



# MASKAYU



**TECHNICAL FACT FINDING MISSION  
TO AUSTRIA**

**DIALOGUE ON WOOD WOOL  
CEMENT BOARD**



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## Publisher

LEMBAGA PERINDUSTRIAN KAYU MALAYSIA  
(MALAYSIAN TIMBER INDUSTRY BOARD)  
Level 13 - 17, Menara PGRM,  
8, Jalan Pudu Ulu, Cheras, P.O. Box 10887,  
50728 Kuala Lumpur, Malaysia  
Tel : 603-9282 2235  
Fax : 603-9200 3769 / 9283 9792  
E-mail : info@mtib.gov.my  
Website : www.mtib.gov.my

## Printer

Abadi Ilmu Sdn. Bhd.  
No. 6A & 6B, Jalan SS4D/14,  
47301 Petaling Jaya,  
Selangor Darul Ehsan, Malaysia  
Tel : 03-7804 4588 / 7888 6158  
Fax : 03-7804 4152  
E-mail : abadiilmu@gmail.com  
Website : www.abadiilmu.com



**Cover:** MDF and particleboard are manufactured from wood waste. More details on pages 22-25.



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## TECHNICAL FACT FINDING MISSION TO AUSTRIA



*Group photo in front of KLH CLT house.*

Emerging technologies which are known to be more effective in terms of material utilisation as well as structural reliability, are being increasingly applied to structural timber design and engineering in the construction industry. This is currently being practised in several developed countries such as Austria, Germany, the UK, Australia, Japan, Korea and New Zealand as a result of intensive R&D and compliance to latest International Standards.

However the application of these technologies is still limited in the Malaysian construction industry, thus affecting the use of timber in the industry. These concerns are due to specific requirements in the Uniform Building By-Laws (UBBL), lack of design and engineering research as well as lack of application of advanced technology and products. Many building codes discriminate against the use of timber for construction, deeming it as combustible. Such a perception is misguided since properly designed timber construction can perform as well as other materials in the event of fire. In most cases of fires, it is the content rather than the construction material that provides the fire load, so the fire itself is no worse in a timber structure than in a steel or concrete structure.

As part of its continued efforts to encourage technology diffusion as well as to learn from the experience of developed countries on the application of Engineered Timber Products (ETP) as load bearing and IBS products, MTIB arranged a technical fact finding mission to Austria from 27 April to 2 May. The programme was participated by seven delegates representing MTIB, Public Works Department (JKR), Fire and Rescue Department, Pertubuhan Arkitek Malaysia (PAM) and two from the timber industry. The group was led by Dr. Jalaluddin Harun, Director-General of MTIB.

The objectives of the visit were to discuss the procedures and testings in the legislation and building codes to fulfill the requirements of the authorities such as the Fire Department in the use of timber as a construction material in Austria and Europe; to observe the sustainable construction industry in Austria in particular the use of timber for residential, commercial and industrial buildings; to establish networking and cooperation under the of G-to-G platform for applications of the "Engineered Timber Product (ETP)" in the construction industry; and to learn the manufacturing processes of ETP through visits to manufacturers of glulam, cross laminated timber (CLT) and Timber Frame System as well as the CREE System. CREE GbmH is a subsidiary of Rhomberg, the fourth generation of Austrian Building company founded in 1893. CREE is an award winning green building firm and innovative leader in design and construction of tall and mid-size building multi family residential buildings. It is a hybrid of wood and



*Construction of KLH CLT house-completed within three days.*



## TIMBER WORLD IN BRIEF

### AUSTRALIA

#### New Home Constructions, Renovations Increase in 2014

According to the latest figures from the Housing Industry Association, renovations recorded an increase by 8.2%, while investment in renovation is expected to increase to AUD31 billion (USD28.62 billion) in 2017, up from AUD28 billion in 2013. New home construction in 2013 reached 167,900 and the number is set to increase by 8.2% to 180,000 in 2014. The above-average housing starts will further increase over the next three years to 175,100, 169,600 and 173,500 in fiscal 2015, 2016 and 2017 respectively. South Australia, Victoria and Tasmania will face a decreasing or stagnant number of construction starts in the next three years while high levels of construction will continue in Western Australia, Queensland and New South Wales.

*The Australian, 28 May*

#### Plans to Construct Tallest Timber Commercial Building

A seven-storey commercial timber building is proposed for the heart of Sydney. The building, which will be the tallest timber commercial building in Australia, follows the recent completion of Forté, the country's tallest timber residential tower, built in Melbourne.

The commercial building, designed by Fitzpatrick + Partners and delivered by Lend Lease, will feature a glulam structure and a glass curtain wall. The glulam will be provided by Austrian manufacturer KLH, which also supplied the cross-laminated timber for the 10-storey Forté tower. The project is currently in the detailed design phase.

*TTJ online, 12 May*

### CHINA

#### Furniture and Parts Exports Rose 3.3%

In China's Guangdong province, a 3.3% jump was recorded in the exports of furniture and parts between January and March 2014 to CNY23.83 billion, as compared to the first three months of 2013, as revealed by the General Administration of Customs. Of the total, exports value to ASEAN, the EU and the US, rose by 14.8% to CNY2.46 billion, grew 7.8% to CNY4.36 billion and increased by 3.5% to CNY7.68 billion respectively.

Exports to Japan jumped 21.6% to CNY1.38 billion. Also, of the total exports, 7.4%, 35.5% and 57.1% were exports handled by state-owned enterprises, wholly foreign owned enterprises and private enterprises in the province, with exports value reaching CNY1.77 billion, CNY8.46 billion and CNY13.6 billion, down by 5%, 1.8% and up by 8.1%, respectively. In terms of trading types, exports through processing trade and exports through general trade accounted for 16.8% and 80.9% of the total export of furniture and parts for the province during the

three months, with exports value decreasing 1.8% and growing 3.9% to CNY4 billion and CNY19.27 billion respectively.

*askci.com, 9 May*

#### Producing 25 Million Cubic Metres of Particleboard Annually

Currently, production of particleboard in China is mainly concentrated in Shandong, Hebei, Jilin, Jiangsu, Fujian, Guangdong and Guangxi provinces. There more than 700 enterprises producing particleboard with an output capacity of around 25 million m<sup>3</sup>. Most of particleboard production lines are Chinese made. Plants utilising imported production lines are mainly found in Guangdong, Guangxi, Fujian, Jiangsu and Hebei provinces.

China's particleboard industry has been developing rapidly in recent years and output increased to 25.6 million m<sup>3</sup> in 2011 from 6.4 million m<sup>3</sup> in 2003.

In the domestic market particleboard is used mainly for kitchen, office and bedroom furniture, truck decks, packaging and for surfaced interior decoration industry. Guangdong provinces recorded the highest consumption of particleboard with 8 million m<sup>3</sup> in 2013.

*Source: ITTO, 1 - 15 May*

### EUROPEAN UNION

#### Imports of Chinese Hardwood Ply Fall 4%

EU imports of Chinese hardwood plywood fell slightly last year, but the EU Timber Regulation had less of an impact than expected. The EU's imports were down 4% on 2012, to 939,000 m<sup>3</sup>, according to the latest International Tropical Timber Organisation report. However, China's market share declined only slightly, from 45.2% in 2012 to 43.4% in 2013, and it maintained its position as the largest single supplier, suggesting that the EUTR was not a deterrent.

There was speculation that the EUTR might reduce China's market share because of the difficulty of obtaining reliable legality documentation in China where supply chains tend to be complex, the ITTO said. But while the EUTR has encouraged European importers to buy from a narrower range of manufacturers in China, it seems these companies have been able to satisfy EU demands for legality assurance.

This has included switching from face veneers from countries perceived to be high risk to FSC-certified veneers or dyed reconstituted fine line veneers of Chinese Poplar.

During 2013 imports of Chinese hardwood plywood fell by 6.5% in the UK; 5% in Belgium; 4% in Germany; and 30% in the Netherlands but this was offset by a rise of 9% in France and 46% in Bulgaria and Romania.

*Source: wpbionline.com, 1 May*

### EUROPE

#### EPLF Members Produce 113 Million Square Metres of Laminated Flooring

European Producers of Laminate Flooring (EPLF) recorded a production volume of 113 million m<sup>2</sup> in the first quarter of 2014 and demand remained at a good level. The German market

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saw sales amounting to 19.2 million m<sup>2</sup> in the first quarter of 2014. The global market for laminate flooring is estimated at 925 million m<sup>2</sup>, 53% of which is produced by EPLF member companies. A total of 89% of all laminate flooring sold in the European market is produced by EPLF members.

Holz-Zentralblatt, 16 May

**FINLAND**  
**Wood Construction Reduces Stress and Offers a Healthy Living Environment**

Wood has psychological effects on people and a similar stress-reducing effect to nature, says Marjut Wallenius, a Docent and Doctor of Psychology at the University of Tampere. The use of wood promotes the health and well-being of mind and body. Based on studies carried out in Norway, Japan, Canada and Austria, wood seems to have positive effects on the emotional state of people. Environments with wooden structures cause a drop in blood pressure and pulse and have a calming effect. Now that we are very familiar with the technical properties of wood, we should carry out a cross-disciplinary research project about the psychological and physiological effects of wood, suggests Wallenius. According to Wallenius, wooden surfaces make a room feel warmer and cosier and they also have a calming effect. In these properties, wood beats all other normal surface materials.

The naturalness and natural origin of wood is also why wood is considered a warm and cosy material in construction. Based on studies carried out so far, we can say that wood reduces stress in a person and has a calming effect. This is based on the positive emotional experience that wood causes, such as proximity to nature, warmth, homeliness and a relaxing effect.

Woodforgood.com, May

**GERMAN**  
**Parquet Production Stable in First Quarter 2014**

German parquet flooring manufacturers recorded stable production levels in the first three months of 2014 compared to the same period of the previous year. According to the parquet flooring association VDP, a production total of 2.7 million m<sup>2</sup> in the first quarter of 2014, was 0.5% less than in the same period of the previous year. However, production of three sided wide plank flooring increased 16% to a total of 1.2 million m<sup>2</sup> in the first quarter of 2014.

Holz-Zentralblatt, 9 May

**Importers Launch Quality Plywood Initiative**

German plywood importers have launched a new Quality Plywood Initiative (IQS) which, according to GD Holz, the German timber importers association, aims to promote plywood to consumers and encourage fair competition in the market.

A central component of IQS is to develop minimum quality requirements that must be met and declared by manufacturers supplying German importers that have joined the initiative.

IQS members are committed to ensuring that their suppliers

accurately report essential performance characteristics such as veneer wood species, grade and glue quality.

Products supplied by IQS members that conform to the quality and declaration requirements will be marked with the IQS logo. IQS also intends to work with plywood suppliers to develop and distribute plywood product information sheets.

Source: wpbionline.com, 7 May

**JAPAN**  
**April Housing Starts Better Than Expected**

April housing starts were up on levels in March, a particularly poor month but, at 75,300, were some 4% down from April 2013. However, the April figures were much better than expected as analysts had forecast starts to fall as much as 8% year on year.

Source: ITTO, 16 - 31 May

**NORWAY**  
**Data on the Construction of Housing Units Decreased**

In the first quarter of 2014, licenses were granted for the construction of 6,160 new housing units in Norway which is equivalent to 873,000 m<sup>2</sup> of housing area. The number of licenses is 22% lower than in the first quarter of 2013. The most licenses were granted in Rogaland County with 1,140 licenses.

hegnar.no, 9 May

**SWEDEN**  
**Order Bookings for Wooden Houses and Flats Rose**

Order bookings for individual wooden houses rose by 11% year-on-year during the first four months of 2014, figures from the Swedish Federation of Wood and Furniture Industry (TMF) show. A total 821 houses were ordered during the period. Order bookings for groups of small-scale houses rose by 214% during the same period to 506.

The total value of order bookings, including exports, rose by 13% to SEK1.50 billion (USD 228.43 million).

Woodnet, 15 May

**UNITED STATES**  
**April Housing Starts Increased**

Privately-owned housing starts in April were at a seasonally adjusted annual rate of 1,072,000. This is 13.2% above the revised March estimate of 947,000 and is 26.4% above the April 2013 rate of 848,000. Single-family housing starts in April were at a rate of 649,000, this is 0.8% above the revised March figure of 644,000. The April rate for units in buildings with five units or more was 413,000.

Privately-owned housing units authorised by building permits in April were at a seasonally adjusted annual rate of 1,080,000. This is 8.0% above the revised March rate of 1,000,000 and

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APRIL 2014

## SHIPPING NEWS



### Malaysian Shipping Industry to Remain Strong this Year

The Malaysian shipping industry is expected to remain strong in 2014, supported by high demand for small and medium-sized ships which balances off the decline in orders for tankers and container vessels.

According to Datuk Ir. Kamarulzaman Zainal, Senior Vice President of Industry Intelligence, Malaysia Industry Group for High Technology (MIGHT), medium-sized ships were now increasingly in demand, particularly from the oil and gas industry both within and outside the country. This underlined the need for more complex medium-sized ships which we are capable of manufacturing at local shipyards. He further added that last year, RM7 billion was generated from the export of medium-sized ships to regional countries, Europe, the Middle East and Australia. In addition, the potential to expand the export industry was vast, amid the slowdown in demand for large vessels caused by surplus tonnage of container ships and oil tankers in China. Although slightly impacted, he said that the industry overall was still showing growth, albeit slowly, supported by the National Maritime Plan launched by YAB Dato' Sri Mohd Najib Tun Haji Abdul Razak, Prime Minister of Malaysia at the LIMA 2011.

While officiating the recent LIMA 2013, Dato' Sri Mohd Najib unveiled the Maritime Industry Report (SBSR 2013) prepared by MIGHT. In the report, MIGHT said the maritime industry comprises shipbuilding, ship repairs and production of equipment. The report also noted that the Shipbuilding/Ship Repair Industry plan had been included as an Entry Point

Project (EPP) under the services sector, which supports Malaysia's development as a shipbuilding and ship repair hub.

The EPP in question had been implemented by two key SBSR industry players, Boustead Heavy Industry Corporation Bhd. and Shin Yang Shipping Corporation Bhd., assisted by the Performance Management and Delivery Unit (Pemandu) with MIGHT as the EPP driver.

