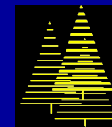


Emerging Trends in the Global Trade of Forest Products

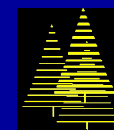
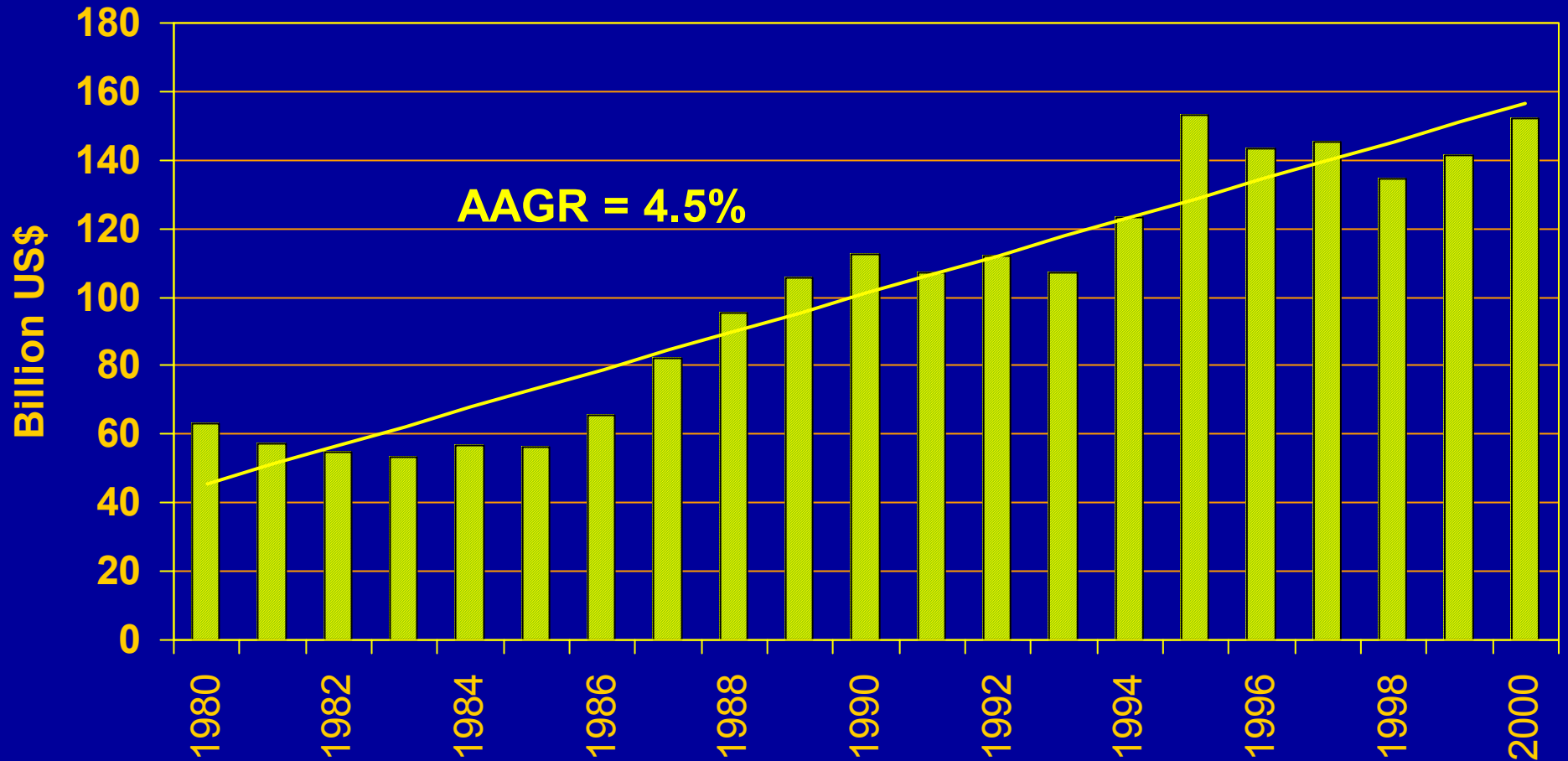
**PRUTIMBER Timberland Investment Workshop
Point Clear, Alabama
April 8, 2002**

**Bob Flynn, Director
Wood Resources International Ltd.**



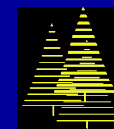
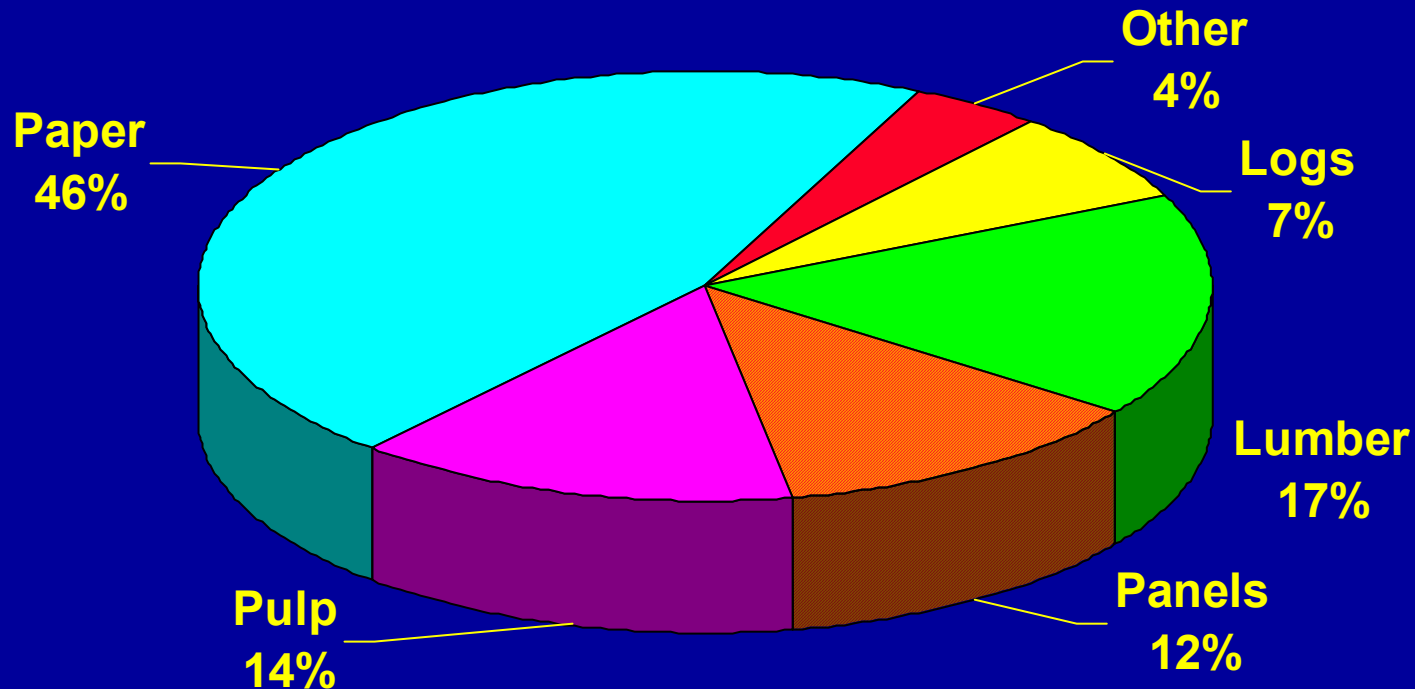
**Wood Resources
International Ltd.**

Global trade in forest products has been expanding at a rate of nearly 4.5% per year



60% of global trade in forest products is in pulp and paper products

Global Trade in Forest Products, 2000
Percent of Value by Product

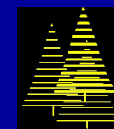


Trade in paper products has been growing at a much faster rate than most solidwood products

Global trade in value of forest products, 1980 - 2000

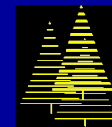
– Average annual growth rate:

- Paper = +6.15%
- Pulp = +4.10%
- Solidwood Products = +3.22%
- Softwood Lumber = +2.57%
- Plywood = +5.40%
- Other Wood-based Panels = +7.24%



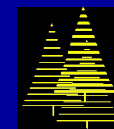
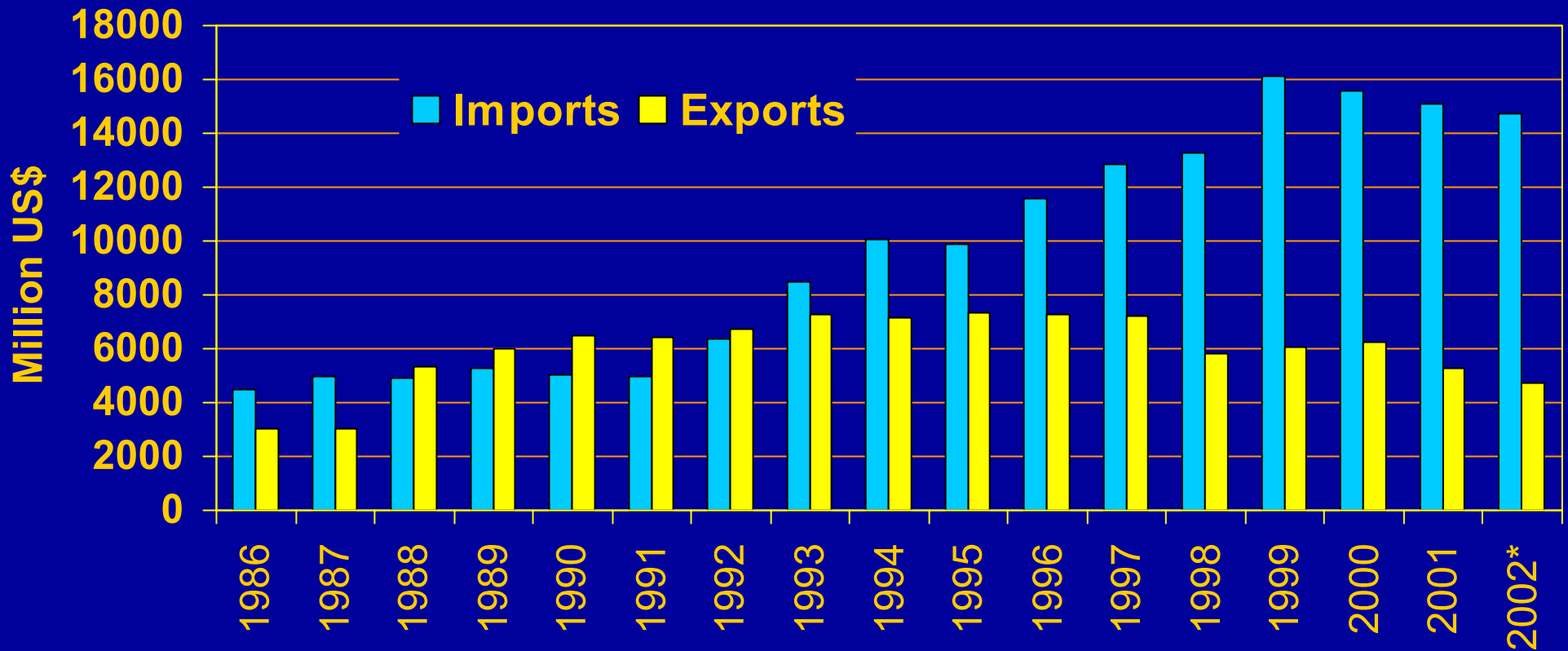
The United States:

Largest Producer and Importer of Wood Products
Changing Sources of Supply



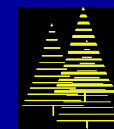
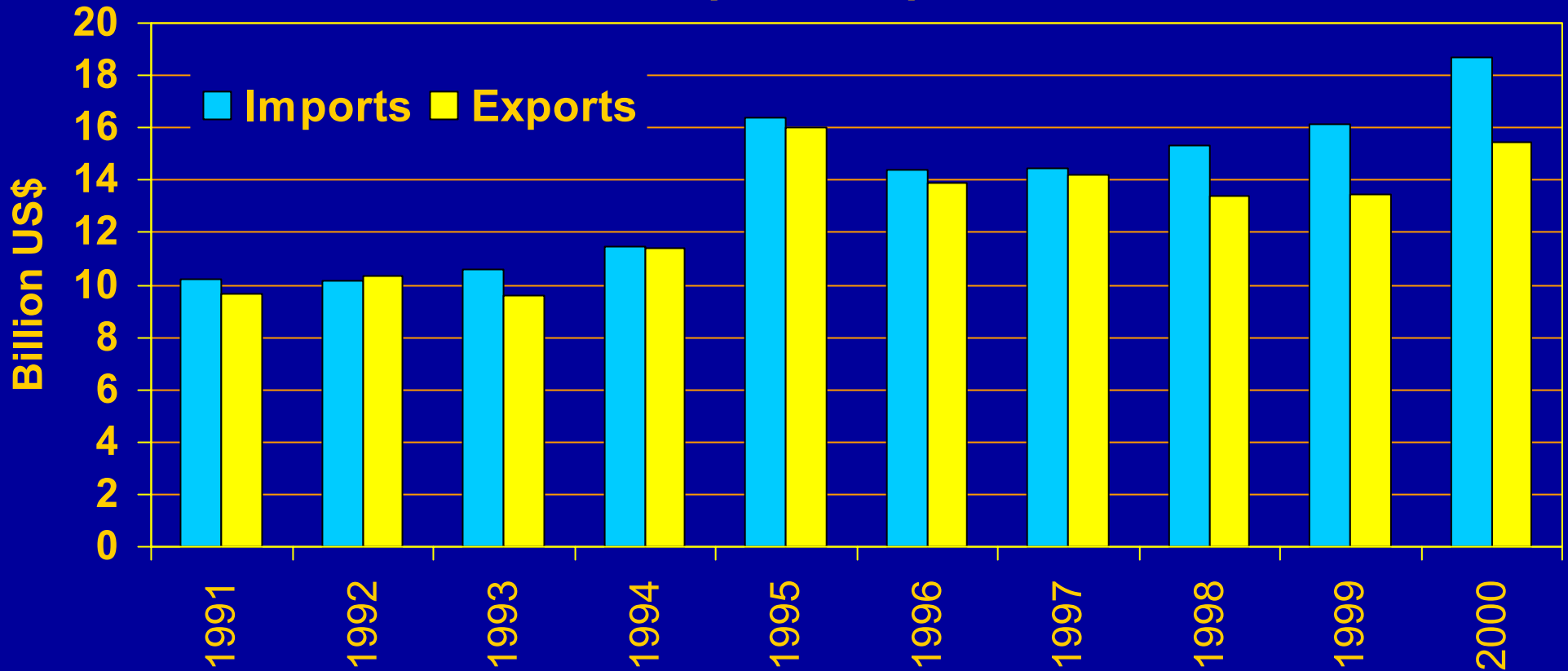
The US has a large and growing trade deficit in solid wood products

US Trade in Solid Wood Products

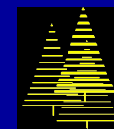
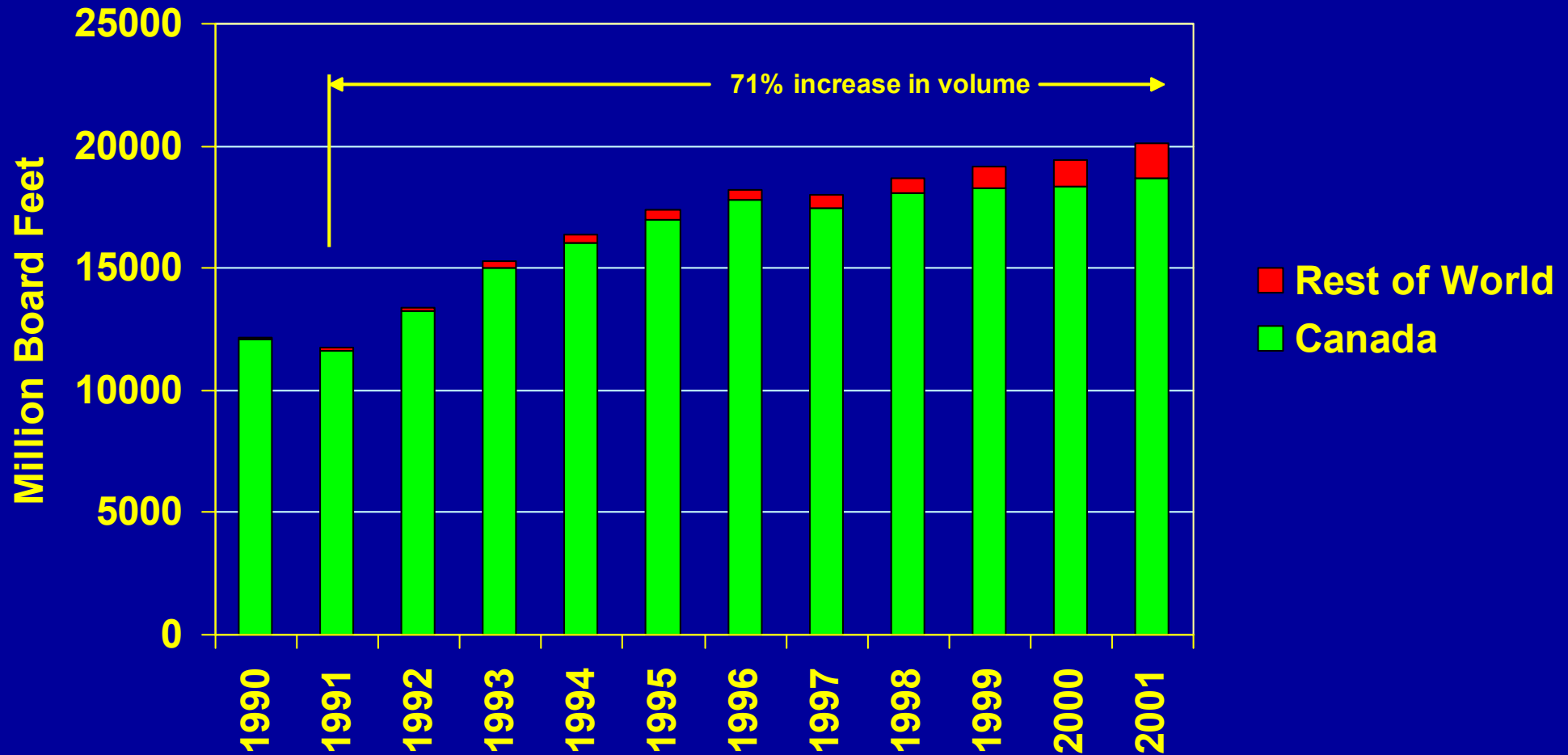


