

SUMMARY REPORT

ITTO Statistical Training Workshop



27-30 September 2011
Chiang Mai, Thailand





Opening ceremony at Holiday Inn Hotel, Chiang Mai



Field Observation of Wood Industry of Forest Industry Organization, Lampang

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Preface

As Royal Forest Department (RFD) by Office of International Cooperation on Forestry had organized a workshop on Forest Products Statistic in Thailand, which was supported by International Tropical Timber Organization (ITTO). The workshop was held at the Holiday Inn in Chiangmai during 27-30 September, 2011, with 38 persons participating in the workshop. For the purpose of development of statistic system in Thailand and improving its efficiency into international standard level, we had gathered all information and results of the workshop and created this report for the operating officers and those who are interested.

On this occasion, our gratitude goes to Dr. Steven E. Johnson and Mr.Charas Mayura from International Tropical Timber Organization, Mr.Felice Pardovani, an expert from Food and Agriculture Organization of United Nations and all lecturers from Royal Forest Department, the Customs Department, National Statistical Office of Thailand, Department of Foreign Trade, Faculty of Forestry, International Council of Forest and Paper Associations, Thai Parawood Association and Valuable support for the study trip from Forest Industry Organization at Mae Moh Plantation and Elephant Center, Lampang, Thaweephan Furniture Company Limited in Chiangmai and also thanked the participants from many agencies for their generous provision of information, opinions and RFD staff in support of this training workshop Due to their support and cooperation, the workshop had passed without hindrance and achieved the determined objective.

Royal Forest Department

December 2011

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ITTO Statistical Training Workshop

Chiang Mai, 27-30 September 2011

Venue : Hotel Holiday Inn

Day 1: Tuesday, September 27, 2011

• **Opening Session**

Time	Subject	Speaker
8.30–9.00	Registration	Sumet Sirilak, Piyachat Chuayplod
9.00–9.10	Welcome & Background of the Workshop	Director of Foreign Forestry Division, RFD
9.10–9.30	Address by Representative, Thai Government	Director of International Forestry Cooperation Office, RFD
9.30–9.45	Address by Representative, ITTO	Dr. Steven E. Johnson, ITTO
9.45–10.00	Address by Representative, FAO	Mr. Felice Padovani, FAO
10.00–10.30	Coffee Break	

• **Start of Workshop**

Time	Session	Topic	Speaker
10.30–13.00	Session 1: Forest products statistical reporting at the National and State/provincial level	Presentation by RFD delegates on the conditions of the statistical reporting on 4 regions (30 min. each).	Delegates from Thailand's provinces: Central, North East, North, and South
		Thailand forest products statistics trends and how forest products statistics are compiled and used at a national level.	Representative from Information Technology Center (RFD)
13.00–14.00	Lunch		
14.00–15.30	Session 1 continues	Status of Forest Plantations activities of the public and private sectors in Thailand	Representative from Reforestation Promotion Office (RFD)
		OTHER: Producer of forest products Statistics in Thailand	Representative from Faculty of Forestry, Kasetsart University

15.30–16.00	Coffee Break		
16.00– 17.00	Session 2: National forest products statistics reporting – legal frameworks and importance of statistical reporting	National Legal Framework	Representative from National Statistical Office
17:00 – 17:30		The basic role and responsibilities of a Forestry Statistical Office	Mr. F. Padovani, FAO
17.30 – 18.00	Working Group (1): Status and issues in reporting forestry statistics in Thailand	Formation of working groups and discussion on status and issues/problems in reporting forest products statistics in THAILAND (see TOR WG1)	Moderator: Mr. F. Padovani
18.00 – 20.00	Reception		

Day 2: Wednesday, September 28, 2011

Time	Session	Topic	Speaker
9.00 – 10.00	Working Group (1): (continued)	Presentation of the reports of the working groups and discussions (15 mins each presentation).	Chairperson/Rapporteur of each team
10.00 – 11.00	Session 3: International data reporting requirements	An international perspective on forest products statistics and how national forest products statistics are collected used at international level: <ul style="list-style-type: none"> • Joint Forest Sector Questionnaire – approach and concept; • Review of Thailand's national forestry statistics and issues relating to the adequacy of data provided by Thailand. 	S.J. ITTO and F.P.FAO
11.00 – 11.30	Coffee Break		
11.30 – 13.30	Session 3	Group discussion on (1) data gaps	Moderator:

	continues Working Group Discussion (2): Improving Thailand's reporting of forest products statistics for the JFSQ (see TOR WG2)	and provision of missing data (2) the various aspects of JQ1 and JQ2. Three groups to be formed to discuss the finer points of methodologies to ensure reporting of the following three aspects of JQ1 and JQ2: Group I: FP Statistics: Removals: Woodfuel and Industrial Roundwood Group II: FP Statistics on Production: Sawnwood, WBP, Pulp and Paper Group III: FP Statistics on Trade. Presentations by the 3 working groups (10 mins each)	Mr. F. Padovani Chairperson/Rapporteur of each team
13.30 – 14.30	Lunch		
14.30 – 15.00		Forestry Statistics regarding export – import scenario in Thailand	Representative from Department of Customs
15.00 – 16.30	Working Group Discussion (3): Consolidating regional and national forest products data (see TOR WG3)	Group discussions on consolidating regional and national forest products data	Chair person/Rapporteur of each team
16.30 – 18.00	Session 4: Reports of working groups on consolidation of Regional and National Forest Products data	Presentations by the three groups on decisions arrived at and methodologies developed followed by discussions	Chair person/Rapporteur of each team

Day 3: Thursday, September 29, 2011

07.00 – 19.00	Field trip to: <ol style="list-style-type: none"> 1) Field office of Forest Industry Organization at Lampang 2) Thaweephan Furniture Company Limited Chiangmai
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Day 4: Friday, September 30, 2011

Time	Subject	Topic	Speaker
08.00 – 10.00	Session 5: An overview of Forest Products Statistics – A stand point of the industry	<ul style="list-style-type: none"> ● 'Forest Products Statistics – Paper & Pulp Industry' ● 'Plywood and Panel Industries status, challenges and opportunities' 	Representative from The Thai Pulp and Paper Industries Association Representative from Thai Parawood Association
10.00 – 10.30	Coffee Break		
10.30 – 14.00 (including lunch time and coffee break)	Session 6: Working Group 4: Solutions to national and regional information needs (see TOR WG 4)	Formation of Two groups, one on regional/provincial information requirement and the other on national information requirements with the following Terms of Reference: <ol style="list-style-type: none"> 1. Group I: National Information Requirement <ol style="list-style-type: none"> (i) National Output – reporting formats and units and use of forestry statistics in policy and decision making at the national level (ii) Indicators for assessing the national status of forests (iii) Relative importance of parameters in terms of forestry database (iv) Issues related to improvement in National Forest Products Statistics. 2. Group II: Regional Information Requirement <ol style="list-style-type: none"> (i) Regional Output – reporting formats and units and use of forestry statistics in policy and decision making at the regional level (ii) Collection format of regional forestry statistics and their importance Solutions to problems encountered in statistical reporting	

		Issues related to improvement in Regional Forest Products Statistics.	
14.00-15.00		<p>Presentations by the two groups on the output followed by discussion on the recommendations with specific recommendations on:</p> <ul style="list-style-type: none"> ● Consolidation of national forest products statistics ● Solutions to main problems related to collection, compilation and regular dissemination of forest products statistics <p>Roles and responsibilities of the RFD's (represented by the state correspondents) towards maintaining a sustainable Forest Products Statistical System in Thailand.</p>	Chairperson/Rapporteur of each team
15.00 – 1600	Panel discussion and Workshop closure	Panelists (Representatives of each sector give their overall conclusions on the workshop); ITTO, FAO and RFD give closing comments and present workshop certificates.	

List of Participants

No.	Name	Position
<u>Royal Forest Department</u>		
1	Ms.Ampai Pornleesangsuwan	Forestry Technical Officer, Senior Professional Level
2	Mr.Banjong Wongsrisoontorn	Director of Wood Certification Division
3	Mr.Chokchai Lertkiattiwong	Director of Information Technology Center
4	Ms.Kamrai Pramann	Forestry Technical Officer, Practitioner Level
5	Mr.Nivat Luengborisut	Forestry Officer, Senior Level
6	Mr.Narong Koonkhunthod	Forestry Technical Officer, Practitioner Level
7	Ms.Narumol Noochplian	Forestry Technical Officer, Professional Level
8	Ms.Piyachat Chuayplod	Foreign Relations Officer, Practitioner Level
9	Mr.Pornsun Koonthonsurakarn	Lawyer , Professional Level
10	Mr.Porntep Luewprasert	Forestry Technical Officer, Professional Level
11	Ms.Rattana Sa-ardnug	Forestry Technical Officer, Professional Level
12	Mr.Sapol Boonsermsuk	Director of International Forestry Cooperation Division
13	Ms.Sapinna Onpeng	Computer Technical Officer, Practitioner Level
14	Mr.Somdet Champee	Forestry Technical Officer, Professional Level
15	Mr.Sumet Sirilak	Director of Foreign Forestry Division
16	Ms.Suphawadee Wilamart	Forestry Technical Officer
17	Mr.Suchat Kalyawongsa	Forestry Technical Officer, Senior Professional Level
18	Mr.Surat Kanjanakunchorn	Director of Training Division
19	Mr.Thada Suwannawimon	Forestry Technical Officer, Professional Level

List of Participants

No.	Name	Position
<u>Royal Forest Department</u>		
20	Mr.Theerawat Kenmee	Forestry Technical Officer, Practitioner Level
21	Mr.Wiboolchai Pasonghong	General Management Officer
<u>Department of National Parks, Wildlife and Plants Conservation</u>		
22	Mr.Somyot Seangnin	Forestry Technical Officer, Senior Professional Level
23	Mr.Surasak Chiamratanasil	Computer Technical Officer, Professional Level
<u>Forest Industry Organization</u>		
24	Ms.Kanyaratra Laochote	Head of Planning and Evaluation
25	Mr.Nipol Pa-in	Chief of Plantation Khun Mae Kam Mee
<u>Chiang Mai Provincial Office of Natural Resources and Environment</u>		
26	Mr.Somkit Panyadee	Forestry Officer, Experienced Level
<u>Lamphoon Provincial Office of Natural Resources and Environment</u>		
27	Mr.Prasit Srijamorn	Forestry Technical Officer, Professional Level
<u>Trang Provincial Office of Natural Resources and Environment</u>		
28	Mr.Plueang Rattanachawii	Chief of Natural Resources Group
<u>Customs Department</u>		
29	Ms.Wandee Maolanont	Director of Information Processing and Data Warehouse Division
30	Ms.Nuananong Reokkhawutthikun	Statistician, Professional Level
31	Ms.Laaiad Wongtong	Statistician, Professional Level

List of Participants

No.	Name	Position
<u>National Statistical Office</u>		
32	Ms.Nampung Chirdchuepong	Director of Information Analysis Group
33	Mr.Wichai Simmanoi	Statistician Officer, Professional Level
<u>Department of Foreign Trade</u>		
34	Ms.Nareeratana Chongsatja	Trade Officer, Senior Professional Level
35	Ms.Wasinee Atisook	Trade Officer, Professional Level
<u>Office of Agricultural Economics</u>		
36	Ms.Patchara Wongngamkam	Statistician Officer, Senior Professional Level
<u>The Thai Parawood Association</u>		
37	Ms.Arunwan Petsang	Manager
<u>Thai Pulp and Paper Industrial Association</u>		
38	Mr.Kritsana Makkawan	Section Manager of Planning and Customer Services

Opening Remark

Mr.Thanupong Reuangjirawit

Director of International Cooperation on Forestry Office

ITTO Statistical Training Workshop

Hotel Holidays Inn, Chiangmai, Thailand

27-30 September 2011

Dr.Steven Johnson, Mr.Charas Mayura,

Experts of International Tropical Timber Organization,

Mr.Felic Padovani ,Expert of Food and Agricultural organization,

Ladies and Gentlemen,

I am most honoured to have the privilege of making an opening remark on the occasion of ITTO Statistical Training Workshop. I wish to accord warm welcome to Expert of International Tropical Timber Organization, Expert of Food and Agricultural Organization, and all of distinguished participants which assemble in Chiangmai, the land of forest and the location of Royal Forest Department Office at the beginning 115 years ago.

The mission of Royal Forest Department (RFD) aims to protect, conserve, and management the forestland including permission service on wood ,wood products and wood industrial utilization, in connection with these administration, RFD needs to have the efficiency process for statistical system harmonized with the international standard to response the country development including supporting information for international level.

I hope that the achievements of this workshop will enhance the capacity of statistical process on forest products in Thailand and benefit to trading industrial in line with the policy and good governance on sustainable forest management.

RFD has developed the e-permit since 2010 and the operation is under testing to link with the National Single Window System (NSW) following the cabinet resolution at December 2005 ,which the Customs Department was delegated to be portal agency. With regard to National Single Window System, RFD contains of control information supply chain by verifying timber from origin to destination, defining route and time of transportation, authorities details, and licensing transport permits, and wood raw material information including chain of custody information such as customs procedure of imported and exported timber , control of timber and wood products movement . This system will promote the utilization of Forest statistics and to support good governance working and the country development.

On behalf of RFD ,I would like to express our sincere appreciation and grateful thanks to ITTO for contribution on Expert and Budget to hold this Statistical Training Workshop. In this auspicious time, may I declare the opening workshop and I hope that our meeting today will be a fruitful and will come up with the deliberation.

Thank you

List of Abbreviations

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DMCR	Department of Marine and Coastal Resources
DNP	Department of National Parks, Wildlife, and Plant Conservation
FAO	Food and Agriculture Organization of United Nations
FIO	Forest Industry Organization
ITTO	International Tropical Timber Organization
MNRE	Ministry of Natural Resources and Environment
MOC	Ministry of Commerce
MOF	Ministry of Finance
MOI	Ministry of Interior
NSO	National Statistical Office
RFD	Royal Forest Department
UNCTAD	United Nations Conference on Trade and Development
UNFF	United Nations Forum on Forest
USDA	U.S. Department of Agriculture

“ Forest Products Statistical Reporting at the National and Provincial Level ”

1.1 Conditions of the Statistical Reporting on 4 Regions

The morning part of session 1 was conducted with presentations by RFD delegates on the conditions of the statistical reporting on 4 regions (30 minutes each) by delegates from Thailand's provinces (Central, North East, North, and South). Details of this sub-session are as follows:

1.1.1 Conditions of Forest related Statistical Reporting in Trang

Mr.Plueang Ratanachawee, Forestry Technical Officer, Senior Level, Trang Provincial Natural Resources and Environment Office presented that forest-related statistical operations in Trang¹ involve the following areas:

- 1) registration of land as registered forest plantation;
- 2) forest industrial licensing;
- 3) forest business operations; and
- 4) issuance of licenses governing transportation and relocation of woods and forest product items

In 2009, Trang's agricultural production structure comprised farming (90.5%), livestock (2.4 %), agricultural services (1.8 %), and forest (5.3%). Between 1998 and 2011, 36 individual teak growing farmers registered 595 rai of land as registered forest plantation as provided by the Forest Plantation Act B.E.2535 (1992).

At present, Thailand has a total of 16,718,145 rai of land as pararubber plantations, the majority of which 11,339,698 rai are in the South. Trang itself has 1,310,188 rai of pararubber plantations, which over 28,556 rai were felled from October 2009 to August 2010 while pararubber trees in 11,813.60 rai of land were replanted. Trang authorities also collect data of pararubber exports, parawood-based products exports, and parawood exports all of which are among the provinces' top exports items.

¹ Representing the Southern region

As for forest industrial licensing, Trang authorities issued licenses to 3 processing facilities employing human labour, 23 processing facilities employing machinery for inventions/manufactured items, 40 parawood/wood-processing facilities employing machinery (involving 13 types of wood) and 1 wood-processing facilities employing machinery. In the trading sector, 21 processed wood trading facilities, and 19 inventions/manufactured items trading facilities were granted licenses.

1.1.2 Conditions of Forest related Statistical Reporting in Lamphun

Mr.Prasit Srijamorn, Acting Head of the Natural Resource Group, **Lumphun**² Provincial Natural Resources and Environment Office presented that Lamphun comprises 2,799 square kilometres of forest (62.13% of the total land area), 1,027 square kilometres of agricultural area (22.79 % of the total land area),³ and 679 square kilometres for other types of land use (15.07 % of the total land area).⁴

Regarding tree planting and registration of forest plantation in Lamphun between 1993 and 2010, there were 243 individual teak growing farmers registered 22,821,165 rai of land ,which containing 3,114,607 teak trees.

In the field of forest industrial licensing in Lamphun, authorities issued licenses to 16 processing facilities employing human labour for inventions/manufactured items, 48 processing facilities employing machinery for inventions/manufactured

items, and 2 wood-processing facilities employing machinery. As for trading, 28 processed wood trading facilities, and 93 inventions/manufactured items trading facilities were granted licenses. In 2010, 565 licenses permitting relocation of wood/logs and forest products were issued.

1.1.3 Conditions of Forest related Statistical Reporting in the Northeastern Region

Mr.Somdej Champee, Forestry Technical Officer, Professional Level, the 6th Forest Resources Management Office (Udon Thani) started the presentation by classifying forest products into 3 sub-categories – i.e. 1) woods, 2) non-timber products and medicinal plants, and 3) wildlife. Then the speaker elaborated on the conditions of forest related statistical reporting in the Northeastern region in the areas as follows:

● Relevant Laws, Regulations, and Agencies

There are a great number of relevant laws, regulations, and agencies involved in forestry. Such as the Forest Act B.E.2484 (1941) enforce for permission of logging, wood-processing, sawmill and trading of wood, the National Reserved Forest Act B.E.2507 (1964) enforce for permission of forest land, and etc. The agencies concerned to forest management and activities comprise of RFD, DNP, DMCR, 75 Provincial Natural Resources and Environment Offices as well as, the Customs Department.

²Representing the Northern region

³Data from the Lamphun Provincial Agricultural Office: 2001

⁴Water resources, residential areas, industrial estates, public utilities, mining zones, and others

The permission for wood industries, forest-related industrial licensing, logging activities on proprietary land and in forest plantation, importation of woods and non-timber forest products, as well as smuggled woods and non-timber forest products. All these procedures involved a great deal of authorities across many line ministries such as the MNRE, MOI, MOF as well as courts.

Table 1.1: Collection, Compilation, and Reporting of Data related to Forest Products in the Northeastern Region

Data Items	Data Sources	Data Formats	Frequency of Data Collection	Data End Agencies
Imported wood and non-timber forest products	Customs Checkpoints	Customs Tariff Calculation Forms	Monthly	Customs Department
	Forest Checkpoints	Forms	Monthly	RFD
Woods in proprietary land and forest plantation	Provincial MONRE Office	Forms and Wood Lists	As requested or lodged	-
	Relevant Coordination Centers and Responsible Area Offices in Charge of Respective Areas	Verification Forms	As appropriate, and as per License Expiry Date(s)	RFD
Non-Timber Forest Products	Provincial MONRE Office	Forms and Wood Lists	As requested or lodged	-
	Relevant Coordination Centers and Responsible Area Offices in Charge of Respective Areas	Verification Forms	As appropriate, and as per License Expiry Date(s)	RFD

Restricted Wildlife and Plants	Administrative Offices	Forms		DNP
Illegal Logging and Collecting Non-Timber Forest Products	Area Offices in Charge of Respective Areas	Forms and Case Monitoring Systems	Daily	RFD

● **Transportation of Goods through Customs Checkpoints in the Northeast Region**

There are on-going and continued international activities across the border as shown in statistics of Goods Transportation through Nong Kai Customs Checkpoint (September, 2011) reveals that processed woods were registered as the top 10 items as shown in Table 1.2. The nature and types of wood and non-timber forest products transported through customs checkpoints are presented in Table 1.3 below.

Table 1.2: Top 10 Goods Transport through Nong Kai Customs Checkpoint

No.	Product Types	Values (Million Baht)
1	Copper	1611.34
2	Clothing	652.08
3	Silicone	72.89
4	Shoes	39.27
5	Airplane Spare Parts	16.28
6	Communications Devices	8.59
7	Canned Sweet Corn	8.49
8	Processed Woods	6.43
9	Cars	5.17
10	Personal Use Items	2.67

Table 1.3: Wood and Non-Timber Forest Products Transported through Customs Checkpoints

Customs Checkpoints	Characteristics of Imported Woods	Characteristics of Woods Transported through Customs Checkpoints	Imported Non-Timber Forest Goods
Nong Kai	Processed Woods/ Ready-Made Woods	Round Wood	
Bueng Kai	Processed Woods, Sawdust		Raisin Lumps
Pobul Mangshan	Processed Woods, Plywood, Sawdust	Furniture Items Parts, Old Wood Columns/Poles	Wood Oil Wood Charcoal

● **Smuggled Wood and Non-Timber Products**

Another aspect identified in the presentation is illegal practices involving smuggling of woods and non-timber forest products – i.e.:

- 1) Processed wood and Payung wood; and
- 2) Products listed on CITES lists such as carcasses of deer’s heads and orchids.

● **Summary of Conditions of Forest-related Statistical Collection and Reporting in the Northeastern Region**

1) There are a great number of agencies involved resulting in unsystematic data collection as each agency operates to serve different objectives or mandates;

2) Data acquired from different agencies such as the Customs Checkpoint and from Forestry-Checkpoints might not be readily corroborated as there are complicated coordination procedures in the entire process;

3) Logs in illegal logging as well as imported and exported woods/logs means data collected from entrepreneurs alone might not reflect real figures; and

4) As yet, data have not been made openly public. Also data analysis is needed for the forest management purposes such as forest growing promotion, reforestation, and forest product utilization.

● **Suggestions for Redressing the Current Situations**

1) The government should develop a data center in charge of data collection for the purposes of economic value evaluation and financial administration, and forest management planning at the national level in order to achieve market transparency;

2) Quarterly interagency data verification helps to ensure data congruence. This can be achieved in the form of a national forest products data committee. Alternatively, the national statistical office may be assigned to serve as the focal point in this regard; and

3) Necessary arrangement should be undertaken to collect and analyze data at the regional office or provincial level, covering both forest goods production for commercial purposes and social capital formation (biodiversity and community food and drug bank).