MIGHT has set the target for the maritime industry to post a profit of up to RM19 billion by 2020, while offering 55,000 job opportunities to the locals.

Source: BERNAMA, 26 April

### Westports Aiming for 5-10% Growth in Container Handling this Year

Westports Holdings Bhd is optimistic that they will achieve between 5-10% growth this year in container handling, underpinned by terminal expansion and a robust global trading environment.

According to Encik Ruben Emir Gnanalingam, CEO of Westports, construction of Container Terminal 7 was on track and scheduled to be fully operational in 2014, increasing the port's capacity to 11 million twenty-foot equivalent units (TEUs) from 9.5 million TEUs in 2013. With the increased capacity, the port would be well-positioned to leverage on the growth opportunities in the region. He also said that the terminal was also designed to handle 19,000 TEU vessels, the world's largest container vessel in the orderbook. Apart from capacity

### Shipments of Timber and Timber Products through Ports in Peninsular Malaysia, April 2014

Products	Port Klang		Kuantan		Pasir Gudang		Tanjung Pelepas		Penang		Total all ports m <sup>3</sup>	% Change April 2014/ March 2014
	m <sup>3</sup>	% Change April 2014/ March 2014	m <sup>3</sup>	% Change April 2014/ March 2014	m <sup>3</sup>	% Change April 2014/ March 2014	m <sup>3</sup>	% Change April 2014/ March 2014	m <sup>3</sup>	% Change April 2014/ March 2014		
Sawntimber	53,449	15	4,705	-40	1,820	7	281	66	8,639	-29	68,894	1
MDF	17,598	29	514	-12	13,717	21	12,275	3	12,854	-14	56,958	9
Mouldings	12,404	3	322	-34	1,942	1	742	47	1,579	-3	16,989	3
Dressed Timber	1,896	23	36	-78	650	-3	263	23	298	-58	3,143	-5
Plywood	6,465	2	-	-	7	-67	48	-	9,799	-3	16,319	-1
Veneer	49	-75	4	-	-	-	-	-	408	19	461	-14
Particleboard	41,532	18	861	81	40	-57	150	-42	-	-	42,583	18
<b>TOTAL</b>	<b>133,393</b>	<b>15</b>	<b>6,442</b>	<b>-32</b>	<b>18,176</b>	<b>15</b>	<b>13,759</b>	<b>5</b>	<b>33,577</b>	<b>-15</b>	<b>205,347</b>	<b>6</b>

Note : Indicates % change over the previous month

Source : MTIB

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expansion, the company was confident cargo shipment and throughput growth momentum would remain robust in the first quarter of this year given the increasing volume on the intra-Asia, Asia-Africa and Asia-Australasia routes.

On the other hand, Westports has also expressed its intention to the government to revise container tariffs. The tariffs have not been revised for the last 11 years but any decision on the adjustment was still up to the government.

For the financial year ended 31 December 2013, Westports' revenue, year-on-year, grew 15% to RM1.71 billion while profit after tax increased 21% to RM435.3 million. The better results was due to an 8% surge in container throughput to 7.5 million TEUs while conventional throughput grew 4% to 10.7 million tonnes. The company's market share last year expanded by 3% to 72% and the port operator dominated Port Klang with 80% transshipment and 60% import/export market share. Westports shareholder's funds stood at RM1.6 billion while cash balance remained healthy at RM342 million. Its net-to-equity ratio was modest at 0.35 times while return on equity increased by 3% to 27%. Westports also declared RM178 million in dividends in line with the company's 75% dividend payout policy. Going forward, the company aimed to maintain the 75% dividend policy.

Westports, besides being involved in container and conventional cargo handling, also provide marine, rental and ancillary services.

Source : Bernama, 30 April

**PSA, MPA Extend Partnership on Developing Singapore Port**

The Maritime and Port Authority of Singapore (MPA) and PSA Corp Ltd (PSA) today signed a memorandum of understanding (MoU) to extend their collaboration under the Port Technology Research and Development Programme. PSA operates the world's largest container transshipment hub in Singapore.

The extension of the programme would allow MPA and PSA to continue with R&D initiatives to develop next-generation technologies for Singapore's future container terminal operations. The MoU was signed by MPA Chief Executive, Mr. Andrew Tan and PSA International Regional Chief Executive Officer, South-East Asia, Mr. Tan Puay Hin.

Mr. Andrew Tan said with growing demand on ports to accommodate ever larger ships and growing amounts of cargo, it was imperative that MPA and PSA leveraged on new technologies to increase port efficiency and productivity.

Through co-funding of such R&D efforts, they hoped to see the adoption of new systems and technologies that would significantly enhance the competitiveness of Singapore as a global transshipment hub and bring benefit to the rest of the industry.

Mr. Tan Puay Hin added that the corporation was pleased to continue the partnership with MPA as the company geared up for the development of the future terminals at Pasir Panjang Phases 3 and 4 as well as Tuas. The innovative technologies developed under the programme would transform their terminal operations and take their productivity and process efficiency to new heights.

Under the MoU, MPA would fund the programme an additional S\$15 million over five years from the Maritime Innovation and Technology Fund while PSA would provide additional co-funding of up to S\$15 million over the same period. This would bring the total amount committed towards the programme to S\$50 million up from the initial S\$20 million. The programme would continue its focus on the key areas of port automation, intelligent planning and control systems, and green port solutions.

Source: BERNAMA, 11 April

**Abu Dhabi Free Port Welcomes Biggest Heavy Lift Cargo Ever**

Abu Dhabi Ports Company (ADPC) has welcomed the largest and longest heavy lift cargo load it has ever handled in the Free Port, next to Zayed Port in Abu Dhabi.

Five heavy lift pieces of infrastructure equipment were unloaded for Abu Dhabi Oil Refining Company (Takreer) for the new carbon black and delayed coker plant which was being built at the chemical refining complex in Ruwais, Abu Dhabi. The infrastructure equipment arrived recently on a heavy project cargo carrier from Ulsan, South Korea. The heavy lift carrier occupied three berths at the Freeport. The MV Dongbang Giant No.1 carried five different pieces of infrastructure which had an overall combined weight of 3,367 metric tonnes, and 29,492 m<sup>3</sup> in volume (freight tonnage).

The heavy lift pieces which varied in weight between 140 and 1,531 metric tonnes were unloaded onto the quayside by a roll off operation with SPMT trailers up to 76 axles. The pieces would be stored in the Free Port for 10 days before being reloaded onto a barge to travel down the coast of Abu Dhabi to Ruwais. The shipment involved very close liaison between the ADPC operations team and their customer Takreer to ensure smooth transshipment and appropriate arrangements for such an extreme cargo. The largest piece of the heavy lift infrastructure equipment had a weight of 1,531 metric tonnes, a width of 12 metres and a length of 116 metres - the longest piece that has ever been received in the Free Port.

ADPC manages and operates the Free Port which is close to the main Zayed Port in the city. The Free Port has the space to handle such cargo, there was easy access and the quayside was reinforced to carry a weight of 4 metric tonnes per square metre.

Source: BERNAMA, 14 April



## APRIL 2014

Total export of timber and timber products from Malaysia in April 2014 increased 1.3% to RM1.84 billion over the previous month. Cumulative export for the period of January to April also increased 8% to RM6.81 billion over the corresponding period.

### Sawntimber

Export of sawntimber in April 2014 decreased 14% in volume and 15% in value to 160,977 m<sup>3</sup> with a value of RM222.3 million compared to the previous month. Cumulative export for the first four months of 2014 decreased 9% in volume to 595,478 m<sup>3</sup>, however increased 2% in value to RM821.2 million over the previous corresponding period.

Exports to the EU for the month decreased 11% to 16,400 m<sup>3</sup> from 18,471 m<sup>3</sup> as recorded in the previous month. Export to the Netherlands and France increased 1% and 33% to 8,461 m<sup>3</sup> and 1,791 m<sup>3</sup> respectively. This is as a result from increase in the selling of new houses in France. However, export to the UK and Germany decreased 19% and 23% to 1,978 m<sup>3</sup> and 1,609 m<sup>3</sup> respectively due to increase in the import of softwood sawntimber by those countries. Similarly, demand from Belgium declined 52% to 1,367 m<sup>3</sup> from 2,822 m<sup>3</sup> in the previous month.

Total exports to West Asia decreased 36% to 25,368 m<sup>3</sup> from 39,482 m<sup>3</sup> in the previous month. Export of sawntimber to Saudi Arabia and Bahrain increased 64% to 5,633 m<sup>3</sup> and 199% to 1,586 m<sup>3</sup> respectively. Similarly, export to Kuwait improved to 966 m<sup>3</sup> from 655 m<sup>3</sup> recorded in the previous month. Extensive construction sector in the region enhanced demand of sawntimber from Malaysia. However, export to the UAE and Oman declined 24% and 59% to 6,628 m<sup>3</sup> and 2,901 m<sup>3</sup> respectively.

Buying from ASEAN reduced 9% to 60,963 m<sup>3</sup> due to declining demand from Thailand, a major importer of Malaysian sawntimber. Export of sawntimber to Thailand and Singapore decreased 16% and 9% to 32,556 m<sup>3</sup> and 12,230 m<sup>3</sup> respectively.

Likewise, shipments to East Asia declined by 6% to 40,505 m<sup>3</sup> as a result of decreasing demand from China and Taiwan. Export to China and Taiwan decreased 13% and 16% to 19,635 m<sup>3</sup> and 10,114 m<sup>3</sup> respectively. In the meanwhile, export to South Korea and Japan increased 69% and 9% to 2,715 m<sup>3</sup> and 6,377 m<sup>3</sup> respectively.

Elsewhere, exports to the US increased 58% to 1,734 m<sup>3</sup> whilst intake by Australia decreased 23% to 1,151 m<sup>3</sup>. Demand from South Africa increased to 6,112 m<sup>3</sup> from 5,801 m<sup>3</sup> recorded in the previous month.

The average FOB price of sawntimber decreased 1% to RM1,381 per m<sup>3</sup> from RM1,396 per m<sup>3</sup> in the previous month. The price of Dark Red Meranti (DRM) decreased 5% to RM1,408 per m<sup>3</sup> from RM1,487 per m<sup>3</sup> in the previous month while the price of DRM to the Netherlands decreased 11% to RM8,817 per m<sup>3</sup> from RM9,898 per m<sup>3</sup> in the previous month. Keruing was traded at RM1,352 per m<sup>3</sup>, an increase of 2% from the previous month.

### Plywood

Total export of plywood in April decreased 4% in volume and also in value to 287,862 m<sup>3</sup> valued at RM494.21 million respectively as compared to the previous month.

Total export to the EU decreased by 16% to 12,242 m<sup>3</sup>. Similarly shipments to Belgium, Denmark and the UK decreased 75%, 28% and 16% to 349 m<sup>3</sup>, 768 m<sup>3</sup> and 9,052 m<sup>3</sup> respectively. However, Netherlands increased its intake by 130.2% to 1,287 m<sup>3</sup>, whilst Germany and Ireland resumed their intake in April 2014. On the other hand, France and Italy did not make any purchase in April 2014.

Exports to the ASEAN region increased as Singapore's and Thailand's intake of plywood increased by 5% and 86% to 4,051 m<sup>3</sup> and 4,248 m<sup>3</sup> respectively. Brunei reduced its intake by 2% to 957 m<sup>3</sup> and Indonesia did not make any purchase in April 2014. In East Asia, exports to China and Japan decreased by 42% and 4% to 3,247 m<sup>3</sup> and 148,033 m<sup>3</sup> respectively, whilst Hong Kong, South Korea and Taiwan increased their intake by 4%, 30% and 86% to 3,616 m<sup>3</sup>, 29,566 m<sup>3</sup> and 25,647 m<sup>3</sup> respectively.

Exports to West Asia decreased as Yemen, Saudi Arabia, UAE, Qatar and Bahrain reduced their intake by 57%, 50%, 25%, 93% and 97% to 8,377 m<sup>3</sup>, 1,553 m<sup>3</sup>, 4,436 m<sup>3</sup>, 81 m<sup>3</sup> and 46 m<sup>3</sup> respectively, whilst Kuwait did not make any purchase in April 2014.

Elsewhere, exports of plywood to South Africa, Mexico and the US increased by 37%, 6% and 88% to 595 m<sup>3</sup>, 3,318 m<sup>3</sup> and 5,041 m<sup>3</sup> respectively. However, Australia and New Zealand reduced their intake by 4% and 71% to 3,721 m<sup>3</sup> and 64 m<sup>3</sup> respectively. Algeria, Tanzania, Puerto Rico and Turkey did not make any purchases in April 2014.

The FOB price of plywood increased to RM1,695 per m<sup>3</sup> from RM1,686 per m<sup>3</sup> in the previous month, an increase of 0.5% from the previous month.

### Veneer

Exports of veneer for April 2014 showed a decline of 16% in volume and 19% in value to 20,797 m<sup>3</sup> at RM29.53 million as compared to the previous month respectively. Similarly, exports to Singapore, Taiwan and the US decreased by 86%, 8% and 98% to 2 m<sup>3</sup>, 9,072 m<sup>3</sup> and 45 m<sup>3</sup> respectively. Meanwhile, China, Australia, India and Viet Nam increased their intake by 148%, 31%, 140% and 41% to 2,148 m<sup>3</sup>, 315 m<sup>3</sup>, 245 m<sup>3</sup> and 62 m<sup>3</sup> respectively. The UK did not make any purchase in April 2014.

The FOB price of veneer decreased to RM1,435 per m<sup>3</sup> from RM1,441 per m<sup>3</sup> in the previous month, a reduction of 0.4% from the previous month.

### Medium Density Fibreboard (MDF)

Malaysia's exports of MDF for April 2014 showed an increase of 4% in volume and also in value from the previous month. Export totalled 77,134 m<sup>3</sup> at RM80.6 million.

Exports to East Asia registered a decrease of 11% to 12,657 m<sup>3</sup> from 14,149 m<sup>3</sup> in the previous month. Exports to China grew by 286% to 764 m<sup>3</sup>, and export to South Korea also increased by 198% to 447 m<sup>3</sup>. However export to Japan decreased by 14% to 10,863 m<sup>3</sup> followed by Taiwan, which shrank by 50% to 583 m<sup>3</sup>.