The US trade balance in pulp and paper products is also negative, due partially to the strong US\$

US Trade in Pulp and Paper Products

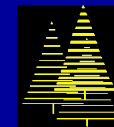


Canada continues to dominate US softwood lumber imports, but other sources are increasing

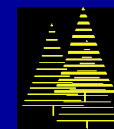
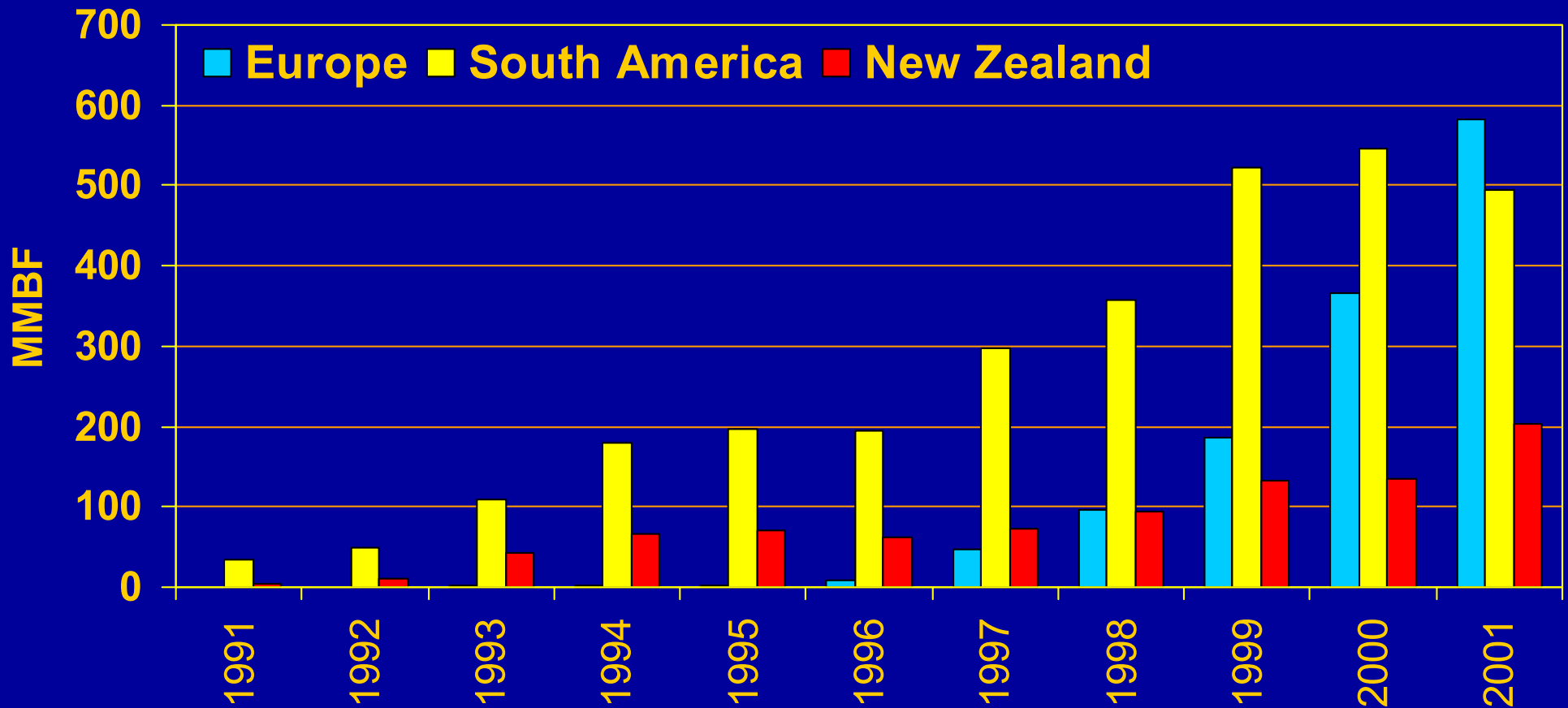


US-Canada Softwood Lumber War – impact on timberland values difficult to estimate

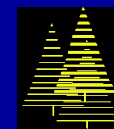
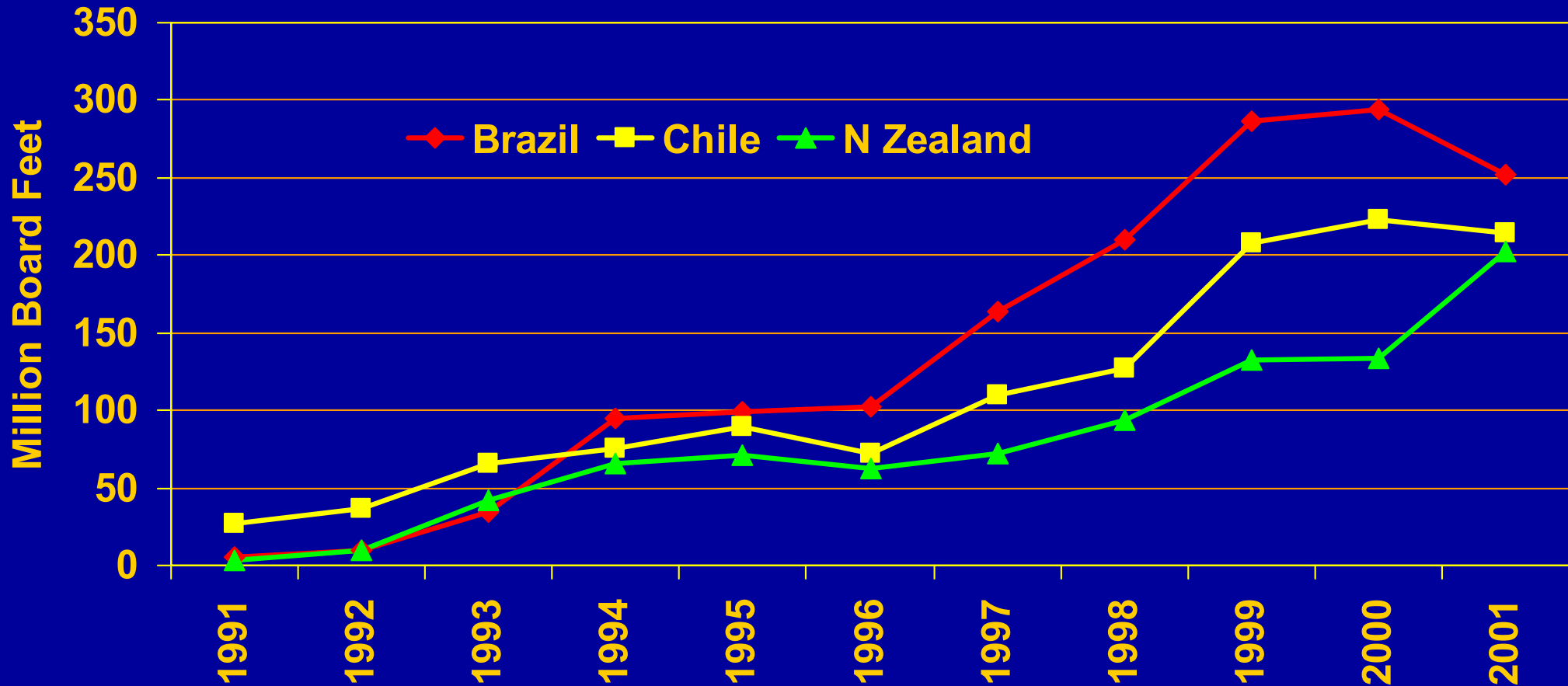
- War not over yet--- May 6 ruling by ITC could eliminate import duties, or WTO could over-turn
- Impact of Softwood Lumber Agreement (1996-2001)
 - Incentive to non-quota provinces to increase softwood lumber production and exports
 - Incentive to push harder into export markets, replacing US product
 - Incentive to add value in Canada
 - But lumber prices still higher than without duties/quota, which acts to push up timberland prices



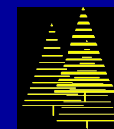
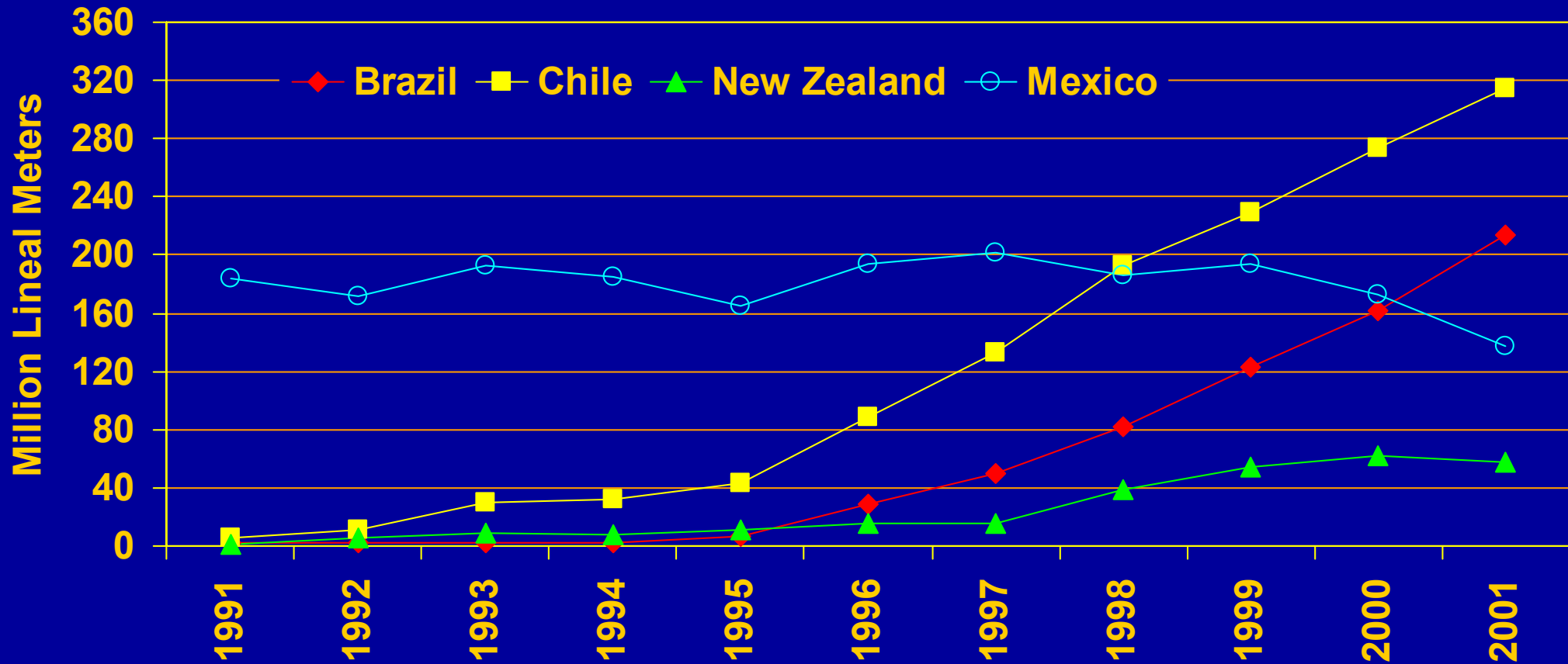
US imports of European softwood lumber now exceed those from South America



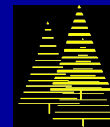
Imports of softwood lumber from New Zealand jumped 53% in 2001, but imports from Brazil and Chile declined



US imports of finished products like softwood moulding from Brazil and Chile continue to increase



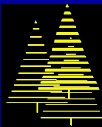
Timber from plantation forests in the Southern Hemisphere is becoming much more important in the global markets



**Wood Resources
International Ltd.**

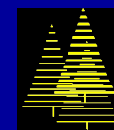
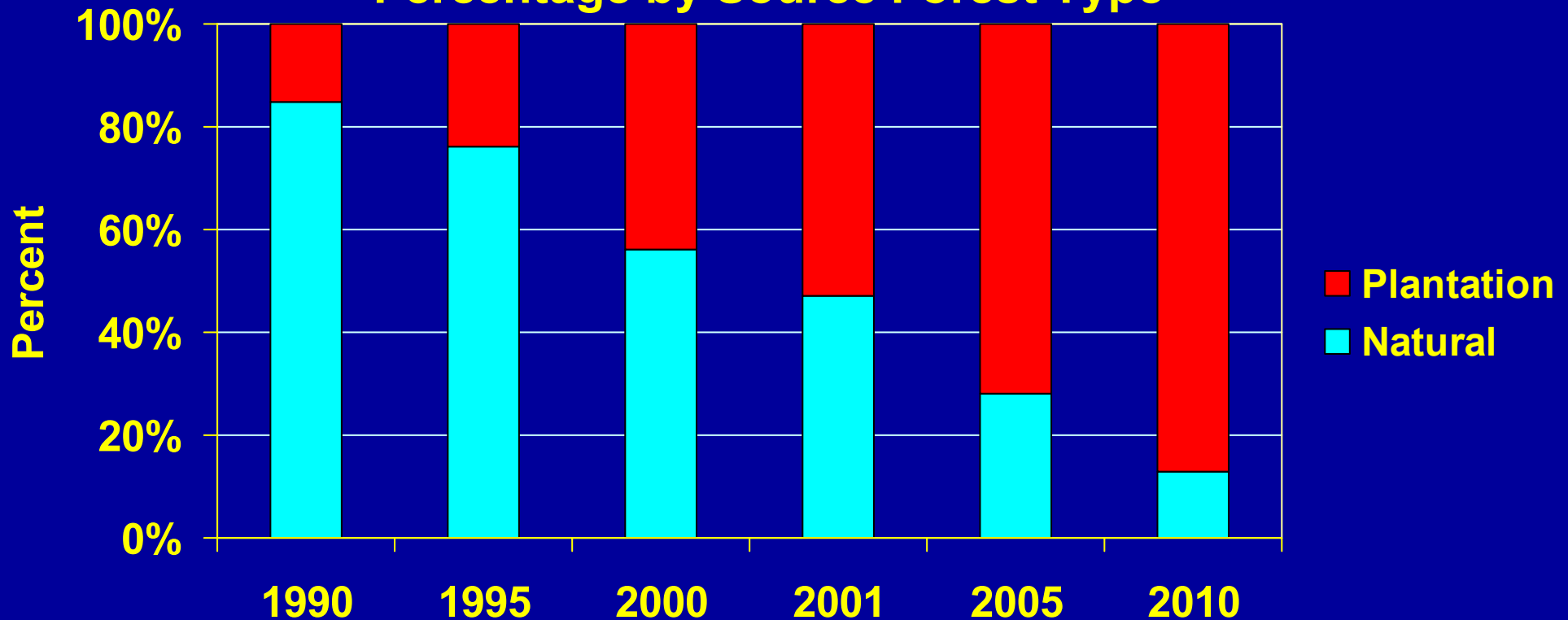
The growth in US imports of Brazilian wood products has been almost entirely from plantation wood

