

Sustainable Development in the Forest Sector:

Balancing production and consumption in a challenging economic and political environment

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- II. Forest resources (production and supply)
- III. Market drivers
- IV. Forest products markets (consumption and demand)
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I. Introduction

Sustainable development

- Management and conservation of the natural resource base, and
- Orientation of technological and institutional change
- In such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations.



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Sustainable development (in the forest sector)

- Conserves land, water, plant and animal genetic resources
- Environmentally non-degrading
- Technically appropriate
- Economically viable
- Socially acceptable.



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Sources of information

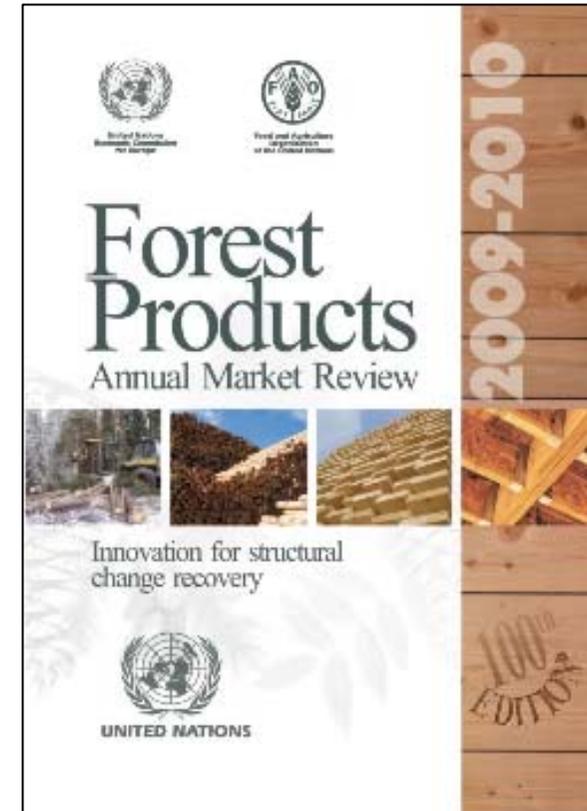
- UNECE/FAO *Forest Products Annual Market Review*
- FAO *Global Forest Resource Assessment*
- UNECE Timber Committee Market Statement & market forecasts
- UNECE/FAO Timber Database
- FAO Statistics database





UNECE/FAO *Forest Products Annual Market Review, 2009-2010*

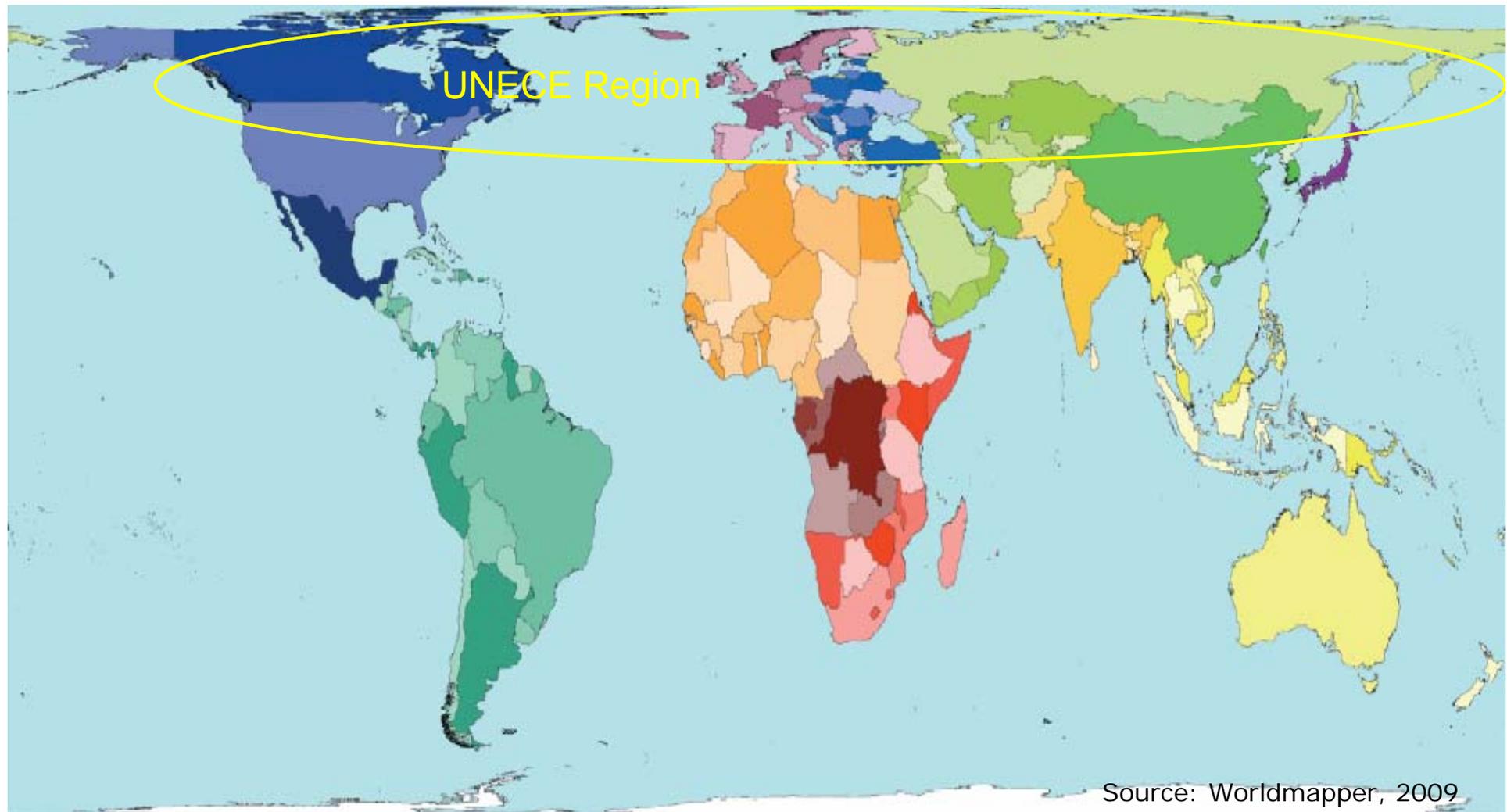
- 100th edition
- Available in English
- Russian and French language versions available later



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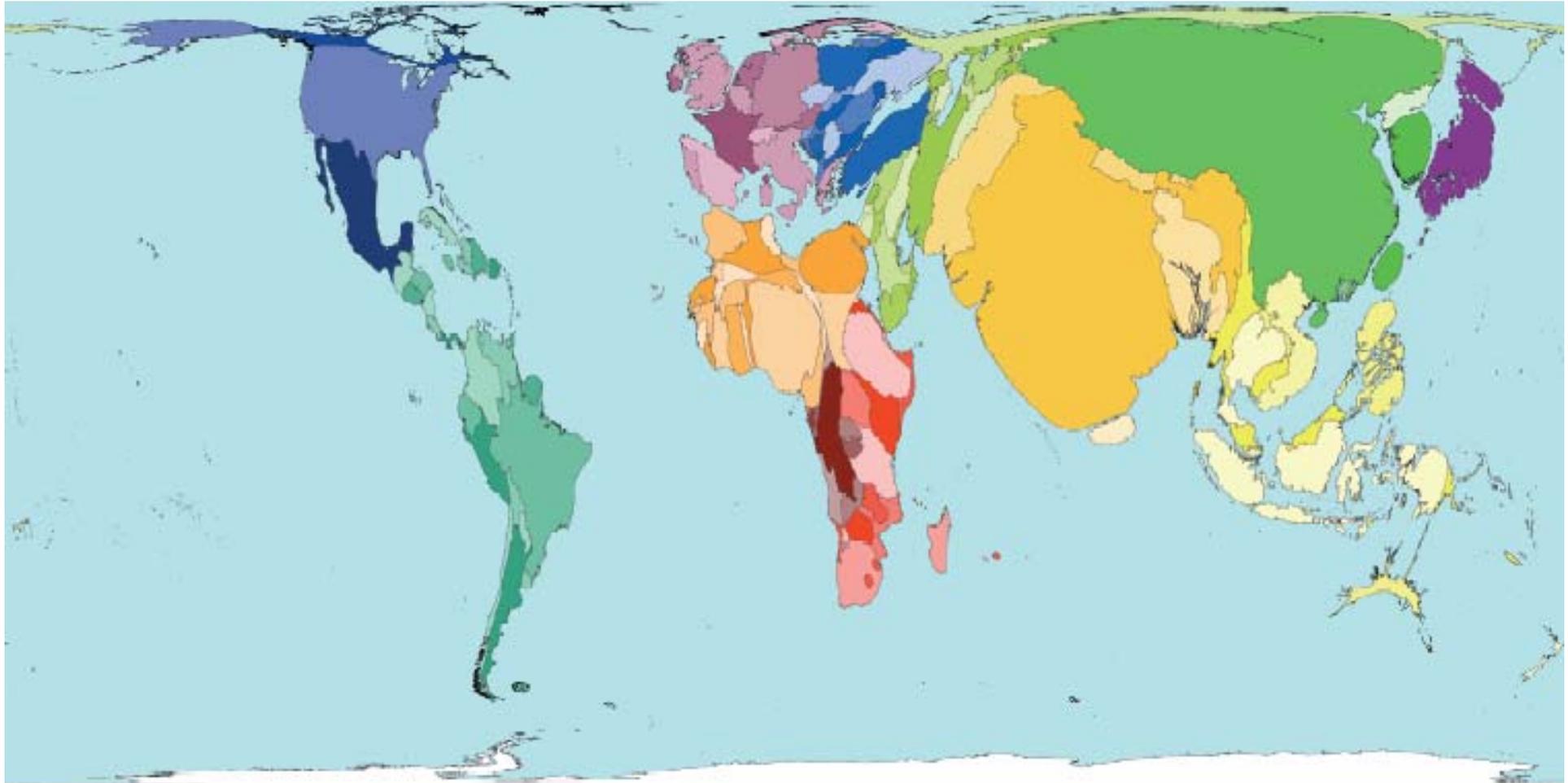
World shaped by political boundaries



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World shaped by population



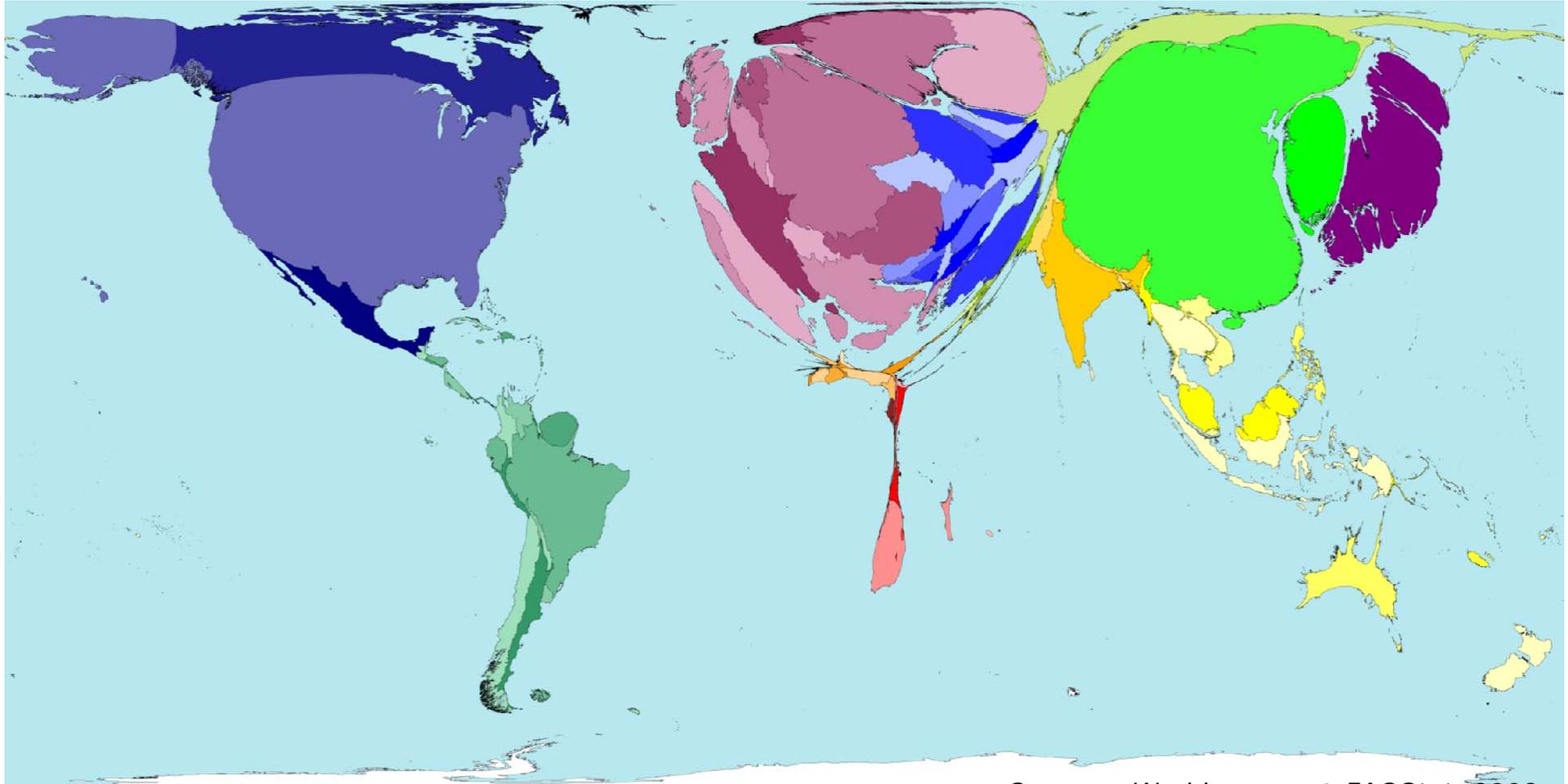
Source: Worldmapper, 2009



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As shaped by forest products production



