



THAILAND

Thai Pulp and Paper Industry in 2008 :

Executive Summary

For the year 2008, total short fiber pulp's production was 1.1 million tons with total utilization rate of 92%. Total pulp consumption was 1.3 million tons almost the same as the previous year. It was estimated that total pulp consumption will grow to 1.4 million tons in year 2013. Thailand total pulp import was 374,000 tons whereas total pulp export was 193,000 tons. (Annex 1)

Total capacity of Paper and Paperboard Industry in 2008 was 4.9 million tons. Kraft paper was the major portion of the industry with total capacity of 62% followed by Printing & Writing paper, Paperboard, Newsprint and Tissue paper.

Total Paper and Paperboard production declined by 3% with total production of 4.2 million tons. The industry utilization rate in 2008 was 87% the same rate as year 2007.

In 2008 consumption of Paper and Paperboard was 3.5 million tons, down by 2% from the previous year. Main portion of the decreasing came from lower consumption of Newsprint paper and Printing & Writing paper. Paper consumption per capita in 2008 was 55 kg. The consumption rate is expected to reach 65 kg. in year 2013.

Total import of Paper and Paperboard in 2008 was 892,000 tons increased by 3% from previous year mainly came from Paperboard paper and Tissue paper import increased by 60% and 24% respectively. While Newsprint paper imports declined by 21% and 15% for Printing & Writing paper.

Export of Paper and Paperboard dropped by 5% from the previous year. Total export volume was 1,102,000 tons. Kraft paper was a major portion which consisted of 46% of the industry export followed by Printing & Writing paper, Tissue paper and Newsprint paper. The industry main export destinations were South Korea, Taiwan, Hong Kong and Southeast Asia countries.

In 2008 Thai economy growth was 2.6% and is expected to slow down to (-3.5)-(-2.5)% in year 2009. (source: National Economic and Social Development Board ; NESDB) Mainly driven by the sluggish of global economy and the economy of Thailand's major export countries. Thanks to global trend of environmental awareness that would improve consumption rate of the industry which has been almost 100% recyclable therefore it is estimated that demand of Paper and Paperboard will grow by 3% and estimated to reach 3.5 million tons in 2009 and will reach 4.1 million tons in year 2013.

For Recovered paper, the industry recovery rate in 2008 was 59% improved by 14% from year 2007. Total Recovered paper consumption was 3.3 million tons which provided by domestic collection of 2.1 million tons and importation. Recovered paper consumption is estimated to grow by 3% in parallel with Kraft paper industry's growth.

1. Thailand Economy in 2008 :

Thailand Key Economic Indicators	2009 Forecast	2008 (2551)	2007	2006	2005	2004
GDP growth (1988 price, %)	(-3.5)-(-2.5)	2.6	4.9	5.2	4.5	6.3
GDP Current prices (Billion Baht)	8,832	9,105	8,493	7,841	7,088	6,490
Investment (1988 price,%)	-6.2	1.1	1.3	3.9	11.1	13.2
- Private	-9.7	3.2	0.6	4.1	10.9	16.2
- Public	5.0	-4.8	3.4	3.3	11.3	5
Consumption (1988 price,%)	2.0	2.2	2.7	2.9	5.5	6.1
- Private	0.4	2.5	1.6	3.0	4.3	6.2
- Public	11.3	0.5	9.2	2.4	13.7	5.6
Export value (Billion USD)	147.2	175.3	150.0	127.9	109.2	94.9
- Growth rate (%)	-15.0	16.8	17.3	17.0	15.0	21.6
Import value (Billion USD)	140.7	175.1	138.5	126.9	117.7	93.5
- Growth rate (%)	-19.6	26.4	9.1	7.9	25.9	25.7
Balance of Trade (Billion USD)	8.3	0.2	11.6	1.0	-8.5	1.5
Current Account (Billion USD)	9.3	-0.2	14	2.3	-7.9	2.8
Inflation (%)	(-0.5)-(-0.5)	5.5	2.3	4.7	4.5	2.7
Population (Million)	63.39	63.39	63.04	62.83	62.42	61.97
Source: BOT						

Source : National Economic and Social Development Board (NESDB) and Bank of Thailand (BOT)
(as of May 25, 2009)

2. Thai Pulp and Paper Industry in 2008

2.1. Pulp Industry

- **Capacity :**

In 2008 total pulp capacity was 1.2 million tons improved a bit from year 2007.

