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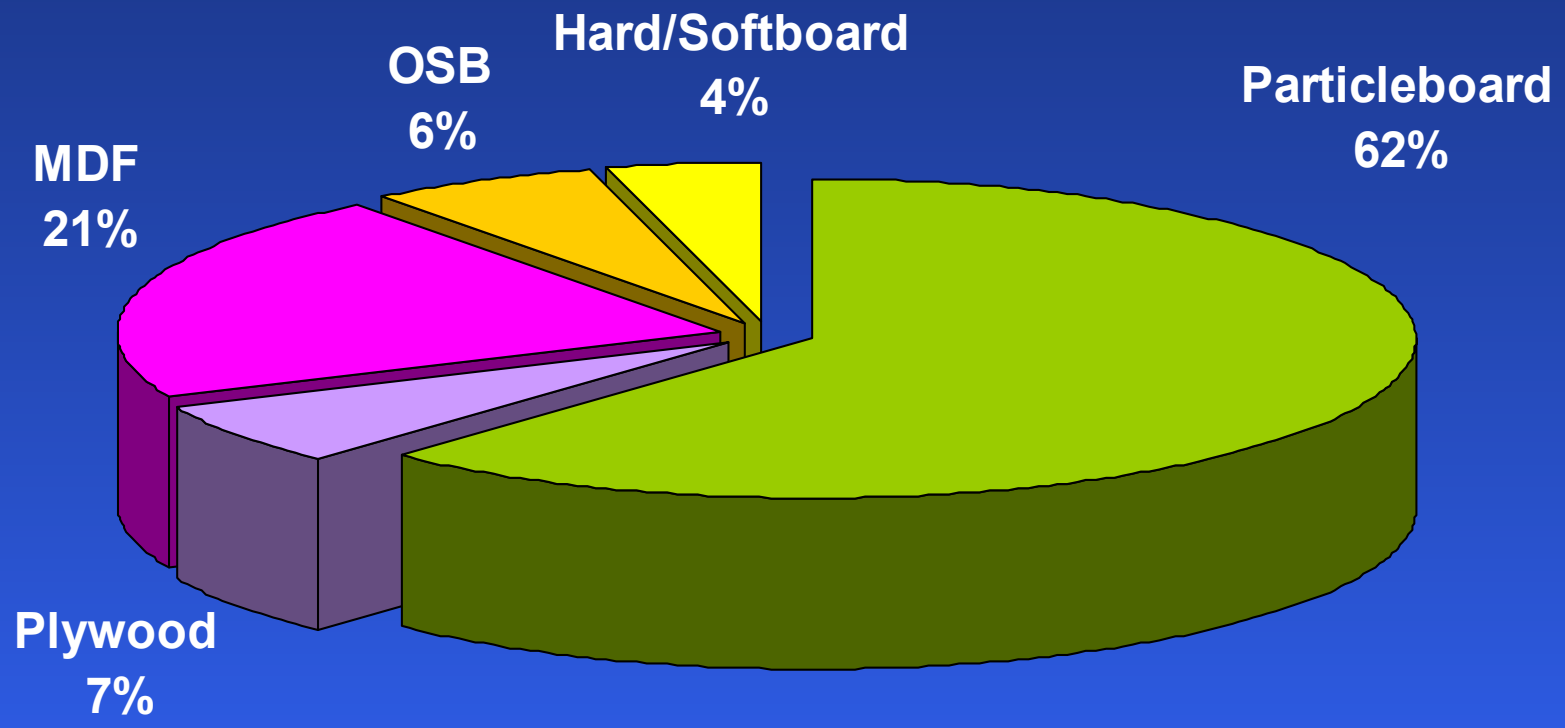
Opportunities and threats of biomass: Experience of the panel Industry

Madrid, Spain, 4 June 2007

Mr Ladislaus Döry
President of EPF
Member of the Board of Constantia – ISO AG

Wood-based Panels in Europe* 2006



Total : 58 million m³

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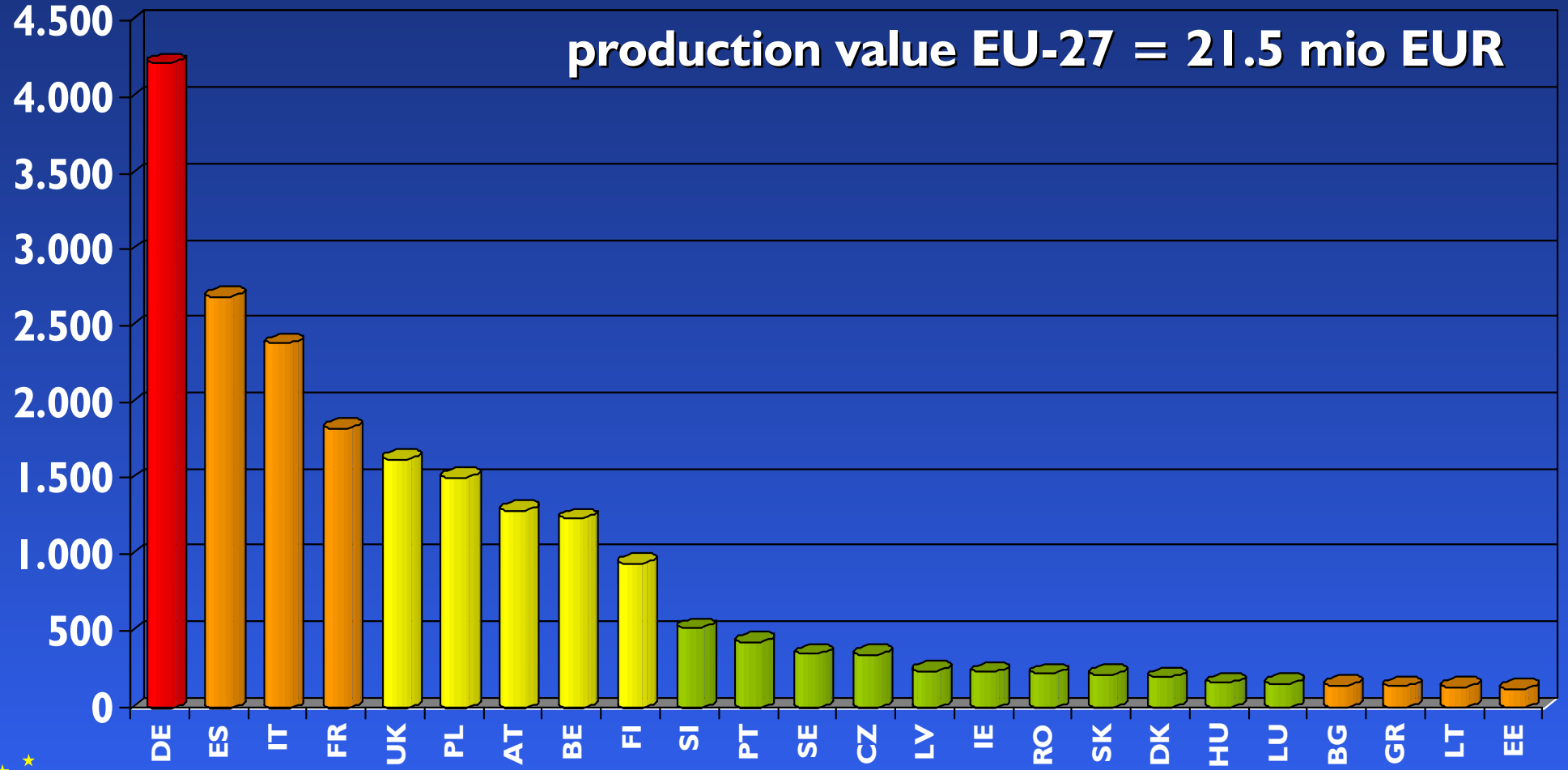
*excluding Russia & Turkey

Wood-based panel industry (production value)



