

# Plantations: Facts and Figures

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September 9, 2004

# Affiliations

- University, Research Institutes
- Forest Trends, WWF...
- Forest Industry Associations, Forest Companies
- FAO, National and Provincial Governments
- Communities

# Facts and figures

There are none!

# Objectives

## o Facts

- ✓ Plantations are a winner
- ✓ Definitions

## o Figures

- ✓ Plantation statistics
- ✓ Plantation forecasts

## o Facts and Figures: Links to myths (policy)

- ✓ Prices
- ✓ Subsidies

# Plantation are a winner!

1. Persistent **government** concerns with stable domestic wood supply and job creation.
2. **Industrial** desire to find lower cost raw material.
3. Intensifying production in some areas would 'decrease pressure' on the natural forest thus making them available for **conservation** or protection.

Win – Win – Win : What Went Wrong?

# Definition - FSC Plantation

Forest areas lacking most of the principal characteristics and key elements of native ecosystems as defined by FSC-approved national and regional standards of forest stewardship, which result from the human activities of either planting, sowing or intensive silviculture treatments (WRM 2003).

# Definition - Forest Plantation

- *Forest plantations are defined as those stands established by planting and/or seeding in the process of afforestation or reforestation. **They are either of introduced or indigenous species with a minimum area requirement of 0.5 ha; tree crown cover of at least 10% of the land cover; and a total height of adult trees above 5 m (FAO 2001).***

# Plantation Area Statistics - Selected

Country	Plantation Area [hectares]	% of Total Forest Area in Country
China	54,083,000	33.1
India	32,578,000	50.8
United States	16,238,000	7.2
Indonesia	9,871,000	9.4
Brazil	4,982,000	0.9
Thailand	4,920,000	33.3
Chile	2,017,000	13.0
Malaysia	1,750,000	9.1
New Zealand	1,542,000	19.4
Australia	1,396,000	0.9

