

Wood-Based Panel Products Market Review Focus on Bosnia and Herzegovina

Prepared for

The Bosnia Cluster Competitiveness Activity

USAID

24nd November 2005

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London

November 22nd, 2005

Wood-Based Panel Products Market Review

This report was completed for USAID’s “Support for Economic Growth and Institutional Reform Project (SEGIR) Privatization II” under Task Order No. 800 “Bosnia Cluster Competitiveness Activity. The report was requested by AG Raymond & Company Inc, on behalf of the prime project contractor, Emerging Market Group.

It has been asked that Jaakko Pöyry Consulting (JPC) investigates and provides an independent market overview for wood-based panels. The region on focus is Europe and especially South East Europe.

This report is based on direct market analysis, JPC databases and the experience of the individual team members and interviews with prospective investors.

Comments to market growth and forecasts are judgements based on the perspectives at the time of the analysis and the interpretation of limited BiH-specific data. JPC has worked with the accuracy and expertise, that can be expected from an experienced industry consulting company to provide the best available information.

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- The information and analysis presented here are based on Jaakko Pöyry Consulting's accumulated research experience in the wood-based panel industry, including JPC databases, market research and analyses tailored specifically for this engagement.
- Market and industry research have been carried out by JPC's local offices in London to complement and update the information which has been used as a foundation for JPC analysis and conclusions.

The aim of this report is to provide a high-level assessment of opportunities for panelboard manufacture in BiH by interpreting:

- Available market information for wood-based panels in Europe
- Interviews with prospective investors in the industry

The scope of the work covers as agreed:

- The following products: particleboard, MDF, OSB and plywood. The geographical scope is Europe including the South East European region

Summary

Business investments are signals for prosperity and stability in the Balkan Region

- By 2006, the Balkan region will be on the way to join Europe's mainstream and will be eligible for European development funds since the Balkan region is progressing towards long-term macro-economic stability.
- Economic growth has been increasing by 4-5% a year. Inflation has been kept low and direct foreign investment has been rising in the region.
- Greek investments in the Balkans are already worth USD 6 billion in increasingly dense network of holdings in sectors ranging from telecoms and energy to finance and cement, showing that Greece has a strategic plan to play a leader role in the region.
- This economic growth has opened the potential for the restructuring of petroleum, furniture, chemical and metal based industries.
- The Balkan region utilises approximately only a third of its annual allowable cut for the production of panels and pulp and paper. Bulgaria has the largest annual allowable cut within the region.
- In general, hardwood species account for more than 70% of the annual allowable cut in the Balkan region with the exception of Bosnia and Herzegovina where the ratio of softwood to hardwood is evenly split.
- There is therefore room for investments in the region with a potential market in Western Europe, especially Greece, Cyprus, Bulgaria as well as Jordan, Saudi Arabia and Former Yugoslav Republic of Macedonia (FYROM).

Ten years after the war, Bosnia and Herzegovina still suffers from the legacy of a conflict that destroyed a significant part of the country's production capacity, depleted human resources and shattered institutions and social capital ...

- Bosnia and Herzegovina ranked next to Macedonia as the poorest republics in the old Yugoslavian federation.
- The inter-ethnic warfare in Bosnia caused production to plummet by 80% from 1992 to 1995 and unemployment is high with approximately 44% of unemployed in 2004, however, grey economy remains still the main obstacle for the improvement.
- The young population of Bosnia and Herzegovina are longing to leave the country.
- With an uneasy peace in place, the industry output recovered in 1996-99 at high percentage rates from a low base; but output growth slowed in 2000-02. Part of the lag in output was made up in 2003-2004.
- National-level statistics are limited and do not capture the large share of black market activity which is gaining further ground.
- The konvertibilna marka (convertible mark or BAM) - the national currency introduced in 1998 - is highly correlated to the euro, and the Central Bank of Bosnia and Herzegovina has dramatically increased its reserve holdings.
- Implementation of privatization has been slow.
- A sizeable current account deficit and high unemployment rate remain the two most serious economic problems.

... but still can catch up with the more advanced economies in central and Eastern Europe.

- Opportunities for growth exist in Bosnia and Herzegovina since firms have been exporting their goods, foreign investors see business prospects and new jobs have already been created.
- Bosnia and Herzegovina exports have increased by 10% a year in euro terms while the ratio of export/imports has risen from less than one tenth to one third.
- Bosnia and Herzegovina has achieved some success in redirecting its trade towards the EU market. Bosnia and Herzegovina is gaining trading shares with its second trading partner, Croatia, as well as maintaining a strong partnership with its main trading partner, Italy.
- Participation in retail-driven commodity chains, such as the furniture sector, shows that Bosnia and Herzegovina can be present in a very competitive market place.
- Furniture and textiles production, vehicle and military assembly and oil refining are some of the largest industries in Bosnia.
- Bosnia and Herzegovina's national gross income per capita in 2003 amounted to USD 2,040. Approximately 61% of its GDP originated from services, 23% from the industry, and 11% from agriculture.

Key Questions

Bosnia and Herzegovina... risk or opportunity for a new investment?

Key questions to be answered.....

Our interviews with key stakeholders in the sector provided more questions than answers. .. questions signal there is some interest in the region.....but still there are many prerequisites...

- How big is the market opportunity in the region?
- How competitive will a BiH plant be?
- Will the current supply chain support a major board plant?
- Do we have to “rewrite”¹ the supply chain?
- How much fibre is available?
- How easy is it to access the fibre?
- What are the main wood species and are they suitable for panel production?
- Has the informal market been reduced over the last few years?
- What is the current status of the infrastructure to facilitate foreign investors?
- What are the ownership issues in BiH for foreign investors?

Note: ¹ Rewrite means restructuring and remodeling the channel flow pathways in the chain

Concentrate on improving the following fundamental investment drivers.

- Corporate tax at low levels (i.e. 30%)
- Minimal government intervention in the economy (e.g. control of energy prices)
- Simple legal, regulatory, judicial procedures to create a more hospitable business environment for foreign investors
- A transparent culture in business procedures
- Adequate infrastructure to ensure the application of regulations and law
- Minimal bureaucracy... e.g. tens of different administrative approvals needed for a simple registration...

JPC carried out extensive interview program talking to key stakeholders in European panel business. The conclusions of this exercise are summarised below.

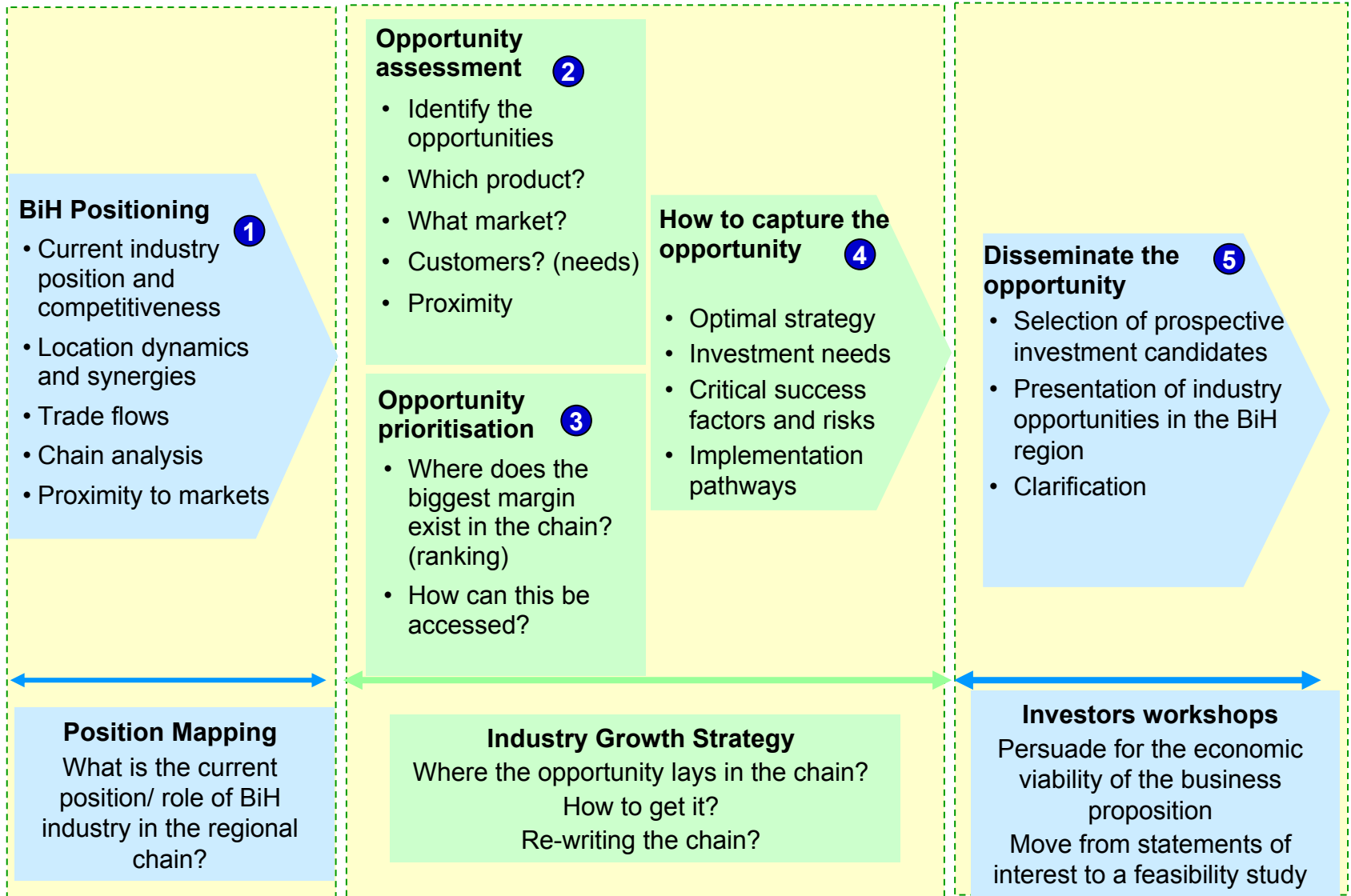
- Many of the leading European players are actively investing in the former Eastern European countries, including the Balkans (e.g Romania, Bulgaria). The big private panel players e.g. Kronospan and Egger, are leading the way here. The decision making process is in the hands of a small management team and is rapid but opaque. Business plans are not normally disclosed or announced before the final approval by the owners.
- Kronospan has been one of the first movers in identifying windows of opportunities for green-field investments in Eastern Europe, including the Balkan countries, however, Bosnia-Herzegovina has not featured yet. Although these privately held players have a significant appetite for political risk, BiH remains a challenging case. In this case, in order to stimulate further interest from the key industry stakeholders in Europe, JPC suggests the approach of facilitated roadshows with focus on presenting the local market opportunities and business drivers in the area of Bosnia and Herzegovina.
- Smaller players, such as some companies from Greece, have expressed strong interest to expand in the region. Greek investors have already made significant steps in expanding their investment portfolios in other sectors of the region.

Next Steps

How to capture the opportunity and stimulate interest for new investment


JPC Development Model

JPC recommends a stepwise process for the development of industry growth strategy to attract foreign investment in the region



The stepwise industry growth strategy concept will address key questions and illuminate the following points:

- What is the current status of the forest and furniture cluster chain in terms of supply market characteristics, proximity to markets, logistics, product segmentation, industry integration, and consolidation?
- Is there any clear cost competitive advantage for the BiH forest products and furniture industries when compared to other competitive jurisdictions (e.g. Poland, Italy, Turkey etc.)?
- What is the geographical distribution and proximity of raw materials for potential new mill locations in relation to proximity to markets?
- What is the most suitable option or scenario for growing the forestry and furniture cluster in the BiH region based on chain, market, trade analyses and dynamics?
- What are the most suitable industry development pathways in the region?
- Are there any prospective candidate investors and statements of interest to move towards pre-feasibility or feasibility phase?



The opportunity needs to be defined in all its dimensions....it is not just a simple question of supply, demand or raw material availability...

European Market Overview

Overview of the EU and South East Europe (SEE) market for wood- based board products

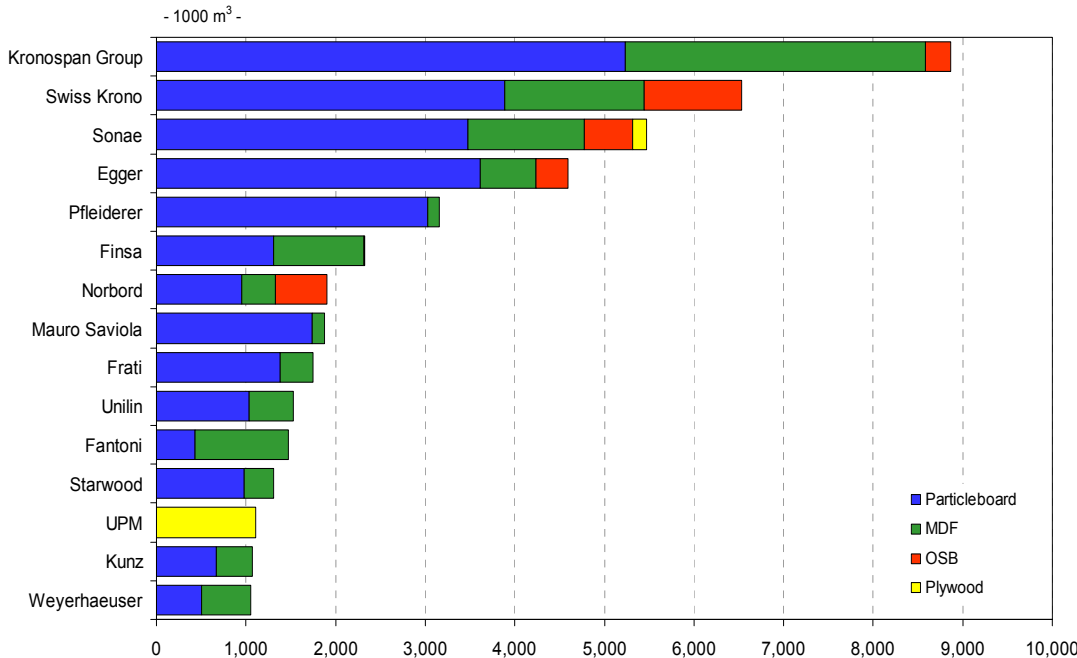
Covering: consumption, production, imports, exports, supply/demand, prices, trends/forecasts

Major manufacturers in the EU and SEE, data on their mills, production

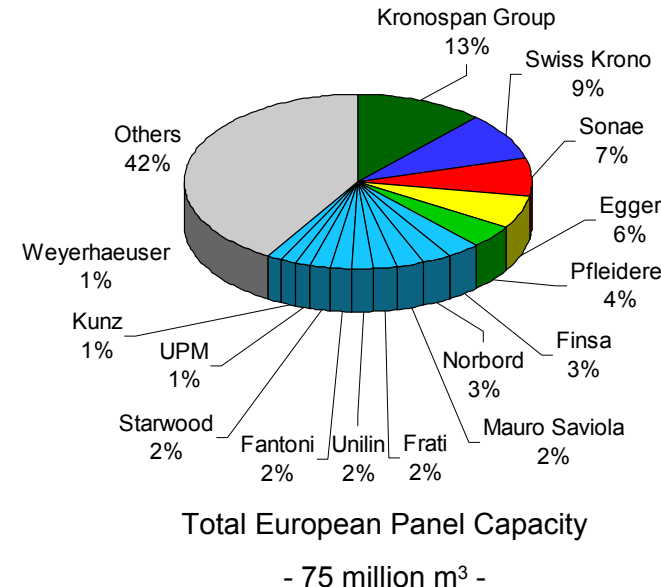
Top 15 European Panel Manufacturers, 2005

Kronospan Group, Swiss Krono, Sonae, Egger and Pfeleiderer are the leading players holding 39% of the total panel capacity in Europe

- Top 15 Panel Manufacturers by Capacity, 2005 -



- % share of top 15 players in the total European Panel Capacity -

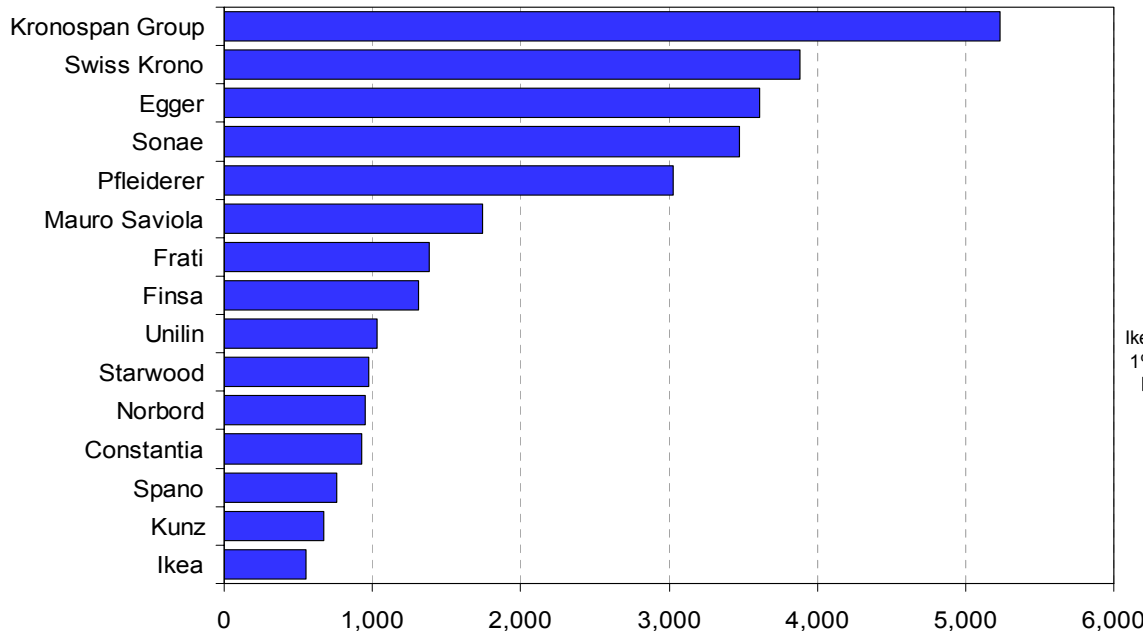


- The main players are strategically leading the race controlling the business environment and influencing the market dynamics.
- In regions with the toughest business environment (e.g. Western Europe) the pressure is high and the supply chain is being continually reconfigured and optimised forcing uncompetitive players to exit or merge.
- The furniture producers are clustering with panel producers and the optimisation of distribution networks is resulting in a very dynamic and competitive business environment overall

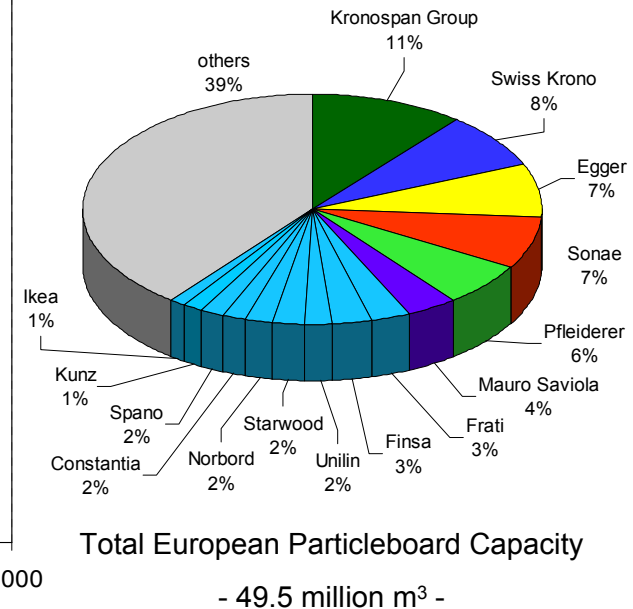
Top 15 European PB Manufacturers, 2005

Kronospan Group, Egger, Swiss Krono, Sonae, Pfliederer and Mauro Saviola are the leading players holding 43% of the total Particleboard capacity in Europe.