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Source: EPF & Eurostat

European Panel Federation

Members in 25 countries

Particleboard > 35.9 million m³

MDF > 12.4 million m³

OSB > 3.5 million m³

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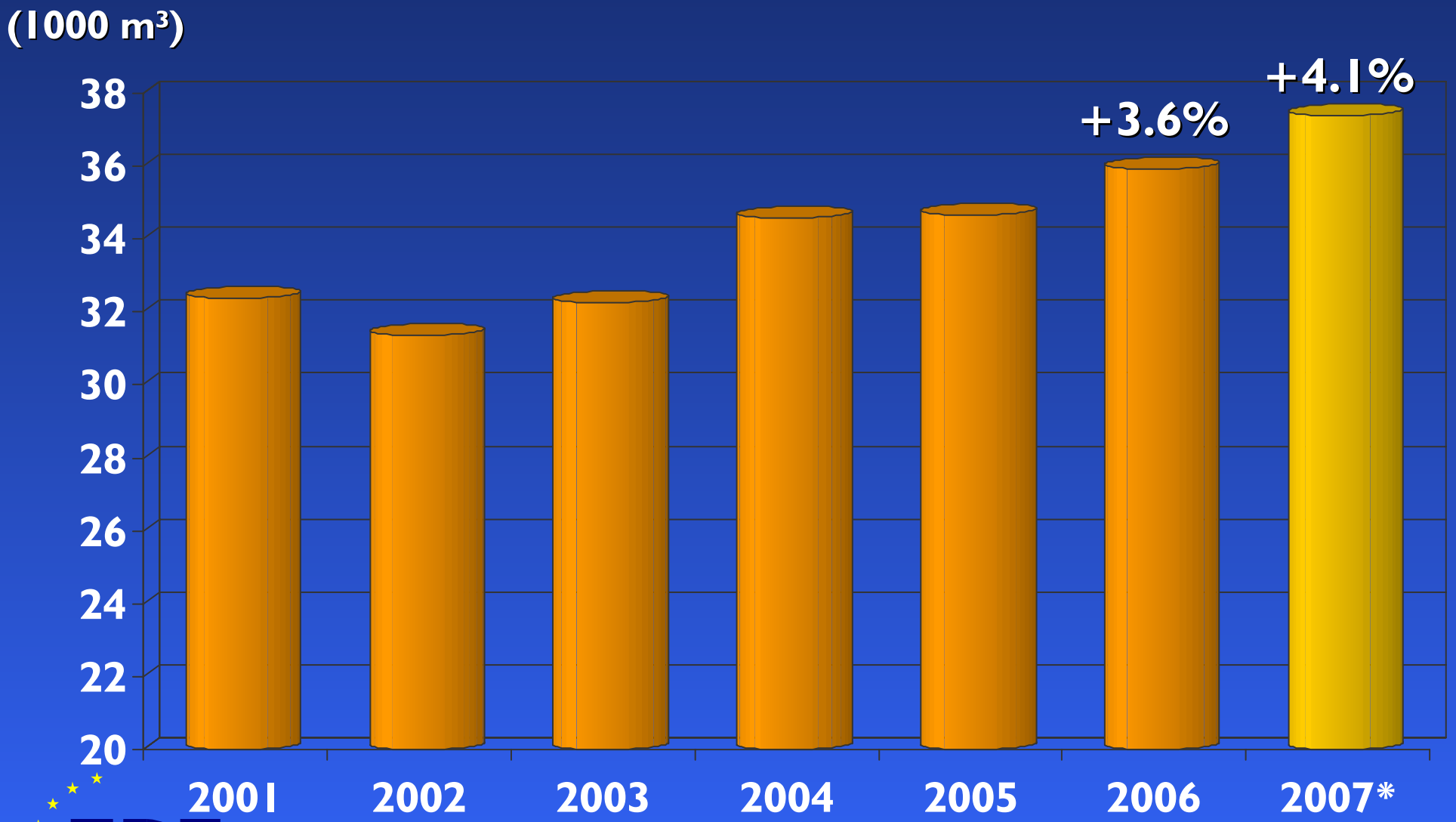
Annual Particleboard Production



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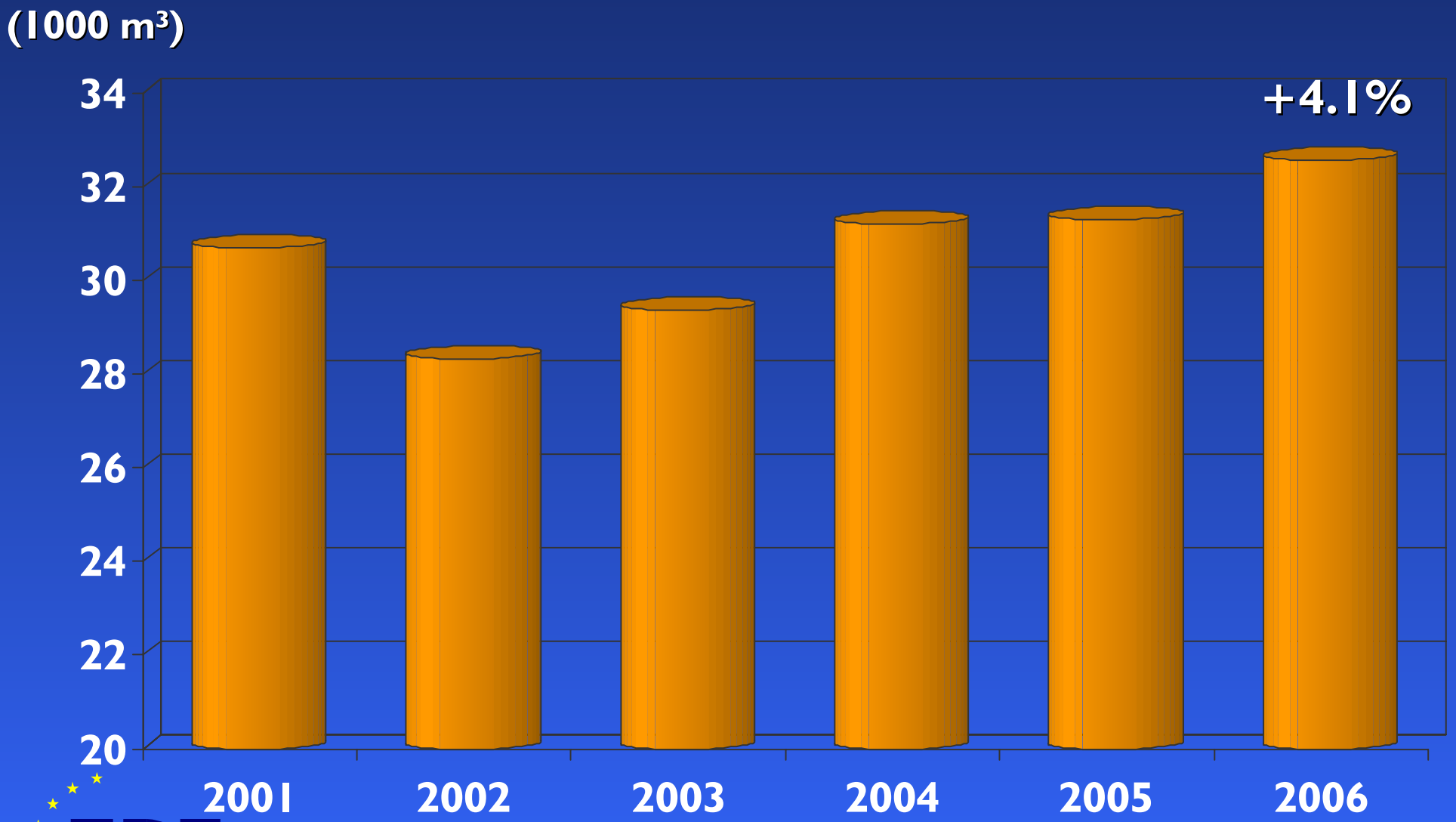
In 2006: 36 million m³

Annual Particleboard Consumption



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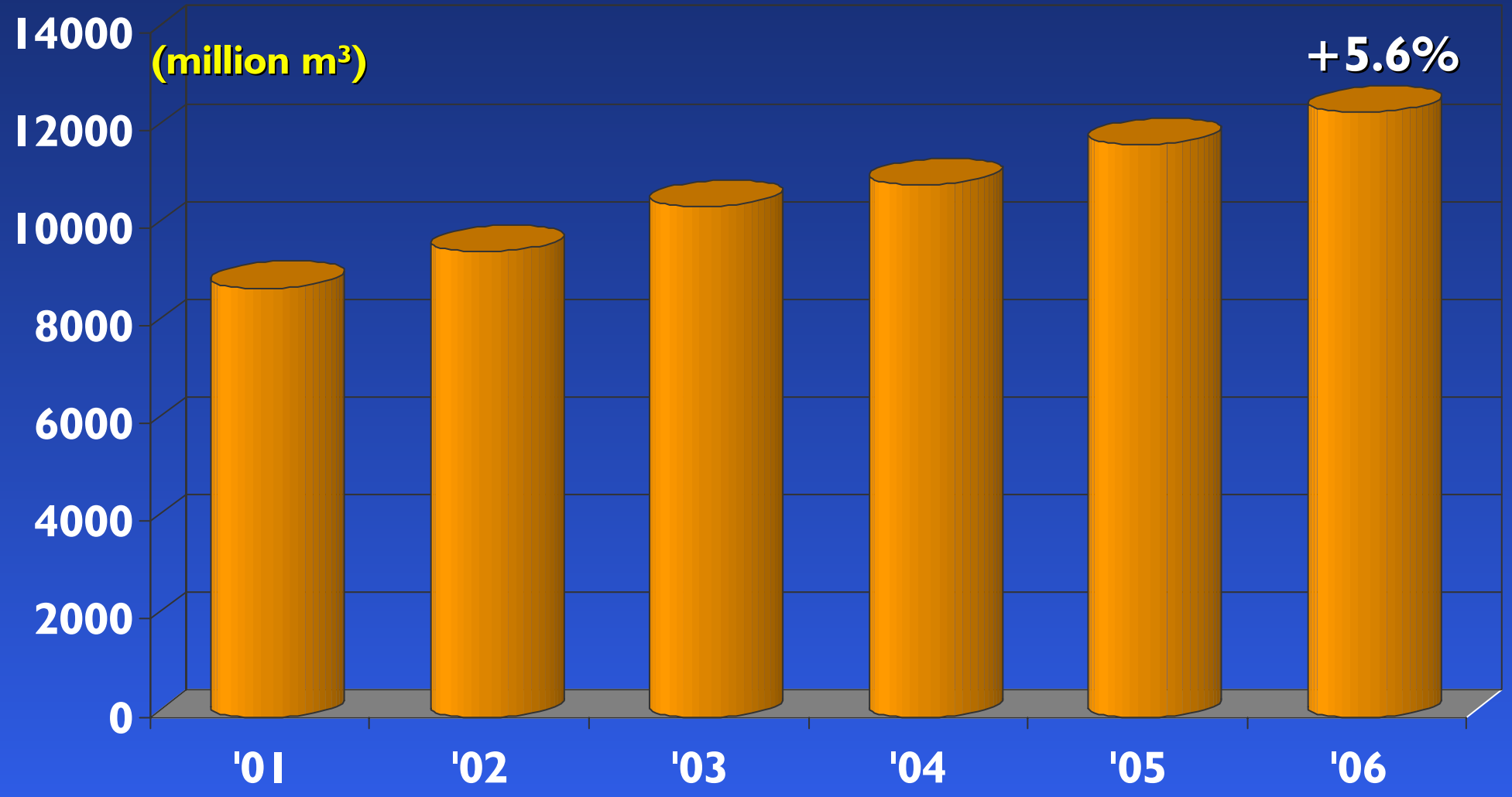
In 2006: 33 million m³