US Imports of Solidwood Products from Brazil

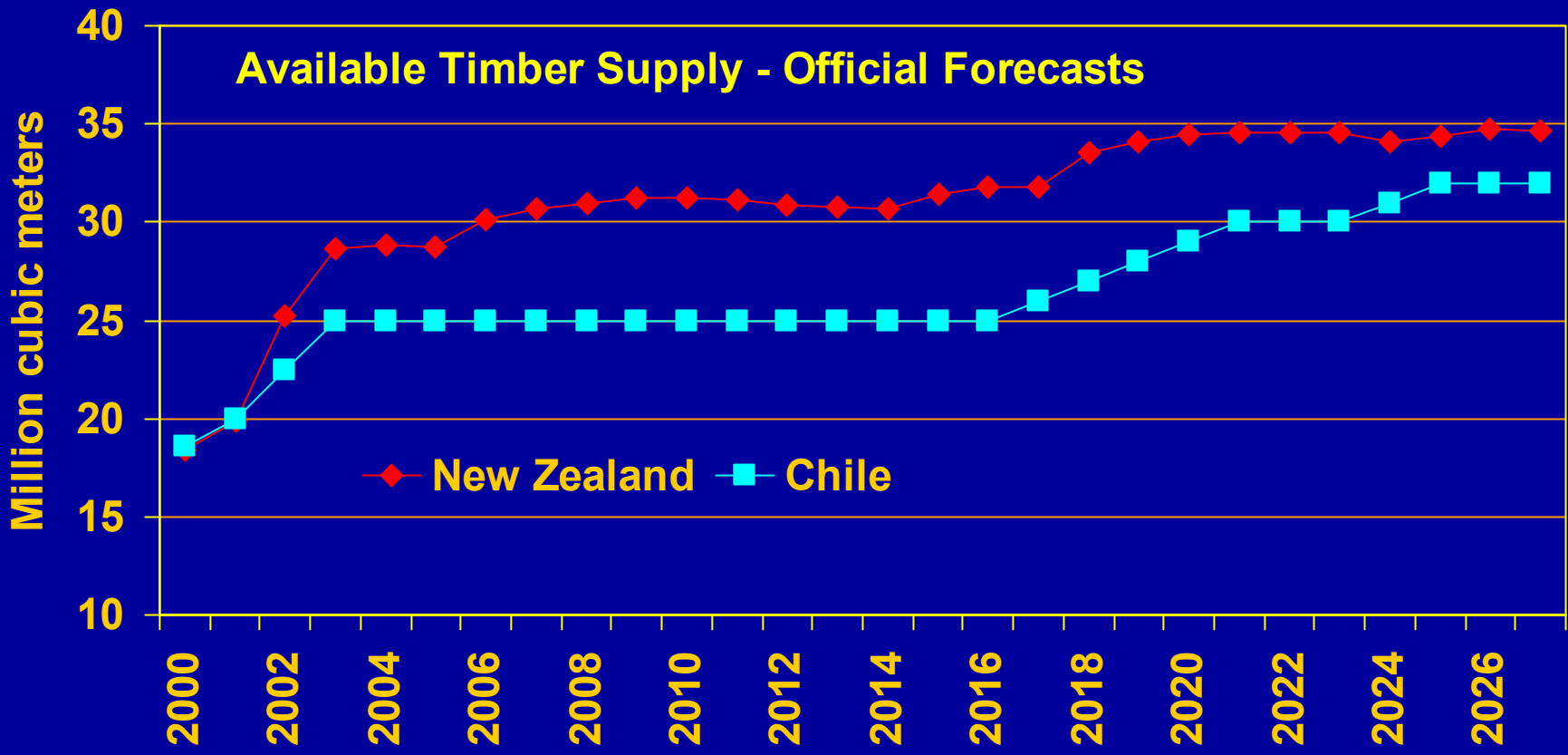


Plantation forests are also taking over much of the international pulpwood trade

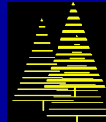
Japanese Hardwood Chip Imports, Percentage by Source Forest Type



The volume of pine *available* for harvest in Chile and New Zealand will expand rapidly in the coming 5 years, but demand will likely be slower



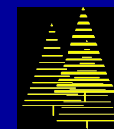
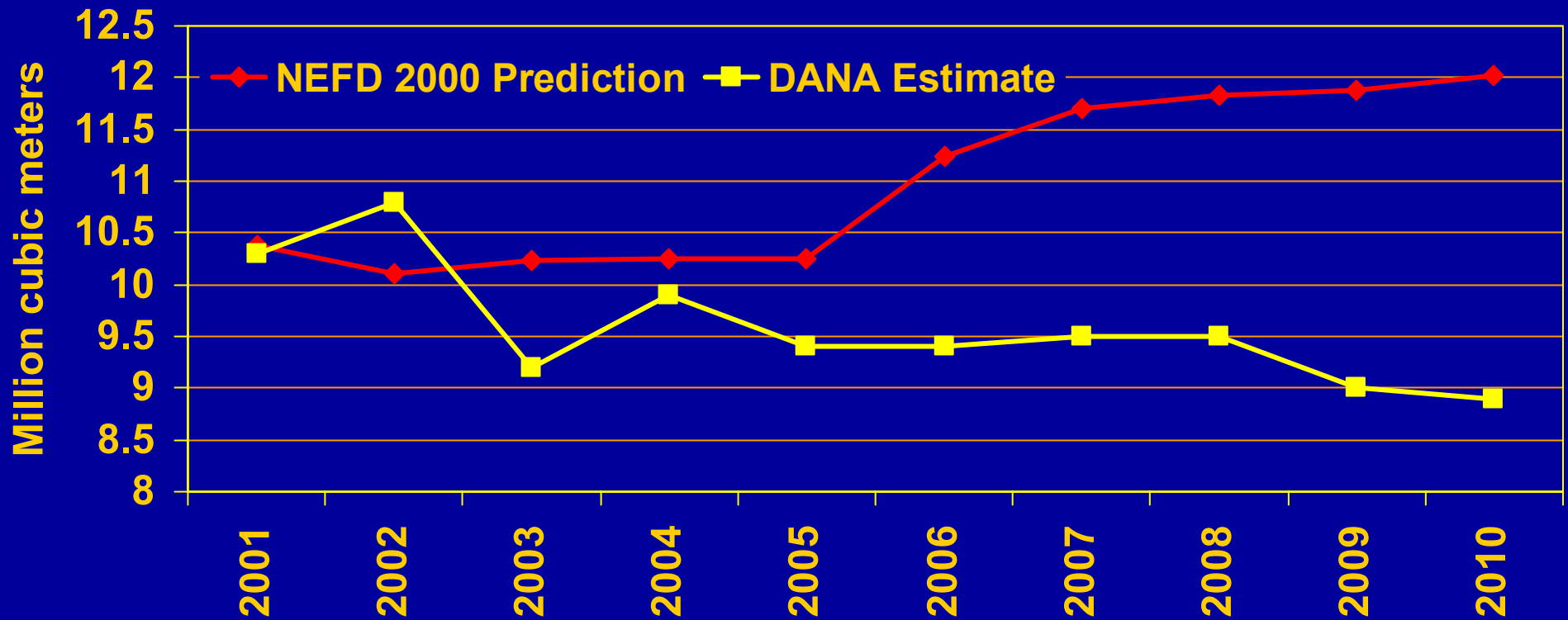
Source: INFOR, NZ MAF



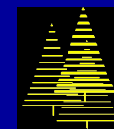
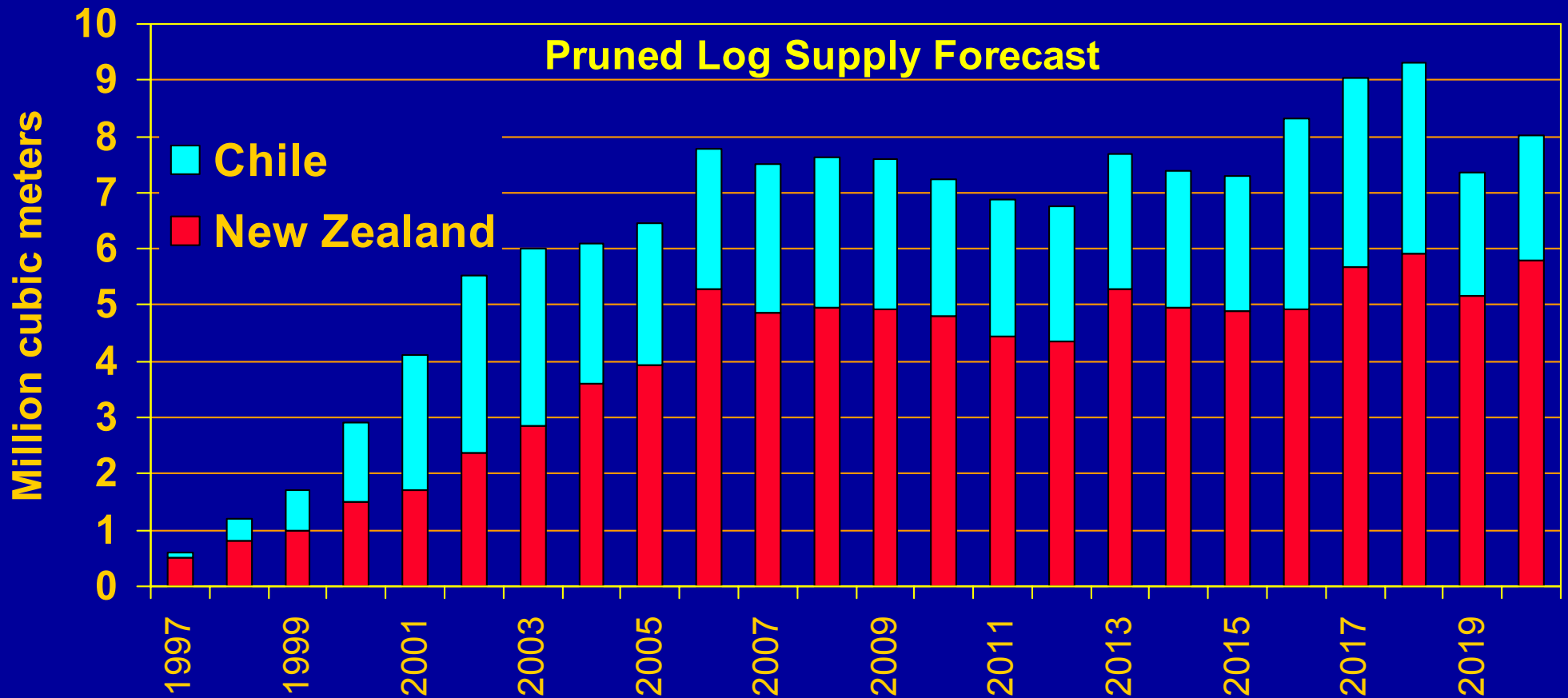
Wood Resources International Ltd.

But the “Wall of Wood” may not be as tall as some have assumed

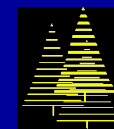
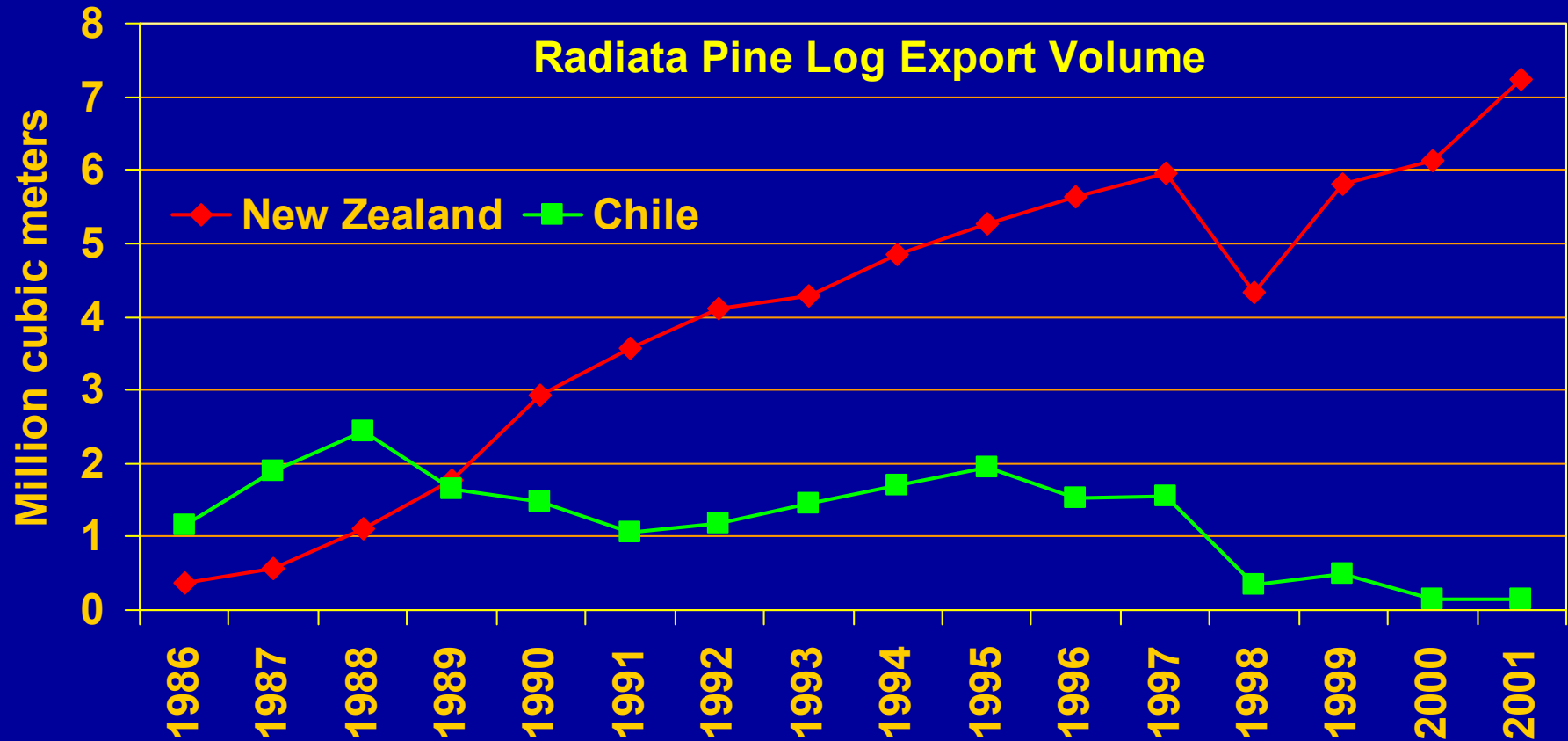
Central North Island New Zealand Timber Harvest Forecast



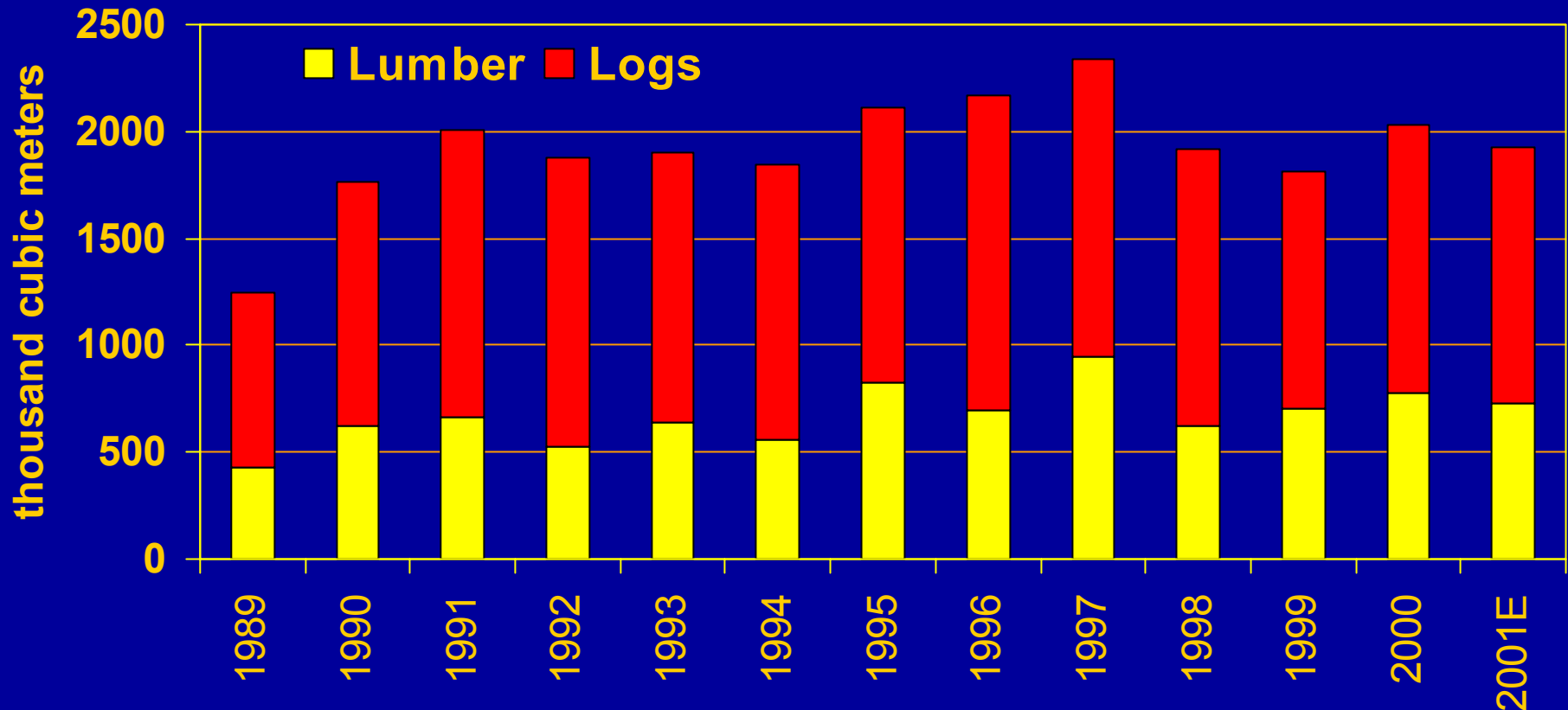
More importantly, pruned log availability is set to triple between 1999 and 2003



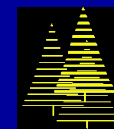
New Zealand and Chile have taken radically different approaches to log exports