Source FAO 2001

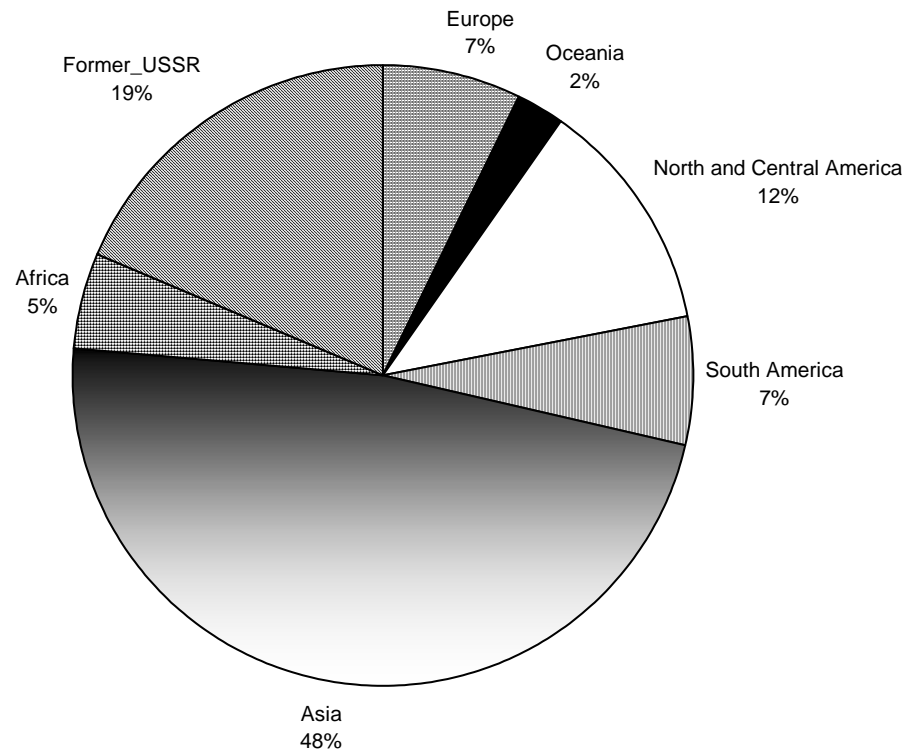


# Plantation by Region

Country or region	Industrial plantation area (million ha.)	Non-industrial plantation area (million ha.)	Total plantation area (million ha.)
North and Central America	<b>18.9</b>	<b>0.3</b>	<b>19.2</b>
<i>United States</i>	<i>18.4</i>	<i>0</i>	<i>18.4</i>
South America	<b>5.4</b>	<b>2.8</b>	<b>8.2</b>
Asia	<b>41.8</b>	<b>15.1</b>	<b>56.9</b>
<i>China</i>	<i>17.5</i>	<i>3.9</i>	<i>21.4</i>
<i>India</i>	<i>4.1</i>	<i>8.3</i>	<i>12.4</i>
<i>Japan</i>	<i>10.7</i>	<i>0</i>	<i>10.7</i>
Oceania	<b>2.7</b>	<b>0.01</b>	<b>2.7</b>
Africa	<b>3.6</b>	<b>2.2</b>	<b>5.7</b>
Europe	<b>8.7</b>	<b>0</b>	<b>8.7</b>
Former-USSR	<b>22.2</b>	<b>0</b>	<b>22.2</b>
<i>Russian Federation</i>	<i>17.1</i>	<i>0</i>	<i>17.1</i>
<b>TOTAL</b>	<b>103.3</b>	<b>20.4</b>	<b>123.7</b>

Source: Brown 1999

# Plantation distribution



Source: Brown 1999