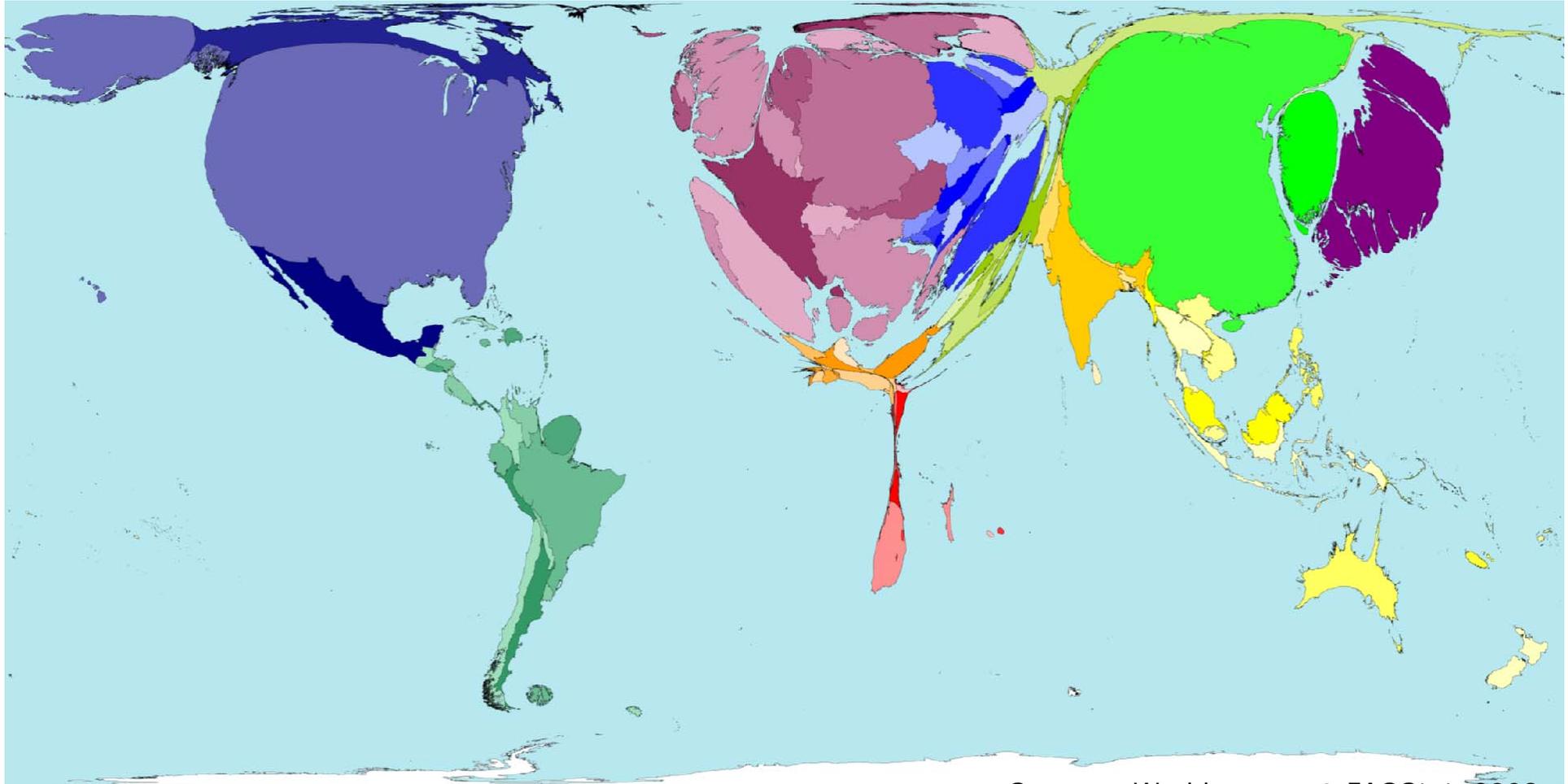
Sources: Worldmapper & FAOStat, 2009



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Shaped by wood and paper consumption



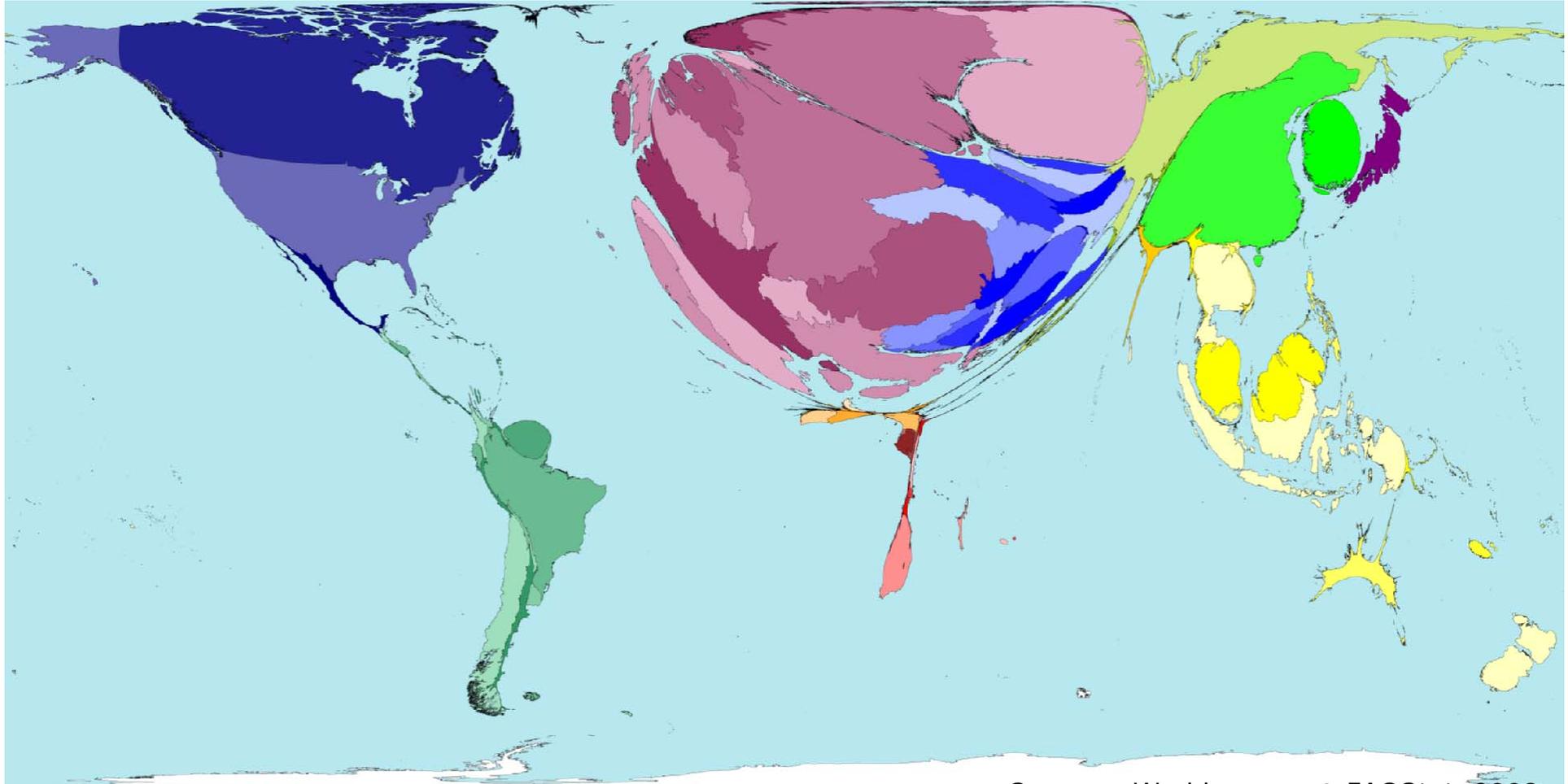
Sources: Worldmapper & FAOStat, 2009



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As shaped by forest products exports



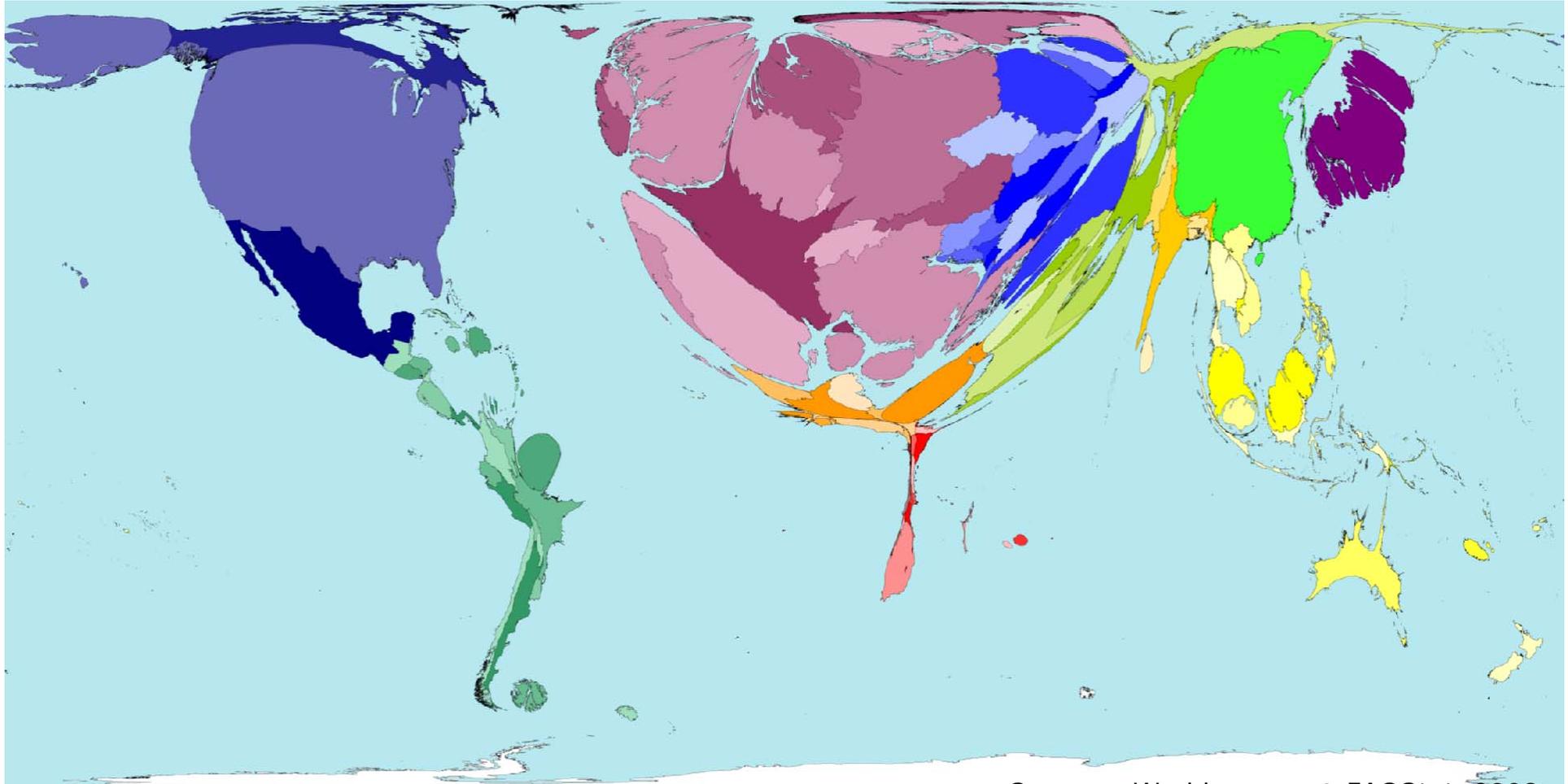
Sources: Worldmapper & FAOStat, 2009



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As shaped by forest products imports



Sources: Worldmapper & FAOStat, 2009



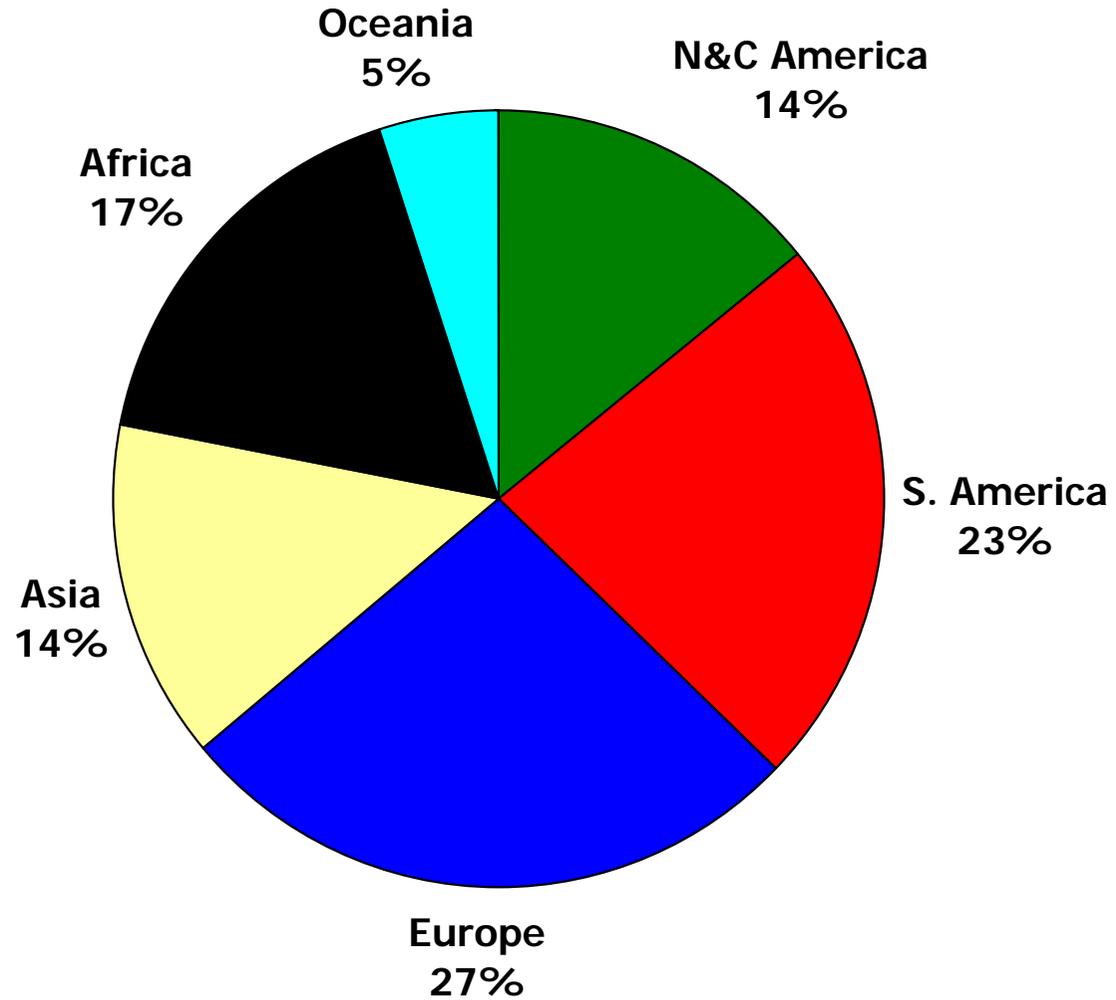
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II. Forest resources