Totally 6 pulp manufacturers are as following;

Pulp Manufacturers in Thailand

Manufacturer	Capacity (Thousand Ton)	Grade
1. Advance Agro	560	Eucalyptus
2. Phoenix Pulp and Paper	235	Eucalyptus, Bamboo, Leucaena, Acacia
3. Panjapol Pulp Industry	110	Eucalyptus
4. SCG Paper	105	Eucalyptus, CTMP
5. Siam Cellulose	86	Eucalyptus
6. Environment Pulp and Paper	100	Bagasse
Total	1,196	

- **Production :**

In 2008 total pulp production was 1.1 millions ton declined by 5% from the previous year. Utilization rate was 92%, down 6% compared to year 2007.

- **Consumption :**

Total pulp consumption was 1.3 millions ton almost the same as the previous year. As Thailand produced only short fiber grade, totally 880,000 tons of short fiber consumption were produced within the country, the rest was long fiber grade mostly imported from Northern Europe and Northern America regions. Slow growth of pulp demand was an impact of substitution effect from virgin pulp to recycled pulp of paper manufacturers in order to be cost efficient manufacturers and also environmentally friendly awareness.

- **Pulp Import - Export :**

Total pulp imported was 374,000 tons declined by 9% from year 2007, of which 315,000 tons were long fiber and 59,000 tons were short fiber. Imported of long fiber down by 15% from year 2007. Canada, Sweden and United States were Thailand major pulp exporters.

Thailand exported short fiber pulp of 193,000 tons, down by 34% from year 2007. Thailand major pulp export destinations were China, South Korea, Taiwan, Indonesia and Vietnam.

- **Trend of Pulp Demand and Capacity :**

Domestic pulp consumption is estimated to grow by 2% per year in line with the growth of Printing & Writing paper industry which was its major consumption. It's estimated that demand of pulp industry would reach 1.4 million tons in year 2013.

Unit: Thousand Ton

Year	2005	2006	2007	2008	<i>Estimated</i>				
					2009	2010	2011	2012	2013
Consumption									
- Short Fiber	914	895	1,167	880	897	915	934	952	971
- Long Fiber	338	431	122	407	415	424	432	441	450
Total	1,252	1,326	1,289	1,287	1,313	1,339	1,366	1,393	1,421
Capacity									
- Short Fiber	1,143	1,146	1,189	1,196	1,396	1,736	1,736	1,736	1,736
- Long Fiber	-	-	-	-	-	-	-	-	-
Total	1,143	1,146	1,189	1,196	1,396	1,736	1,736	1,736	1,736
Production									
- Short Fiber	1,061	1,129	1,169	1,106	1,396	1,736	1,736	1,736	1,736
- Long Fiber	-	-	-	-	-	-	-	-	-
Total	1,061	1,129	1,169	1,106	1,396	1,736	1,736	1,736	1,736
Surplus (Shortage)									
- Short Fiber	148	234	3	226	499	821	802	784	765
- Long Fiber	(338)	(431)	(122)	(407)	(415)	(424)	(432)	(441)	(450)

2.2 Recovered Paper :

- **Local recovered paper collection :**

In 2008, total volume of recovered paper collection was 2.1 million tons, a rise of 12% from the previous year. Thanks to an effective waste management schemes and environmental concerns, the industry recovery rate was 59% significantly improved by 14% from year 2007.

- **Consumption :**

Recovered paper consumption was 3.3 million tons increased by 22% from the previous year. According to the industry aware of friendly environment in accordance with a rising cost of energy and virgin pulp prices, which motivated the use of recycled pulp thus push to boosting trend of recovered paper consumption.