1.1.4 Conditions of Forest related Statistical Reporting at the National Level

Mr. Banjong Wongsrisunthon, Director of Wood Certification Division, Permission Office presented the conditions of data reporting in the fields of wood importation and exportation as well as forest industry permission. The speaker started the presentation by summarizing RFD's organizational administration which is divided into 1) central administrative and operational agencies, and 2) regional administrative and operational agencies.

The central administrative and operational agencies, located in Bangkok, are composed of 14 major agencies at different missions and responsibilities. And there are 10 Forest Resources Management Offices located across the countries functioning as regional administrative and operational agencies. Later on the speaker specifically elaborated on 3 particular agencies under the Permission Office which directly concerned with wood importation and exportation.

The Forest Checkpoints Division is responsible for the regulation, supervision, and inspection, and permission of woods and non-timber forest products importation and relocation/ transportation. Collection of data on importation

conducted by the Forest Checkpoints Division is carried out at 13 forest checkpoints (Type I), and 1 forest checkpoint⁵ (Type II), located across the country. 22 in-country checkpoints which inspect and control transportation of woods and non-timber forest products within the country also provide relevant data.

● **Data Collection Methodology**

13 forest checkpoints (Type I), and 1 forest checkpoint (Type II) collect and submit data to the Permission Office on a daily basis, and summarize all the data for monthly reporting. Data reported include the number of round wood, processed wood, non-timber forest products, and wood-based inventions imported/transported in the form of itemized data accordingly checkpoints and regions involved.

The Forest Industries Permission Division is in charge of developing standards, methods, as well as procedures involved in forest industries permission. It also regulates operational compliance and promotes industrial functioning to achieve efficiency and optimal use of forest resources. According to the law of authority, forest industries permission is delegated by Director General of RFD to provincial governors. Provincial authorities are required to report all the permissions issued to the RFD by date 15th of the following month with copies thereof sent to the Forest Resources Management Offices in respective localities.

⁵ Although there is only 1 Forest Checkpoint Station (Type II), there are 4 branches thereof in all.

● **Collection/storage of Data related to Forest Industries Permission**

The Forest Industries Permission Division is in charge of collecting and storing data related to forest industries permission, while Provincial National Resources and Environmental Offices carry out the same function in other provinces.

● **Reporting of Data related to Forest Industries Permission**

According to the database stored at the Forest Industries Permission Division in fiscal year 2010, there are 7,330 wood-processing facilities, 4,510 processed-wood trading facilities, and 5,884 trading business dealing in wood-based innovations, which means there are 17,724 enterprises in these 3 business categories in Thailand. The corresponding figures for Bangkok in the same fiscal year are 1,164 wood-processing facilities, 624 processed-wood trading facilities, and 967 trading business dealing in wood-based innovations, with a total number of 2,755 enterprises in these 3 business categories.

● **Problems encountered in the Preparation of Statistics of Forest Industries Permission**

1) Provincial authorities fail to report their permission and provide documents to their respective regional forest resources offices and the RFD;

2) Where any such reporting required is actually carried out, it is often not done do by the timeframe set forth (by date 15th of the following month);

3) Reporting is often not carried out in the format prescribed by the RFD; and

4) RFD lacks an efficient database.

The Wood Certification Division is in charge of verifying and issuing documents certifying wood products and wood charcoal for exportation.

● **Data Collection Methodology**

In Bangkok, the Wood Certification Division collects data on wood certification, whereas regional Forest Resources Management Offices carry out the same function and report data thereof to the Wood Certification Division, the Permission Office in Bangkok on a monthly basis.

Data on wood, wood-based products and charcoal certification are collected and classified according to details such as number, volume, product types, wood types, destinations, and names of enterprises involved.

● **Obstacles/Difficulties Encountered in Data Reporting**

As of now data inaccuracy still occurs in the collection of data related to forest product certification due to the fact that:

1) Certain regional Forest Resources Management Offices fail to submit reports of certificates issued; and

2) Certain regional Forest Resources Management Offices fail to submit reports thereof by the timeframe set forth. Instead, they submit relevant reports due only once in many months.

1.2 Thailand forest products statistics trends to shed light on how forest products statistics are compiled and used at a national level.

After four speakers representing four distinct regions had made their presentation, there were 2 presentations regarding 'Thailand forest products statistics trends to shed light on how forest products statistics are compiled and used at a national level' by RFD delegates. Details of this sub-session are as follows:

1.2.1 Forestry Statistical Data

Mr. Chokechai Lertkiatwong, Director of the Information Centre, Planning and Information Office delivered a presentation on Forestry Statistical Data provided by Information Centre in 3 major aspects including 1) general information, 2) Data on importation and exportation of woods, and 3) Forest-related industries.

● General Information

The sources of data are:

- 1) Agencies within the RFD and publications published by the department;
- 2) DNP;
- 3) The Customs Department; and
- 4) FAO (FAO yearbook of forest products).

The Information Centre compiles information in this category from internal units within RFD and RFD annual forest statistics of Thailand. Major items included under this category are:

- 1) Data on the number of forestry personnel (source: the Central Administrative Office);
- 2) Data on forest management – i.e. data on forest areas in different regions, forest areas in

different provinces, conserved forests, and areas under responsibility in different provinces (source: the Forest Land Management Office);

- 3) Data on budgeting – i.e. expenses plan classified according to activities (source: the Planning and Information Office), RFD revenue (source: the Central Administrative Office); and

- 4) Data on forest fire prevention and forest rehabilitation – i.e. forest land areas restored by RFD (source: Reforestation Promotion Office), statistics of forestry infringements (source: the Forest Protection and Forest Fire Control Office), estimations of forest land areas damaged by forest fires (source: the Forest Protection and Forest Fire Control Office), and number and total and areas approved as community forests (source: the Community Forest Management Office).

● Data on Importation and Exportation of Woods

The Information Centre obtains data on the following items:

- 1) Wood product imports and exports;
- 2) Classified imported round woods and processed woods;
- 3) Classified exported round woods and processed woods;
- 4) Round woods and processed woods classified according to countries of origin; and
- 5) Round woods and processed woods classified according to countries of destination

The stored data are retrieved from the official website of the Customs Department: <http://www.customs.go.th/statistic/Index.jsp>, which is the direct source of data on category 9 products: woods, wood-based products, wood charcoal, as well

as imported and exported items as appropriate. The Information Centre's database also contains analytical data on woods imports and exports classified into product types and wood types covering both round woods and processed woods.

Additional information on importation and exportation includes information on Thailand's annual wood-base imports and exports as well as top 10 log-exporting countries, retrieved also from the Customs Department Information extracted from the FAO yearbook of forest products provides further details of major importing and exporting countries of round woods, processed woods, plywood, other types of wood, pulp, printing paper, etc.

● **Data on Forest Industries**

The database provides data on forest industries compiled from the Permission Office. Notable items include:

- 1) Data on wood-processing facilities and trading facilities dealing in wood-based products;
- 2) Data on verification and issuance of for woods, wood-based products, and wood charcoal;
- 3) Data on permits issued according to the Chainsaw Act B.E.2545 (2002); and
- 4) Data on permission for forest land utilization

1.2.2 National Single Window (phasel): Forestry Part (Electronic-based system; Web-based Application)

Mr.Thada Suwannawimon, Forestry Technical Officer, Professional Level delivered a presentation on The National Single Window (NSW) which is a new development designed to enhance data access efficiency at the national level. This system

maintains a wide range of data on timber sources. The single window system contains import information (country of harvesting, importers/owners, species of wood, quantities, and transportation), and plantation information (name of registered plantation, location, extent, land tenure, ownership, species of planted trees, quantities, and planted years).

On forestry checkpoints, the single window system contains control information (supply chain by verifying timber from origin to destination, defining route and time of transportation, authorities' details, and licensing transport permits), and wood raw material information registering timber to wood industry, date and time, and species and quantities). As for information on wood industries, the NSW portal has compiled information on types of the wood industry, number of establishments, location, and owner.

Information on the functioning of the Forest Industries Permission Division is also accesible through the NSW: i.e.-control information (registering establishments of wood industries, verifying accounting, verifying wood stock, verifying wood products, authorities' details, and operational licensing), and wood product information (registering timber to wood industry, product details, species, quantities, and customers).

Details of the functioning of the Wood Certificate Division: maintained by the system are control information (verifying wood products, authorities' details, issuing licenses for export), and wood product information (exporter details, commodity details & HS Codes, verification details, ports of destination, inspection details, authorities' details, and counrties of destination).

Information on supply chain control are also available as follows: chain of custody information (customs procedures, imported/planted timber, control of timber movement, control of wood industrial activities, control of timber product movement, wood certificates for exportation, and customs procedures).

The NSW has developed a series of RFD databases as follows:

- 1) **Imported timber** (species, quantities, countries of harvesting, logistic arrangements, etc)
- 2) **Planted timber** (owners, species, quantities/stock, locations/coordinates, extents, planted years, etc)
- 3) **RFD authorities** (names, addresses, details, etc)
- 4) **Importers/exporters/operators/farmers/owners** (names, addresses, details, etc)
- 5) **Wood industries** (owners, type of industry, objectives, locations, stock, etc)
- 6) **Wood certificate** (exporters, addresses, commodity details, wood products, HS codes, consumer countries, etc)

The NSW has also developed a system of NSW Real-Time Reporting: for the following data items:

- 1) Timber and timber products (imported timber, planted timber, timber products exported, registered plantation, approximate planted timber stock, and wood industries classified by types); and
- 2) People/countries (importers/ exporters, authorities, and countries of destination).

The system has initiated a NSW backtracking mechanism as follows: sequencing information of supply chain (imported timber/planted timber, control of timber movement, wood industry, control of timber products movement, issuing licenses for exportation,

and barcodes).

The NSW operates in a supposed undertaking whereby 100 Teak logs were imported from Laos PDR. In this case FCP01 was set as land port on the Thai-Laos border, FCP02 was also set, and FCP03 was set as the final destination.

1.3 Status of Forest Plantations activities of the public and private sectors in Thailand

The afternoon part of session 1 started with a presentation on the status of forest plantations activities of the public and private sectors in Thailand by **Mr. Narong Khoonkhuntod**, Forestry Technical Officer, Practitioner Level, Public-Sector Forest Plantation Division, Reforestation Promotion Office.

The speaker presented that forest plantation in Thailand is divided into public-sector forest plantation, private-sector forest plantation, and forest plantation undertaken by FIO (a state enterprises), and forest plantation undertaken by other implementing agencies. There are projects regarding forest plantation in Thailand as following:

- 1) Government-sector forest plantation projects are designed to restore forest areas in state land and are undertaken by RFD, DNP, DMCR, etc;
- 2) Private-sector forest plantation projects are designed to enhance economic yields on private land and are undertaken by members of the public and private juristic persons;
- 3) Forest plantation by state enterprises aims to enhance economic returns and preserve environmental quality, and are undertaken on state land by the FIO and Thai Plywood Co., Ltd.; and
- 4) Other forest plantation projects are designed for esthetic value, environmental quality

and, and serve as demarcation purposes. These projects are undertaken on land earmarked for public utility, on public agency premises, and boundary homesteads by public agencies and members of the public.

The speaker then specifically elaborated on 1) government-sector, and 2) private-sector forest plantation project, as well as, administrative gaps of data collection in these two sectors. Details summarized as follows:

● **Government-sector forest plantation**

First-phase forest plantation projects (1906-2002) were forest plantation operations (1906-2002), forest plantation in water-head areas (1906-2002), forest plantation projects for the improvement of water-head areas and ecological improvement (1965-1981 and 1996-2002), water-basin management (1985-1995), off-budget forest plantation (1986-2002), restoration of areas devastated by typhoon Gay in the Southern region (1991-1995), seedling nursery projects in the Northeastern region (1991-2000), permanent forest plantation in honour of HM the King (1994-2002), forest plantation pursuant to HM the King's initiatives (1994-2002), and forest plantation contracts by lump-sum payment undertaken by private contracting parties (2000-2002). The first-phase plantation projects covered a total land area of 8,721,830 rai.

Data on government-sector forest plantation during the first phase were managed solely by RFD up to when parts of RFD was separated and reestablished as constituent components of the newly-established DNP, and DMRC.

Second forest plantation projects (2003-present) are forest plantation operations (2003-present), forest plantation contracts by lump-sum payment undertaken by private contracting parties (2003-2005), forest plantation pursuant to HM the King's initiatives (2002-2006), off-budget forest plantation (2003-present), restoration of flood-devastated areas in 5 northern provinces (2005-2006), substitution forest plantation (2005-present), demonstration forest plantation (2005), rattan plantation (2005), and other forest plantation such as forest restoration in the wake of global warming, forest plantation for economic re-stimulation and restoration of water-head areas.

Data on government-sector forest plantation during the second phase are managed by 3 government agencies: i.e. 1) RFD (national preserved forests and forest areas pursuant to Forest Act B.E. 2484 (1941), and others, 2) DNP (national parks, wildlife preservation areas and water-head areas), and 3) DMCR (mangrove-forest areas, and beach woods).

Data sources for government-sector forest plantation are of annual operational plans and budget plans, RFD orders, annual work summaries, reports of implementing agencies, as well as official and relevant documents.

Administrative gaps of data collection in government-sector on forest plantation are as follows:

1) Government-sector forest plantation is undertaken by a variety of agencies with different operational methods. Therefore, data produced take different formats. As of now there is no single agency serving as the focal point in ensuring uniform practices in this field in order to aggregate framework for the entire country; and

2) Operations seem fragmented as certain forest plantation areas are taken charge of by FIO, while parts of planned forest plantation areas are revoked. Also some other areas have been annexed as conversation areas. Some areas have been encroached into and complete destroyed and have not been restored as yet. These recent developments have not been reflected nor updated in any database.

● **Private-sector forest plantation**

Projects undertaken by the private-sector, under this category, private agencies make their own investments in their own land or rented forest areas. Projects funded through government budget, under this category, private agencies undertake necessary steps funded by the RFD in their own land areas or land accorded with possession rights.

In the case of privately-funded projects data sources, data may be collected through forest management unit registration (for teak, yang, and possibly other timber species). Data for projects supported financially by RFD may be acquired from annual operational plans and budget plans, annual work summaries, reports of implementing agencies, as well as official and relevant documents.

According to data sources, 1,063,087 rai of land was registered as (teak and yang/gurjum) registered plantation between 1992 and 2010.

Details of private-sector forest plantation financed by RFD (gathered from different sources quoted above) are as follows:

1) Economic crop plantation promotion (1994-/2002): 3,000 baht subsidy per rai (800,723 rai in total);

2) Forestry-related occupation promotion (2009-/2010): seedling supply (93,449 rai in total) ;

3) Promotion of fast-growing tree plantation as renewable energy sources (2009): 800 baht

subsidy per rai (36,322 rai in total); and

4) Promotion of economic crop plantation for social quality and the environment (2010) : 2,500 baht subsidy per rai (74,388 rai in total).

Administrative gaps of data collection in private-sector forest plantation are as follows:

1) As of now, there has been no common mechanism for collecting data on privately planted forest areas not yet registered (dipterocarp spp, fast-growing trees and others);

2) Trees in registered plantation may be cut, partially adjusted for other types of land use without reporting to R. As such relevant data have not been updated;

3) Plantation registration and permission procedures under the Forest Act B.E. 2484 (1941) is a mandate of each respective provincial MONRE office. Updating data, therefore, requires interagency coordination;

4) There still exists gaps/discrepancies in data collection;

5) No agencies have been designated as focal data-collection authorities;

6) No steps have been taken among agencies to ensure data-format homogeneity or facilitate data collection for the purposes of forest plantation policy formulation and implementation;

7) No approaches have been developed to collect data on private-sector forest plantation which are not financed by public funds or have not been, as yet, registered; and

8) Procedures involved in forest plantation registration do not induce private players to report their operations. Rather, these procedures are

cumbersome and, hence, discourage them not to report their project stoppages.

1.4 Wood Utilization and Statistics of Forest Product Producers in Thailand

Asst. Prof. Dr. Wiwat Hanvongjirawat, Department of Forest Products, Faculty of Forestry, Kasetsart University presented on wood utilization and statistics of forest product producers in Thailand. The presentation was summarized as following:

Different parts of trees (branches, bark, and round wood, etc.) may be used for a variety of purposes, for example glue-laminated timber, structural lumber, furniture, toys, flooring, and parquet. From wood plastic composite, we may produce and generate charcoal, wood vinegar, electricity, and heat, whereas processed material from wood chip mills give rise to chemical wood products, pulp and paper, door skin items, medium density fiberboard (MDF), cement fiberboards, particleboards, cement particleboards, and auto-body lining items. Other wood-based uses include veneer items, plywood, and laminated veneer lumber (LVL).

There are different types of wood material for subsequent utilization - logs, lumber, chips, thin flakes, excelsior or wood wool for producing wood wool boards, strands for producing oriented strandboard (OSB), particles, fiber bundles for producing fiberboards, paper fiber, wood flour (sawdust), and cellulose. Sources of wood material are as varied – i.e. logs, fast growing trees from plantations, rubber wood, biomass residual, non-wood trees (bamboo, pineapple leaves, and different types of grass), and Eucalyptus plantations.

Wood industries can be separated into 3 levels of activity: 1) domestic or village operation Industries

(wood handicrafts, tool handles, products from agricultural residuals, and miscellaneous product items), 2) small-scale industries (pencil industries, lumber industries, match industries, furniture industries, wood preservation industries, wood seasoning industries, plywood industries, and large-scale industries (fiberboard industries, soft-boards, MDFs, hardboard, particleboard industries, mineral-bonded panel industries, wood cement boards, wood gypsum boards, pulp and paper industries, lumber, preservation and drying industries), and primary processing wood products such as fuel wood and charcoal production. Also related to forest management is non-wood forest products production, which is not to be neglected readily. Industries in Thailand consumed over 40 million metric tons of wood.

In developing different wood-based products, producers' teams can apply creativity as appropriate such as designs based on human form inspiration to suit human forms, man-made form inspiration, and free-form inspiration. Also, modern technology may be applied to enhance design and data analysis, such as use of the SAS software package to develop OSL wood-based panels.

Thai industries use 5-7.5 million tons of rubber wood planted on a total land area of 200,000 rai-300,000 rai annually. The pulp and paper industries utilize 7 million tons of eucalyptus wood per year. Simultaneously, Thailand's construction industry uses imported wood 1.86 million m³ of imported wood.

With special reference to pararubber plantation areas, Indonesia is the country with the largest total pararubber plantation land areas (15 million rai), followed by Thailand (12.3 million rai), and Malaysia (10 million rai) respectively, 85.3 percent of Thailand's total pararubber plantation areas is in the Southern

region. The country's pararubber furniture and products producers' sector total approximately 25,000 factories, which are in the main medium and small-scale factories with a total production capacity value of 100,000 million baht per annum, 57,000 million baht worth of which are exported (the year in question not specified). The wood exports statistics from 2008 to August 2011 as follows: 41,548.18 million baht in 2008, 52,217.61 million baht in 2009, 34,905.33 million baht in 2010, and 39,013.01 million baht as of August 2011 (source: ICT Centre of the MOC in collaboration with the Customs Department). Subsequently, the speaker elaborated that in Thailand 60 percent of eucalyptus material is used for pulp production by 6 pulp-producing factories, while 40 percent is used as chopped wood. Therefore, growth of the paper pulp has substantial bearing on eucalyptus demand in Thailand. One third of short-fiber pulp produced in Thailand is exported. Per capita domestic consumption of paper pulp is not particularly high (30 kg per capita per annum while the corresponding figure is developed countries is 200 kg per capita per annum). Therefore, eucalyptus demand for domestic industrial purposes may be estimated at no less than 6.5 million of fresh eucalyptus per year.

The speaker then elaborated that 4.5 tons of wood yields 1 ton of pulp, while 1 ton of pulp yields 1.5 tons of paper. Therefore, 1 rai eucalyptus yielding 14.0 tons of eucalyptus (at the rate of 3-year rotation cycle) will yield 4.67 tons of paper. As 1 ream of paper weighs 2.5 kg, and requires 8.33 kg of

eucalyptus wood, if 1 rai of eucalyptus plantation yields 14.0 tons of wood, then one would get 4.67 tons of paper (1,867 reams of paper), which is worth 186,700 baht in all. The speaker noted that 1 ream of paper requires a total of 0.857 m² plantation area. Quoting 2007 data from the Industrial Works Department, the speaker stated that there are approximately 800 factories producing pulps, paper, and paper-based materials (including packaging materials) with a total value of 37 billion baht. Quoting figures provided in the 2007-2009 Directory of the Thai pulp and paper industries association, the speaker revealed that volumes of imported and exported pulp items in 2006 are as follows: 409,000 tons of imported pulp (372,000 tons of long-fibre pulp, and 37,000 tons of short-fibre pulp), and 211,200 tons of exported pulp (200 tons of long-fibre pulp, and 211,000 tons of short-fibre pulp).

According to the UN Comtrade Database, sources of Thailand's imported chemical pulp (HS 4703) in 2006 were Canada (51.4 million USD), Sweden (42.1 million USD), USA (40.0 million USD), Chile (12.7 million USD), Switzerland (12.5 million USD), and other countries (45.8 million USD). The total value of HS 4703 items in 2006 were 204.5 million USD.

Quoting the 2007-2009 directory of the Thai pulp and paper industries association, the speaker revealed that Thailand's pulp production, consumption, import and export volumes as well as growth rates in 2006 are as follows:

- 1) Production capacity : ,146.0 tons of pulp (0.3 per cent growth rate)
- 2) Actual production : 1,129.0 tons of pulp (6.4 per cent growth rate)
- 3) Capacity utilization rate : 98.5 percent (6.1 per cent growth rate)
- 4) Consumption volume : 1,326.0 tons of pulp (5.9 per cent growth rate)
- 5) Import volume : 409.0 tons of pulp (-2.1 per cent growth rate)
- 6) Export volume : 211.0 tons of pulp (12.8 per cent growth rate)

Then the speaker briefly presented production processes of certain major fiberboard items, using graphic presentation – i.e. particleboard production, fiberboard production, OSB production, wood cement production.