- Top 15 Particleboard Manufacturers by Capacity, 2005 -
- 1000 m³ -



- % share of top 15 players in the total European PB Capacity -

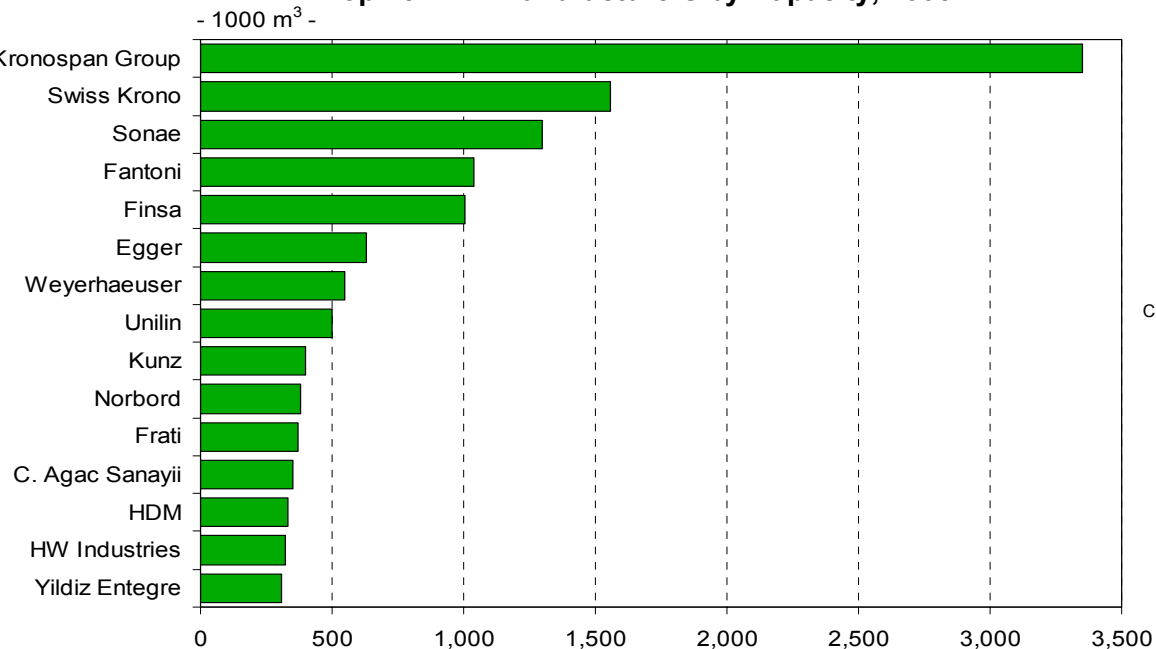


- Kronospan Group and Swiss Krono are companies with strong focus on growth. These two companies have an exceptionally efficient strategy which is focused on identifying market opportunities even in periods when the market is stagnating.
- Integration and consolidation is moving on. Pfliederer has responded to competition with the acquisition of Kunz Group. New entries in the top 15 are Starwood (Turkey) and Ikea (Sweden).
- Norbord moved up the ladder with the acquisition of Agglo, but the Belgian operation is going through restructuring driven by the stagnation of Western European particleboard market. The Italian Frati and Mauro Saviola have stood still, playing more an observer role.

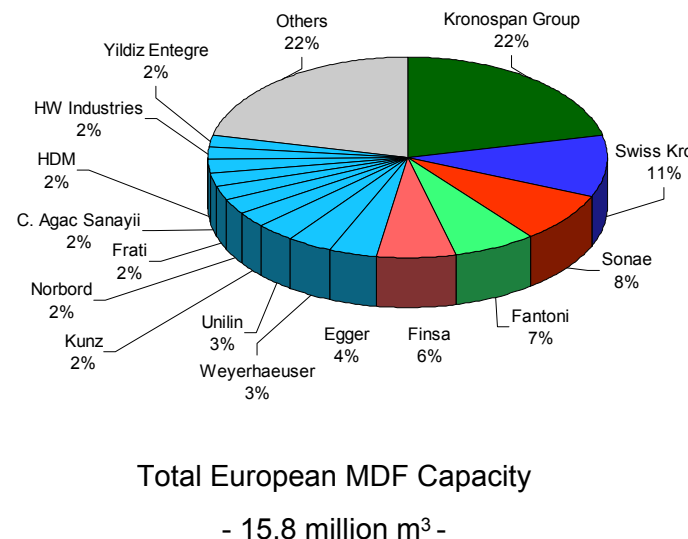
Top 15 European MDF Manufacturers, 2005

Kronospan Group, Swiss Krono, Sonae, Fantoni and Finsa are the leading players holding 54% of the total MDF capacity in Europe.

- Top 15 MDF Manufacturers by Capacity, 2005 -



- % share of top 15 players in the total European MDF Capacity -



Total European MDF Capacity

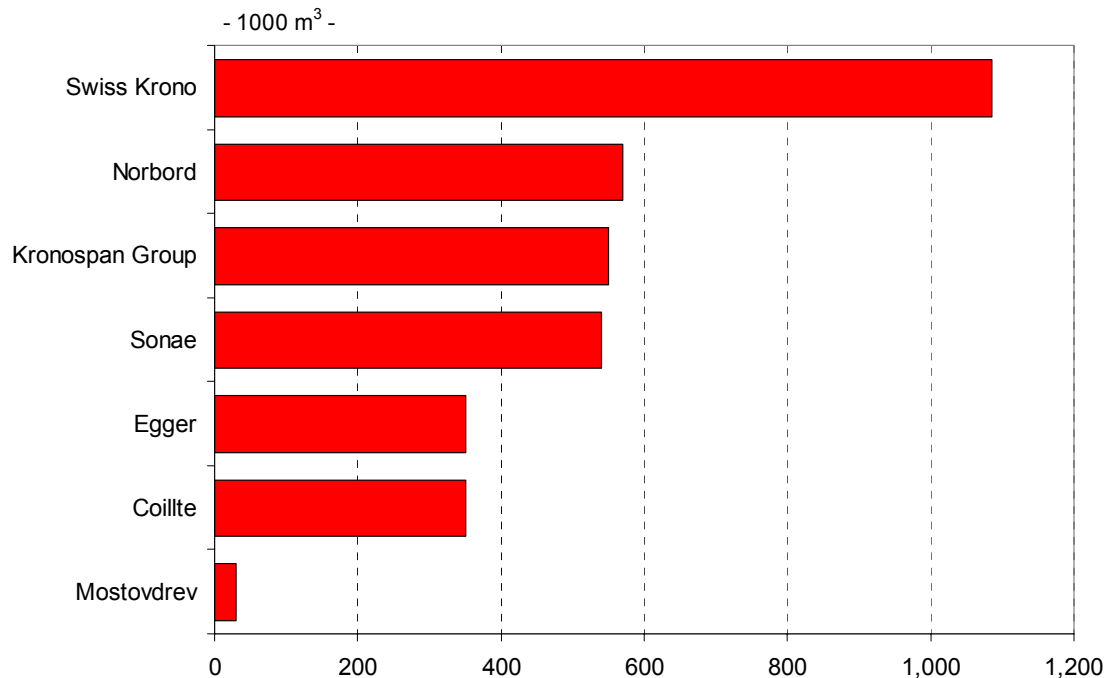
- 15.8 million m³ -

- MDF industry consolidation is happening fast for example in 2002, the “others” segment shared 25%, - this is now 22%.
- During the last three years, Kronospan Group and Swiss Krono have dynamically responded to the competitive requirements of the market and expanded their MDF businesses aggressively.
- Medium size players such as Weyerhaeuser, Norbord and Fantoni, have also increased their capacity share.
- Yildiz Entegre the new entry in the top 15 chart, have further plans for another increase of their capacity and will be one of the leading players in Balkans.

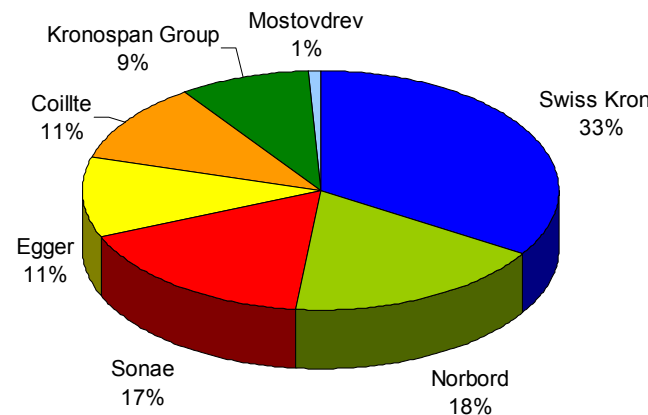
Top European OSB Manufacturers, 2005

Seven groups account for 100% of the total European OSB capacity. Most companies follow the business model of integrated “mega sites” where OSB is one of a wide range of panel products, including MDF and Particleboard.

- Top OSB Manufacturers by Capacity, 2005 -



- % share of top players in the total European OSB Capacity -



Total European OSB Capacity

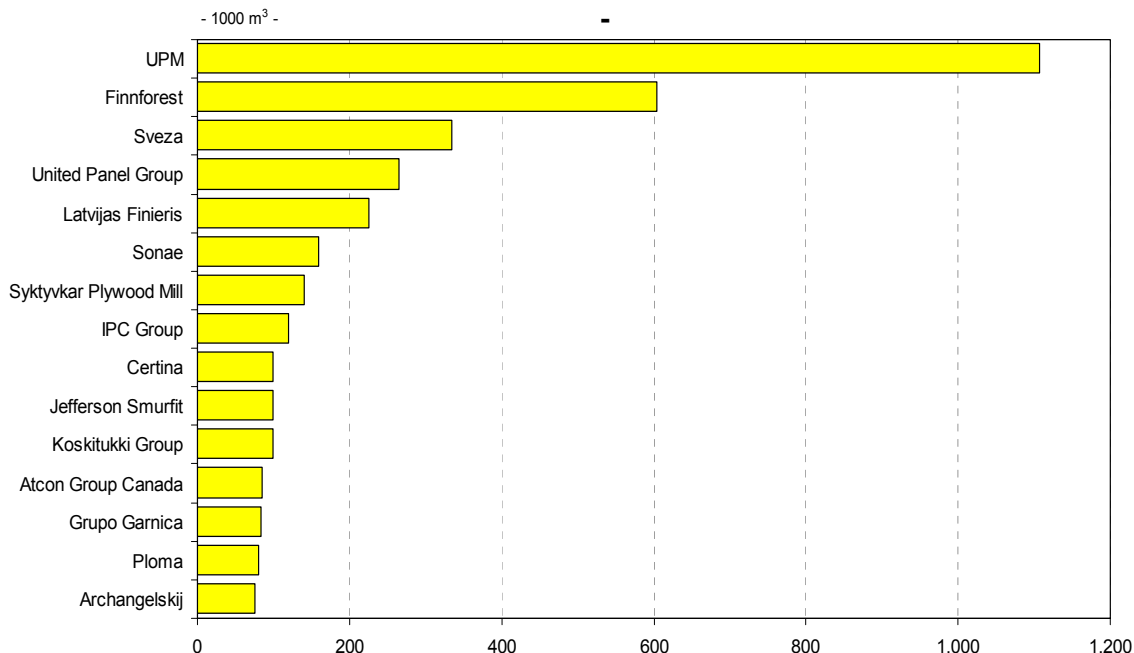
- 3.2 million m³ -

- Swiss Krono Group is the biggest player with three OSB plants in Europe
- Norbord, after the acquisition of Agglo, has become the second largest OSB producer in Europe
- New mills from Swiss Krono Group and Kronospan Group are expected to start in 2005/6 in Sublice (Poland), Sharya (Russia) and Jilhava (Czech Republic)

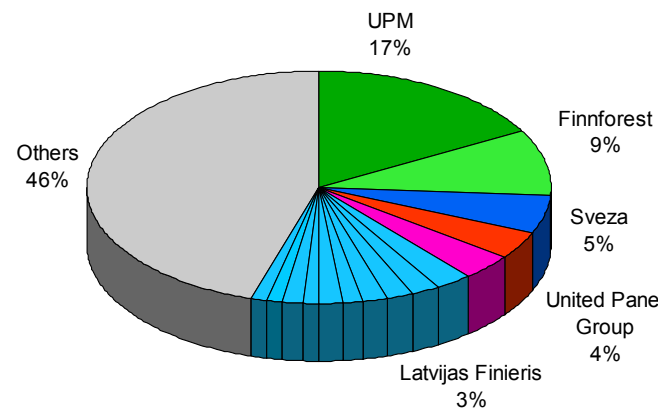
Top 15 European Plywood Manufacturers, 2005

The Top 5 Players have increased their share of total production substantially in the last decade and represent approximately 38% of total plywood capacity

- Top 15 Plywood Manufacturers by Capacity, 2005



- % share of top 15 players in the total European Plywood Capacity -

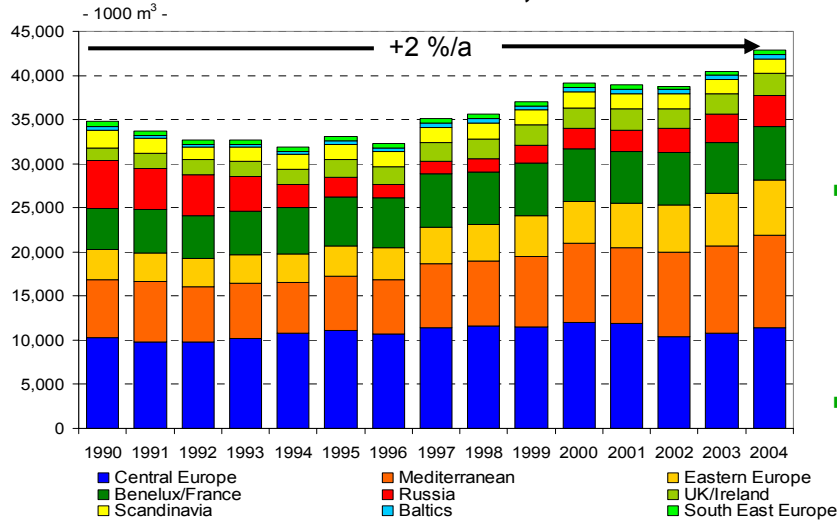


Total European Plywood Capacity

- 6.5 million m³ -

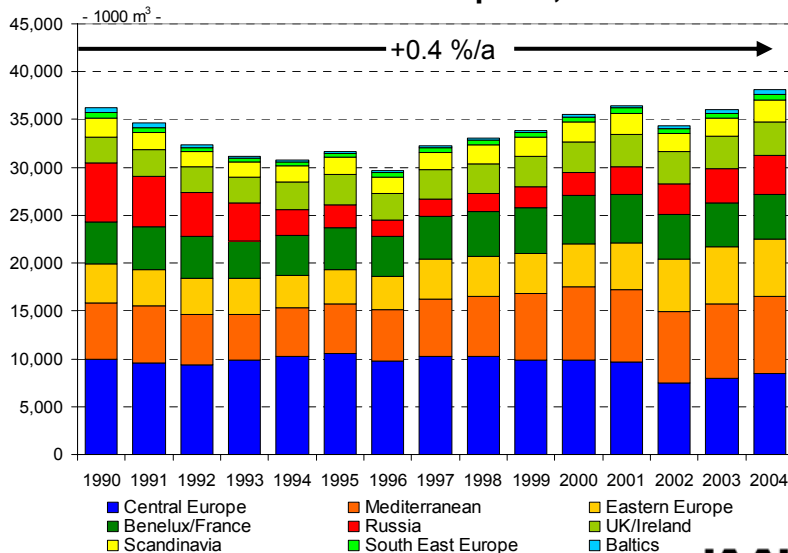
- The Finnish company UPM is the largest producer of plywood in Europe and has production facilities in Russia, Finland, France and Estonia. UPM is expanding its production in Finland by adding capacity.
- With the exception of UPM, all the other largest producers of softwood plywood have only facilities in one country (i.e. Sveza and UPG in Russia, Finnforest in Finland).
- Unlike the OSB business, new investments in plywood mills are not expected outside Finland and Russia. With the exception of companies in Finland and Russia, the majority of the plywood mills in Europe are more than 20 years old and investments to improve competitiveness are necessary.

Particleboard Production, 1990-2004



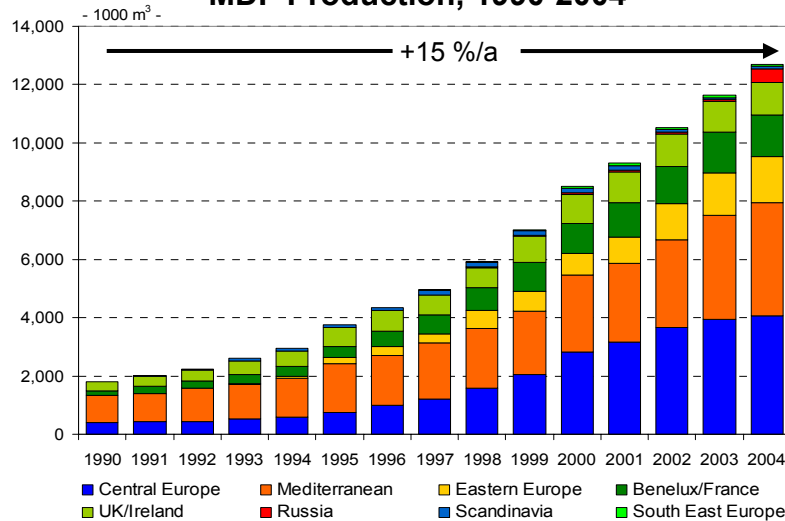
- The particleboard industry picked up vigorously in 2004, bringing the production output up to a new record level reaching 42.9 million m³. The previous record was set in 2003 and has been beaten by 2.4 million m³.
- The particleboard production is expected to grow by 1.2%/a up to 2010 while particleboard consumption will increase by 3%/a reaching 46.2 and 44.8 million m³ respectively.
- The top 5 producing countries are Germany, France, Italy, Russia and Spain and accounted together for approximately 55% of the total production output.

Particleboard Consumption, 1990-2004

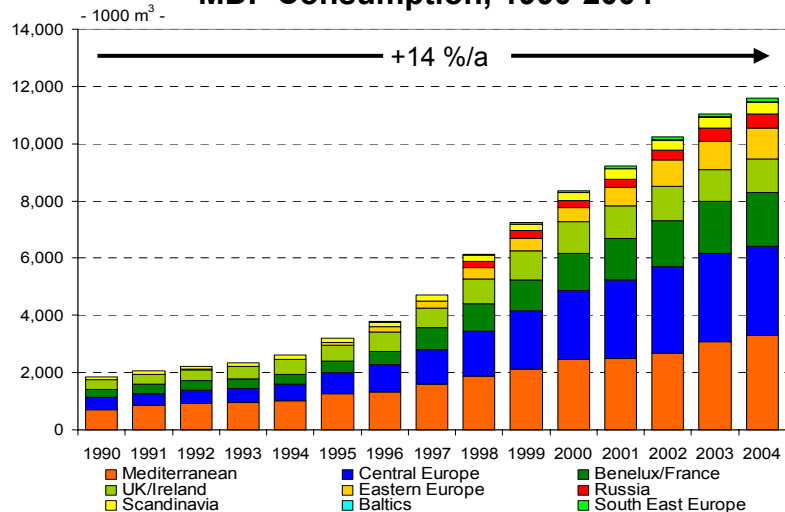


- The major engines behind the 2004 increase in production were located in Western Europe, Romania (23%) and Russia (12%).
- Exports still exceeded imports and therefore provided the particleboard industry with a clear positive trade balance in Europe. Main exporting countries outside Europe are the USA and Japan.
- In terms of consumption, Germany, Russia, Italy, the UK and Spain were the largest markets for particleboard in Europe, representing 58% of total particleboard demand.