MDF Production in Europe



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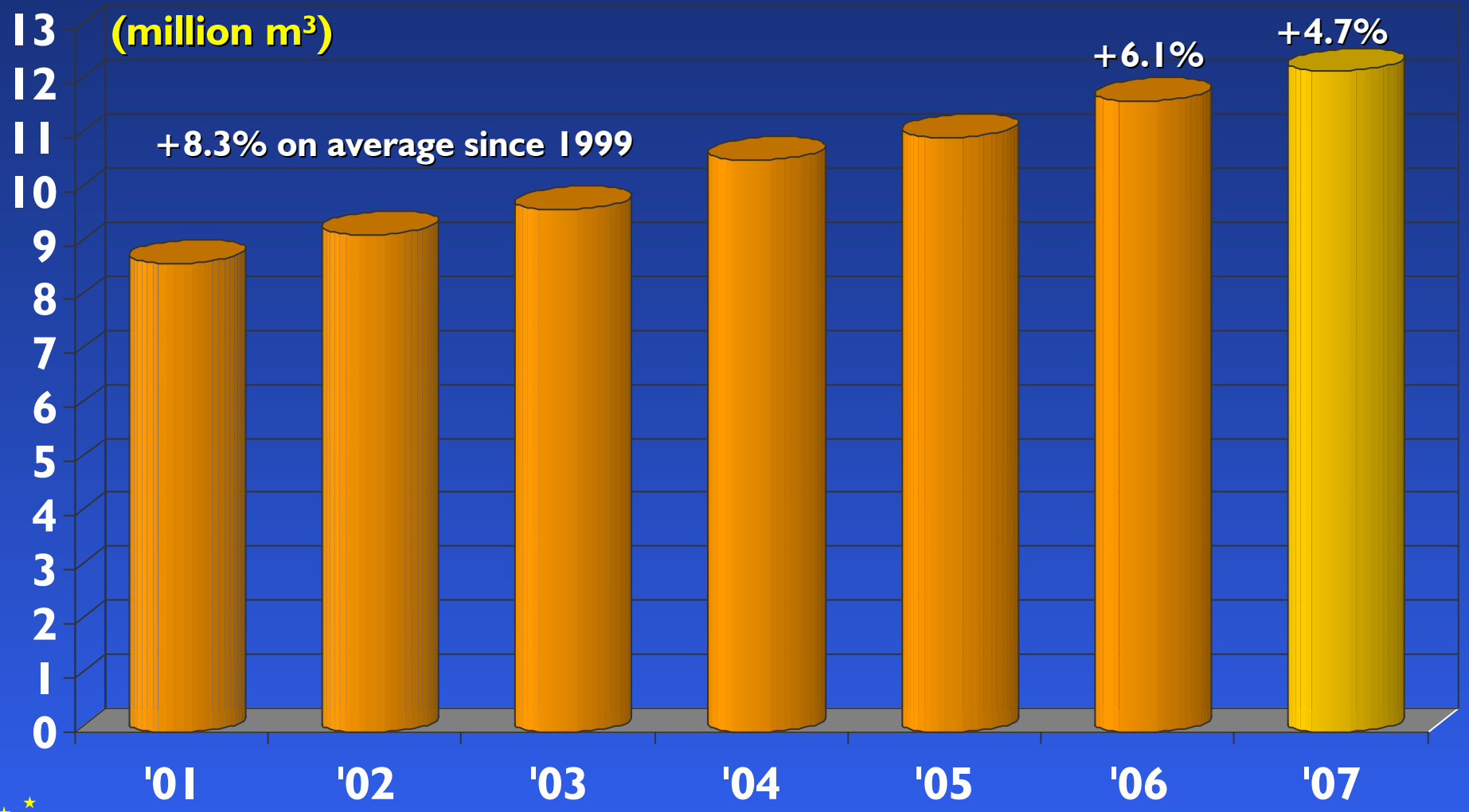
** Production +5.6% to 12.4 million m³*

MDF Consumption in Europe



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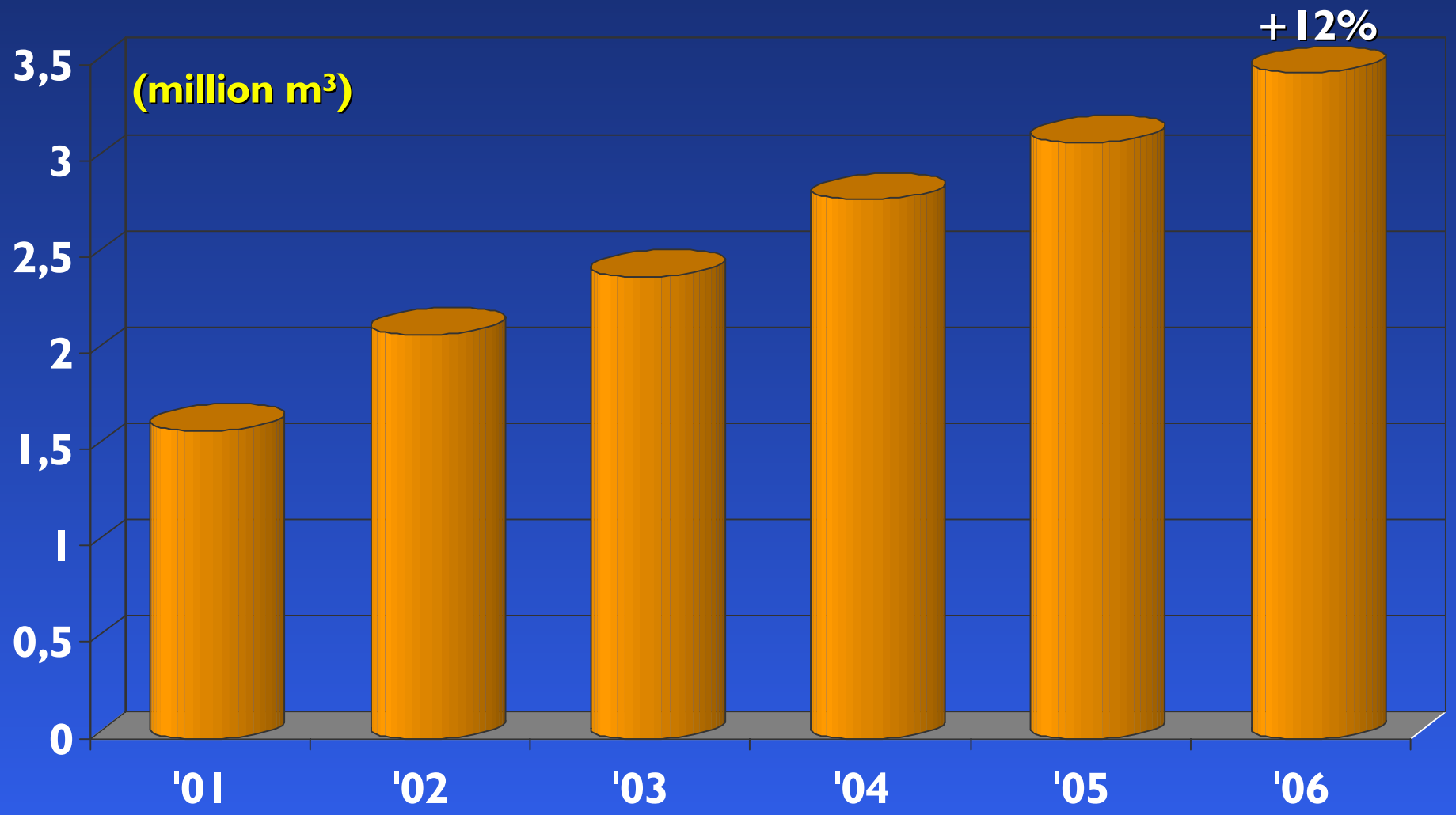
** Consumption +6.1% to 11.7 million m³ in 2006*