# Global Outlook for Plantations

	Unit	Africa	North and Central America	South America	Asia
Industrial plantations area	million ha	3.9	24.2	7.8	30.1
Total effective area	million ha	1.4	24.2	7.5	11.2
Plantation area suitable for commercial wood production	%	36	100	96	37
Species planted – ratio of softwood to hardwood		50:50	98:2	53:47	31:69
Ownership levels – ratio of public to private		na	60:40	0:100	na

# Global Outlook for Plantations

		Europe and former Soviet Union	Oceania	World
Industrial plantations area	million ha	47.1	2.8	115.9
Total effective area	million ha	47.1	2.5	93.9
Plantation area suitable for commercial wood production	%	100	89	81
Species planted – ratio of softwood to hardwood	%	88:12	90:10	71:29
Ownership levels – ratio of public to private		50:50	33:67	na

**a** By the Food and Agriculture Organisation's statistical regions. **na** Not available.

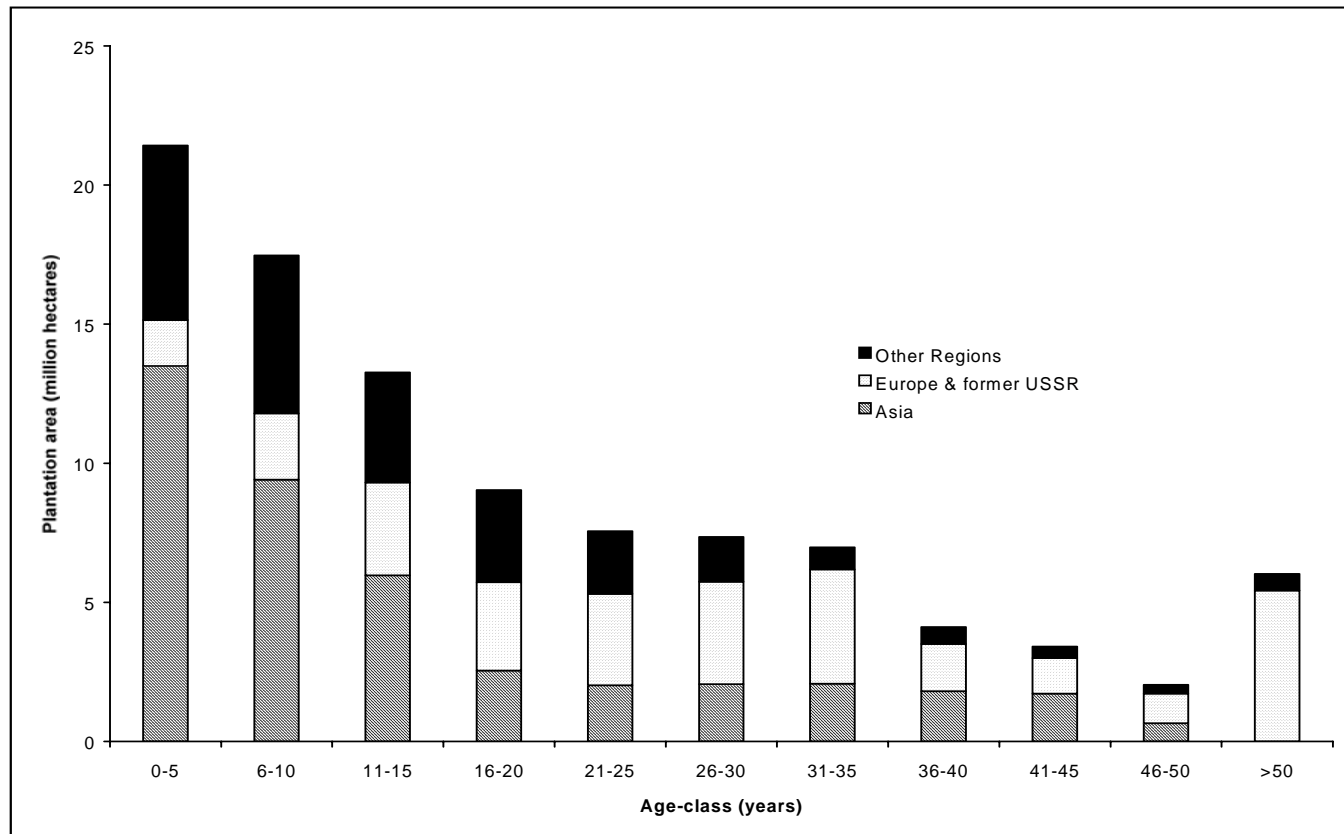
*Source:* Global Outlook for Plantations Database.

