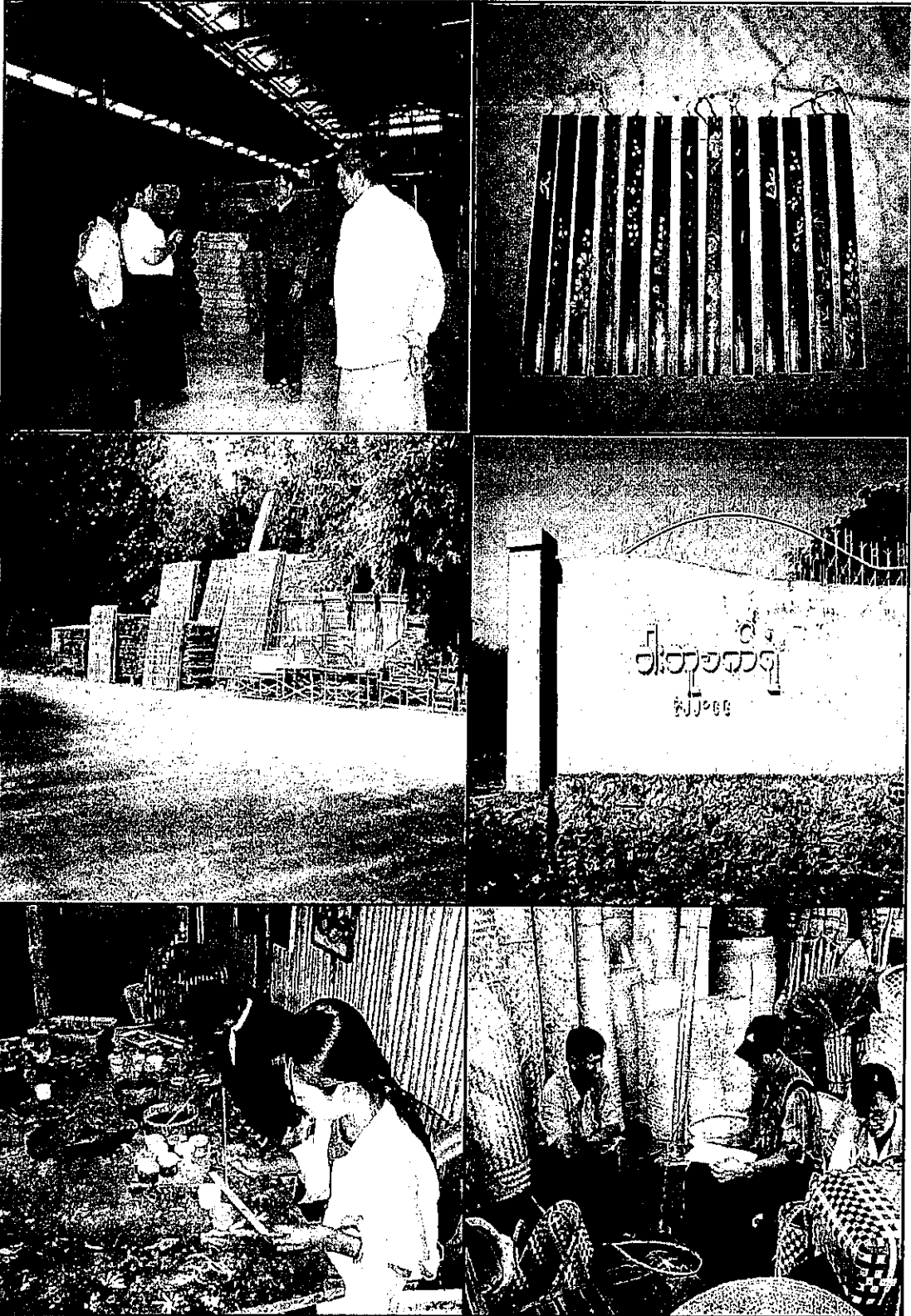
Bamboo Basket



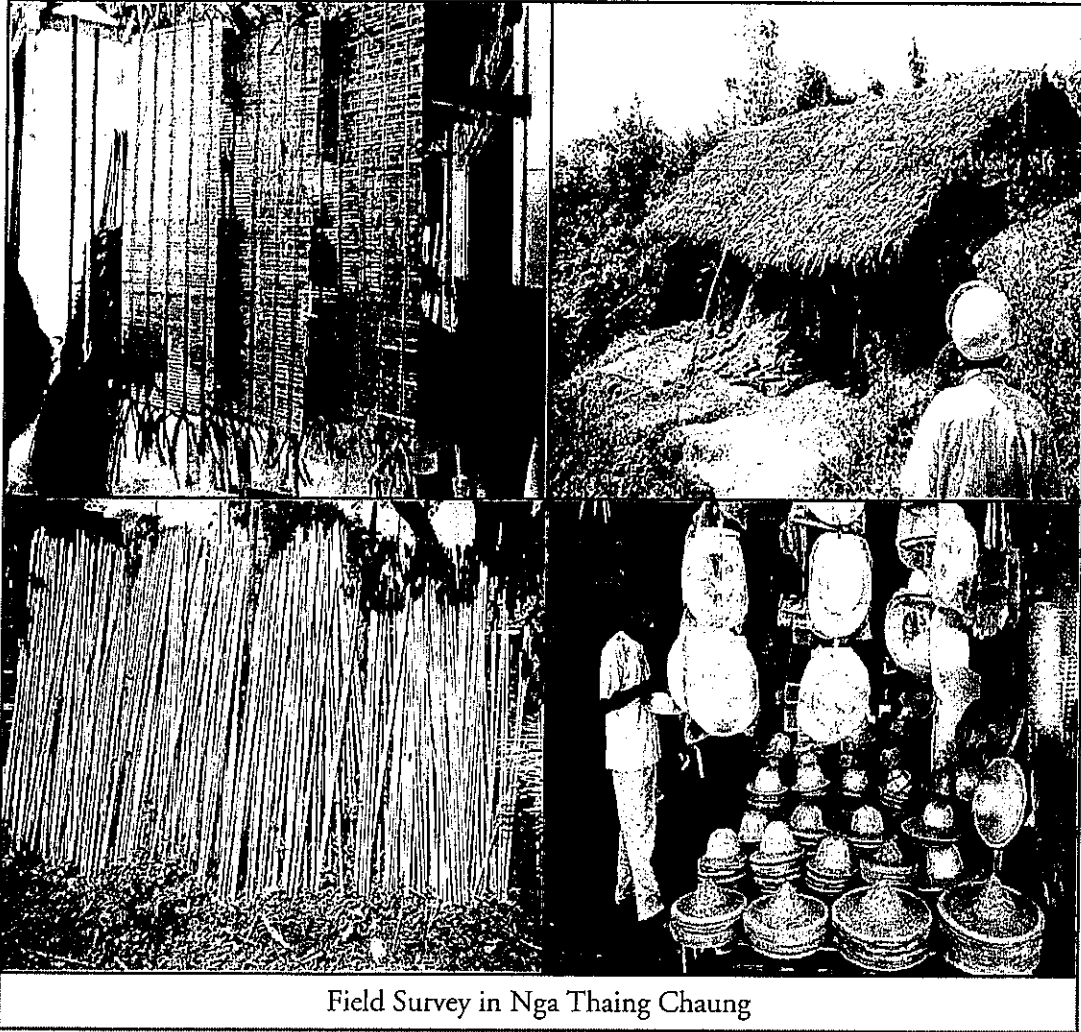
Bamboo Pot

Products for Local Markets