OSB Production in Europe



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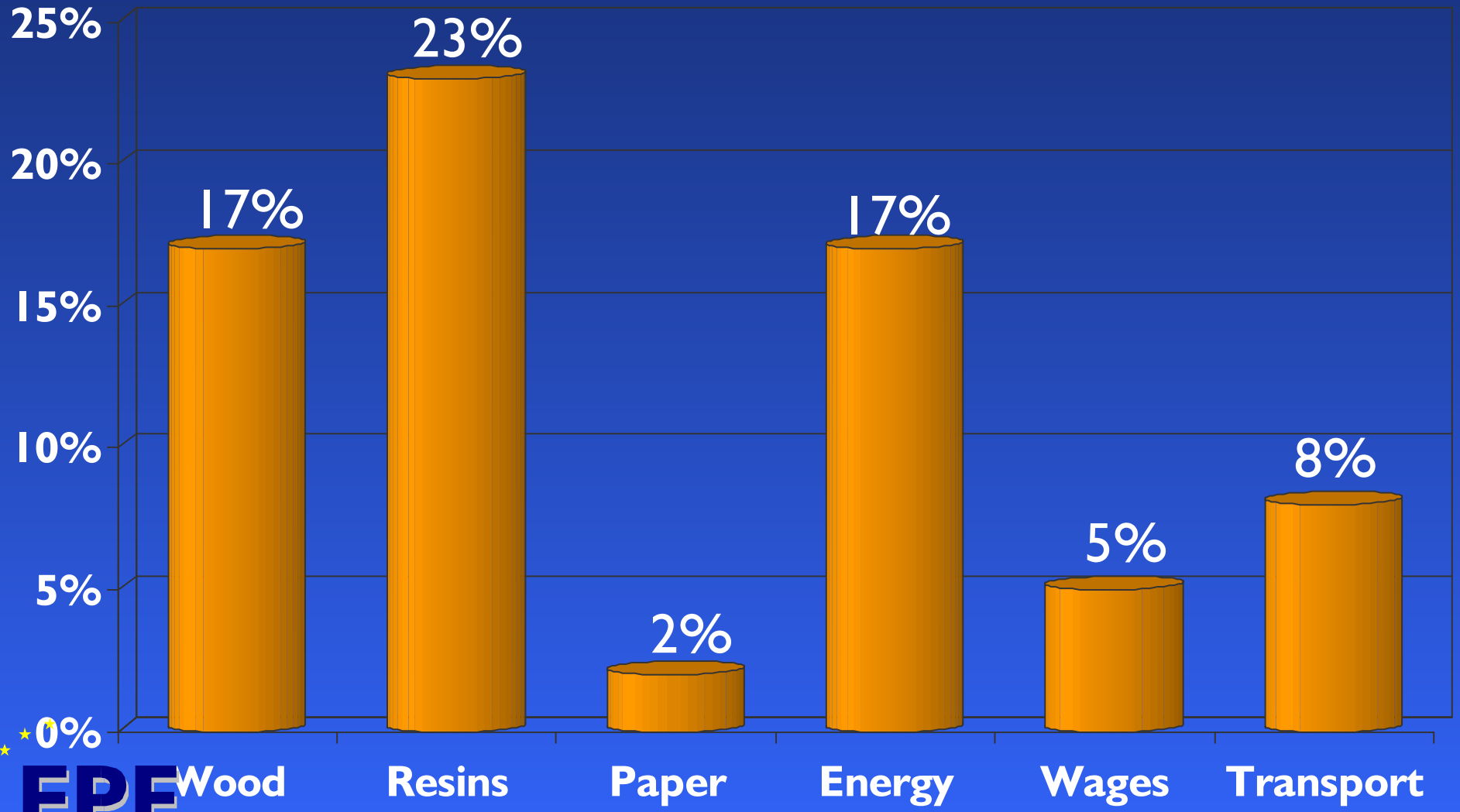
* *Production +12% to 3.5 million m³*

Cost evolution 2006



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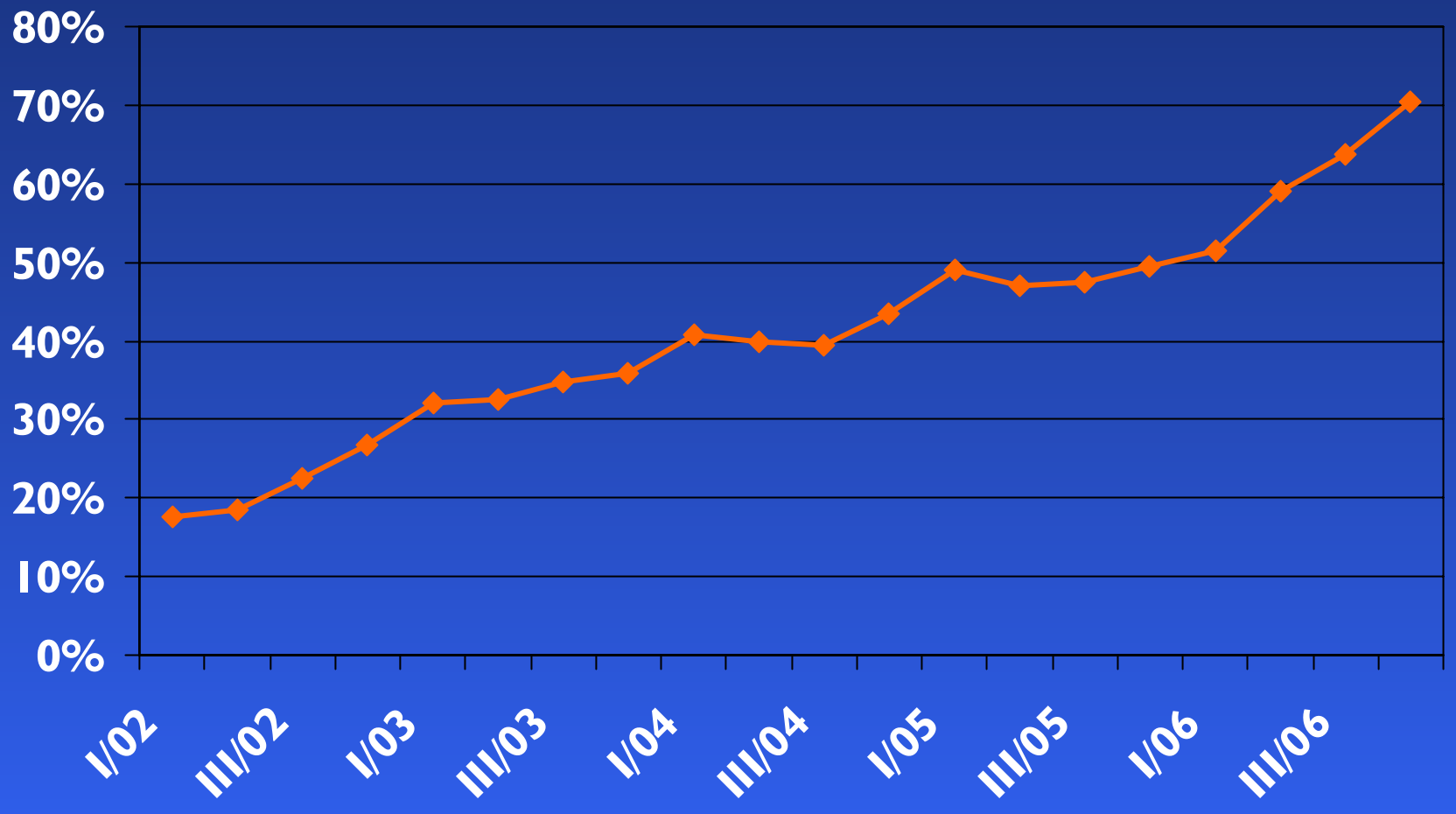
Evolution of Wood Costs in EU