Figure 1.1 : Particleboard Production

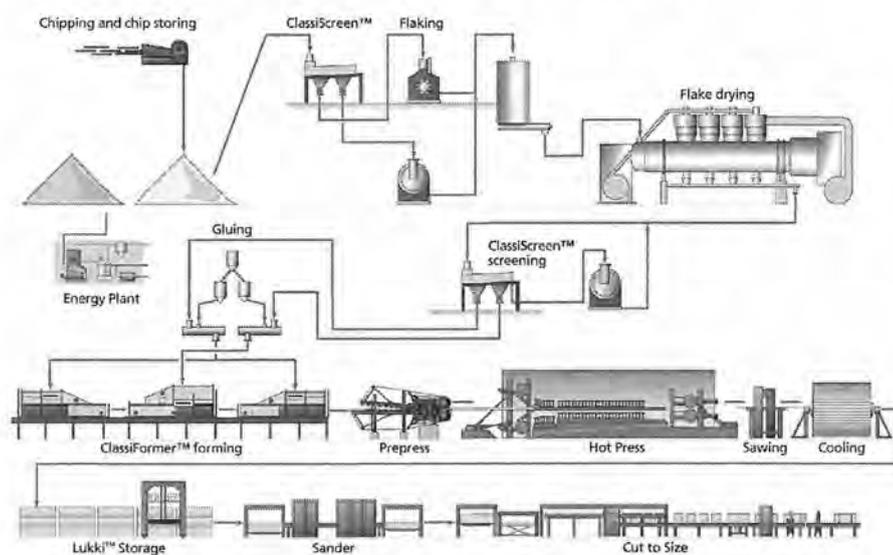


Figure 1.2 : Fiberboard Production

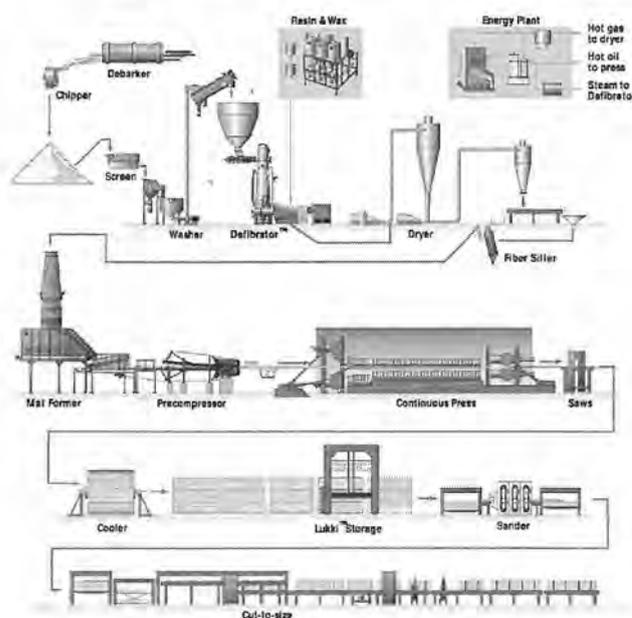
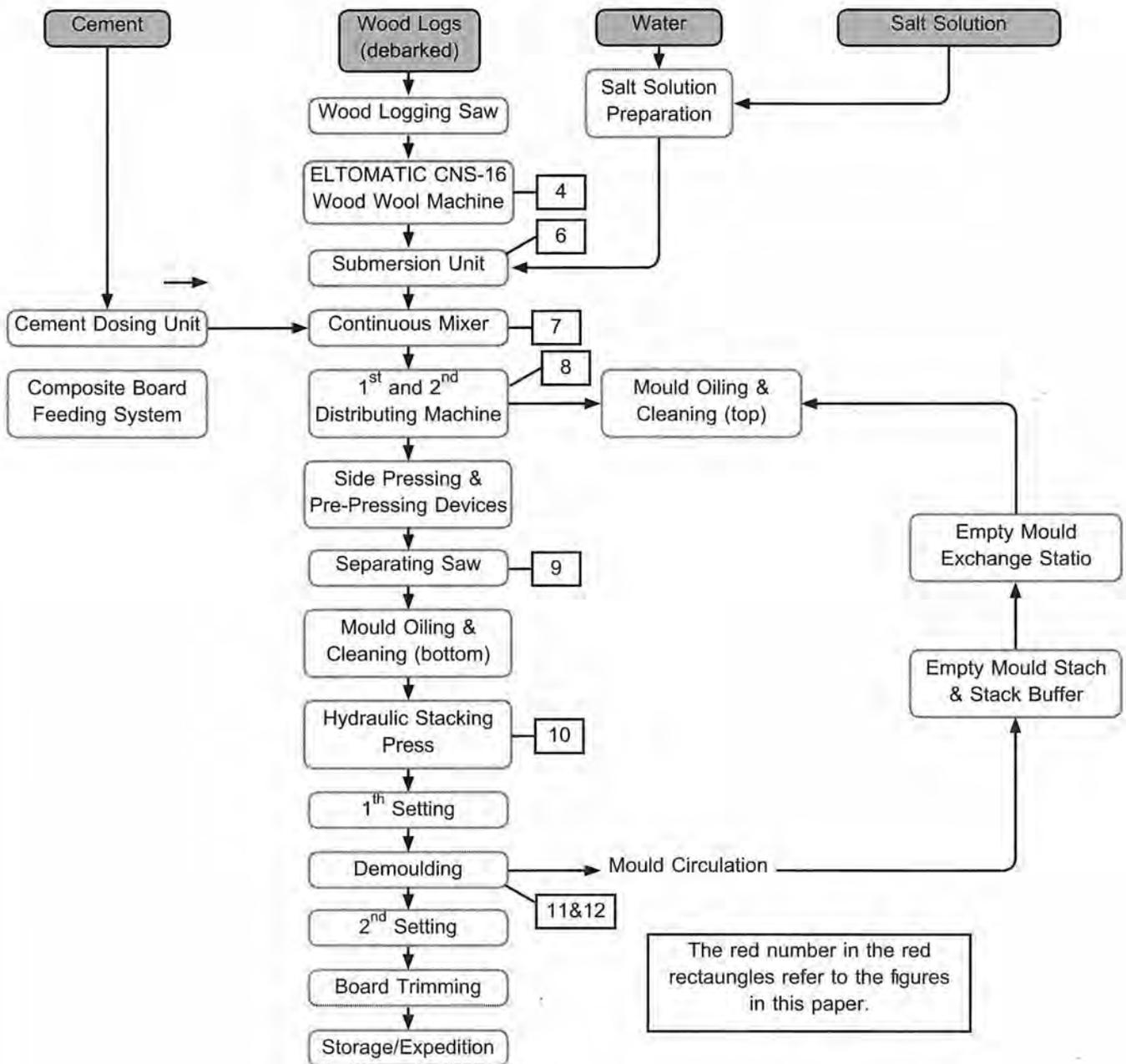


Figure 1.3 : Wood Cement production



Subsequently, the speaker briefly presented the overall picture of wood-based panels industry in Thailand which comprises veneer and plywood, fiberboards, particleboards, and wood cement boards. Name lists of particle particleboard manufacturers, MDF and door skin manufacturers, and hard-board processing factories in Thailand.

“ National Forest Products Statistics Reporting – Legal Frameworks and Importance of Statistical Reporting”

2.1 National Legal Framework

The first part of session 2 was allocated to a presentation related to Thailand's national legal framework by a representative from the National Statistical Office (NSO). *Ms. Namphueng Cherdchuphong*, from the Public-Sector Strategic Information Centre, made a presentation entitled ‘**the Statistical Act and data integration**’. This presentation comprised five sections as follows:

1) Thailand's Statistical System

Thailand's statistical system is composed of NSO, and statistical offices in other agencies such as ministry-level statistical offices, independent statistical units, and other statistical units. With special reference to NSO, the speaker put an emphasis on its vision, and missions. The speaker elaborated on the Statistical Act, Thailand's Statistics Master Plan, and sectoral Statistical Master Plan. Both types of master plan involve interaction among the private sector, NGOs, public agencies such as ministries and BMA, state enterprises, independent agencies, and members of the public.

Statistics/data users are faced with a plethora of problems such as data confusion, data

redundancy, inaccuracy, out-of-date data, data incomprehensiveness, substandard data, and lack of statistical soundness. Therefore statistical offices shall aim to redress or mitigate all these problems.

2) The Statistical Act

Thailand first promulgated the Statistics Prediction Act B.E.2479 (1936). The country then has had a series of statistical acts – i.e. the 1952 Statistics Act, the 1965 Statistics Act, and the 2007 Statistics Act. Sections 6 of the current Statistics Act provides for NSO's authority and responsibilities. Section 7 stipulates NSO's roles in developing a national statistical master plan and working in conjunction with other public agencies concerned in order to develop the country. Section 8 requires that NSO prepares statistics according to statistical standards, and provides that NSO report any failure to comply on the part of any agencies involved to the cabinet for further action/resolution.

According to section 14, where it is necessary for NSO to acquire data/information for the purpose of national development, agencies are required to provide such data to NSO for it to use in developing up-to-date important databases within 30 days

starting from the day it is informed of such requirement. The identify of persons referred to in the data provided must not be disclosed unless specific consent is given in writing, or it is already common knowledge or it is a fact which be readily verified by the public. Section 15 requires that data specific to individuals must be kept confidential with the exception of cases subject to provisions stated under this section, while section 16, provides that data disclosed may not be used for other purposes other than those specified for statistical purposes. Sections 18, 19, and 20 provide sanction measures against those failing to comply with the provisions of the Statistics Act.

3) **NSO's Missions**

NSO is in charge of producing statistical data (survey/censuses), providing statistical services (to both public and private sectors), and administering the country's statistical system (statistical standards, statistical master plans, and linkage integration).

NSO has been conducting surveys and censuses in different areas applying statistical standards and methodologies. As of now, its functioning is still faced with data gaps and involves cooperation with 20 ministries (200 departments thereunder), local administrative organizations, which means it has to implement a great number of 'transaction processing data', and utilizes data stocks in various forms such as sectoral statistical data maps and provincial data maps. NSO is part of a national statistical system organizing committee dealing with 3 principal areas – social, economic, and environmental and resources aspects (comprising 23 sub-branches).

The official statistics is used in policy formation for the country's development. It has to be produced continuously by full-fledge, resourceful agencies according to standards, acknowledged classification systems, and acceptable quality levels, and will have to be accredited as reference data for the country.

Criteria for official statistics selection are as follows:

- 1) Data deemed necessary for the country's development.
- 2) Data produced by data-producing agencies authorized by laws or ministerial regulations.
- 3) Data produced by agencies which constantly produce statistics in the area/aspect in question.
- 4) Data produced by agencies adequately equipped with facilities and potential for data development to attain official data status.

4) **Thailand's Statistics Master Plan**

The preparation of the current National Statistical Master Plan comprises the following constituent statistical information: educational statistics, agricultural statistics, transportation statistics, labour statistics, population statistics, housing/habitation statistics, financial and fiscal statistics, industrial statistics, and tourism statistics. NSO envisages that the preparation of future National Statistical Master Plan will still comprises the same constituent statistical information.

Furthermore, under the National Master Plan, homogeneous and high-quality statistics will be produced using a systematic statistical data preparation framework implemented in a participatory manner in conjunction with a great number of statistical units. This master plan aims to minimize functional redundancy/duplication through inter-agency cooperation, and enhance standardization

based on academically sound principles to compile data in the fields of educational statistics, agricultural statistics, transportation statistics, labour statistics, population statistics, housing/habitation statistics, financial and fiscal statistics, industrial statistics, and tourism statistics.

The country's statistical paradigm/system will play a significant part in producing statistics scholars, and specialists as well as disseminate statistical data and provide services to them as appropriate. The National Statistical Master Plan serves to materialize the one-stop service concept whereby cooperation between Thailand's NSO and the International Statistical Organization will be strengthened further. In this whole process, NSO has to develop the country's statistical infrastructure and techniques as well as deepen its computer and telecommunication technology base through operational budget allocated by the Budget Office.

The administration of the country's statistical information system also involves agencies' statistical data administration and the development of sectoral statistical master plans in such areas as health, industries, tourism, local natural resources etc, and linkages development in conjunction with 20 ministries, the cabinet secretaries' office, the private sector, and the people's sector.

5) **Data integration for decision-making**

Public-sector data integration and linkages involves infrastructure facilities (statXchange, and XML convertor), NSO information, information from different public agencies, statistical the UDDI and NIC data integration network, and informational facilities/databases across 20 ministries.

Past NSO operations include:

1) The development of working procedures (developing statXML standards to serve as the common standards framework in the exchange of statistical specialized data);

2) Personnel development (providing training for public-sector programmers on web-service data exchange);

3) Cooperation development (setting up a committee for public-sector data integration comprising representatives from 2 ministries); and

4) Infrastructure development (installing servers and a web-service data exchange program at the permanent secretaries' offices of all the 20 ministries).

In web-based system, a search system and comprehensive presentation tools have been incorporated for effective communications. In particular, the national information centre has developed comprehensive a database covering such data dossiers as state-of-affairs indicators, sectoral indicators, and topics of interest.

The speaker then made reference to the usefulness of data administration in the country development: a poverty-reduction strategy, the proportion of impoverished, population in the total population, and debt level per household. Major and relevant factors at work were identified in any solution process required for this strategy (inflation rates, income disparity levels, level of country openness, and literacy levels). All these elements require different forms of data collection and methodologies, as well as involve different data sources.

NSO has developed web-based public-sector data pool covering all the 20 ministries, their constituent departments, and other relevant databases.

Once accessed this web-base data pool users will have access to data sources across the Thai bureaucracy system. Users can click into the MNRE data pool section and segmental data pools such as data on agriculture, fisheries and forestry.

Under this specific sectoral heading users will find information/data on a variety of topic related to poverty reduction such as the number of agricultural landholders throughout the kingdom, total in-season and off-season rice plantation land areas, and total volume of fertilizer imports. Data users also have access to an underprivileged population database with data on such population sections as impoverished population ratios, underserved population, stateless population, and severity degrees of relevant problems. Additionally, NSO has included analytical articles related to poverty reduction in its web-based data pool for further policy deliberation.

The speaker argued that public-sector data integration is a very important strategy as a country with high quality databases are better equipped in its public-sector administration than otherwise. Such a country can comfortably aim to achieve data efficiency administrative effectiveness in terms of its monitoring and evaluation while the private sector will literally also have access to quality data services for its business planning.

Like many other statisticians, the speaker concluded the presentation by reiterating the importance of quality data in setting the country's development on the right track.

2.2 Basic Role and Responsibilities of Forestry Statistical Office

Mr. Felice Padovani, representative from FAO, presented perspectives on the basic role and responsibilities of a forestry statistical office. The speaker powerfully emphasized that the forestry statistical office provides statistics for improving effectiveness decisions by collecting highest quality and most useful data in timely and cost-effective manner, producing appropriate and accessible data products, as well as teaching rewards and methods of using statistics.

In this process a need for action is perceived (for policies, programs, and decisions); information needed is defined, and information collection operation is designing, promoting, conducting, and collecting. Information gathered is processed, and information products are produced, released, promoted and disseminated to users.

Using the knowledge generated from the use of information products, decision making of users, initiate studies, policies and programmes. Based on the experience of using the statistical information, new needs are then perceived, and/or feedback information is given on **how to improve the Information**. All these stages are constituent parts of statistical information cycle.

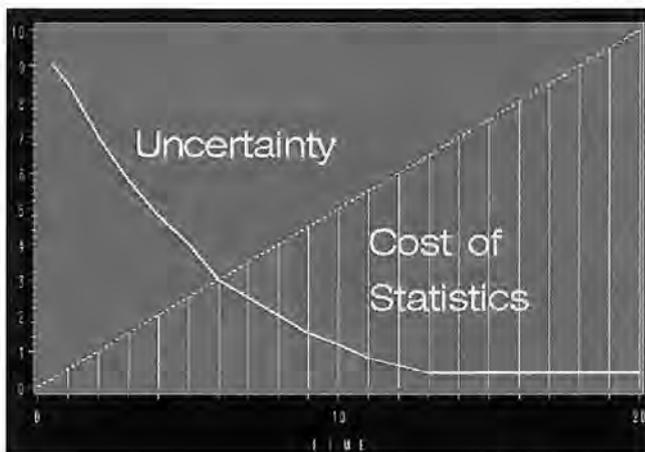
The speaker delivered the following tips on how to build up better understanding and support for forestry statistical work:

- 1) Do not wait for policy makers or potential data users to come to statistical office staff;
- 2) Begin by motivating;
- 3) Keep it simple in the beginning;
- 4) Build support vertically;
- 5) Build support horizontally an outside;

- 6) Recognize that statistical staff produce a product; and
- 7) Consult all data users concerned.

The speaker also suggested that statistical office staff market information produced such that it achieve from utility, place utility, and time utility. The speaker pointed that data producers and data consumers are engaged in a sort of synergy through data producing and using. There might be occasions whereby conflicts of interests arise but these problems are in fact opportunities to forge ahead. Data producers supply data, while consumers demand them further, hence inducing a comprehensive on-going process.

Figure 2.1 : Decision Making



In reality, a decision is an action that must be taken when there is no more time for gathering facts. In any decision making process uncertainty and costs of statistics are inevitable. Factors for a decision. The speaker identified factors for decision-making comprise of statistics, experience, judgement, knowledge, and analysis. The ultimate goal in any statistical undertaking is to arrive at consensus. This whole process will also require 4 basic elements – i.e. access, administration, analysis and presentation.

Figure 2.2 : Whole Process Basic Elements



Data producers can offer different kinds of products, which may be statistical, methodological, analytical, and geographical in their nature. These products may also differ in forms, e.g. publications, CD-ROMs, on-line databases, internet resources, video information. The speaker reiterated that disseminating data is a rewarding practice as it helps to improve national and local economies, as well as the management of social programmes. Moreover, this practice induces feedback, which then can be used to improve data. It can also induce further domestic and international support for statistical efforts. Subsequently, the presentation was concluded by proclaiming that information is a valuable national resource, and is essential for any society aiming to develop clear and sound policies and programmes.

2.3 Working Group I: "Discussion and Presentation on Status and Issues in Reporting Forestry Statistics in Thailand"

The last part of session 2 was allocated to Working Group I implementation: formation of working groups and discussion on status and issues/problems in reporting forest products statistics in Thailand (see Annex 1: TOR WG1) with **Mr. Felice Padovani** as the moderator.

● **Discussion**

The contents of working group centered on issues and constraints affecting the reliability and sustainability of forest products statistics in Thailand (3 groups with representation from provinces). All the 3 groups were instructed to discuss problems affecting provinces' **forest products** statistical systems in the following aspects:

- Sources of information;
- Methodologies used;
- Information flow;
- Data reliability: how much is accurate the information?;
- Institutional structures and responsibilities in data collecting and reporting; and
- Other weaknesses and constraints affecting the forestry sectors in responding to different data consumer needs.

● **Presentation**

The presentations (15 minutes for each group) were run by the chairperson/rapporteur of the group.

Group I classified data into two sub-groups: 1) data under the State's control, and 2) data that lying beyond the State's control. To achieve multi-level data integration one has to strengthen intra-ministerial unity involving RFD, DNP, DMCR, and provincial MONRE offices, and 2) inter-ministerial integration. In terms of data management, a proper system needs to cover the collection of data related to forestry (tourism, forest products, etc) at regional, provincial, and local/community levels.

Problems affecting forestry statistical systems were also comprehensively identified as follows:

Sources of Information

- 1) Data types and formats have not as yet been clearly determined or identified;
- 2) Agencies producing/collecting data have not reached a common ground regarding data. For example RFD staff still do not understand product codes as developed or applied by the Customs Department;
- 3) Data are still fragmented as there are many agencies in charge of data collection; and
- 4) There are no focal points for data collection.

Methodologies used

- 1) Details of data to be collected are not comprehensive;
- 2) Data are in the main collected from records and documentary compilations which are likely to invite mistakes; and
- 3) Further staff trianning courses on data collection should be put in place or made available.

Information flow

- 1) Reporting are carried out later than the time prescribed;
- 2) Agencies concerned fail to submit data; and
- 3) There is still a lack of continuity in data collection.

Data reliability

- 1) Data on permission for the setting up or operations of industrial factories/enterprises are relatively reliable;
- 2) Data taken from the Customs Department are reliable as a result of double cross-checking;
- 3) Data on forest product collection are not reliable as the data collection methodologies used are neither accurate nor definitely systematic; and
- 4) Data on fieldwork surveys are still problematic as a result of shortages of skilled

personnel. For example, data on the production capacity of the Forest Industry Organization are still neither comprehensive nor accurate.

Institutional structures and responsibilities in data collecting and reporting

1) The organizational structure of agencies in charge of data collection is not complete or functional;

2) Executives of agencies in charge of data collection do not accord a special emphasis on their data-related mandates. Therefore, data-collection arms are not provided with respectable budget outlays, personnel, nor equipment as appropriate; and

3) There is a sheer lack of inter-agency integration among agencies in charge of data collection.

Other weakness and constraints affecting the forest sectors in responding to different data consumers' needs

- Access to certain types of information may have certain bearing on agencies' functioning, thus causing them not to disclose requested data and information.

Group II discussed about problems and limitations that have a bearing on the credibility/reliability and sustainability of Thailand's forest-related production statistics, and identified the following points:

Data Sources

1) There are different data sources, leading to complications and difficulties in data collection and compilation;

2) Agencies' mandates and duties have been adjusted/changed, causing further complications in their functioning;

- 3) Lack of continuity in data collection;
- 4) Lack of focal points in data collection processes; and
- 5) Lack of data integration.

Data Usage Methods

- 1) There are different data collection methods, leading to complications and problems; and
- 2) Data collection methods have not been standardized.

Information/Data Flow

- 1) A large number of reporting systems have not been digitalized; and
- 2) In the main, agencies still use paper-based systems.