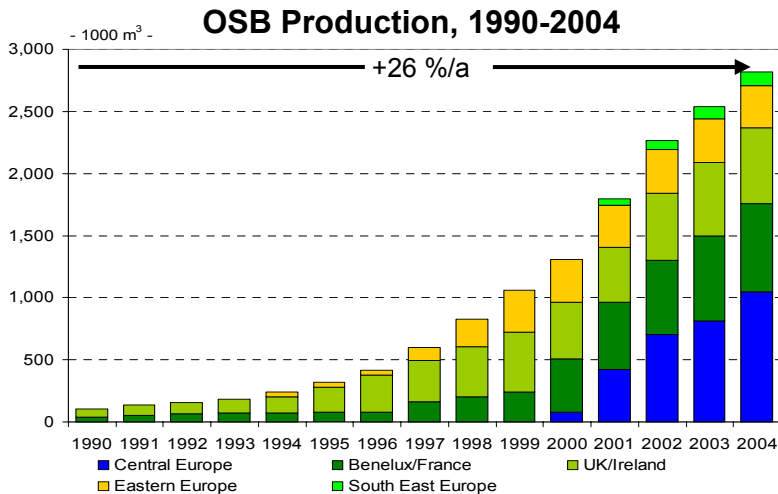
MDF Production, 1990-2004



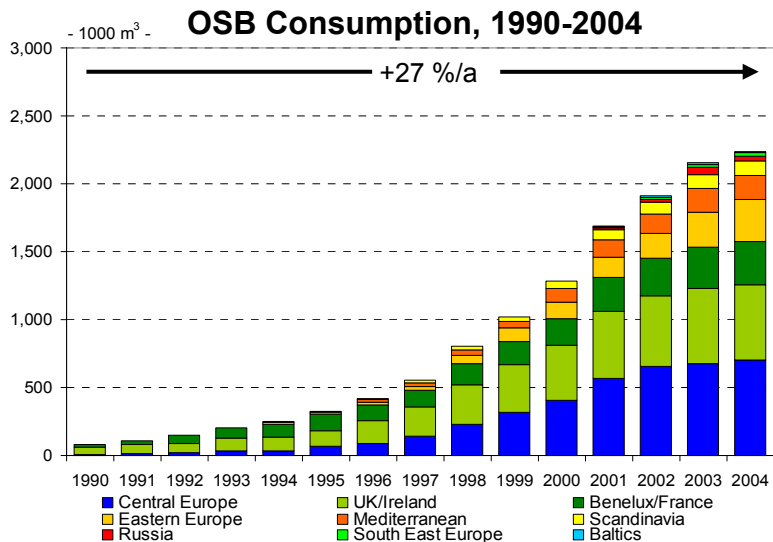
MDF Consumption, 1990-2004



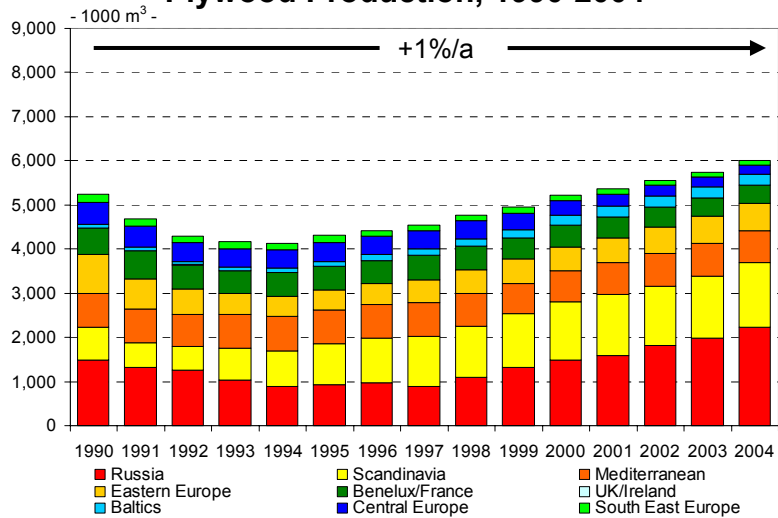
- The European MDF industry performed well and reached its highest level of production, reaching 12.7 million m³, meaning an increase of 9% compared to 2003.
- JPC forecasts that the production will grow by 4%/a up to 2010, reaching 15.2 million m³ while the European MDF consumption will grow by 4%/a to a level of 15 million m³.
- Central Europe (mainly Germany) remained by far the largest producer of MDF in Europe, followed by the Mediterranean region (Spain) and Eastern Europe (Poland).
- During 2004, the highest growth was seen in Eastern European countries such as Russia (750%), Romania (185%), Poland, Ukraine and Belarus.
- Total consumption amounted to 11.6 million m³, 5% higher since 2003. The Mediterranean region followed by Central Europe are the largest consumer regions with 55% of total MDF demand in Europe.
- On a country basis, Germany is by far the largest consumer of MDF with 23.3% of total European MDF demand.



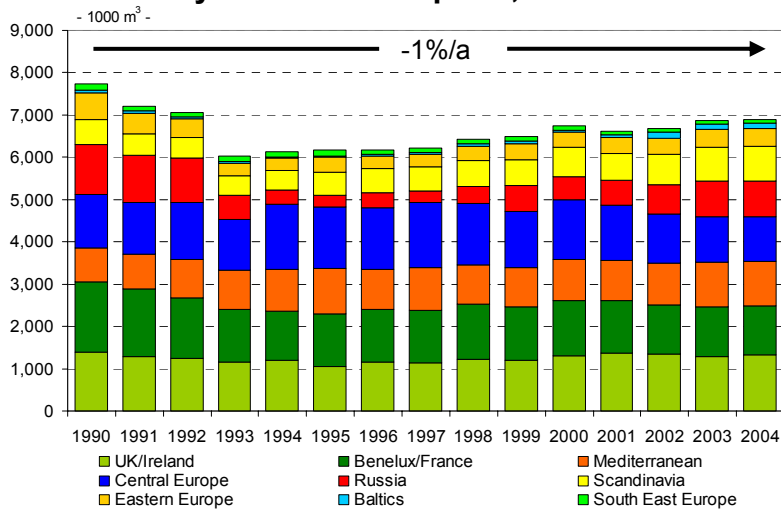
- During 2004, the OSB industry reached a new production record level of 2.8 million m³. The previous record was 2.4 million m³ in 2003. Since 1990, the OSB production has been growing with an impressive 26%/a.
- The OSB production will show a positive growth of 4%/a up to 2010 totalling 3.5 million m³. The OSB consumption will show a more aggressive growth of 5%/a reaching 3 million m³.
- Germany, is the only OSB producer in the Central European region and is the largest producer of OSB in Europe (37.3%).
- Consumption has grown rapidly in recent years, as it substitutes plywood, particleboard and solid wood in many applications.
- European demand for OSB has risen by 5% in 2004 to set a new record level at 2.2 million m³.
- Currently Europe is a net exporter of OSB with a positive net trade of approximately 600,000 m³ and resulting in export strategies in North America and Asia.



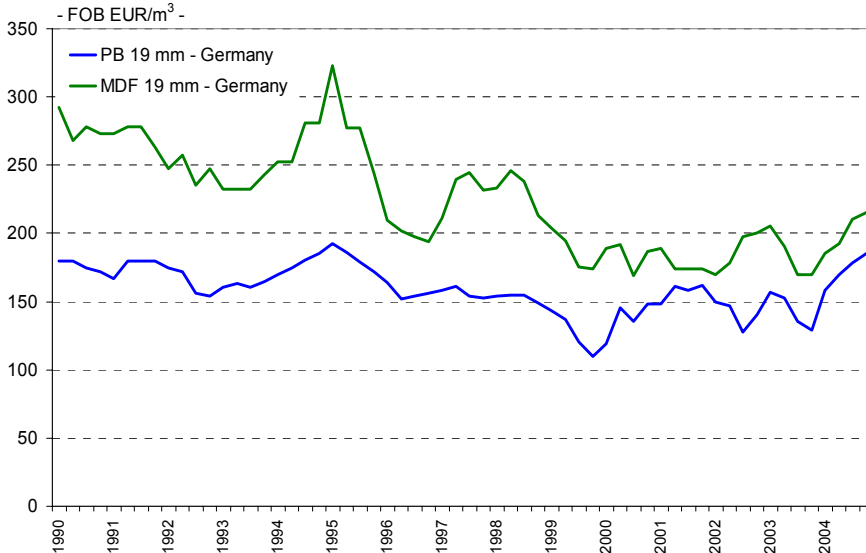
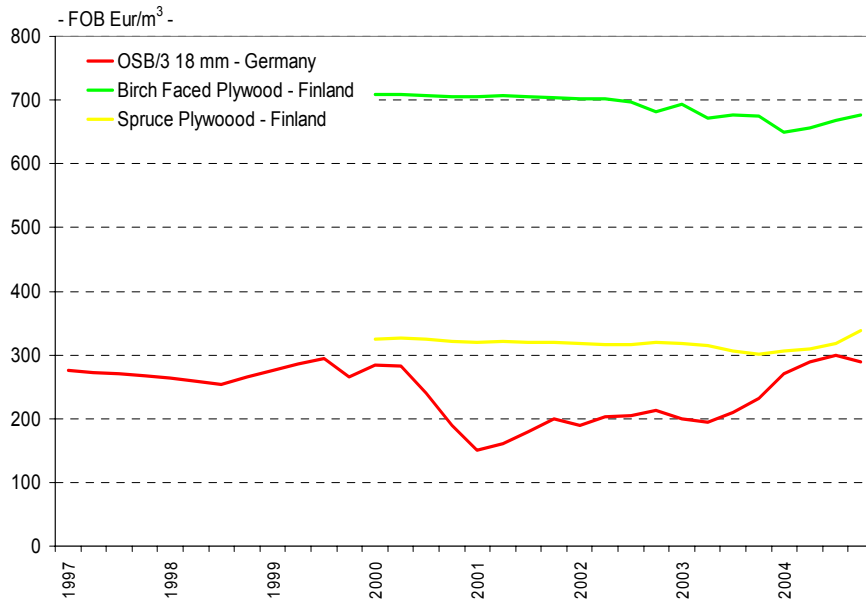
Plywood Production, 1990-2004



Plywood Consumption, 1990-2004



- Plywood production has been relatively stable with an increase of 1%/a overall since 1990.
- Plywood will grow by 0.2%/a up to 2010 and the plywood consumption will grow by 0.15%.
- Rationalisation in France and Italy and contraction of the German industry has been more than offset by strong production in the Nordic countries, increasing the overall production level.
- The majority of plywood production in Eastern Europe takes place in Russia with 70% followed by Latvia, Belarus and Czech Republic.
- Consumption has been relatively stable over the period. Since bottoming out in 1993, however the market has grown and has mainly been driven by the demand in certain regions, mainly in Western European countries such as UK/Ireland (18%), Germany (13%) and Italy (11%). The Eastern European countries are consuming at a higher growth but smaller volumes.
- Demand growth in Eastern European countries is fuelled by expanding construction whilst substitution from OSB restricts further growth.
- Despite rapid demand growth in Eastern European countries, Eastern Europe is expected to have a significant volume available for exports.



- Finnish plywood is the most expensive European hardwood and softwood plywood in the European market.
- The OSB price is highly correlated with softwood plywood – mainly originating from Brazil – in order to keep their respective market share in the region.
- OSB has been more volatile in prices due to its immature stage while MDF and particleboard have been more constant due to their maturity in the European market.
- By the end of 2005, OSB capacity will increase by 25% due to two new plants and expansions of the current OSB capacity and prices are therefore expected to decrease.
- Following the restructuring of Eastern Europe, particleboard prices have been under fierce competition.
- A decline in prices has been shown for MDF with often, stable margins over time.
- Particleboard and MDF have shown a recovery in prices after 2003, a year in which furniture production reached its lowest peak for the last ten years.

Wood-Based Panel Specifications

European standard requirements covering product specifications, physical and mechanical properties, resin testing, CE marking, decay resistance etc.

Wood-Based Panel Standards	
EN 120 : 1992	Determination of formaldehyde content.
EN 310 : 1993	Determination of modulus of elasticity in bending and of bending strength
EN 311 : 2002	Surface Soundness
EN 318 : 2002	Determination of dimensional changes associated with changes in relative humidity
EN 321 : 2002	Determination of moisture resistance
EN 322 : 1993	Determination of moisture content
EN 323 : 1993	Determination of density

Wood-Based Panel Standards	
EN 324 - 1 : 1993	Determination of dimensions of boards, Determination of thickness, width and length
EN 324 - 2 : 1993	Determination of dimensions of boards. Determination of squareness and edge straightness
EN 325 : 1993	Determination of dimensions of test pieces
EN 326 – 1: 1994	Sampling, cutting and inspection. Sampling and cutting of test pieces and expression of test results
EN 326 – 2 : 2000	Sampling, cutting and Inspection. Quality control in the factory
EN 326 – 3 : 2003	Sampling, cutting and inspection. Inspection of an isolated lot of panels
EN 335 – 3 : 1996	Hazard classes of wood and wood-based products against biological attack

Wood-Based Panel Standards	
EN 717 – 1 : 1999	Determination of formaldehyde release. Formaldehyde emission by the chamber method
EN 717 – 2 : 1995	Determination of formaldehyde release.
EN 717 – 3 : 1996	Determination of formaldehyde release
EN 789 : 2004	Determination of mechanical properties of wood based panels
EN 1058 : 1996	Determination of characteristic values of mechanical properties and density
EN 1195 : 1998	Performance of structural floor decking
EN 1438 : 1998	Symbols for timber and wood-based products

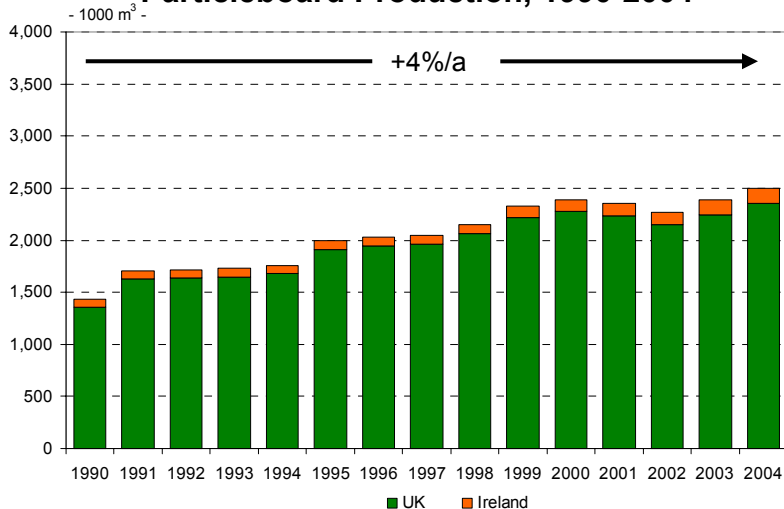
Wood-Based Panel Standards	
ENV 12038 : 2002	Durability of wood and wood-based products Determining the resistance against wood-destroying basidiomycetes
EN 12369 – 1 : 2001	Characteristics values for structural design
EN 12369 – 2 : 2004	Characteristics values for structural design
EN 12871 : 2001	Performance specifications and requirements for load bearing boards for use in floor, walls, and roofs
EN 13446 : 2002	Determination of withdrawal capacity of fasteners
EN 13986 : 2004	Characteristics, evaluation of conformity and marking
EN 14322 : 2004	Melamine faced boards for interior uses.

Market Update by Region

Particleboard Market Update by Region

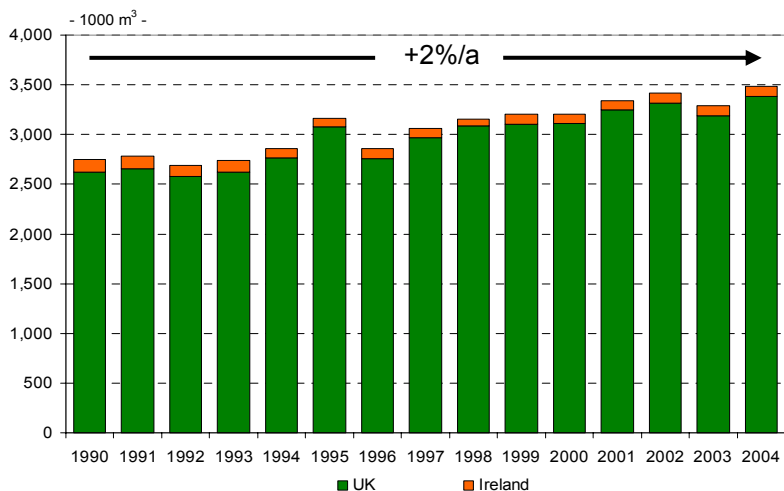
Production, consumption, capacity, new investments

Particleboard Production, 1990-2004

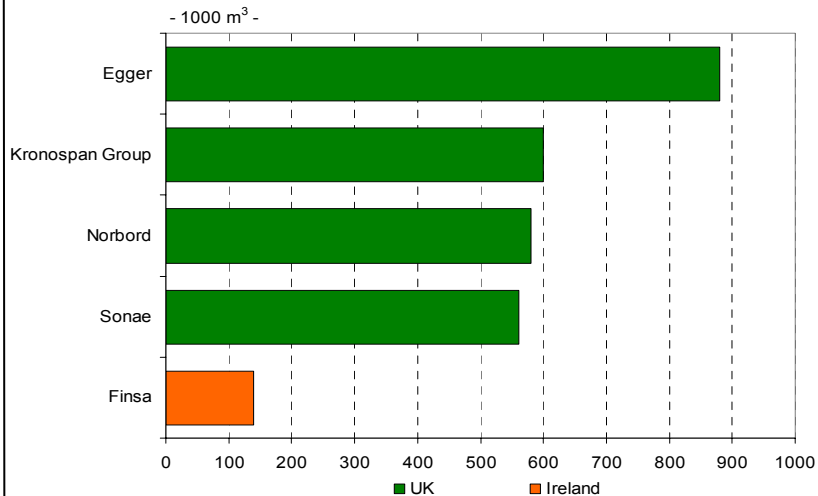


- PB production has grown over the last 10 years reaching a maximum of 2.5 million m³ in 2004.
- For 2005, particleboard production is likely to continue on a similar level as in 2004.
- The UK is the leading player in the region, holding 94% of the production share for over 10 years.
- Ireland and the UK have increased their production capacities by 64% (investment by Finsa) and 36% (Kronospan UK, Norbord and Egger) respectively since 1990.
- In the last 10 years, the UK has seen several PB production line replacements by the main players (e.g. Nexfor/Norbord at Cowie, Kronospan in Chirk) and investments by Egger Barony and Sonae Knowsley.

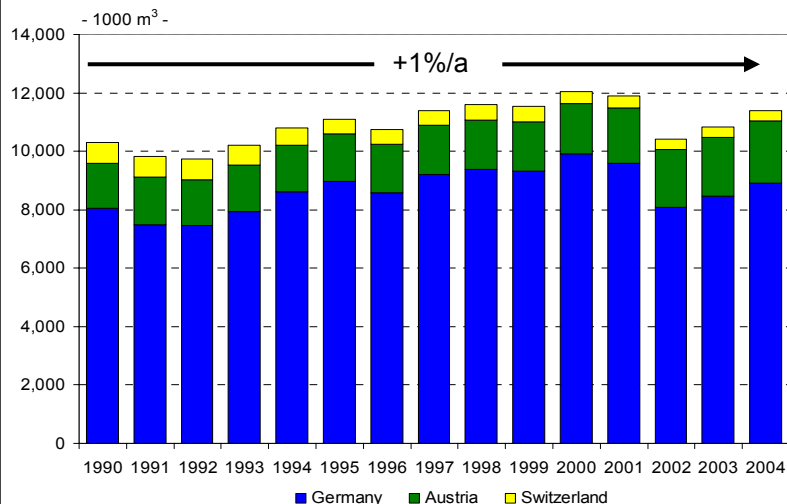
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

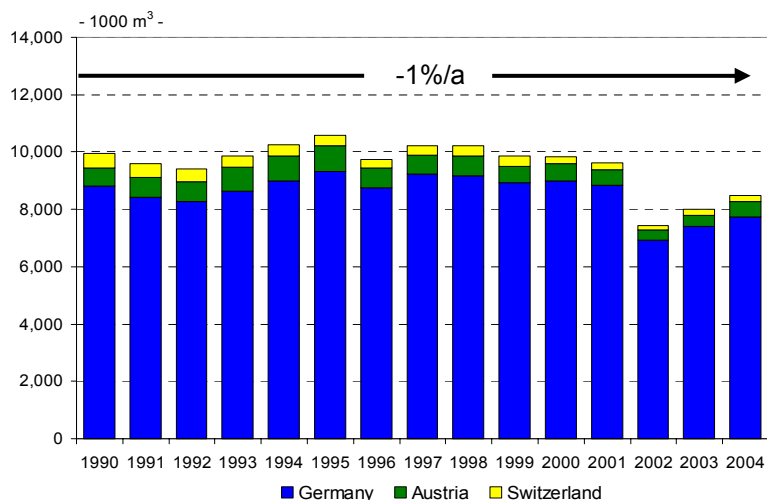


Particleboard Production, 1990-2004

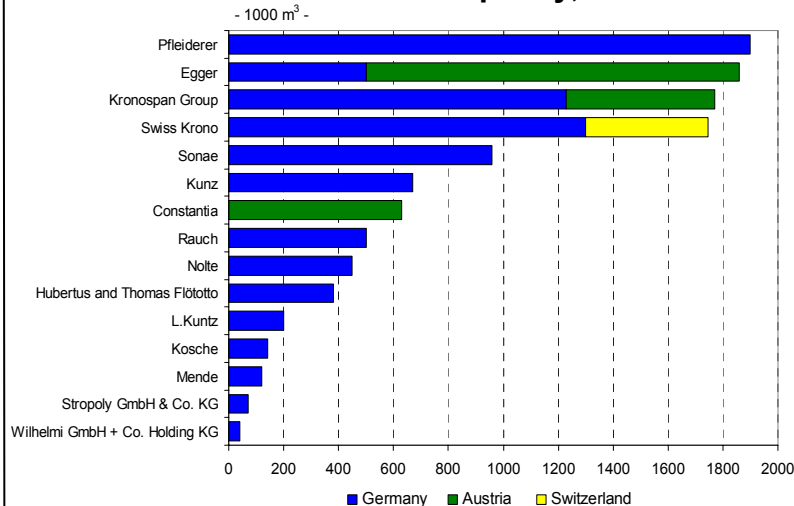


- Production is still recovering from a significant drop in 2002 due to a slow down in the German economy as well as a serious restructuring of its particleboard industry and shutdown of many old mills.
- Germany remains the most important producer in Europe and in the region with a total production of 8.9 million m³. Germany increased its production by 5% since 2003.
- Austria and Germany are a key exporting country, exporting mainly to the Mediterranean region, Denmark, the UK and Poland.
- During 2004, particleboard production in Austria crossed the 2 million m³ limit.