January 2002 – December 2006



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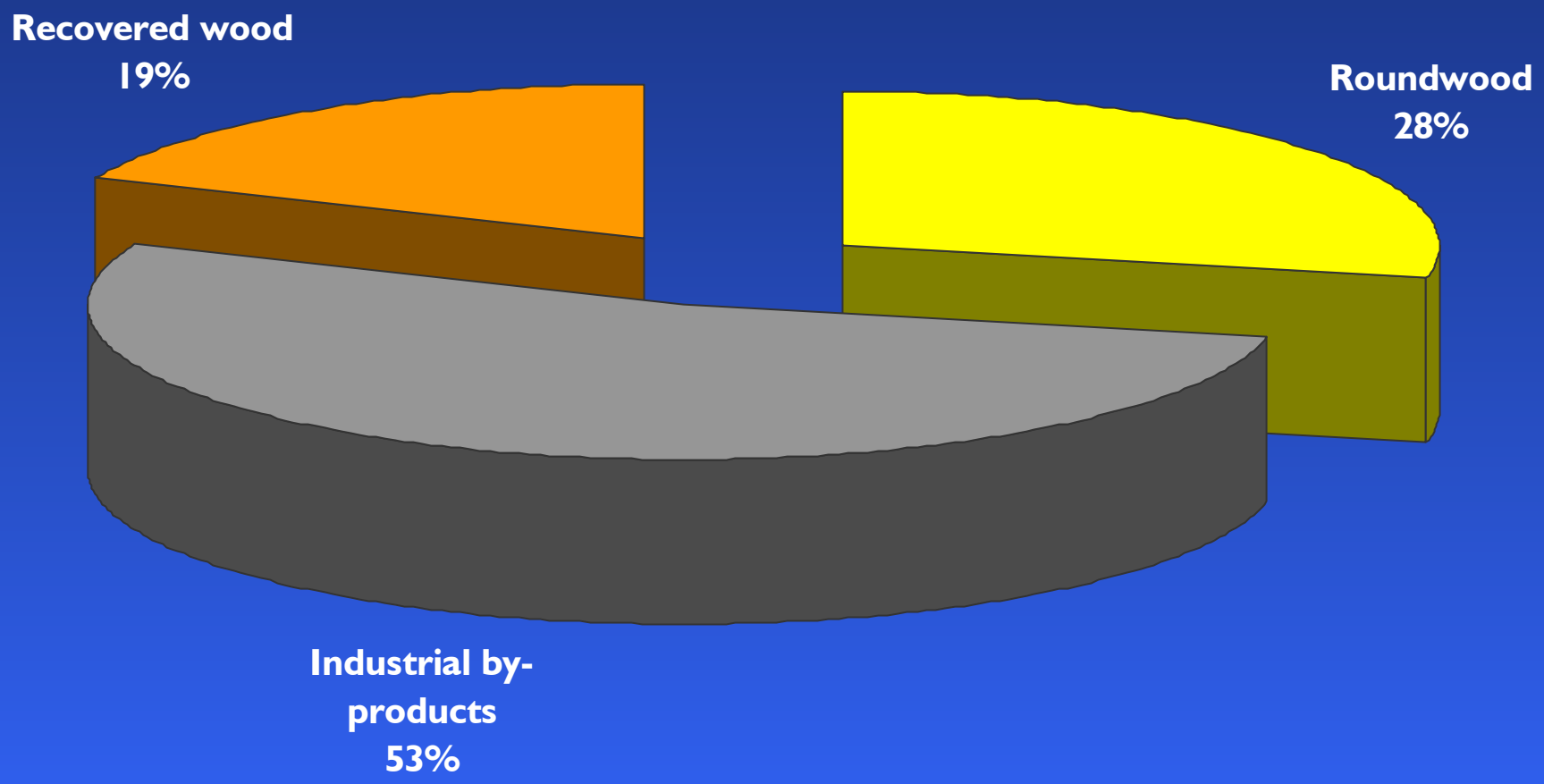
2000 = 100

Particleboard Wood Mix 2006



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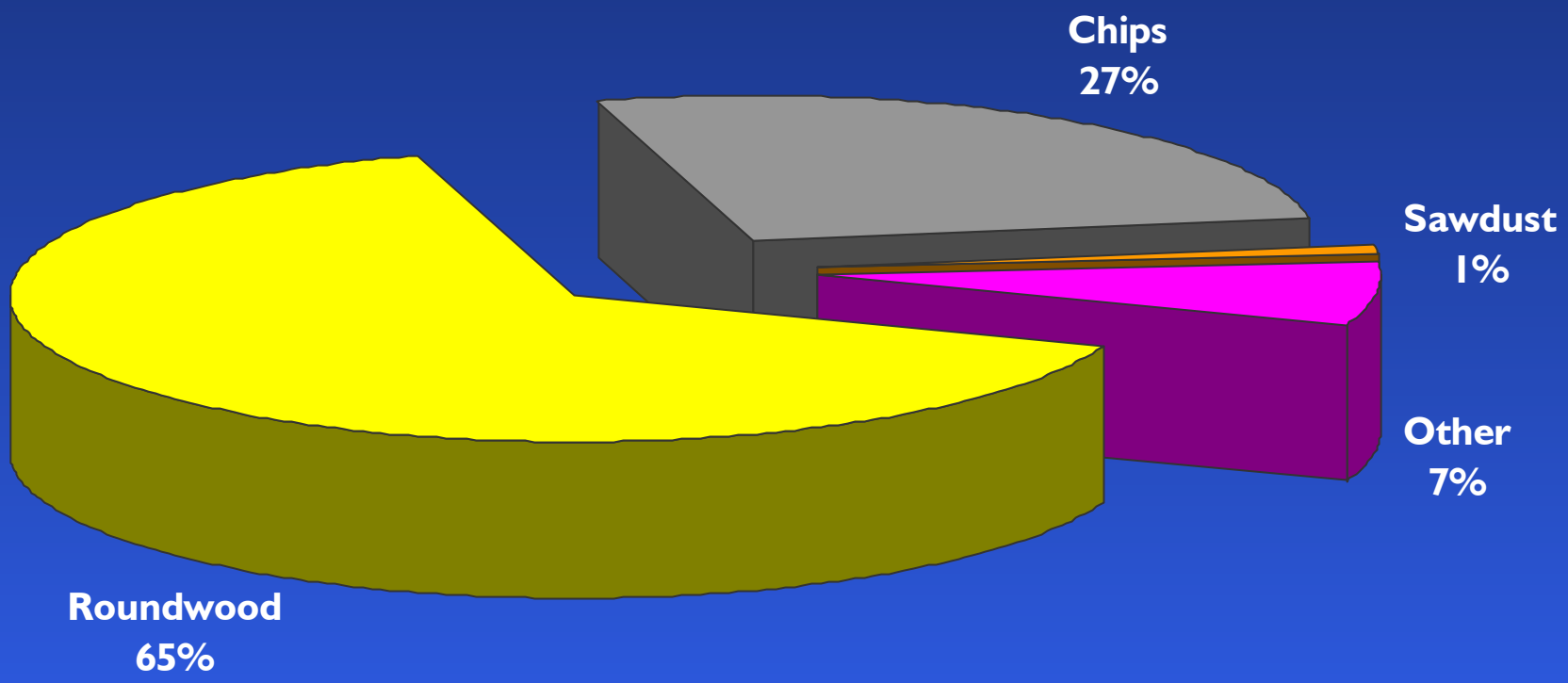
MDF Wood Mix 2006



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MDF Wood Distance

Country	Km
Sweden	200 km
Austria	180 km
Italy	150 km
Germany	140 km
UK	120 km
Belgium	120 km
Poland	105 km
France	100 km
Czech Republic	70 km