Meanwhile exports to West Asian market recorded a positive growth with an increase of 15% in volume to 32,858 m<sup>3</sup> from 28,592 m<sup>3</sup> in the previous month. Export to Bahrain recorded a massive increase of 423% to 1,346 m<sup>3</sup> followed by Kuwait

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at 25% to 1,311 m<sup>3</sup> and UAE at 1% to 11,466 m<sup>3</sup>. On the other hand, export to Oman, Saudi Arabia and Jordan showed negative growth by 17% to 2,496 m<sup>3</sup>, 19% to 8,983 m<sup>3</sup> and 95% to 21 m<sup>3</sup> respectively from the previous month.

Export to South Asia also recorded positive growth by 7%. Export to India increased by 66% to 730 m<sup>3</sup>, followed by Bangladesh by 33% to 1,999 m<sup>3</sup> and Sri Lanka by 5% to 1,640 m<sup>3</sup>. However, export to Pakistan decreased by 6% to 4,678 m<sup>3</sup>.

Export to the UK showed an increase by 104% to 204 m<sup>3</sup>, the US, an increase of 45% to 2,250 m<sup>3</sup>, Australia 37% to 2,589 m<sup>3</sup> and South Africa, 17% to 953 m<sup>3</sup>.

In ASEAN, total export to the ASEAN region for this month decreased by 17% to 14,040 m<sup>3</sup> from 16,899 m<sup>3</sup> in the previous

month. Statistics show only exports to Singapore increased by 58% to 220 m<sup>3</sup>. Export to Viet Nam, Indonesia and Philippines registered negative growth by 5% to 7,343 m<sup>3</sup>, 18% to 3,508 m<sup>3</sup> and 29% to 2,406 m<sup>3</sup> respectively.

### Mouldings

Exports of mouldings for the month increased by 2% in volume but decreased 5% in value to 21,843 m<sup>3</sup> and RM59.83 million respectively. However, the cumulative exports increased by 18% in volume and 16.7% in value to 79,884 m<sup>3</sup> and RM225.77 million respectively as compared to the previous corresponding period in 2013.

Exports to the EU for the month were recorded at 8,330 m<sup>3</sup>, a reduction of 7% compared to the previous month. Similarly, shipments to Germany, Netherlands and the UK decreased by 22%, 16% and 21% to 1,497 m<sup>3</sup>, 4,556 m<sup>3</sup> and 523 m<sup>3</sup> respectively. However, Belgium increased its intake by 188.1% to 821 m<sup>3</sup> whilst Italy resumed its intake in April 2014.

Exports to the ASEAN region increased as Viet Nam's and Singapore's intake of mouldings increased by 36% and 15% to 34 m<sup>3</sup> and 1,323 m<sup>3</sup> respectively, whilst Indonesia did not make any purchase in April 2014.

In Asia, exports to South Korea, Taiwan and China increased 52%, 100% and 214% to 2,052 m<sup>3</sup>, 54 m<sup>3</sup> and 339 m<sup>3</sup> respectively. Meanwhile, exports to Japan and Hong Kong decreased 8% and 5% to 2,809 m<sup>3</sup> and 260 m<sup>3</sup> respectively.

Elsewhere, export to Australia increased by 14.9% to 3,537 m<sup>3</sup>, whilst export to the US and Canada decreased 5% and 27% to 1,968 m<sup>3</sup> and 113 m<sup>3</sup> respectively.

FOB unit value decreased 1% from RM2,859 per m<sup>3</sup> in the previous month to RM2,826 per m<sup>3</sup> in April 2014.

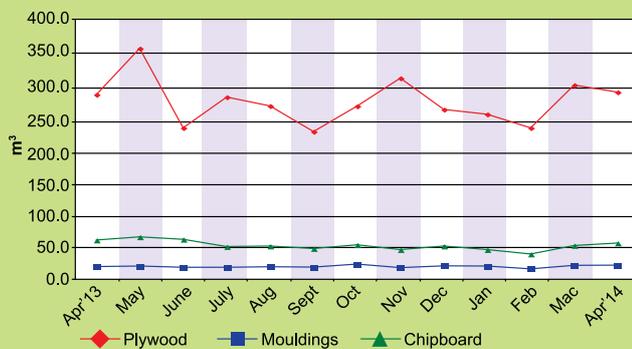
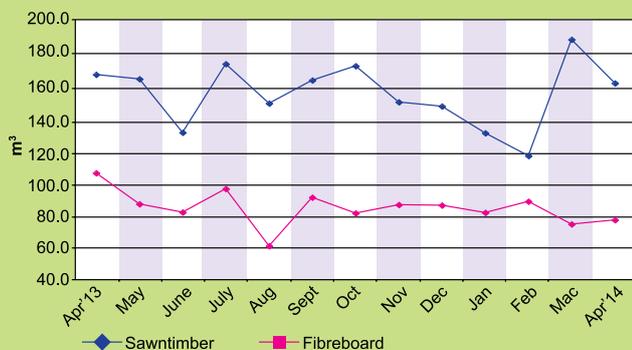
### Builders Joinery and Carpentry (BJC)

Total BJC cumulative exports from January to April increased 7% to RM327.41 million as compared to RM307.49 million in the corresponding period last year. The largest import in EU is UK with the value of RM44.02 million. Similarly, demand by Netherlands, Sweden and Turkey increased by 249%, 67% and 124% to RM0.44 million, RM4.85 million and RM0.91 million respectively. Whereas, exports to France, Belgium, Italy, Denmark and Germany decreased by 42%, 10%, 6%, 14% and 58% to RM8.06 million, RM14.90 million, RM1.58 million, RM6.69 million and RM3.46 million respectively over the previous corresponding period, whereas, Norway did not make any purchase in April 2014.

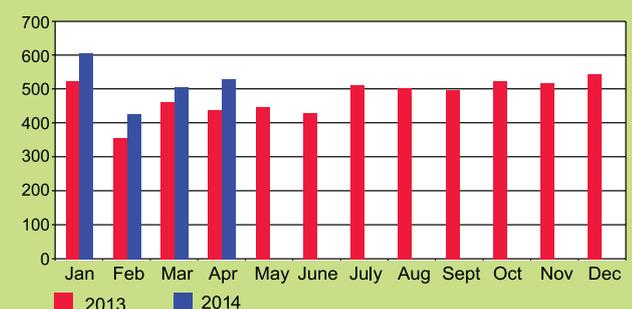
In Asia, exports to Saudi Arabia, Japan, India, Pakistan, South Korea, Taiwan, Singapore and Thailand grew 415%, 7%, 11%, 121%, 1%, 30%, 8% and 21% valued at RM4.38 million, RM27.38 million, RM21.48 million, RM13.72 million, RM1.25 million, RM5.43 million, RM38.35 million and RM12.01 million respectively. However, exports to the UAE and Viet Nam decreased by 22% and 31% to RM4.23 million and RM6.15 million respectively.

Exports to Australia and the US increased by 636% and 38% to RM44.53 million and RM25.14 million respectively. However, Maldives and South Africa reduced their intake by 50% and 11% to RM0.78 million and RM3.76 million respectively.

**Export of Selected Products from Malaysia**  
(April 2013 - April 2014) / Volume ('000 m<sup>3</sup>)



**Malaysia: Export of Wooden Furniture**  
(January 2013 - April 2014) / Value (RM Million)



Source : Department of Statistics, Malaysia

APRIL 2014



## Logs

Prices of logs continued to stable and the supply remained available in the market. Most mills reported that they had adequate log inventories for current usage.

Chengal log stood firm at RM3,600 per tonne. Similarly, Balau and Red Balau prices remained at the previous month's level of RM2,580 per tonne and RM2,500 per tonne respectively. Merbau price, however, increased 6% to be traded at RM2,300 per tonne. There were no changes for the prices of Keruing and Kapur, recorded at RM1,170 per tonne and RM1,700 per tonne respectively. Meanwhile, price of Kempas grew 5% to RM1,183 per tonne. Yellow Meranti and White Meranti continued to be traded at RM1,000 per tonne and RM983 per tonne. Prices for Dark Red Meranti increased by 2% to RM1,460 per tonne while Red Meranti declined by 9% to RM1,175 per tonne. Mixed Heavy Hardwood was reported to have increased by 1% to RM988 per tonne whilst Mixed Light Hardwood stabilised at RM615 per tonne.

## Sawntimber

The average sawntimber prices were reported to be firm with no significant changes in prices due to slow demand from both domestic and international markets.

Price of Chengal sawntimber remained firm at RM6,638 per m<sup>3</sup>. Balau and Red Balau were traded at RM3,143 per m<sup>3</sup> and RM2,966 per m<sup>3</sup>, unchanged from last month. However, Merbau price registered a decline of 3% to RM3,672 per m<sup>3</sup>. Prices of Keruing and Kapur remained at RM1,695 per m<sup>3</sup> and RM2,472 per m<sup>3</sup> respectively whilst Kempas sawntimber recorded an increase of 7% to RM1,435 per m<sup>3</sup>. Prices of White Meranti and Nyatoh stood firm at RM1,448 per m<sup>3</sup> and RM777 per m<sup>3</sup>. Meanwhile, prices for Dark Red Meranti and Yellow Meranti grew by 5% and 2% to RM2,189 per m<sup>3</sup> and RM1,448 per m<sup>3</sup> respectively. On the other hand, sawntimber prices of Mixed Heavy Hardwood and Mixed Light Hardwood remained at RM812 per m<sup>3</sup> and RM720 per m<sup>3</sup> as compared to the previous month.

## Plywood

The supply of plywood to the domestic market continued to suffice to cater to the need of local demand. Prices of plywood remained stable and hovered around last month's level. Plywood of 4mm, 6mm, 9mm and 12mm of thicknesses were traded at RM14.60, RM22.00, RM34.00 and RM41.00 per piece respectively.

## Medium Density Fibreboard (MDF)

Prices of MDF for the month continued to weaken due to slow demand from the domestic market. MDF of 4mm, 6mm, 9mm and 12mm of thicknesses were averagedly decreased by 3% to be traded at RM12.15, RM17.00, RM23.30 and RM31.50 per piece respectively.

## Intra-Malaysia Trade \* – April 2014

In April 2014, the shipments of sawntimber from Sabah to Peninsular Malaysia recorded a sharp increase of 156% to 822 m<sup>3</sup>, valued at RM1.17 million from 321 m<sup>3</sup> recorded in March 2014. Shipments of veneer also improved significantly by 184% to 108 m<sup>3</sup>. The demand for sawntimber and veneer started to pick up after a slow start in the first quarter of the year. However, shipments of plywood eased slightly by 1% in volume to 9,598 m<sup>3</sup>, valued at RM15.5 million. Meanwhile, no exports of logs were recorded for the month.

Export of sawntimber from Sarawak to Peninsular Malaysia grew by 1% from 753 m<sup>3</sup> in March to 764 m<sup>3</sup> in April. Export of veneer also rose by 63% to 5,987 m<sup>3</sup> valued at RM7.7 million. Meanwhile, shipments of plywood fell by 8% in volume and 7% in value to 10,532 m<sup>3</sup> worth RM13.3 million.

*No intra trade from Peninsular Malaysia to Sabah and Sarawak was recorded in April 2014.*

\* Source: Department of Statistics, Malaysia 

### INTRA-MALAYSIA TRADE – APRIL 2014

From	Products	MARCH 2014		APRIL 2014		% Change in Volume April 2014/Mac 2014	% Change in Value April 2014/Mac 2014
		Volume (m <sup>3</sup> )	Value (RM '000)	Volume (m <sup>3</sup> )	Value (RM '000)		
SABAH	Logs	0	0	0	0	0	0
	Sawntimber	321	358	822	1,168	156	226
	Plywood	9,650	15,832	9,598	15,485	-1	-2
	Veneer	38	62	108	181	184	192
SARAWAK	Logs	0	0	0	0	0	0
	Sawntimber	753	658	764	801	1	22
	Plywood	11,441	14,360	10,532	13,300	-8	-7
	Veneer	3,681	4,070	5,987	7,730	63	90

Source : Department of Statistics, Malaysia

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APRIL 2014

**\*AVERAGE DOMESTIC PRICES OF LOGS, SAWNTIMBER, PLYWOOD AND MDF IN PENINSULAR MALAYSIA  
APRIL 2014 (VALUE IN RM)**

SPECIES	LOGS/tonne	SAWNTIMBER/m <sup>3</sup>			
	18" UP	GMS	STRIPS	SCANTLINGS	
<b>HEAVY HARDWOOD</b>					
Chengal	3,600	6,638	2,684		8,828
Balau	2,580	3,143	1,536		2,931
Red Balau	2,500	2,966	1,977		3,178
Merbau	2,300	3,672	3,319		2,472
Mixed Heavy Hardwood	988	812	748		918
<b>MEDIUM HARDWOOD</b>					
Keruing	1,170	1,695	812		2,203
Kempas	1,183	1,435	671		1,883
Kapur	1,700	2,472	727		2,472
Mengkulang	1,100	1,412	925		1,575
Tualang	1,240	2,331	2,225		2,225
<b>LIGHT HARDWOOD</b>					
Dark Red Meranti	1,460	2,189	1,342		2,062
Red Meranti	1,175	1,292	1,012		2,408
Yellow Meranti	1,000	1,448	1,095		1,324
White Meranti	983	1,448	565		1,695
Mersawa	1,156	1,367	874		2,684
Nyatoh	900	777	565		1,201
Sepetir	850	1,130	918		1,165
Jelutong	945	1,544	1,236		1,554
Mixed Light Hardwood	615	720	572		657
<b>MALAYSIAN RUBBERWOOD</b>					
<i>Hevea brasiliensis</i>	LOGS/tonne	SAWNTIMBER/m <sup>3</sup>			
	160	1" X 1"	2" X 2"	3" X 3"	4" X 4"
		852	1,045	1,172	1,229
<b>PLYWOOD 4' X 8'</b>					
(RM per piece)	4mm	6mm	9mm		12mm
	14.60	22.00	34.00		41.00
<b>MDF 4' X 8'</b>					
(RM per piece)	4mm	6mm	9mm		12mm
	12.15	17.00	23.30		31.50

Note: Log prices ex-batau. Sawn timber, plywood, MDF and Malaysian Rubberwood (*Hevea brasiliensis*) prices ex-mill  
\* Prices are only indicative

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**TIMBER ROUND-UP**

**Furniture**

Exports of wooden and rattan furniture for the period under review in 2014 increased 16% compared to the corresponding period of 2013. Total shipments recorded RM2.07 billion against RM1.78 billion in 2013.