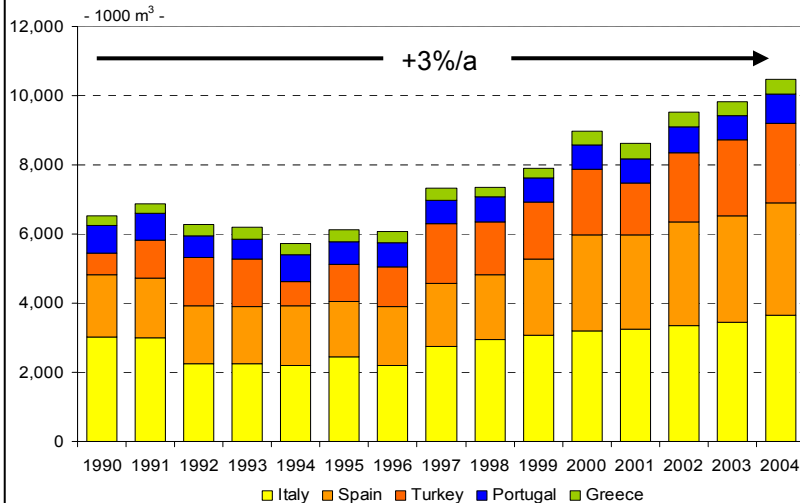
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

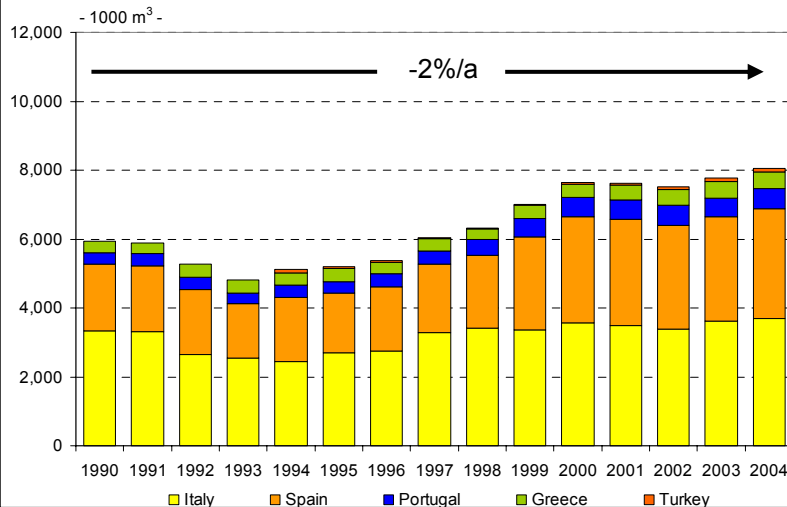


Particleboard Production, 1990-2004

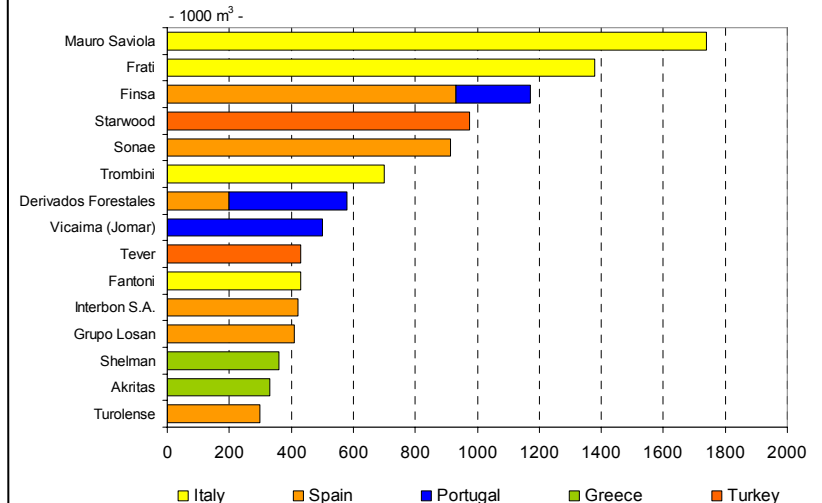


- Italy, Spain and Turkey reached a new highest level in particleboard production with on average more than 3% growth since 1990.
- The Italian particleboard industry increased its production by 6% since 1990 driven by its strong furniture industry.
- Turkey is rapidly developing as a new production centre in the area and especially for the Balkans.
- A long tail of small producers of particleboard with an average capacity of 100,000 m³ ranging between 200,000 and 20,000 m³ follow the 15 largest players.

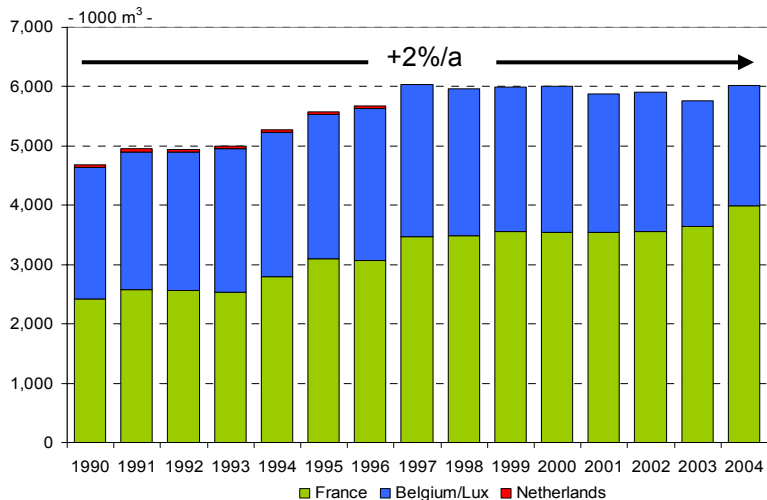
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

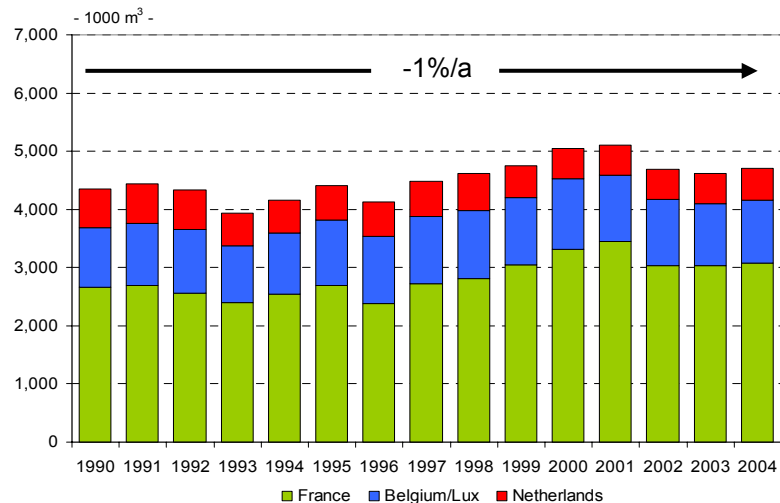


Particleboard Production, 1990-2004

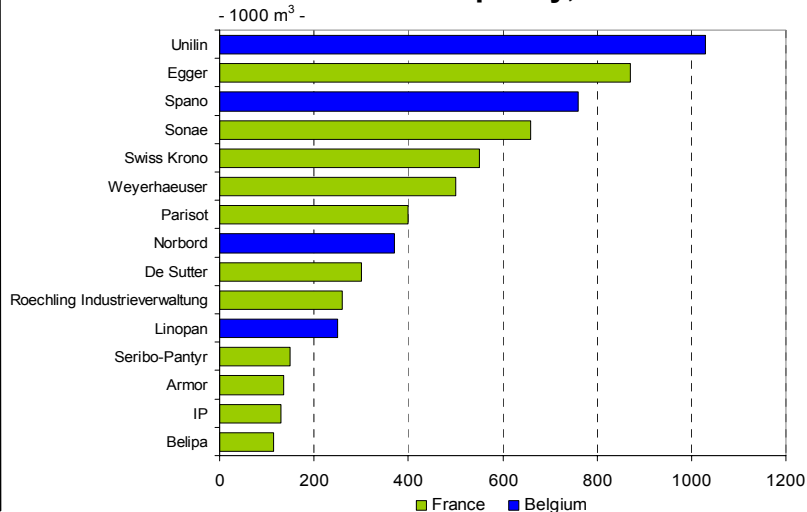


- France holds a share of 66% in the region and presented a striking 10% increase reaching nearly 3.9 million m³ in 2004.
- Belgium faced a reduction in its production output. This decrease was related with the sizeable capacity cuts in 2003 and a weak demand in the furniture industry.
- Unilin is the largest producer in the region with a state-of-the-art mill with a maximum capacity of 550,000 m³/a.
- Many of the leading European groups i.e. Egger, Sonae or Swiss Krono Group have PB capacity in France while Belgium is dominated by local producers.

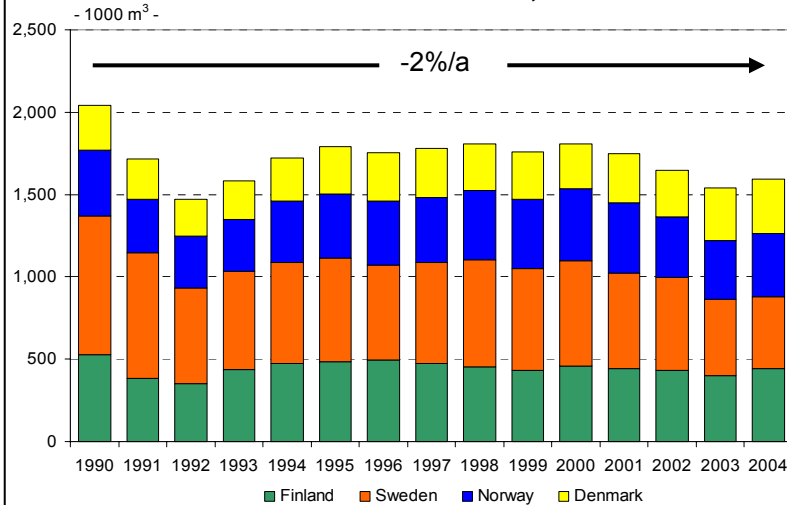
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

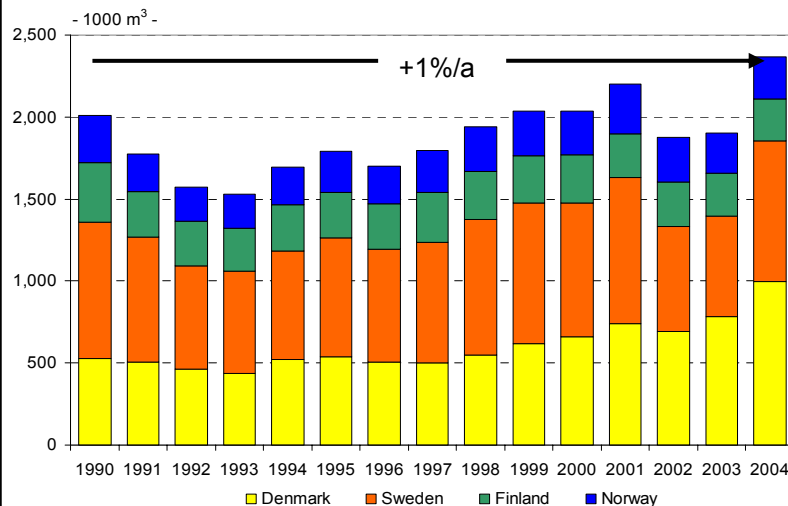


Particleboard Production, 1990-2004

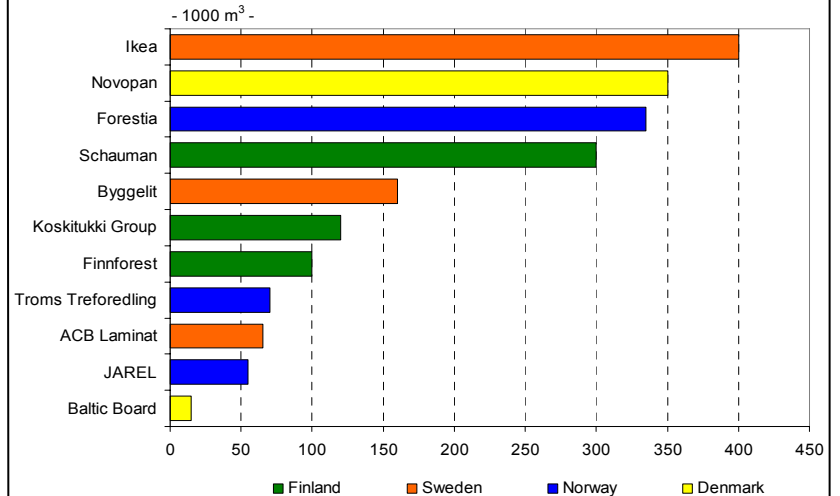


- The Finnish particleboard industry improved their export activities and therefore increased their particleboard production. Despite this favourable development, domestic demand remained weak and contracted by 3.4%.
- Sweden was confronted with a reduction in production for the fourth consecutive year. This decrease can be attributed to mill closures and reduced capacity driven by the biomass energy competition.
- High wood costs and small mills plague the Nordic industry vs. imports from Germany and Poland.
- Ikea commissioned their new state-of-the-art line in 2003. ACB Laminat has announced the commissioning of 150,000 m³ refurbished capacity.

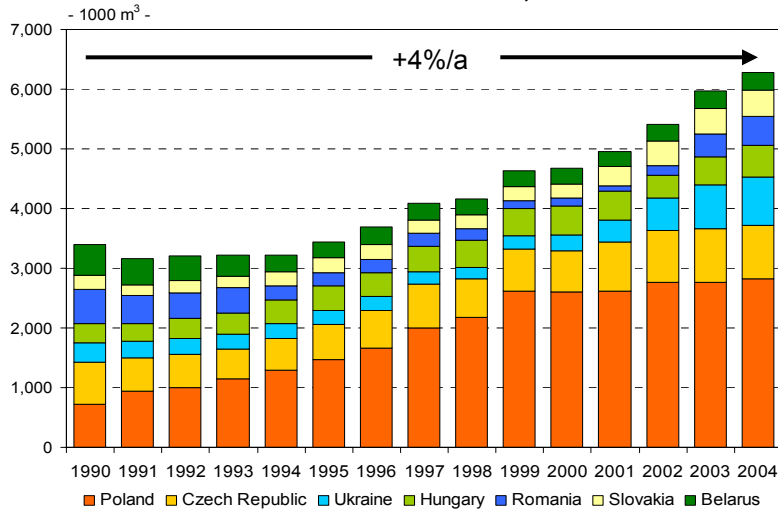
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

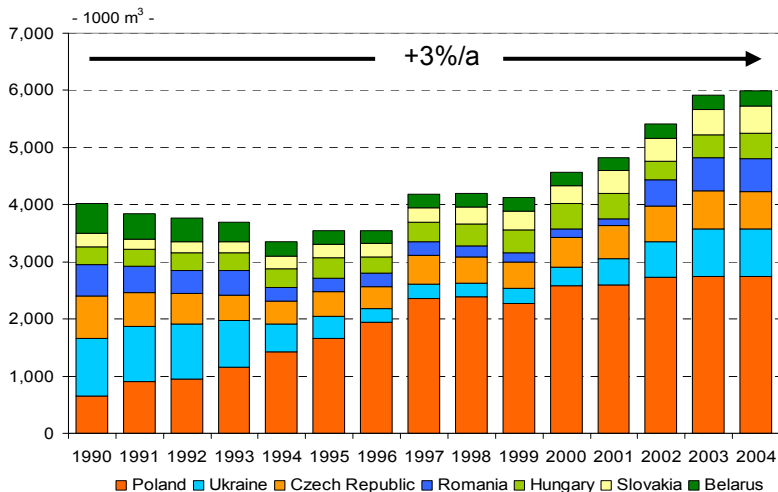


Particleboard Production, 1990-2004

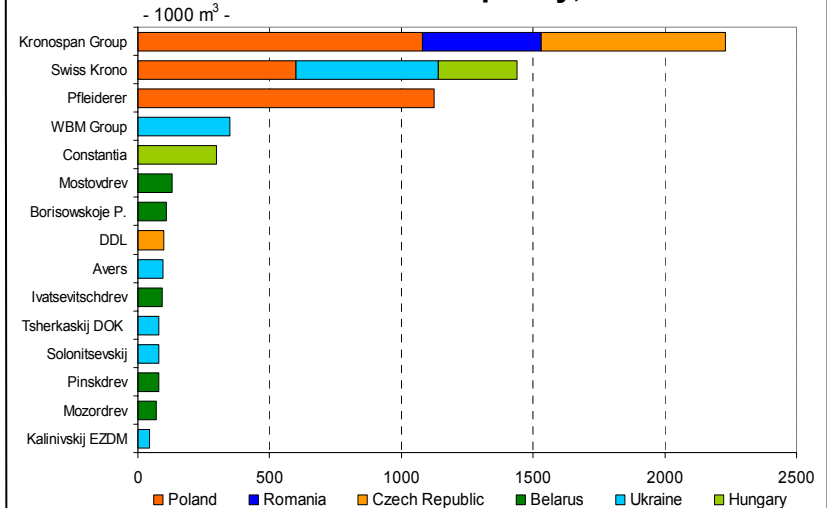


- Significant growth overall since 2000 for production (8%/a) and consumption (7%/a).
- Key driver for the production growth in the region was the growing expansion of furniture production. Companies moved from Western Europe to Eastern Europe to take advantage of the lower manufacturing costs and investment capital grants and tax relief programmes.
- Poland and Slovakia and Ukraine have presented the most remarkable production growth in the region by 142%, 117% and 185% respectively.
- Expansion in Poland is increasingly limited by fibre supply.
- New investment is planned by Swiss Krono Group in Ukraine.
- A large number of smaller particleboard producers with an average of 35,000 m³.