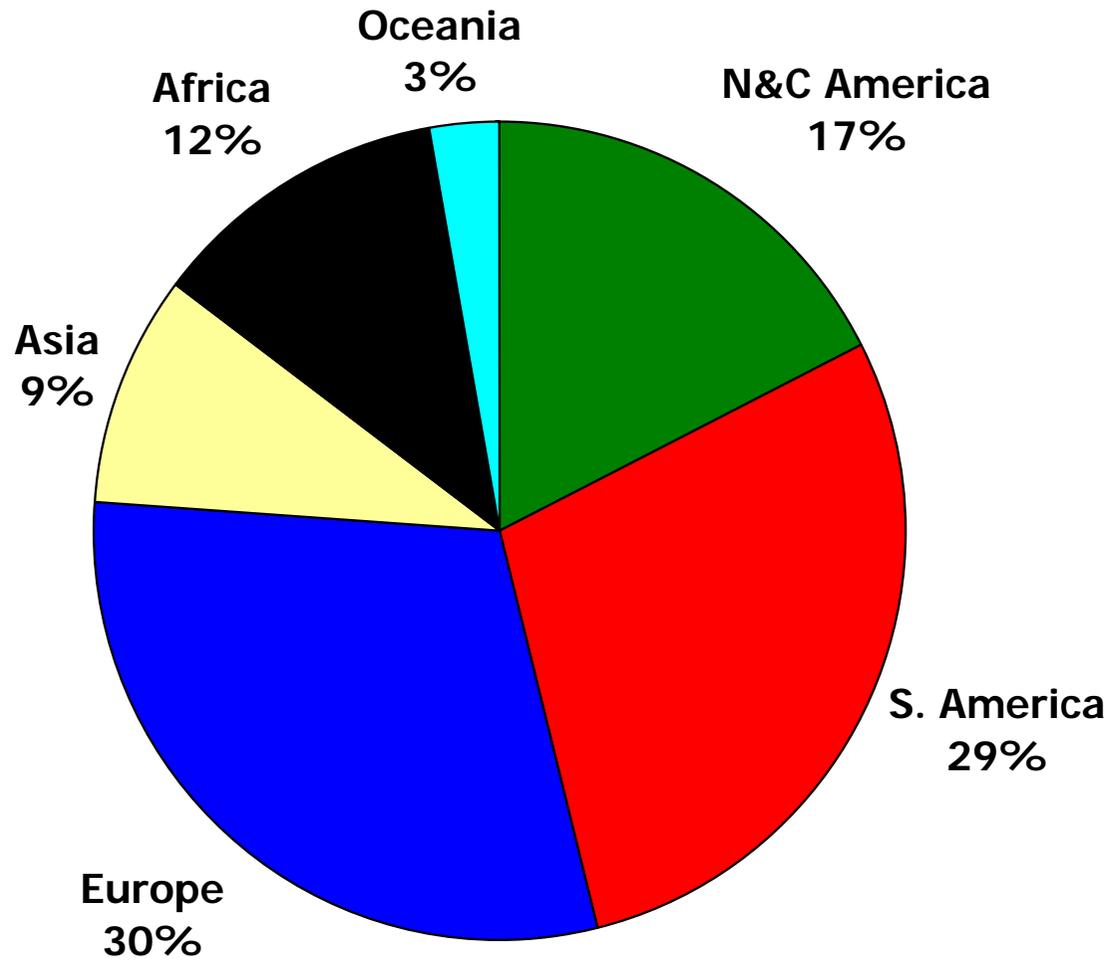
Where are the forests?



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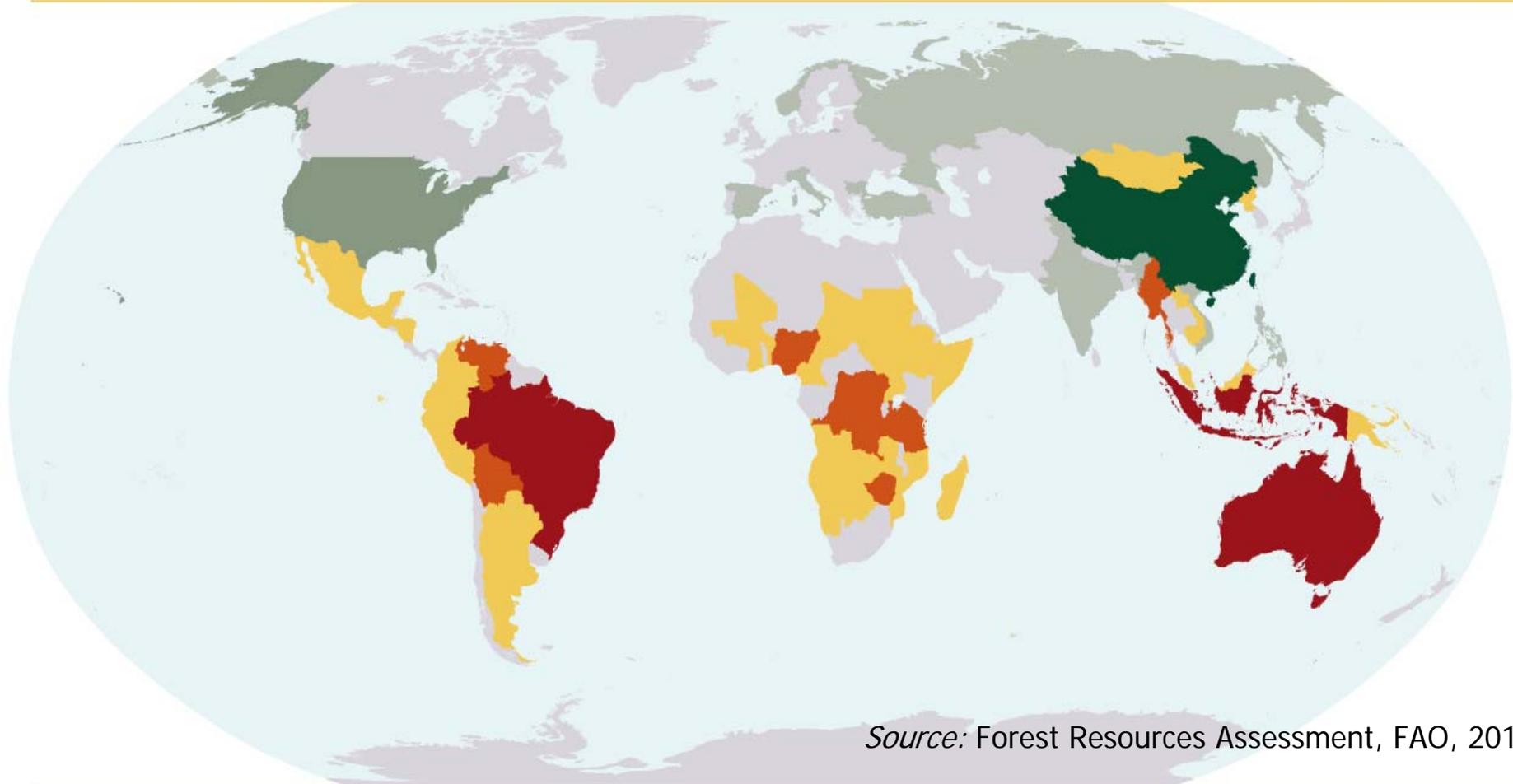
Where does the wood come from?



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Net change in forest area 2005-2010 (hectares/year)

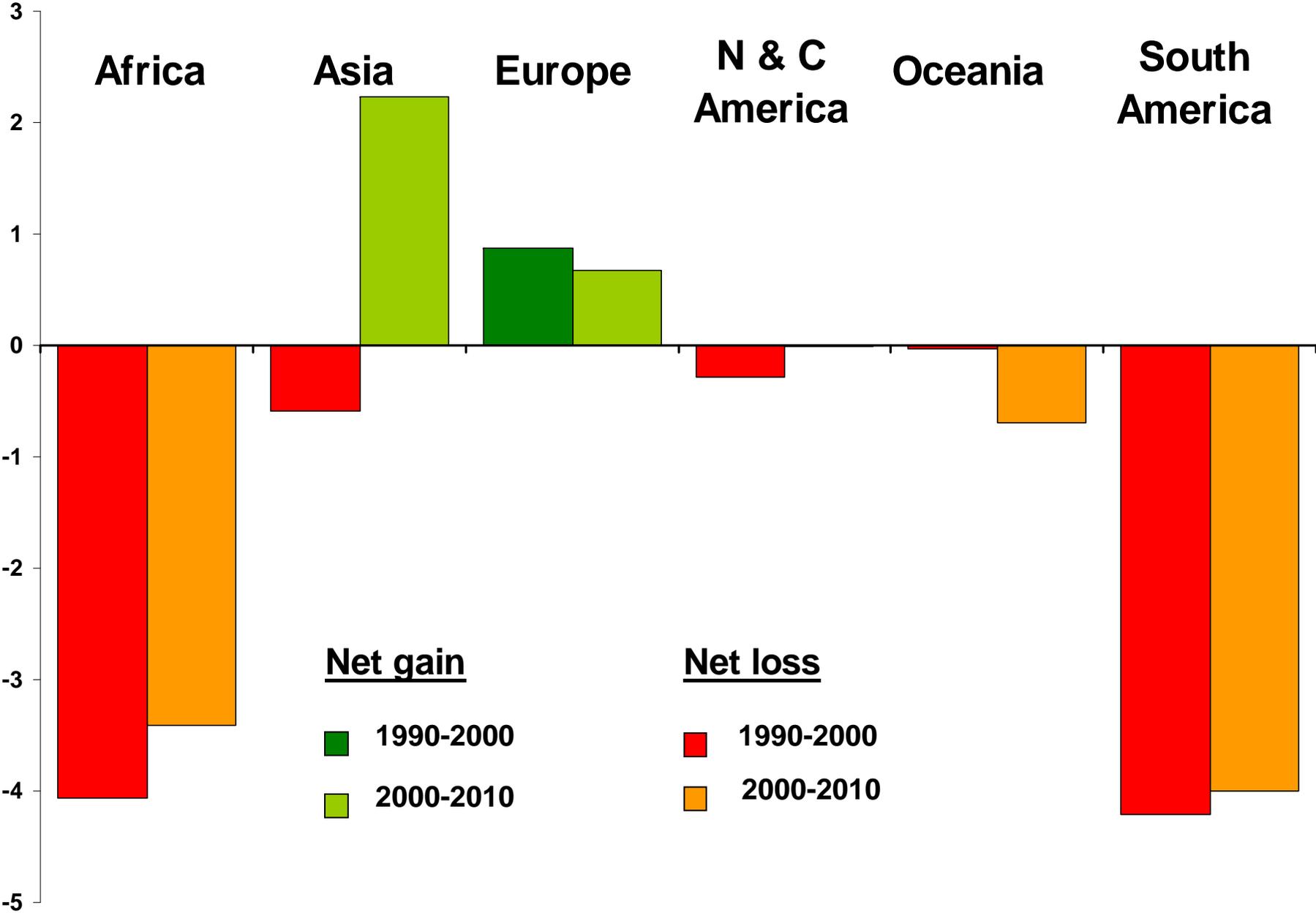


Source: Forest Resources Assessment, FAO, 2010.



Net change in forest area

Million ha/year





Global forest resources

- 31% of world forested
- Net change = Σ of gain – Σ of loss
 - 1990-2000 **-8.3** million ha/year
 - 2000-2010 **-5.2** million ha/year

“The rate of deforestation shows signs of decreasing – but is still alarmingly high.”

Source: Global Forest Resources Assessment, FAO, 2010.