Purchase of wooden furniture from Malaysia for the January to April 2014 duration increased 16% from RM1.77 million to RM 2.06 billion compared to the same period in 2013. Demand for wooden furniture for April 2014 was positive across most major markets.

Imports of wooden furniture by the US increased by 16% from RM566.6 million to RM656.5 million. Japan also follow suit with an increase of 15% from RM161.9 million to RM185.5 million.

Intake by Australia increased by 5% from RM125.8 million in 2013 to RM131.6 million in the first four months of 2014. The UK imports also increased by 25% from RM86.4 million to RM107.9 million.

Canada upped its intake of wooden furniture by 30% to reach RM87.8 million. The UAE recorded a huge increase of 52% to reach RM84.1 million in 2014. Saudi Arabia wooden furniture intake increase to RM50.7 million. Russia also improved its consumption by 26% from RM31.1 million to RM39.1 million. India's intake increased by 51% to reach RM38.4 million in 2014.

Germany increased its wooden furniture consumption by 35% with a purchase of RM31.9 million in for the first four months of 2014 from RM23.6 million in 2013.

Rattan furniture shipments increased by 16% to reach RM11.4 million for the January to April 2014 period. Singapore emerged as the top importer as its demand almost doubled to RM3.5 million in 2014 whilst Germany increased its import by 1,046%, to RM68,000. The import by the UK increased as well by 62% to reach RM1.8 million in 2014. UAE renewed its purchases, whereas, Poland did not make any purchase in April 2014.

## DIALOGUE ON WOOD WOOL CEMENT BOARD



*Dialogue in session.*

In an effort to promote the use of timber in the construction industry, MTIB once again organised a dialogue with contractors and Malays Chamber of Commerce of Malaysia (DPMM) in Sabah. The dialogue titled “Wood Wool Cement Board (WWCB) for Building Construction” was held at WISDEC, Sabah on 30 April. The dialogue aimed to provide information on the potential use of wood wool cement board as an alternative building material and also to increase awareness of the use of timber in the construction industry.

Tuan Hj Mahpar Atan, MTIB Director of Industry Development in his opening remarks noted that the timber industry should place greater emphasis on the domestic market, which has great potential for growth. The largest timber consumer in the domestic market is the housing and the construction sector which accounts for more than 50% of the total value of the domestic market. Sawntimber is the major product used in this sector. Apart from it, plywood, door and window frames and other wood-based panels are also used as formwork and interior components. Towards that end, the efforts by the government to promote the Industrialised Building System (IBS) as a concept for construction should be fully tapped by the timber industry.

Leading the discussion at the dialogue was Datuk Dr. Abdul Aziz bin Mohamad, CEO of Duralite (M) Sdn. Bhd. who talked about wood wool cement board applications. He started his presentation with an introduction to wood wool cement board as the most versatile construction material for building needs. The wood wool cement board is a versatile building material made from wood wool (excelsior) and cement. He then explained in detail the characteristics of wood wool cement board as building material. The main characteristics are:

- Fire resistance
- Wet and dry rot resistance
- Freeze-thaw resistance
- Thermal insulation, providing energy savings
- Acoustic performance - sound absorption

The dialogue was attended by 40 participants comprising contractors and MTIB technical officers. During the dialogue the participants also had the opportunity to exchange information and experience on WWCB applications. MTIB will organise a similar dialogue on 17 June 2014 in Tawau, Sabah. 

*Cont. from page 5*

is 3.8% above April 2013. Single-family authorizations in April were at a rate of 602,000, which is 0.3% above the revised March figure of 600,000. Authorisations of units in buildings with five units or more were at a rate of 453,000 in April.

*Source: US census.gov/stats*

### Dark Colours and Strong Texture the Choice of US Buyers of Flooring

The World Flooring Association has released a summary of trends in flooring design in 2014 and beyond. The North American market for hardwood flooring has been dominated

by darker colours for many years now, but light colours are making a comeback. The main wood species with natural light colours sold are White Oak, Maple and (slightly darker) Walnut. Sun bleached and light greyish tones are popular. The texture of wood flooring is becoming almost as important as the colour. Distressed, weathered, wire brushed and hand-scraped are the most common textures, with hand-scraped being the most costly. Reclaimed wood from industrial or commercial buildings often shows unusual texture. Reclaimed wood is marketed as environmental friendly because of the reuse of material. Prices are high and luxury homes are the main market.

*Source: ITTO, 1-15 May *

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concrete slab and post design technology allows for rapid construction for building structures. It enables architect to design stunning tall wood buildings up to 30 storeys high, 50% shorter time compare to conventional system. Combining wood and concrete together requires smaller foundation and up to 90% lower carbon emission. CREE buildings meet local fire safety and seismic building codes and can be reduced to bioenergy at their end of use. Rhomberg has many customers such as Murray CLT Building in London (ninth storey building), ninth storey 'Tamedia' Zurich Printing Company, Norway College and University in Sweden. The company is in the process to build 22-25 storey in Vienna in 2017/2018.

It was observed that the load bearing structures of buildings in Austria utilise engineered timber panels rather than steel frames or concrete blockwork. Since the construction industry in the west strives to create environment-friendly buildings with an increased use of sustainable materials, timber frame construction is an obvious choice. Austria is a leading country in sustainable construction and solar energy technologies despite several challenges faced such as different requirements on fire regulations by the authorities. Its building technologies stand for efficient, cost effective and sustainable solutions for the buildings of tomorrow. It stands among the first countries in Europe to apply sustainable building technologies and now leads the world in the number of energy-efficient building per capita. With more efficient factory production, combined with new innovations in building technology and construction systems such as the timber framing system, it will continue to play a defining role for construction as this century progresses. In addition, the Austrian government revises their legislation from time to time to fulfill the requirements imposed by several authorities such as the fire department, taking into account new innovations and R&D.

MTIB, in line with its role to enhance the use of timber as well as being an authority responsible for assisting the development of the timber industry in Malaysia, has constantly been in contact with local authorities, municipalities, fire department and other relevant stakeholders to promote timber as a construction material. In order to encourage the usage of timber in the early stages of a building project and to persuade planners,

architects and developers to use timber as their building material choice, MTIB needs to work with the government if there is a need for policies that support at least a certain percentage of timber applications for new development projects e.g. affordable housing schemes for Malaysians or school buildings using glulam or CLT.

The government through MTIB also hopes to initiate development and utilisation of renewable building material and timber through further R&D with universities as well as to accelerate knowledge transfer across the region. In order to accelerate the usage of ETP as IBS load bearing members in the Malaysian construction industry, Malaysia needs to explore the possibilities of a strategic partnering between Malaysian local companies with international companies such as KLH Massivholz GmbH, a producer of Solid Timber Panels (CLT), since KLH has established 15,000 projects within 15 years since it's operation in 1999. KLH has exported CLT to several countries such as France, Austria, UK, Germany, Italy, USA, Japan and Taiwan as well as a 10th floor Forte Apartment using CLT, in Melbourne, Australia. Also, in order to access new technologies or market gain, a wider range of products and package services as well as a joint R&D or production in particular need to be implemented. There is clearly potential for Malaysian Hardwood to be used as CLT since Malaysia has more than 2,500 species of timber whereby majority are suitable to be used as construction members such as glulam and CLT provided that the required data is available.

As an immediate follow-up action, MTIB has established a task force comprising members from several agencies and authorities such as MPIC; MTIB; Ministry of Works; Ministry of Urban Wellbeing, Housing and Local Government; Ministry of Energy, Green Technology and Water; JKR; Local Government Department; Construction Industry Development Board; PAM; Master Builder Association Malaysia; Fire Department; UiTM and Terengganu Timber Industry Training Centre as well as the timber industry in order to tackle several issues and challenges by the industry holistically. The task force will play a major role as an advisor to the government in enhancing the use of timber in construction, particularly IBS innovative load bearing structures and timber framing.



Delegates being briefed by Ms Christina on CREE Life Cycle Tower One Smart building in Rhomberg, Austria.



Delegates during a visit to OBf consulting headquarters in Vienna, Austria.

## FIFTH MEETING OF THE ASIA PACIFIC ECONOMIC COOPERATION EXPERTS GROUP ON ILLEGAL LOGGING AND ASSOCIATED TRADE

The Fifth Meeting of the Asia Pacific Economic Cooperation Experts Group on Illegal Logging and Associated Trade (EGILAT) was held on 6 – 9 May in Qingdao, China. Eighteen APEC economies comprising Australia, Brunei, Canada, Chile, China, Indonesia, Japan, Korea, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei, United States, Malaysia and Viet Nam attended the meeting.

The meeting was officiated by Mr. Liu Dongsheng, Deputy Administer of State Forestry Administration of China. In his speech Mr. Dongsheng highlighted that a healthy and good environment is the basis of sustainable development of all economies and shared China's experience and involvement towards achieving sustainable forest development. He spoke of the measures taken to ensure legality which included improvements in forestry governance, promotion of the forest certification and verification scheme, exploring ways to facilitate the sustainable use of oversea forest, cooperation mechanism for the government, sectoral and industrial associations, international dialogues and communications for policy and information sharing.

Among the pertinent issues discussed in the meeting were;

- Strategic Plan and Work Plan 2014
- Exchange of Information on Policies, Regulations, Governance, and Law Enforcement Relating to Combating Illegal Logging and Promoting Trade in Legal Forest Products
- Understanding of "Legality" and the Scope of Laws that are Intended to Address "Illegal Logging" Enacted by Member Economies
- Capacity Building

With regards to the Strategic Plan and 2014 Work Plan, the discussion focused on the achievement of the programme and activities carried out in 2013 as well as the means to monitor the implementation of all programmes and activities in 2014.

The EGILAT Strategic Plan for 2014 – 2017 was also presented and it received comments and amendments from member countries. The new draft will be presented in the next meeting.

On issues relating to "Exchange of Information on Policies, Regulations, Governance, and Law Enforcement Relating to Combating Illegal Logging and Promoting Trade in Legal Forest Products", all member economies made their presentations. The topics that attracted attention were the Australian Illegal Logging Prohibition Act (ILPA) which was designed to promote the trade in legally harvested timber and timber products in Australia. The regulation highlighted the due diligence system (DDS) requirements and reported the country's specific guidelines.

China presented a concept paper entitled "Establishing a Regional Timber Legality Recognition Mechanism" which proposed to establish one standard timber legality mechanism that could be used by all EGILAT member countries and which could be accepted by consumer countries. The meeting could not make any decision on the proposal and requested China to detail up their proposal and to present it in the next meeting.

The meeting also discussed the Funded Projects Timelines and Funding Criteria for 2014 which urged member countries to follow strictly the timeline for project implementation as well as to outline the criteria and scope of projects to be considered for funding. Prior to the meeting, a workshop was held on 6 May entitled "Timber Legality Assurance System – Development and Challenges".

The Malaysia delegation was led by Encik Mad Zaidi Mohd Karli, Undersecretary of Timber, Tobacco and Kenaf Industries of MPIC. Included in the delegation were representatives from other agencies: Forestry Department Peninsular Malaysia, MTIB, Malaysian Timber Council and Sarawak Timber Association. MTIB was represented by Encik Mohd Kheiruddin Mohd Rani, Director of Trade Development. 



**Malaysian Wood**  
Standing on Excellence

**Lukisan Seribu Makna, Kayu Eratkan Semua**  
*A Picture Paints a Thousand Words. Wood Binds Them All*

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## EGILAT WORKSHOP ON DEVELOPING TIMBER LEGALITY ASSURANCE SYSTEM

A workshop on Timber Legality Assurance System (TLAS) was held from 6-7 May in Qingdao, China. The workshop was held in conjunction with the APEC Experts Group on Illegal Logging and Associated Trade (EGILAT) and was organised by the Chinese Academy of Forestry (CAF) in collaboration with the European Forest Institute (EFI). The objective was to promote the understanding on ongoing actions on combating illegal logging and its associated trade and to share examples of best practices.

In the opening remarks made by Ms. Zhang Yanhong, Deputy Director-General of Development Planning and Finance Management Department of the State Forestry Administration of China (SFA), she stated that the Chinese Government is committed to combat illegal logging and trade in such products as such activities could result in loss of wealth of the local community.

Four sessions were held during the workshop, as follows :

- 'Why develop timber legality assurance systems'
- 'What systems are available to assure wood products are legally obtained and traded'
- 'What are the key building blocks and major challenges in developing and implementing an effective and credible timber legality assurance system'
- 'How to address the challenges of developing and implementing an effective and credible timber legality assurance system'

The speakers for the first session were from the Australian Government Department of Agriculture, Illegal Logging Section, Mr. Ben Mitchell who presented a paper titled 'Timber Legality: the Australian Experience', and the US Department of Justice, who shared his experience in 'US Perspective on Timber Legality Assurance Systems'. Other speakers included representatives from China, Russia and EFI. Generally, the speakers shared information on their efforts to promote environmental protection and to respond to current market requirements and consumer preferences.

In the second session, representatives from Ghana and Indonesia, member signatories of the Voluntary Partnership Agreement (VPA) with the EU, shared their experiences on the challenges in concluding the negotiations. Malaysia's representative spoke on the development of its TLAS and the status of its negotiation with the EU on a FLEGT VPA. Japan and PNG also presented papers relating to the development of effective and credible timber legality assurance systems undertaken by the respective countries.



*Presenters for second session, 'What systems are available to assure wood products are legally obtained and traded'.*

In the subsequent session, presentations regarding the challenges in developing and implementing timber legality assurance systems, and issues related to stakeholder participation, effective chain of custody mechanisms, effective law enforcement capability and practices were presented. The speakers were from WWF China presenting the 'WWF's Efforts and Perspective in Promoting Responsible Forestry' and representative from Congo presented the 'DRC Natural Resources Network perspective of legality timber as an important aspect of forest governance'. Meanwhile Mr. Frederick Cornu from Bureau Veritas and Mr. Mikhail Tarasov from IKEA China shared the auditors' and dealers' perspectives of trading in legal and responsible wood origin in the timber market.