# Forecast of plantation wood supply by region

	2000	2020	2040
	%	%	%
Africa	20	39	40
Asia	32	46	48
Europe and former Soviet Union	46	53	55
North and Central America	22	29	31
Oceania	55	66	67
South America	63	65	66
World	35	44	46

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# Plantation Fibre

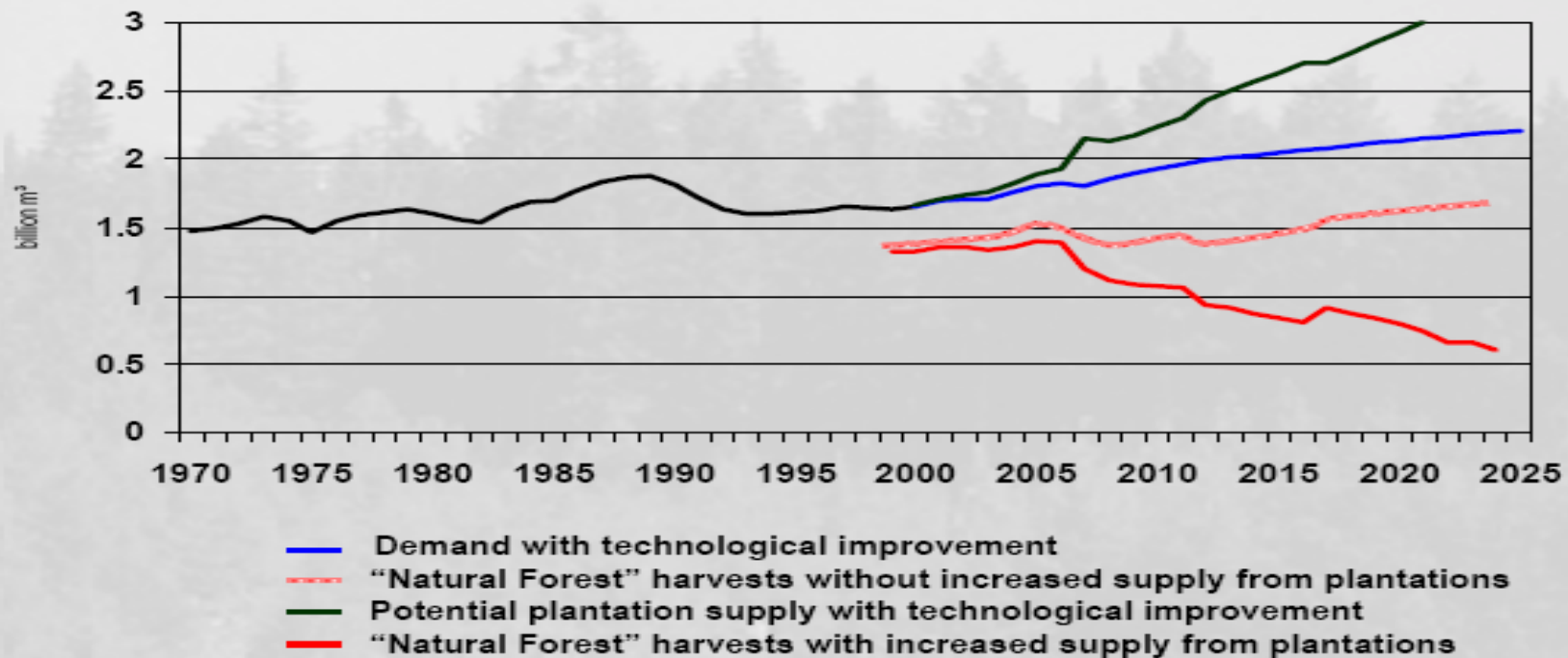


Whiteman and Brown 1999

# Forecasts

## A Forecast of Global Plantation Timber Supply

Harvests from Natural Forests may Decline by More than One Half!