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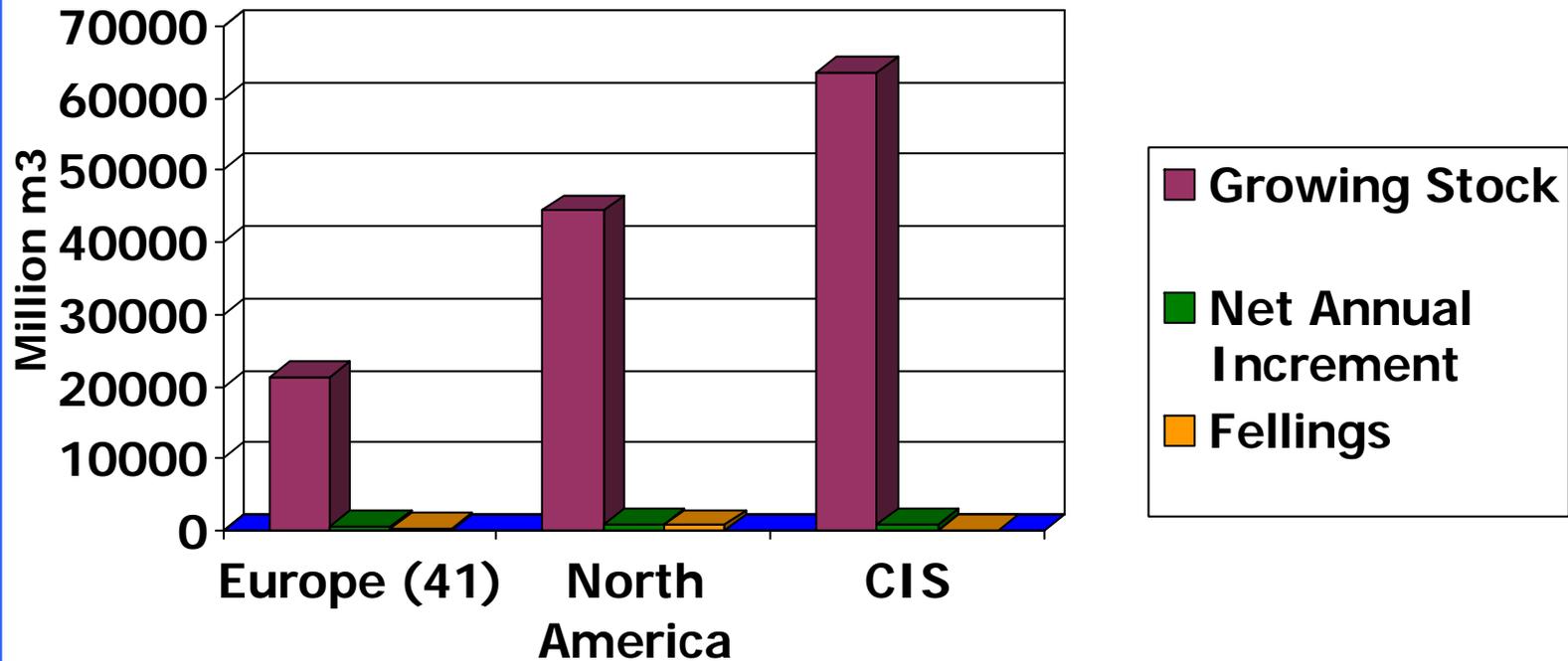
Causes of deforestation

- Conversion to other land uses
 - Agriculture
 - Palm oil
 - Pasture
 - Urbanization
- Fire, insects and disease
- Root causes
 - Poverty
 - Inefficient heating and cooking
 - Illegal logging





UNECE subregions Growing Stock vs. NAI vs. Fellings

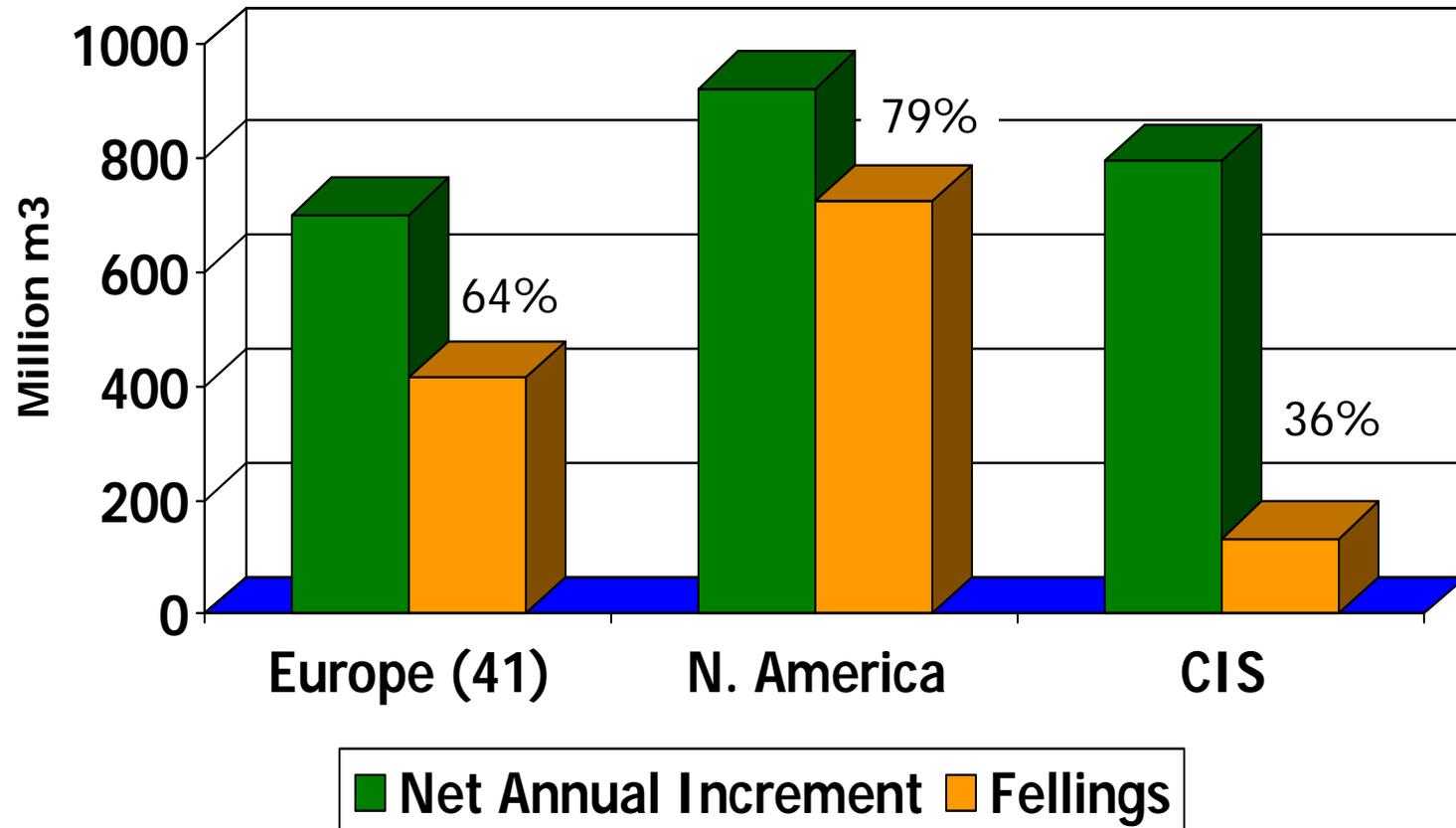


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NAI vs. Fellings



Source: UNECE/FAO, 2010.



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Global Forest Resources Assessment findings

- Large-scale planting of trees is significantly reducing the net loss of forest area globally
- South America and Africa continue to have the largest net loss of forest
- Primary forests account for 36% of forest area – but have decreased by more than 40 million hectares since 2000
- Planted forests increasing to 7% of total area
- 12% of the world's forests are designated for the conservation of biological diversity





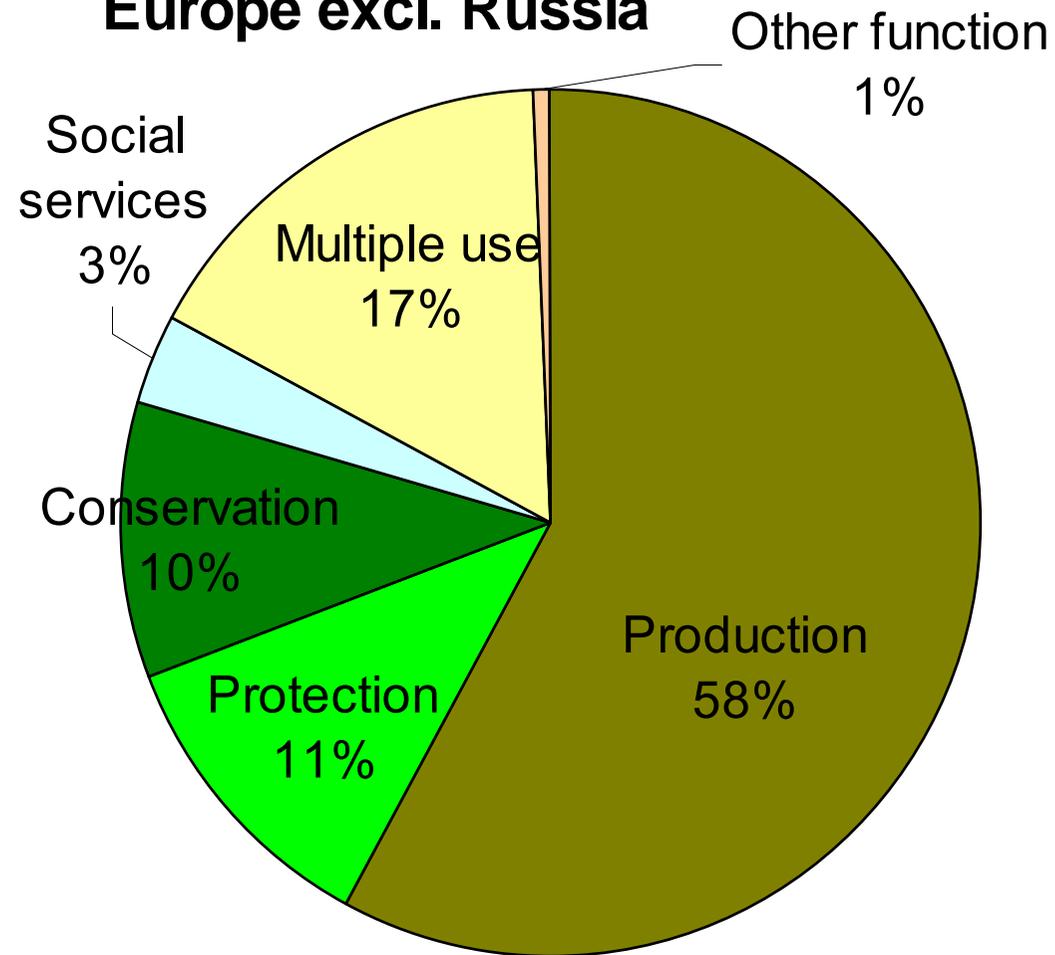
Global Forest Resources Assessment findings

- 30% of the world's forests are primarily used for production of wood and non-wood products
- Harvests decreased in the early 1990s due to breakup of the Soviet Union
- Harvests rose to 3.4 billion cubic metres, but fell during 2008-2009 economic crisis
- Over half of harvests used for woodfuel globally, often inefficiently
- Value of wood removals reached \$100 billion in 2007, but fell sharply in 2008-2010





Europe excl. Russia



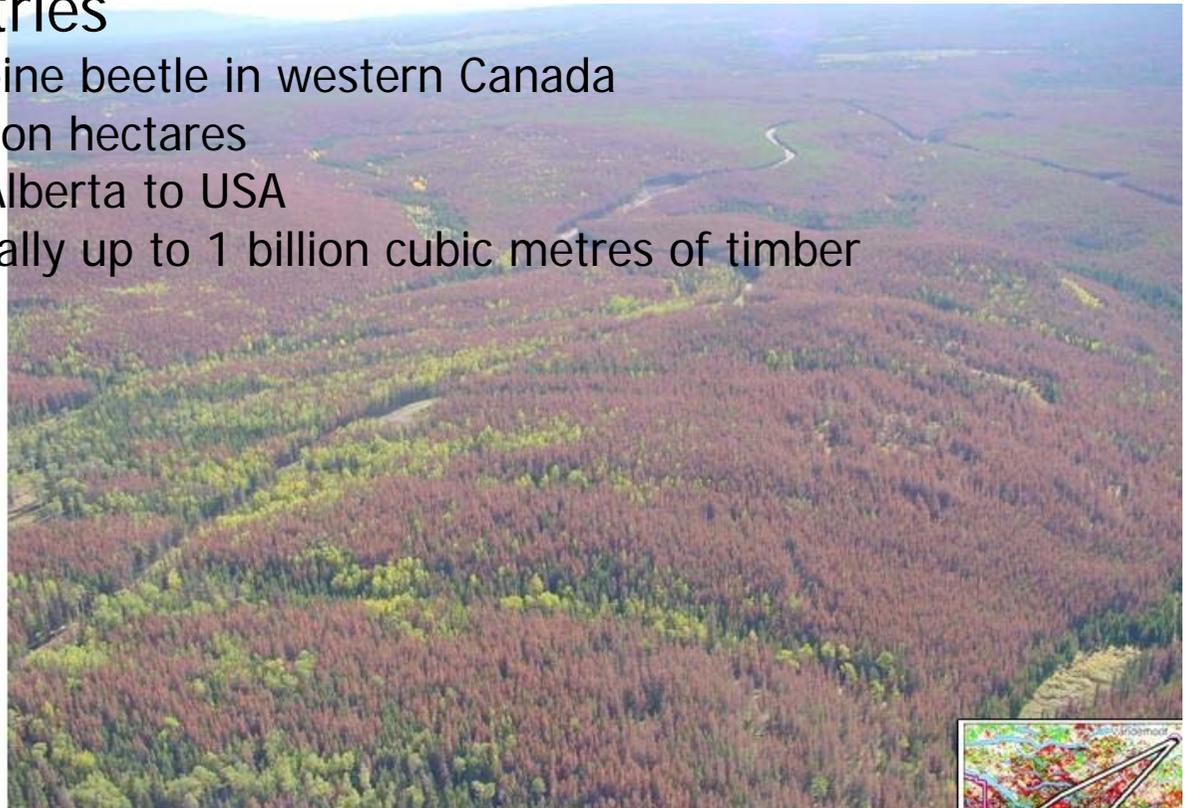
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Global Forest Resources Assessment findings

- Forest fires are severely underreported at the global level
- 30% of the world's forests are primarily used for production of wood and non-wood products
- Pests and diseases, natural disasters and invasive species are causing severe damage in some countries
 - Mountain pine beetle in western Canada
 - 11 million hectares
 - BC to Alberta to USA
 - Eventually up to 1 billion cubic metres of timber



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Global Forest Resources Assessment findings

Non-timber uses of forests

- Forests store a vast amount of carbon
- 12% of the world's forests are designated for the conservation of biological diversity
- 8% of the world's forests have soil and water conservation as their primary objective
- The management of forests for social and cultural functions is increasing
- The value of non-wood forest products remains underestimated





Global Forest Resources Assessment findings

Legal, policy and institutional framework

- Significant progress in developing forest policies, laws and national forest programmes
 - 76 of the 143 countries that have a forest policy statement, 76 countries have issued or updated their statements since 2000.
 - 69 of the 156 countries that have a specific forest law, primarily in Europe and Africa, reported that their current forest law has been enacted or amended since 2005.
 - 75% of the world's forests are covered by a national forest programme, i.e. a participatory process for the development and implementation of forest-related policies and international commitments at the national level.