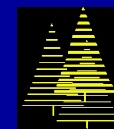
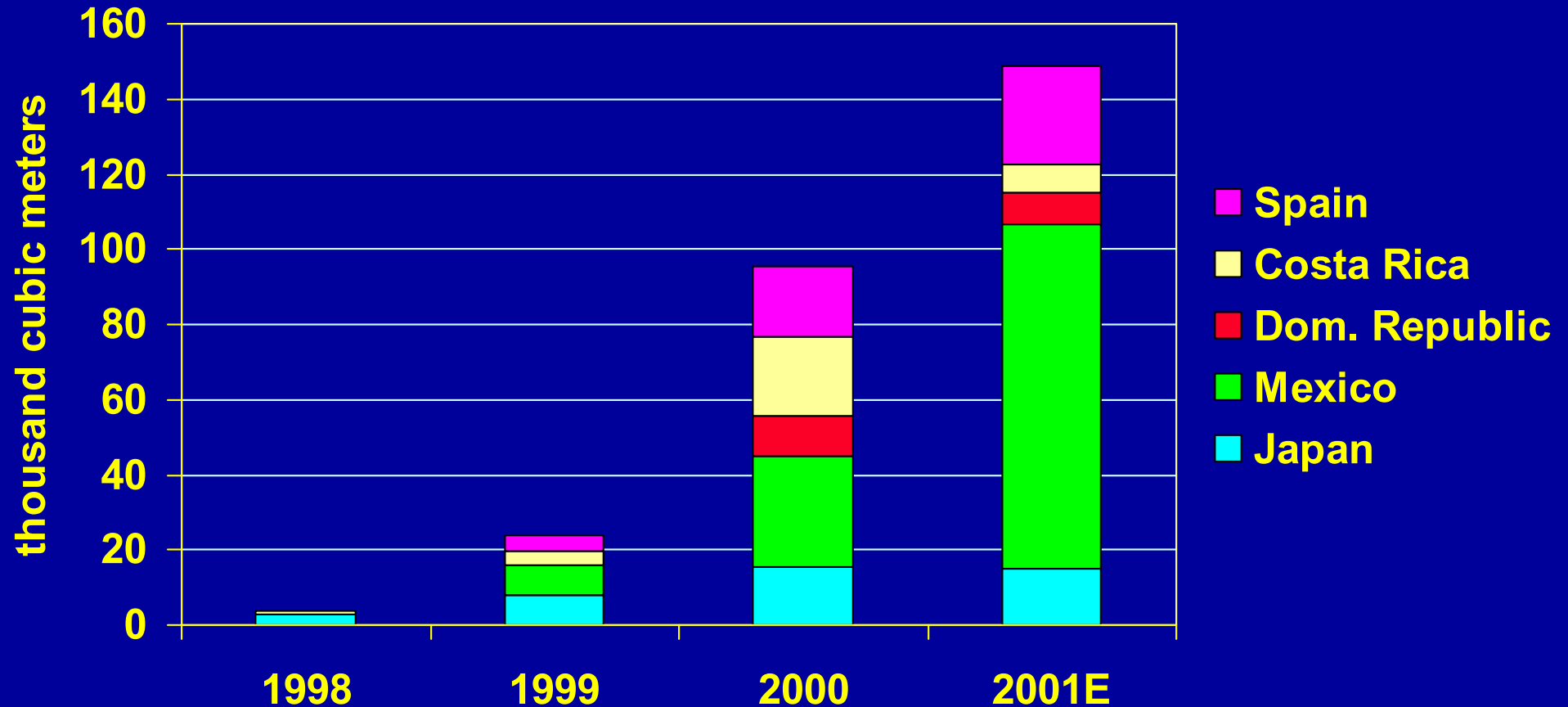
The total imports of radiata pine in Japan have not increased since 1991



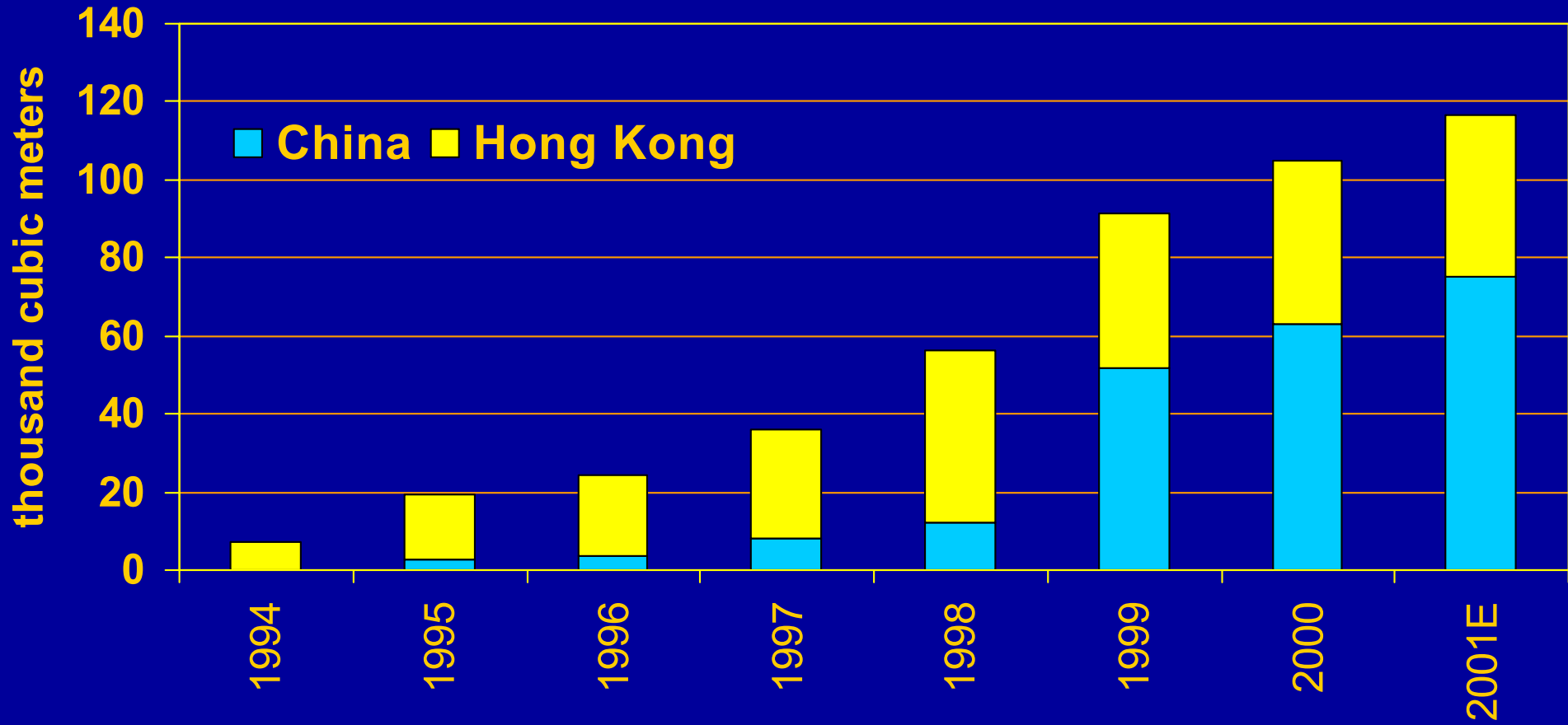
Lumber equivalent volume



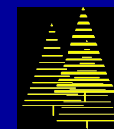
Chile: Exports of KD surfaced lumber are expanding rapidly in certain markets



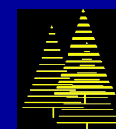
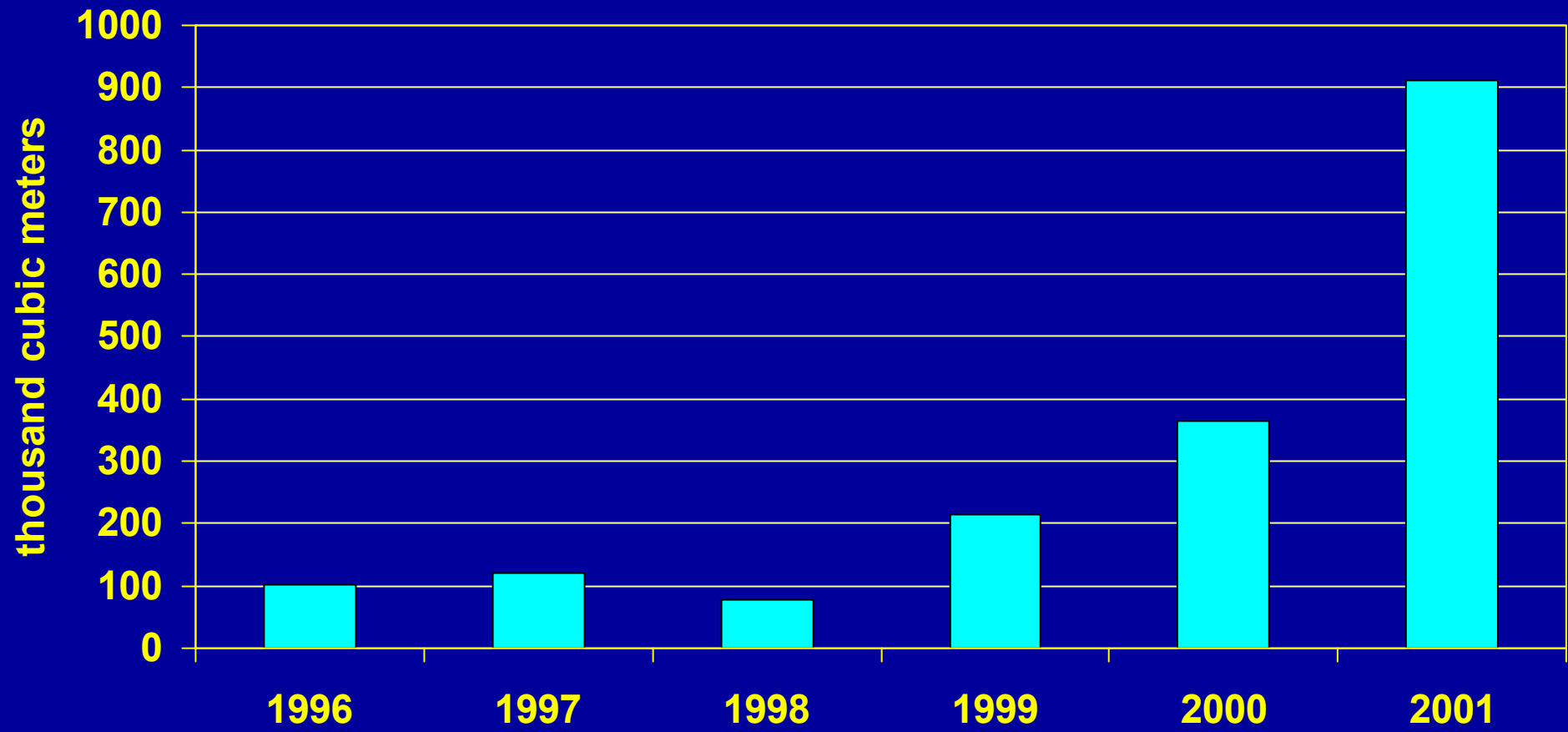
New Zealand sawnwood exports to China have increased rapidly



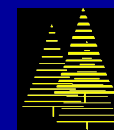
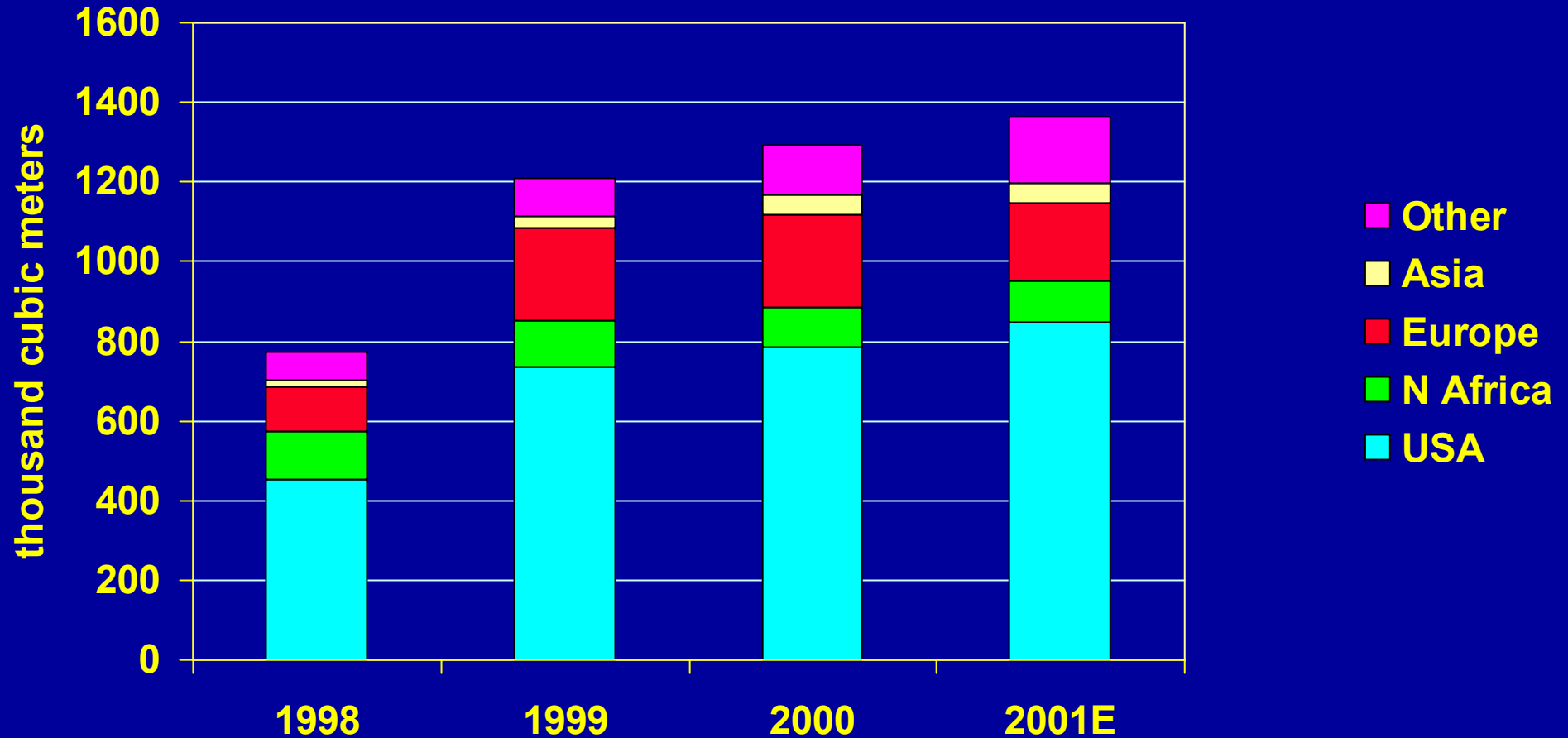
Note: 100,000 m³ = 42 MMBF



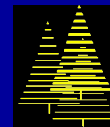
But New Zealand's exports of logs to China have been growing even faster



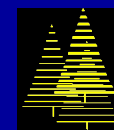
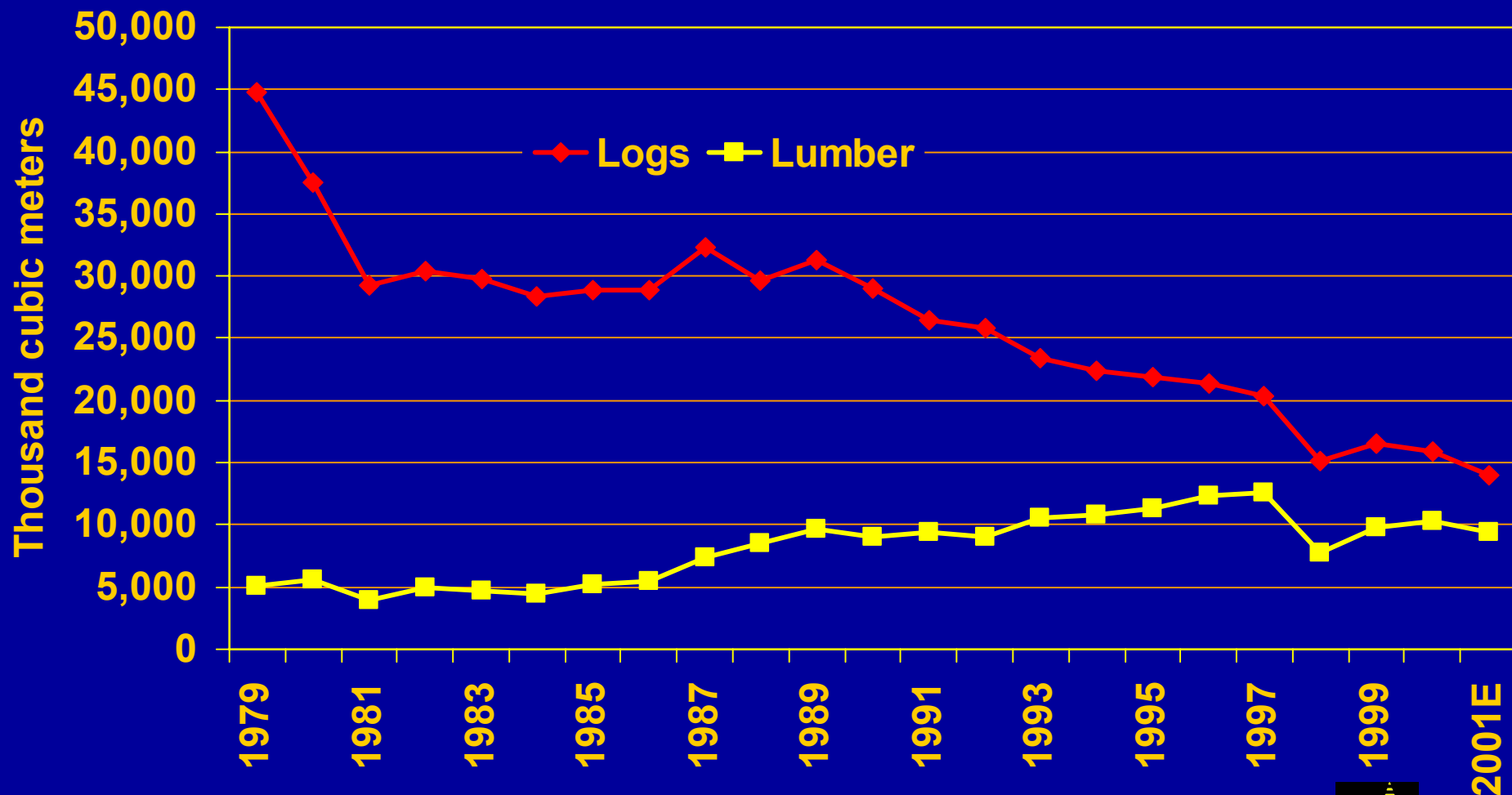
The US continues to be the dominant market for Brazilian softwood lumber exports