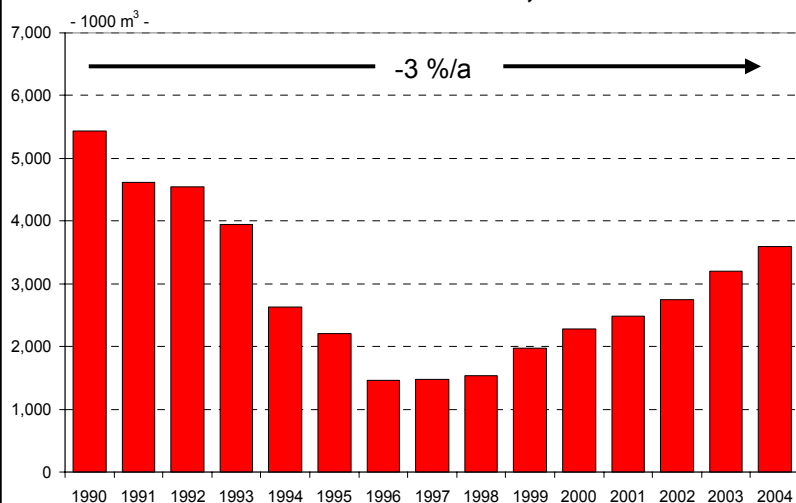
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

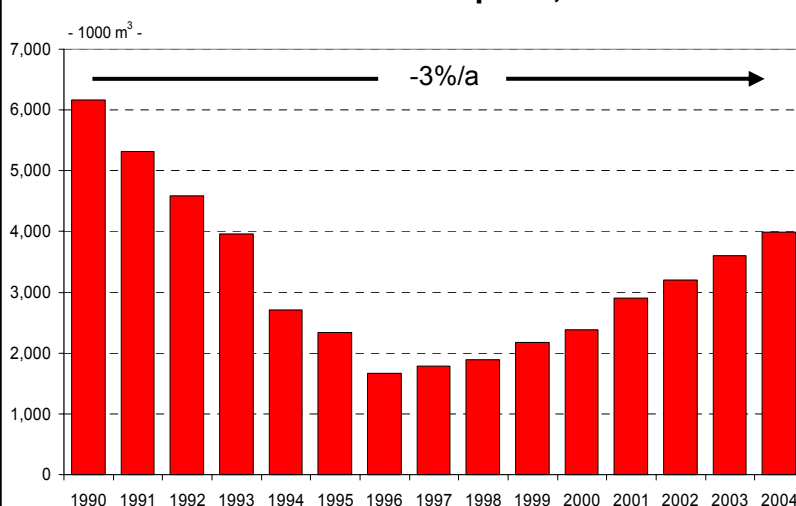


Particleboard Production, 1990-2004

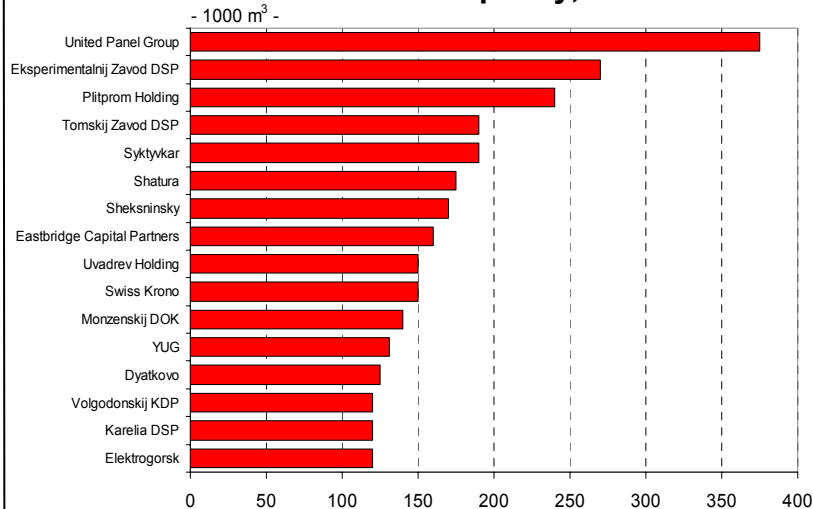


- Russia holds 8% of European production share and is growing fast driven by domestic demand.
- New investments: Egger Shuya 250 000 m³, Pfeleiderer Podberezje 500 000 m³, Kronostar Swiss Krono 500 000 m³, Kronospan Group Yegorievsk 500 000m³ (all 2005/6).
- Prices are attractive, albeit more volatile as big investments come in. A significant supply side gap has to be filled with modern and new lines. Many existing Russian mills are not fit to compete in the future, closures appear unavoidable.
- The start-ups will create volume and price waves.

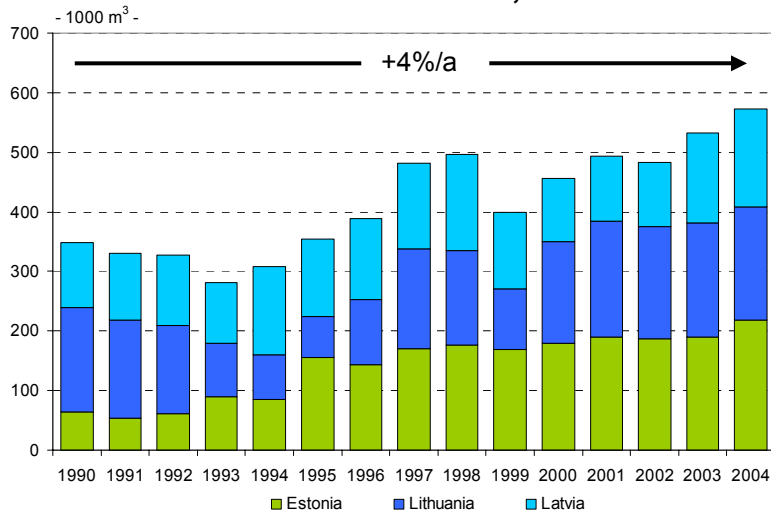
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

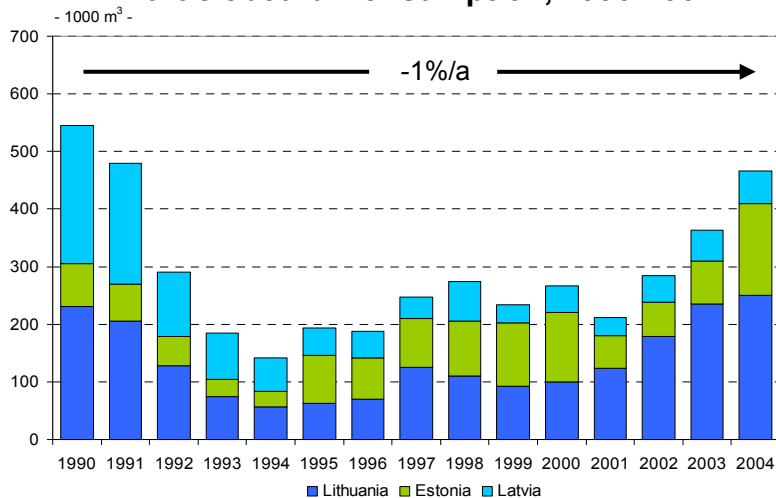


Particleboard Production, 1990-2004

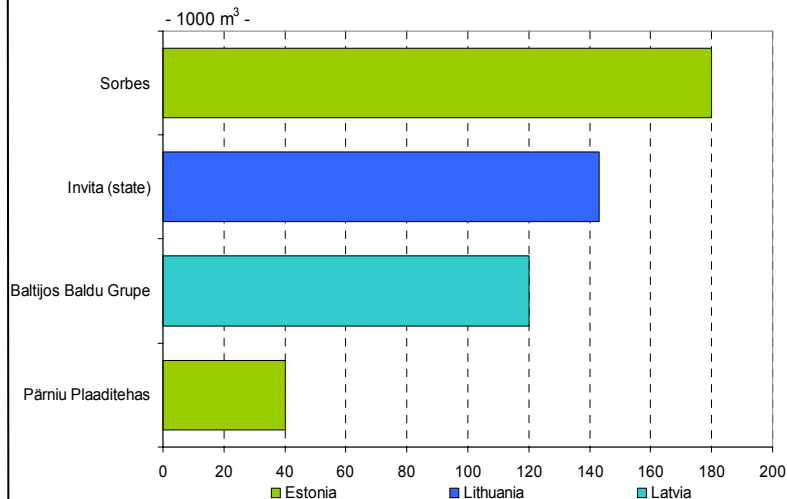


- The particleboard industry in the Baltics consists of 4 plants with an annual production of 483,000 m³ in 2004.
- Following several years of continuous growth, the production output of 2004 show again an increase.
- The furniture industry is the main consumer of particleboard, accounting for 80% of total sales.

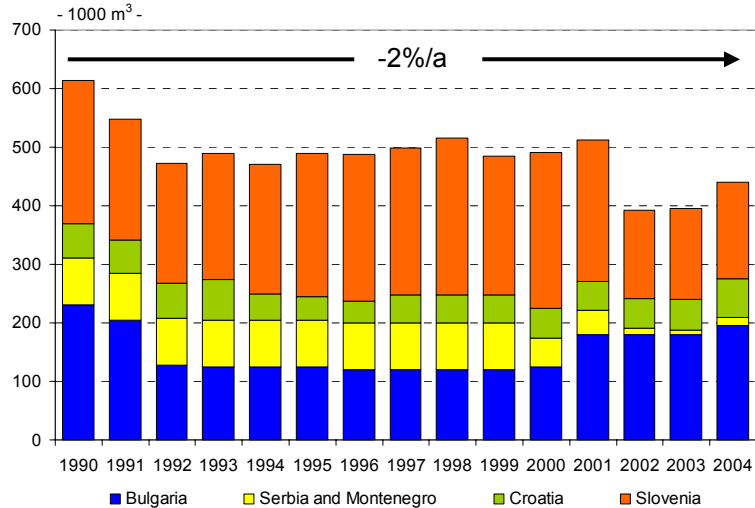
Particleboard Consumption, 1990-2004



Particleboard Capacity, 2005

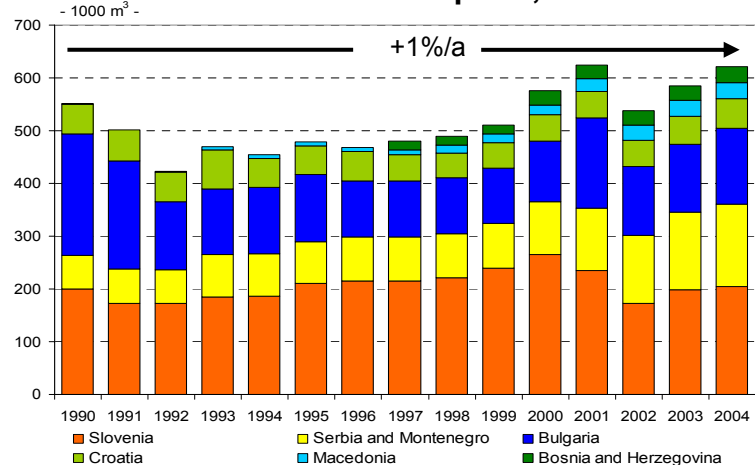


Particleboard Production, 1990-2004

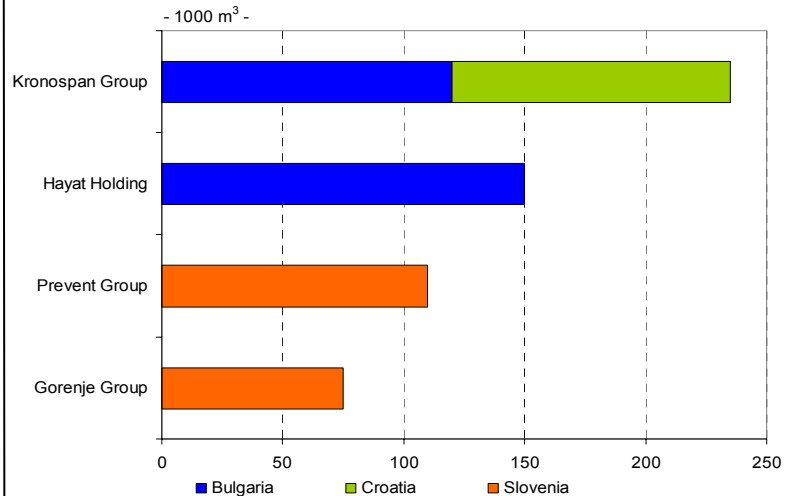


- Particleboard production picked up in 2004 following two years of reduced output levels. This contraction has been linked with the closure of mills in Serbia and Montenegro.
- Slovenia particleboard industry increased their production in 2004 by 5% up to 165,000 m³.
- The increase of production in the region has been supported by a firm demand growth on the domestic demand as well as exports.
- The furniture industry has been the most important driver for the increase in the domestic consumption in the region.
- Bosnia has no particleboard production facilities

Particleboard Consumption, 1990-2004

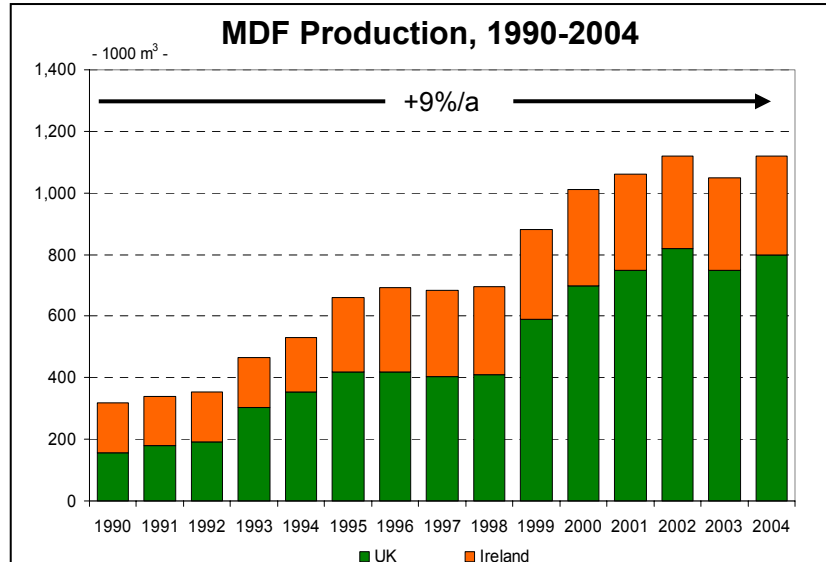


Particleboard Capacity, 2005

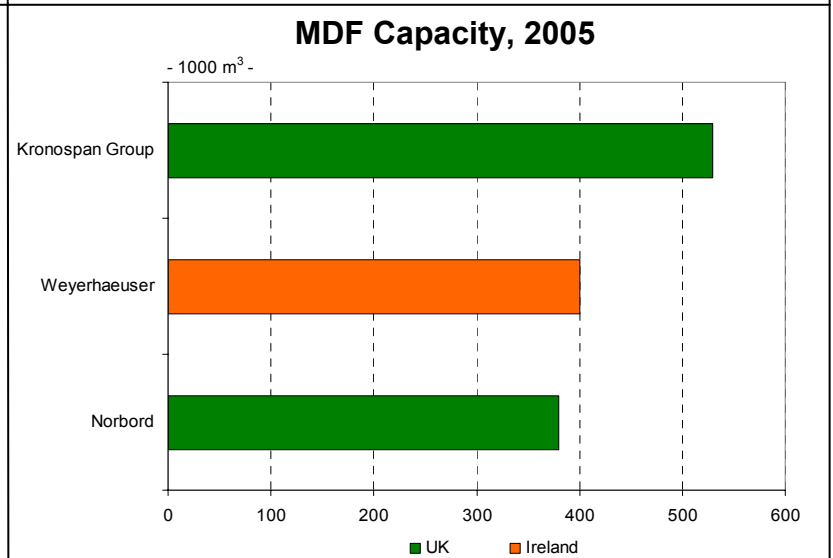
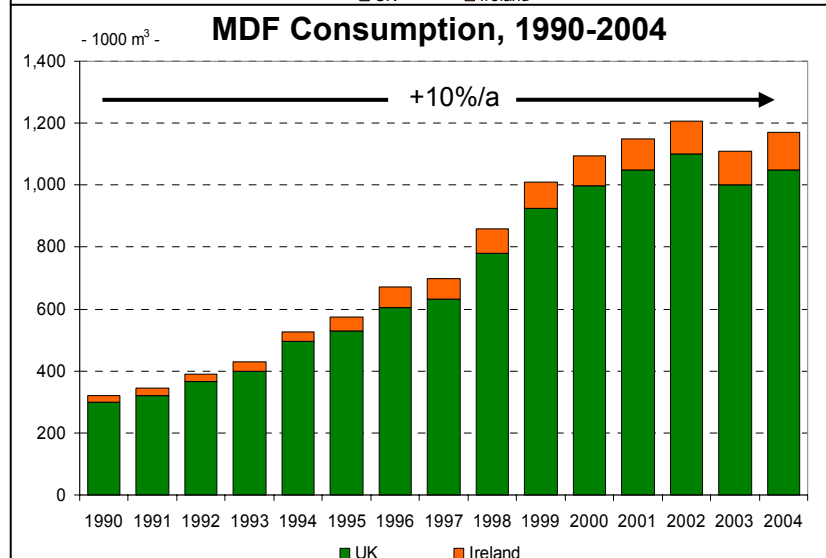


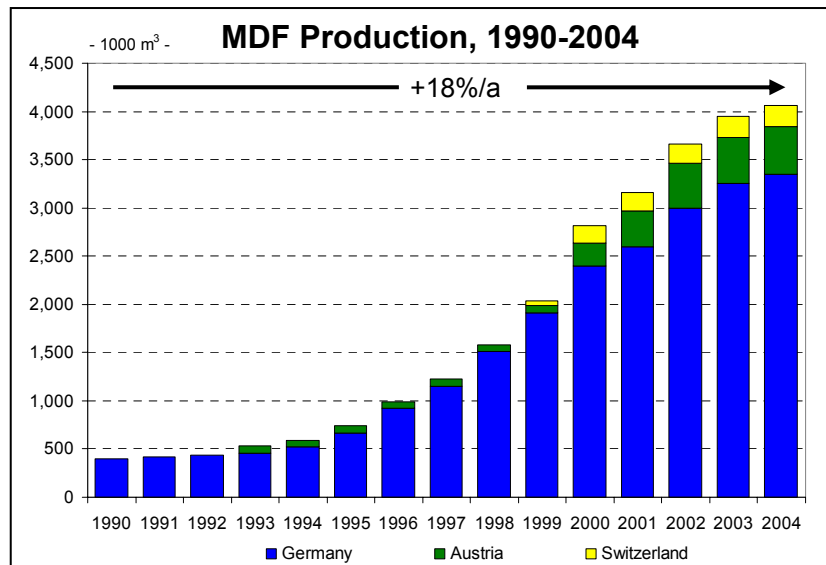
MDF Market Update by Region

Production, consumption, capacity, new investments

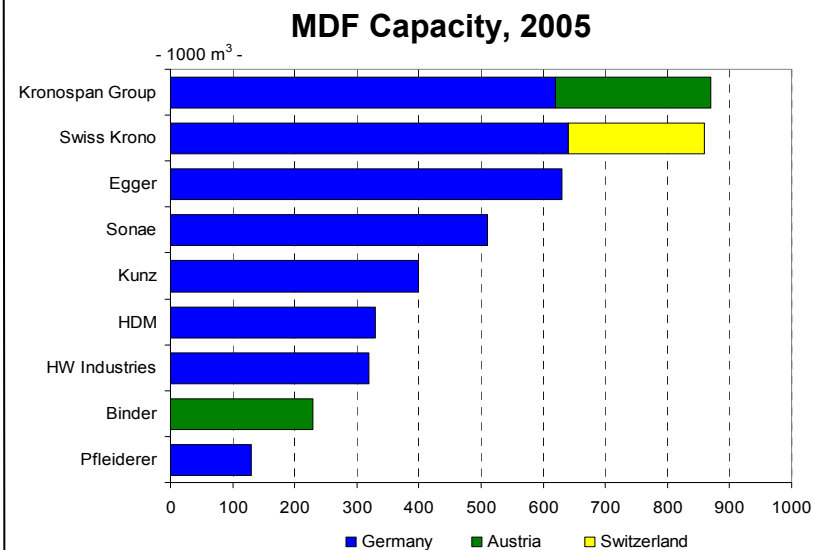
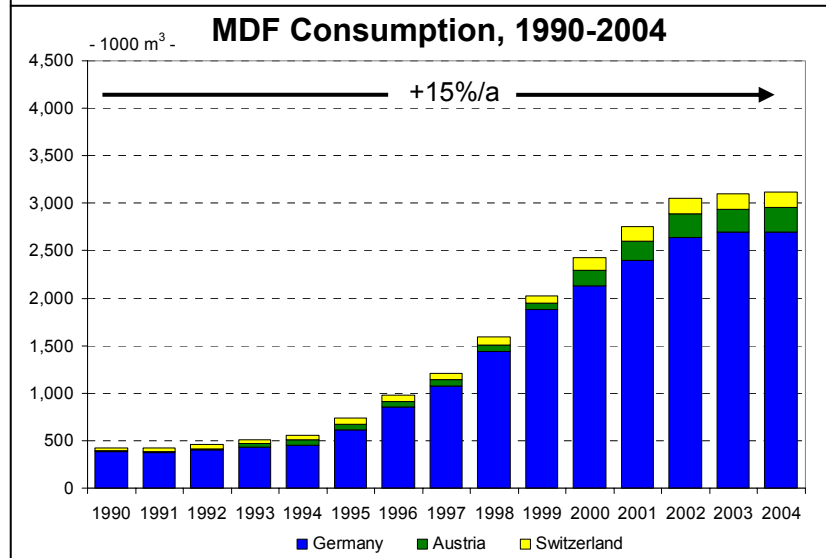