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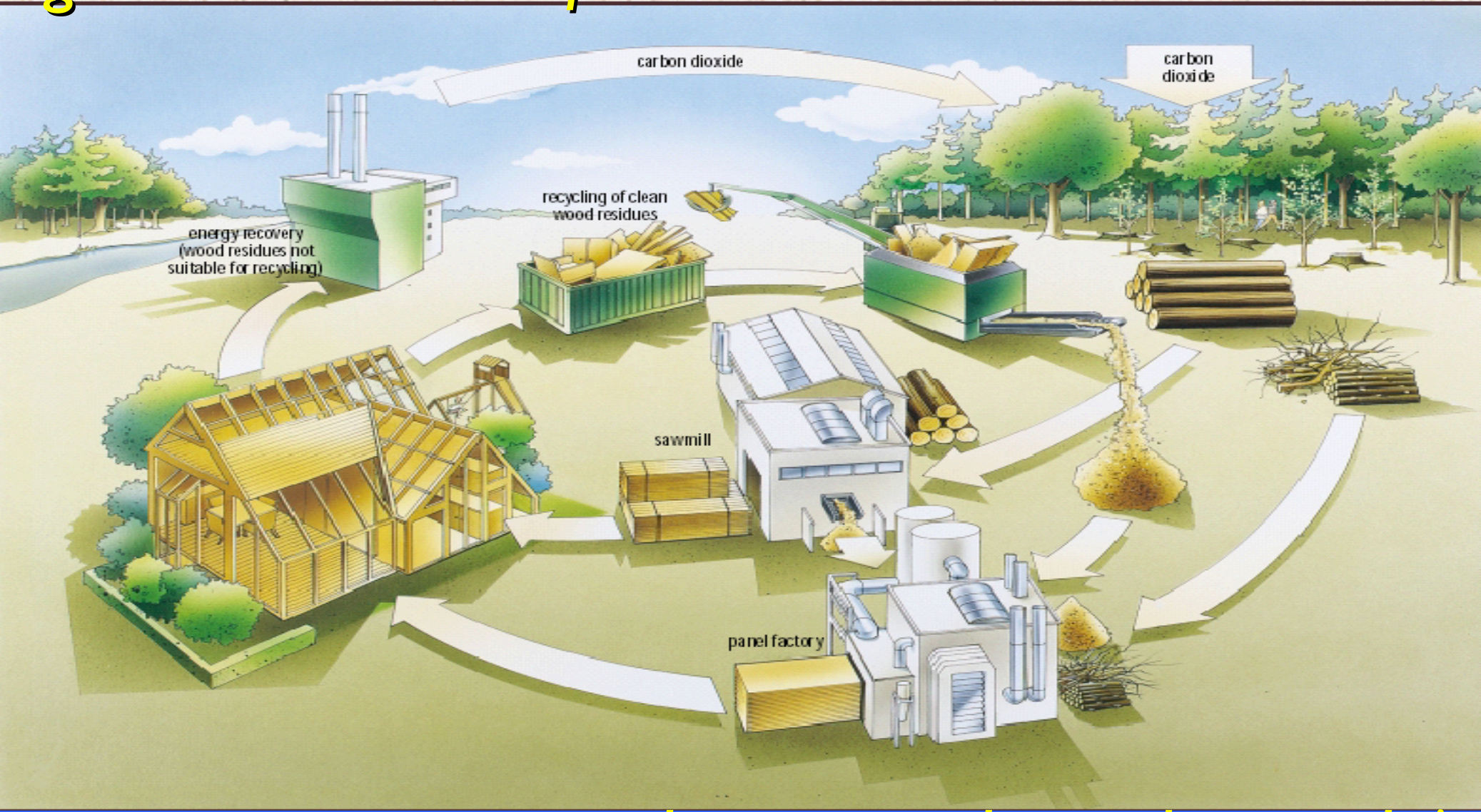
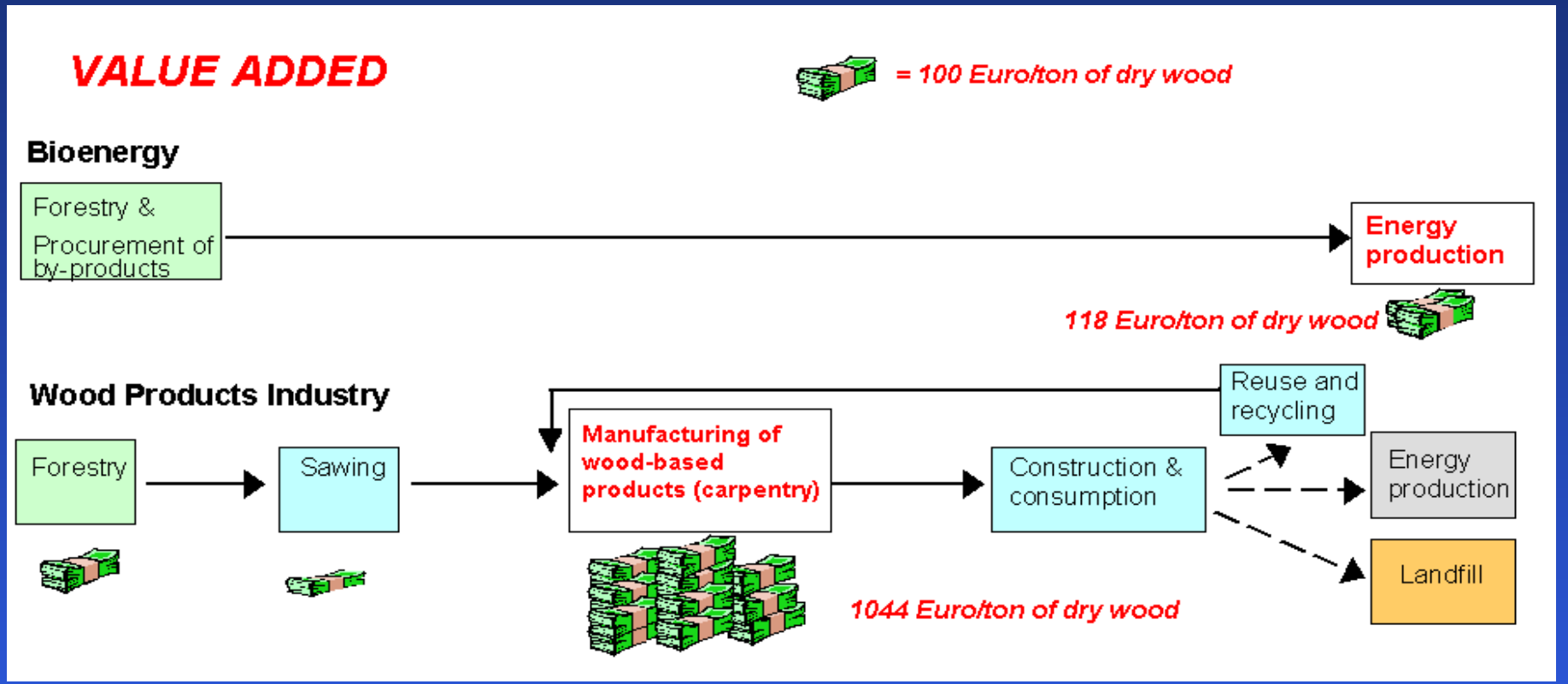
*The **woodworking** industry gives value to the forest...*



...and respects the carbon cycle!

Added Value Chains Compared



Multiplication Factor 10

(FBI Forum, 2003)

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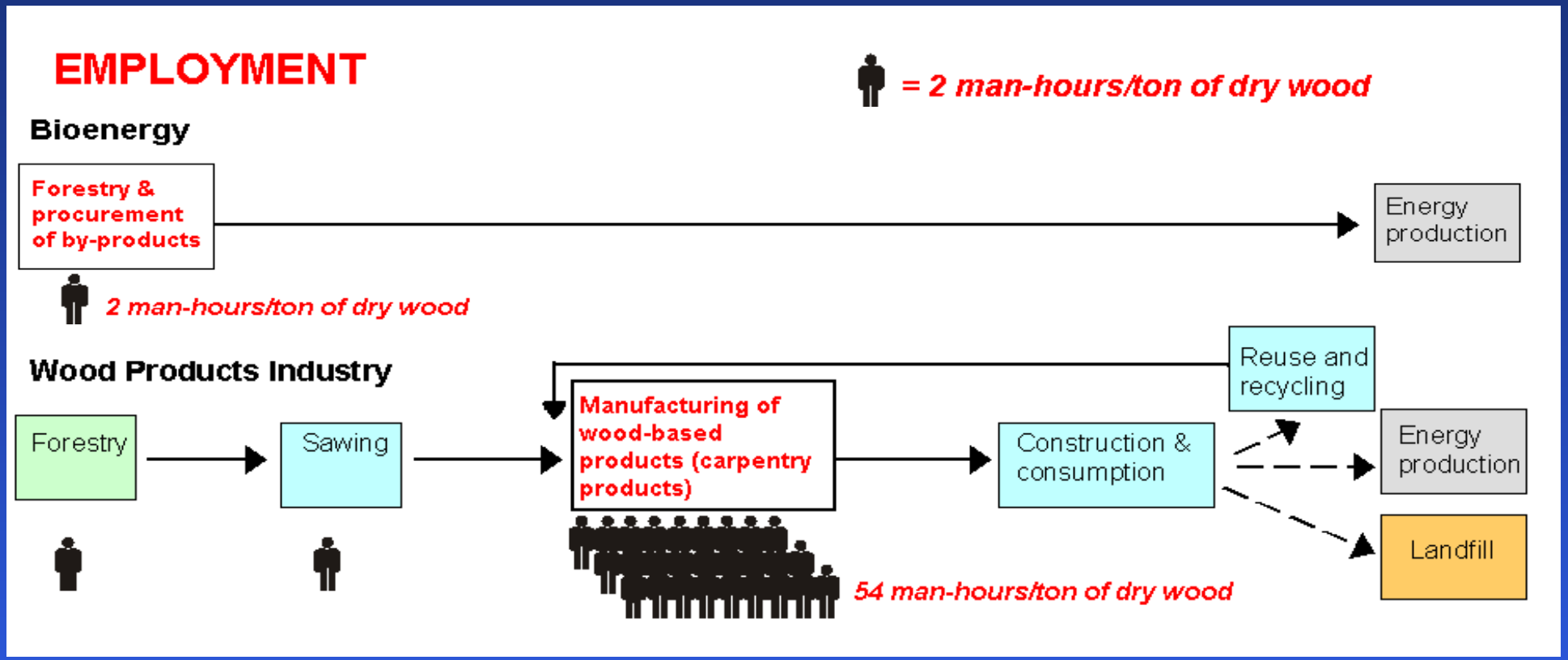
Social Value Chains Compared



Multiplication Factor 30

(FBI Forum, 2003)

EPF Recommends:

- **Use Wood BEFORE Burning It!**
- **Respect the value and employment chains of wood!**
- **Use MORE wood-based products**: they are eco-efficient and mitigate Climate Change

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EPF Recommends:

- **Mobilise more wood** by:
  - Optimising use of net annual forest growth
  - More efficient use of harvest residues
  - Improved logistic/technical facilities
  - Promoting afforestation & short rotation forestry
  - **Identifying Unknown Forest Owners**
- **Enhance wood recycling/recovery practices and stimulate selective collection of recovered wood**

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EPF Recommends:

- **Focus all Biomass Action Plans on wood mobilisation**
  - Always involve the wood-based sector using their competence in the forest-wood chain
  - This will allow to take account of the specific regional/local situation
- **Encourage efficient use of wood biomass energy**, (e.g. CHP)

- **Stop subventions to industrial and energy-inefficient installations** as they distort competition

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Key problems to wood mobilisation

- Forest inventories are very inaccurate
- Small forest owners are difficult to persuade to enter the wood markets
- Large forest owners are not interested in market share. Higher wood prices allow them to earn what they need by cutting less
- RES policy is directing the long term price of wood to its energy content, thereby linking it to fossil fuel prices