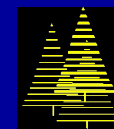
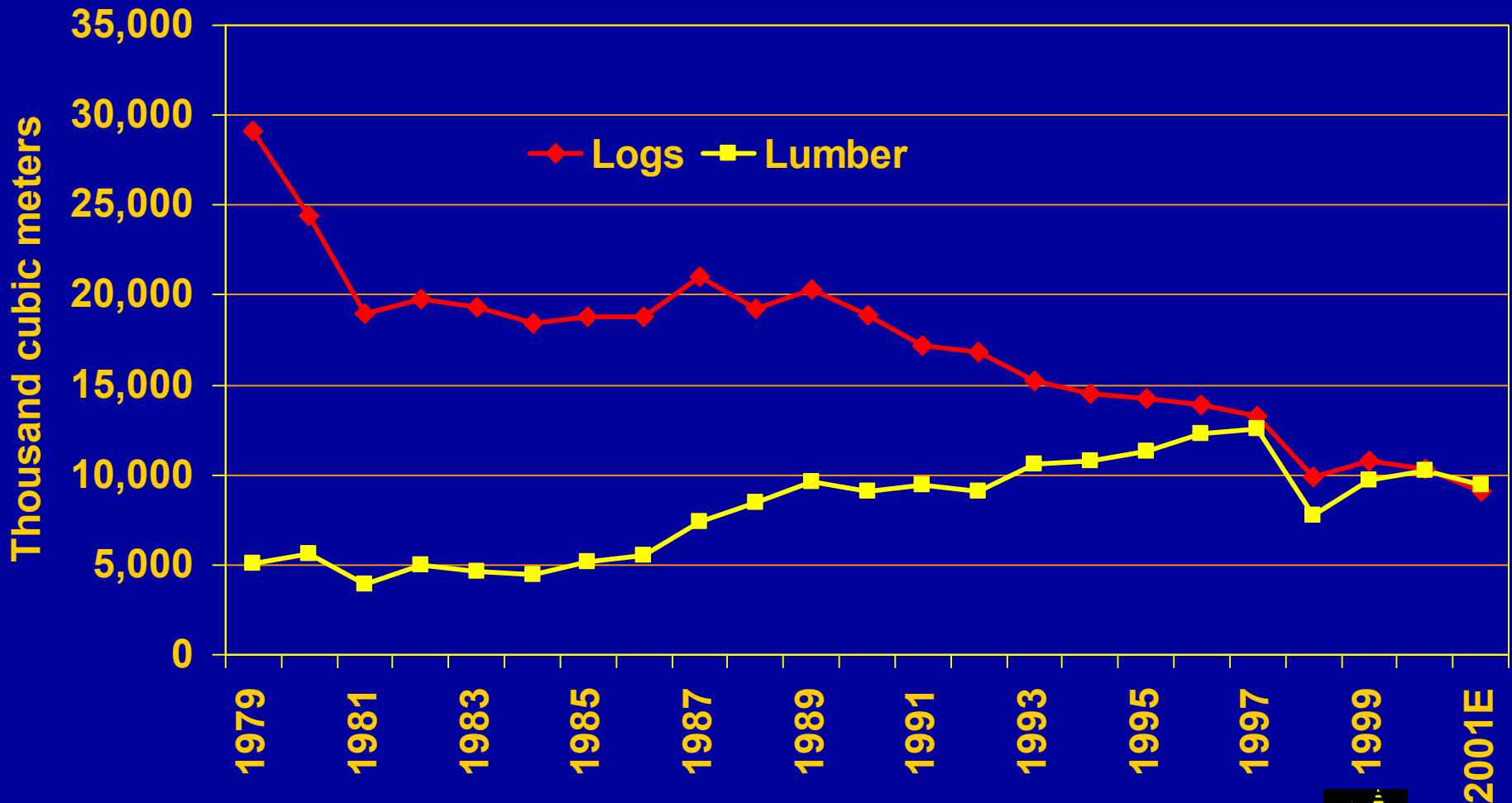
Is trade in forest products moving away from raw materials (logs and woodchips) and towards greater volumes of “value-added” products?



Japanese imports of logs have been declining, while imports of lumber have increased

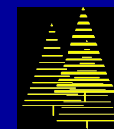
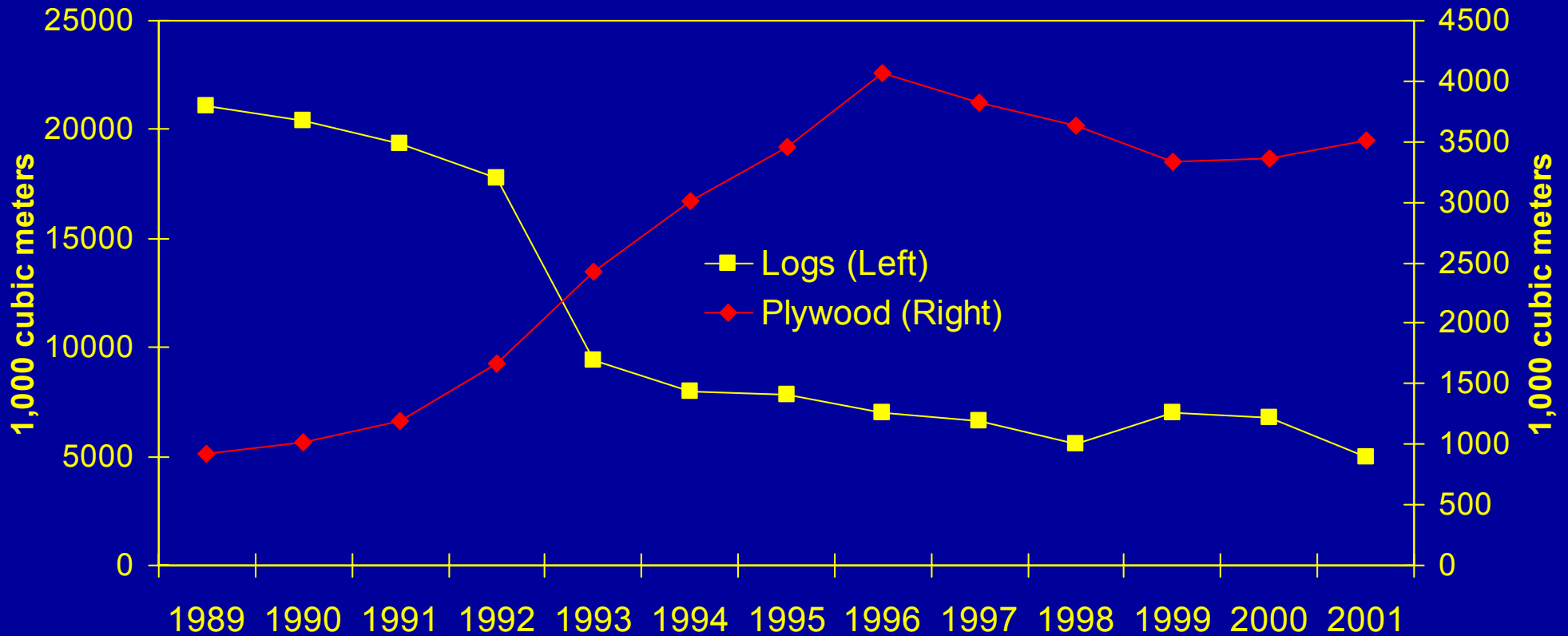


On a lumber equivalent basis, Japan now imports more lumber than logs



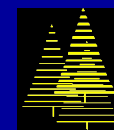
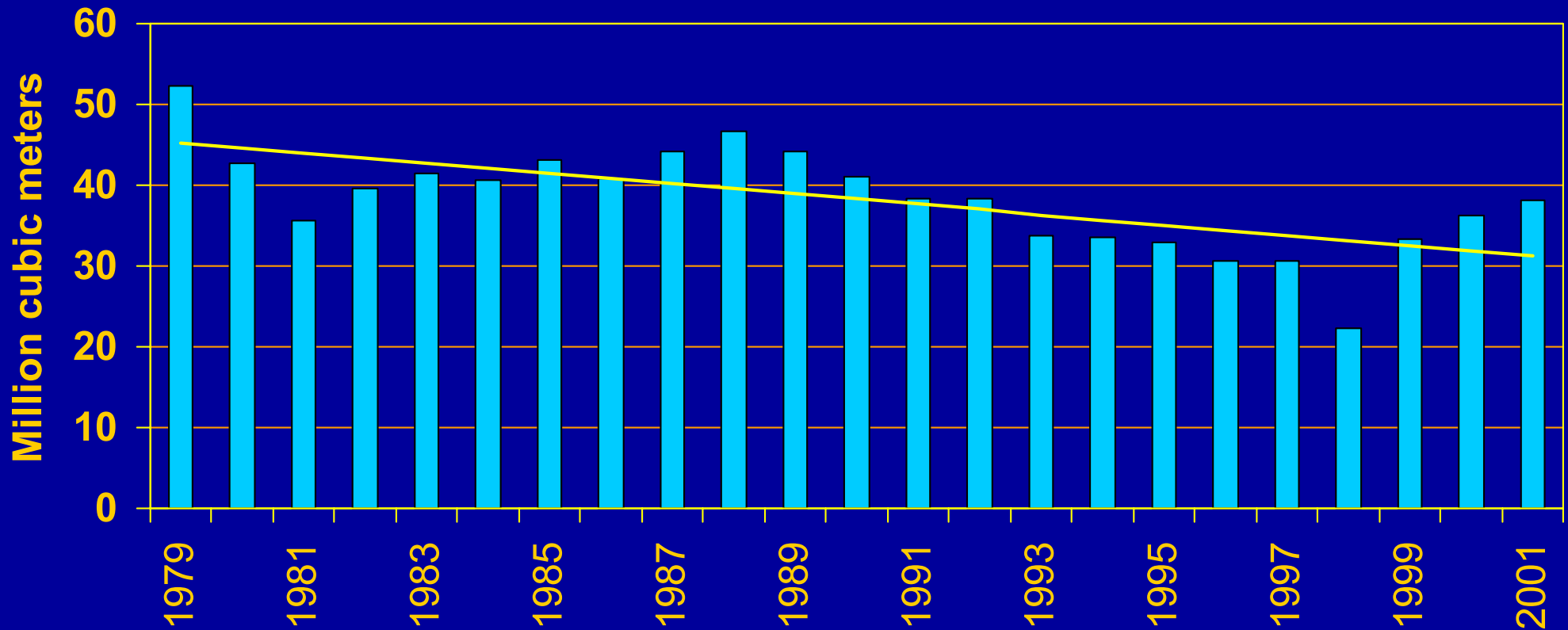
In a number of countries, exports of logs have declined in favor of processed product exports

Malaysia: Log and Plywood Export Trends



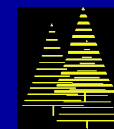
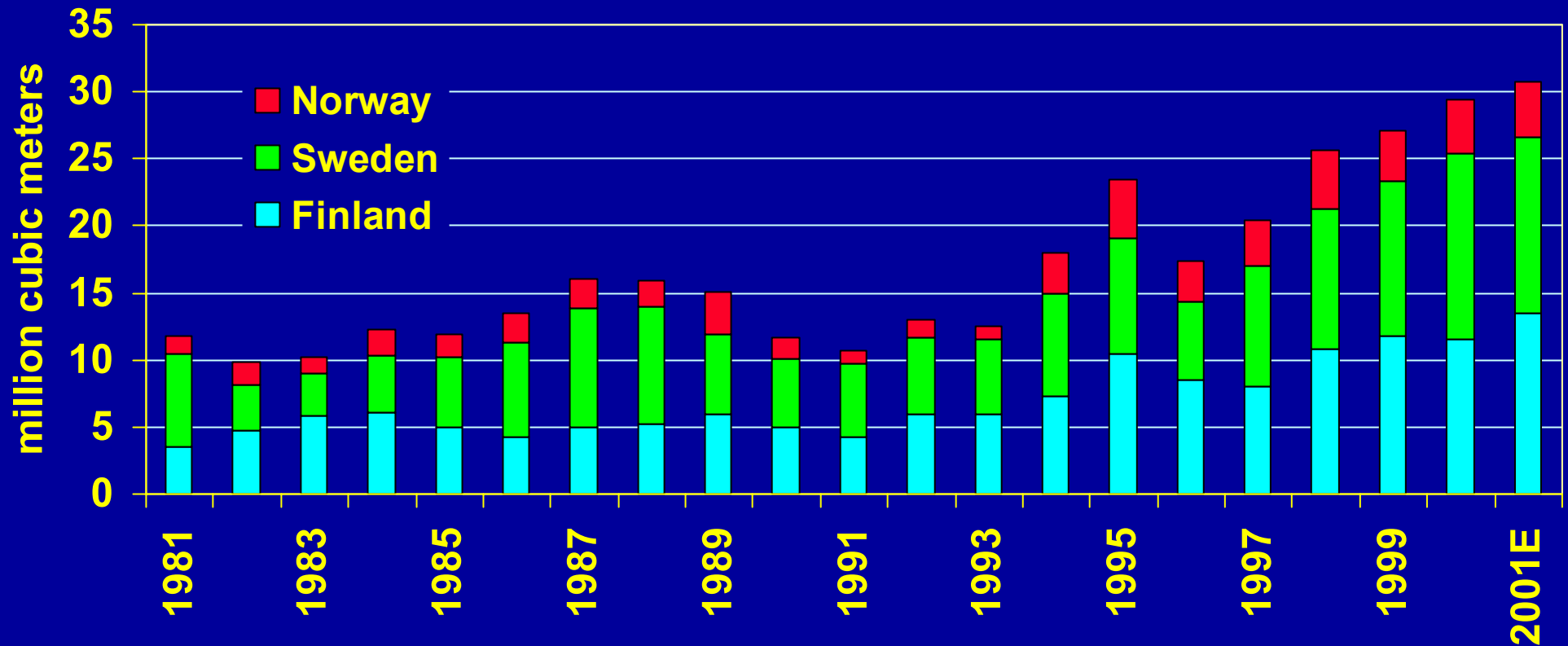
But while the log trade has fallen quickly in some countries, the total trade is only slowly declining

Total Log Imports in Japan, China, and Korea



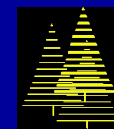
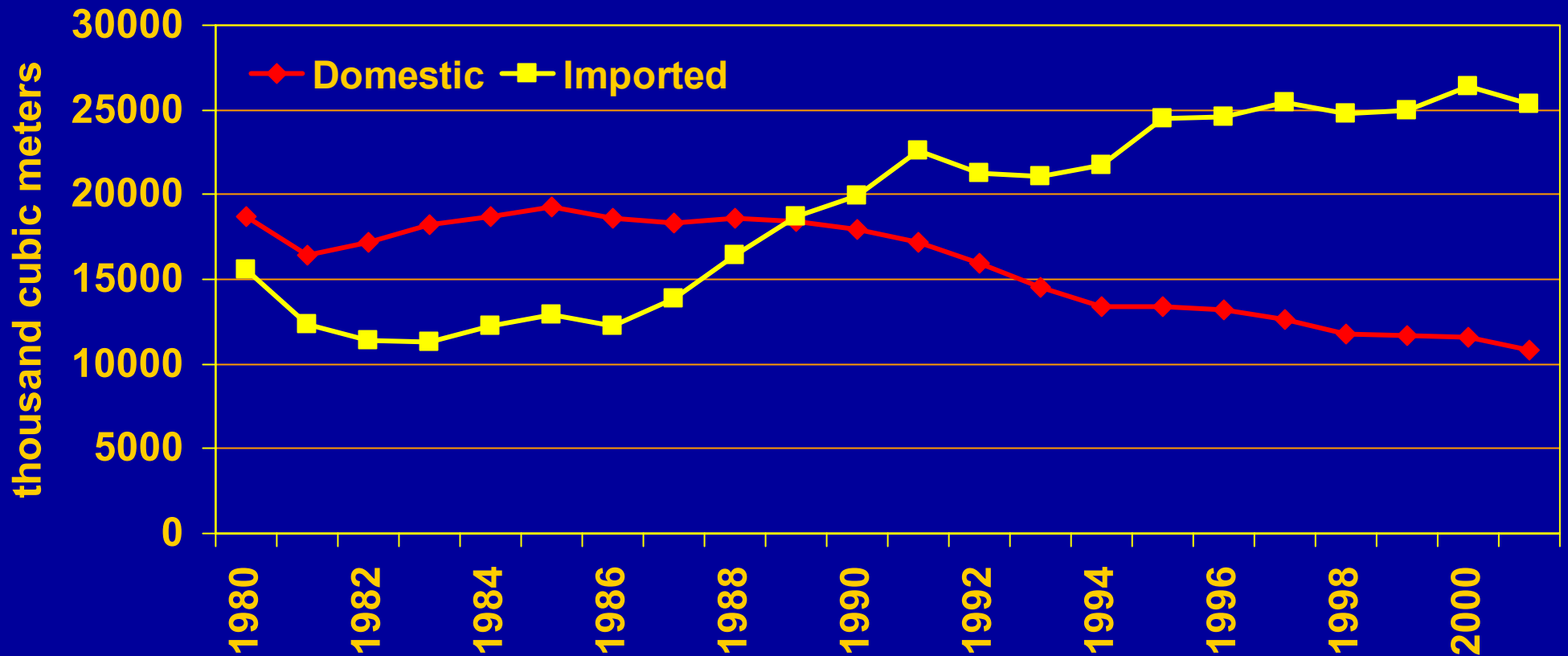
And the trade in raw material imports in Northern Europe has expanded rapidly in the 1990s