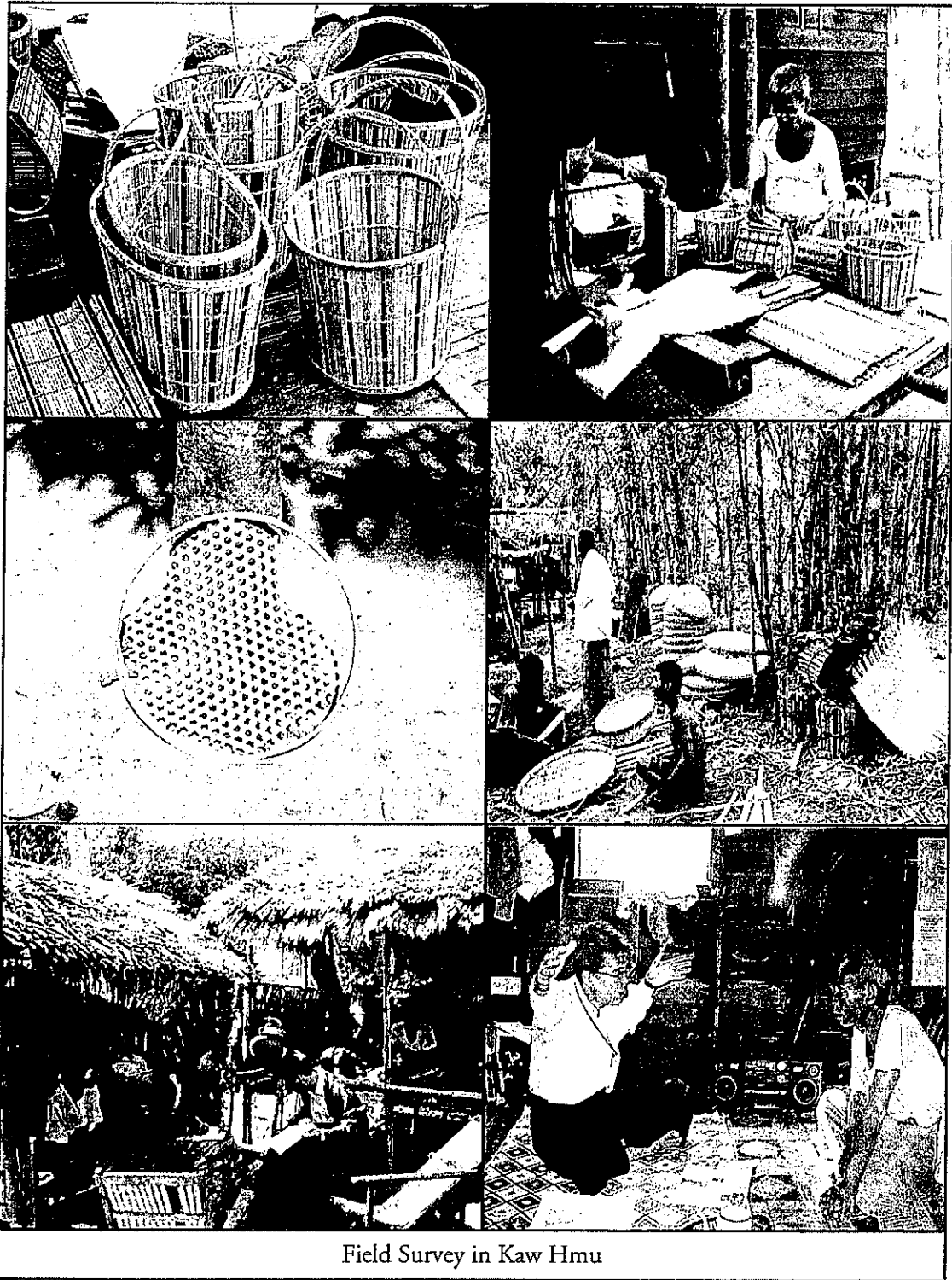


Field Survey in Mandalay and Monywa

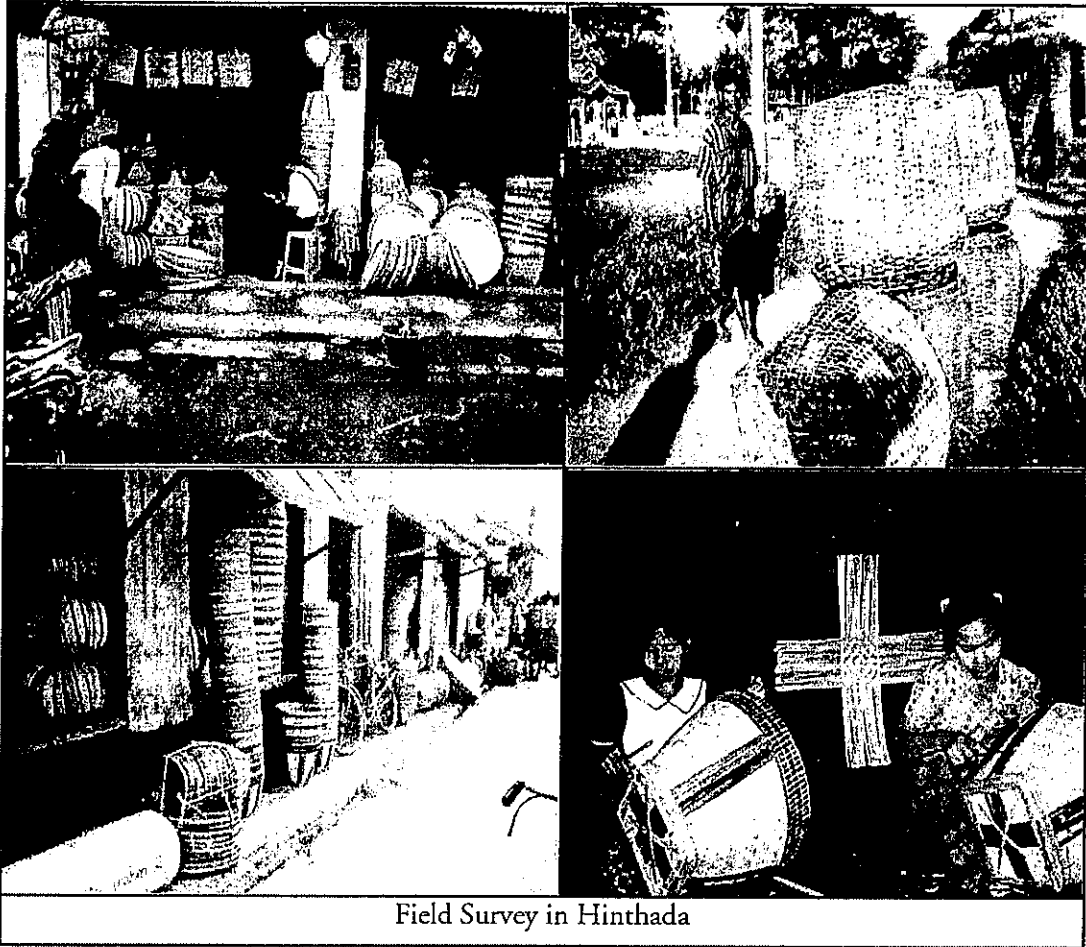




Field Survey in Twantay



Field Survey in Kaw Hmu



Field Survey in Hinthada





Briefing and Debriefing of Field Survey Teams



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