Data Credibility/Reliability

- 1) Data collected/reported remain incomplete and incomprehensive
- 2) Data are still not updated;
- 3) Certain data principally contain approximates; and
- 4) Data status should be verified and indicated.

Agencies' Organizational structures and responsibilities in relation to data collection and reporting

- 1) There are many agencies in charge of data collection in the same field which belong to different lines of command;
- 2) Lack of focal points/centres in charge of collecting data from different agencies; and
- 3) Agencies are in need of modern data-bases for data collection and reporting.

Other weakness and limitation that have certain a bearing on forestry in the process of delivering data to users with differing data requirements

- 1) Lack of modern data-bases for the purposes

of data collection and reporting;

- 2) Incomplete data; and
- 3) Lack of surveys of users' data requirements.

Limitations/Constraints

- 1) Executives' policies;
- 2) Inadequate budget;
- 3) Inadequate staff members; and
- 4) Lack of integrated approaches to management.

Group III presented the following points in regard to problems and limitations that have a bearing on the credibility/reliability and sustainability of Thailand's forest-related production statistics and identified the following points:

Data Sources

Major sources of data are public agencies such as the RFD (Forest Resources Management Offices), the MNRE (provincial MONRE Offices), DNP, the Customs Department (Wood and Wood Product Import/Export Statistics), the Office of Agricultural Economics and agencies providing aerial photography/remote sensing/satellite photography.

Problems

- 1) Lack of Inter-agency data integration; and
- 2) False Statements by entrepreneurs.

Usage Methods

- 1) Data Recording
 - Imports and exports
 - Forest management unit registration
 - Permit issuance
- 2) Aerial photography interpretation
- 3) Fieldwork surveys

Problems

- 1) Different definitions (e.g. same products with different classification codes); and
- 2) Incorrect data recording.

Information/Data Flow

- 1) paper; and
- 2) Electronic data communication .

Problems

- 1) Data submissions are neither carried out as prescribed nor according to the format;
- 2) Information systems are not jointly/collectively developed; and
- 3) Lack of inter-agency cooperation.

Data Credibility/Accuracy

- 1) Approximately 80-90 % official data as taken from public agencies;
- 2) Aerial photographs (higher than 90%); and
- 3) Surveys (approximately 80%).

Agencies' Organizational structures and responsibilities in relation to data collection and reporting

- 1) There are no focal points dealing with data collection;
- 2) Lack of intra-ministerial and inter-ministerial cooperation; and
- 3) Lack of personnel with specialized expertise.

Other weakness and limitation that have a bearing on forestry

- 1) Lack of communications between data producers and users. For example, there are no accurate and systematic data on forestry management units administered by the public sector, state-owned enterprises, and the private sector, thus making it impossible to achieve informed decision making; and
- 2) Problems related to relevant legislation/orders/notifications.

“ International Data Reporting Requirements”

3

3.1 An international perspective on forest products statistics and how national forest products statistics are collected used at international level

This session deals specifically with international data reporting requirements with the presentation entitled ‘an international perspective on forest products statistics and how national forest products statistics are collected used at international level’ by Dr. Steven E. Johnson, the Representative of ITTO. The speaker presented the overall picture and process involved in the ITTO statistical system dealing with issues related to different stages from the Joint Forest Sector Questionnaire (JFSQ) to the dissemination of the annual review.

The speaker first shed light on the key features and statistics in the global timber scenario. Timber remains the single most important product produced and traded internationally from tropical forests, therefore focus remains on collecting reliable and timely data on timber and wood products. Accordingly, the speaker pointed out that better market transparency and improved market intelligence are vital for the expansion of international trade in timber from

sustainably managed tropical forests and the planning of forestry policies. In this connection, ITTO has the mandate of compiling, collecting and publishing statistical information on production, supply, trade, stocks, consumption and market prices of tropical timber. This mandate is primarily implemented through the preparation of ITTO’s “Annual Review and Assessment of the World Tropical Timber Situation”.

The objective of this presentation, emphasized on the ITTO statistical system, which involves the following stages:

- 1) Collection of data (e.g. JFSQ),
- 2) Processing, filtering and compilation (e.g. databases), and
- 3) Analysis and publication (e.g. The Annual Review).

In essence, the ITTO statistical system incorporates different elements – i.e.:

- 1) Sources of information;
- 2) Data processing and compilation; and
- 3) Data analysis and dissemination.

ITTO uses both primary and secondary sources of information. The JFSQ is the primary

source of information for ITTO administration. ITTO developed questionnaire as a mechanism to acquire information (i.e.-as sources of Information). The organization has undergone a long series of develop in this regard. In 1988, relevant information was supplied by FAO/ECE to ITTO. Then the first version of the ITTO Questionnaire was developed between 1989 and 1990 based on the FAO/ECE standard questionnaires. This questionnaire included pulpwood, temperate hardwood species and several product categories outside the mandate of ITTO.

Then, between 1990 and 1997 the second versión of the ITTO Questionnaire was developed further, resulting in a substantially revised questionnaire. This questionnaire focused only on tropical timber and detailed information on the direction of trade, forest areas and removal statistics, industrial structure and employment. As an integral part in the whole process, the system of statistical correspondents was introduced.

The third version of the ITTO questionnaire was developed and produced during 1997-1998. In this questionnaire, the staff expanded the coverage of the questionnaire to include all timber species while annual information on industrial structure and forest areas was excluded.

From 1999 up to the presernt is a momentous period in the development of ITTO questionnaires with the advent of the JFSQ. ITTO joins UN-ECE, FAO and Eurostat in the Joint Forest Sector Questionnaire (JQ) process. The Joint Forest Sector Questionnaire (JQ)

Reasons for the development and application of the JQ questionnaire are as follows:

1) This represents the rationalization of efforts by international organizations for data collection,

processing, analysis and dissemination of information.

2) This consitutes use of the same data which maximises the consistency and reliability of disseminated information.

3) The JQ questionnaire Project helps to reduce reporting burden on countries. Before, a country in EU had to fill in over 25 data tables for all four organizations. This number has been reduced in the JQ to a maximum of 10 data tables. In short, it is commendable not to ask the same country for the same information more than once.

Admittedly, ITTO is faced with problems related to data collection in the JQ Project in terms of response rates, timely submission of completed questionnaire, and the quality of responses. ITTO deals with deficient information in the JQ applying the following techniques:

1) Statistical correspondents are requested to clarify apparent inconsistencies;

2) A number of supplementary data sources are used. Main sources are the ITTO Market Information Service, or MIS, in regard to price series since 1990;

3) The conducting of ITTO Projects: studies in main markets such as Europe, North America and Asia (China, Japan, and India);

4) Referring to specialized publications on national and international trade from sources such as FAO, Maskayu, etc;

5) Utilization of on-line Databases: FAO, UN Customs (COMTRADE), Global Trade Atlas (GTA), Comext, etc;

6) Utilization of USDA data (US Departament of Agriculture); and

7) Utilization of the International Monetary Fund economic data.

In regard to data processing and compilation, the speaker elaborated on steps involved in the whole process. This phase encompasses data entry, checking of inconsistencies, use of supplementary data sources and compilation of the information in databases. Data processing and compilation at ITTO is largely carried out through an expert system developed in Microsoft Access. Firstly, the JQs (in Excel) and supplementary information from FAO, COMTRADE, GTA, USDA, etc. (in ASCII) are digitally entered into the expert system. Then, the system automatically checks for validation of information in the JQ and reports detected inconsistencies. Some checks now built into JFSQ. The most common routine checks are as follows:

1) The volume of logs available should be greater than or equal to the volume required for primary production.

2) No large are left unexplained variations in the figures over the years.

3) Aggregate import or export totals should be equal to the sum of traded amounts per country, and

4) Exports \leq production + imports \pm stocks, (while unit values are reasonable).

Pre-conditions in this stage are as follows: 1) the volume must be in m³ of the product (i.e. product equivalent – pe) and not in m³ of roundwood (rwe), and 2) countries should convert data into pe using own conversion factors, which vary between species and sawmill types. When a country fails to do this, the ITTO Expert System uses standard conversion factors to implement this requirement. The use of general conversion factors may lead to inconsistencies, but their use is justified by the lack of better information.

After the processing part, ITTO proceeds to the next phase – compilation. After a careful review of the JQ and supplementary data sources, in light of the data provided in previous years, the information is filtered, selected and compiled in databases. These databases are used as the basis for the generation of the various tables included in the Annual Review, with all data identified as to its source.

An analysis of production, trade and prices is then carried out for both primary and secondary forest products, as well as a review of current and short-term perspectives. ITTO's Annual Review is the primary mode of disseminating this information and its analysis. The Annual Review contains the following sections:

1) Production and consumption;

2) Markets and trade;

3) Export prices;

4) Trade on secondary processed products, news of interests from the countriesm;

5) Information on major species traded, forest areas and plantations; and

6) Other sections.

A draft version is submitted to the ITTO Council at its meeting in November each year, country members are invited to make comments and corrections. The Review is subsequently amended and published by April of the following year. The Annual Review is distributed worldwide in 3 languages to governments, inter-governmental organizations, national and intern'l NGOs, research centres, universities and libraries. It is also available also at the ITTO website www.itto.or.jp.

Other modes of dissemination are:

1) Frequent enquiries received from member countries, ITTO projects and other agencies;

2) Articles in the ITTO's quarterly newsletter (Tropical Forest Update);

3) Preparation of the annual vote allocation for ITTO members; and

4) Articles for FAO bulletins and other publications, and the preparation of reports for CITES, UNFF, UNCTAD and others.

The speaker finished the presentation by reiterating the importance of forest statistics in the quality of the review and assessment of the tropical timber production and trade and stating that better and more timely market intelligence allows parties concerned to 1) recognize market trend changes (new markets, products, specifications, relative competitiveness) and opportunities, and 2) achieve better decision making capabilities for the formulation of policies for better management of tropical forests, expansion of trade, promotion of lesser used species, etc. Therefore, it is necessary that ITTO country members to be aware of the importance of providing accurate and timely information. This will enable the dissemination and analysis of more reliable information for the benefit of the countries and the international community.

After Dr. Johnson's presentation, **Mr. Felice Padovani**, the representative of FAO, jointly ran a review of Thailand's national forestry statistics and issues relating to the adequacy of data provided by Thailand.

3.2 Working Group II: "Discussion and Presentation on Status and Issues in Reporting Forestry Statistics in Thailand"

The second working group discussion on improving Thailand's reporting of forest products statistics for the JFSQ (see TOR WG2).

Group discussion focused on 1) data gaps and provision of missing data and 2) the various aspects of JQ1 and JQ2. **Mr. Felice Padovani** functioned as the moderator during this sub-section. Three groups were formed to discuss the finer points of methodologies to ensure reporting of the following three aspects of JQ1 and JQ2:

- Group I: FP Statistics: woodfuel and industrial roundwood;

- Group II: FP Statistics on production: sawnwood, WBP, Pulp and Paper; and

- Group III: FP Statistics on trade – imports and exports.

All the three groups discussed problems encountered in completing the JFSQ on a regular basis. Discussion points were composed of two aspects as follows:

1) Various aspects of JFSQ; and

2) Data gaps and provision of missing data.

Regarding various aspects of JFSQ, it was recommended that all the three groups discussed major issues in providing information for JQ1, JQ2, and JQ3; DOT1, and DOT2; and ITTO1, ITTO2, and ITTO3. Some suggested discussion points were also added: i.e. using classifications: HS96; HS200, HS2007, SITC, Rev.; definitions, using Excel, functionality (discrepancies, consumption, unit values, communication among states, measurements CUM/MT, and collecting/Integrating, and different data sources in the JQ (Production, Trade). In regard to the second element – data gaps and provision of missing data, the participants were encouraged to discuss as to determine how the provincial statistical correspondents can provide the missing data in order to consolidate incomplete historical national forest products data.

After the discussion each group made its presentations for 10 minutes. Members of Group I stated that they were not faced with any problems while entering data in the questionnaire (no problem for JQ1, JQ2, and JQ3; no problem for DOT1 and DOT2, no problem for ITTO1, ITTO2 and ITTO3). However, they argued that a clear definition should be given for each item (e.g. abbreviations/acronyms). Others problems identified by **Group I** are as follows:

- Respondents do not have details of excel and its different commands; and

- No main coordinators in charge of compiling data, filling in data as well as including data collection/ compilation to suit the specified form.

They also offered recommendations for improvement of the questionnaire – i.e.:

- The same HS codes should be applied across the world; and

- Clear definitions should be given in order to enhance common understanding.

Regarding problem solving, it was suggested that training should be offered to enable organized officers concerned to acquire working knowledge and a deeper understanding of relevant matters.

Group I also called for support in terms of budget and equipment as well as the establishment of focal agencies at the central and provincial levels. Additionally, members of **Group I** were of the opinion that the provisions of the existing laws (e.g. the National Statistics Act) should be implemented should be implemented.

In relation to problems related to the questionnaire in general **Group II** stated that:

- Personnel still lack knowledge necessary/ required for filling out the questionnaire;

- There are an inadequate number of staff for the purposes of data collection;

- Filling out the questionnaire is an additional burden on top of the agencies' regular tasks;

- Lack of diversity in data sources results in incomplete data;

- There are a great numbers of questions, such that there are no data available for certain questions;

- Lack of links/linkages with the private sector for the purposes of data collection and requests;

- Much time is spent on filling out the questionnaire and the deadline for submission to ITTO is thus not respected;

- Effectively, there are no follow-up mechanisms for acquiring data from agencies that fail to supply the data requested; and

- The Thai measurement units/systems do not match the units/systems used in ITTO questionnaire. Therefore, such data need to be converted before respondents can enter them into the system.

Group II identified problems with each type of questionnaire as follows:

- JQ1: Suppliers of data do not coordinate with other sources to acquire information. The data supplied are solely collected from RFD, resulting in incomplete information.

- JQ2: There has not been any differentiation between coniferous wood items and non-coniferous items. As such certain data strings are left blank.

- ITTO 2: Species should be increased in the scientific name column.

- ITTO 3: The private sector should assist in entering the data, because they are directly involved in these fields.

In regard to data gaps and the acquisition of missing data Group II stated that that there is no clear reporting format for use by provincial-level agencies. Furthermore, no clear timeframe for submitting the report is prescribed.

3.4 Forestry Statistics regarding Export and Import Scenario in Thailand

The presentation entitled "Forestry Statistics regarding Export and Import Scenario" was presented by Ms. Wandee Maolanon from the Information Technology Office, the Customs Department. Details are as following:

Thailand's Customs statistical system, data acquisition and collection have proceeded through the e-cumtoms data feeds which involve data from import declaration and export declaration. Then the data acquired will be loaded onto the main statistical system.

Monthly data are completed by the 16th of each month. The data acquisition process requires:

- 1) comprehensive collection of details on both import and export bills of lading,
- 2) data verification,
- 3) data dissemination to agencies, and
- 4) provide data-related services to both internal divisions within the Customs Department and external agencies.

Data on bills of lading is first verified while being keyed in through a paperless system. In this stage, data verified include data on tax payer identity, dates imported, names of vessels, customs classified categories, and customs rates. Subsequently, statistical verification is undertaken to verify retrospect average figures.

Agencies regularly receiving data from the Customs Department include the Office of the MOF Permanent Secretary, the Bank of Thailand, the Office of the MOC Permanent Secretary, the National Statistical Office, the Office of the National Economic and Social Development Board, and the Office of Agricultural Economics.

Those interested in data on forest and wood products may access customs data base at www.customs.go.th. Details included in this areas are relatively varied such as imports/exports volumes, monetary values of products imported and exported, customs-classified items, export destinations, countries of origins, names of importing and exporting entrepreneurs, etc.

3.5 Working Group III : "Discussion on Consolidating regional and national forest products data"

After the presentation followed another sub-section for the 3rd working group discussion (see TOR WG3) run by a chairperson and a rapporteur of each team. What follows are the instructions for this working groups discussion. The state statistical correspondents are invited to consolidate their forest products data provided over the period 1999-2009. A workbook with the data available to FAO were made available for data revision. It was required to:

- 1) Verify the status of the NO Official data, flagged with an "F" or an "*" and revise as appropriate;
- 2) Verify all the cases having negative consumption and revise the data that generate the negative consumption;
- 3) Verify annual Increments of production (+-30) and trade (+-50). If true, the participants were requested to justify, otherwise they were requested to revise accordingly;
- 4) Verify the discrepancies in Trade data. All the quantities are related with their values. If one of the two is missing please provide; and
- 5) Verify that the unit value of Imports and Exports are within their limits

The participants were instructed to analyze the estimated data on production of: "Wood fuel, including wood for charcoal", "Charcoal" and "Other Industrial Roundwood". If FAO data/estimates are not realistic please replace them accordingly.

A table where FAO and ITTO have published different production and trade figures over the years were made available to the National Correspondent in order revise them with the official data.

“ Reports of Working Groups on Consolidation of Regional and National Forest Products Data”

The three groups presented their findings on decisions arrived at and methodologies developed. The presentation details summarized as follows:

Group I was asked to deliberate upon the following question: What factors account for marked variations in the data pattern between 1999 and 2009? Members of Group I offered comments vis-à-vis 3 different cases as follows:

1) In the case of logs and processed wood, they argued that:

- In 1989 Thailand stopped according concession of natural wood/timber, resulting in decreases in wood production volume.

- A reason accounting for increases is wood production at forest management units by the FIO. In certain years the felling/cutting of trees by the FIO is reduced.

- Thailand imported complementary wood materials from neighbouring countries, i.e. Laos, Cambodia, and Malaysia. Later on Laos and Cambodia stopped the export of logs/

round wood. Only processed wood items are exported.

- Round-wood pararubberwood, eucalyptus wood or wood from forest management units are also exported. However, these timber/wood items are not on the reserved/prohibited wood items list, which mean their production is not necessarily reported, thus resulting in seemingly marked discrepancies between the two sets of figures.

2) As for fuel wood and charcoal, members of Group I suggested that mangrove-based wood charcoal is a popular item. However, as concession of mangrove-based wood charcoal had been discontinued in Thailand, a greater number of wood charcoal was thus imported.

3) They also argued that data are reliable/trustworthy as they are in the main taken from official sources such as RFD, FIO, the Customs Department, and the Department of Foreign Trade.

Group II presented its findings on the topic entitled 'national-level and international-level data collection relating to forest product production and trade'. Members of the group delved into details of 2 major sub-groups of products:

Particleboard

Medium-density fiberboard

Members of **Group II** discussed different aspects of these products and reached the following findings:

Domestic Consumption Data

- The 1998 economic crisis induced a downward trend in domestic consumption of these products.

Export Volume Data

- In 1992, and between 1996 and 1998, export volume increased significantly as producers exported their products more in response to decreases in domestic consumption.

Production Quantities

- Production quantities between 2004 and 2009 show repeated figures which might have been approximates rather than actual production figures.

Comparing Production Figures and Export Volume

- It appeared that during those periods in question production quantities were less than export volume, which could be attributed to the following reasons: 1) Data were collected from only some sources/factories/mills., and 2) Data

providers/factories/mills did not report accurate production data.

Group III's members discussed and deliberate upon the verification of national data on pulp and paper production and imports and exports (Pulp and Paper) in the following areas:

1) Wood pulp

2) Recovered paper

3) Paper and paperboard

4) Data on imports and exports

5) Import unit prices

6) Brief itemized findings from Group III

discussion are as follows:

Data on Pulp and Paper in Thailand

The following data items are readily available from the Thai Pulp and Paper Industries Association:

1) Wood pulp

2) Recovered paper

3) Paper and paperboard

Data on Pulp and Paper Imports-Exports

The following data items available from the Customs Department's Classification Code Database: e.g.:

1) Paper and paperboard (relevant codes being 4707 and others)

2) Recovered paper (relevant codes from 4705.00.00-000 to 4706.93.00-000)

Findings

Major findings/results from the discussion are as follows:

1) Data on all types of pulp and paper from 2007 to 2009;

2) Data on pulp and paper production between 1999 and 2006 will be searched for at a later stage;

3) Data on Pulp and Paper Imports-Exports between 1999 and 2009; and

4) Data on Import Unit Prices between 1999 and 2009.

After the group presentations, **Mr.Kritsana Makkawan** from Thai Pulp and Paper Industries Association was requested to be the focal point/contact person to acquire further data/information on pulp and paper production, and **Ms.Laiad Wongtong** of the Customs Department was requested to be the focal point/contact person to acquire further data/information on imports and exports.

“Overview of Forest Products Statistics – Stand Point of the Industry”

5.1 Forest Products Statistics – Paper & Pulp Industry

Mr. Kritsana Makkawan from the Thai Pulp and Paper Industries Association (TPPIA) presented on the pulp & paper industries in Thailand. The presentation comprises of 4 areas as follows:

- 1) pulp & paper production;
 - 2) world pulp & paper demand-supply;
 - 3) domestic pulp & paper demand-supply;
- and
- 4) domestic wood demand-supply.

The speaker argued that in terms of production, the pulp and paper industry is an important source of employment rural and social development, domestic supply, import substitution and export promotion. The value chain involving paper and pulp production is a long one, involving for example eucalyptus plantations, pulp mills, paper mill, magazine printing, printing & writing paper production, and packaging paper production, container board production, and corrugated container production.

TPPIA representative mentioned that BCP demand growth will grow slower than during the

pre-crisis. Meanwhile, in the post crisis period, BHKP growth is expected to be more than BSKP. During the post-crisis world BHKP major demand growth is in China while Japanese demand continues to decrease. Simultaneously, global NBKP demand growth is in China, followed by other Asian countries and the rest of the world.

Figure 5.1 : Depicts BHKP Market Demand Growth and BSKP Market Demand Growth

Market BHKP Demand Growth	2004 – 2008	2012F-2016F
North America	2.61%	0.53%
West Europe	2.76%	2.06%
Japan	-1.45%	-0.97%
China	12.79%	6.03%
Other Asia	2.15%	2.01%
Rest of the world	8.91%	2.51%

Market BSKP Demand Growth	2004 – 2008	2012F-2016F
North America	1.87%	-0.90%
West Europe	-1.78%	-0.38%
Japan	-0.74%	-1.61%
China	11.61%	4.80%
Other Asia	3.18%	1.06%
Rest of the world	1.61%	1.26%

The pulp and paper market were pointed out that:

- 1) Latin America continues to be main supplier for global market BHKP while Asia & Africa are major consumers.