Scandinavian Roundwood Imports, 1981 - 2001

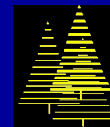


Trade in woodchips has also expanded: Japanese imports in 2000 were an all-time record volume

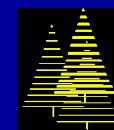
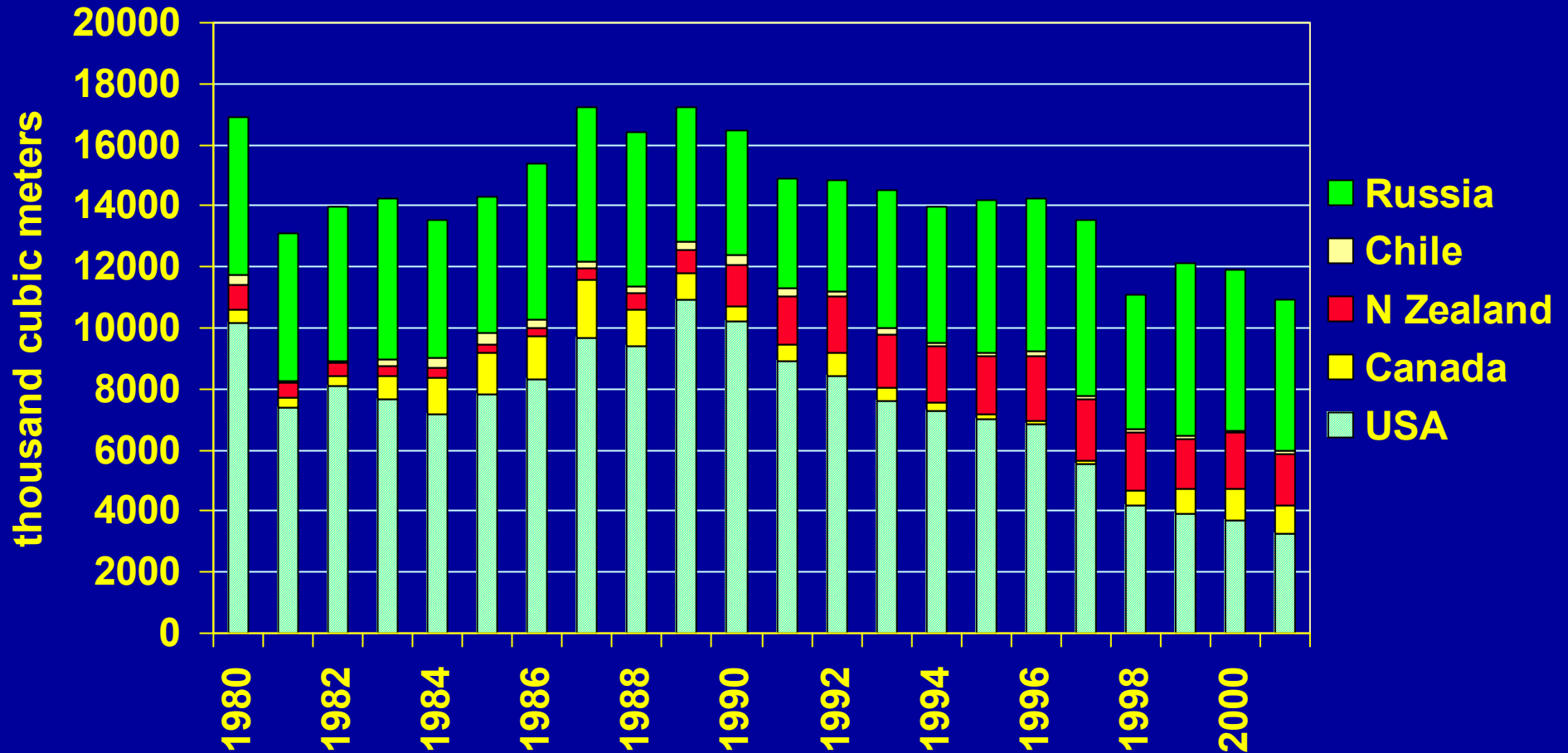
Japan: Woodchip Consumption by Source



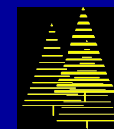
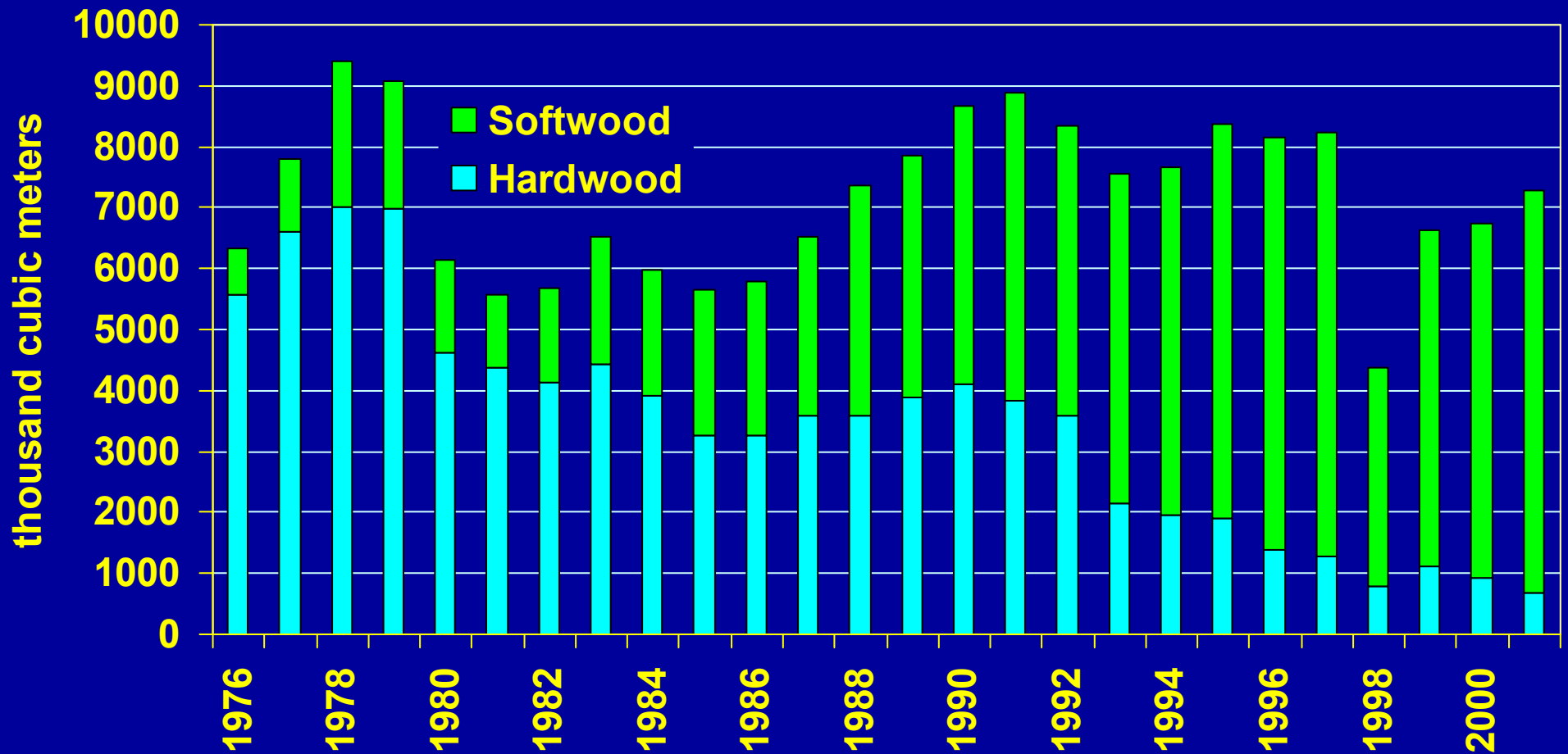
The Pacific Rim Log Market--- **Changes in Sources and Markets**



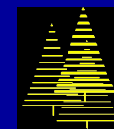
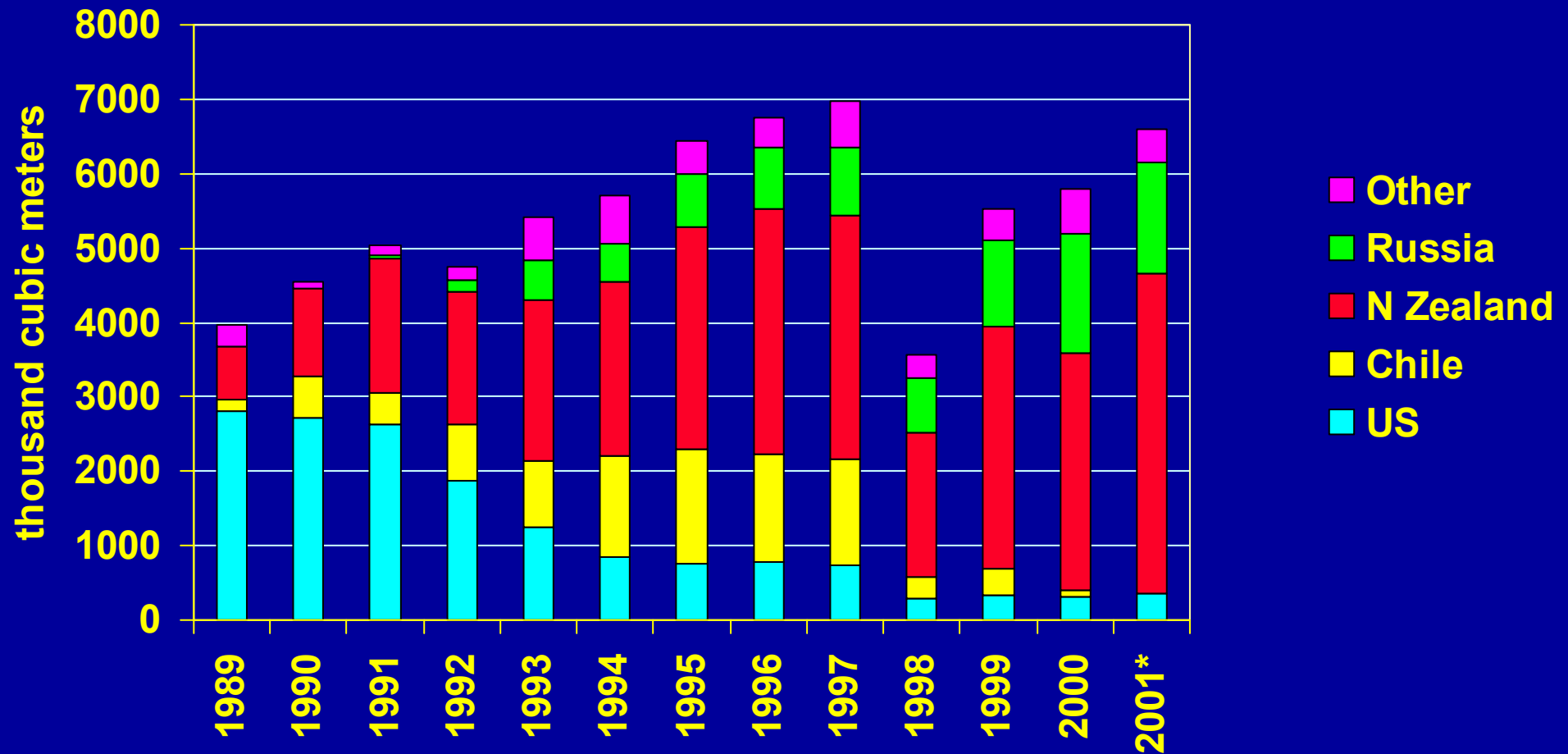
Russia is now the leading source of softwood logs for Japan, but the total volume has fallen



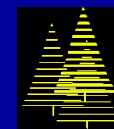
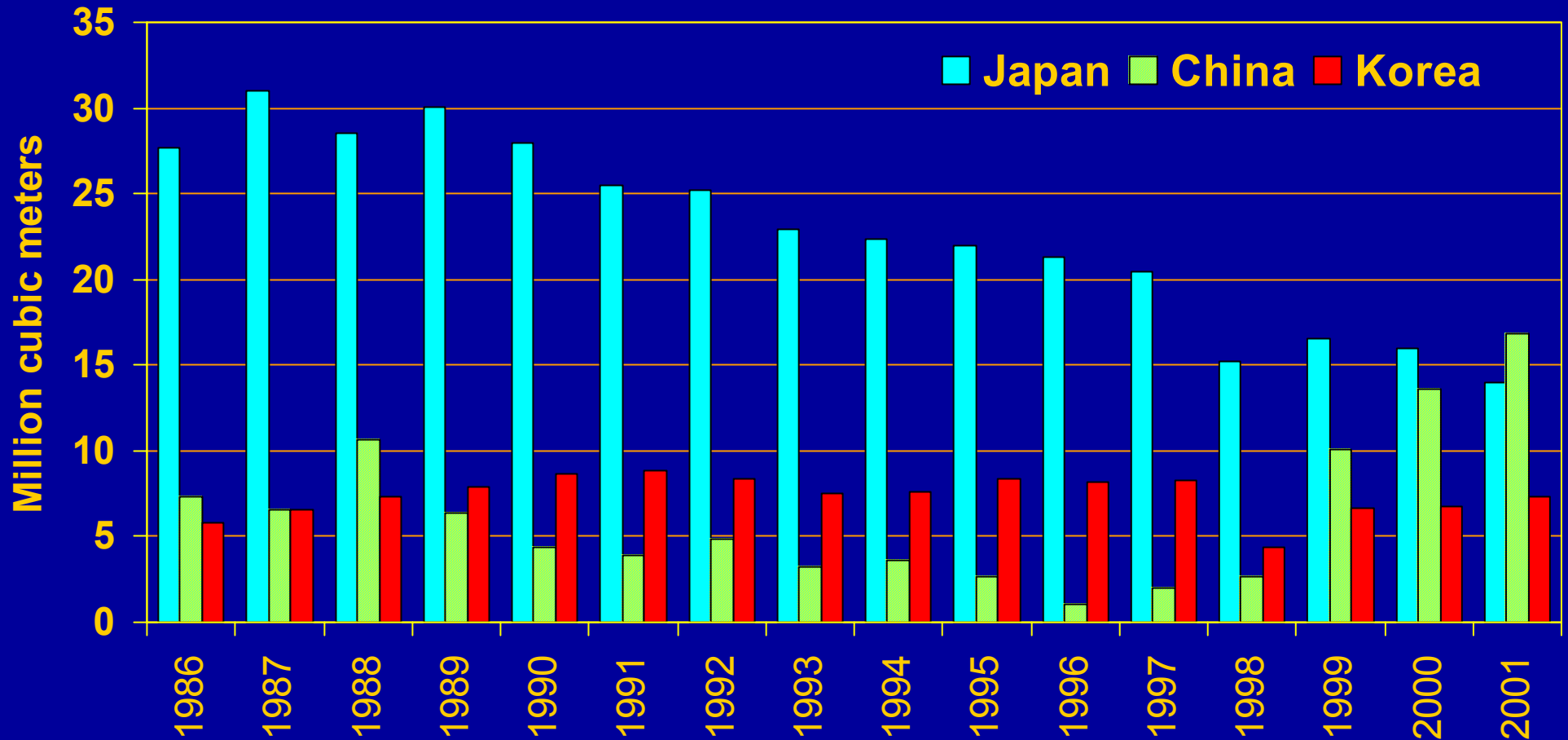
Korean log imports have been decreasing, and have shifted to almost all softwood



South Korea's softwood log imports are dominated by New Zealand and Russia

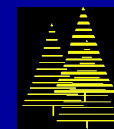
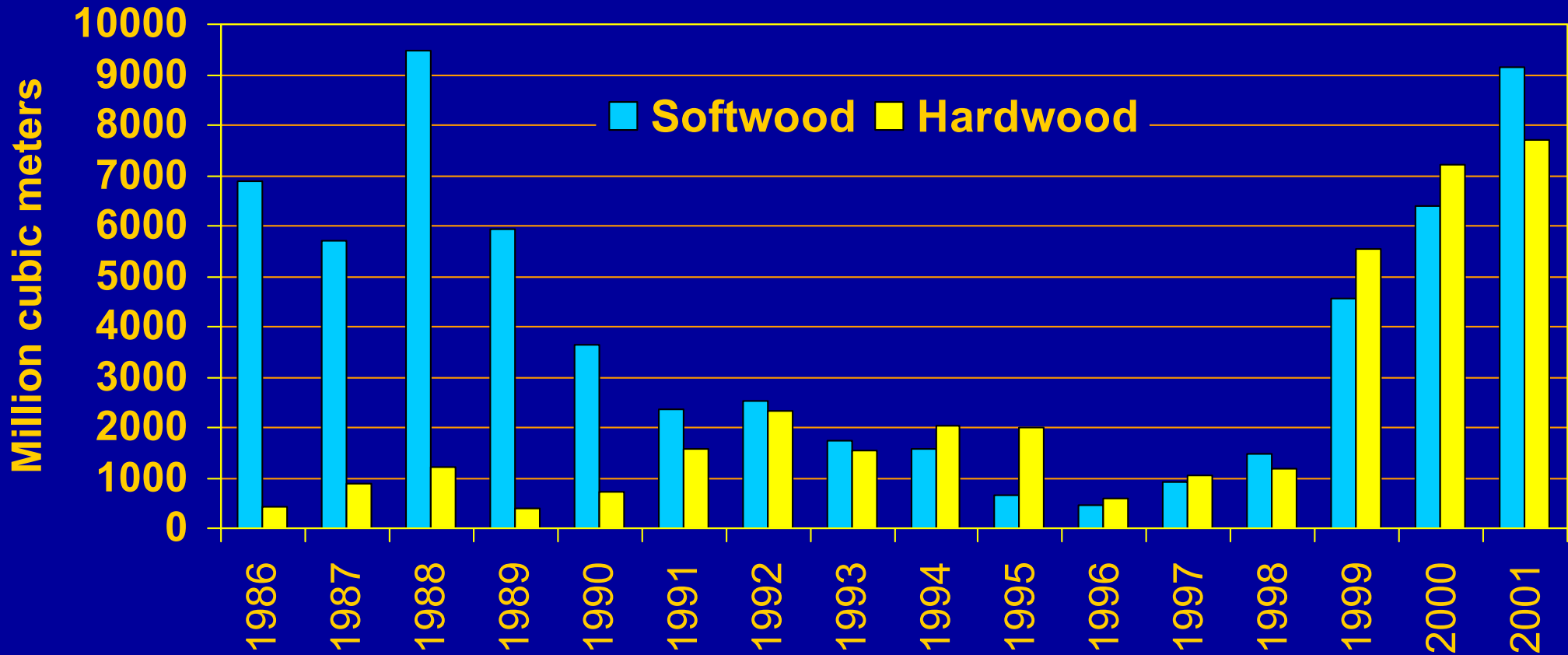


