

MODELING DEMAND, SUPPLY AND TRADE IN CHINA'S PULP & PAPER MARKETS

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Motivations

- Information on projections of China's demand and supply for pulp and paper is limited in the public domain, but lots of interests seen from individual firms, NGOs and policy makers
- There have been large discrepancies in projected results from different sources

Objectives

- Examine recent trends and to make new projections of China's demand, supply and trade for pulp and paper
- Provide detailed data and analysis on historical performance for major pulp and paper grades in the Chinese markets
- Present forecasts for major grades through 2010

Methodology (1)

- Use a combination of top-down and bottom-up approaches to model paper and paperboard demand, supply and trade
- Top-down approach
 - Forecast the GDP growth in China
 - Develop a weighted average index, which includes real consumer spending, investment and net trade
 - Use an econometric model to project demand for paper and board by grades through 2010

Methodology (2)

- Bottom-up approach
 - Look at confirmed capacity expansions at the mill level
 - Combine those potential increases in production with business cycles to forecast supply for paper and board by grades
 - The net trade is the difference between demand and supply

Projected Demand Growth In Paper And Paperboard By Grades In 2010 (MM Tonnes)

	2003	2010	Growth
NW	2.4	3.9	1.5
P&W	9.7	18.6	8.9
Tissue	3.3	5.7	2.4
CNT	16.0	25.9	9.9
BX	6.5	10.2	3.7
Other	10.2	4.2	-6.0
Total	48.1	68.5	20.4

Projected Production Growth In Paper And Paperboard By Grades In 2010 (MM Tonnes)

	2003	2010	Growth
NW	2.1	3.5	1.4
P&W	9.6	16.9	7.3
Tissue	3.5	5.7	2.2
CNT	13.5	23.7	10.2
BX	5.5	8.9	3.4
Other	8.8	3.8	-5.0
Total	43.0	62.5	19.5

Projected Growth In Net Imports For Paper And Paperboard By Grades In 2010 (MM Tonnes)

	2003	2010	Growth
NW	0.2	0.4	0.2
P&W	1.2	1.7	0.5
Tissue	-0.1	-0.05	0.05
CNT	2.4	2.1	-0.3
BX	1.0	1.3	0.3
Other	0.5	0.5	0
Total	5.2	6.0	0.8

Forecast Comparison For Paper and Board Demand In China In 2010 (MM Tonnes)

	FT	CIECC	Jaakko	URS
	-CIFOR		- Pöyry	
NW	3.9	2.8	2.4	4.7
PW	18.6	16.0	19.2	18.9
Tissue	5.7	5.0	4.1	5.0
CNT	25.9	24.4	14.8	31.6*
BX	10.2	7.4	7.7	
Other	4.2	9.4	11.0	na
Total	68.5	65.0	60.0	60.2

Objectives in Second Phase Study

- Use the results from the projections to analyze fiber demand and supply trends within China, as well as trade flows from pulp and pulpwood exporters in the region
- Understand the implications of market trends on forest resources and livelihoods both within China and in the broader Asia-Pacific region
- Identify strategic leverage points, which can be used to promote improved policy and market decisions

Methodology

- Use a Derived Demand Approach to Project Demand for Wood and Nonwood Fiber

Demand Growth In Pulp And Recycled Paper By Grades In 1990-2003 (MM Tonnes)

	1990	2003	Growth
Nonwood	6.8	11.7	4.9
Waste paper	4.2	19.2	15.0
Wood pulp	1.9	9.2	7.4
BHKP	0.2	2.9	2.7
BSKP	0.5	2.8	2.3
Other	1.1	3.4	2.3
Total	12.8	40.2	27.3

Net Imports In Pulp And Recycled Paper By Grades In 1990-2003 (MM Tonnes)

	1990	2003	Growth
Nonwood	0.003	0.041	0.038
Waste paper	0.4	9.4	9.0
Wood pulp	0.3	5.7	5.4
BHKP	0.025	2.3	2.3
BSKP	0.2	2.0	1.8
Other	0.07	1.4	1.3
Total	0.7	15.1	14.4

Production Growth In Pulp And Recycled Paper By Grades In 1990-2003 (MM Tonnes)

	1990	2003	Growth
Nonwood	6.8	11.7	4.9
Waste paper	3.8	9.8	6.0
Wood pulp	1.5	3.5	2.0
BHKP	0.2	0.6	0.4
BSKP	0.3	0.9	0.5
Other	1.0	2.0	1.0
Total	12.1	25.0	13.0

Projected Demand Growth In Pulp And Recycled Paper By Grades In 2003-2010 (MM Tonnes)

	2003	2010	Growth
Nonwood	11.7	9.9	-1.8
Waste paper	19.2	34.6	15.4
Wood pulp	9.2	15.1	5.9
BHKP	2.9	6.1	3.2
BSKP	2.8	4.3	1.5
Other	3.4	2.6	-0.8
Total	40.2	59.6	19.4

Projected Net Imports In Pulp And Recycled Paper By Grades In 2003-2010 (MM Tonnes)

	2003	2010	Growth
Nonwood	0.041	0.036	-0.005
Waste paper	9.4	16.9	9.0
Wood pulp	5.7	8.3	5.4
BHKP	2.3	2.9	2.3
BSKP	2.0	3.1	1.8
Other	1.4	2.2	0.8
Total	15.1	25.2	10.1

Projected Production Growth In Pulp And Recycled Paper By Grades In 2003-2010 (MM Tonnes)

	2003	2010	Growth
Nonwood	11.7	9.8	-1.9
Waste paper	9.8	17.8	8.0
Wood pulp	3.5	6.8	3.3
BHKP	0.6	3.2	2.6
BSKP	0.9	1.2	0.3
Other	2.0	2.4	0.4
Total	25.0	34.4	9.4

Summary

- Rapid Growth in Demand and Supply Is Expected in Pulp and Paper Sector
- In Spite of Efforts towards Self-Sufficiency, China Has to Rely Heavily on Imports to Meet Its Needs for Raw Materials