Global Forest Resources Assessment findings

Employment

- Staff in public forest institutions is decreasing
 - 1.3 million people, 22% women,
 - 20,000 professionals in public forest research institutions
- More than 60,000 university students graduate in forestry annually – one-third are female
- 10 million people employed in forest management and conservation
- Considerably more people dependent on forests for livelihoods





\$

CHF

€

III. Market drivers

SEK

£

Ruble





Market drivers

- Economic situation
- Certification and certified forest products
- Government policies, e.g.
 - EU renewable energy promotion
 - FLEGT initiative
 - Green building





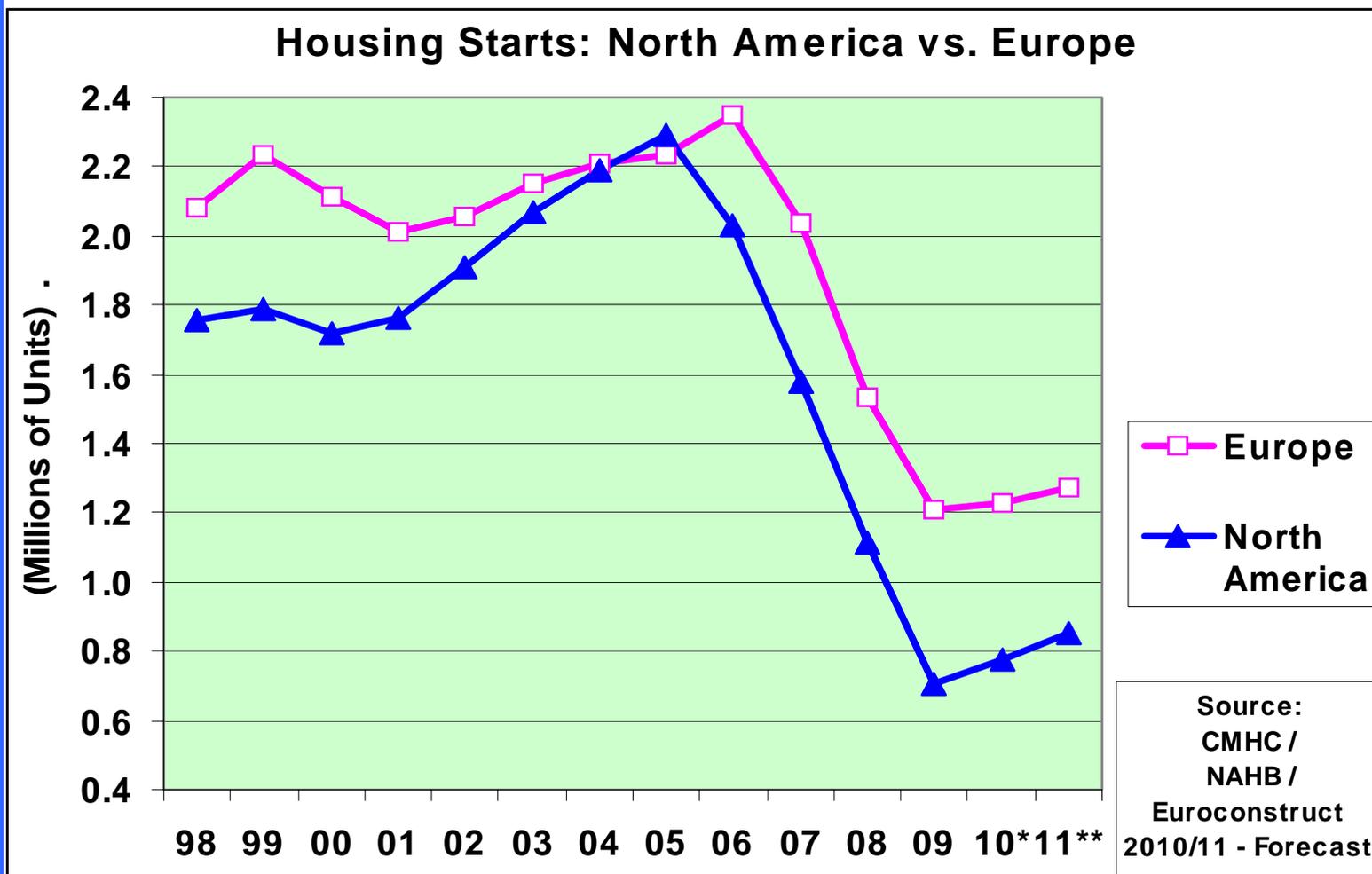
Economic and construction developments

- Recovering from the most severe financial shock since the Great Depression
- Deepest economic downturn since World War II
- Debt crisis in the Eurozone
- Sluggish recovery despite massive intervention
- High unemployment restrains recovery



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Source: WOOD MARKETS Monthly Newsletter, 2010

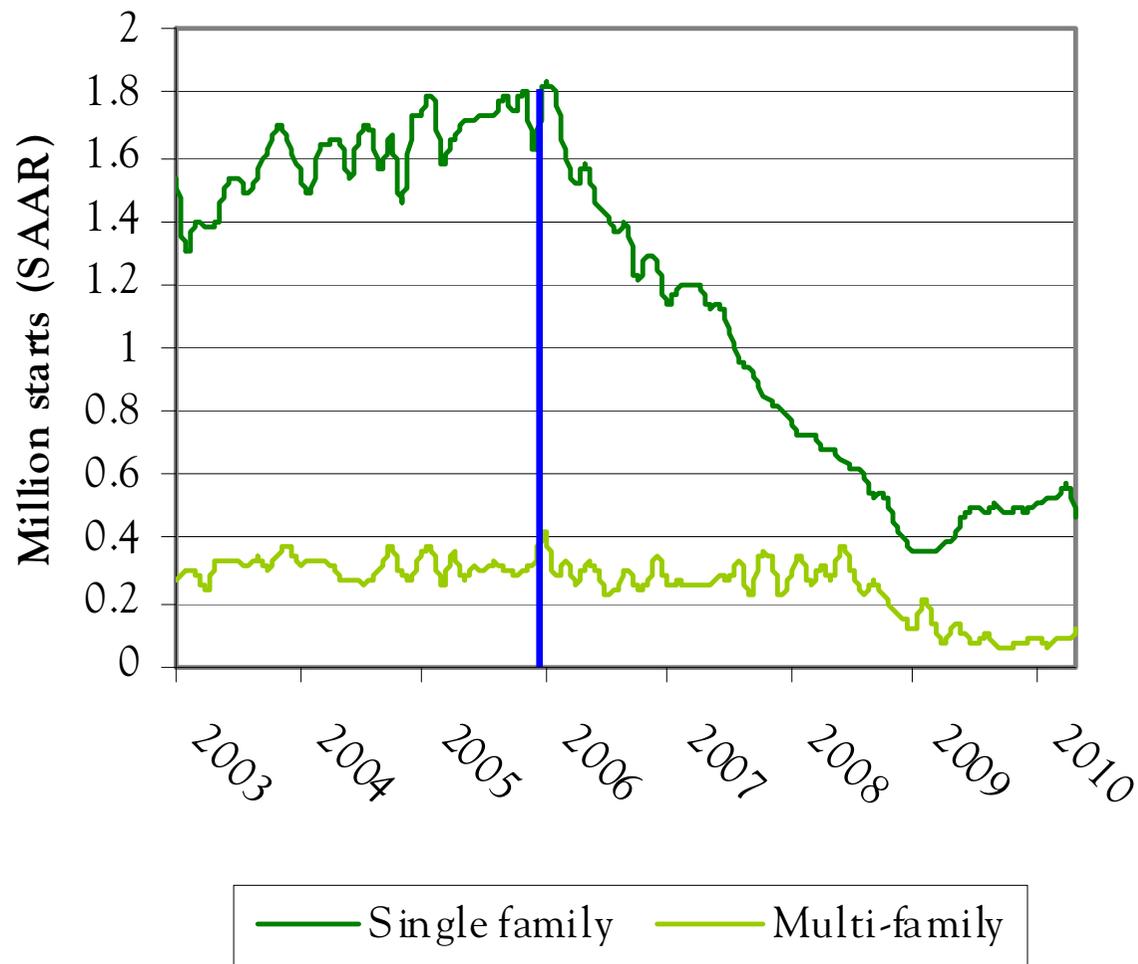


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United States housing starts 2003-2010



Source: US Census Bureau, 2010.
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United States housing market

- Peak 2.2 million new houses per year in 2005
- 500,000 in 2010
- Huge inventory unsold new and used homes +
- “Shadow homes” (owned by banks, not on market)
- House prices down at 2003 levels
- Problems grew
 - Sub-prime mortgages with little down payment
 - Mortgage value greater than house value
 - Economic downturn → foreclosures



Certification



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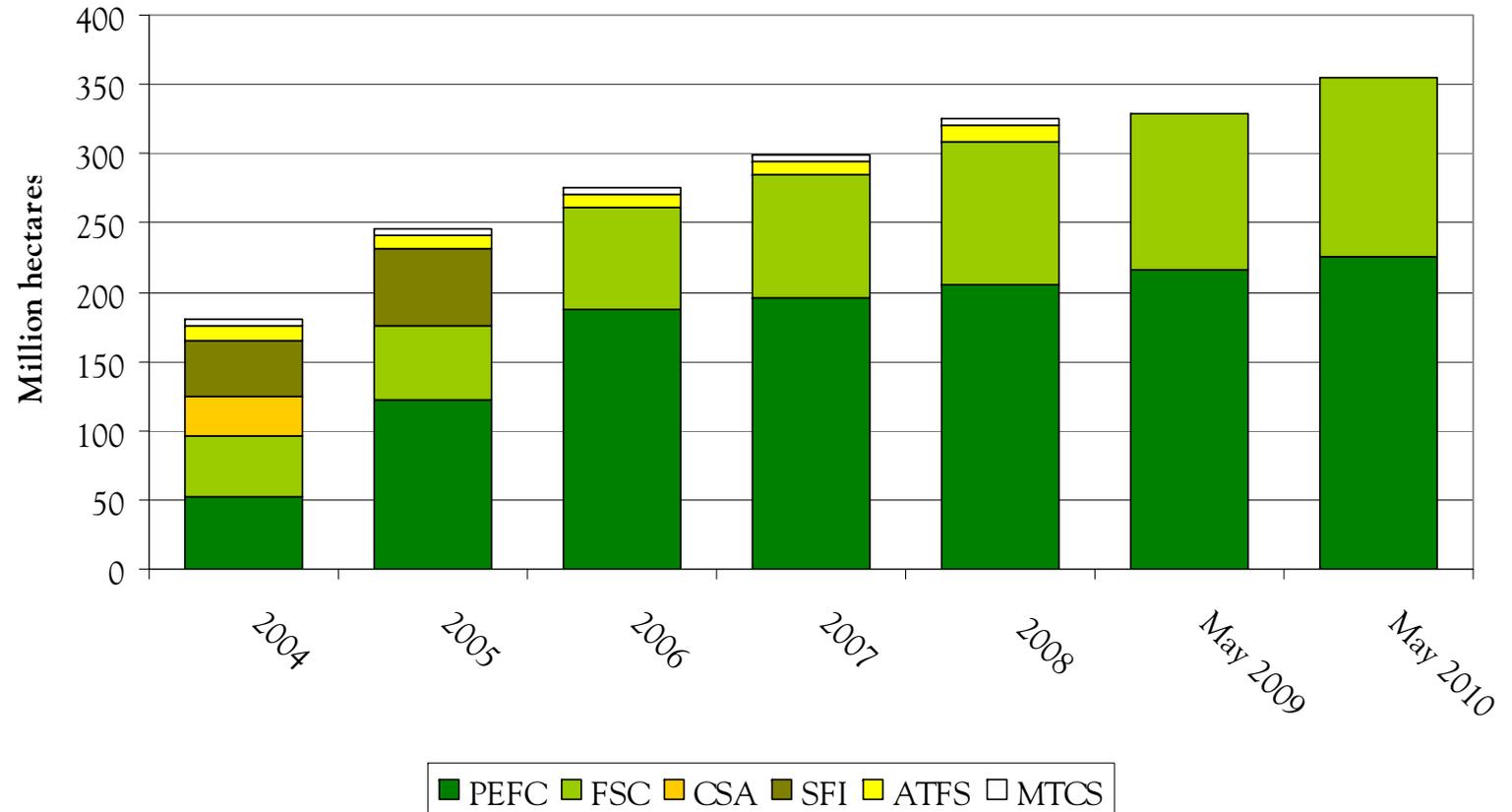


- Certification of sustainable forest management assures harvesting is continually conducted
 - Environmentally
 - Socially
 - Economically
- Certified forest products carry labels
 - Demonstrate coming from forest meeting standards for SFM
 - Verifiable by independent bodies