For the final session, participants shared their views on possible measures, capacity building needs and information sharing methods in order to promote the development and implementation of effective and credible timber legality assurance systems within the Asia-Pacific region. They also spoke on the need to ensure a simple system which could be implemented without incurring exorbitant cost, and which can be done without many changes to existing/current practices. The workshop agreed that policy makers should try to find the best method in establishing the best and practical timber legality system in their country. The session was moderated by Dr. Chen Shaozi, Director of Centre for International Forest Product Trade SFA.

Mr. Xia Jun, the EGILAT Chairperson, in concluding the discussion, stated that an effective and credible timber legality assurance system has to be cost effective for it to be accepted in the marketplace.

MTIB was represented by Puan Loke Sim Wah and Puan Emie Syarina Norizan from PROTEM Secretariat. 

## FURNITURE MACHINING TECHNOLOGY UPDATES DURING VISIT TO ITALY



*MTIB officers and furniture entrepreneurs at the SCM showroom in Thiene.*

Rapid globalisation for furniture markets has resulted in increasing competition and local Malaysian manufacturers are not spared from this evolution. They are forced to continuously improve their competitiveness by improving productivity and production technology. It is a prerequisite for manufacturers to equip themselves with the necessary technology to produce consistent quality products at competitive prices. Malaysian furniture manufacturers also need to utilise the latest processing technology as well as automations to increase production capabilities. This will enhance industry throughput and manufacturing flexibility, reduce cost, improve quality and produce a wider product range.

For the year 2014 and 2015, MTIB has established a programme to provide the latest wooden furniture processing

machines to selected Bumiputera entrepreneurs. The aim of the programme is to upgrade the knowledge of MTIB officers and Bumiputera entrepreneurs pertaining to production capacities and technology capabilities to cut processing time and manufacture higher quality products. MTIB has established a training module to train its officers and the entrepreneurs to adapt to the new processing technology (full automation) when using the various woodworking machines for the production of panel and solid wood items, edging products, mortiser and tenoner parts, spindle moulder and other products.

SCM Group Italia is a company in Italy that produces various wooden furniture machines for panel and solid items, side finishing (using edge banders), sanding and finishing line. SCM Group Italia Malaysian office offered to sponsor MTIB officers for a visit to Italy to familiarise themselves with the latest furniture machines being developed by SCM Group Italia. MTIB sent two officers and four Bumiputera entrepreneurs. The programme took place in Rimini, Italy from 9 to 14 April at SCM Home Event. SCM Group displayed their latest wooden processing machines, utilising automation and development of data software to increase production capacity, maintain quality, cut cost and utilise less manpower. SCM Group also displayed various wooden processing machines occupying an area of over 80,000 square metres. MTIB officers were briefed on the various machines brand that produced different furniture products such as Stefani for edge banders, DMC for wide belt sanders, Morbidelli for CNC, SCM for panel saw optimisers and Superfici for finishing lines.

More than 4,000 visitors from 57 countries attended the five-day SCM Home Event. The organiser also arranged a special visit to the SCM manufacturing plants at Alea Office in Thiene



*Briefing on UV finishing system at Superfici Office in Monza, Milan.*

## FOURTH MEETING OF TASK FORCE ON WOOD-BASED PRODUCTS UNDER WG I (STANDARDS AND MRA) CONVENES

The 32<sup>nd</sup> Meeting of the ACCSQ WG 1 on Standards and MRA was held on 28-29 May in Hanoi, Viet Nam as a follow-up from the previous meeting which was held at the ASEAN Secretariat, Jakarta Indonesia. The meeting was chaired by Encik Ridzwan Kasim, Senior Director, Policy and Standards Division, Department of Standards Malaysia, Ministry of Science, Technology and Innovation, Malaysia and co-chaired by Mr. Nguyen Van Khoi, Deputy Director of Standard Department, Directorate for Standards, Quality and Metrology (STAMEQ), Viet Nam. The meeting was officially opened by Dr. Vu Van Hong, Director of International Cooperation Department, STAMEQ.



*Task Force on Wood-based Products.*

The meeting discussed the harmonisation of standards in several sectors namely; automotive, prepared foodstuff, cosmetic, electrical and electronic equipment, medical device, rubber-based products as well as wood-based products. The meeting noted the progress made by the Task Force on Wood-based Products, which included some information, namely: information exchange on standards related to the identified area for Phase 1 (wood-based panels, sawntimber and flooring products), indication of acceptance on the ISO standards and steps taken by Member States to align its standards with international standards. The meeting noted Malaysia's proposal to add 12 new standards (on wood-based panels) for harmonisation. However, the Task Force agreed to prioritise the current 34 identified standards and consider the additional 12 new standards as a second priority.

The meeting also updated recent developments in ASEAN Economic Integration Initiatives whereby some recommendations were made by ASEAN Member States which included developing studies on "Moving ASEAN and AEC Beyond 2015" and "Vision Paper on the AEC Beyond 2015". A Working Group to develop a draft framework of AEC (2016-2025) will be chaired by Malaysia. A discussion on the revision of the ASEAN Policy Guidelines on Standards and Conformance (APGSC) and ASEAN Policy and Guidelines for Harmonisation of Standards based on presentations by representatives from EU-ARISE was also held.

The Fourth Meeting of the Task Force on Wood-based Products (TFWBP) was held on 27 May prior to WG1 Meeting. The TFWBP meeting was chaired by Puan Hj. Mahsuri Mat Dris, MTIB Senior Deputy Director of Industry Development. The main objective of the meeting was to exchange information on the existing intra-ASEAN trade figures for wood-based

products, technical requirements and existing regulations in the wood-based sector among member states and update the indication of acceptance on the ISO standards within ASEAN Member states. Several ASEAN member states such as Brunei Darussalam, Indonesia, Malaysia, Singapore and Viet Nam presented their intra-ASEAN Figures during the TFWBP meeting based on HS Codes whilst Cambodia, Lao PDR, Myanmar, Philippines, and Thailand had yet to submit their intra-ASEAN trade figures for wood-based products.

The purpose of these presentations were to identify the most traded products as one of the basis of harmonising standards of wood-based products within ASEAN as well as to explore the possibility of TBT being involved in the import and export activities within ASEAN Member countries. However there were still discrepancies in the intra-trade figures between Member States. This might have been caused by the different data source of each Member State and as such, no conclusion could be made by the TFWBP. In this context, to ensure consistency of trade figures, all ASEAN member states were requested to compile their figures from their Customs Department as well as Department of Statistics for compilation and preliminary analysis.

The TFWBP meeting was attended by delegates from Brunei Darussalam, Thailand, Indonesia, Myanmar, Lao PDR, Cambodia, Malaysia, Singapore, Viet Nam and representatives from the ASEAN Secretariat. Malaysia was represented by five representatives comprising members from Standards Malaysia, MTIB, CIDB and FRIM. MTIB was represented by Puan Hj. Mahsuri Mat Dris and Puan Syafinaz Abd Rashad from Industry Development. Brunei Darussalam will host the 33<sup>rd</sup> ACCSQ WG 1 Meeting which will be held tentatively on 10-13 November 2014.

## ASEAN MEETING ON WILDLIFE ENFORCEMENT INITIATIVE



*Deputy Minister Agriculture and Rural Development of Viet Nam officiated Partnership Workshop.*

The Ninth Meeting of the ASEAN Wildlife Enforcement Network (ASEAN-WEN) was held in Hanoi, Viet Nam from 28 to 29 May. It was hosted by the Ministry of Agriculture and Rural Development of Viet Nam. The meeting was attended by delegates from all ASEAN Member States (AMS).

The objective of the meeting was to enable AMS to discuss and update strategic action plans for the region, identify needs and prioritise activities and plans, taking note of the ASEAN-WEN Strategic Action Plan (2008-2015) and the Regional Action Plan on Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 2012-2015. It is a significant initiative as it would assist networking and coordinating of enforcement activities with counterparts across the region to curb wildlife crime such as poaching. This network could potentially be one of the world's largest wildlife law enforcement networks.

Preceding this meeting was the ASEAN-WEN Partnership Workshop which was held on 27 May. The Partnership Workshop was held in response to the recommendations of the 16<sup>th</sup> Meeting of the Senior Officials on Forestry (ASOF) in Brunei Darussalam held on July 2013. The purpose of the Partnership Workshop was to assist the ASEAN Secretariat in identifying and understanding existing and potential programmes of key partners, donors, relevant sectoral bodies and organisations, particularly for the sustainability of ASEAN-WEN and the Programme Coordination Unit (PCU).

The Partnership Workshop was officially opened by Mr. Vu Van Tam, Deputy Minister of the Ministry of Agriculture and Rural Development of Viet Nam. He extended his warm welcome to all delegates on behalf of the host country. He highlighted the uniqueness of ASEAN region as it is rich in biodiversity. He noted that despite the economic growth, ASEAN also faces challenges in its efforts towards conservation of wildlife especially with regard to law enforcement. He urged the delegates to participate actively in the discussions and share knowledge and experiences for the benefit of all AMS.

The workshop was also attended by Mr. John E. Scallon, CITES Secretary-General. He noted that combating illegal wildlife trade requires collective efforts at national, regional and global levels and hailed ASEAN-WEN as a leading wildlife enforcement network.

Following the Partnership Workshop and the Ninth Meeting of the ASEAN-WEN was the 10<sup>th</sup> Meeting of the ASEAN Expert Group on the CITES (10<sup>th</sup> AEG-CITES) on 30-31 May. The meeting was attended by all AMS, the ASEAN Secretariat and representatives from TRAFFIC Southeast Asia. It was officiated by Dr. Nguyen Ba Ngai, Deputy Director-General of Viet Nam Administration of Forestry. He highlighted that CITES enforcement requires a multi-dimensional approach including



*Group photo of ASEAN-WEN Partnership.*

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scientific research, awareness raising, capacity building, policy development, regional and international cooperation as well as law enforcement. He noted that since all AMS are members of CITES, it provides an effective mechanism for controlling the trade in wild fauna and flora. The meeting also deliberated on several issues related to ASEAN such as confiscation and disposal of illegally traded specimens from Appendix I, II and III. In addition, the delegates were also informed that there

would be a Working Group meeting in 2015 to undertake the revision of the Glossary of Agarwood Products.

Malaysia was represented by officials from the Ministry of Natural Resources and Environment, Department of Wildlife and National Parks, Department of Agriculture, Department of Fisheries, MTIB, Sabah Wildlife Department, and Forest Department of Sarawak. MTIB was represented by Encik Zahari Hamid from Licensing and Enforcement. 



*Delegates of the 10<sup>th</sup> ASEAN Expert Group on CITES.*

*Cont. from page 16*

for the MTIB group to enable them to understand the delicate process involved in manufacturing the wooden furniture machines. The MTIB officers learnt to handle the Stefani brand of square edge bander with two-sided bander cells and laser technology to produce a high production capacity. For the door manufacturers, SCM came up with a single-sided edge-bander for soft and hard forming doors as well as J-shaped doors. In Rimini, SCM introduced and demonstrated SCM Accord WD, integrated machines to produce components for doors, windows and staircases.

The SCM Home Event displayed plenty of innovation in the world of carpentry especially in made-to-measure furniture production. The various models of Superfici Finishing Lines attracted potential buyers from China, Malaysia, Indonesia and Viet Nam.



*Machinery displayed at the "SCM Home Event" show in Rimini.*

MTIB was represented by Encik Mohd Asmawi Mohd Afandi and Encik Azhar Ayup. The Bumiputera companies which took part in the programme were Ramaco Bena Sdn. Bhd., Adunan Komersial (M) Sdn. Bhd., Zone Furniture Sdn. Bhd. and Kitapanel Wood Product Sdn. Bhd. 

## FAMILIARISING ACTIVITIES IN THE WOOD-BASED INDUSTRY

A familiarisation programme conducted by Ministry of Plantation Industries and Commodities (MPIC) aimed to enhance the knowledge and skills of MPIC officers on the sector, was held from 21 to 23 May. The MPIC Familiarisation Programme was hosted by MTIB and it focused on the wood-based industry in the Northern Region. The visit covered the conservation, plantation as well as manufacturing activities related to the wood-based industry. The participants learnt the importance of balancing the activities of conservation and development in the industry.

Gaharu is governed under CITES regulations and MTIB has been appointed as the Management Authority to monitor and facilitated the trade of gaharu products.

The first visit was to Gaharu Tea Valley, Gopeng, Perak (GTVG) which owns 300 acres of Karas plantation and manufactures gaharu products. During the briefing and the tour, the participants were told that GTVG has become an agro-tourism destination. GTVG products are sold in the Gaharu Retail Shop which is located onsite at the plantation. Products produced by GTVG include gaharu tea, gaharu cookies, gaharu instant noodles, gaharu soup mix, gaharu nougat, gaharu oil/fragrance and gaharu wood chip.

For a better understanding of how engineered solid hardwood flooring is made, the delegations visited Ekowood International Berhad. The company is engaged in the manufacture and sale of downstream wood products. The principal activities are supplying and installing timber strip panel flooring, manufacturing engineered solid hardwood flooring that uses

a mechanical locking system, and trading wood products. The main attraction was the finishing section where the processed 3-ply panel underwent sanding, lacquering and drying for several times continuously.

At Matang Mangrove Forest in Kuala Sepetang the participants were briefed by the Forestry Officer on the conservation and production activities related to mangrove. The Matang Mangrove Forest Reserve is the oldest in the country. Matang was gazetted a permanent forest reserve way back in 1906. About 80% of the forest is used for the production of mangrove woods including Bakau Minyak and Bakau Kurap for charcoal production under the sustainable harvest policies, while the remainder is completely protected for biodiversity. The participants were shown the mangrove trees while noting the age and size suitable for the production of charcoal and for piling.

At a nearby mangrove charcoal factory, the participants observed the process involved in mangrove charcoal production. Most of the charcoal produced in this factory is exported to Japan.

To enhance their exposure to furniture production, the participants were also brought to two furniture factories. GCF Industries Sdn. Bhd. produces furniture components while Mahakota Sdn. Bhd. manufactures furniture.

The delegation also visited the MTIB office for Northern Region to acquire knowledge on functions and activities conducted in the region.