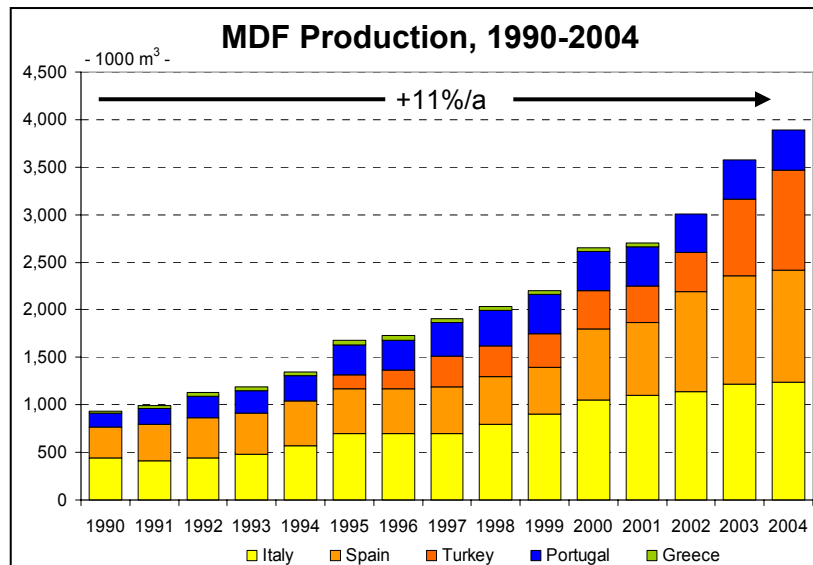
- UK is the leading player in the area. UK holds 71% of the total production in the region. Overall UK has increased its share in production from 49.5% in 1990 to 71% in 2004.
- Ireland is a net exporter mainly to UK and other countries in the continent.
- Kronospan with a state-of-the-art mega site heavily integrated vertically and forward is the dominant player in the market.
- Production increased significantly with the commissioning of the Kronospan presses in 1998-99.
- For 2005, MDF demand is expected to expand by 4%



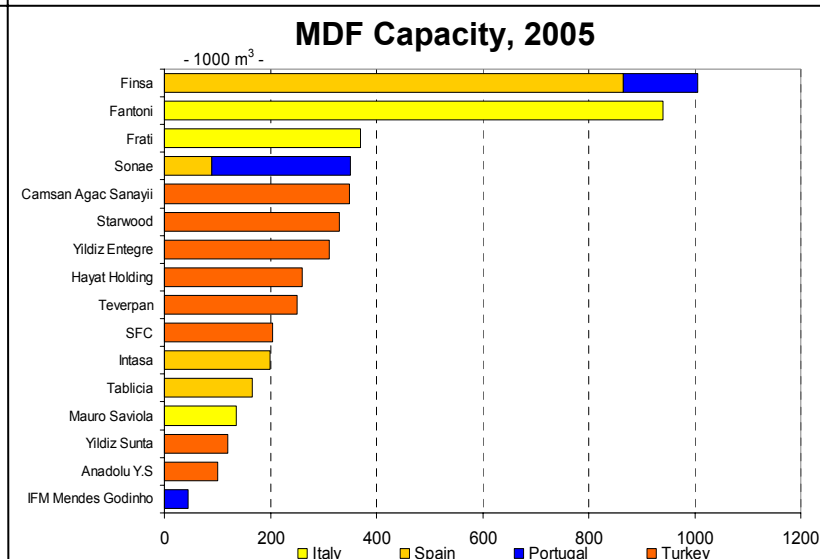
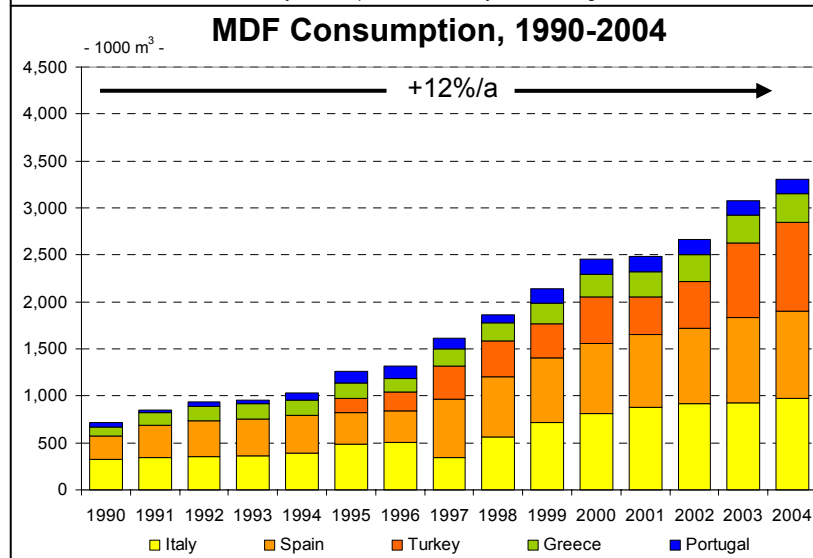


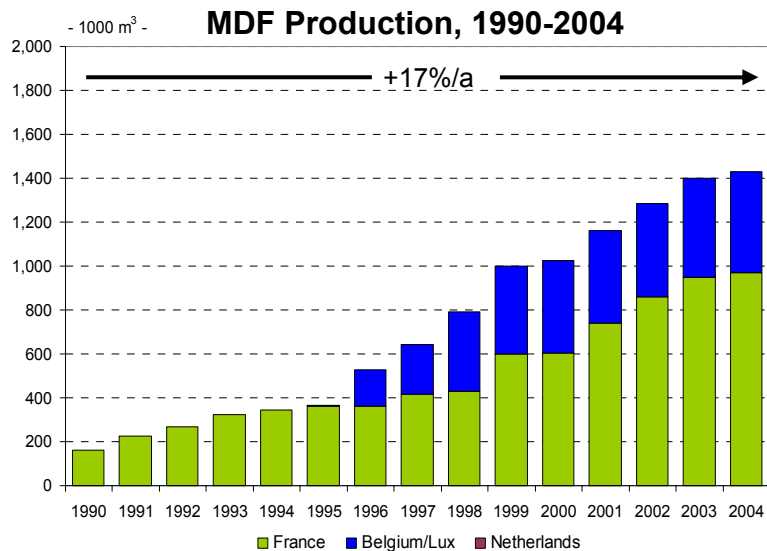
- Germany holds 82% of the production share in the region and is the largest MDF producer in Europe.
- Germany has increased its production since 1998. The German MDF industry has been operating at full capacity and reconfirmed its leading position in Europe.
- Austria holds only 12% of the production and Switzerland is the smallest player in the region holding only 5% of the production share.
- Germany is the largest consumer of MDF in Europe, accounting for 25% of European demand.
- There are no known plans for new investments in the area.



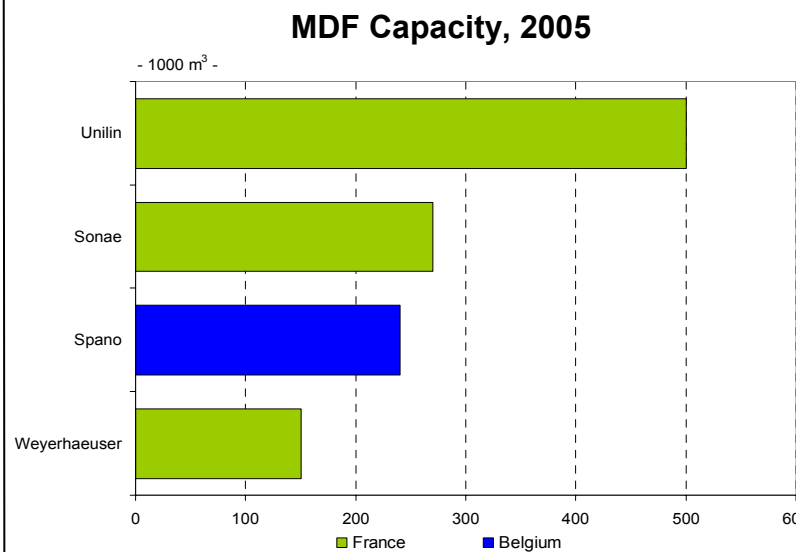
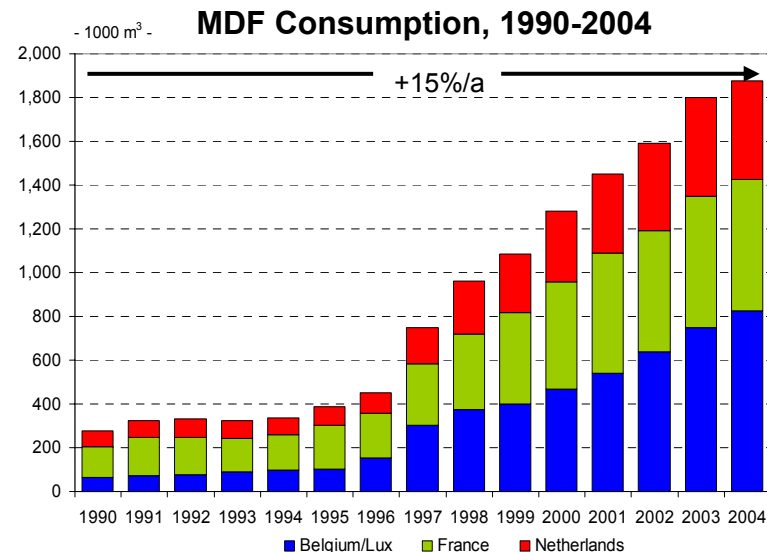


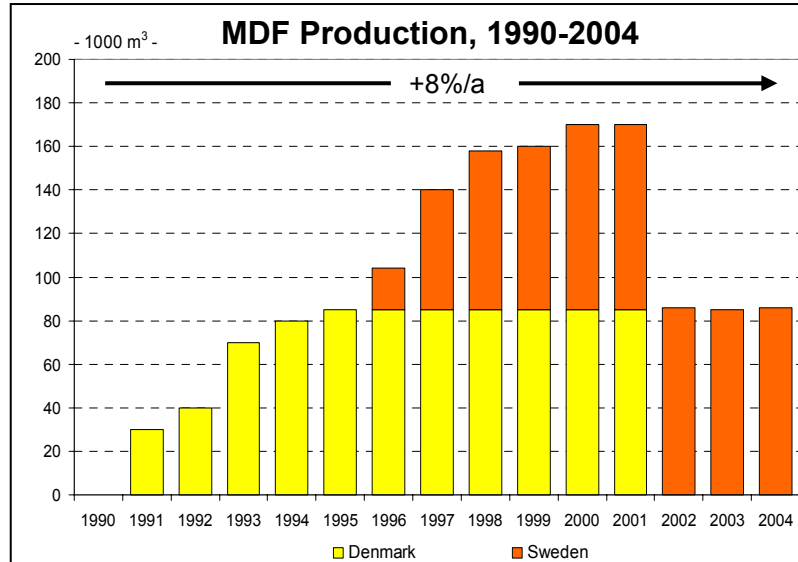
- Spain and Italy hold 41% and 44% of the production share. Both have presented a significant growth in production since 1990.
- Greece loses its only MDF plant (Pindos) but Alfawood has announced the commissioning of 100,000 m³ of a new MDF line in the same area by 2006. Alfawood has a furniture plant in Bulgaria.
- Turkey is the new emerging power in the region with a significant increase of production share over the last ten years, from 0% in 1993 to 16% in 2003.
- New investments are seen in Turkey by 2005-2006: Serdar Inegöl, 130,000 m³, Yildiz Entegre Arslanbey, 300,000 m³, Yildiz Sunta Bursa, 330,000 m³



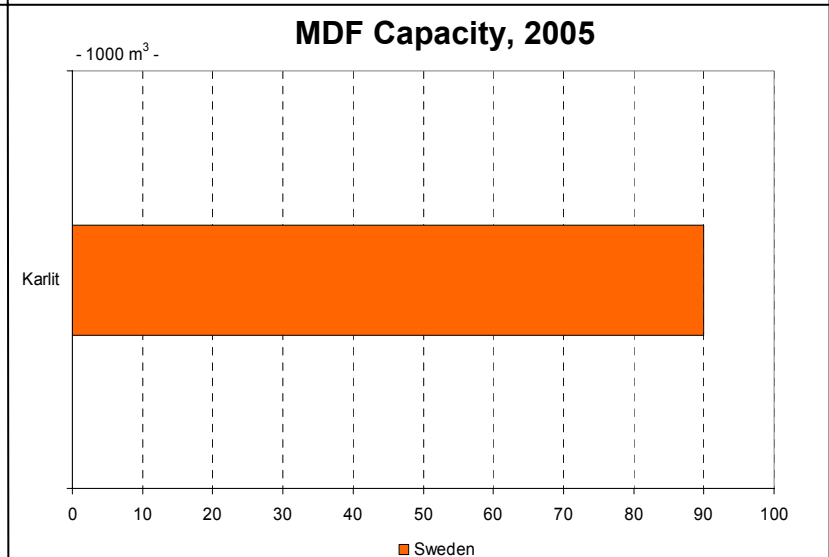
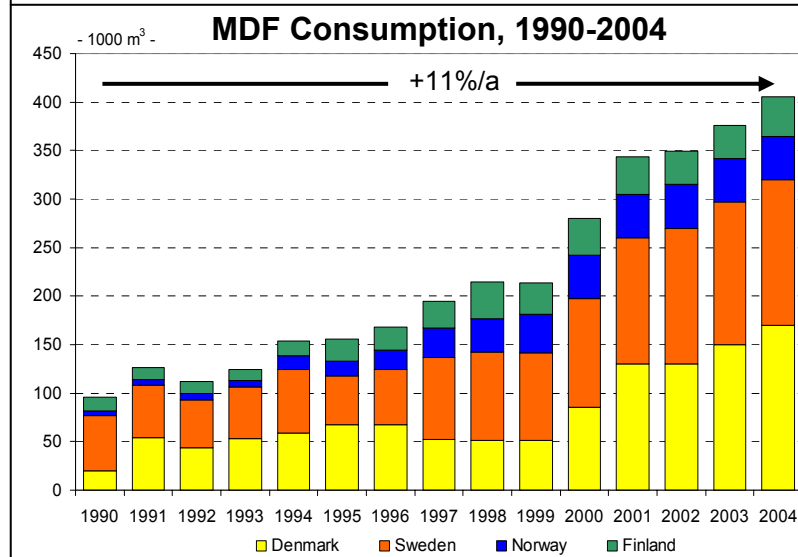


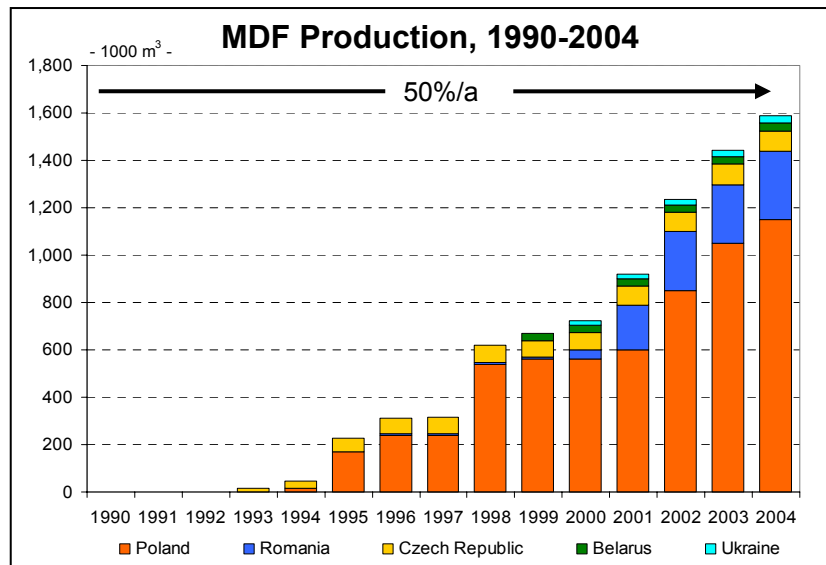
- The MDF industry in France achieved another dynamic increase in production with a 2% increase since 2004.
- The French industry is running at full capacity and is the third largest MDF producer in Europe with a share of 8%. Besides firm exports activities, the home market proved to be a key growth contributor during 2004. In particular the laminate flooring industry is a major consumer of MDF in France.
- The region plays a strategic role in exports for the UK market.
- The Netherlands is a net importer of MDF and has been increasing its domestic consumption at a high rate since 1997.



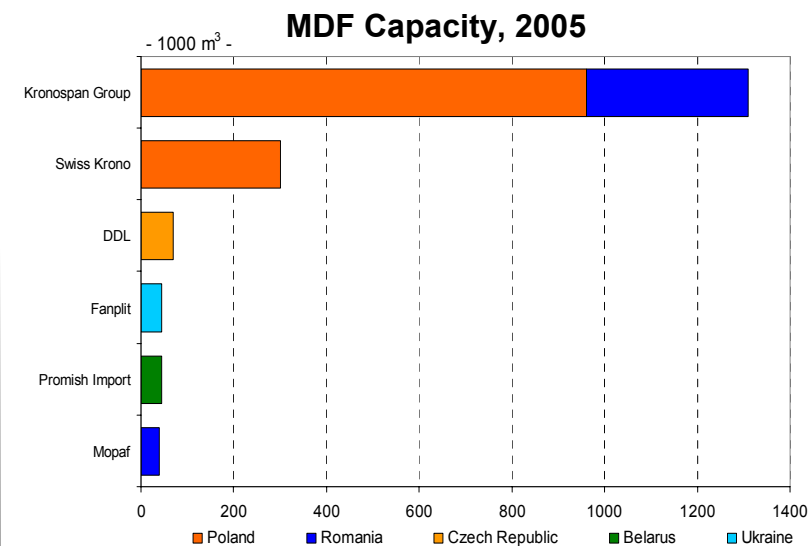
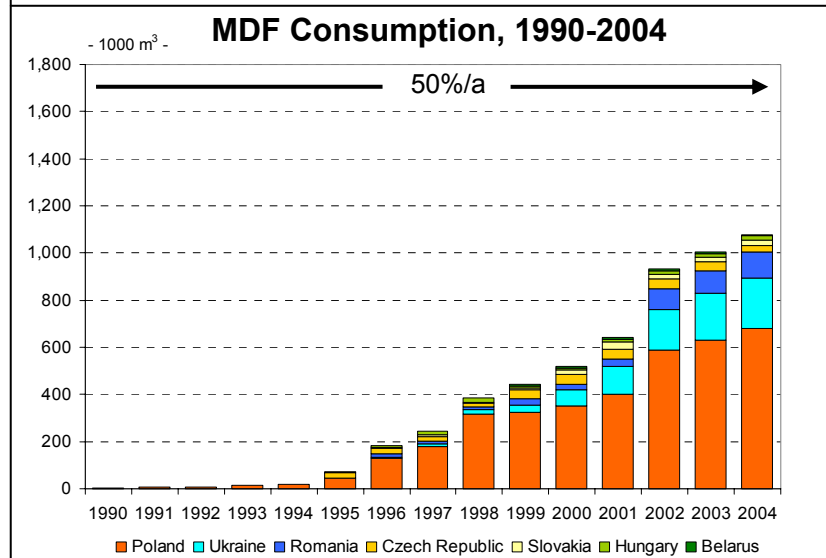


- In the absence of a local MDF industry in Finland, Denmark and Norway, domestic demand is entirely met by imports.
- There is a small MDF mill in Sweden, commissioned in 1996 which belongs to IKEA. Denmark lost its only MDF mill in 2002.
- The region is a net importer of MDF. It is mainly imported from Germany and Poland. This has been driven by the biomass energy developments which resulted in a reduction of availability of raw material.
- The rather modest volumes of MDF imported in the region are mainly due to the fact that the furniture industry primarily uses solid wood and particle-board, while the strong sawn timber production restrains MDF from substituting in solid wood applications.

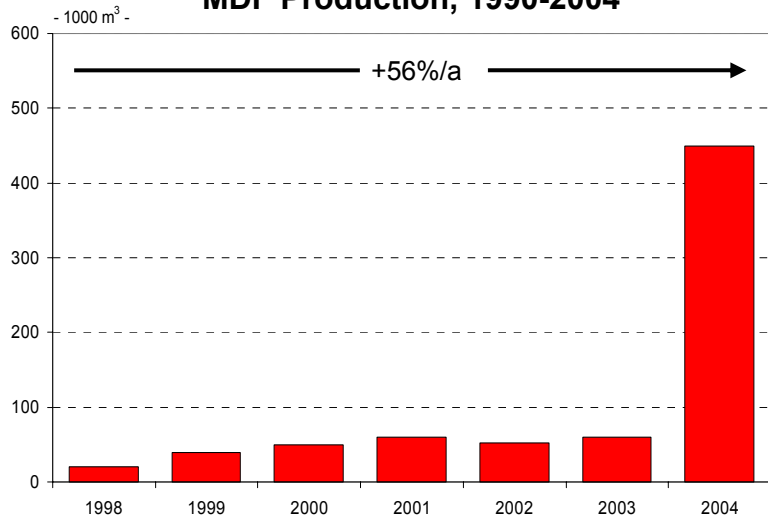




- Back in 1993, Czech Republic was the only country in the region with MDF production with 20,000 m³.
- Now the region has become an emerging centre of MDF production with Poland holding the largest production share in the market with 70%, followed by Romania 16%.
- All the increase in production is due to Kronospan Group as well as Swiss Krono investments in the area.
- Czech Republic, Belarus, Ukraine and Slovenia are small players in the region holding 6%, 2%, 2% and 4% respectively.