Certified forest area

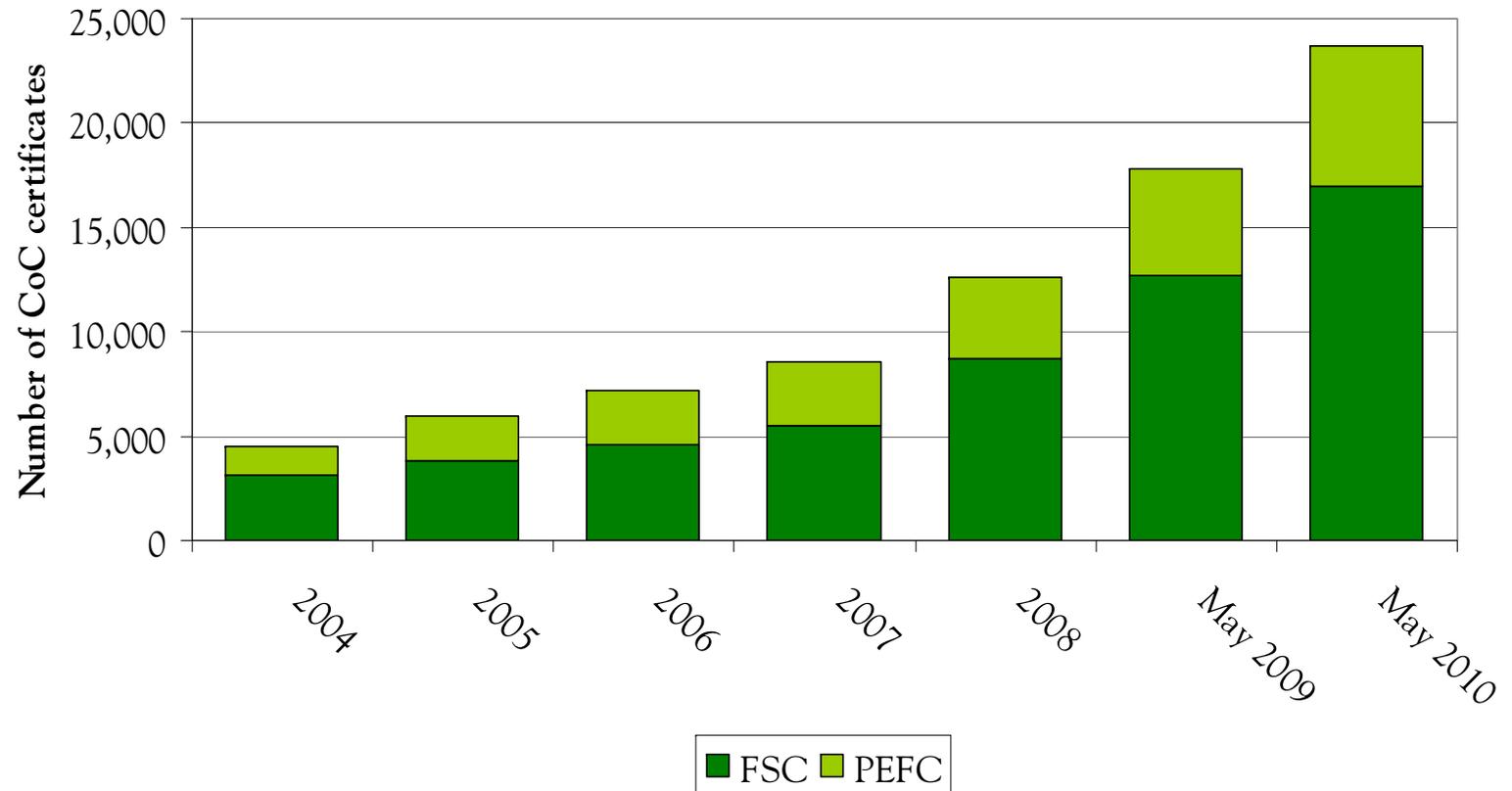


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Chain of custody certificates



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Certification drivers

- Business-to-business (B2B)
- Not by consumer demand
- Minority of companies that have chain of custody
- Considerable potential for development
 - EU FLEGT and “due diligence”
 - USA Lacey Act Amendment
 - Corporate social responsibility programmes (trade associations and companies)





Photo source: Metsaliitto.

Wood energy

The only market sector that grew during the 2008-2009 economic crisis



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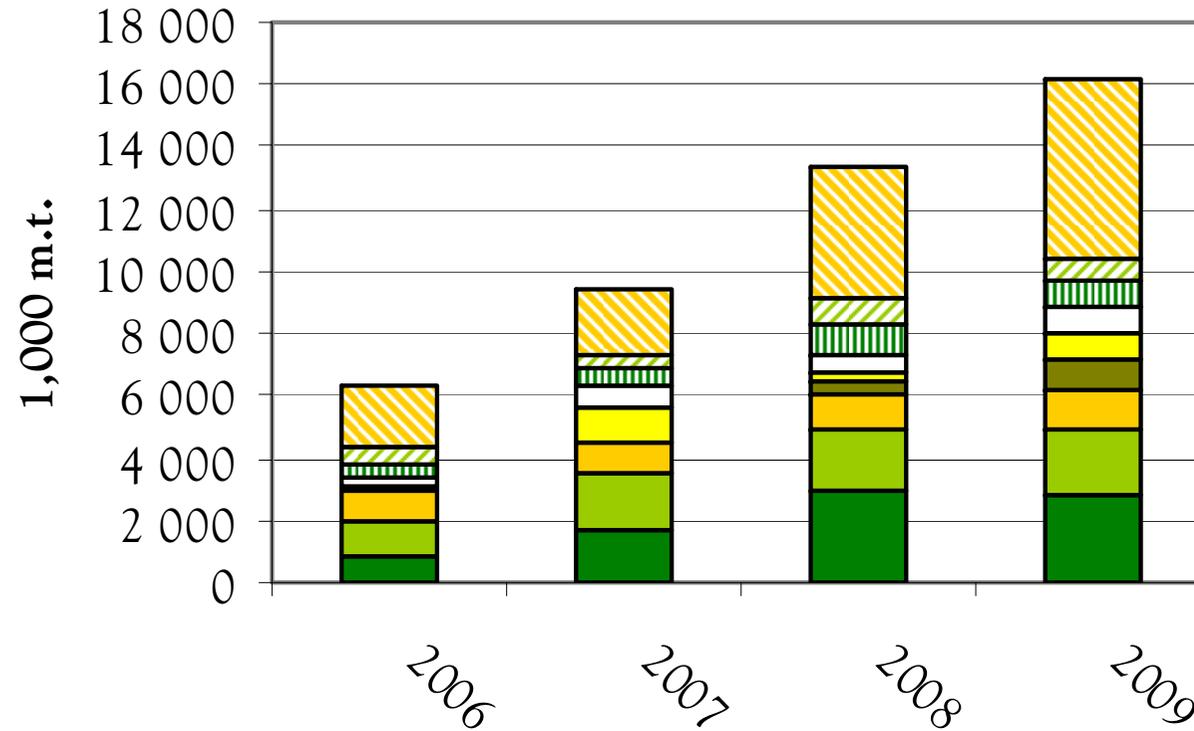
Wood energy drivers in Europe

- European Union renewable energy targets (20% renewables by 2020)
- Energy security – independence from imports
- Environmental concerns with fossil fuels
- Forest sector development by governments
- Industry-driven diversification





European wood pellet production capacity



Source: Ljungblom, 2010.

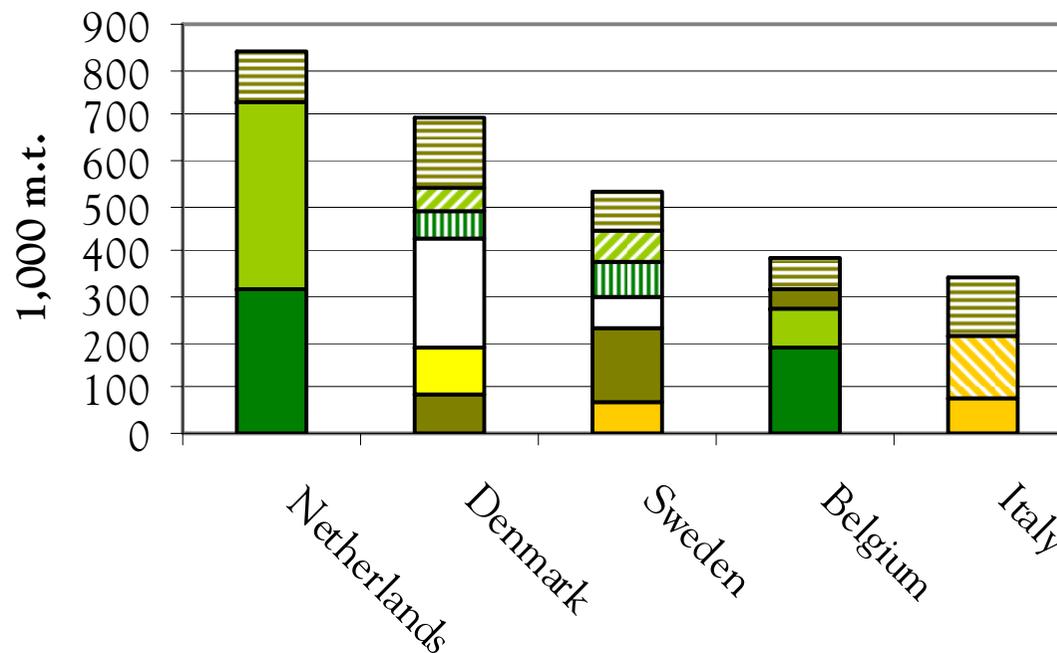


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Major European pellet importing countries and their suppliers, 2009

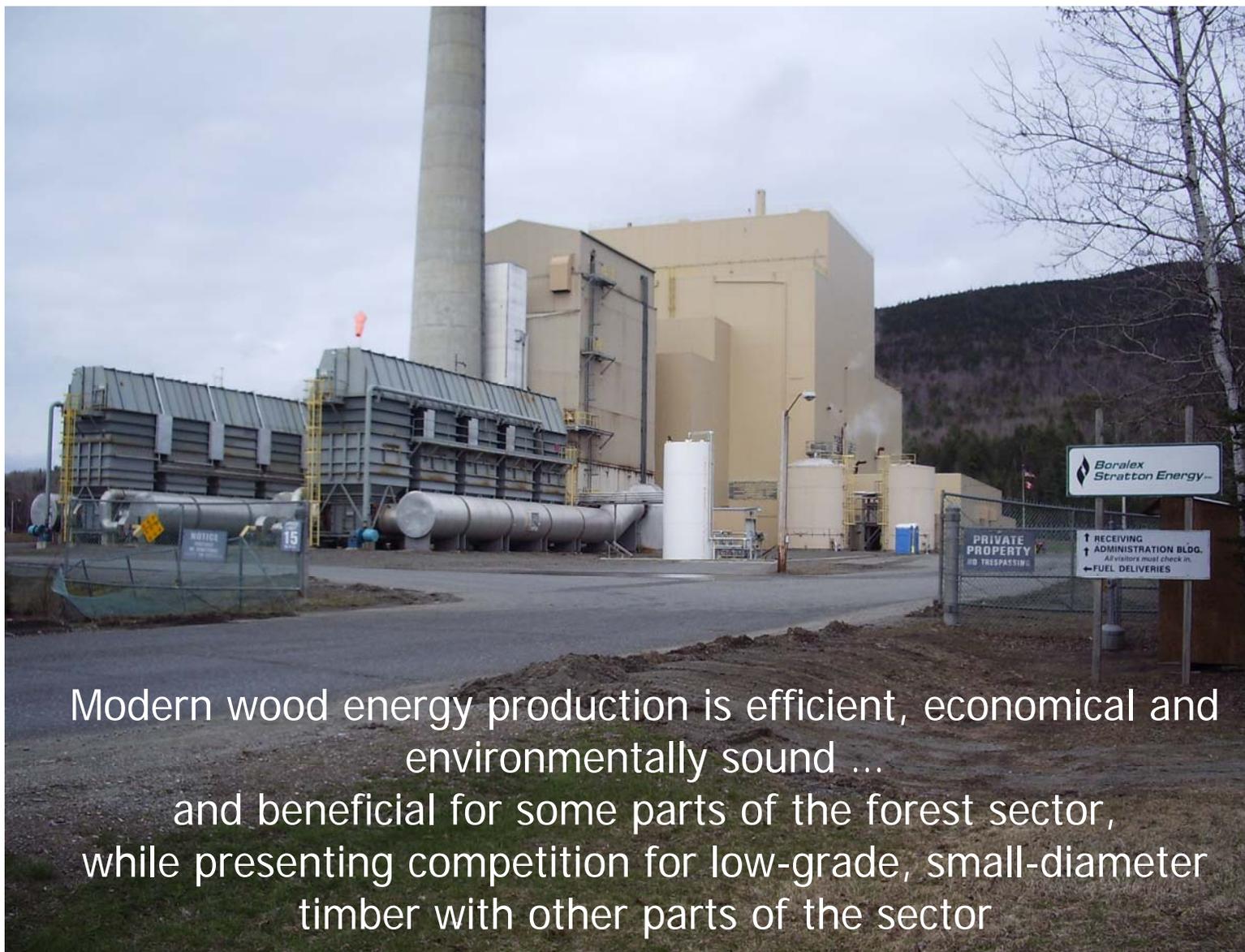


Source: Eurostat, 2010.



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Modern wood energy production is efficient, economical and environmentally sound ...
and beneficial for some parts of the forest sector,
while presenting competition for low-grade, small-diameter
timber with other parts of the sector

Photo source: M. Fonseca.