*A group photo at Gaharu Tea Valley in Gopeng, Perak.*

## SEMINAR FOR SMES – FIRST TIME ENTRY TO EXPORT AND OPEN MARKET

For a company to venture into the export and open market, know-how on the procedures and information of the country is crucial. On that note, MTIB organised a seminar especially for SMEs who would like to try and export their products as well as to trade in the open market, on 27 May in Kuala Lumpur. A total of 50 participants attended the seminar. The objective of the seminar was to create awareness and update the SMEs on the various procedures that they would have to adhere to and to impart experiences and expertise by speakers from the trade.

Puan Hj. Zaibi Yakin, MTIB Director of Bumiputera Empowerment Economic, in her welcoming remarks, highlighted on the performance of SMEs in the timber industry. She reiterated MTIB's prominent role in the participation of SMEs and on the various activities and programmes that had been carried out. Apart from capacity building for the SMEs, MTIB is currently focusing on improving and enhancing the technology and quality of the wood products in order to be more competitive. She advised SMEs not to be dependent on government contracts but to venture into the export and open market.

Speakers from the industry and agencies presented their papers which were as follows:

- Puan Candice Lim, Deep Furniture Sdn. Bhd./Head of Marketing and Information Muar Furniture Association
- Cik Hj. Robiyah Hj. Husin, MTIB
- Encik Ahmad Kamal Chik, Puncak Bumi Utama Sdn. Bhd.
- Encik Awang Abu Bakar, PSB Decoration Sdn. Bhd.
- Encik Noorman Jamal Din, Designer
- Puan Sarimah Mohamad Sabudin, Malaysian Furniture Promotion Council
- Encik Nazir Khan Nizam Khan, PROTEM
- Encik Mohammad Khair Puteh, MTIB



*Puan Candice Lim, Head of Marketing and Information Muar Furniture Association presenting her paper.*



*Attendees at the seminar.*

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*At Ekowood International Berhad.*



*At Matang Mangrove Forest.*

The programme was led by Tuan Hj. Zulkepli Abd Rani, Director of Fibre and Biocomposite, MTIB. The participants comprised six offices from MPIC, 10 from MTIB, two each from Malaysian

Palm Oil Board, Malaysian Pepper Board, Malaysian Rubber Board, National Kenaf and Tobacco Board and Malaysian Cocoa Board.

# MDF AND PARTICLEBOARD INDUSTRY IN PENINSULAR MALAYSIA

## Introduction

Within the last two decades, Malaysia's wood-based industry has become one of the most important socioeconomic sectors in the country. The timber sector contributed an estimate of 2.7% or RM19.5 billion from the country's export earnings in 2013 and provides employment to approximately 200,000 people.

In view of the need to maximise the utilisation of wood resources, the industry has diversified into the production of high value-added, reconstituted panel products such as medium density fibreboard (MDF) and particleboard. Both MDF and Particleboard have been widely used to support the furniture industry in the country for both local or export markets. With the expansion of the wood composite mills as well as production capacities, it is expected that the MDF and particleboard will continue to grow as they exhibit good prospect and indicate strong demand in the future. In 2013, this industry contributed 7% or RM1.4 billion from the country's total export earnings of timber products.

Made from wood waste, MDF and particleboard applications have developed from solely for furniture to building interiors. MDF and particleboard are reconstituted wood-based panel (RWP). The products are made from recycled wood, i.e. wood fibres (for MDF) or wood particles/chips (for particleboard). MDF is an engineered wood product formed by breaking down wood into wood fibres, often in a defibrator, combining it with wax and resin, and forming panels by applying high temperature and pressure. It is a building material similar in application to plywood but made up of separated fibres, not wood veneers. It is denser than normal particleboard. MDF is primarily used in the joinery and furniture industry. The light-coloured MDF made in this country is prized by joiners and furniture manufacturers because it is easier to apply synthetic overlays and veneers of optimum thickness.

Particleboard, also called "chipboard", is an engineered wood product manufactured from wood particles, such as wood chips, sawmill shavings, or even saw dust, and a synthetic resin or other suitable binder, which is pressed and extruded. Particleboard is a type of fibreboard, a composite material, but it is made up of larger pieces of wood than MDF and hardboard. Particleboard is any board that is made from wood particles, as opposed to wood fibres or sheets of wood.

## Study on the Raw Materials Consumed by the MDF and Particleboard Industry in Peninsular Malaysia

In Malaysia, MDF and particleboard industries were established in late 1970 and have grown tremendously over the years. Currently there are 17 plants in operation in Malaysia. In 2012, Malaysia was ranked as the seventh largest exporter of MDF and 16<sup>th</sup> largest exporter of particleboard in the world. Exports were mainly to Japan, the People's Republic of China (PRC), Iran, UAE, Viet Nam, Syria and Indonesia. Malaysian MDF and particleboard has attained international standards such as

BS (Britain), JANS (Australia and New Zealand Standard), EN (Europe) and JIS (Japan).

Recognising the importance of these industries to the country, MTIB initiated a study in 2012 with the objective to identify the consumption of raw materials by the MDF and particleboard industries in Peninsular Malaysia. In addition, this study also aimed to gather information on the current status of both industries in Peninsular Malaysia. The study was conducted on the main producers namely the eight MDF plants and six particleboard plants in Peninsular Malaysia.

In general, the study revealed that these industries have an installed capacity of 3.059 million m<sup>3</sup> annually. MDF industry has an annual installed capacity of 1.417 million m<sup>3</sup> while the particleboard industry has a total of 1.642 million m<sup>3</sup>. Both industries have provided jobs to almost 4,000 people.

**Table 1 : The Major MDF and Particleboard Manufacturers in Peninsular Malaysia**

No.	Manufacturers	Product	Location of Plant
1	Mieco Chipboard	Particleboard	Pahang (Gebeng, Semambu and Lipis)
2	Heveaboard	Particleboard	Negeri Sembilan (Gemas)
3	Allgreen Timber Product	Particleboard	Johor (Segamat)
4	Pahanco	Particleboard	Pahang (Gambang)
5	Evergreen Fibreboard	MDF	Johor (Batu Pahat, Pasir Gudang and Masai) Negeri Sembilan (Nilai)
6	Donghwa Fibreboard	MDF	Negeri Sembilan (Nilai), Kedah (Merbok and Kulim)
7	Robin Resources	MDF	Mentakab, Pahang
8	Segamat Panel Boards	MDF	Johor (Segamat)

Source: MTIB Survey 2012 and respective companies

## Raw Materials Used for the Production of MDF and Particleboard in Peninsular Malaysia

The survey recorded that wood usage by MDF and particleboard industries totalled 3.120 million tonnes in the year 2010 and increased further by 3% to 3.204 million tonnes in 2011.

The MDF industry used 2.177 million tonnes of wood in 2010 and decreased by 8% to 2.006 million tonnes of wood in 2011, affected by the closure of some plants' line operations.

However, the particleboard industry showed an increasing trend on the use of wood. In 2010 the industry used 0.943 million tonnes and the amount increased by 28% to 1.198 million tonnes in 2011 due to the increased demand from favourable market conditions.

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In comparison, the survey showed that in 2011, MDF industry is a major user of wood material with 63% or 2.006 million tonnes, while particleboard only consumed 37% or 1.198 million tonnes of wood from a total of 3.204 million tonnes of wood consumption.

**Wood Species of Raw Materials for MDF and Particleboard**

Rubberwood is the main species used in the MDF and particleboard industries. Rubberwood-based timber products have gained popularity in Peninsular Malaysia in recent years because of the dwindling supply of timber from natural forest. In 2011, 76% of the wood species of the raw materials used for the production of MDF and particleboard were from Rubberwood. Most of the Rubberwood supply derived from the replanting programmes which were undertaken by RISDA, FELDA and FELCRA.

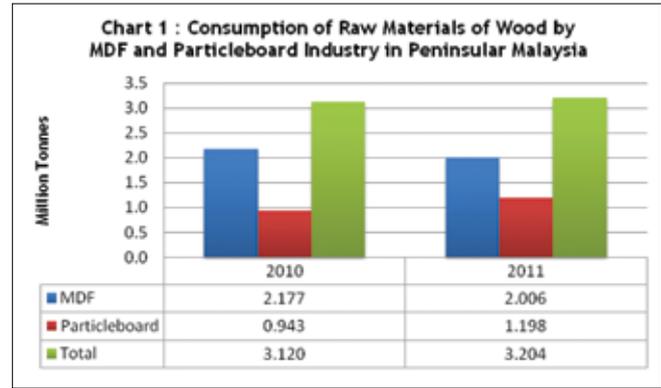
However, the MDF and particleboard industries in Malaysia are facing very stiff competition to obtain the Rubberwood from the sawmill and furniture industries. The reduction in the planting areas as well as rubber replanting activities have led to the problem of declining resources of raw materials for the industries. In 2011 and 2012, only 15,900 hectares and 23,610 hectares of rubber areas were replanted respectively. These factors have led to higher tender prices of rubber plantations areas amounting to RM12,000 per acre in early 2012 and this subsequently led to the higher prices for its logs and branches. The replacement of the plantation areas from rubber to oil palm plantations as well as dependency on the rubber replanting programme has created uncertainty to the sustainability of this resource. Therefore, the industry is also using other wood materials, such as mixed hardwood species and oil palm trunk as an alternative raw material.

In 2011, the MDF and particleboard industries utilised 2.430 million tonnes of Rubberwood in their production from 2.336 million tonnes in 2010, recording an increase of 4% over the previous year. Meanwhile, 20% of the wood species of the raw materials used for these industries were of mixed tropical wood which amounted to 627,000 tonnes in 2011, declining marginally by 1.3% over the previous year. Other species identified was Acacia which represents 4% from the total raw material used in 2011. The use of Acacia however decreased by 9% from 148,000 tonnes in 2010 to 147,000 tonnes in 2011.

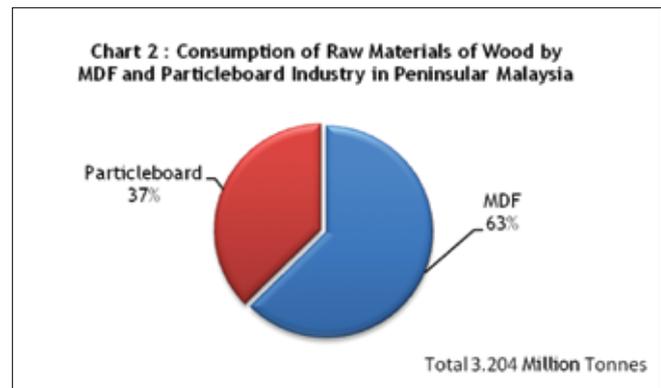
The study showed that the MDF and particleboard industries were still depending on Rubberwood as the main raw material for its productions. Although the use of alternative wood species such as mixed tropical wood and Acacia was reported to have decreased, at the least it could assist on raw material procurement as needed.

**Types of Wood as Raw Materials for MDF and Particleboard**

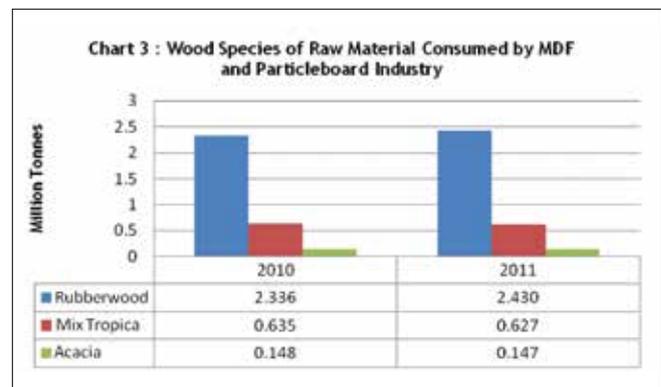
In addition to the species, procurement of raw materials by the MDF and particleboard industries were categorised into three types:



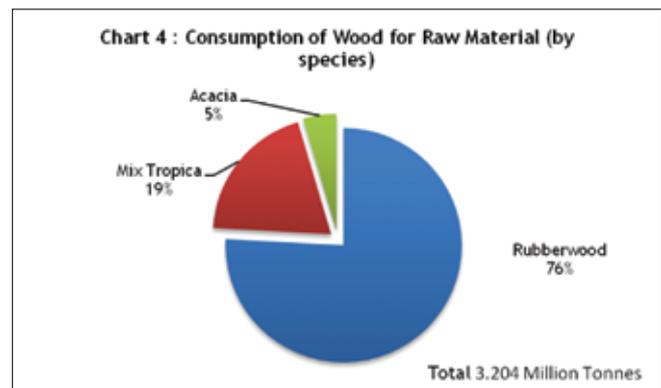
Source: MTIB



Source: MTIB

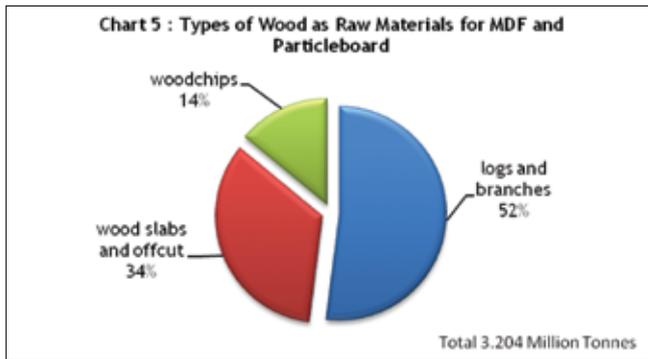


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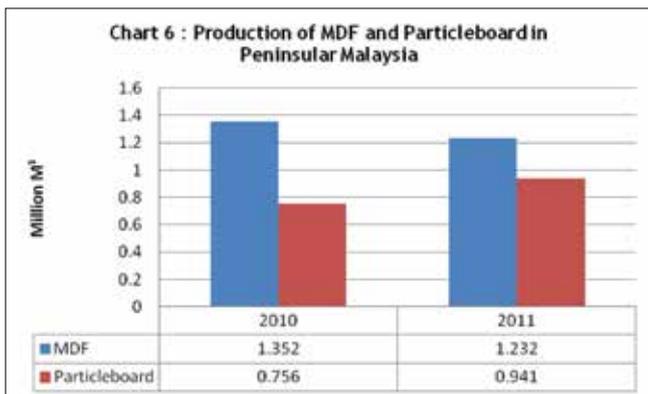


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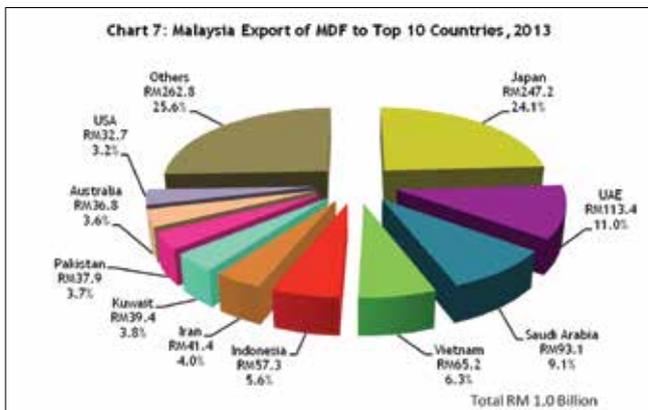
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Source: MTIB



Source: MTIB



Source: MTIB

**Table 2 : Exporter of Fibreboard : Global Ranking**

(Value: USD '000)

Rank	Exporter Country	2009	2010	2011	2012
	World	8,148,902	8,927,396	9,903,428	9,505,863
1	Germany	1,832,657	1,898,893	1,939,478	1,825,393
2	China	883,294	1,114,253	1,435,604	1,613,604
3	Belgium	626,115	612,353	664,717	575,521
4	Poland	393,761	473,941	514,690	490,493
5	Austria	417,405	419,125	442,080	404,035
6	Thailand	244,732	347,942	401,651	392,958
7	Malaysia	293,627	373,764	368,908	371,985
8	Chile	240,316	276,122	310,220	317,530
9	France	257,574	270,791	305,891	297,835
10	Turkey	214,872	253,258	286,842	295,093

Source: UN Comtrade Statistics

- Logs and branches
- Wood slabs and off-cut
- Woodchips

Normally the MDF and particleboard mills will process timber and wood slabs to produce woodchips before they can be further processed for the production of MDF and particleboard. Not only do they produce woodchips by themselves, they also obtain woodchips by purchasing it from local suppliers to meet their demand for raw materials. Meanwhile, the procurement of woodchips declined in 2011 by 9% to 0.450 million tonnes as compared to 2010.