China is now the largest log import market in Asia



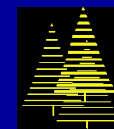
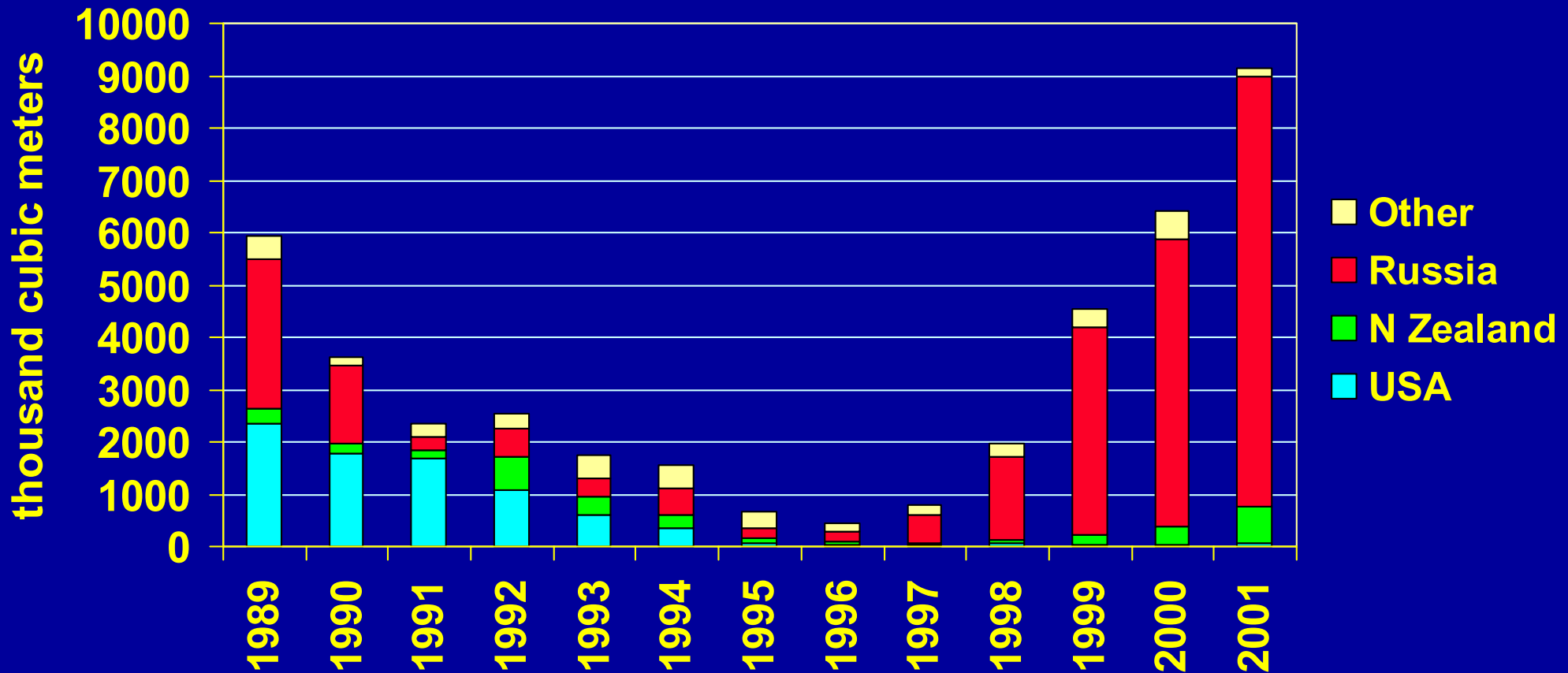
China's log imports have increased rapidly, and are now balanced between softwood and hardwood

China Log Imports by Species Type

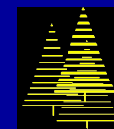
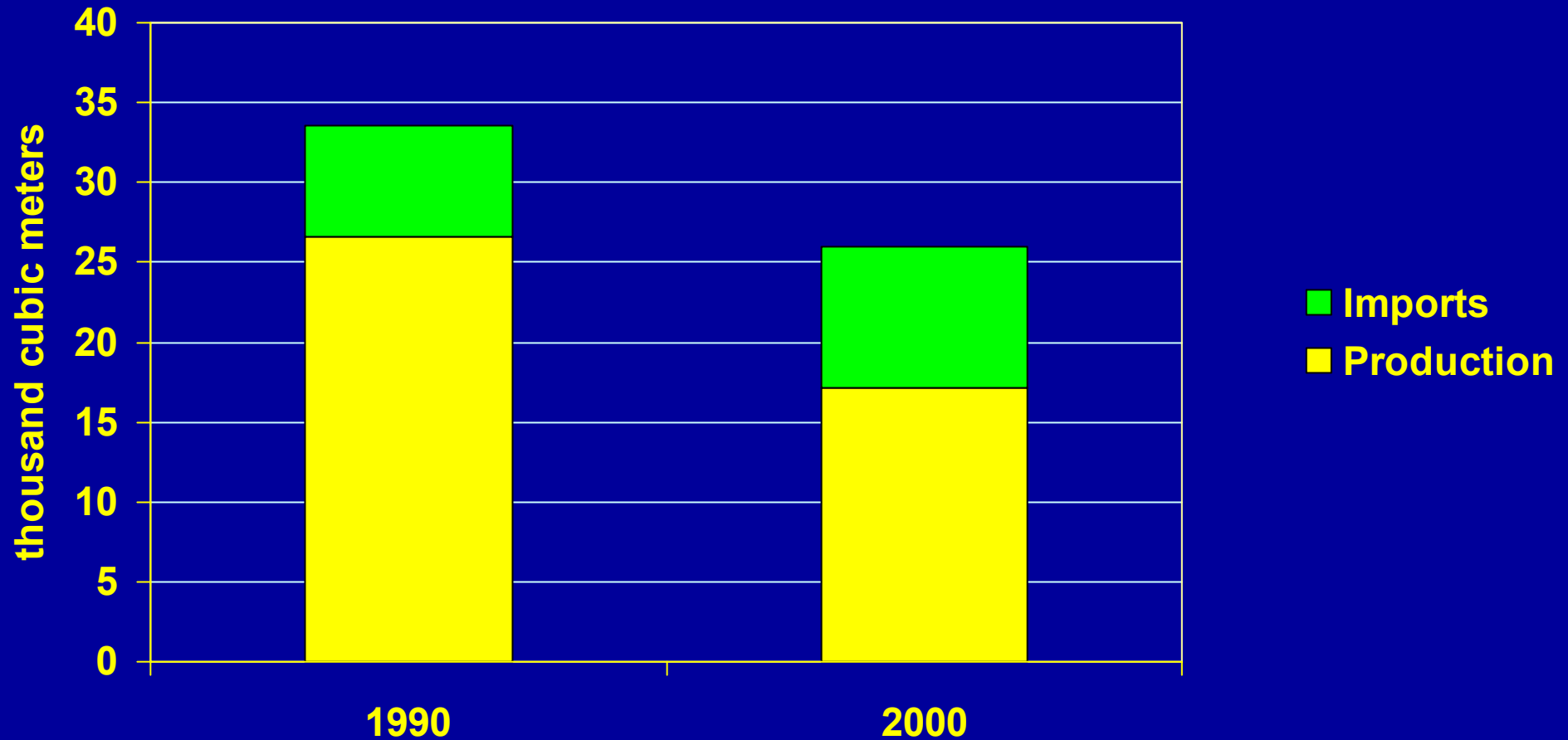


Russia dominates China's softwood log market, and the volume has increased rapidly since 1996

China: Softwood Log Imports by Source

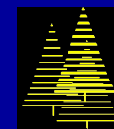
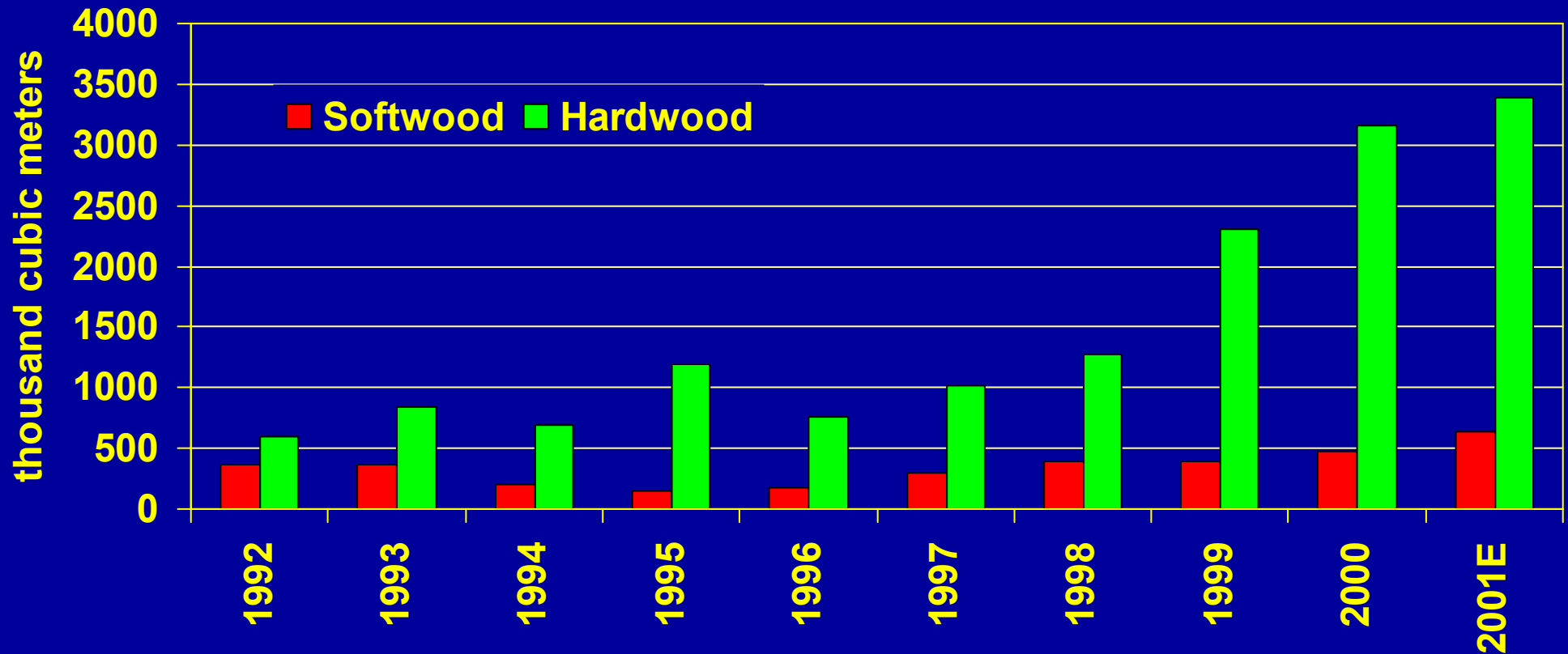


Japanese consumption of softwood lumber has declined sharply



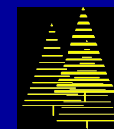
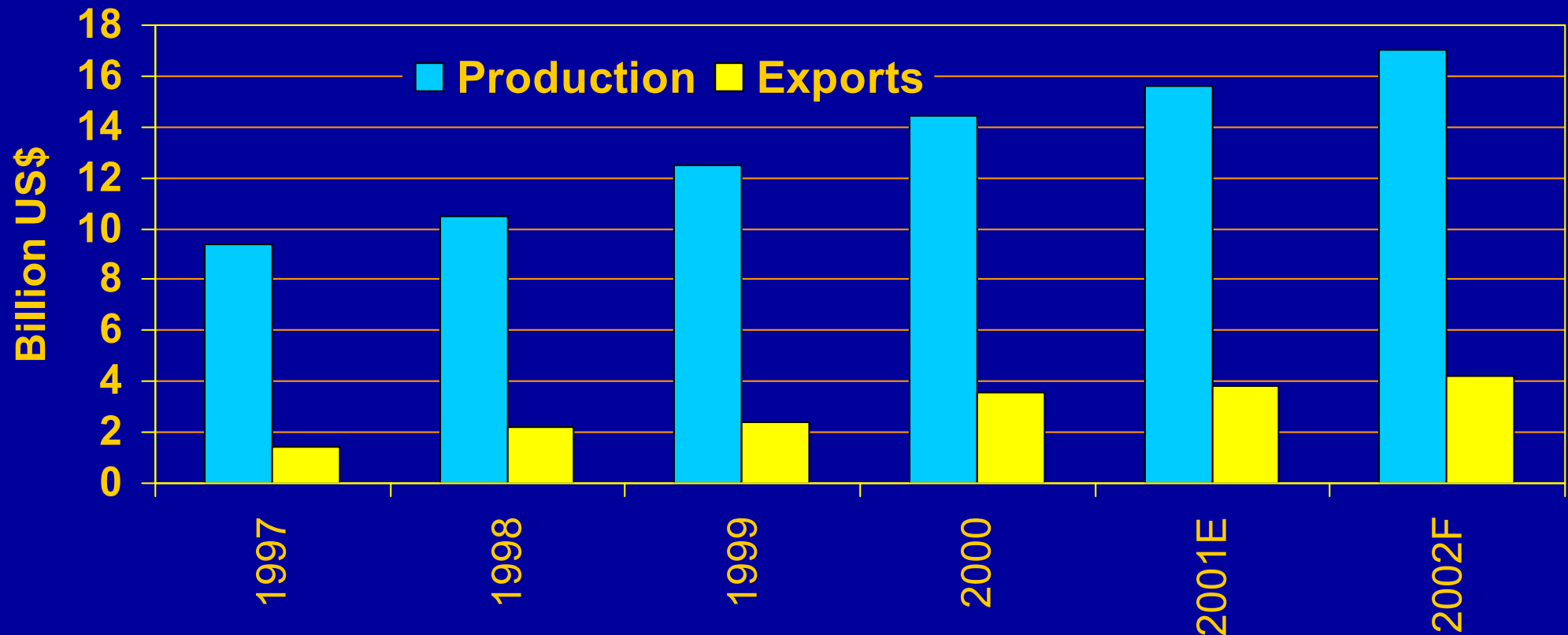
While China's hardwood lumber imports have increased quickly, softwood lumber imports have increased more slowly

China: Lumber Imports



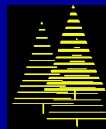
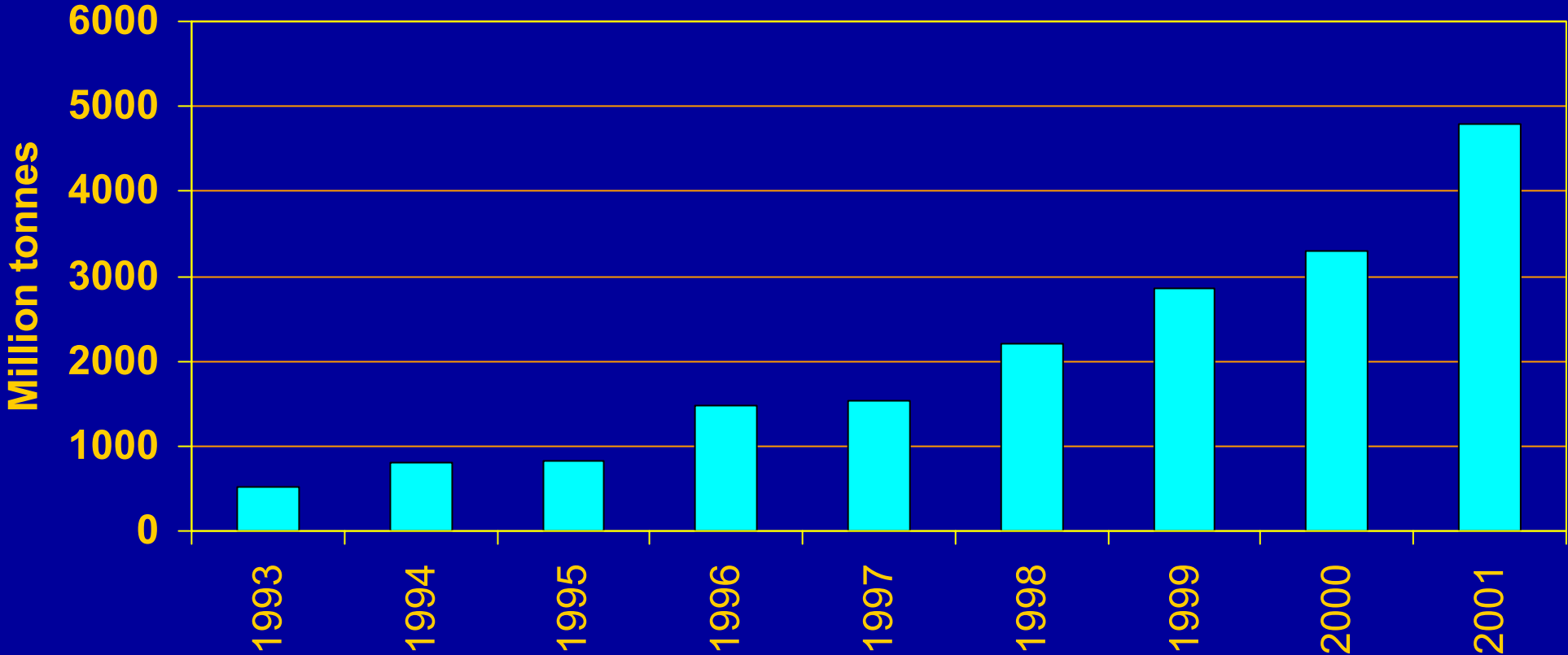
China is also one of the world's largest exporters of wooden furniture, a driving force behind Chinese wood imports