2) North America is main supplier for market NBKP.

3) New BHKP capacity expansion is 5.00 Mt per year (Latin America: 4.26 Mt per year; and China & Laos: 0.74 Mt per year).

4) New BSKP capacity expansion is 0.59 Mt per year: Latin 0.10 Mt per year; and Russia: 0.49 Mt per year.)

5) Demand / capacity of BHKP is improving in the forecast period.

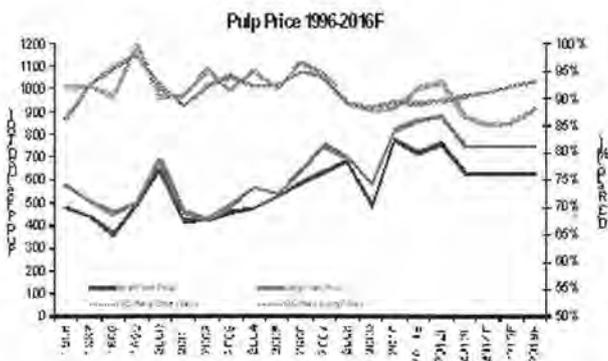
6) Demand / capacity of NBKP is expected to be stable.

7) Demand / capacity of BHKP is improving in the forecast period.

8) Demand / capacity of NBKP is expected to be stable.

The pulp prices of short-fiber material and long-fiber material as well as D/C ratios for both materials as between 1996 and 2016 as depicted in the figure below.

Figure 5.2 : Pulp Prices (1996-2016F)



With reference to Thailand's domestic pulp and paper demand and supply, the speaker presented the following table with details of manufacturers' names and capacity levels, and grades.

Table 5.1: Major Pulp Manufacturers in Thailand

Major Pulp Manufacturers in Thailand

Manufacturer	Capacity (Thousand tons)	Grade
1. Double A (Former Advance Agro)	580	Eucalyptus
2. Phoenix Pulp & Paper	244	Eucalyptus, Bamboo
3. Panjapol Pulp Industry	110	Eucalyptus
4. SCG Paper	110	Eucalyptus, CTMP
5. Environment Pulp and Paper	100	Non-Tree Pulp (from Bagasse)
6. Siam Cellulosa	88	Eucalyptus
7. Fiber Pattana	18	Non-Tree Pulp (from used UHT boxes)
8. Thai Gorilla Pulp	16	Non-Tree Pulp (from leftover Palm Oil tree)
Total	1,284	

Then, the speaker presented a series of graphic presentations on trends in pulp demand and supply, kraft paper consumption, printing and writing paper consumption, paperboard consumption, newsprint paper consumption, tissue paper consumption, total paper and paper board consumption, as well as Thailand's total paper consumption (kg per capita).

Figure 5.3 : Trend of Pulp Demand & Supply

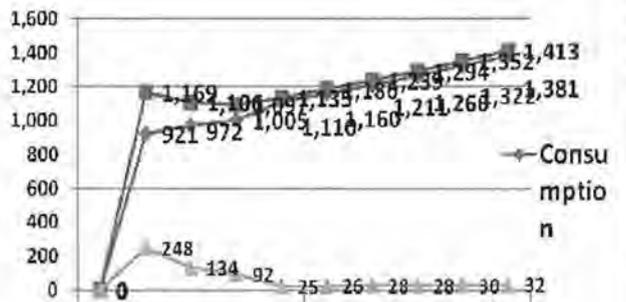


Figure 5.4 : Kraft Paper Consumption

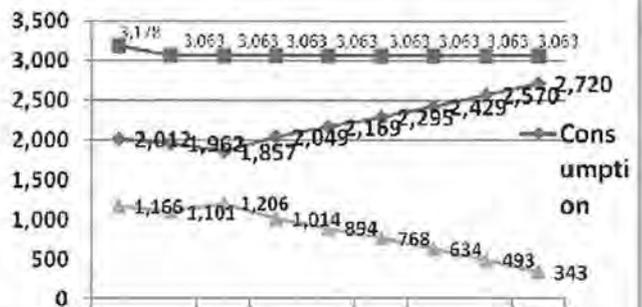


Figure 5.5 : Printing & Writing Paper Consumption

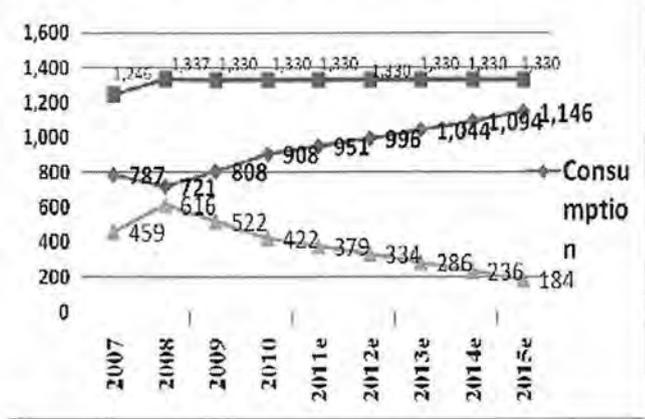


Figure 5.8 : Tissue Paper Consumption

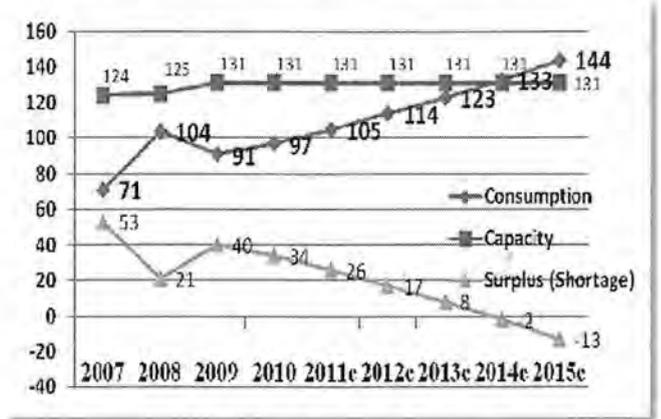


Figure 5.6 : Paperboard Consumption

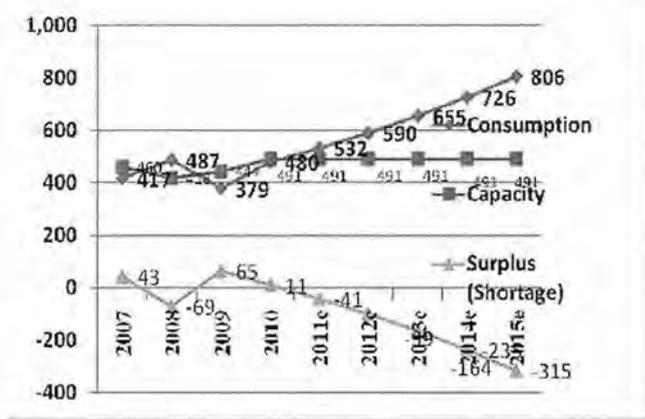


Figure 5.9 : Total Paper & Paperboard Consumption

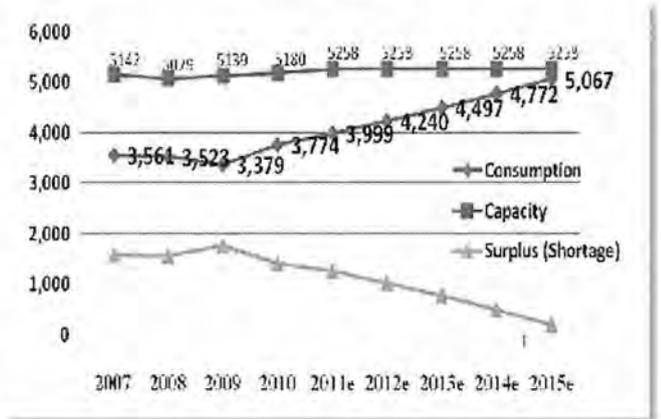


Figure 5.7 : Newsprint Paper Consumption

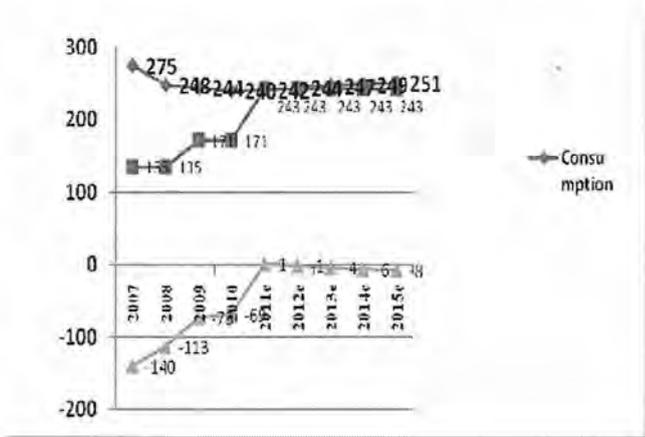
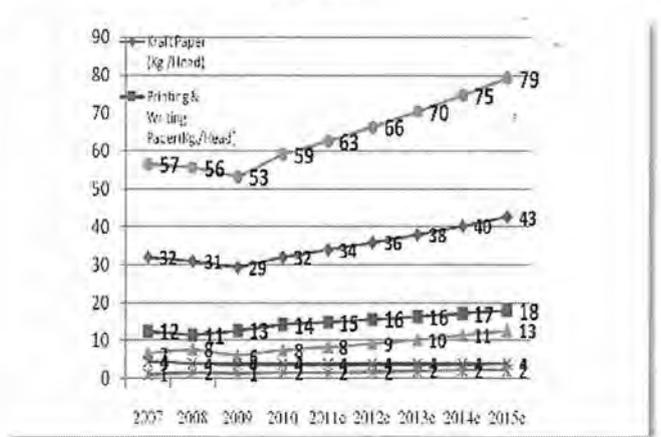


Figure 5.10 : Thailand Paper Consumption (Kg/head)



In regard to international wood demand and supply, it was pointed out that China will become Asian's biggest woodchip consumers. Key importers to China in 2010 were Vietnam (56%), Thailand (16%), Indonesia (14%), Australia (13%), and others (1%). Key importers to Japan in 2010 were Australia (36%), Chile (24%), South Africa (15%), Vietnam (11%), Brazil (6%), Thailand (6%), Malaysia (2%), and Others (2%).

Regarding domestic wood demand & supply in 2010 pulp demand was 4,886,500 (unit not specified), demand for hard board and MDF products was 750,000 (unit not specified), and fuel demand was 700,000 (unit not specified). Total demand was 6,317,300 (unit not specified), and total domestic demand was 10,014,862 (unit not specified),

Then the speaker touched upon Eucalyptus supply in Thailand by region as follows: western region (300,000: unit not specified), northern region (400,000: unit not specified), upper northeastern region (2,700,000: unit not specified), lower northeastern (3,800,000: unit not specified) eastern region and (2,900,000: unit not specified).

5.2 Plywood and Panel Industries Status, Challenges and Opportunities

After the first presentation **Mr. Suthin Pornchaisuree, president of Thai Parawood association**, made a presentation on the 'plywood and panel industries status, challenges and opportunities'. In particular, Mr. Suthin discussed 3 major areas related to the parawood industry – i.e.

1) Status of the parawood industry

- Overall picture of Thailand's and global parawood plantation

- Material for the Thai parawood industry, and the parawood industry

2) Statistics of current reference prices as well as trends in prices of dried processed parawood, and values of Thailand's parawood exports; and

3) opportunities and challenges.

Parawood trees are grown in 22 countries across the world with Thailand as the world's second largest parawood-growing country in terms of total parawood plantation areas. As of 2008, parawood trees were grown in 65 Thai provinces (16,718,145 rai in all), with approximately two thirds of which were grown in the South. Between 2011 and 2013, the government plans to promote growing of parawood trees in 800,000 rai of land (new plantations). Between 2008 and 2010, the government has also planned to substitute old varieties of parawood trees with new quality parawood trees through funding provided by the Office of the Rubber Replanting Aid Fund on 300,000 rai of land.

It has been estimated that cutting of parawood trees across 300,000 rai of land will yield 90,000,000 cubic feet of dried processed parawood. Meanwhile, demand for parawood in Thailand's furniture industry in 2011 was estimated at 46,227,812 cubic feet.

Penang Port FOB prices of processed dried parawood between 2006 and September of 2011 across 7 sizes (as measured in 3 dimensions: width [mm] x thickness [mm] x length [metre]) shows the lowest percentage of change in price for the 44X50-UpX1.00/1.10 category (45.21 %) and the highest percentage of change in price for the 32X 50-UpX1.00/1.10 category (267.25 %).

As of now there are 548 parawood-processing factories in Thailand employing 10,710 workers and 125,445.59 units of horsepower engine

Thailand's export values of 13 wood products from 2007 to 2010 are as follows; 156,160.64 million baht (2007) 151,473.23 million baht (2008), 140,872.94 million baht (2009) and 168,002.79 million baht (2010).

Regarding opportunities and challenges, Thailand has great potential and may well develop into a major global hub of parawood industry. Pararubber also has great growth potential as it is an eco-friendly wood, Furthermore, Thailand can develop tripartite cooperation in conjunction with

Malaysia and Indonesia. However, in order to materialize these opportunities, the government should amend applicable laws to facilitate business development, create a single umbrella agency for the supervision, policy formulation, and administration of the parawood industry in a more integrated manner very much as same as the Malaysian Timber Board (MTB) and the Malaysian Timber Council (MTC). The president of Thai parawood association also suggested that a separate Parawood Act should be promulgated as distinct from the Forest Act. It was also proposed that the parawood industry can achieve sustainability if policies of ministries concerned are orchestrated systematically across the board.

“Solutions to national and regional information needs”

Working Group IV

Main problems and solutions of Forestry Information Systems in assessing, disseminating and using wood product statistics for increasingly sophisticated users

Group I had suggested that;

National Information Requirements

● National Output

1.1 Reporting Formats

- Single Format
- International Format
- Same definition

1.2 Units used in forestry statistics

- Volume
- Weight
- Value

Indicators for assessing the national status of forests

- Forest Area
 - Natural Forest
 - Plantation
- Forest Type
- Density

- Volume/ area unit
- Wood type
- Quantity of wood from the other forest type
- Production
 - Primary Product (Wood)
 - Secondary Product (Non wood)
- Import-Export
- Domestic Consumption

Relative importance of parameters in terms of forestry database

- Type of data collection
- Method of data collection
- Knowledge skills and experiences of personnel in data collection
- Information Systems
 - Hardware
 - Software
 - Peopleware
- Budget of data collection

Issues related to improvement in National Forest Products Statistics

- Cooperation with stakeholder and integration of information
- Database designing to users' needs
- Development of personnel in the area of knowledge, skills and understanding
- Provision of a clear gathering, checking, analyzing and reporting system

Group II had suggested that;

Regional Information Requirement

1. Regional Output analyzing need of information is necessary

- 1.1 Regional data collection
- 1.2 Central data collection
- 1.3 Standard of international unit
- 1.4 Design of reporting format

2. Collection format of regional forestry statistics and their importance

- Law suit
- factory
- wood permission and wood product
- wood price
- plantation area/type of planted wood
- wood production/wood product

3. Solutions to problems encountered in statistical reporting

- Information resources
- Method used in statistical reporting
- Creditability of information
- Other limitations

TOR

Working Group I

**Issues and constraints affecting the reliability and sustainability of
Forest Products Statistics in Thailand
(3 working groups with representation from provinces)**

Tuesday 27 September 2011

Discussion on the problems affecting Provinces' **forest products** statistical systems:

- Sources of information
- Methodologies used
- Information flow
- Data reliability: how much is accurate the information?
- Institutional structures and responsibilities in data collecting and reporting
- Other weaknesses and constraints affecting the Forestry Sectors in responding to different

data consumer needs

TOR

Working Group II

**Group discussion on problems encountered in completing the JFSQ
on a regular basis**

Wednesday 28 September 2011

Discussion groups:

Group I: Production: Woodfuel and Industrial Roundwood

Group II: Production: Sawnwood, Wood based panels, Pulp and Paper

Group III: Trade: Imports and exports.

Discussion points

(1) Various aspects of JFSQ.

What are the issues with providing information for:

- JQ1, JQ2, JQ3
- DOT1, DOT2,
- ITTO1, ITTO2, ITTO3

Some suggested discussion points are:

- Using Classifications: HS96; HS2002; HS2007, SITC Rev. 3;
- Definitions
- Using Excel
- Functionality (Discrepancies, Consumption, Unit Values, Communication among States
- Measurements CUM/MT
- Collecting/Integrating different data sources in the JQ (Production, Trade)

(2) Data gaps and provision of missing data

- How can the Province statistical correspondents provide the missing data in order to consolidate incomplete historical national forest products data

TOR**Working Group III****Consolidation of National and International Data on Production and Trade of Forest Products data****Wednesday 28 September 2011**

The State statistical correspondents are invited to consolidate their forest products data provided over the period 1999-2009. A workbook with the data available to FAO will be made available for data revision. It is required to:

- Verify the status of the NO Official data, flagged with an "F" or an "*" and revise as appropriate.
- Verify all the cases having Negative Consumption and revise the data that generate the negative consumption
- Verify annual Increments of production (+- 30) and trade (+-50). If true please justify otherwise revise accordingly
- Verify the discrepancies in Trade data. All the quantities are related with their values. If one of the two is missing please provide.
- Verify that the unit value of Imports and Exports are within their limits

Analyze the estimated data on production of: "Wood fuel, including wood for charcoal", "Charcoal" and "Other Industrial Roundwood". If FAO data/estimates are not realistic please replace them accordingly.

A table where FAO and ITTO have published different production and trade figures over the years will be made available to the National Correspondent in order to revise them with the official data.

TOR
Working Group IV
Main Problems and Solutions of Forestry Information Systems
in Assessing, in Disseminating and Using Wood Product Statistics
for Increasingly Sophisticated Users

Friday 30 September 2011

The participants are invited to identify the **solutions to problems** affecting their province/national **forest products** statistical systems in relation to:

Group I: National Information Requirements

- (i) National Output – reporting formats and units and use of forestry statistics in policy and decision making at the national level
- (ii) Indicators for assessing the national status of forests
- (iii) Relative importance of parameters in terms of forestry database
- (iv) Issues related to improvement in National Forest Products Statistics.

Group II: Provincial Information Requirement

- (i) Provincial Output – reporting formats and units and use of forestry statistics in policy and decision making at the regional level
- (ii) Collection format of regional forestry statistics and their importance
- (iii) Solutions to problems encountered in statistical reporting
 - Sources of information
 - Methodologies used
 - Data Reliability
 - Other Constraints
- (iv) Issues related to improvement in Provincial Forest Products Statistics

Product Code		Product	Unit	2004 Quantity	2005 Quantity
ROUNDWOOD REMOVALS					
1		ROUNDWOOD	1000 m ³	na	na
1.C		Coniferous	1000 m ³	0	0
1.NC		Non-Coniferous	1000 m ³	na	na
1.1		WOOD FUEL, INCLUDING WOOD FOR CHARCOAL	1000 m ³	na	na
1.1.C		Coniferous	1000 m ³	0	0
1.1.NC		Non-Coniferous	1000 m ³	na	na
1.2		INDUSTRIAL ROUNDWOOD (WOOD IN THE ROUGH)	1000 m ³	na	na
1.2.C		Coniferous	1000 m ³	na	na
1.2.NC		Non-Coniferous	1000 m ³	na	na
1.2.1		SAWLOGS AND VENEER LOGS	1000 m ³	na	na
1.2.1.C		Coniferous	1000 m ³	na	na
1.2.1.NC		Non-Coniferous	1000 m ³	na	na
1.2.2		PULPWOOD (ROUND & SPLIT)	1000 m ³	na	na
1.2.2.C		Coniferous	1000 m ³	na	na
1.2.2.NC		Non-Coniferous	1000 m ³	na	na
1.2.3		OTHER INDUSTRIAL ROUNDWOOD	1000 m ³	na	na
1.2.3.C		Coniferous	1000 m ³	na	na
1.2.3.NC		Non-Coniferous	1000 m ³	na	na
PRODUCTION					
2		WOOD CHARCOAL	1000 mt		
3		WOOD CHIPS AND PARTICLES	1000 m ³		
4		WOOD RESIDUES	1000 m ³		
5		SAWNWOOD	1000 m ³		
5.C		Coniferous	1000 m ³		
5.NC		Non-Coniferous	1000 m ³		
5.NC.T		of which:Tropical	1000 m ³		
6		WOOD-BASED PANELS	1000 m ³		
6.1		VENEER SHEETS	1000 m ³		
6.1.C		Coniferous	1000 m ³		
6.1.NC		Non-Coniferous	1000 m ³		
6.1.NC.T		of which:Tropical	1000 m ³		
6.2		PLYWOOD	1000 m ³		
6.2.C		Coniferous	1000 m ³		
6.2.NC		Non-Coniferous	1000 m ³		
6.2.NC.T		of which:Tropical	1000 m ³		
6.3		PARTICLE BOARD (including OSB)	1000 m ³		
6.3.1		of which:OSB	1000 m ³		
6.4		FIBREBOARD	1000 m ³		
6.4.1		HARDBOARD	1000 m ³		
6.4.2		MDF (MEDIUM DENSITY)	1000 m ³		
6.4.3		INSULATING BOARD	1000 m ³		
7		WOOD PULP	1000 mt		
7.1		MECHANICAL	1000 mt		
7.2		SEMI-CHEMICAL	1000 mt		
7.3		CHEMICAL	1000 mt		
7.3.1		SULPHATE UNBLEACHED	1000 mt		
7.3.2		SULPHATE BLEACHED	1000 mt		
7.3.3		SULPHITE UNBLEACHED	1000 mt		
7.3.4		SULPHITE BLEACHED	1000 mt		
7.4		DISSOLVING GRADES	1000 mt		
8		OTHER PULP	1000 mt		
8.1		PULP FROM FIBRES OTHER THAN WOOD	1000 mt		
8.2		RECOVERED FIBRE PULP	1000 mt		
9		RECOVERED PAPER	1000 mt		
10		PAPER AND PAPERBOARD	1000 mt		
10.1		GRAPHIC PAPERS	1000 mt		
10.1.1		NEWSPRINT	1000 mt		
10.1.2		UNCOATED MECHANICAL	1000 mt		
10.1.3		UNCOATED WOODFREE	1000 mt		
10.1.4		COATED PAPERS	1000 mt		
10.2		SANITARY AND HOUSEHOLD PAPERS	1000 mt		
10.3		PACKAGING MATERIALS	1000 mt		
10.3.1		CASE MATERIALS	1000 mt		
10.3.2		FOLDING BOXBOARD	1000 mt		
10.3.3		WRAPPING PAPERS	1000 mt		
10.3.4		OTHER PAPERS MAINLY FOR PACKAGING	1000 mt		
10.4		OTHER PAPER AND PAPERBOARD N.E.S.	1000 mt		