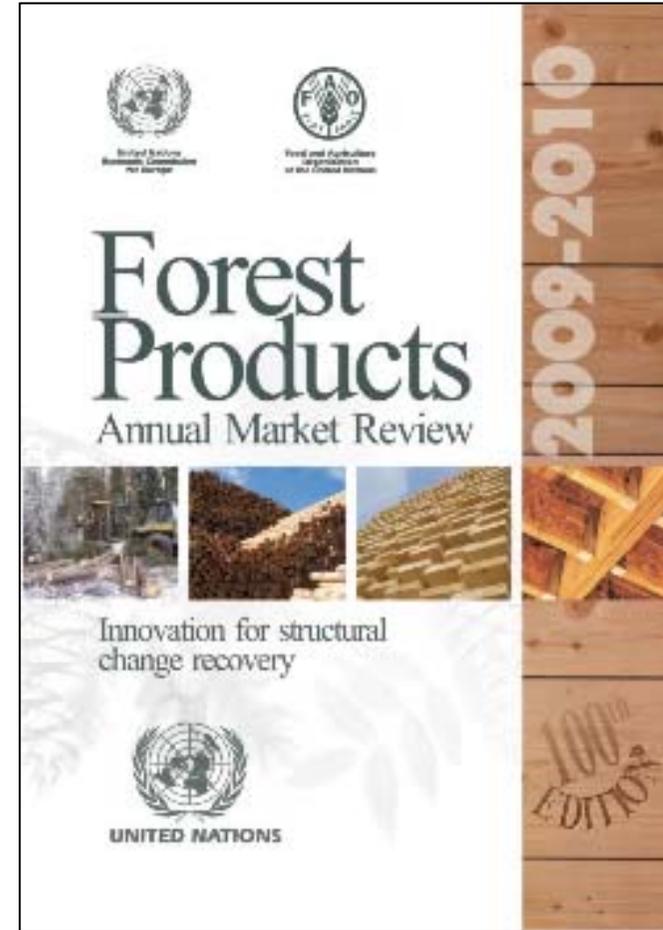
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IV. Forest products market developments



Overall highlights



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Highlights from our *Annual Market Review*

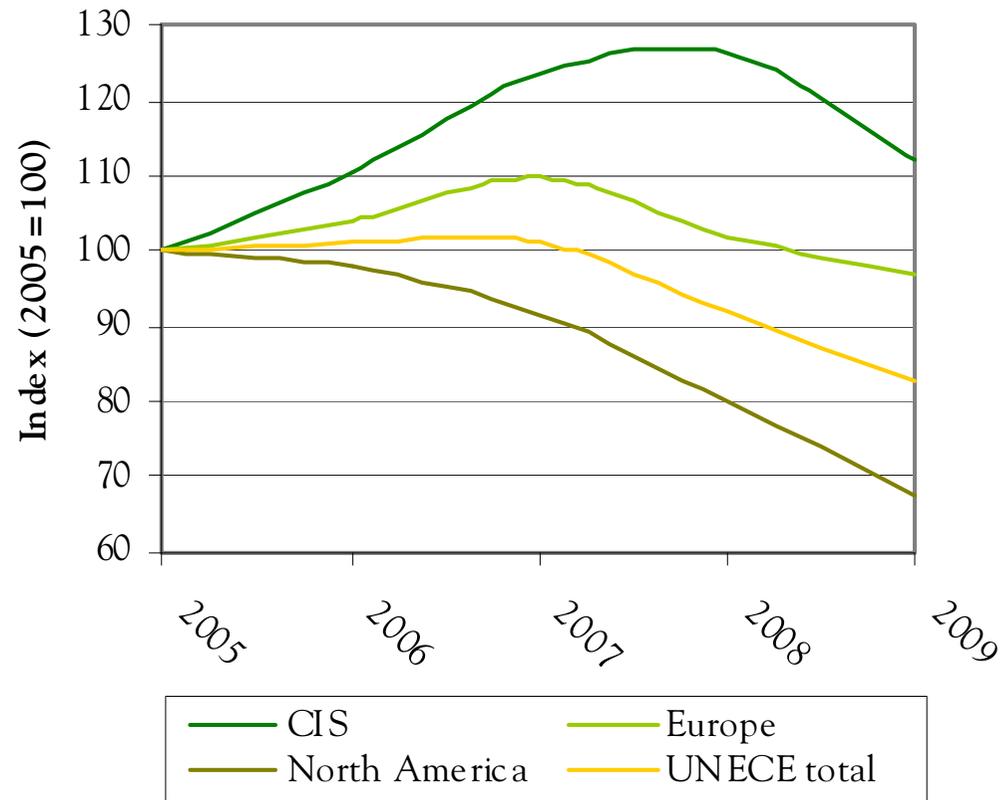
- Forest sector experiencing a structural change
 - Industries innovating and adapting
 - “Innovation for structural change recovery”
- Consumption of wood and paper products **fell** 12% in 2009 (greatest ever)
- Production of industrial roundwood at record low





Structural change in forest sector: 4 reasons

1. Downturn in demand forcing rationalization of production capacity



Source: UNECE/FAO TIMBER database, 2010.

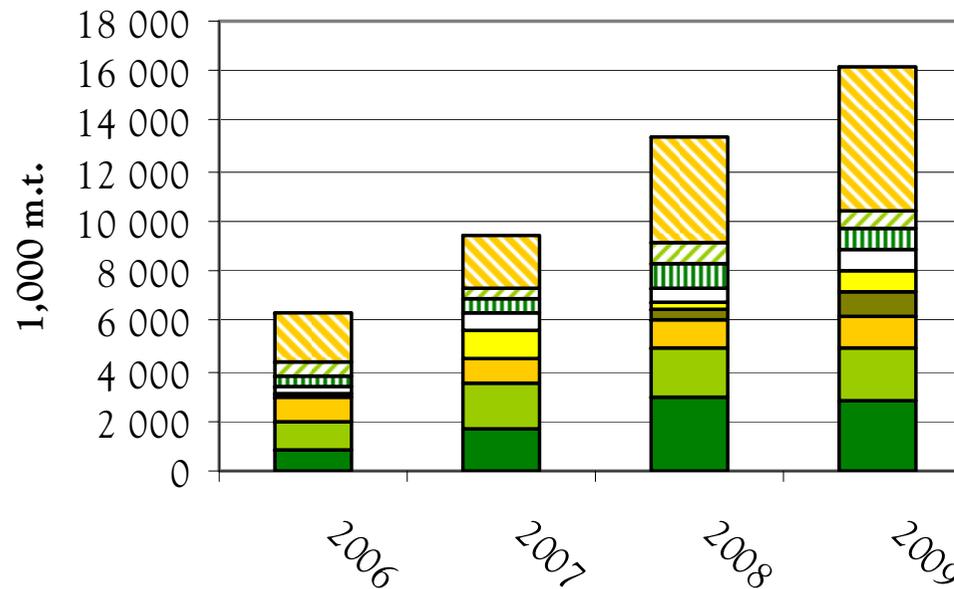
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Structural change in forest sector

2. Climate change policies: wood energy escalation production, consumption and trade



European pellet production capacity

■ Germany ■ Sweden ■ Austria ■ Portugal ■ France
□ Poland ■ Latvia ■ Finland ■ Others

Source: Ljungblom, 2010.



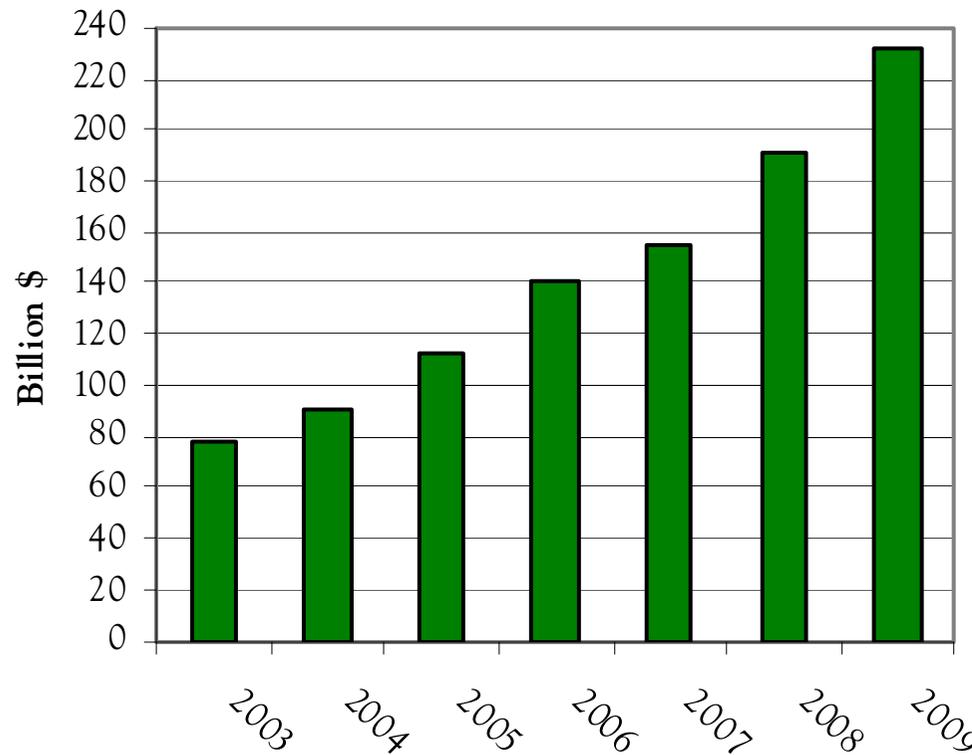
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Structural change in forest sector

3. Globalization of forest products markets, e.g. China's rise as a major provider of forest products in the global markets



Chinese forest products output

Source: International WOOD MARKETS Group, 2010.



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Structural change in forest sector

4. International control of origins of wood to ensure sustainable and legal production.



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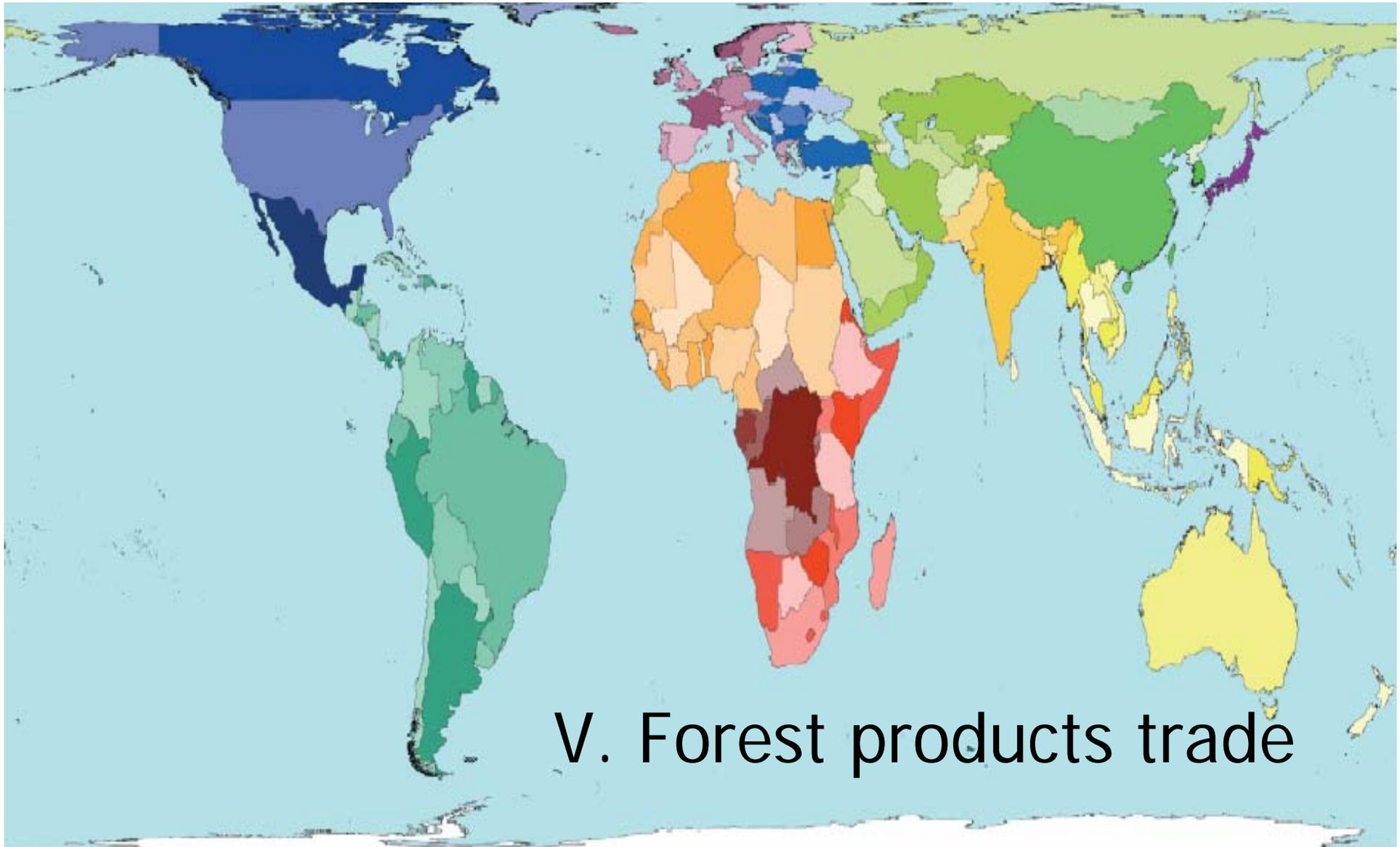




Structural change in forest sector

1. Downturn in demand forcing rationalization of production capacity;
2. Climate change policies: wood energy escalation production, consumption and trade;
3. Globalization of forest products markets, e.g. China's rise as a major provider of forest products in the global markets;
4. International control of origins of wood to ensure sustainable and legal production.