From the study, logs and branches were found to be the main types of raw materials procured by the MDF and particleboard industries for their production. In 2011, a total of 1.668 million tonnes of logs and branches were used as compared to 1.687 million tonnes in the previous year.

However, demand for slabs and off-cut were reported to increase by 17% from 0.935 million tonnes in 2010 to 1.086 million tonnes in 2011.

Generally, logs and branches are the key types of raw material used by the MDF and particleboard industry which contributed 52% from the total of raw material consumption of 3.204 million tonnes in 2011, followed by slabs and offcut, 34% and woodchips, 14%.

### Production of MDF and Particleboard in Peninsular Malaysia

The study, found that MDF production in 2011 decreased by 9% from 1.35 million m<sup>3</sup> in 2010 due to operational problems and the weak global market demand faced by the major manufacturers of MDF.

However, production of particleboard increased significantly by 24.5% to 941 thousand m<sup>3</sup> in 2011 as compared to the previous year. Favourable market demand had led to positive growth for the industry.

### Export Markets

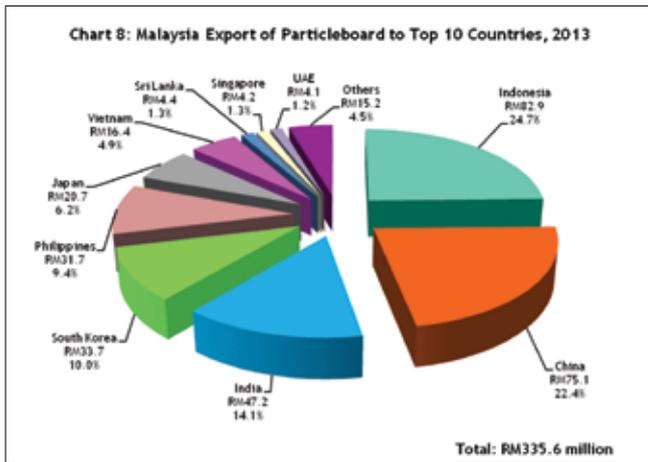
#### Medium Density Fibreboard (MDF)

Malaysia's exports of MDF totalled RM1.027 billion in 2013, a decline of 10.6% compared to 2012. Japan was the major importer of MDF, export to the country totalling RM247.2 million, representing 24% of total export in 2013. The UAE was also major market for MDF with 11% market share, followed by Saudi Arabia at 9%, Viet Nam at 6.3% and Indonesia, 5.6%.

Globally, Malaysia ranked seventh behind Thailand and Austria in the 2012 ranking. Other major suppliers were Germany, China, Belgium and Poland.

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Source: MTIB

**Table 3 : Exporter of Particleboard : Global Ranking**

(Value: USD '000)

Rank	Exporter Country	2009	2010	2011	2012
	World	5,519,461	6,259,920	7,000,544	7,186,048
1	Canada	626,561	873,603	803,132	1,085,594
2	Germany	821,986	802,891	858,174	737,003
3	Austria	662,855	670,629	782,487	736,574
4	France	377,107	437,076	546,741	499,035
5	Belgium	346,471	375,397	435,214	395,351
6	Romania	127,111	211,692	258,421	375,338
7	Czech Republic	228,494	269,751	320,630	304,079
8	Thailand	227,073	275,030	302,442	282,293
9	Russian Federation	96,647	59,013	87,681	205,343
10	Spain	161,996	178,272	215,790	188,818
11	Malaysia	71,072	89,723	110,468	109,801

Source: UN Comtrade Statistics

**Particleboard**

Export of particleboard in 2013 declined marginally by 1% to RM335.6 million compared to 2012. Indonesia is a major importing country, registering RM82.9 million, representing 24.7% of the total export. China is the second largest importing country with export valued at RM75.1 million, representing 22.4%, followed by India at 14.1%, South Korea at 10%, Philippines at 9.4% and Japan with 6.2%.

For the supply of particleboard globally, Malaysia ranked 16<sup>th</sup> in 2012. Other major suppliers were Canada, Germany, Austria and France.

**Conclusion**

In general, the study revealed that these industries have an installed capacity of 3.059 million m<sup>3</sup> annually. The MDF industry has an annual installed capacity of 1.417 million m<sup>3</sup> while the particleboard industry has a total of 1.642 million m<sup>3</sup>.

The survey recorded that wood usage by the MDF and particleboard industries totalled 3.204 million tonnes in 2011. In terms of total consumption of raw wood materials, the MDF industry was the major consumer at 63% or 2.006 million tonnes, while the particleboard industry used 37% or 1.198 million tonnes.

Rubberwood has emerged as the most important source of wood species for raw material in production of major timber products in Malaysia including MDF and particleboard. The study found that Rubberwood contributes 76% from the total consumption of raw materials of wood for the manufacturing of MDF and particleboard totalling 3.204 million tonnes. This is followed by mixed tropical timber at 20% and Acacia at 4%.

The study also indicated that there are some companies which have started to use alternative raw materials such as oil palm trunks (OPT) in their production of MDF and particleboard. This shows that there is potential for the industry to adopt the OPT as a raw material in the future. Companies have also stated their concerns on shortage of raw materials particularly due to increased competition from the furniture industry as well as for export markets. Constraints in supply and increase in demand especially for Rubberwood have led to an increase in the prices of the raw material. Apart from the shortage and inconsistent supply of Rubberwood, the MDF and particleboard industries are also facing stiff competition from China and Thailand which offer more competitive prices of MDF and particleboard as compared to Malaysia.

From the study, in 2011, production of MDF was registered at 1.232 million m<sup>3</sup>, while production of particleboard was recorded at 941,000 m<sup>3</sup>. For the supply of MDF, Malaysia ranked seventh in the world ranking in 2012 and exported MDF totalling RM1.027 billion in 2013. Its major markets were mainly Japan, the UAE, Saudi Arabia and Viet Nam. Meanwhile, Malaysia ranked 16<sup>th</sup> in the global ranking as supplier of particleboard in 2012. Exports of particleboard were recorded at RM335.6 million and its major markets were Indonesia, China, India, South Korea and Philippines.

**References:**

- Study on Consumption of Raw Materials by MDF and Particleboard Industry in Peninsular Malaysia, MTIB, 2012
- Department of Statistics Malaysia (DOSM)
- UN Comtrade Statistics
- Wood-based Panels (WBP) 

## FOURTH INTERNATIONAL CONFERENCE AND EXHIBITION ON OIL PALM BIOMASS



*Dr. Loh Yueh Feng from MTIB presenting a paper entitled "Conversion of Oil Palm Stem into Veneer and Plywood".*



*A fruitful discussion during the conference.*

The Fourth International Conference and Exhibition on Oil Palm Biomass (ICOPB 2014) was held from 26 to 28 May in Jakarta, Indonesia. The event was endorsed by Ministry of Research and Technology (Food and Agriculture Sector) and Ministry of Economic, Indonesia.

The theme for Fourth International Conference and Exhibition on Oil Palm Biomass was "Indonesian Palm Oil Forward in the Political Resilience through Sustainability and Downstream Industry Development". ICOPB 2014 was the premier forum for the presentation of applied research and business opportunities on oil palm biomass; attendees learned about new advances in the area of converting oil palm biomass to value added products and energy. The conference brought together leading international researchers, scientists, engineers, and materials processors from the industry, academia, and government agencies involved in developing innovative products and creating new opportunities in oil palm bio-based materials derived from oil palm biomass.

The conference was officially opened by Mr. Soedjai Kartasasmita, Chairman Advisory Board of ICOPB on 26 May. After the opening ceremony, three panel dialogues were held to discuss the action plan for the palm oil industry, policies on upstream and downstream development, palm oil sustainability, political resilience, challenges and aspirations on environment issues and the new approach in development of biotechnology, peat and human resources in the palm oil industry.

In the session of oil palm biomass, papers delivered by Malaysian speakers were from SIRIM Berhad, Malaysia Biomass Industries Confederation, Inno Y&L Trading Co. Ltd., IOPRI, MTIB, Malaysia Innovation Agency and Universiti Malaysia Kelantan. The papers, in general, covered the latest development and findings in the research field of converting oil palm biomass to value-added products such as high grade chemicals, pulp and paper, livestock and energy. Eight papers were presented in the ICOPB 2014 inclusive of a paper entitled "Conversion of Oil Palm Stem into Veneer and Plywood" delivered by Dr. Loh Yueh Feng from MTIB. 

An advertisement for Malaysian Wood. On the left, a photograph shows a wooden park bench in a lush green park setting. On the right, the text reads: "Malaysian Wood Standing on Excellence", "Tak Lapuk Dek Hujan, Tak Lekang Dek Panas", and "Timeless, Enduring". At the bottom, there is the website "www.mtib.gov.my" and several logos including MTIB, SIRIM, and others.



## INDIA AN EMERGING TIMBER MARKET

India is developing into an open-market economy, yet traces of its past autarkic policies remain. Economic liberalisation measures, including industrial deregulation, privatisation of state-owned enterprises, and reduced controls on foreign trade and investment, began in the early 1990s and served to accelerate the country's growth, which averaged fewer than 7% per year from 1997 to 2011.

### Economy

India's diverse economy encompasses traditional village farming, modern agriculture, handicrafts, a wide range of modern industries, and a multitude of services. Slightly less than half of the work force is in agriculture, but, services are the major source of economic growth, accounting for nearly two-thirds of India's output with less than one-third of its labour force. India has capitalised on its large educated English-speaking population to become a major exporter of information technology and business outsourcing services, and software workers. India's economic growth began slowing in 2011 because of a decline in investment, caused by high interest rates, rising inflation, and investor pessimism about the government's commitment to further economic reforms and the sluggish global economic recovery. In 2010, the Indian economy rebounded robustly from the global financial crisis, largely because of strong domestic demand and growth exceeded 8% year on year in real terms.

In late 2012, the Indian government announced additional reforms and deficit reduction measures, including allowing higher levels of foreign participation in direct investment in the economy. The outlook for India's long-term growth is moderately positive due to a young population and corresponding low dependency ratio, healthy savings and investment rates, and increasing integration into the global economy. However, India still faces many challenges that it has yet to fully address major issues including poverty, corruption, violence and discrimination against women and girls, an inefficient power generation and distribution system, ineffective enforcement of intellectual property rights, decades-long civil litigation dockets, inadequate transport and agricultural infrastructure, limited non-agricultural employment opportunities, high spending and poorly-targeted subsidies, inadequate availability of quality basic and higher education, and accommodating rural-to-urban migration. Growth in 2013 fell to a decade low, as India's economic leaders struggled to improve the country's wide fiscal and current account deficits.

Rising macroeconomic imbalances in India and improving economic conditions in Western countries, have led investors to shift capital away from India, prompting a sharp depreciation of the rupee.

However, investors' perception of India improved in early 2014, due to a reduction of the current account deficit and expectations of post-election economic reform, resulting in a surge of inbound capital flows and stabilisation of the rupee.



### Basic Indicators (2013)

Population	: 1,236,344,631 (July 2014 est.)
Age Structure	: 15-64 years (64.9%)
GDP / GDP Grow	: 10.4%
GDP per Capita	: USD4,000
Inflation Rate	: 9.6%
Labour Force	: 478 million
Exchange Rates	: Indian rupees (INR) per USD58.68 (2013 est.)
Land Area	: 3,287,590 sq km.
Export Value	: USD313.2 billion (2013 est.)
Export Commodities	: petroleum products, precious stones, machinery, iron and steel, chemicals, vehicles, apparel
Import Value	: USD467.5 billion (2013 est.)
Import Commodities	: crude oil, precious stones, machinery, fertilisers, iron and steel and chemicals.

### Malaysia's Export of Timber and Timber Products to India

Export of timber and timber products to India has been on an increasing trend. In 2009 and 2010, exports totalled RM1.34 billion and RM1.51 billion respectively. Exports, however, decreased slightly by 0.07% to RM1.5 billion in 2011. In 2012, exports dropped 2% to RM1.47 billion but increased 4% in 2013 to RM1.53 billion.

Logs have been the main export to India and the amount has been increasing. In 2009, exports totalled RM1.11 billion. In 2010, exports increased by 7.2% to RM1.19 billion. The exports however decreased 5% to RM1.13 billion in 2011. In 2012, exports were at RM1.05 billion and in 2013, at RM1.12 billion, a marginal increase.