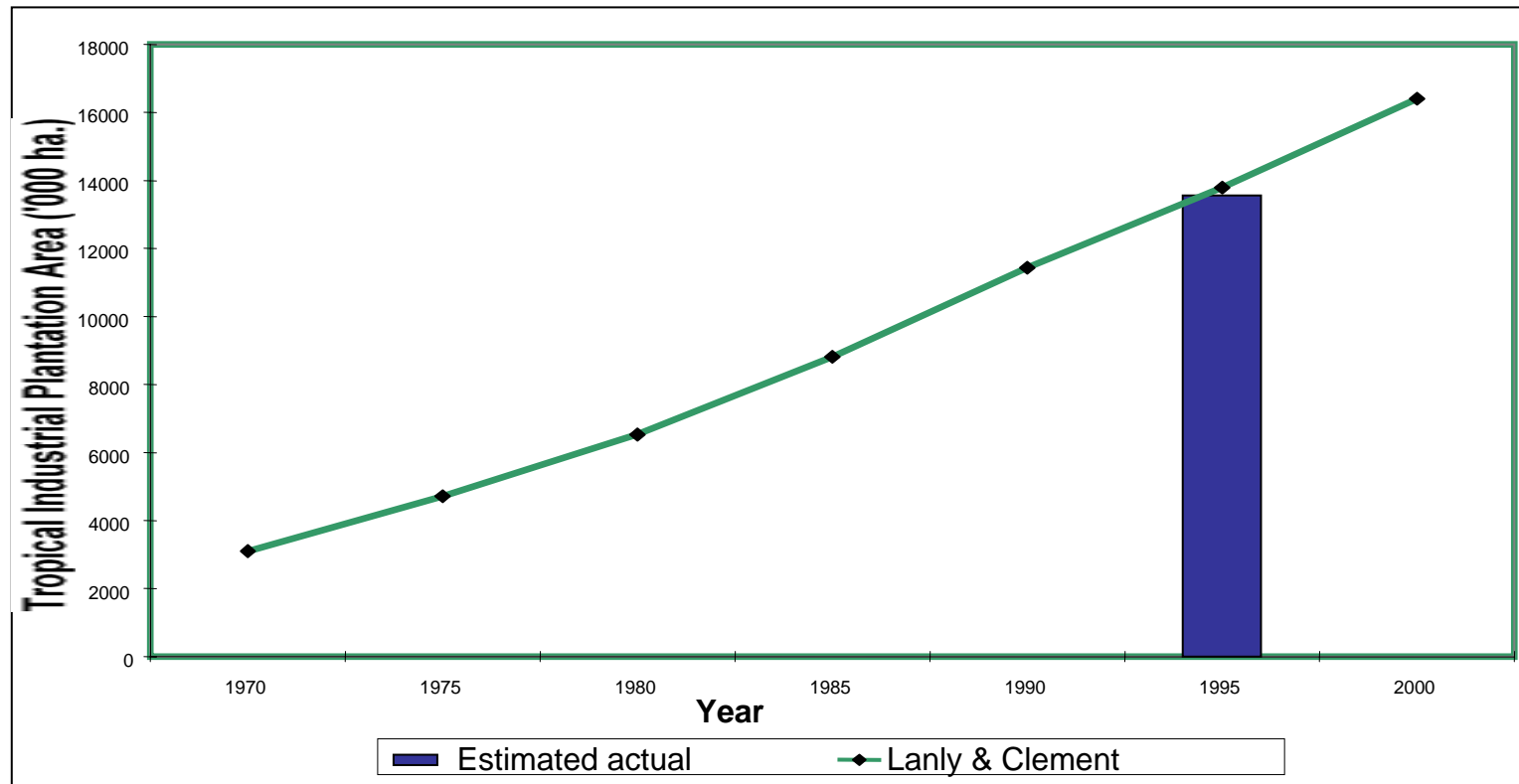
Source: RISI & HTRG Research

# Plantation forecast - One industrial view

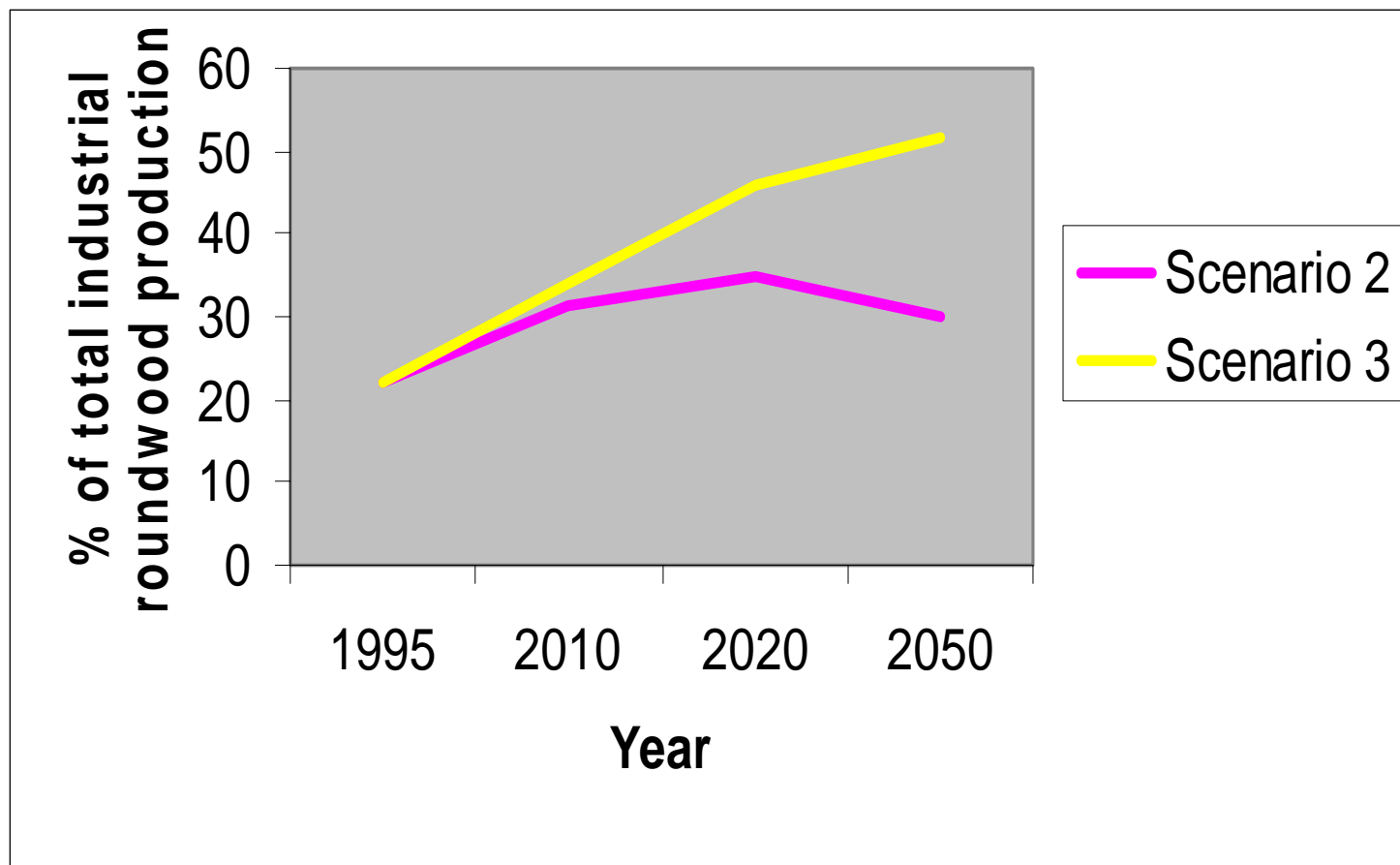




# Plantation trends 1979-2000



# Plantation Scenarios- FAO 99



# Forecasts – China and Brazil

- 13.33 million hectares of fast-growth-high-yield plantation development between 2001 and 2015 (estimated investment required is US \$ 8.65 billion) Source AFPA 2004.
- Brazil will double its forest plantation estate by 2015. Source BRACELPA 2004.

# So what?

- o Where is the vision?
- o Where are the Euros/\$?
- o Who has the purse strings?