J02
FOREST SECTOR QUESTIONNAIRE
Trade

Country: Thailand Date: 10/8/2006
 Name of Official responsible for reply: The Royal Forest Department
 Official Address (in full): 61 Paholyothin Road Chatuchak Bangkok 10900
 Telephone: (662) 025798901 Fax: (662) 025798901
 E-mail: stat@forest.go.th

Specify Currency and Unit of Value (e.g. 1000 US \$): 1000\$

Product code	Product	Unit of quantity	2004			2005			2004			2005		
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value		
1	ROUNDWOOD	1000 m ³												
1.1	WOOD FUEL, INCLUDING WOOD FOR CHARCOAL	1000 m ³			0	10						1	15	
1.2	INDUSTRIAL ROUNDWOOD (WOOD IN THE ROUGH)	1000 m ³			396	123,620						8	1,354	
1.2.C	Coniferous	1000 m ³	10	1,231	15	3,112					0			0
1.2.NC	Non-Coniferous	1000 m ³	371	1,073	381	121					298	8	1,354	
1.2.NC.T	of which: Tropical	1000 m ³												
2	WOOD CHARCOAL	1000 mt	34	1,780	33	1,870					5	1,571	2	897
3	WOOD CHIPS AND PARTICLES	1000 m ³	6	29	2	106					3,969	1,571	734	39,554
4	WOOD RESIDUES	1000 m ³												
5	SAWNWOOD	1000 m ³			1,940	518,800					1,790	291,047		2,356
5.C	Coniferous	1000 m ³	138	23,798	156	29,407					138	23,798	2	2,356
5.NC	Non-Coniferous	1000 m ³	1,698	4,137	1,784	489,392					1,698	403,617	1,360	295,597
5.NC.T	of which: Tropical	1000 m ³												
6	WOOD-BASED PANELS	1000 m ³												
6.1	VENEER SHEETS	1000 m ³	35	23,476	30	24,336					2	8,889	2	9,302
6.1.C	Coniferous	1000 m ³												
6.1.NC	Non-Coniferous	1000 m ³												
6.1.NC.T	of which: Tropical	1000 m ³												
6.2	PLYWOOD	1000 m ³	142	28,495	108	29,287					3	1,567	2	1,120
6.2.C	Coniferous	1000 m ³												
6.2.NC	Non-Coniferous	1000 m ³												
6.2.NC.T	of which: Tropical	1000 m ³												
6.3	PARTICLE BOARD (including OSB)	1000 m ³	11	4,641	9	4,373					868	106,539	1,346	156,230
6.3.1	of which: OSB	1000 m ³												
6.4	FIBREBOARD	1000 m ³	25	7,307	26	8,722					639	112,206	706	136,127
6.4.1	HARDBOARD	1000 m ³												
6.4.2	MDF (MEDIUM DENSITY)	1000 m ³												
6.4.3	INSULATING BOARD	1000 m ³												
7	WOOD PULP	1000 mt	460	246,421	442	244,606					167	72,503	164	82,536
7.1	MECHANICAL	1000 mt												
7.2	SEMI-CHEMICAL	1000 mt												
7.3	CHEMICAL	1000 mt												
7.3.1	SULPHATE UNBLEACHED	1000 mt												
7.3.2	SULPHATE BLEACHED	1000 mt												
7.3.3	SULPHITE UNBLEACHED	1000 mt												
7.3.4	SULPHITE BLEACHED	1000 mt												
7.4	DISSOLVING GRADES	1000 mt												
8	OTHER PULP	1000 mt	8	5,577	13	9,566					0	809	23	10,773
8.1	PULP FROM FIBRES OTHER THAN WOOD	1000 mt												
8.2	RECOVERED FIBRE PULP	1000 mt												
9	RECOVERED PAPER	1000 mt												
10	PAPER AND PAPERBOARD	1000 mt	607	769,255	704	985,617					6	1,071	15	3,323
10.1	GRAPHIC PAPERS	1000 mt									914	757,625	1,014	959,343
10.1.1	NEWSPRINT	1000 mt												
10.1.2	UNCOATED MECHANICAL	1000 mt												
10.1.3	UNCOATED WOODFREE	1000 mt												
10.1.4	COATED PAPERS	1000 mt												
10.2	SANITARY AND HOUSEHOLD PAPERS	1000 mt												
10.3	PACKAGING MATERIALS	1000 mt												
10.3.1	CASE MATERIALS	1000 mt												
10.3.2	FOLDING BOXBOARD	1000 mt												
10.3.3	WRAPPING PAPERS	1000 mt												
10.3.4	OTHER PAPERS MAINLY FOR PACKAGING	1000 mt												
10.4	OTHER PAPER AND PAPERBOARD N.E.S.	1000 mt												

Country: Thailand Date: 10/8/2006
 Name of Official responsible for reply: The Royal Forest Department
 Official Address (in full): 61 Petchayothin Road, Chulachak Bangkok 10900
 Telephone: (662) 025798901 Fax:
 E-mail: sta@forest.go.th

DOT1
 FOREST SECTOR QUESTIONNAIRE
 IMPORT QUANTITY
 2009



Imported from:	Industrial Roundwood		Wood in the Rough		Wood Chips and Particles		Sawnwood		Veneer Sheets		Plywood		Particle Board		Fibreboard		Wood Pulp		Recovered Paper		Paper and Paperboard			
	Product Code	Unit	1.2.C	1.2.NC	3	5.C	5.NC	6.1	6.2.C	6.2.NC	6.3	6.4	7	9	10	10.1.1	1000 m ³	1000 m ³	1000 m ³					
ASIA			7	289	0	11	1,039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161	0	
Afghanistan																								
Armenia																								
Azerbaijan																								
Bahrain																								
Bangladesh																								
Bhutan																								
Brunei Darussalam																								
Cambodia																								
China			1	2	18																			
China, Taiwan Province of																								
China, Hong Kong SAR																								
China, Macao SAR																								
Cyprus																								
Georgia																								
India																								
Indonesia																								
Iran (Islamic Rep.)																								
Iraq																								
Israel																								
Japan																								
Jordan																								
Kazakhstan																								
Korea Democratic People's Republic of																								
Korea Republic of																								
Kuwait																								
Kyrgyzstan																								
Laos																								
Lebanon																								
Malaysia			4	85		2	1,265																	
Maldives																								
Mexico																								
Myanmar			2	167																				
Nepal																								
Oman																								
Pakistan																								
Philippines																								
Qatar																								
Saudi Arabia																								
Singapore																								
Sri Lanka																								
Syrian Arab Republic																								
Tajikistan																								
Thailand																								
Turkey																								
Turkmenistan																								
United Arab Emirates																								
Uzbekistan																								
Viet Nam																								
Yemen																								

* Data exclude those for Taiwan Province of China, Hong Kong Special Administrative Region and Macau Special Administrative Region.

Country: Thailand		Date: 10/8/2006											
Name of Official responsible for reply: The Royal Forest Department		Official Address (in full): 61 Pannoythin Road Chueachak Bangkok 10900											
Telephone: (062) 025798901		Fax: Bangkok 10900											
E-mail: stat@forest.go.th													
Product Code	Unit	Industrial Roundwood	Wood in the Rough	Wood Chips and Particles	Sawnwood	Veneer Sheets	Rywood	Particle Board	Fibreboard	Wood Pulp	Recovered Paper	Paper and Paperboard	
		Confiferous 1.2.C 1000 m ³	Non-Confiferous 1.2.NC 1000 m ³	3 1000 m ³	Confiferous 5.C 1000 m ³	Non-Confiferous 5.NC 1000 m ³	Confiferous 6.2.C 1000 m ³	Non-Confiferous 6.2.NC 1000 m ³	6.3 1000 m ³	6.4 1000 m ³	7 1000 mt	9 1000 mt	Total 10 10.1.1 1000 mt
Imported from:	EUROPE	4	2	0	32	16	0	0	0	0	0	0	0
Albania													
Andorra													
Austria													
Belgium													
Bulgaria													
Bulgaria and Herzegovina													
Croatia													
Czech Republic													
Denmark													
Estonia													
Faeroe Islands													
Finland													
France													
Germany													
Gibraltar													
Greece													
Hungary													
Iceland													
Ireland													
Italy													
Latvia													
Lithuania													
Luxembourg													
Macedonia, the fmr Yugoslav Rep. of													
Malta													
Republic of Moldova													
Netherlands													
Norway													
Poland													
Portugal													
Romania													
Russian Federation													
Slovakia													
Slovenia													
Spain													
Sweden													
Switzerland													
United Kingdom													
Ukraine													
Yugoslavia, the Federal Republic of													

DOT1
FOREST SECTOR QUESTIONNAIRE
IMPORT QUANTITY
2005



Country: Thailand Date: 10/8/2006
 Name of Official responsible for reply: The Royal Forest Department
 Official Address (in full): 61 Pohnvithin Road Chutuchak Bangkok 10900
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 E-mail: stat@forest.go.th

DOT2
 FOREST SECTOR QUESTIONNAIRE
 EXPORT QUANTITY
 2005

Product Code Unit	Industrial Roundwood: Wood in the Rough		Wood Chips and Particles		Sawnwood		Veneer Sheets		Plywood		Particle Board	Fibreboard	Wood Pulp	Recovered Paper	Paper and Paperboard	
	Coniferous 1.2.C 1000 m ³	Non-Coniferous 1.2.NC 1000 m ³	Coniferous 5.C 1000 m ³	Non-Coniferous 5.NC 1000 m ³	Coniferous 6.1 1000 m ³	Non-Coniferous 6.2.NC 1000 m ³	Coniferous 8.2.C 1000 m ³	Non-Coniferous 8.2.NC 1000 m ³	6.3 1000 m ³	6.4 1000 m ³					7 1000 mt	9 1000 mt
Exported to: AFRICA																
Algeria																
Angola																
Benin																
Botswana																
Burkina Faso																
Burundi																
Cameroon																
Cape Verde																
Central African Republic																
Chad																
Comoros																
Congo, Democratic Republic of																
Congo, Republic of																
Côte d'Ivoire																
Djibouti																
Egypt																
Equatorial Guinea																
Eritrea																
Ethiopia																
Gambia																
Ghana																
Guinea																
Guinea-Bissau																
Kenya																
Lesotho																
Liberia																
Libyan Arab Jamahiriya																
Madagascar																
Malawi																
Mali																
Mauritania																
Mauritius																
Morocco																
Mozambique																
Namibia																
Niger																
Nigeria																
Rwanda																
Senegal																
Sao Tomé and Príncipe																
Sierra Leone																
Seychelles																
Sierra Leone																
Somalia																
South Africa																
Sudan																
Swaziland																
Tanzania, United Republic of																
Togo																
Tunisia																
Uganda																
Zambia																
Zimbabwe																

Product Code Unit		Industrial Roundwood		Wood in the Rough		Wood Chips and Particles		Sawwood		Veneer Sheets		Plywood		Particle Board		Fibreboard		Wood Pulp		Recovered Paper		Paper and Paperboard	
		Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Total	Newsprint
		102.C	102.NC	1000 m ³	1000 m ³	1000 m ³	1000 m ³	5.C	5.NC	6.1	6.2.NC	6.3	6.4	7	8	9	10	11	12	13	14	15	16
Exported to:																							
ASIA																							
Afghanistan																							
Armenia																							
Azerbaijan																							
Bahrain																							
Bangladesh																							
Bhutan																							
Brunei Darussalam																							
Cambodia																							
China*																							
China, Taiwan Province of																							
China, Hong Kong SAR																							
China, Macau SAR																							
Cyprus																							
Georgia																							
India																							
Indonesia																							
Iraq (Islamic Rep.)																							
Iraq																							
Israel																							
Jordan																							
Kazakhstan																							
Korea Democratic People's Republic of																							
Korea Republic of																							
Kuwait																							
Kyrgyzstan																							
Laos																							
Lebanon																							
Malaysia																							
Maldives																							
Mongolia																							
Myanmar																							
Nepal																							
Oman																							
Pakistan																							
Philippines																							
Qatar																							
Saudi Arabia																							
Singapore																							
Sri Lanka																							
Syrian Arab Republic																							
Tajikistan																							
Thailand																							
Turkey																							
Turkmenistan																							
United Arab Emirates																							
Uzbekistan																							
Viet Nam																							
Yemen																							

* Data exclude those for Taiwan Province of China, Hong Kong Special Administrative Region and Macau Special Administrative Region.

DOT2
FOREST SECTOR QUESTIONNAIRE
EXPORT QUANTITY
2005

Country: Thailand Date: 10/8/2006
Name of Official responsible for reply: The Royal Forest Department
Official Address (in full): 61 Paholyothin Road Chatuchak Bangkok 10900
Telephone: (662) 025798901 Fax:
E-mail: stat@forest.go.th



DOT2
FOREST SECTOR QUESTIONNAIRE
EXPORT QUANTITY
2006

Country: Thailand Date: 10/8/2006
 Name of Official responsible for reply: The Royal Forest Department
 Official Address (in full): Sukhothai Road, Chatuchak Bangkok 10900
 Telephone: 01 16621 0257/89901 Fax:
 E-mail: rfd@forest.go.th



Product Code Unit	Industrial Roundwood/Wood in the Rough		Wood Chips and Particles		Sawnwood		Veneer Sheets		Plywood		Particle Board	Fireboard	Wood Pulp	Recovered Paper	Paper and Paperboard	
	Coniferous 1.2.C. 1000 m ³	Non-Coniferous 1.2.NC. 1000 m ³	Coniferous 3 1000 m ³	Non-Coniferous 5.NC 1000 m ³	Coniferous 5.C. 1000 m ³	Non-Coniferous 6.2.NC 1000 m ³	Coniferous 6.2.C 1000 m ³	Non-Coniferous 6.1 1000 m ³	Coniferous 6.2.NC 1000 m ³	Non-Coniferous 6.2.NC 1000 m ³					7 1000 mt	9 1000 mt
Exported to: OCEANIA																
American Samoa																
Australia																
Cook Islands																
The Republic of the Fiji Islands																
French Polynesia																
Guam																
Kiribati																
Nauru																
New Caledonia																
New Zealand																
Niue																
Norfolk																
Papua New Guinea																
Samoa																
Solomon Islands																
Tokelau																
Tonga																
Tuvalu																
Vanuatu																
Wallis and Futuna Islands																

DOT2
FOREST SECTOR QUESTIONNAIRE
EXPORT QUANTITY
2005

Product Code Unit	Industrial Roundwood: Wood in the Rough		Wood Chips and Particles		Sawnwood		Veneer Sheets		Plywood		Particle Board		Fibreboard		Wood Pulp		Recovered Paper		Paper and Paperboard		
	1.2.C 1000 m ³	1.2.NC 1000 m ³	3 1000 m ³	5.C 1000 m ³	5.NC 1000 m ³	6.1 1000 m ²	6.2.C 1000 m ³	6.2.NC 1000 m ³	6.3 1000 m ³	6.4 1000 m ³	7 1000 mt	9 1000 mt	Total 10 1000 mt	10.1.1 1000 mt							
	Coniferous	Non-Coniferous	Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous	Coniferous	Non-Coniferous		
Exported to:	EUROPE																				
Albania																					
Andorra																					
Austria																					
Belarus																					
Belgium																					
Bosnia and Herzegovina																					
Bulgaria																					
Croatia																					
Czech Republic																					
Denmark																					
Estonia																					
Faeroe Islands																					
Finland																					
France																					
Germany																					
Gibraltar																					
Greece																					
Hungary																					
Iceland																					
Ireland																					
Italy																					
Latvia																					
Lithuania																					
Luxembourg																					
Macedonia, the fmr Yugoslav Rep. of																					
Malta																					
Republic of Moldova																					
Netherlands																					
Norway																					
Poland																					
Portugal																					
Romania																					
Russian Federation																					
Slovakia																					
Slovenia																					
Spain																					
Sweden																					
Switzerland																					
United Kingdom																					
Ukraine																					
Yugoslavia, the Federal Republic of																					

Country: Thailand
 Name of Official responsible for reply: The Royal Forest Department
 Official Address (in full): 61 Pambolythin Road Chatuchak Bangkok 10900
 Telephone: (662) 025 798901 Fax:
 E-mail: stat@forest.go.th

Date: 10/8/2006



Country: Thailand Date: 10/8/2006

Name of Official responsible for reply: The Royal Forest Department

Official Address (in full): 61 Panyothin Road Chatuchak Bangkok 10900

Telephone: (662) 025798901 Fax:

E-mail: stat@forest.go.th

DOT2
FOREST SECTOR QUESTIONNAIRE
EXPORT QUANTITY
2005



Product Code Unit	Industrial Roundwood: Wood in the Rough		Wood Chips and Particles		Sawnwood		Veneer Sheets		Plywood		Particle Board	Fibreboard	Wood Pulp		Paper and Paperboard		
	Coniferous 1.2.C 1000 m ³	Non-Coniferous 1.2.NC 1000 m ³	Coniferous S.C. 1000 m ³	Non-Coniferous S.NC 1000 m ³	Coniferous S.C. 1000 m ³	Non-Coniferous S.NC 1000 m ³	Coniferous S2.C 1000 m ³	Non-Coniferous S2.NC 1000 m ³	6.1 1000 m ²	6.2 1000 m ²			6.3 1000 m ²	6.4 1000 m ²	7 1000 mt	8 1000 mt	9 1000 mt
Exported to: NORTH AMERICA																	
Anguilla																	
Antigua and Barbuda																	
Aruba																	
Bahamas																	
Barbados																	
Belize																	
Bermuda																	
British Virgin Islands																	
Canada																	
Cayman Islands																	
Costa Rica																	
Cuba																	
Dominica																	
Dominican Republic																	
El Salvador																	
Greenland																	
Grenada																	
Guadeloupe																	
Guatemala																	
Haiti																	
Honduras																	
Jamaica																	
Martinique																	
Mexico																	
Montserrat																	
Netherlands Antilles																	
Nicaragua																	
Panama																	
Saint Kitts and Nevis																	
Saint Lucia																	
Saint Pierre and Miquelon																	
Saint Vincent and the Grenadines																	
Trinidad and Tobago																	
Turks and Caicos Islands																	
United States of America																	
Exported to: SOUTH AMERICA																	
Argentina																	
Bolivia																	
Brazil																	
Chile																	
Colombia																	
Ecuador																	
Falkland Islands(Malvinas)																	
French Guiana																	
Guyana																	
Paraguay																	
Peru																	
Suriname																	
Uruguay																	
Venezuela, The Bolivarian Republic of																	
Total Export																	

Country: _____ Date: _____

Name of Official responsible for reply: _____

Official Address (in full): _____

Telephone: _____ Fax: _____

E-mail: _____



SP1

FOREST SECTOR QUESTIONNAIRE
Secondary Processed Wood and Paper Products
TRADE

Specify Currency and Unit of Value (e.g.:1000 US \$): _____

Product code	Product	IMPORT VALUE		EXPORT VALUE	
		2004	2005	2004	2005
11		Secondary wood products			
11.1	Further processed sawnwood				
11.1.C	Coniferous				
11.1.NC	Non-coniferous				
11.1.NC.T	of which: Tropical				
11.2	Wooden wrapping and packing equipment				
11.3	Builder's joinery and carpentry of wood				
11.4	Wooden furniture				
11.5	Prefabricated buildings				
11.5.1	of which: made of wood				
12		Secondary paper products			
12.1	Composite paper and paperboard				
12.2	Special coated paper				
12.3	Carbon paper and copying paper, ready for use				
12.4	Household and sanitary paper, ready for use				
12.5	Packaging cartons, boxes, etc.				
12.6	Other articles of paper or paperboard				
12.6.1	of which: printing & writing paper, ready for use				
12.6.2	of which: articles, moulded or pressed from pulp				
12.6.3	of which: filter paper & paperboard, ready for use				
12.7	Printed articles				
12.7.1	Printed books				
12.7.2	Newspapers				
12.7.3	Other printed products				

Country: _____ Date: _____
 Name of Official responsible for reply: _____
 Official Address (in full): _____
 Telephone: _____ Fax: _____
 E-mail: _____



ITTO1
FOREST SECTOR QUESTIONNAIRE
 Production and Trade Estimates for 2006

Specify Currency and Unit of Value (e.g.: 1000 US \$): _____

Product Code	Product	Unit of quantity	Production Quantity	Imports		Exports	
				Quantity	Value	Quantity	Value
1.2	INDUSTRIAL ROUNDWOOD (WOOD IN THE ROUGH)	1000 m ³					
1.2.C	Coniferous	1000 m ³					
1.2.NC	Non-Coniferous	1000 m ³					
1.2.NC.T	of which: Tropical	1000 m ³					
5	SAWNWOOD	1000 m ³					
5.C	Coniferous	1000 m ³					
5.NC	Non-Coniferous	1000 m ³					
5.NC.T	of which: Tropical	1000 m ³					
6.1	VENEER SHEETS	1000 m ³					
6.1.C	Coniferous	1000 m ³					
6.1.NC	Non-Coniferous	1000 m ³					
6.1.NC.T	of which: Tropical	1000 m ³					
6.2	PLYWOOD	1000 m ³					
6.2.C	Coniferous	1000 m ³					
6.2.NC	Non-Coniferous	1000 m ³					
6.2.NC.T	of which: Tropical	1000 m ³					

Product	Classifications HS96/HS2002	Scientific Name	Local/Trade Name	I M P O R T			E X P O R T				
				2004	2005	2004	2005	2004	2005		
				Quantity (1000 m3)	Value	Quantity (1000 m3)	Value	Quantity (1000 m3)	Value	Quantity (1000 m3)	Value
1.2.NC.T the rough), Tropical Industrial Roundwood (wood in	44.03.40 ex 44.03.99	Tectona grandis Lf.	Teak	370	106,794	380	194,472	1	316	8	1,364
		Dipterocarpetus	Yang	101	58,830	122	71,112	1	201	8	1,341
		Pterocarpus macrocarpus	Pra-du	16	2,121	11	2,288	0	0	0	0
		Light red meranti	sa-yal(Light red meranti)	0	127	1	487	0	0	0	0
		Hopea odorata	Ta-Kien	1	106	0	0	0	0	0	0
		Dalbergia oliveri	Ching-chan or Ket-daeng	0	5	0	0	0	0	0	0
		Shorea obtusa	Teng and rang	0	32	1	109	0	0	0	0
			Pararubber wood	0	0	0	0	0	100	0	0
			Eucalyptus	20	267	27	334	0	14	0	0
			Others	232	45,306	218	120,143	0	1	0	12
5.NC.T	44.07.20 ex 44.07.99			1,664	389,556	1,996	532,659	1,766	294,996	1,359	295,597
Sawwood, Tropical	44.08.30 ex 44.08.90	Tectona grandis Lf.	Teak	19	12,260	21	13,574	7	16,889	5	17,442
		Dipterocarpetus	Yang	94	17,710	134	25,460	0	0	0	0
		Pterocarpus macrocarpus	Pra-du	10	3,256	21	7,519	2	1,898	2	2,446
		Light red meranti	sa-yal(Light red meranti)	3	689	4	1,117	0	0	0	0
		Hopea odorata	Ta-Kien	27	7,310	47	8,649	0	0	0	0
		Dalbergia oliveri	Ching-chan or Ket-daeng	1	379	1	469	0	0	0	0
		Shorea obtusa	Teng and rang	15	2,708	24	4,144	0	1	0	0
			Pararubber wood	3	578	1	110	1,743	231,809	0	4
			Eucalyptus	0	0	0	0	0	0	1,324	235,254
			Others	1,491	354,547	1,742	471,618	35	44,498	29	40,460
6.1.NC.T Veneer Sheets, Tropical	44.08.30 ex 44.08.90										
6.2.NC.T Plywood, Tropical	44.12.13 ex 44.12.14 44.12.22 ex 44.12.23 ex 44.12.29										

Specify Currency and Unit of Value (e.g.:1000 US \$): 1000\$

ITTO2

FOREST SECTOR QUESTIONNAIRE
Trade in Tropical Species

Note: List the major species traded in each category. Use additional sheet if more species to be explicitly reported. For tropical plywood, identify by face veneer if composed of more than one species.