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EPF ACTIONS TO LIMIT COST INCREASES

- Strategic alliances
  - Joint position paper with CEI-Bois and trade unions
  - Joint position paper with other sectors (paper industry, parts of the chemical and food industries)
- United Nations Economic Committee for Europe
  - "Mobilising wood resources workshop on 11-12 January 2007 in Geneva
  - EPF urges UNECE to improve its statistics and offers help

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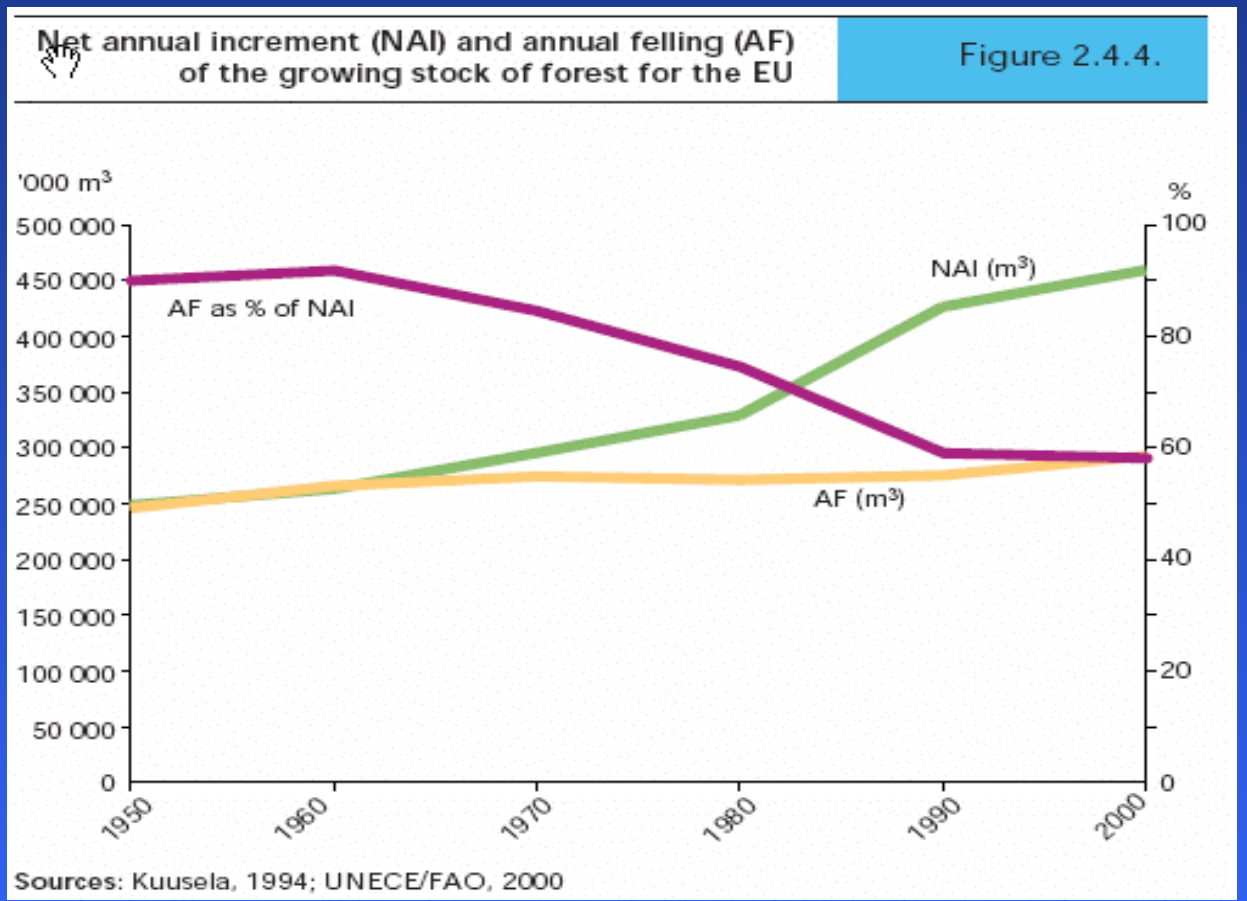
The legend of the woody biomass reserve in Europe

The legend of the woody biomass reserve in Europe

The difference between "net annual increment" and „actual felling" is normally seen as biomass potential.

This lumps completely different things together!



The legend of the woody biomass reserve in Europe

For a better understanding:

Definition of “complementary fellings”

- “.., the gap between the level of fellings and the increment in growing stock provides an opportunity to use forestry biomass that currently remains unexploited as a source of renewable energy. This opportunity is identified as complementary fellings.”
  (EEA Report, No 7/2006 How much bioenergy can Europe produce without harming the environment, p 31)

- This does not include the following biomass reserves:
  - reserves as a result of over-mature forests
  - reserves in form of forest rest wood (branches, needles)
  - reserves from unused fellings

The legend of the woody biomass reserve in Europe

The EU covers 160 M ha forest growing about 574 M m³ NAI.

The legend

- EU forest based industries use only 55% (315 M m³)
- Logically, EU forest resources can be more intensively used E.G. a felling rate at 85% of NAI would yield an extra 173 M m³
- The recent EEA study estimated that an extra 23 M toe (126 M m³) could be used without ecological impact.

Why is the woody biomass reserve in Europe a legend?

There is a huge difference in definition between inventory data and actual fellings:

- EU inventory data are calculated over bark
- inventory data include harvest losses
- inventory data includes unused fellings
- actual fellings do not include unregistered fellings

The experience with the German inventory 2002

EU calculations made on shares in Germany

inventories	DE 2002	DE %	EU 1997
NAI in M. m³ (VFm)	97,9	100,0	574
additional biomass to NAI – further technical potential			
wood under 7 cm diameter	18,0	18,4	106
needles	5,6	5,7	33

The experience with the German inventory 2002

EU calculations made on shares in Germany

	DE 2002	DE %	EU 1997 (?)
net anual increment in M. m³ (VFm)	97,9	100	574
bark and losses	**20,5**	**20,9**	**120**
felling volume (EFm)	77,5	79,1	454
unused stemwood *)	10,8	11,0	63
usable felling potential	**66,7**	**68,1**	**391**

Why are bark and losses no biomass potential?

The experience with the German inventory 2002

EU calculations made on shares in Germany, 16 % unregistered is the average unregistered fellings between 1987 and 2005

wood potential for forest industries in M. m³

wood potential in M m³	DE 2002	EU 1997
usable for industry	66,7	391
fellings	42,5	315
unregistered fellings (16% EU)	13,7 *)	50
Reserve for so called complementary fellings	**10,5**	**26**

This is a technical reserve!

It is not taken into consideration that quite a lot of forest owners arn‘t doing any fellings!

The reserve for complementary fellings is a legend !!!

*) yearly number vary; DE 2002 24,4 %; avarege 1987 to 2005 16,1%;
EU was calculated with 16%.

Summary of wrong assumptions in the ***EEA-report 7 / 2006***

NAI and official fellings cannot be compared directly!

- Wood industry consumption is not stable.
  In recent years it has been grown in Germany
  even more than energy consumption!

- Bark is treated as available volume,
  losses are not taken into account and
  unregistered cuttings are not seen at all.

- It is very generous to take an **additional** 5%
  out of production, but it is an unworldly dream
  based on a complete misunderstanding of forest reality.

Where are the reserves of woody biomass?

1. Forest rest wood
2. Trees above rotation rate
3. Rotation rate itself
4. Energy plantations
5. Trees outside forests
6. Definition of sustainability in wood production

Reserves – 1. Forest rest wood

Estimation of 100% potential of energy wood – possibly 33% can be harvested and used.

Energy wood	DE		EU
	M. m³	%	M. m³
unused stemwood	10,8	31%	63
wood under 7 cm diam.	18,0	52%	105
needles	5,6	17%	33
technical potential	**34,4**	**100%**	**201**

EU calculations made on shares in Germany

Reserves – 1. Forest rest wood

Estimation of 100% potential of energy wood – possibly 33% can be harvested and used.

Energy wood	DE		EU
	M. m³	%	M. m³
technical potential	34,4	100%	201

The realistic economic biomass reserve for energy wood is most likely much smaller than 100 M m³. It is located in assortments hardly used today because of the cost price ratio.

WHAT'S NEXT?