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Exports of sawntimber totalled RM11.1 million in 2009. In 2010, exports increased substantially to RM15.8 million. However, in 2011 exports decreased to RM13 million. In 2012 exports increased substantially to RM15.2 million and in 2013, they were valued at RM15.2 million.

Plywood exports to India totalled 17,920 m<sup>3</sup> in 2009. Exports registered a reduction in 2010 to 16,450 m<sup>3</sup>. However exports increased in 2011 to 23,962 m<sup>3</sup> and continued to increase in 2012 at 26,740 m<sup>3</sup> whilst in 2013, exports dropped to 15,588 m<sup>3</sup>. Exports of particleboard totalled RM29.7 million

and RM49 million in 2009 and 2010 respectively. However, in 2011, particleboard exports further increased heftily to RM72.7 million. In 2012, they dropped to RM62 million and in 2013, they decreased to RM47.2 million.

Malaysian furniture export has shown an encouraging growth. Exports increased from RM94 million in 2009 to RM124.2 million in 2010. In 2011, exports increased further to RM155.6 million. However, in 2012 exports decreased by 3% to RM151.8 million and further decreased in 2013 to RM108.9 million. Furniture exports to India mainly consist of

### Malaysia: Export of Timber Products to India

(FOB Value: RM '000)

Products	2009	2010	2011	2012	2013
Logs	1,109,920	1,193,543	1,134,357	1,050,664	1,117,551
Sawntimber	11,128	15,844	13,022	15,163	15,152
Plywood	28,550	26,675	29,169	22,319	23,215
Veneer	671	522	125	1,787	1,796
Mouldings	2,988	1,781	4,877	1,858	4,129
Chipboard/Particleboard	29,694	49,031	72,664	62,006	47,200
MDF	26,218	54,627	37,311	30,882	18,368
Wooden Frame	220	94	119	143	58
BJC	30,763	37,837	55,334	61,072	56,929
Wooden Furniture	94,022	124,199	155,640	151,800	108,894
Rattan Furniture	335	598	191	346	398
Other Products	1,348	1,311	2,653	76,685	135,336
<b>Total</b>	<b>1,335,857</b>	<b>1,506,062</b>	<b>1,505,461</b>	<b>1,474,724</b>	<b>1,529,027</b>

Source: Department of Statistics Malaysia( DOSM) and MTIB

### Malaysia: Export of Timber Products to India

(Volume : m<sup>3</sup>)

Products	2009	2010	2011	2012	2013
Logs	2,219,810	2,256,380	1,879,196	1,826,844	1,788,275
Sawntimber	7,696	12,650	10,130	11,343	11,276
Plywood	17,920	16,450	23,962	26,740	15,588
Veneer	278	266	158	2,520	1,698

Source: DOSM and MTIB

### Malaysia: Import of Timber Products from India

(FOB Value: RM '000)

Products	2009	2010	2011	2012	2013
Sawntimber	0	27	0	566	948
Plywood	346	265	472	149	438
Veneer	0	0	0	978	2,285
Mouldings	0	47	10	0	10
Chipboard/Particleboard	76	118	130	54	124
Fibreboard	239	248	109	57	240
Wooden Frame	13	12	15	16	11
Builders Joinery and Carpentry	137	88	183	41	91
Wooden Furniture	631	846	1,060	6,608	846
Rattan Furniture	116	16	73	16	79
Other Products	736	613	997	944	2,661
<b>Total</b>	<b>2,295</b>	<b>2,280</b>	<b>3,048</b>	<b>9,429</b>	<b>7,733</b>

Source: DOSM and MTIB

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wooden upholstered furniture, office, kitchen and bedroom furniture.

Exports of MDF on the other hand, totalled RM54.6 million in 2010, an increase of 108% from the previous year and in 2011 exports dropped to RM37.3 million. In 2012, MDF exports dropped to RM30.9 million and in 2013 exports were at RM18.4 million.

### Malaysia's Import of Timber Products from India

Malaysia's import of timber products from India is small but shows an increasing trend. Imports totalled RM2.29 million in 2009 and decreased to RM2.28 million in the following year. Imports however, increased to RM3.05 million in 2011 and in 2012, peaked further to RM9.43 million. In 2013, imports dropped marginally at RM7.73 million.

Malaysia's main imports of timber products from India are wooden furniture, veneer, plywood, BJC, fibreboard, densified wood and particleboard.

### Import Tariffs for Timber Products

Tariffs for timber and timber products have been reduced significantly with most rates at 10%. For example, import duty for logs was reduced from 140% to 5% in 2004. Basic duty for other timber products are at 10% but other duties such as excise duty, excise cess, education cess and countervailing duties are also being levied. These duties can come up to between 9.3% and 36.7%. Basic import tariffs are as follows:

India: Import Tariffs for Timber Products (MFN)

Products	Tariff Rates (%)
Logs (4403)	5
Sawntimber (4407)	10
Plywood (4412)	10
Veneer (4408)	10
Mouldings (4409)	10
BJC (4418)	10
Particleboard (4410)	10
MDF (4411)	10
Furniture (HS 9403)	10
Seats (HS 9401)	10

India: Import Tariffs for Timber Products Rates under Malaysia India Comprehensive Economic Agreement \*(MICECA) Effective 1 July 2011

Products	Tariff Rates (%)
Logs (4403)	5
Sawntimber (4407)	5
Plywood (4412)	5
Veneer (4408)	5
Mouldings (4409)	5
BJC (4418)	5
Particleboard (4410)	5
MDF (4411)	5
Furniture (HS 9403)	5-8
Seats (HS 9401)	5-8

\* The MICECA is a comprehensive Agreement covering Trade in Goods, Trade in Services and Economic Cooperation between Malaysia and India.

### Prospects

The booming Indian economy has great business potential for Malaysian companies and they could tap some unique business opportunities in this market of roughly 1.2 billion people. India is a country with a large and growing population and a wide diversity of market segments. It provides a potentially vast market for consumers and industrial products, particularly when access is further liberalised bilaterally under MICECA.

India has also been experiencing a period of sustained and rapid economic growth. New industries such as IT and business process outsourcing operations are surging ahead while investment especially foreign direct investment (FDI) is increasing. India has attracted a huge quantum of FDI on account of its excellent economic performance and recently, the real estate sector has also been deregulated and liberalised. India's heavy investment in infrastructure is also creating huge business opportunities for timber building material.

India is a timber deficit country and its annual timber requirement is approximately 45 million m<sup>3</sup>. India's demand for wood is mainly from the household furniture manufacturing sector, construction industry, wood-based industries and also as firewood. As India has already been importing timber and timber products from Malaysia, there is prospect for growth in trade.

## COMING EVENTS – NOVEMBER 2014

DATE	EVENT	VENUE	ORGANISER
5-8	<b>FURNIPRO ASIA 2014</b> Furniture, Woodworking Trade Fair	Marina Bay Sands, Singapore	Koelnmesse Pte. Ltd. Tel : + 65 6688 8868 Fax : + 65 6294 8403 E-mail : info@koelnmesse.com.sg
7-9	<b>FOREST FAIR 2014</b> International Forestry Exhibition	Helsinki Fair Centre, Finland	Suomen Messut Tel : + 358 40 450 3250 Fax : + 358 9 142 358 E-mail : info@finnexpo.fi
7-9	<b>FURNITURE AND INTERIOR DESIGN SHOW 2014</b> International Exhibition of Interior Design, Furniture and Accessories	Expo Georgia Exhibition Centre, Georgia	Expo Georgia Tel : + 995 32 2341100 Fax : + 995 32 2351100 E-mail : expo@expogeorgia.ge
10-13	<b>DECOFAIR 2014</b> International Exhibition of Interior Design, Furniture and Accessories	Jeddah International Exhibition and Convention Centre, Saudi Arabia	Reed Exhibition Companies Tel : + 44 20 8271 2134 Fax : + 44 20 8910 7823 E-mail : rxinfo@reedexpo.co.uk
10-16	<b>FURNITURE FAIR BELGRADE 2014</b> Furniture of all kinds for all purposes	Belgrade Fair Grounds, Serbia	Belgrade Fair Tel : + 381 (0) 11 2655 - 555 Fax : + 381 (0) 11 2655 - 402 E-mail : info@sajam.com.rs
11-14	<b>EXHIBITION OF MODERN FURNITURE 2014</b> Decoration, Home and Office Design Furniture	Tabriz International Exhibition Centre, Tabriz, Iran	Tabriz International Co. Tel : + 98 (411) 6373 851 - 8 Fax : + 98 (411) 6373 850 - 60 E-mail : info@tabrizfair.ir
14-16	<b>FUZHOU FURNITURE AND BUILDING DECORATION FAIR 2014</b> Furniture, Decoration, Constructions Home and Office Design	Fuzhou Strait International Conference and Exhibition Centre, Fuzhou, China	China Foreign Trade Guangzhou Exhibition Corp. Tel : + 86 20 8912 8183 Fax : +86 20 8912 8308 E-mail : marketing@fairwindow.com.cn
29-31	<b>BANGKOK FURNITURE SALE 2014</b> Furniture Exhibition	Queen Sirikit National Convention Centre, Bangkok, Thailand	Union Pan Exhibitions Co. Ltd. Tel : +66 (0) 2314 0855 Fax : + 66 (0) 2319 8337 E-mail : service@unionpan.com



**Malaysian Wood**  
Standing on Excellence

**Dari Mata Turun ke Hati**  
*Appealing to the Eye, Capturing the Heart*

# PASAK – SUITABLE FOR INTERIOR USE



Wood colour and texture

**P**asak is the Standard Malaysian Name for the tree and timber of *Aglaia* spp. (family Meliaceae). *Aglaia* spp. including the formerly separate genus *Amoora*. Trade and local names are: *parak, langsung* (Indonesia); *bekak, pasak, segera, pak* (Malaysia); *makaasim, katong* (Philippines); *thanatka-wa* (Myanmar); *tasua, sangkhriat* (Thailand). The timber is not protected under CITES regulations.

This timber is found in the lowland forests especially in a geographic distribution from Myanmar to Australia.

## General Characteristics

Pasak is classified as a Medium Hardwood with a density ranging from 770-995 kg/m<sup>3</sup> when air dry.

Growth ring boundaries are indistinct or absent. The sapwood is pale yellow-brown, light straw-coloured or light pink-brown and is moderately to sharply different from the heartwood, which is light red, orange-red or red-brown, becoming dark red-brown or walnut-brown on exposure. Texture is fine to moderately fine or moderately coarse and even. The grain is straight to interlocked, sometimes irregular or wavy.

## Wood Anatomy

Growth rings are not apparent. Vessels are moderately numerous to numerous, small to medium-sized: solitary and in radial multiples of up to four, solitary tyloses are absent but white, yellow or dark coloured deposits are present. Odour in some species is distinct, or indistinct or absent.

Wood parenchyma is moderately abundant to abundant while both paratracheal and apotracheal types are present. The paratracheal type is in aliform and confluent bands while the apotracheal type is in narrow irregularly space terminal bands. The average number of cells per axial parenchyma strand is four to eight.

Rays are seven to 11 per tangential mm, multiseriate (also if only few), (1–) 2(–3) cells wide. Rays compose of a single cell type (homocellular), or two or more cell types (heterocellular); homocellular ray cells are procumbent. Heterocellular rays with square and upright cells are restricted to marginal rows, mostly one marginal row of upright or square cells to mostly two to four marginal rows of upright or square cells. Some specimens show exclusively uniseriate rays; as this feature is not characteristic of the entire group, it is not coded. Rays

are moderately fine to medium-sized, visible to the naked eye and not conspicuous on the radial surface. Ripple marks are absent.

There are secretory structures. Oil and mucilage cells are absent. Intercellular canals and laticifers or tanniferous tubes are also absent.

There are mineral inclusions. Crystals are present, prismatic is located in axial parenchyma cells. Crystal-containing axial parenchyma cells is chambered, or not chambered. The number of crystals per cell or chamber is one. Silica is not observed.

## Durability

The timber is moderately durable.

## Working Properties

Planing	: Easy	Finish	: Smooth
Boring	: Easy	Finish	: Smooth
Turning	: Easy	Finish	: Smooth
Nailing	: Excellent		
Gluing	: n.a		
Finishing	: n.a		

## Mechanical Properties

Strength Group	: n.a
Static Bending MOE	: 9,730 N/mm <sup>2</sup>
MOR	: 49.5 N/mm <sup>2</sup>

### Compression Strength:

Perpendicular to Grain	: 2.5 N/mm <sup>2</sup>
Parrallel to Grain	: 25.5 N/mm <sup>2</sup>
Shear Strength	: 7.5 N/mm <sup>2</sup>

## Uses

Pasak timber is suitable for interior uses e.g. door and window frames, railings, joists, beams, posts, furniture making and packing cases. It is also suitable for panelling and plywood manufacture.

### References :

- 100 Malaysian Timbers-MTIB (2010 Edition)
- <http://www.biologie.uni-hamburg>

# MTIB Moments



Dr. Jalaluddin Harun, MTIB Director-General (centre) and several MTIB officials from HQ being briefed by Encik Mohd Norzam Ujud, Head of MTIB Tawau on the activities of MTIB Tawau. The group visited the office on 16 May 2014.



Dr. Jalaluddin Harun, MTIB Director-General (third from left) presenting MTIB publication entitled 'Shaping the Timber Industry of Malaysia' to Encik Goh Kun Teck, Senior General Manager of TSH Resources. The group visited the factory in Tawau, Sabah on 17 May 2014.



Practical session during a Course on the Development of Rubber Plantation and Nursery which was organised by MTIB from 20 to 24 May 2014 in Betong, Sarawak.



MTIB organised a Workshop on Enhancing MCS System for its personnel on 22-24 May 2014 in Kuala Lumpur.



Puan Hjh. Norchahaya Hashim, MTIB Deputy Director-General (back row- fifth from left) witnessing the signing of MoA between UPSI and AI-Hilmi Agrofarm Sdn. Bhd. under the MTIB-TESCO Greener Earth Programme. The event took place on 24 May 2014 in Tanjung Malim, Perak.



MTIB officials posing at MTIB booth during Hello Komoditi organised by MPIC on 31 May 2014 in Sungai Besar, Selangor.