Country:	Date:
Name of Official responsible for reply:	
Official Address (in full):	
Telephone:	Fax:
E-mail:	

ITTO3

FOREST SECTOR QUESTIONNAIRE

Miscellaneous Items
(use additional paper if necessary)



1 Please enter current import tariff rates applied to tropical and non-tropical timber products. If available, please provide tariffs by the relevant customs classification category. If tariff levels have been reported in previous years, enter changes only. (Logs = JQ code 1.2, Sawn = JQ code 5, Veneer = JQ code 6.1, and Plywood = JQ code 6.2)

Current import tariff	Logs		Sawn		Veneer		Plywood	
	Tropical:	Non-Tropical:	Tropical:	Non-Tropical:	Tropical:	Non-Tropical:	Tropical:	Non-Tropical:
Comments (if any):								

2 Please comment on any quotas, incentives, disincentives, tariff/non-tariff barriers or other related factors which now or in future will significantly affect your production and trade of tropical timber products.

3 Please elaborate on any short or medium term plans for expanding capacity for (further) processing of tropical timber products in your country.

4 Please indicate any trends or changes expected in the species composition of your trade. How important are lesser-used tropical timber species and/or minor tropical forest products?

5 Please indicate trends in domestic building activity, housing starts, mortgage/interest rates, substitution of non-tropical wood and/or non-wood products for tropical timbers, and any other domestic factors having a significant impact on tropical timber consumption in your country.

6 Please indicate the extent of foreign involvement in your timber sector (e.g. number and nationalities of concessionaires/mill (joint) owners, area of forest allocated, scale of investment, etc.).

7 Please provide details of any relevant forest law enforcement activities (e.g. legislation, fines, arrests, etc.) in your country in the past year.

8 Please indicate the current extent of forest plantations in your country (ha), annual establishment rate (ha/yr) and proportion of industrial roundwood production from plantations.



JOINT FOREST SECTOR QUESTIONNAIRE

DEFINITIONS

GENERAL TERMS

- C** **Coniferous**
All woods derived from trees classified botanically as Gymnospermae, e.g. *Abies* spp., *Araucaria* spp., *Cedrus* spp., *Chamaecyparis* spp., *Cupressus* spp., *Larix* spp., *Picea* spp., *Pinus* spp., *Thuja* spp., *Tsuga* spp., etc. These are generally referred to as softwoods.
- NC** **Non-coniferous**
All woods derived from trees classified botanically as Angiospermae, e.g. *Acer* spp., *Dipterocarpus* spp., *Entandrophragma* spp., *Eucalyptus* spp., *Fagus* spp., *Populus* spp., *Quercus* spp., *Shorea* spp., *Swietenia* spp., *Tectona* spp., etc. These are generally referred to as broadleaves or hardwoods.
- NC.T** **Tropical**
Tropical timber is defined in the International Tropical Timber Agreement (1994) as follows: "Non-coniferous tropical wood for industrial uses, which grows or is produced in the countries situated between the Tropic of Cancer and the Tropic of Capricorn. The term covers logs, sawnwood, veneer sheets and plywood ... in some measure conifers of tropical origin shall also be covered by the definition." For the purposes of this questionnaire, tropical sawnwood, veneer sheets and plywood shall also include products produced in non-tropical countries from imported tropical roundwood. Please indicate if statistics provided under "tropical" in this questionnaire may include species or products beyond the scope of this definition.

TRANSACTIONS

Removals

The volume of all trees, living or dead, that are felled and removed from the forest, other wooded land or other felling sites. **It includes** natural losses that are recovered (i.e. harvested), removals during the year of wood felled during an earlier period, removals of non-stem wood such as stumps and branches (where these are harvested) and removal of trees killed or damaged by natural causes (i.e. natural losses), e.g. fire, windblown, insects and diseases. Please note that this includes removals from all sources within the country including public, private, and informal sources. **It excludes** bark and other non-woody biomass and any wood that is not removed, e.g. stumps, branches and tree tops (where these are not harvested) and felling residues (harvesting waste). **It is reported in** cubic metres solid volume underbark (i.e. excluding bark). Where it is measured overbark (i.e. including bark), the volume has to be adjusted downwards to convert to an underbark estimate.

Production

The solid volume or weight of all production of the products specified below. **It includes** the production of products that may immediately be consumed in the production of another product (e.g. wood pulp, which may immediately be converted into paper as part of a continuous process). Please note that this includes production from all sources within the country including public, private, and informal sources. **It excludes** the production of veneer sheets that are used for plywood production within the same country. **It is reported in** cubic metres of solid volume in the case of roundwood, sawnwood and wood based panels and metric tonnes in the case of charcoal, pulp and paper products.

Imports (Quantity, Value)

Products imported for domestic consumption or processing shipped into a country. **It includes** imports for re-export. **It excludes** "in-transit" shipments. **It is reported in** cubic metres of solid volume or metric tonnes and values normally include cost, insurance and freight (i.e. CIF).

Exports (Quantity, Value)

Products of domestic origin or manufacture shipped out of the country. **It includes** re-exports. **It excludes** "in-transit" shipments. **It is reported in** cubic metres of solid volume or metric tonnes and values are normally recorded as free-on-board (i.e. FOB).

PRODUCTS

The names of individual forest products and product aggregates are listed below in the order in which they occur in the tables later on. Separate definitions are not provided for coniferous (C) and non-coniferous (NC) components where the general definition given above applies. Unless indicated otherwise, each forest product category includes both coniferous and non-coniferous components.

1. ROUNDWOOD

1.C Coniferous

1.NC Non-Coniferous

All roundwood felled or otherwise harvested and removed. It comprises all wood obtained from removals, i.e. the quantities removed from forests and from trees outside the forest, including wood recovered from natural, felling and logging losses during the period, calendar year or forest year. **It includes** all wood removed with or without bark, including wood removed in its round form, or split, roughly squared or in other form (e.g. branches, roots, stumps and burls (where these are harvested) and wood that is roughly shaped or pointed. **It is an aggregate comprising** wood fuel, including wood for charcoal and industrial roundwood (wood in the rough). **It is reported** in cubic metres solid volume underbark (i.e. excluding bark).

1.1 WOOD FUEL (INCLUDING WOOD FOR CHARCOAL)

1.1.C Coniferous

1.1.NC Non-Coniferous

Roundwood that will be used as fuel for purposes such as cooking, heating or power production. **It includes** wood harvested from main stems, branches and other parts of trees (where these are harvested for fuel) and wood that will be used for charcoal production (e.g. in pit kilns and portable ovens). The volume of roundwood used in charcoal production is estimated by using a factor of 6.0 to convert from the weight (mt) of charcoal produced to the solid volume (m³) of roundwood used in production. It also includes wood chips to be used for fuel that are made directly (i.e. in the forest) from roundwood. **It excludes** wood charcoal. **It is reported** in cubic metres solid volume underbark (i.e. excluding bark).

1.2 INDUSTRIAL ROUNDWOOD (WOOD IN THE ROUGH)

1.2.C Coniferous

1.2.NC Non-Coniferous

1.2.NC.T of which tropical

All roundwood except wood fuel. **In JQ1, it is an aggregate comprising** sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. **It is reported** in cubic metres solid volume underbark (i.e. excluding bark). The customs classification systems used by most countries do not allow the division of Industrial Roundwood *trade* statistics into the different end-use categories that have long been recognized in *production* statistics (i.e. sawlogs and veneer logs, pulpwood and other industrial roundwood). Thus, these components do not appear in JQ2. Category 1.2.NC.T does not appear in JQ1 as only minimal quantities of tropical industrial roundwood are removed from countries classified as non-tropical (i.e. Australia, China) and all non-coniferous removals in tropical countries fall into this category by definition. **It excludes:** telephone poles.

1.2.1 SAWLOGS AND VENEER LOGS

1.2.1.C Coniferous

1.2.1.NC Non-Coniferous

Roundwood that will be sawn (or chipped) lengthways for the manufacture of sawnwood or railway sleepers (ties) or used for the production of veneer (mainly by peeling or slicing). **It includes** roundwood (whether or not it is roughly squared) that will be used for these purposes; shingle bolts and stave bolts; match billets and other special types of roundwood (e.g. burls and roots, etc.) used for veneer production. **It is reported** in cubic metres solid volume underbark (i.e. excluding bark).

1.2.2 PULPWOOD, ROUND AND SPLIT

1.2.2.C Coniferous

1.2.2.NC Non-Coniferous

Roundwood that will be used for the production of pulp, particleboard or fibreboard. **It includes:** roundwood (with or without bark) that will be used for these purposes in its round form or as splitwood or wood chips made directly (i.e. in the forest) from roundwood. **It is reported** in cubic metres solid volume underbark (i.e. excluding bark).

1.2.3 OTHER INDUSTRIAL ROUNDWOOD

1.2.3.C Coniferous

1.2.3.NC Non-Coniferous

Industrial roundwood (wood in the rough) other than sawlogs, veneer logs and/or pulpwood. **It includes** roundwood that will be used for poles, piling, posts, fencing, pitprops, tanning, distillation and match blocks, etc. **It is reported in cubic metres solid volume underbark (i.e. excluding bark).**

2 WOOD CHARCOAL

Wood carbonised by partial combustion or the application of heat from external sources. **It includes** charcoal used as a fuel or for other uses, e.g. as a reduction agent in metallurgy or as an absorption or filtration medium. **It is reported in metric tonnes.**

3 CHIPS AND PARTICLES

Wood that has been reduced to small pieces and is suitable for pulping, for particle board and/or fibreboard production, for use as a fuel, or for other purposes. **It excludes** wood chips made directly in the forest from roundwood (i.e. already counted as pulpwood, round and split). **It is reported in cubic metres solid volume excluding bark.**

4 WOOD RESIDUES

The volume of roundwood that is left over after the production of forest products in the forest processing industry (i.e. forest processing residues) and that has not been reduced to chips or particles. **It includes** sawmill rejects, slabs, edgings and trimmings, veneer log cores, veneer rejects, sawdust, residues from carpentry and joinery production and agglomerated products such as logs, briquettes, pellets or similar forms. **It excludes** wood chips made either directly in the forest from roundwood or made from residues (i.e. already counted as pulpwood, round and split or wood chips and particles). **It is reported in cubic metres solid volume excluding bark.**

5 SAWNWOOD

5.C Coniferous

5.NC Non-Coniferous

5.NC.T of which tropical

Wood that has been produced from both domestic and imported roundwood, either by sawing lengthways or by a profile-chipping process and that exceeds 6 mm in thickness. **It includes** planks, beams, joists, boards, rafters, scantlings, laths, boxboards and "lumber", etc., in the following forms: unplaned, planed, end-jointed, etc. **It excludes** sleepers, wooden flooring, mouldings (sawnwood continuously shaped along any of its edges or faces, like tongued, grooved, rebated, V-jointed, beaded, moulded, rounded or the like) and sawnwood produced by resawing previously sawn pieces. **It is reported in cubic metres solid volume.**

6 WOOD-BASED PANELS

In JQ1 and JQ2, this product category is an aggregate comprising veneer sheets, plywood, particle board, and fibreboard. **It is reported in cubic metres solid volume.**

6.1 VENEER SHEETS

6.1.C Coniferous

6.1.NC Non-Coniferous

6.1.NC.T of which tropical

Thin sheets of wood of uniform thickness, not exceeding 6 mm, rotary cut (i.e. peeled), sliced or sawn. **It includes** wood used for the manufacture of laminated construction material, furniture, veneer containers, etc. **Production statistics should exclude** veneer sheets used for plywood production within the same country. **It is reported in cubic metres solid volume.**

6.2 PLYWOOD

6.2.C Coniferous

6.2.NC Non-Coniferous

6.2.NC.T of which tropical

A panel consisting of an assembly of veneer sheets bonded together with the direction of the grain in alternate plies generally at right angles. The veneer sheets are usually placed symmetrically on both sides of a central ply or core that may itself be made from a veneer sheet or another material. **It includes** *veneer plywood* (plywood manufactured by bonding together more than two veneer sheets, where the grain of alternate veneer sheets is crossed, generally at right angles); *core plywood* or *blockboard* (plywood with a solid core (i.e. the central layer, generally thicker than the other plies) that consists of narrow boards, blocks or strips of wood placed side by side, which may or may not be glued together); *cellular board* (plywood with a core of cellular construction); and *composite plywood* (plywood with the core or certain layers made of material other than solid wood or veneers). **It excludes** laminated construction materials (e.g. glulam), where the grain of the veneer sheets generally runs in the same direction. **It is reported in** cubic metres solid volume. Non-coniferous (tropical) plywood is defined as having at least one face sheet of non-coniferous (tropical) wood. If substantial quantities of mixed (coniferous/non-coniferous) plywood are included in reported statistics, an explanatory note should be provided.

6.3 PARTICLE BOARD, ORIENTED STRANDBOARD (OSB) AND SIMILAR BOARD

A panel manufactured from small pieces of wood or other ligno-cellulosic materials (e.g. chips, flakes, splinters, strands, shreds, shives, etc.) bonded together by the use of an organic binder together with one or more of the following agents: heat, pressure, humidity, a catalyst, etc. The particle board category is an aggregate category. **It includes** oriented strandboard (OSB), waferboard and flaxboard. **It excludes** wood wool and other particle boards bonded together with inorganic binders. **It is reported in** cubic metres solid volume.

6.3.1 ORIENTED STRANDBOARD (OSB)

A structural board in which layers of narrow wafers are layered alternately at right angles in order to give the board greater elastomechanical properties. The wafers, which resemble small pieces of veneer, are coated with e.g. waterproof phenolic resin glue, interleaved together in mats and then bonded together under heat and pressure. The resulting product is a solid, uniform building panel having high strength and water resistance. **It excludes** waferboard. **It is reported in** cubic metres solid volume.

6.4 FIBREBOARD

A panel manufactured from fibres of wood or other ligno-cellulosic materials with the primary bond deriving from the felting of the fibres and their inherent adhesive properties (although bonding materials and/or additives may be added in the manufacturing process). **It includes** fibreboard panels that are flat-pressed and moulded fibreboard products. **In JQ1 and JQ2, it is an aggregate comprising** hardboard, medium density fibreboard (MDF) and other fibreboard. **It is reported in** cubic metres solid volume.

6.4.1 HARDBOARD

Wet-process fibreboard of a density exceeding 0.8 g/cm^3 . **It excludes** similar products made from pieces of wood, wood flour or other ligno-cellulosic material where additional binders are required to make the panel; and panels made of gypsum or other mineral material. **It is reported in** cubic metres solid volume.

6.4.2 MEDIUM DENSITY FIBREBOARD (MDF)

Dry-process fibreboard. When density exceeds 0.8 g/cm^3 , it may also be referred to as "high-density fibreboard" (HDF). **It is reported in** cubic metres solid volume.

6.4.3 OTHER FIBREBOARD

Wet-process fibreboard of a density not exceeding 0.8 g/cm^3 . This includes mediumboard and softboard (also known as insulating board). **It is reported in** cubic metres solid volume.

7 WOOD PULP

Fibrous material prepared from pulpwood, wood chips, particles or residues by mechanical and/or chemical process for further manufacture into paper, paperboard, fibreboard or other cellulose products. **In JQ1 and JQ2, it is an aggregate comprising** mechanical wood pulp; semi-chemical wood pulp; chemical wood pulp; and dissolving wood pulp. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

7.1 MECHANICAL WOOD PULP

Wood pulp obtained by grinding or milling pulpwood or residues into fibres, or through refining chips or particles. Also called groundwood pulp and refiner pulp, it may be bleached or unbleached. **It includes** chemi-mechanical

and thermo-mechanical pulp. **It excludes** exploded and defibrillated pulp. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

7.2 SEMI-CHEMICAL WOOD PULP

Wood pulp obtained by subjecting pulpwood, wood chips, particles or residues to a series of mechanical and chemical treatments, none of which alone is sufficient to make the fibres separate readily. It may be bleached or unbleached. **It includes** chemi-groundwood pulp, chemi-mechanical wood pulp, etc. (named in the order and importance of the treatment during the manufacturing process). **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

7.3 CHEMICAL WOOD PULP

Wood pulp obtained by subjecting pulpwood, wood chips, particles or residues to a series of chemical treatments. **It includes** sulphate (kraft) wood pulp; soda wood pulp and sulphite wood pulp. It may be bleached, semi-bleached or unbleached. **It excludes** dissolving grades of wood pulp. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content). If available, statistics for the following four component pulps are also requested: unbleached sulphite pulp; bleached sulphite pulp; unbleached sulphate pulp; and bleached sulphate pulp.

7.3.1 SULPHATE UNBLEACHED PULP

7.3.2 SULPHATE BLEACHED PULP

Wood pulp obtained by mechanically reducing pulpwood, wood chips, particles or residues to small pieces that are subsequently cooked in a pressure vessel in the presence of sodium hydroxide cooking liquor (soda pulp) or a mixture of sodium hydroxide and sodium sulphite cooking liquor (sulphate pulp). **It excludes** dissolving grades of wood pulp. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content). Data for two classes (bleached, including semi-bleached, and unbleached) are requested separately.

7.3.3 SULPHITE UNBLEACHED PULP

7.3.4 SULPHITE BLEACHED PULP

Wood pulp obtained by mechanically reducing pulpwood, wood chips, particles or residues to small pieces that are subsequently cooked in a pressure vessel in the presence of a bisulphite cooking liquor. Bisulphites such as ammonium, calcium, magnesium and sodium are commonly used in this process. **It excludes** dissolving grades of wood pulp. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content). Data for two classes (bleached, including semi-bleached, and unbleached) are requested separately.

7.4 DISSOLVING GRADES

Chemical pulp (sulphate, soda or sulphite) made from wood of special quality, with a very high alpha-cellulose content (usually 90% and over). This type of pulp is always bleached and is readily adaptable for uses other than papermaking. It is used principally as a source of cellulose in the manufacture of products such as synthetic fibres, cellulose plastic materials, lacquers and explosives. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

8 OTHER PULP

Pulp manufactured from waste paper or from fibrous vegetable materials other than wood and used for the manufacture of paper, paperboard and fibreboard. **In JQ1 and JQ2, it is an aggregate comprising pulp from fibres other than wood and recovered fibre pulp. It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

8.1 PULP FROM FIBRES OTHER THAN WOOD

Pulp manufactured from fibrous vegetable materials other than wood and used for the manufacture of paper, paperboard and fibreboard. **It excludes** pulp made from recovered paper. **It includes** pulps made from: straw; bamboo; bagasse; esparto; other reeds or grasses; cotton fibres; flax; hemp; rags; and other textile wastes. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

8.2 RECOVERED FIBRE PULP

Pulp manufactured from recovered paper or paperboard and used for the manufacture of paper, paperboard and fibreboard. **It excludes** pulp made from straw; bamboo; bagasse; esparto; other reeds or grasses; cotton fibres; flax; hemp; rags; and other textile wastes. **It is reported in** metric tonnes air-dry weight (i.e. with 10% moisture content).