China: Production and Exports of Furniture



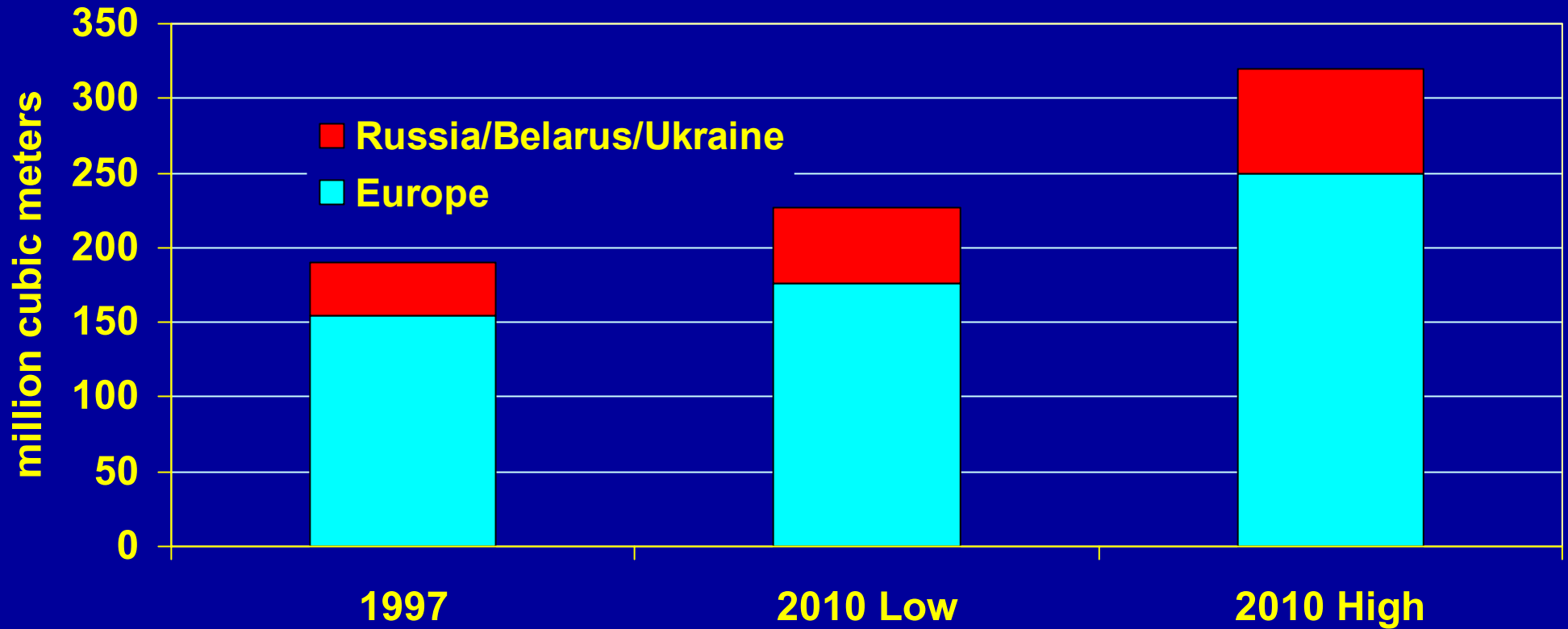
China has quickly become the second largest market for pulp imports, which are expected to continue expanding

China: Pulp Imports

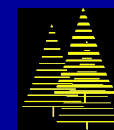


Softwood timber harvest in Europe is expected to increase through 2010

Annual Softwood Timber Harvest

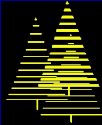
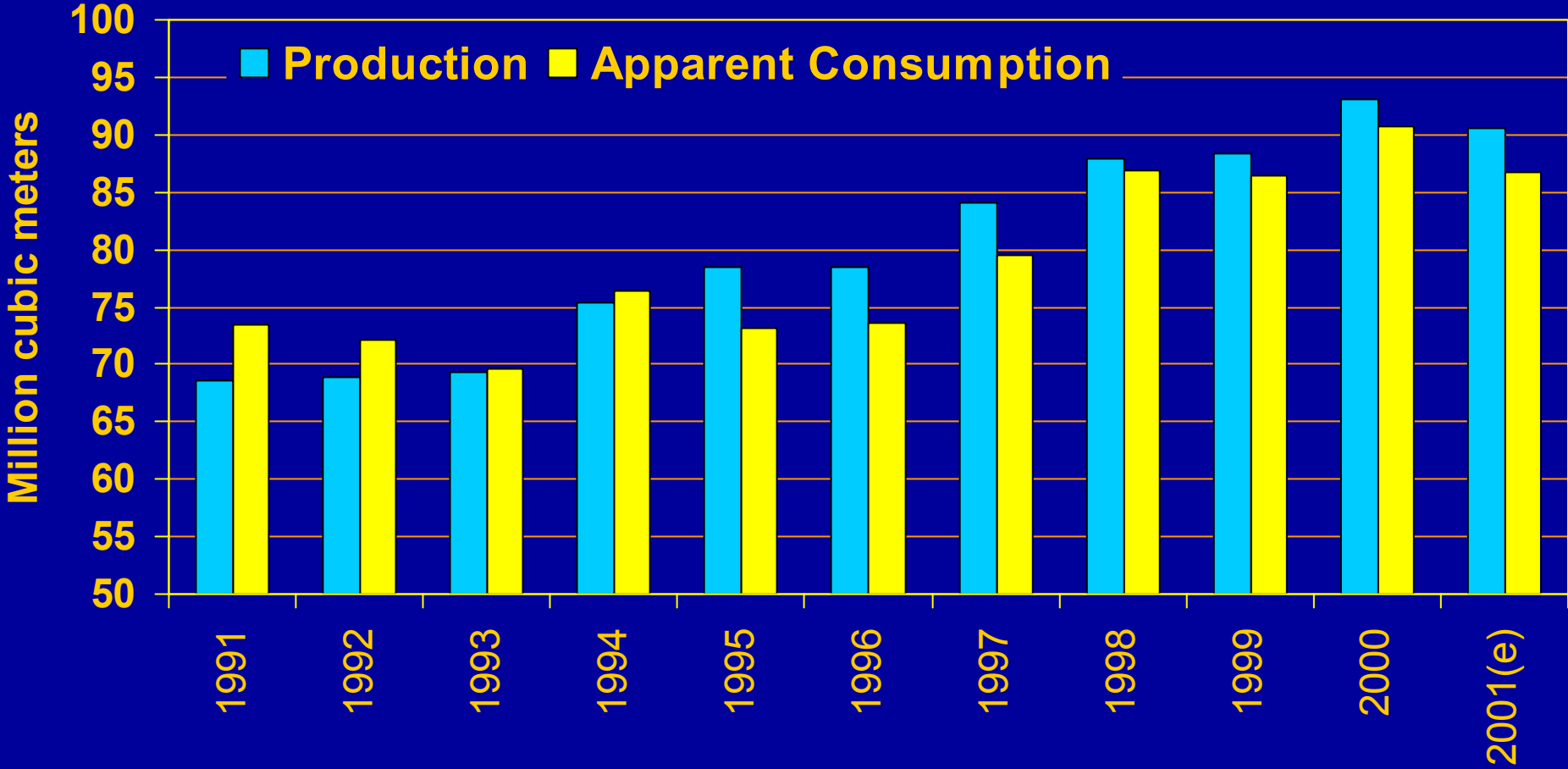


Source: Nilsson, 2000



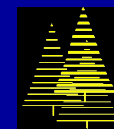
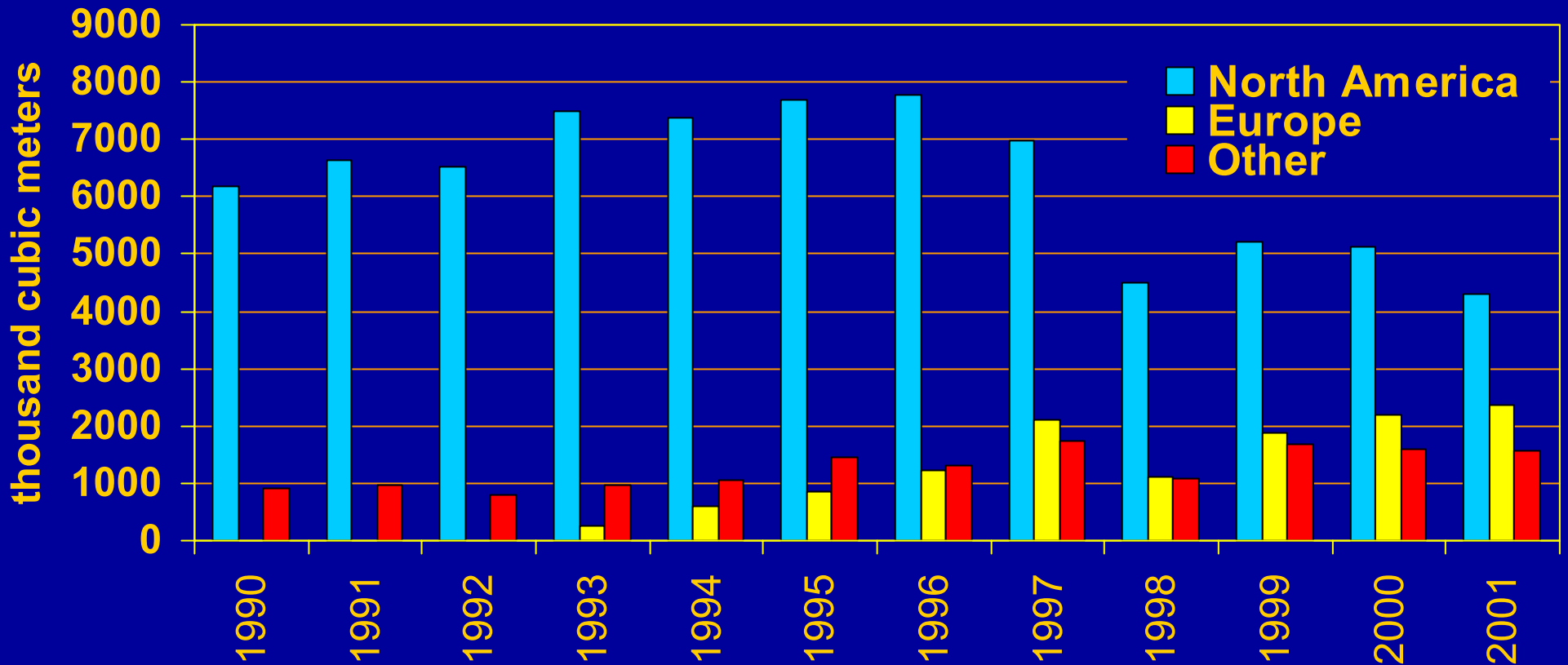
Wood Resources
International Ltd.

European production of softwood lumber has expanded faster than consumption, & the region is a net exporter

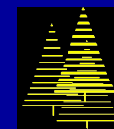
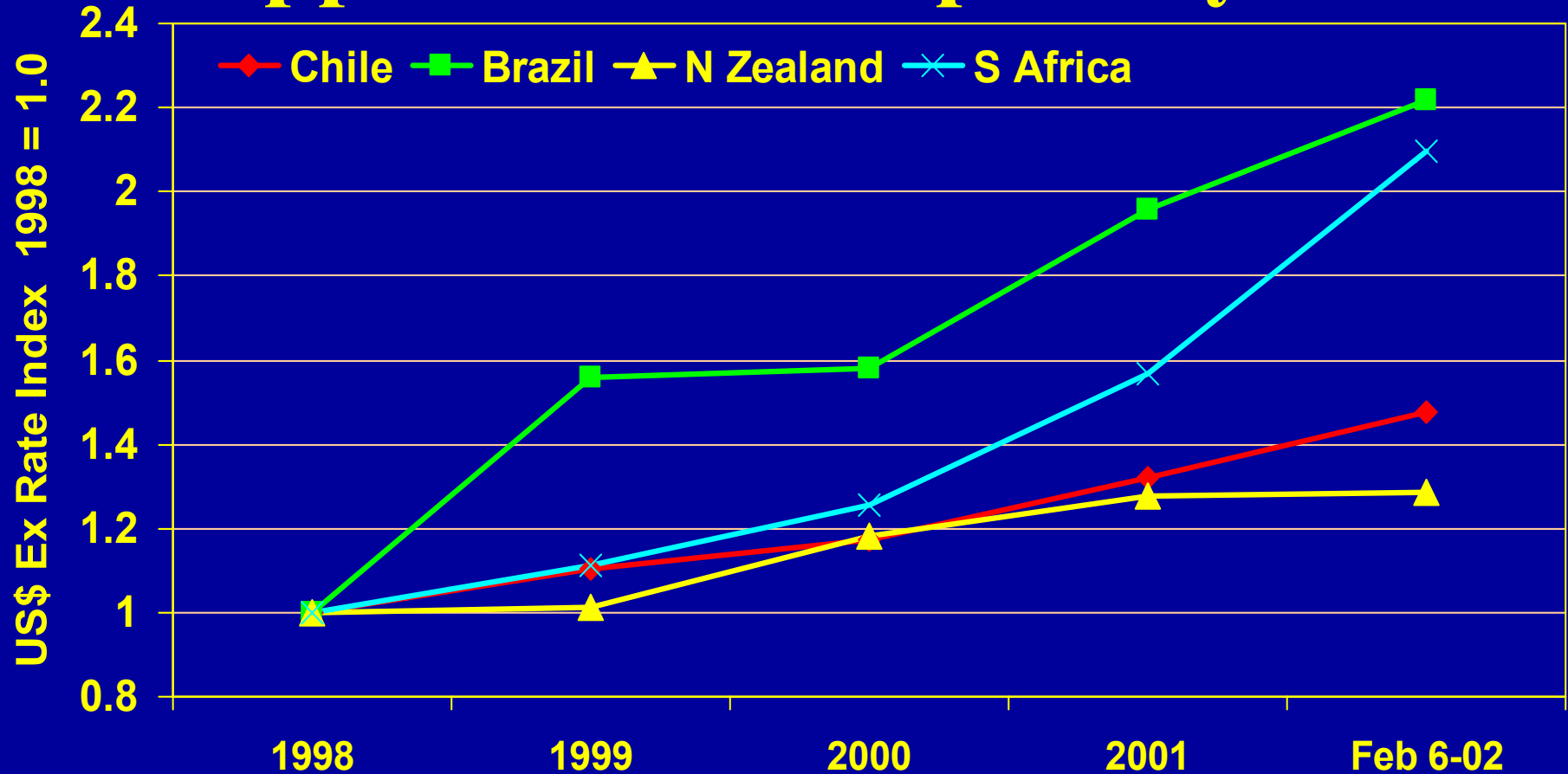


European softwood lumber exporters are gaining market share in Japan also

Japanese Softwood Lumber Imports

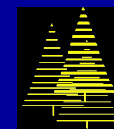


The strong US dollar has helped foreign suppliers over the past 5 years



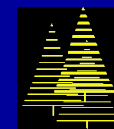
Summary: Changing Global Trade Trends

- **Total trade increasing at 4.5% per year**
- **Some products (paper and wood panels) increasing faster than others**
- **Processed products more important, but raw material flows still a large trade volume**
- **Plantation wood products increasingly gaining market share**
- **Europe becoming an important net solidwood product exporter**
- **USA a large net importer, and major target of Southern Hemisphere and European wood producers --- strong US dollar an important factor**
- **China is the fastest growing wood products market**



Summary: Impacts of changing trade trends on Southern Pine

- US Market
 - Increasing imports of radiata and Brazilian pine imports taking market share in moulding and millwork markets, and in treated boards, decking, and fencing.
 - European lumber imports competing mainly with SPF, but taking a small amount of market share in dimension and untreated boards
 - Lower volume of log, lumber, and plywood exports, due to competition in foreign markets, increases supply of available wood products in the US



Summary: Impacts of changing trade trends on Southern Pine (Continued)

- International Markets
 - SYP losing market share in the Caribbean to Honduran pine lumber and Brazilian pine plywood
 - SYP losing market share in the clear pine market in Europe to radiata pine
 - SYP losing market share in European plywood market to Brazilian pine plywood
 - Southern hardwood chips have lost almost all market share in the Japanese chip market