- **Recovered Paper Import - Export :**

Import of recovered paper in 2008 was 1,217,000 tons, improved by 20% from the previous year. Old corrugated carton (OCC) accounted for 72% of total imports, while mixed waste and

old newspaper accounted for 16% and 12% respectively. United States, Japan and Singapore were major exported countries to Thailand.

- **Trend of Recovered Paper demand and collection :**

The recovered paper consumption is estimated to increase by 3% per year along with Kraft paper industry's growth.

It is estimated that the country recovery rate would improve significantly due to Global trend of environmental awareness would lead the industry to utilize more in recycling material, thus would enhance the industry usage in recycling material.

In addition, an establishment of Thailand Institute of Packaging Management for Sustainable Environment (TIPMSE), sponsored its initial fund by all related packaging material manufacturers in Thailand, is as well to reduce packaging wastes composition such as paper, plastic, glass and metal in the municipal wastes. TIPMSE's vision is to establish integrated management system for the packaging, packaging wastes and solid wastes, in harmony with the sustainable development. Several pilot projects at local universities and communities in order to turn waste to money, are implemented efficiently and disseminated broadly. With such intention and execution will boost up local collection rate for recycling materials especially paper hence will certainly improve the industry recovery rate.

2.3 Paper and Paperboard Industry

- **Capacity :**

Total capacity of Paper and paperboard was 4.9 million tons dropped by 5% from year 2007. Due to the permanent shut down of Printing & Writing paper mills.

Kraft paper continued to be the largest portion of the industry with total capacity of 62%, followed by 23% of Printing & Writing paper, 9% of Paperboard paper, 3% of Newsprint paper and Tissue paper respectively.

- **Production :**

Paper production in 2008 down by 3% with the total production of 4.2 million tons compared to 4.3 million tons in year 2007. Major cause was from the slow growth of Thailand exportation.

Kraft paper production volume was 2.5 million tons, down by 4% from the previous year. With the utilization rate of 83% the same rate as year 2007.

Printing & Writing paper production was 1.1 million tons with the utilization rate of 95%. Utilization rate of Newsprint paper was 99%, 91% for Tissue Paper and Paperboard paper was 79%.

In 2008 total utilization rate of Paper and Board Industry was 86% compared to 84% in year 2007.

- **Consumption :**

In 2008, total Paper and Board consumption was 3.5 million tons, a decrease of 2% from 2007. Major impact was from the slump demand of Newsprint paper and Printing & Writing paper. Paper and Board consumption per capita was 55 kg. compared to 56 kg. in 2007. It is estimated that per capita consumption would reach 65 kg. in year 2013.

Kraft paper consumption was 1.9 million tons down by 4% from prior year, primarily impact was from the economy slow down of Thailand export markets especially the key export market as USA.

Printing & Writing paper consumption was 0.7 million tons, 8% down from the prior year. The same as Newsprint paper consumption was dropped by 10% to 0.2 million tons.

On the other hand, demand growth of Tissue paper was up by 47% and Paperboard paper, mainly used for inner packaging for consumers and foods related products, grew by 17%.

- **Import - Export of Paper & Paperboard :**

Import

Paper and paperboard imports in 2008 improved by 3% from the previous year mainly from an upward trend of Paperboard paper and Tissue paper import which increased by 60% and 24% respectively.

While Newsprint paper, Printing & Writing paper and Kraft paper import dropped by 21%, 15% and 3% respectively. Japan, Canada, Germany, and USA were Thailand's major exporters.

Export

Total paper and board exports declined by 5% to 1.1 million tons in year 2008. Major portion of export slow down came from Newsprint paper and Tissue paper export declined by 41% and 30% respectively. While Paperboard paper exports up 18% from the previous year.

Main exportation countries are South Korea, Taiwan, Hong Kong and Southeast Asia countries.