9 RECOVERED PAPER

Waste and scraps of paper or paperboard that have been collected for re-use or trade. **It includes** paper and paperboard that has been used for its original purpose and residues from paper and paperboard production. **It is reported in metric tonnes.**

10 PAPER AND PAPERBOARD

The paper and paperboard category is an aggregate category. **In the production and trade statistics, it represents the sum of** graphic papers; sanitary and household papers; packaging materials and other paper and paperboard. **It excludes** manufactured paper products such as boxes, cartons, books and magazines, etc. **It is reported in metric tonnes.**

10.1 GRAPHIC PAPERS

The graphic papers category is an aggregate category. **In the production and trade statistics, it represents the sum of** newsprint; uncoated mechanical; uncoated woodfree and coated papers. Products in this category are generally manufactured in strips or rolls of a width exceeding 15 cm or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. **It excludes** manufactured paper products such as books and magazines, etc. **It is reported in metric tonnes.**

10.1.1 NEWSPRINT

Paper mainly used for printing newspapers. It is made largely from mechanical pulp and/or recovered paper, with or without a small amount of filler. Products in this category are generally manufactured in strips or rolls of a width exceeding 36 cm or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. Weights usually range from 40 to 52 g/m² but can be as high as 65 g/m². Newsprint is machine finished or slightly calendered, white or slightly coloured and is used in reels for letterpress, offset or flexo printing. **It is reported in metric tonnes.**

10.1.2 UNCOATED MECHANICAL

Paper suitable for printing or other graphic purposes where less than 90% of the fibre furnish consists of chemical pulp fibres. This grade is also known as groundwood or wood-containing paper and magazine paper, such as heavily filled supercalendered paper for consumer magazines printed by the rotogravure and offset methods. **It excludes** wallpaper base. **It is reported in metric tonnes.**

10.1.3 UNCOATED WOODFREE

Paper suitable for printing or other graphic purposes, where at least 90% of the fibre furnish consists of chemical pulp fibres. Uncoated woodfree paper can be made from a variety of furnishes, with variable levels of mineral filler and a range of finishing processes such as sizing, calendering, machine glazing and watermarking. This grade includes most office papers, such as business forms, copier, computer, stationery and book papers. Pigmented and size press "coated" papers (coating less than 5 g per side) are covered by this heading. **It excludes** wallpaper base. **It is reported in metric tonnes.**

10.1.4 COATED PAPERS

All paper suitable for printing or other graphic purposes and coated on one or both sides with carbon or minerals such as china clay (kaolin), calcium carbonate, etc. Coating may be by a variety of methods, both on-machine and off-machine, and may be supplemented by supercalendering. **It includes** raw carbon and self-copy paper in rolls or sheets. **It excludes** other copying and transfer papers. **It is reported in metric tonnes.**

10.2 SANITARY AND HOUSEHOLD PAPERS

This covers the stock of a wide range of tissue and other hygienic papers for use in households or commercial and industrial premises. Products in this category are generally manufactured in strips or rolls of a width exceeding 36 cm or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. Examples are toilet paper and facial tissues, kitchen towels, hand towels and industrial wipes. Some tissue is also used in the manufacture of baby napkins, sanitary towels, etc.

The parent reel stock is made from virgin pulp or recovered fibre or mixtures of these. **It is reported in metric tonnes.**

10.3 PACKAGING MATERIALS

Paper or paperboard mainly used for wrapping and packaging purposes. Products in this category are generally manufactured in strips or rolls of a width exceeding 36 cm or in rectangular sheets with one side exceeding 36 cm and the other exceeding 15 cm in the unfolded state. **It excludes** unbleached kraft paper and paperboard that are not sack kraft paper or Kraftliner and weighing more than 150 g/m² but less than 225 g/m²; felt paper and paperboard; tracing papers; not further processed uncoated paper weighing 225 g/m² or more. **It is reported in metric tonnes.**

10.3.1 CASE MATERIALS

Papers and boards mainly used in the manufacture of corrugated board. They are made from any combination of virgin and recovered fibres and can be bleached, unbleached or mottled. **It includes** kraftliner, testliner, semi-chemical fluting, and waste-based fluting (*Wellenstoff*). **It is reported in metric tonnes.**

10.3.2 CARTONBOARD

Sometimes referred to as folding boxboard, it may be single- or multi-ply, coated or uncoated. It is made from virgin and/or recovered fibres, and has good folding properties, stiffness and scoring ability. It is mainly used in cartons for consumer products such as frozen food and for liquid containers. **It includes** paper and paperboard covered or coated with plastics (excluding adhesives) and coated multi-ply. **It is reported in metric tonnes.**

10.3.3 WRAPPING PAPERS

Wrappings (up to 150 g/m²): Papers whose main use is wrapping or packaging made from any combination of virgin or recovered fibres, bleached or unbleached. They may be subject to various finishing and/or marking processes. **It includes** sack kraft, other wrapping krafts, sulphite and greaseproof papers as well as coated paper and paperboard not uniformly bleached throughout the mass, except multi-ply. **It excludes:** tracing papers. **It is reported in metric tonnes.**

10.3.4 OTHER PAPERS MAINLY FOR PACKAGING

This category embraces all papers and boards mainly for packaging purposes other than those listed above. Most are produced from recovered fibres, e.g. greyboards, and go for conversion, which in some cases may be for end-uses other than packaging. **It is reported in metric tonnes.**

10.4 OTHER PAPER AND PAPERBOARD N.E.S. (NOT ELSEWHERE SPECIFIED)

Other papers and boards for industrial and special purposes. **It includes** cigarette papers and stock of filter papers, as well as gypsum liners and special papers for insulating, roofing, and other specific applications or treatments; wallpaper base; unbleached kraft paper and paperboard that are not sack kraft paper or Kraftliner and weighing more than 150 g/m² but less than 225 g/m²; felt paper and paperboard; tracing papers; not further processed uncoated paper weighing 225 g/m² or more; and raw copying and transfer papers, in rolls or sheets except carbon or self-copy paper. **It excludes** all composite, not coated, paper and paper board of flat layers stuck together; coated paper and paperboard not uniformly bleached throughout the mass; and paper and paperboard covered or coated with plastics (excluding adhesives). **It is reported in metric tonnes.**

SECONDARY PROCESSED WOOD AND PAPER PRODUCTS

11 SECONDARY WOOD PRODUCTS

11.1 FURTHER PROCESSED SAWNWOOD

11.1.C Coniferous

11.1.NC Non-Coniferous

11.1.NC.T of which tropical

Wood sawn or chipped lengthwise (including strips and friezes for parquet flooring, not assembled) and continuously shaped (tongued, grooved, rebated, V-jointed, beaded, moulded, rounded or the like) along any of its edges or faces, whether or not planed, sanded or finger jointed. It **excludes** sawn or chipped wood with further treatment of edges and/or faces other than planing, or sanding.

11.2 WOODEN WRAPPING AND PACKAGING MATERIAL

Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood; pallet collars of wood. Casks, barrels, vats, tubs and other coopers' products and parts thereof, of wood, including staves.

11.3 WOOD PRODUCTS FOR DOMESTIC/DECORATIVE USE

Wooden frames for paintings, photographs, mirrors or similar objects; tableware and kitchenware of wood; and wood marquetry and inlaid wood, cases for jewellery or cutlery, statuettes and other ornaments of wood; hat racks.

11.4 OTHER MANUFACTURED WOOD PRODUCTS

Tools, tool handles, broom or brush bodies and handles, boot or shoe lasts or trees; clothes hangers, coffins and other articles of wood.

11.5 BUILDER'S JOINERY AND CARPENTRY OF WOOD

Windows, doors and coverings thereof as well as cellular wood panels, assembled parquet panels, shingles and shakes.

11.6 WOODEN FURNITURE

Seats with wooden frames, such as wooden camping and garden seats etc. and parts thereof **except** seats convertible into beds, swivel seats, medical seats.

Wooden furniture other than seats as of a kind used in offices, in the kitchen, bedrooms and elsewhere, as well as parts of all these.

11.7 PREFABRICATED BUILDINGS

11.7.1 PREFABRICATED BUILDINGS PREPONDERANTLY MADE OF WOOD

E.g.: Log cabins, houses prefabricated from particle board.

12 SECONDARY PAPER PRODUCTS

It **includes** all articles of paper ready for use. It **excludes** paper in rolls and sheets cut in the formats specified in JQ2.

12.1 COMPOSITE PAPER AND PAPERBOARD

Composite paper and paperboard (made by sticking flat layers of paper or paperboard together with an adhesive), not surface-coated or impregnated, whether or not internally reinforced, in rolls or sheets

12.2 SPECIAL COATED PAPER AND PULP PRODUCTS

Paper, paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, covered, surface-coloured, surface-decorated or printed, in rolls or sheets. It **includes** tarred, bituminised or asphalted paper and paperboard. It **excludes** composite paper and paperboard (made by sticking flat layers of paper or paperboard together with an adhesive), not surface-coated or impregnated.

- 12.3 CARBON PAPER AND COPYING PAPER, READY FOR USE**
Carbon paper, self-copy paper and other copying or transfer, duplicator stencils and offset plates, of paper, whether or not put up in boxes. **It excludes** raw carbon, self-copy and other copying or transfer papers in paper in rolls or sheets.
- 12.4 HOUSEHOLD AND SANITARY PAPER**
Products ready for use: toilet paper and similar paper, cellulose wadding or webs of cellulose fibres, of a kind used for household or sanitary purposes, in rolls of a width not exceeding 36 cm, or cut to size or shape. **It includes** handkerchiefs, cleansing tissues, towels, tablecloths, serviettes, napkins for babies, tampons, bed sheets and similar household, sanitary or hospital articles, articles of apparel and clothing accessories, of paper pulp, paper, cellulose wadding or webs of cellulose fibres. **It excludes** sanitary paper produced stock.
- 12.5 PACKAGING CARTONS, BOXES ETC.**
Cartons, boxes, cases, bags and other packing containers, of paper, paperboard, cellulose wadding or webs of cellulose fibres; box files, letter trays, and similar articles, of paper or paperboard of a kind used in offices, shops or the like.
- 12.6 OTHER ARTICLES OF PAPER AND PAPERBOARD, READY FOR USE**
Products ready for use: e.g. wallpaper and similar wall coverings; window transparencies of paper; floor coverings on a base of paper or of paperboard, whether or not cut to size; all office material like for correspondence, document storage as well as albums, labels of all kinds, bobbins, spools, cops and similar supports of paper pulp, paper or paperboard (whether or not perforated or hardened); all other paper, paperboard, cellulose wadding and webs of cellulose fibres, cut to size or shape; other articles of paper pulp, paper, paperboard, cellulose wadding or webs of cellulose fibres.
- 12.6.1 PRINTING AND WRITING PAPER, READY FOR USE**
For example: strips or rolls for office machines, continuous forms
- 12.6.2 ARTICLES, MOULDED OR PRESSED FROM PULP**
For example: packagings for eggs
- 12.6.3 FILTER PAPER AND PAPERBOARD, READY FOR USE**
- 12.7 PRINTED ARTICLES**
- 12.7.1 PRINTED BOOKS**
Printed books, brochures, leaflets and similar printed matter, whether or not in single sheets
- 12.7.2 NEWSPAPERS**
Newspapers, journals and periodicals, whether or not illustrated or containing advertising material
- 12.7.3 OTHER PRINTED ARTICLES**
Children's picture, drawing or colouring books; music, printed or in manuscript, whether or not bound or illustrated; maps and hydrographic or similar charts of all kinds, including atlases, wall maps, topographical plans and globes, printed; plans and drawings for architectural, engineering, industrial, commercial, topographical or similar purposes, being originals drawn by hand; hand-written texts; photographic reproductions on sensitised paper and carbon copies of the foregoing; unused postage, revenue or similar stamps of current or new issue in the country to which they are destined; stamp-impressed paper; banknotes; cheque forms; stock, share or bond certificates and similar documents of title; transfers (decalcomania); printed or illustrated postcards; printed cards bearing personal greetings, messages or announcements, whether or not illustrated, with or without envelopes or trimmings; calendars of any kind, printed, including calendar blocks; other printed matter, including printed pictures and photographs.

STANDARD CONVERSION FACTORS

A. Imperial – Metric Conversions

Imperial Unit	Metric Equivalent
1 inch	= 25.4 millimetres
1 square foot	= 0.0929 square metre
1 cubic foot	= 0.02832 cubic metre
1 short ton	= 0.9072 metric ton
1 long ton	= 1.016 metric ton

B. Forest Products Measures

JQ Code	Product and Unit	Cubic Metres	Cubic Feet	1000 Board Feet	Standard (Petrograd)
1	ROUNDWOOD				
	1 hoppus cubic foot	0.03605	1.273		
	1 ton of 5 hoppus cubic feet	1.8027	63.66		
	1 cunit	2.83	100		
	1 cord ¹	3.625	128		
	1 stere	1	35.315		
5	1 fathom ¹	6.1164	216		
	SAWNWOOD				
	1 standard (Petrograd)	4.672	165	1.98	1
	1 000 board/super feet	2.36	83.33	1	0.505
	1 ton of 50 cubic feet	1.416	50	0.6	0.303
6	WOOD-BASED PANELS				
	1 000 square metres (1 millimetre thickness)	1	35.315	0.4238	
	1 000 square feet (1/8 inch thickness)	0.295	10.417	0.125	

¹ Stacked volume

C. Approximate Roundwood Factors

JQ Code	Product and Unit	Cubic Metres	Cubic Feet
Solid volume without bark			
1.2.1	SAWLOGS AND VENEER LOGS		
	1 000 board/super feet	4.53	160
1.2.2	PULPWOOD (ROUND & SPLIT)		
	1 stere	0.72	25.4
	1 cord	2.55	90
1.1	WOOD FUEL, INCLUDING WOOD FOR CHARCOAL		
	1 stere	0.65	23
	1 cord	2.12	74.9
	1 000 stacked cubic feet	18.41	650

D. Approximate Weight and Volume Factors

JQ Code	Product	Kg/CUM			CUM/MT		
		G	C	NC	G	C	NC
1.1	WOOD FUEL, INCLUDING WOOD FOR CHARCOAL	725	625	750	1.38	1.60	1.33
2	WOOD CHARCOAL	167					
1.2.1	SAWLOGS AND VENEER LOGS						
1.2 NC.T	Tropical			730			1.37
1.2.1.C & .NC	Other		700	800		1.43	1.25
1.2.2	PULPWOOD (ROUND & SPLIT)	675	650	750	1.48	1.54	1.33
1.2.3	OTHER INDUSTRIAL ROUNDWOOD	750	700	800	1.33	1.43	1.25
5	SAWNWOOD		550	700		1.82	1.43
6.1	VENEER SHEETS	750			1.33		
6.2	PLYWOOD	650			1.54		
6.3	PARTICLE BOARD, OSB, and OTHER	650			1.54		
6.4.1	HARDBOARD	950			1.053		
6.4.2	MDF (MEDIUM DENSITY FIBREBOARD)				2		
6.4.3	OTHER FIBREBOARD	250			4		

Note: G = general; C = coniferous; NC = non-coniferous

The factors in tables C and D will vary between and within countries. Please use national factors where possible and indicate these in your response.

.....
Bhumibol Adulyadej , Rex.
Given on the 30th day of August , B.E. 2550;
Being the 62th Year of the Present Reign.

His Majesty King Bhumibol Adulyadej has been graciously pleased to proclaim that:

Whereas it is expedient to revise the law on statistics:

Be it , therefore , enacted by the King , by and with the advice and consent of the National Legislative Assembly , as follows:

Section 1 This act shall be called the "Statistics Act, B.E 2007"

Section 2 This act shall come into force from the day following the date of its publication in the Government Gazette.

Section 3 The Statistics Act BE 2508 shall be repealed.

Section 4 In this Act:

"Statistics" mean statements or figures of collected data

"Survey" means collection of existing data to obtain statistics

"Census" means survey by means of enumeration from all units relevant to such information.

"Sample Survey" means survey by means of enumeration from some selected sample units relevant to such information

"Agency" means government agencies, state enterprises, public organizations, local administration organizations and other state agencies.

"Director" means the Director of the National Statistics Office.

"Competent officer" means a person appointed by the Director to carry out this Act.

Section 5 The National Statistics Office shall be the central state agency in charge of the technical statistics work.

Section 6 The National Statistics Office shall have the following authority and duties:

(1) Preparing the Master Plan for the implementation of the government statistical work.

(2) Preparing statistics standards to present to the cabinet for approval.

(3) Promoting and developing statistical work both for the government and private sector.

(4) Conducting census and surveys or directing the surveys on various statistics of the country.

(5) Coordinating and consulting with agencies to prepare plans that define the responsibilities in implementing the statistical work under the Master Plan as mentioned in (1).

(6) Providing recommendations, advice or assistance to agencies regarding the preparation of work plans and methodology for data collection as well as processing and analyzing statistical outcomes.

(7) Coordinating with agencies to create statistical network in order to obtain important and timely statistical database of the country

(8) Providing statistical service to the general public.

(9) Disseminating statistics and organizing education and training on statistics.

(10) Cooperating and coordinating with other countries and international organizations regarding statistical work.

(11) Performing other acts as prescribed by the law and as assigned by the cabinet.

Section 7 For the preparation of the Master Plan under Section 6 (1), the National Statistics Office shall coordinate with relevant agencies and prepare the plan in such a way that it is consistent with the national policy and development plan. Once it is approved by the cabinet, relevant agencies shall follow the Master Plan.

Section 8 Agencies shall prepare their statistics in accordance with the plan defining the responsibilities under section 6 (5), and shall ensure that they meet statistical standards.

In the event that any agency fails to perform according to paragraph one, the National Statistics Office shall report to the cabinet for instructions as it is deemed appropriate.

Section 9 When a census or sample survey is going to be conducted and specified that individual's duty to provide data. It should be announced in the related Ministerial Regulations. Such announcement shall have at least the following information:

(1) Objective

(2) Duration of survey

(3) Area where survey will be conducted

(4) Individuals who will provide information and the methods of providing information

(5) responsible agency

Section 10 When Ministerial Regulations is set under section 9, the Director announces details on the procedures in conducting a census or sample survey regarding the following;

(1) data collecting methods

(2) questions for the respondents or details of the questionnaire as well as instructions for filling out the questionnaire.

(3) The period during which the competent officer shall conduct interviews or send questionnaires.

(4) The period during which the respondents shall return the completed questionnaire to the competent officer.

(5) Other information that the public should know.

The notification under paragraph one shall be made in the Government Gazette and on electronic network systems or other media.

Section 11 When the notification under Section 10 is issued, the individual required to provide information under Section 9(4) shall have the duty to provide information or fill out the questionnaire as described in Section 10(2) correctly and truthfully.

Section 12 When the notification under Section 10 is made, the competent officer be authorized to enter the building or workplace of the person required to provide information or fill out questionnaire between sunrise and sunset or at any other time as notified by the said person in order to make inquiries about the information or fill out the questionnaire, or to check the accuracy of the information. To this end, the said person shall accommodate the competent official as appropriate.

In performing the duty under paragraph one, the competent officer shall present an ID card to relevant parties.

The ID card shall be in the format prescribed in the Ministerial Regulations

Section 13 In the event that the person who will provide information or fill out the questionnaire is unavailable, in accordance with the procedure, method, period of time defined in the Ministerial Regulations should be applied to obtain data.

Section 14 The agency shall coordinate with the National Statistics Office for the benefits in creating statistical network and developing important and timely statistical database of the country.

In the event that the National Statistics Office requires information from the survey or information from records, reports or any other documents that are in the possession of any agency, for conducting important and necessary statistics for country development, such agencies shall send that information to the National Statistics Office within thirty days as of the date notified by the National Statistics Office.

The information that the agency is required to submit under paragraph one or two shall not disclose the name of the person providing the information unless such person has given consent in writing or such information is already disclosed or accessible to the public.

Section 15 Personal information obtained under this act shall be strictly considered confidential. A person who performs his or her duty hereunder or a person who has the duty of maintaining such information cannot disclose it to anyone who doesn't have a duty hereunder except in the case that:

(1) Such disclosure is for the purpose of any investigation or legal proceedings in a case relating to an offense hereunder.

(2) Such disclosure is for the use of agencies in the preparation, analysis or research of statistics provided that such disclosure does not cause damage to the information owner and does not identify or disclose the data owner.

Section 16 By virtue of Sections 14 and 15, anyone performing duties in an agency or the National Statistics Office shall not use the personal information provided by the owner or given in the questionnaire for any purpose other than the statistical analysis or research.

Section 17 For all the information that can be disclosed, the National Statistics Office may provide such information as a service to the general public. The cost, as appropriate as for statistical service, may be charged according to the criteria and rates prescribed by the National Statistics Office.

Section 18 Any person who fails to provide information or fill out the questionnaire in accordance with the method prescribed in the notification under Section 10, or fails to return the completed questionnaires to the competent officer or an agency within the period specified in the notification under Section 10 (4) , or fails to accommodate the competent officer performing his/her duty under Section 12 shall be liable for a fine of not exceeding three thousand Baht.

Section 19 Any person with the duty to provide information under Section 11 who provides false information shall be liable for imprisonment of not exceeding three months or a fine of not exceeding five thousand Baht, or both.

Section 20 Any person who violates Section 15 or Section 16 shall be liable for imprisonment of not exceeding one year or a fine of not exceeding twenty thousand Baht, or both.

Section 21 All Ministerial Regulations, notifications or regulations issued by virtue of the Statistics Act B.E. 2508 and are in force on the date this Act is published in the Government Gazette shall continue to take effect so long as they are not in conflict with or in contrary to the provisions of this Act, until the Ministerial Regulations, notifications or regulations hereunder are issued.

Section 22 The ICT Minister shall be in charge of the enforcement of this Act and shall have the power to issue Ministerial Regulations to carry out this Act.

Such Ministerial Regulations shall come into force when published in the Government Gazette.

Countersigned
General Surayud Chulanont
Prime Minister



Field Observation at Elephant Training Center, Lampang



Field Observation of Thaweephan Wood Flooring Co.,Ltd., Chiang Mai