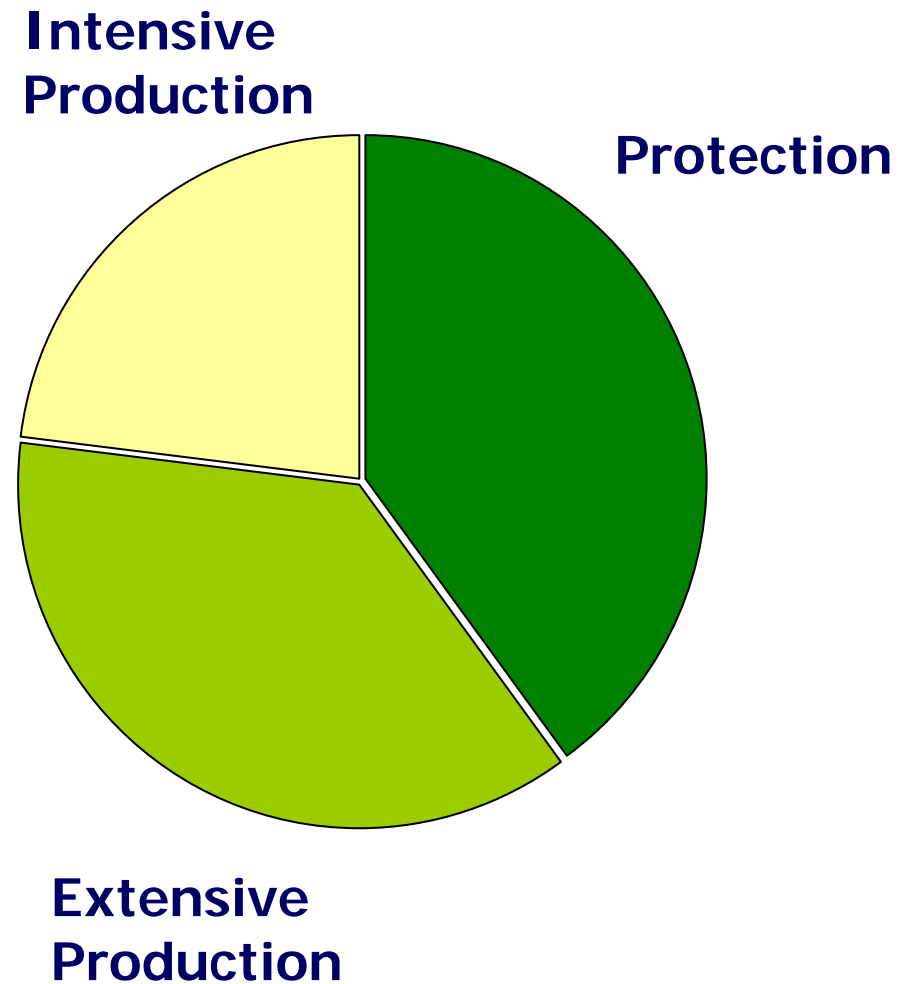
# Forecast Vision 2050

## A Vision for the Global Forest Estate:

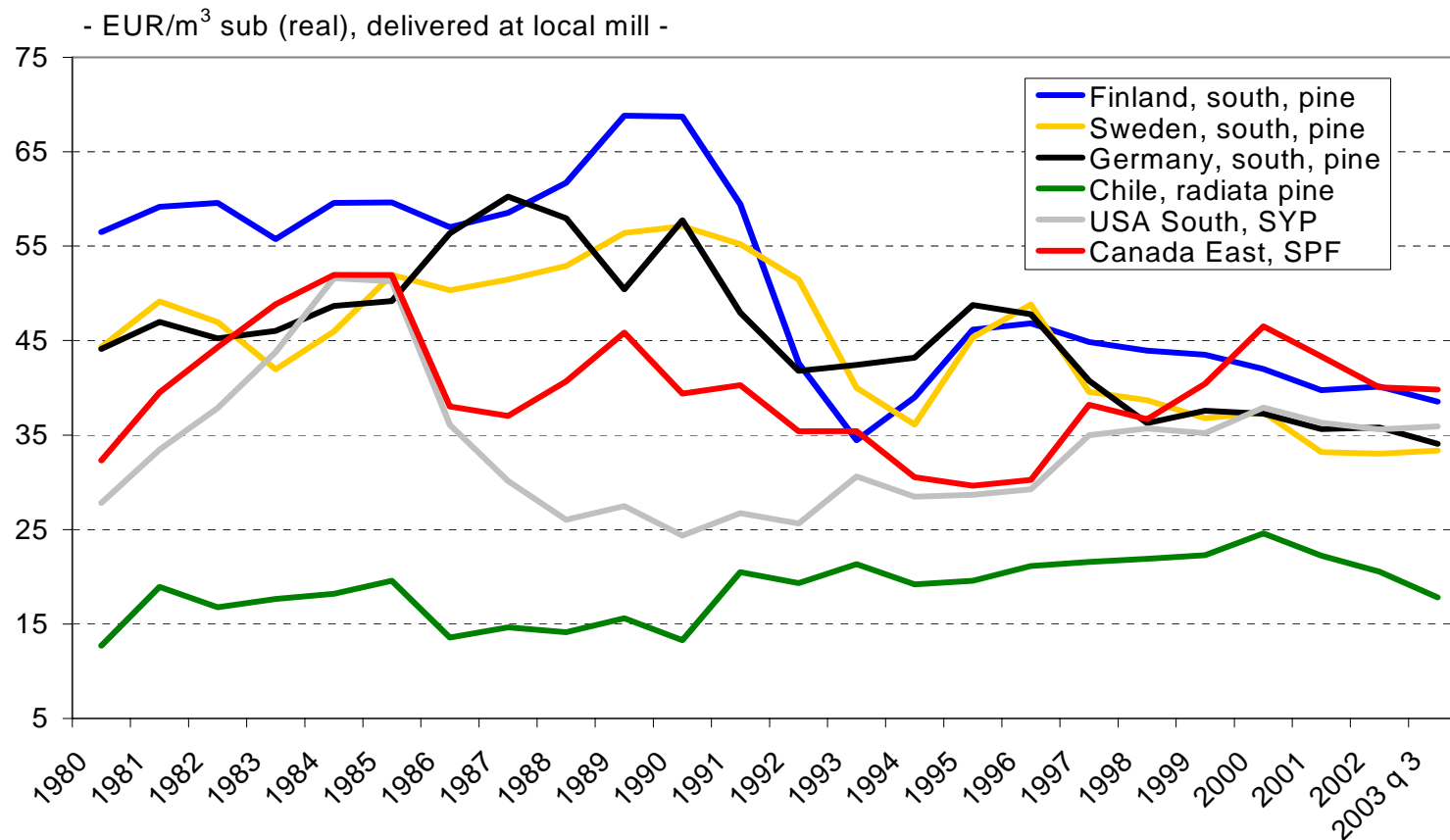
**40% Protected**

**40% Extensive Production**

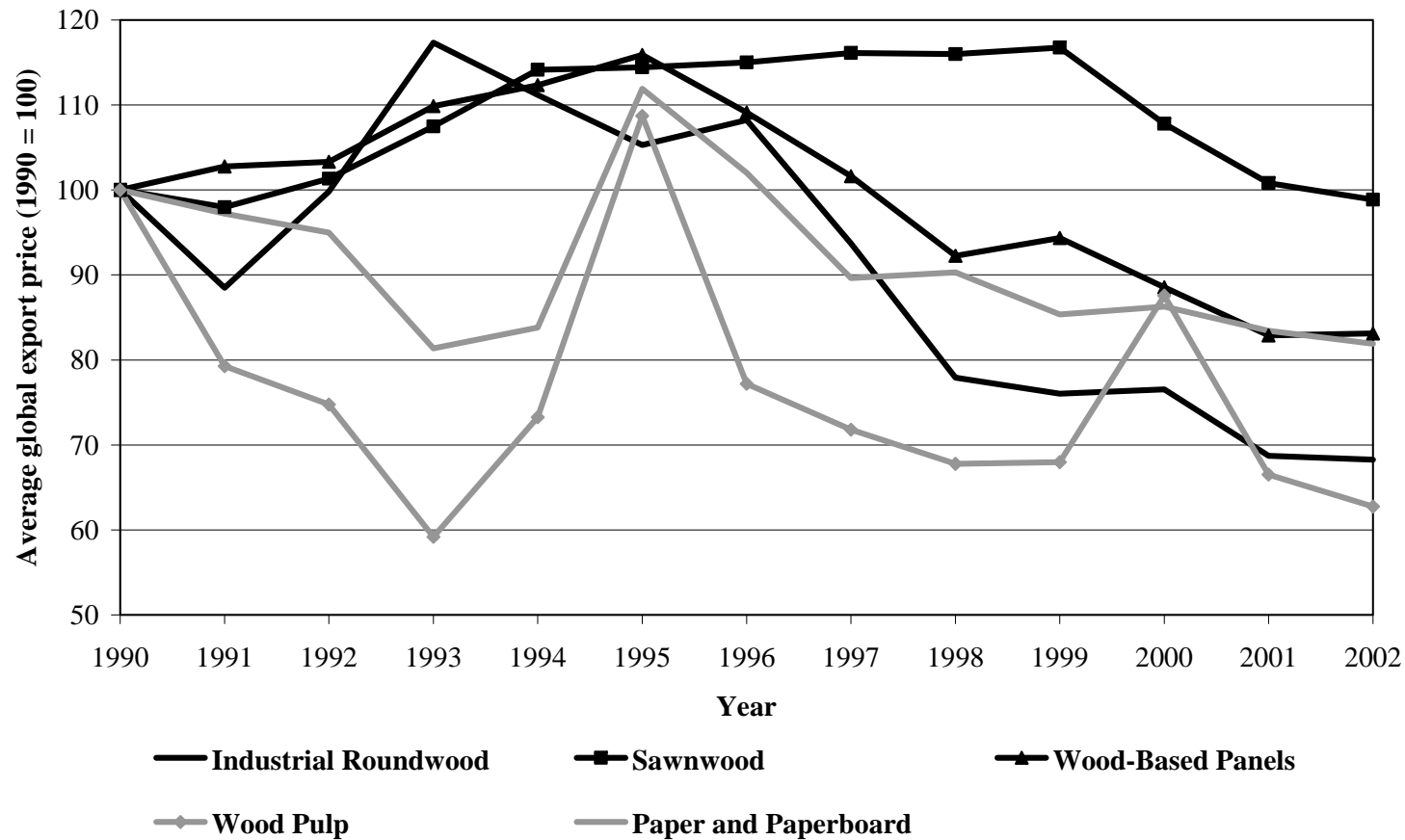
**20% Intensive Production**



# Softwood Pulpwood Cost



# Recent trends in global forest products export prices



Source: FAO 2004

# Plantation and subsidies

<b>Sector</b>	<b>OECD</b>	<b>Non-OECD</b>	<b>World</b>	<b>% of World Total</b>
	<b>\$ US billions 1994-1998</b>			
Agriculture	335	65	400	37
Water	15	45	60	6
<i>Forestry</i>	5	30	35	3.3
Fisheries	10	10	20	2
Mining	25	5	30	3
Energy & Industry	335	185	520	49
Total	725	340	1,065	100

Source: van Beers and de Moor (2001) as cited in Pearce (2002).



# Key conclusions

- Get your act together on definitions, statistics and forecasting.
- Agree that plantations and semi-natural forests are the sources of future wood supply – the vision.
- Discuss the economic issues: subsidies, competition and trade.
- Establish the environmental criteria and indicators that level the playing field with the semi-natural forest.
- Create the social criteria and indicators that are realistic.