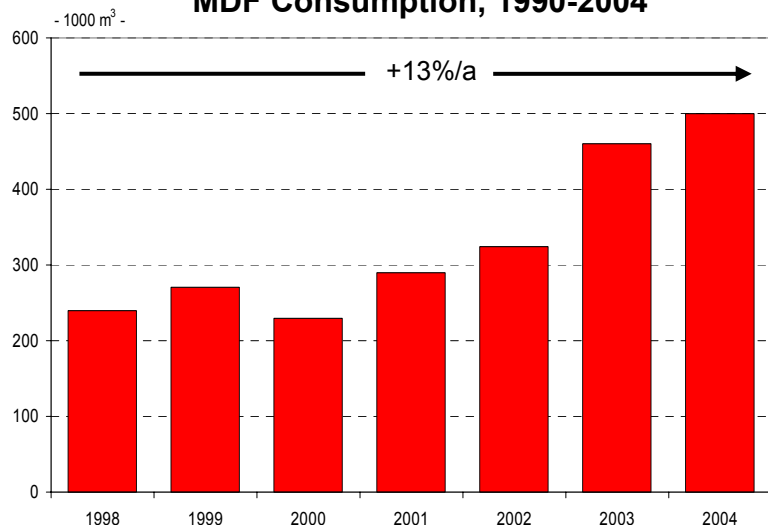


MDF Production, 1990-2004

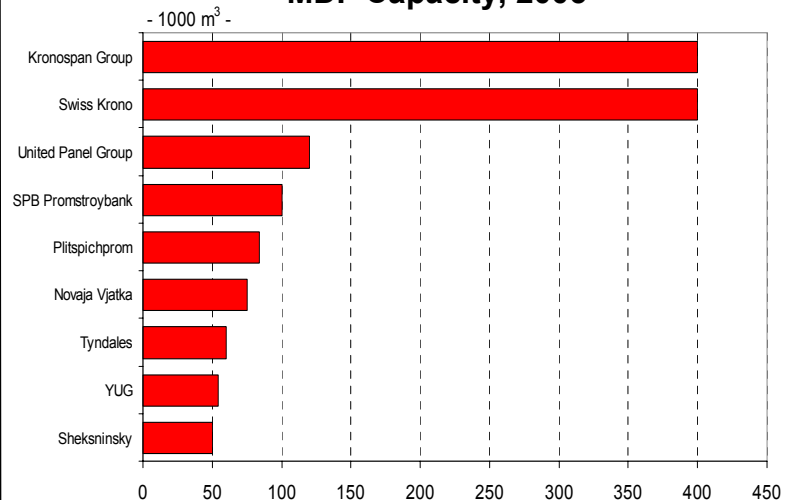


- Total domestic production in 2003 was below 100,000 m³. However, this changed dramatically in 2004 since three new foreign investments from Swiss Krono 400 000m³, Kronospan Group 400 000 m³ (two lines) and UPG 120 000m³ started production.
- Both MDF production and consumption are growing rapidly reaching 800 000m³ in 2005/6. The new MDF producers are expected to "create" the MDF market in Russia by transferring successful business concepts from Poland/Germany in Russia.

MDF Consumption, 1990-2004

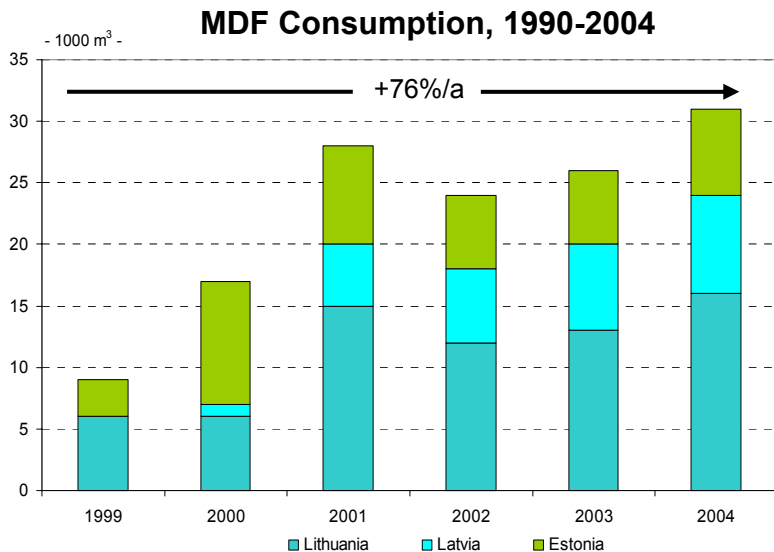


MDF Capacity, 2005

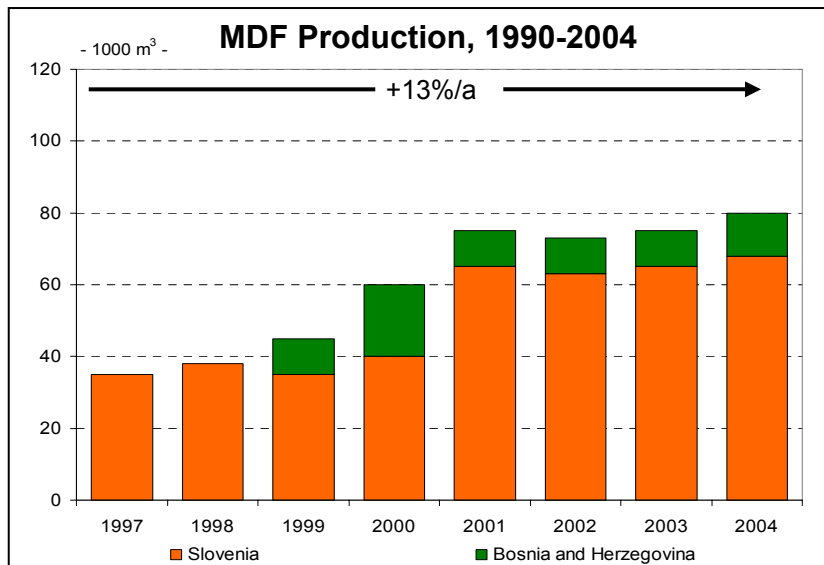


There is no MDF production in the region

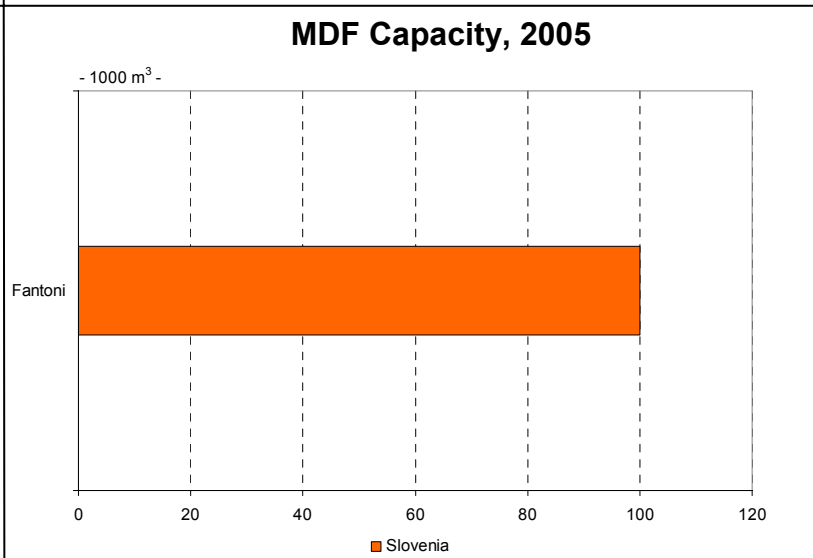
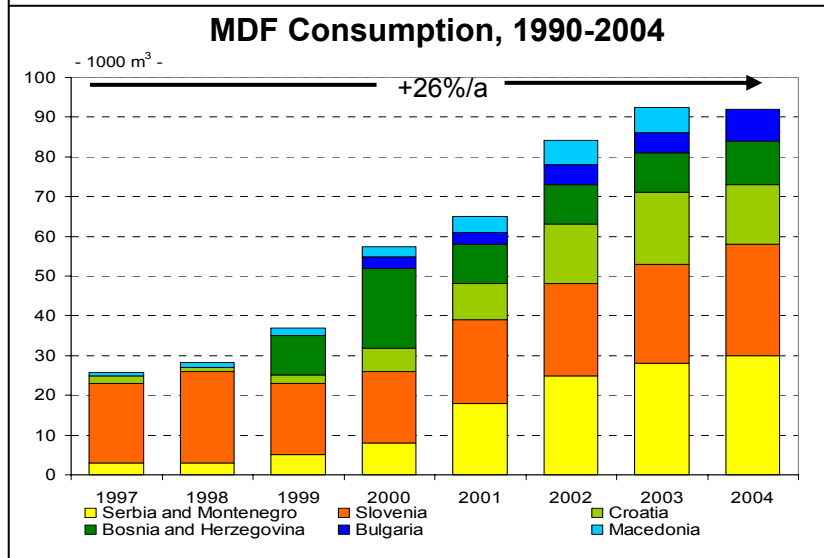
- There is no MDF production in the Baltics. It is the only region in Europe that does not produce MDF.
- The Baltics fully depends on imports to meet demand and only marginal volumes have been imported to meet the domestic demand.
- Consumption increased by approximately 20% in the year 2004 and is anticipated to follow a similar trend by the end of this year.



There is no MDF production in the region

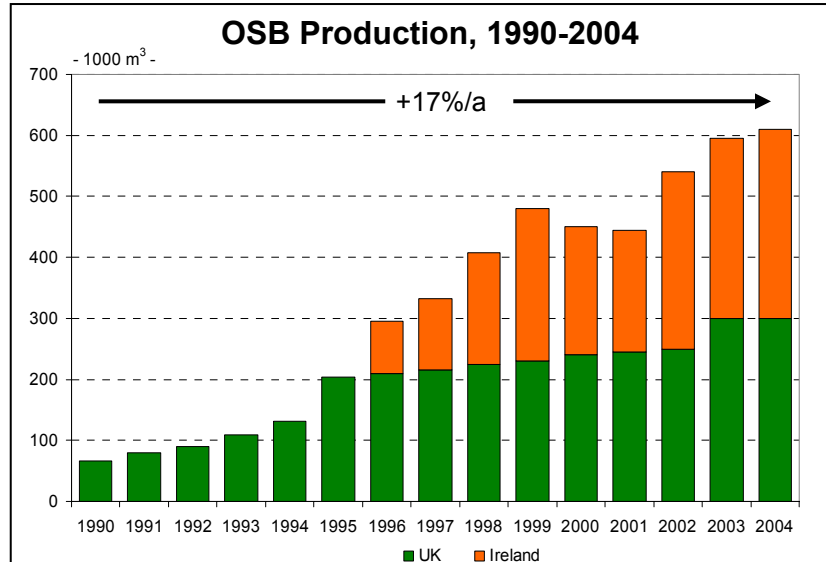


- MDF production is limited to 80,000 m³.
- In the absence of local MDF industry in Bulgaria, the domestic demand is fully supplied by imports.

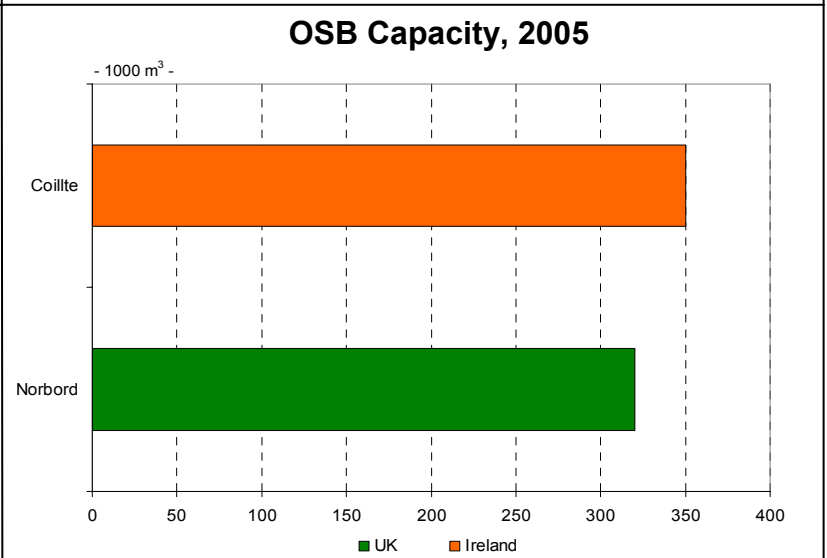
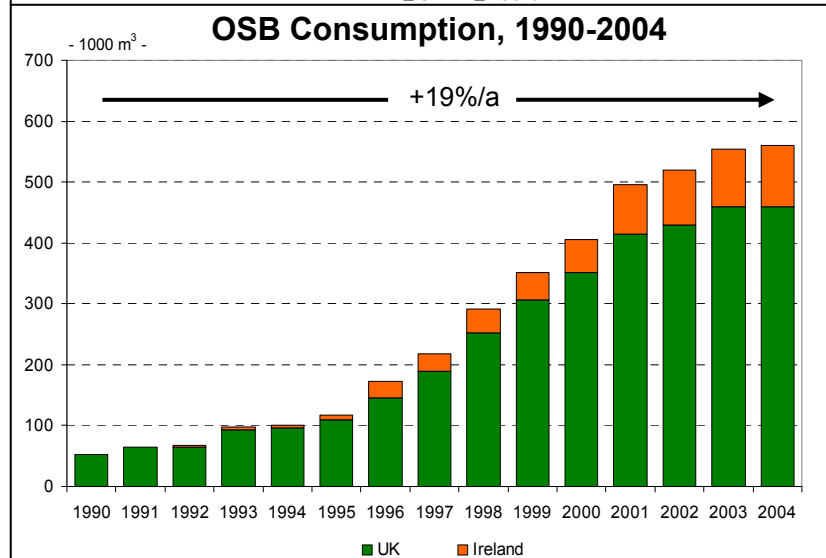


OSB Market Update by Region

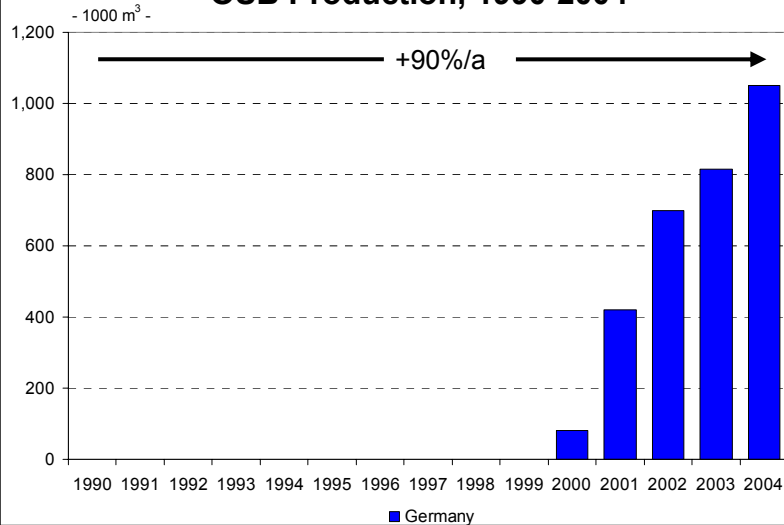
Production, consumption, capacity, new investments



- Following several years of continued growth since 1990, the UK, (Norbord) witnessed a new record in its OSB production output during 2004.
- Exports remained strong, even though the domestic production failed to give a positive impetus to sales in 2004.
- Ireland started its OSB production in 1995. During 2004, OSB production faced a slight increase after many years of robust growth. In particular, the export markets, which account for the great majority of sales, decreased while the domestic consumption remained strong.
- The OSB consumption is mainly driven by timber frame building construction and packaging.

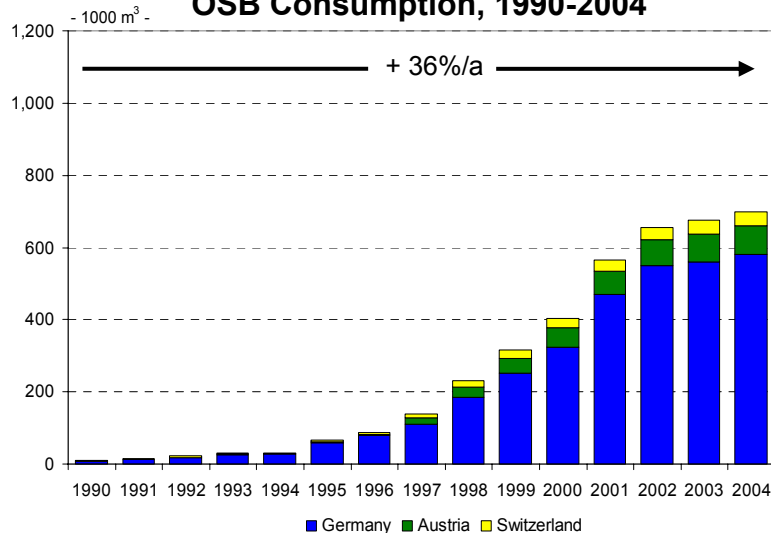


OSB Production, 1990-2004

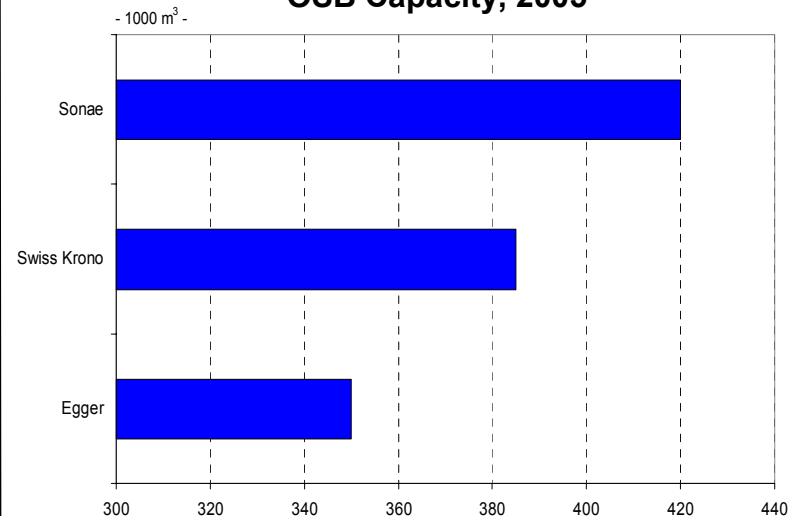


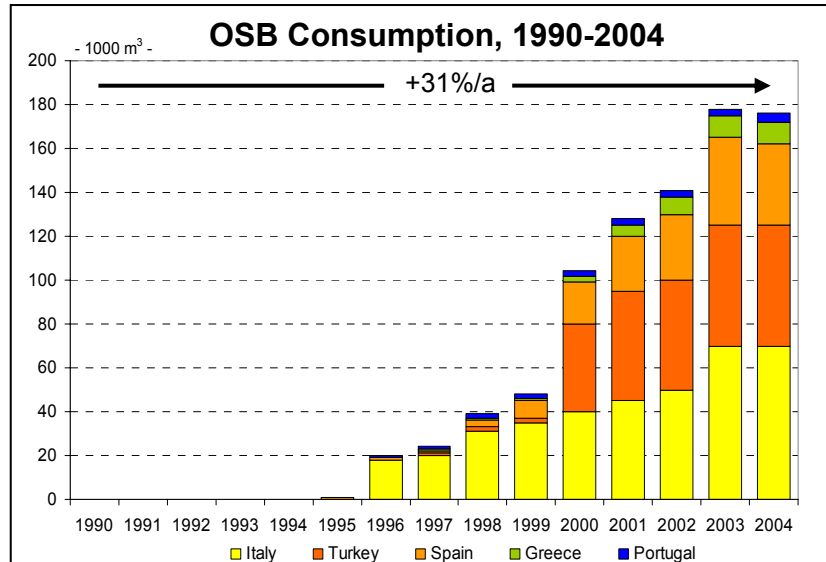
- Germany has become the most important OSB producer, representing 37% of total European OSB production. Similarly, the region is the largest consumer of OSB in Europe with 31% of total European market share.
- The German OSB industry has enjoyed a booming year with a striking increase of 3.5% increase in production.
- Austria is a key importer of OSB in Europe. OSB has started growing since 1996 and it is increasing due to intensive use of timber frame in construction.