V. Forest products trade

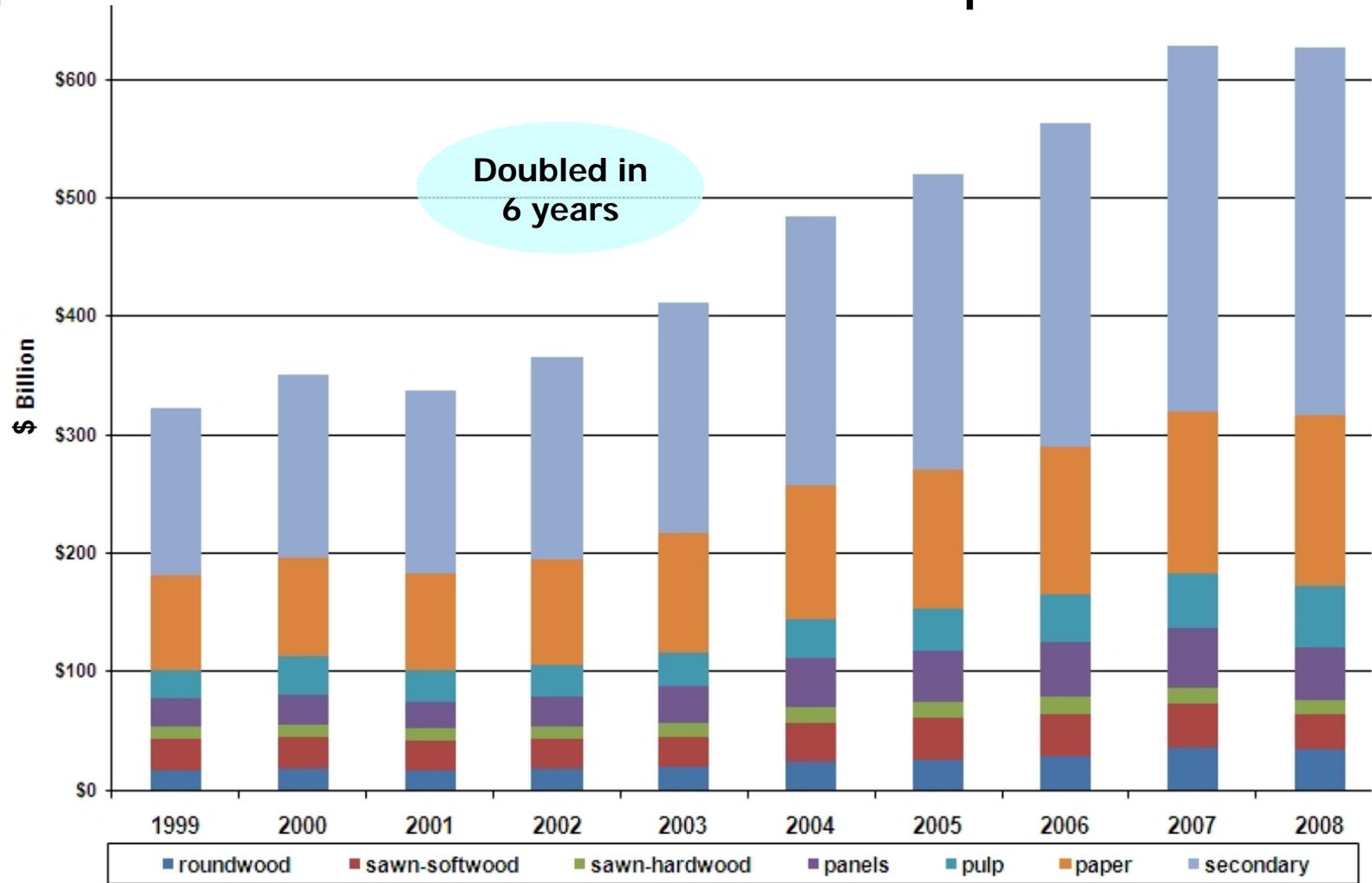


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Global trade of all forest products



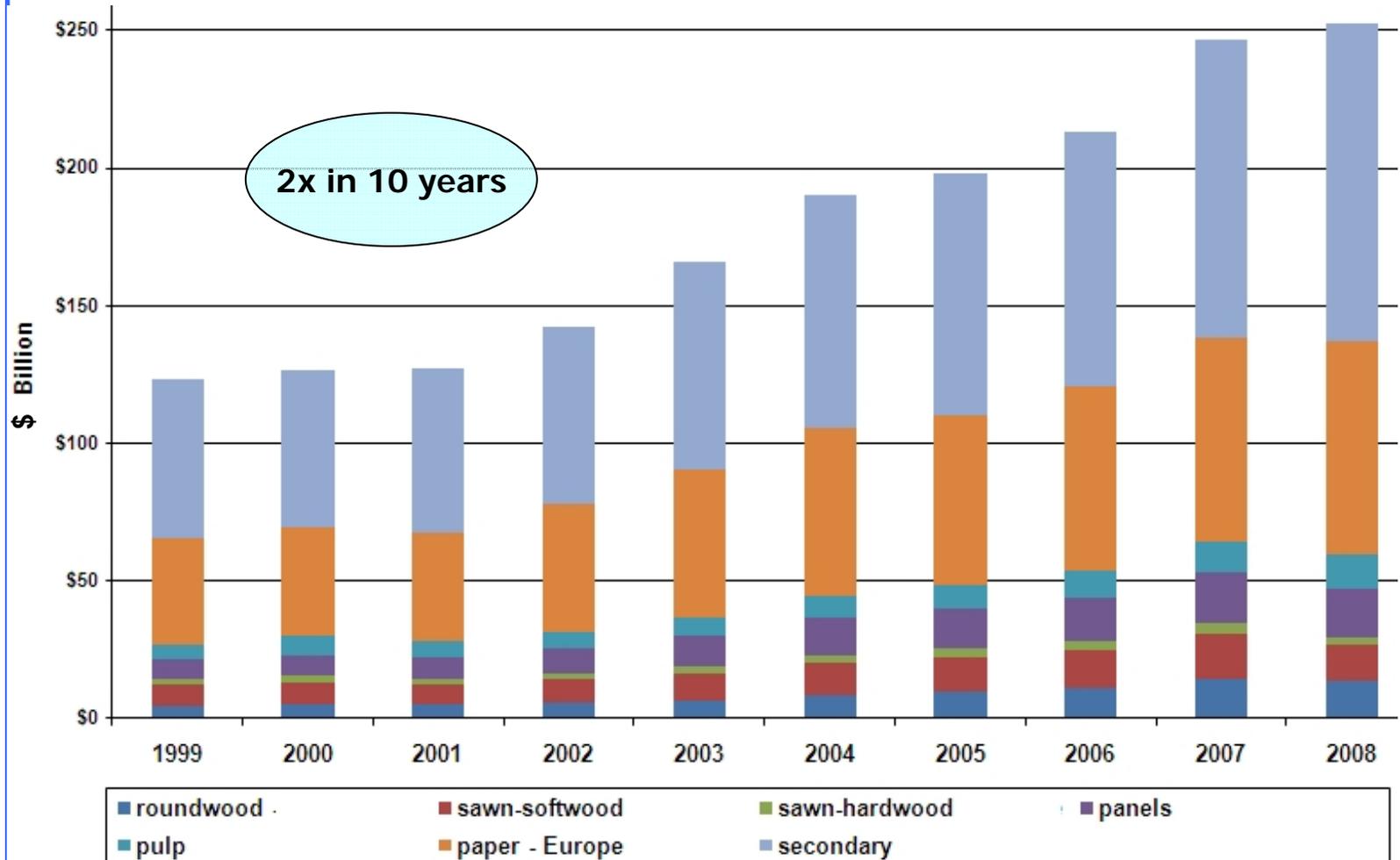
Source: FAO Statistics.



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European forest products exports



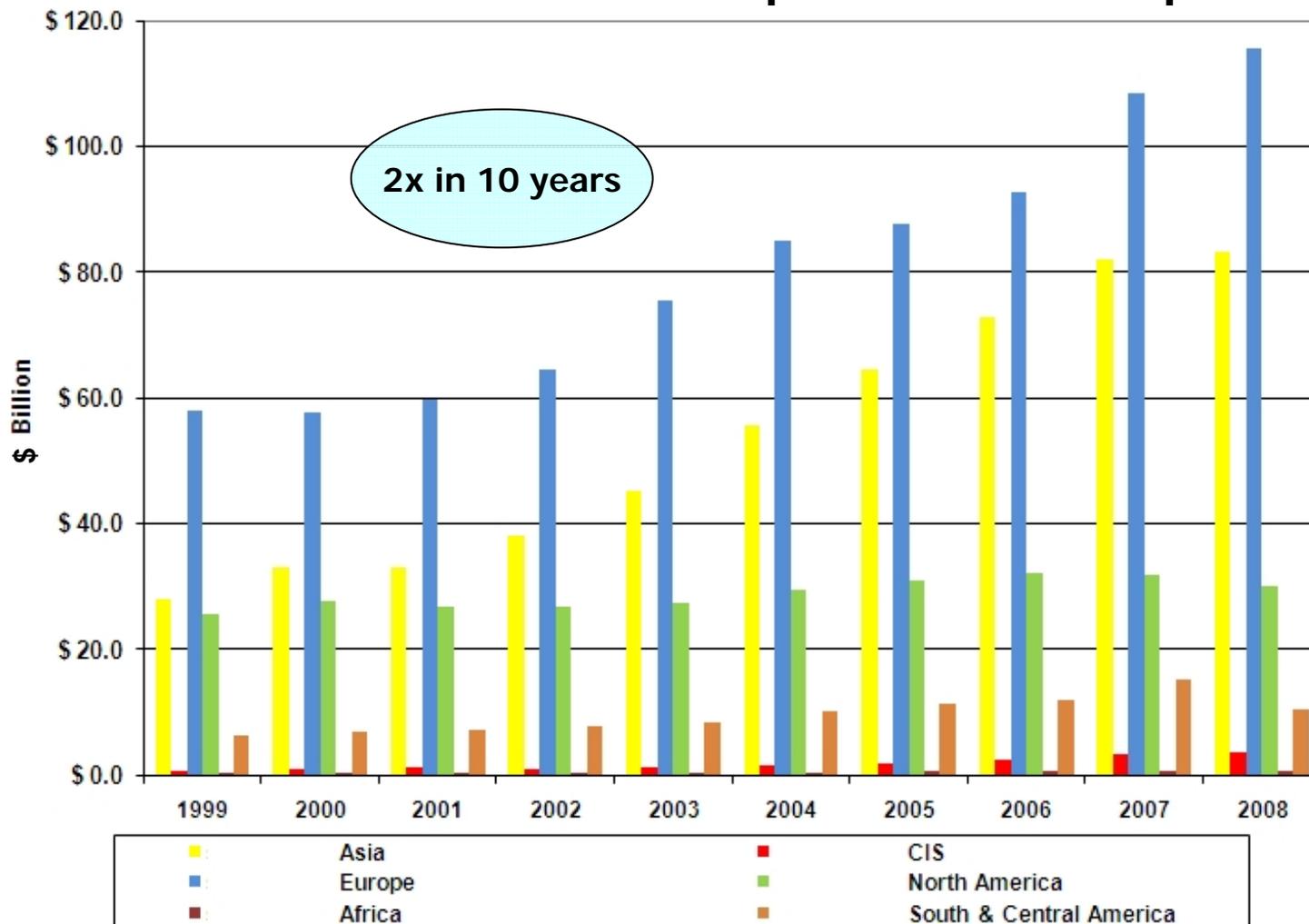
Source: FAO Statistics.



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Value-added forest products exports



Source: FAO Statistics.



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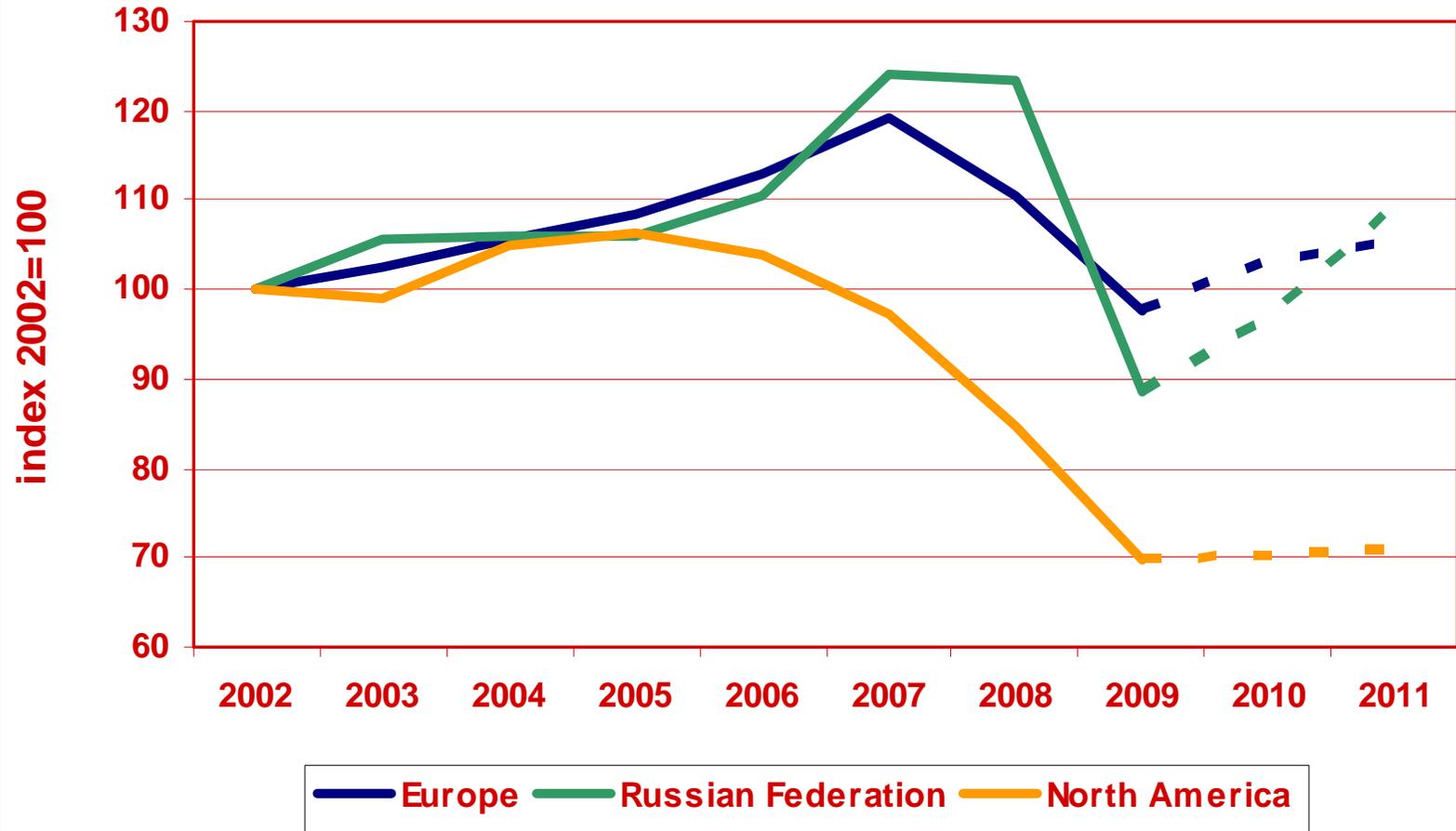




Timber Committee forecasts ...



Consumption rebounds!



Source: Timber Committee forecasts, 2010.

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VI. Conclusions

- Sustainable supply in UNECE region
- Markets rebounding, but not recovered: sustainable markets required for SFM
- Recovery dependent on US housing
- New market opportunities
 - China
 - Middle East
- Market drivers
 - Certified forest products
 - Green building
- Increased trade regulations





VI. Conclusions

- Wood energy escalation
 - Positive for parts of forest sector
 - Positive for renewable energy, when efficient production, transport, combustion
 - Negative in short term for competition
- Globalization and strong trade development
- = Structural change in 2007-2010
- Optimistic future for sustainable development of forest sector in UNECE region





VII. Discussion



INTERNATIONAL YEAR OF FORESTS – 2011



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