- Wood availability study with UNECE/FAO/Commission
  - Co-funded by EPF, CEI-Bois, CEPI with support of EFBWW
  - Presentation at UNECE Timber Committee 8-10 October 2007
- Information meeting in the European Parliament
  - 23 October 2007 in Strasbourg (follow up on 22 May meeting)
  - Hosted by Mrs Catherine Guy-Quint, MEP
  - Presentations by MEPs, industry and worker unions (EFBWW)
- Ministerial Conference on Protection of Forests in Europe
  - 5-7 November 2007 in Warsaw
  - Draft resolution on "Forests, wood and Energy"
- Continuous Dialogue with European Commission

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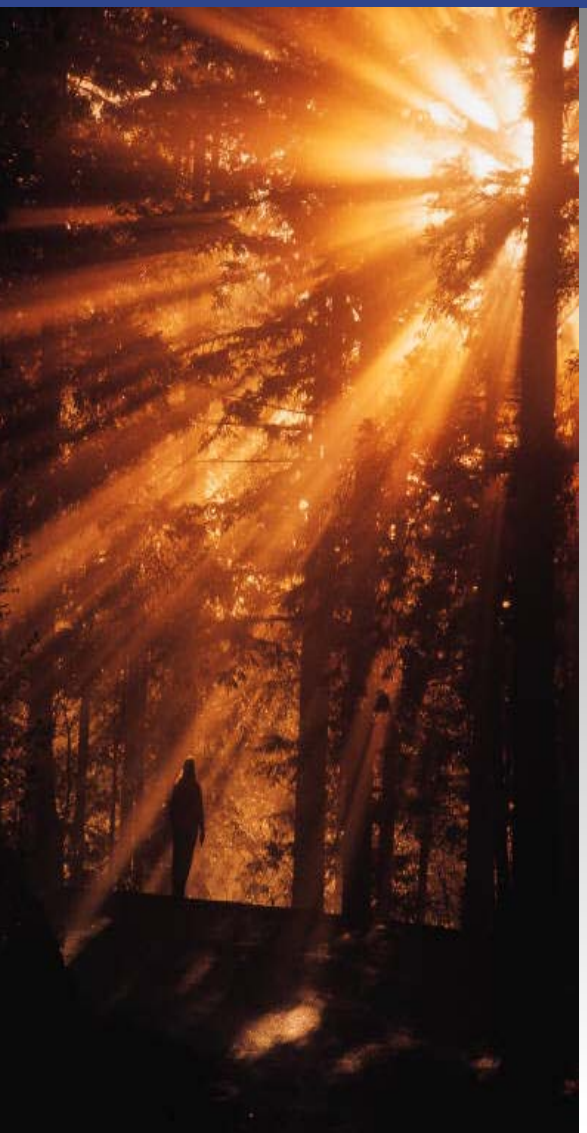
European Commission



Gesbois Meeting

Brussels, 14/03/2007

Strategic supply and demand considerations on the competing end uses of wood for energy and wood-based products

Jeremy Wall

European Commission,

DG ENTR/G/4

Jeremy.wall@ec.europa.eu

New targets

	2006	2010	2020
All renewables:	7%	12%	20%
Biofuels:	1%	5.75%	10%
Green electricity:	15%	21%	(no sectoral
Heating/ cooling:	9%	none	target)
Biomass:		150 Mtoe	195 Mtoe

Renewables Directive 2007

Energy from biomass (incl. organic waste) is expected to make a significant contribution to a future sustainable energy system in Europe in all 3 sectors: electricity, transport, heating and cooling

A predictable, long-term policy framework needed: National Biomass Action Plans to feed into national RES action Plans! Biomass supply and use to be assessed at national level across 3 sectors

Supplementary action on national, regional and local levels with close involvement of all relevant stakeholders is essential and equally important

Challenges exist: competition for raw material and increasing imports to ensure sustainability criteria met for the production of biomass/ biofuels

Bio-fuel increase: sustainability? Second generation support?

BAP State of Play

Other on-going actions:

- **Review buildings directive to incentivise use of RES**
- **Study on performance of household biomass boilers and possibly set eco-design requirements**
- **Review the impact of the energy use of wood and wood residues on forest-based industries**
- **CEN standards on quality of biomass fuels**
- **Development and trade policies to promote sustainable biomass/ bio-fuels production**

What has DG Enterprise done?

- contributed to inter-service co-operation, incl. Energy & Climate Package
- reconvened RES Working Group of the EU F-BI Advisory Committee
- co-operated with international organisations (FAO/IEA/UNECE)

EU Forest Action Plan (FAP)

The overall objective of the Action Plan is to enhance sustainable forest management and the multi-functional role of forests. Its four **operational objectives** are to:

- **improve long-term competitiveness of the forest sector**
- **maintain & enhance biodiversity, carbon sequestration, integrity, health and resilience of forest ecosystems**
- **contribute to life quality by preserving and improving the social & cultural dimensions of forests & forestry**
- **To improve coherence, co-operation and communication in forest related matters**

This is to be achieved through four groups of « Key Actions »:

Competitiveness

Environment

Quality of life

Co-ordination and communication

EU Forest Action Plan - Key Action 4

Promote forest biomass use for energy generation through:

- Assessment of the availability and possibilities for increased mobilisation of small/low-value timber and harvesting residues for energy; disseminate good practices
- Assessment of the feasibility of using forest residues and tree biomass for energy in the context of sustainable forest management; examination of environmental limits
- Examination of possibilities for co-operation between forest owners in energy projects
- Support for R&D for heating and cooling, green electricity and fuels from forest resources
- **NB Working group set up (06/03/2007) to examine mobilisation of wood resources fro energy use.**

CONCLUSIONS (as identified by RES WG):

More woody biomass can be mobilised by:

- Mobilising more of the existing EU forest resources (financially & physically) – a responsibility for both forest owners (private, state, other) and industry
- Developing new forests and other wood-fibre crops (as well as "energy crops")
- Increasing the use of residues – both forest and post-consumer
- Increasing fibre recovery (50% of paper produced from recycled fibres)
- Increasing raw material and energy efficiency in production and use

Factors influencing the availability of wood and its increased use for energy:

- forest resources, including:
- their status (e.g. Natura 2000) and management;
- the fragmented forest ownership structure;
- forest stocking rates, growth rates and harvesting rates;
- specific price/supply effects on harvesting volumes;
- resulting wood supplies;

Factors influencing the availability of wood and its increased use for energy (continued):

- presence, scale & intensity of wood-processing industries, in turn influenced by:
  - trends in forest products (cost factors; demand effects on prices);
  - trade-flows in roundwood, forest & wood residues and wood-based products;
  - presence and intensity of energy-producing industries and the financial instruments supporting them;
- population densities and their effect on demand for domestically consumed firewood, such as through buildings stock (e.g. apartments v. single houses), cultural traditions etc.
- Access and transport costs;
- technical capability;
- operational efficiency;
- a lack of market structure and /or information;
- limitations of the capacity/motivation of forest owners to harvest.

Build POSITIVE Information Flow About Wood and Wood-Based Products

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Tackle climate change: use wood!
The Exhibition

European Parliament, Altiero Spinelli, 3rd floor, Espace bar
2006-02-07/09

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Tackle climate change: use wood!

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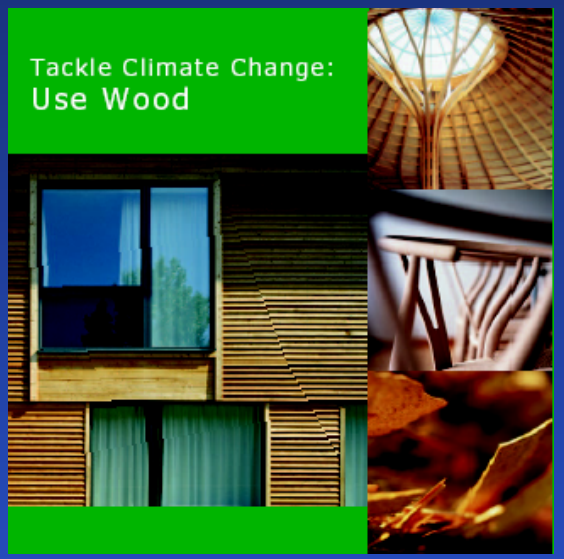
Tackle climate change: use wood!

Tackle climate change: use wood!
The publication



Content

- Foreword by MEP C.G. Quint
- Climate change
- Europe's forests: a renewable resource
- How wood products help slow global warming
- The eco-cycle of wood and wood-based products
- The benefits of using wood
- The industry: facts and figures

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Tackle climate change: use wood!
The science

"It has been estimated that an annual 4% increase to 2010 in Europe's wood consumption would sequester an additional 150 million tonnes of CO_2 per year and that the market value of this environmental service would be about € 1.8 billion a year"

CEI-Bois Roadmap 2010, Executive Summary, 2004

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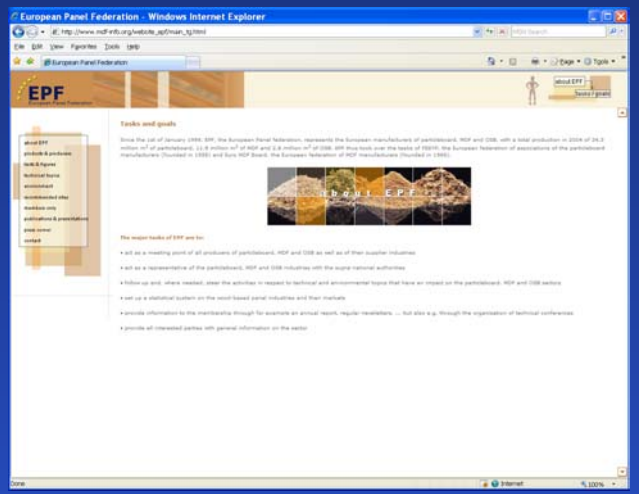
More information:



www.europanels.org

www.mdf-info.org

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