- **Trend of Paper & Paperboard Demand and Capacity :**

The GDP growth of Thai economy in 2009 is expected to decline to (-3.5)-(-2.5) % from 2.6% mainly driven by the sluggish of global economy and the economy of Thailand's major export countries.

Total demand of Thailand Paper and Paperboard industry is expected to grow by 3% and total consumption will reach 3.6 million tons in year 2009 with estimated paper consumption per head of 57 Kg.

Unit : Thousand Ton

Grade		2004	2005	2006	2007	2008	Estimated				
							2009	2010	2011	2012	2013
Kraft Paper	Consumption	1,706	1,784	1,993	2,012	1,933	1,991	2,051	2,112	2,175	2,241
	Capacity	2,400	2,673	3,283	3,178	3,053	3,053	3,053	3,053	3,053	3,053
Surplus (Shortage)		694	889	1,290	1,166	1,121	1,063	1,003	941	878	813
Printing & Writing Paper	Consumption	657	744	893	787	721	746	772	799	827	856
	Capacity	1,083	1,264	1,271	1,246	1,132	1,132	1,132	1,132	1,132	1,132
Surplus (Shortage)		425	520	378	459	411	386	360	333	305	276
Paperboard	Consumption	220	261	315	417	487	515	544	575	608	643
	Capacity	300	300	348	460	449	449	449	449	449	449
Surplus (Shortage)		80	39	33	43	(38)	(66)	(95)	(126)	(159)	(194)
Newsprint Paper	Consumption	266	276	229	275	248	248	248	248	248	248
	Capacity	135	135	135	135	135	135	135	135	135	135
Surplus (Shortage)		(131)	(141)	(94)	(140)	(113)	(113)	(113)	(113)	(113)	(113)
Tissue Paper	Consumption	54	70	83	71	104	110	116	122	129	136
	Capacity	91	129	136	124	125	125	125	125	125	125
Surplus (Shortage)		37	59	53	53	21	15	9	3	(4)	(11)
Total Paper and Paperboard Consumption		2,904	3,134	3,513	3,561	3,493	3,610	3,731	3,856	3,987	4,124
Capacity		4,009	4,501	5,173	5,142	4,895	4,895	4,895	4,895	4,895	4,895
Surplus (Shortage)		1,105	1,367	1,660	1,581	1,402	1,285	1,164	1,038	907	771
Population	(Million Man)	61.9	62.4	62.8	63.0	63.4	63.4	63.4	63.4	63.4	63.4
Per capita Consumption (Kg./Head)		47	50	56	56	55	57	59	61	63	65

2.4 The Industry and Sustainability Development :

Pulp and Paper Industry has been widely accepted to be one of environmentally friendly industry. Since throughout its life cycle, start from Eucalyptus plantation is considered to be renewable resources. Thai forestry company named "Siam Forestry Co., Ltd" has been certified FSC (Forest Stewardship Council) standard for Forest Plantation and received FSC's CoC (Chain-of-Custody) management certification for pulp products in 2008.

For finished products, Thai paper products, such as Printing & Writing paper, Paperboard and Kraft paper have been awarded “Green Label”. The Green Label is an environmental certification awarded to specific products that are shown to have minimum impact on environment. The scheme was initiated by the Thailand Business Council for Sustainable Development (TBCSD) and formally launched by Thailand Environment Institute (TEI) in association with the Ministry of Industry.

In addition an increasing trend of recovered paper usage in substitute of using virgin pulp has been accepted widely for the industry new product development.

Recently, an initiative project of “Life Cycle Inventory Database; LCI” for Thai Pulp and Paper Industry has been implemented. This project is to establish the industry product database and allow the industry to the further step of “Life Cycle Assessment; LCA” which is an analysis and assessment of a product’s environmental impacts throughout its life cycle by taking production process, raw materials, energy, wastes and disposal of the product into considerations. With the main purpose of the study is to identify potential areas of improvement to minimize the product’s overall impacts to environment.

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