OSB Consumption, 1990-2004

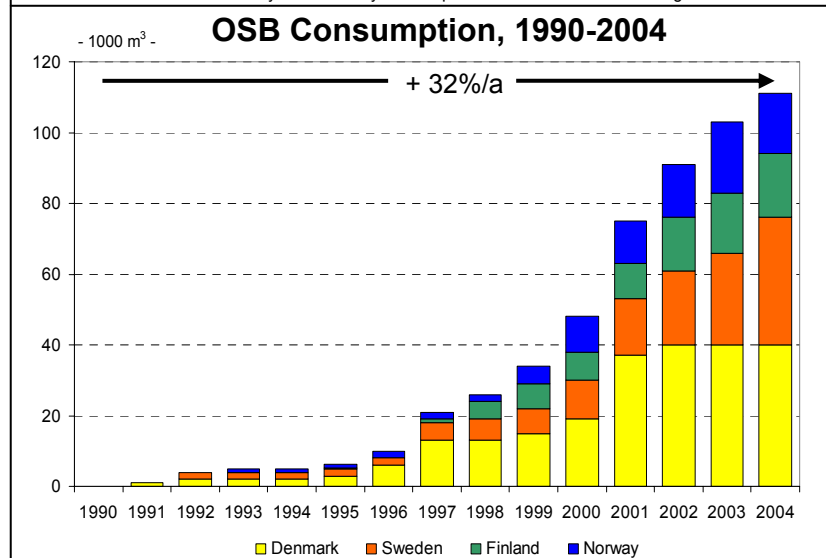


OSB Capacity, 2005

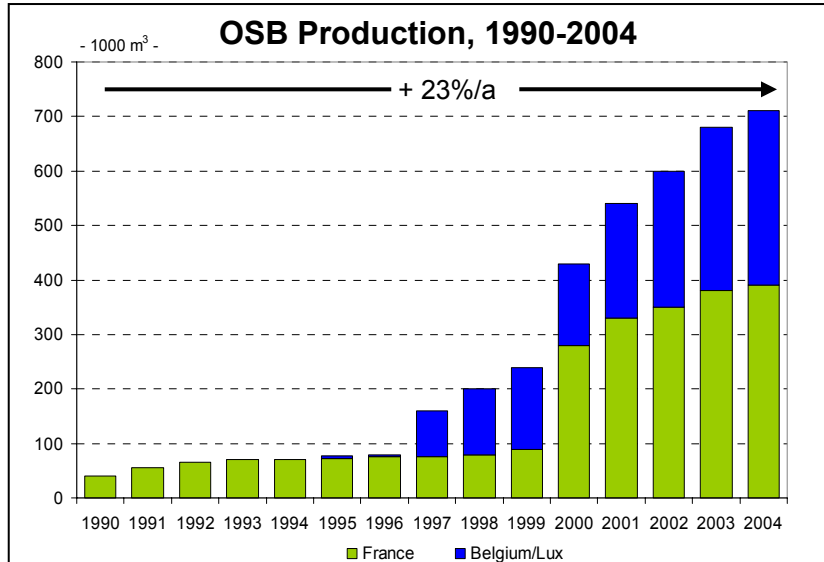




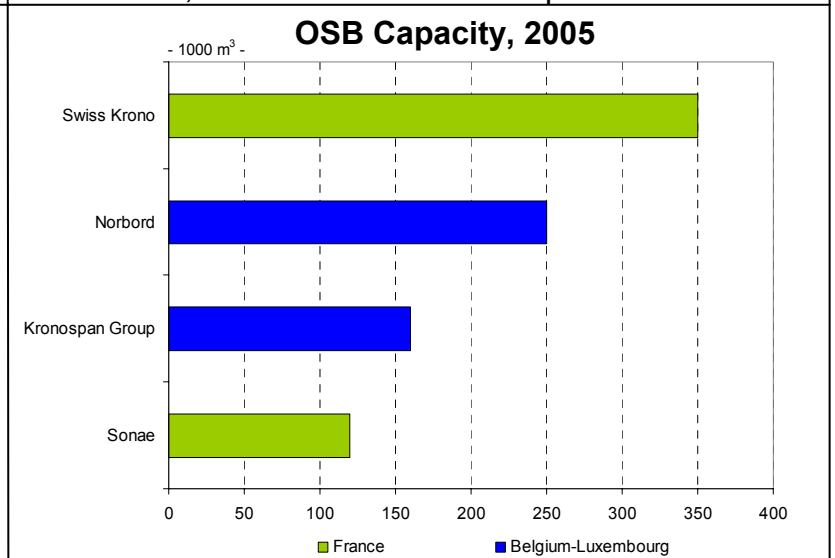
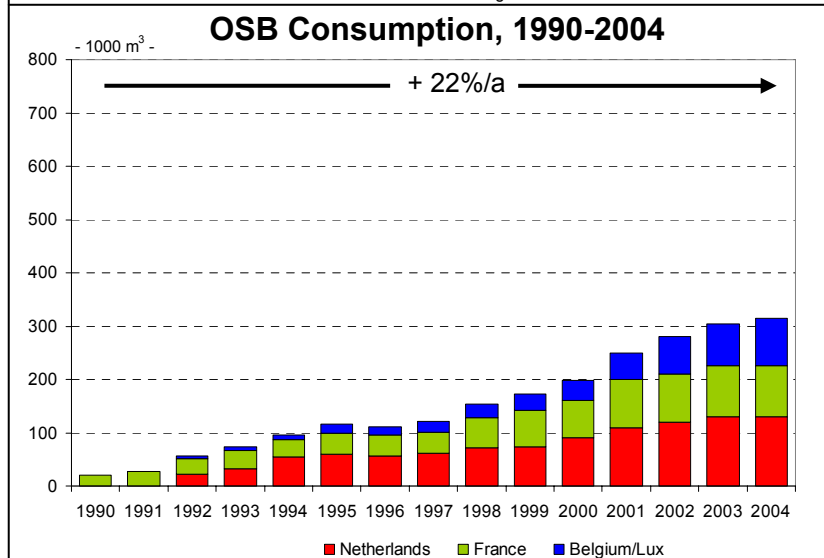
- There is no OSB production in this region but the Mediterranean region consumes 8% of the total consumption in Europe.
- OSB is gaining market share in construction and shows higher growth rates than its competitor product (softwood plywood).

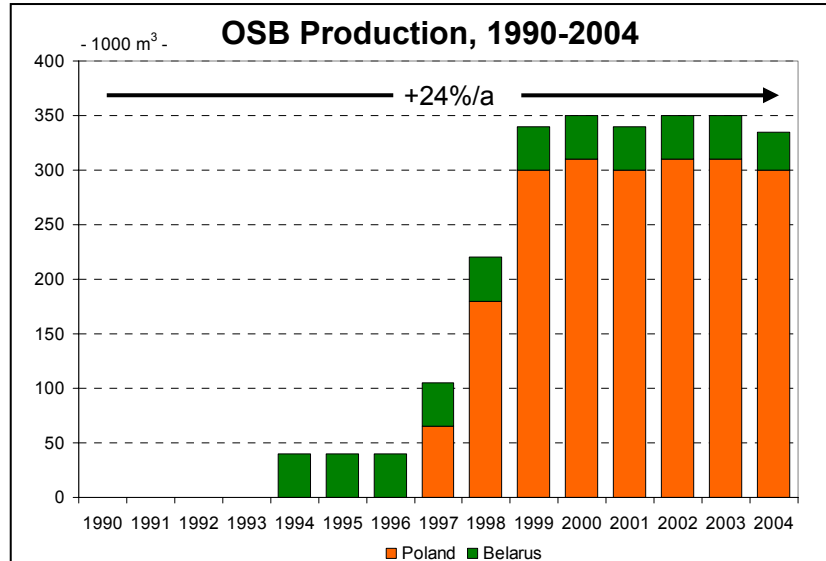


- OSB is a fairly new product in Europe and has not gained significant share in this market since plywood has been the traditional product and dominating the market and being mainly used in furniture and construction.
- Plywood has a much greater acceptance and market share in this region.
- Plywood consumption in this region is three times higher than the consumption of OSB in 2004.
- OSB consumption amounted to 5% of total European OSB consumption.

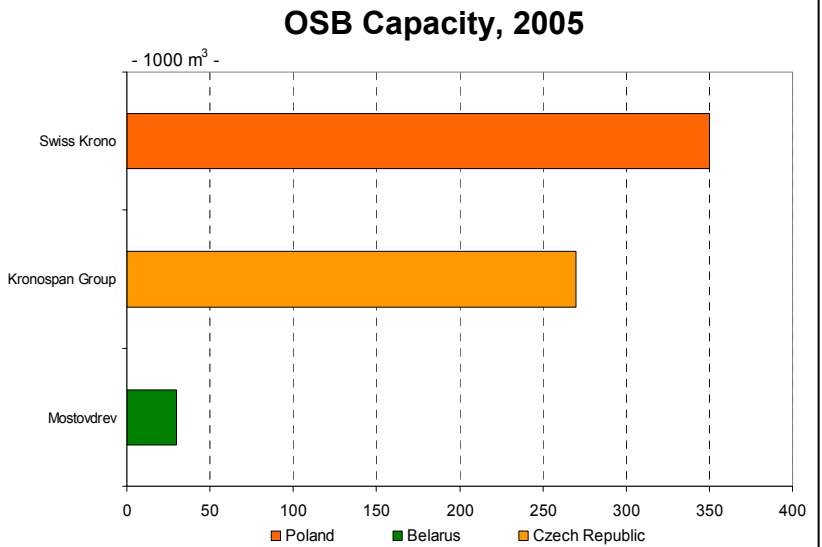
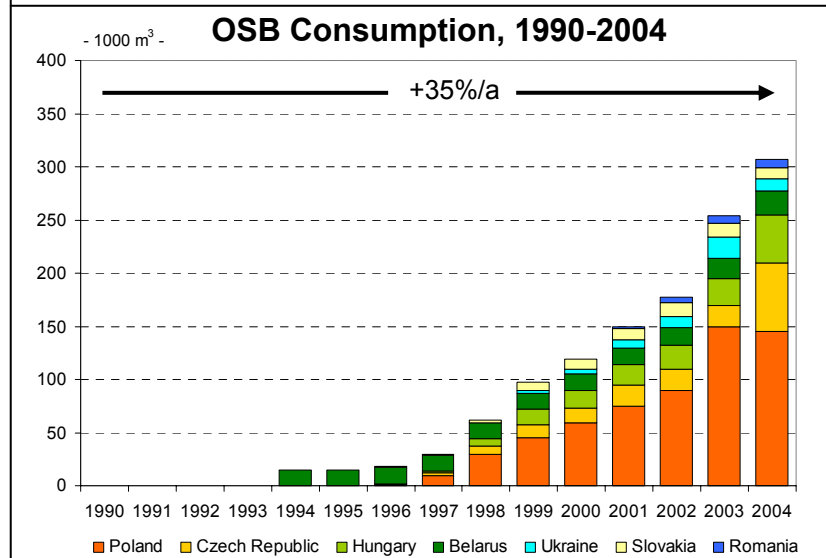


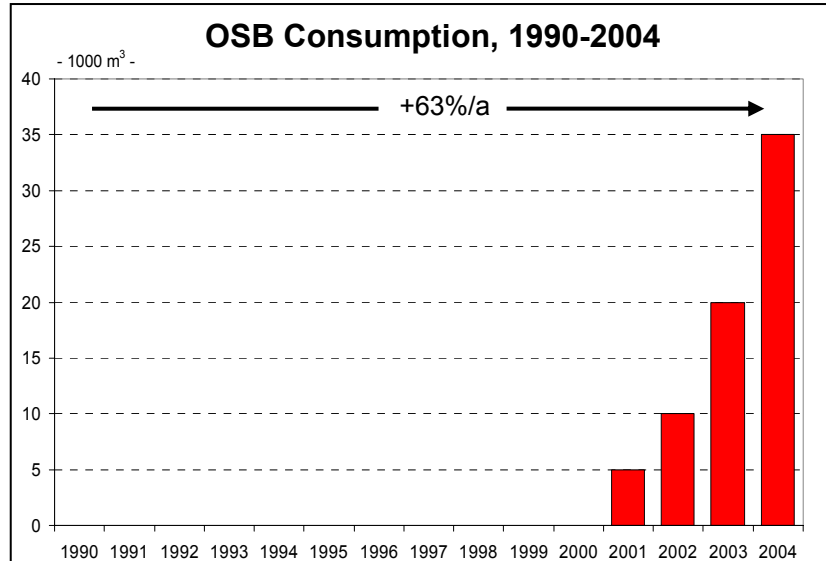
- OSB production has increased rapidly since 1999 but consumption has remained fairly stable during this period of time.
- OSB is mainly produced in this region as an exporting good. Benelux and France represent only 14% of total OSB consumption in Europe meanwhile the region represents 25% of total European OSB production.
- The French OSB production experienced a good year in 2004 as production increased by 2.6% since 2003. France is the second largest OSB producer after Germany.
- The Belgian OSB line has been taken over by Norbord in 2004. OSB demand was high and contributed to an increase in OSB production.
- Production in this region is mainly driven by exports to the UK, USA and Southern Europe.



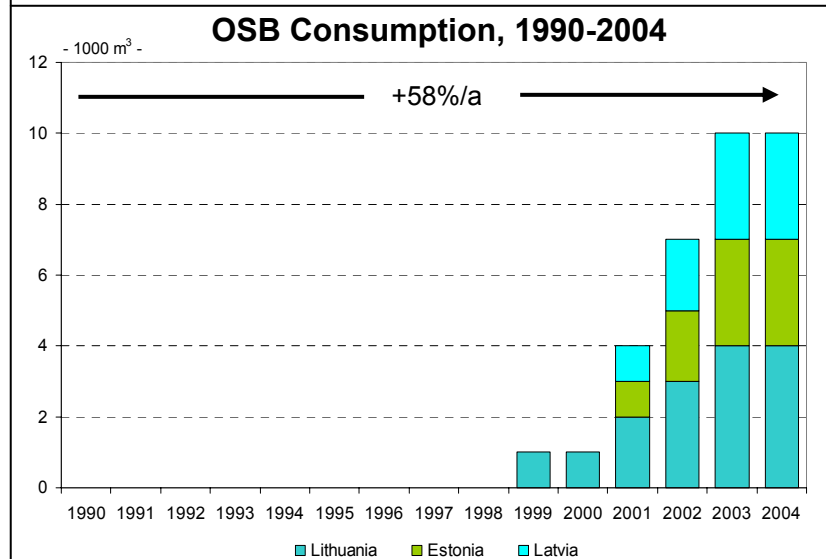


- Poland is a significant producer, consumer and exporter of OSB to many countries in Europe.
- Kronopol in Zary is the only OSB producer with an annual production capacity of 350,000 m³.
- Kronopol's OSB cover 95% of OSB market share in Poland.
- OSB consumption has steadily increased in the last years. However, the market in the region is expected to change with the commissioning of the new OSB line by Kronospan Group. Production of OSB on a trial basis started in summer, leading to a high decrease in OSB prices.



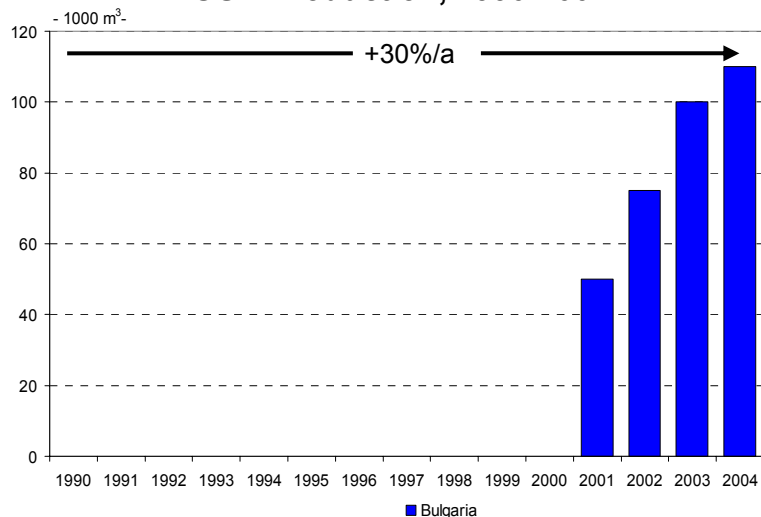


- OSB is a new product in Russia and consumption is currently low. However, imports increased significantly in the last three years.
- At the moment there is no production capacity in Russia. However, Russia is expected to become a significant OSB producer and consumer.



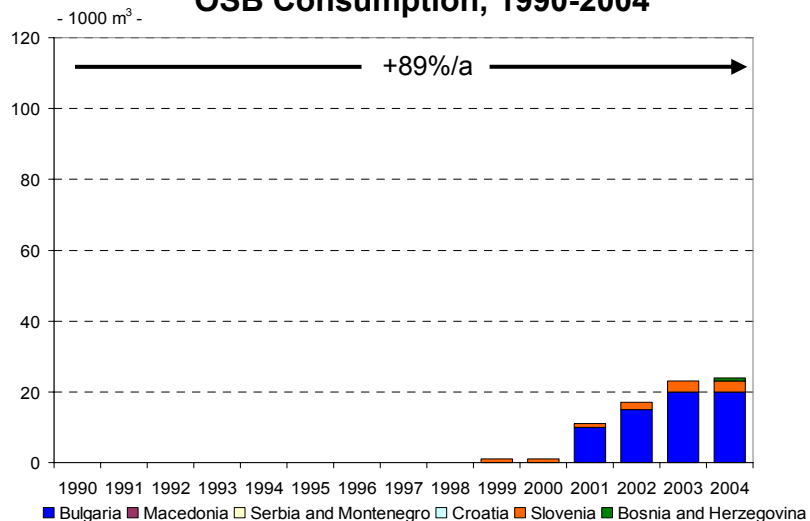
- OSB has only been introduced into this region few years ago and therefore the regional consumption is marginal and only reaching 10,000m³ in 2004.
- The consumption is expected to grow vigorously in the next few years due to building construction increasing in the region.

OSB Production, 1990-2004

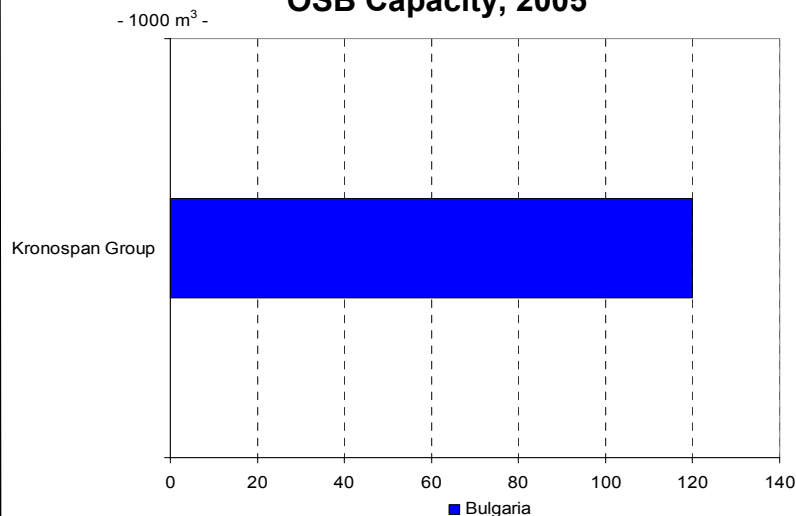


- In 2001, the first OSB plant in Bulgaria became operational with an overall annual production capacity of 120,000 m³.
- During 2004, the plant continued to operate at full capacity.
- Following the same trend than the particleboard production, where about 70% of the production is exported, the OSB production is also destined mainly for exports.

OSB Consumption, 1990-2004



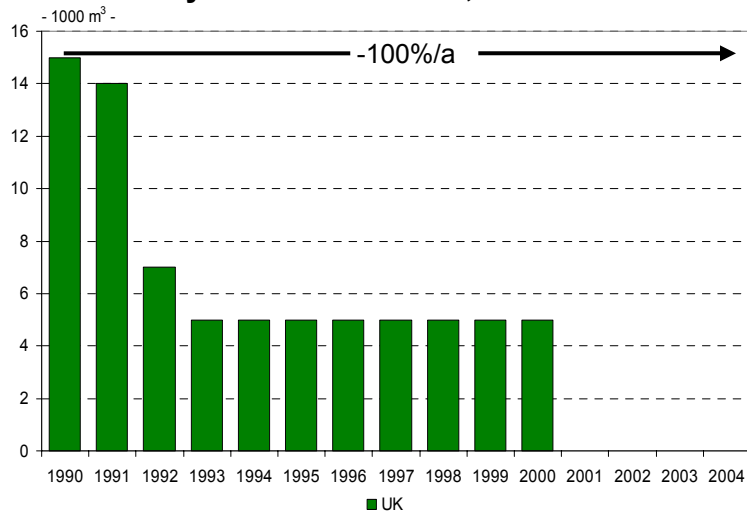
OSB Capacity, 2005



Plywood Market Update by Region

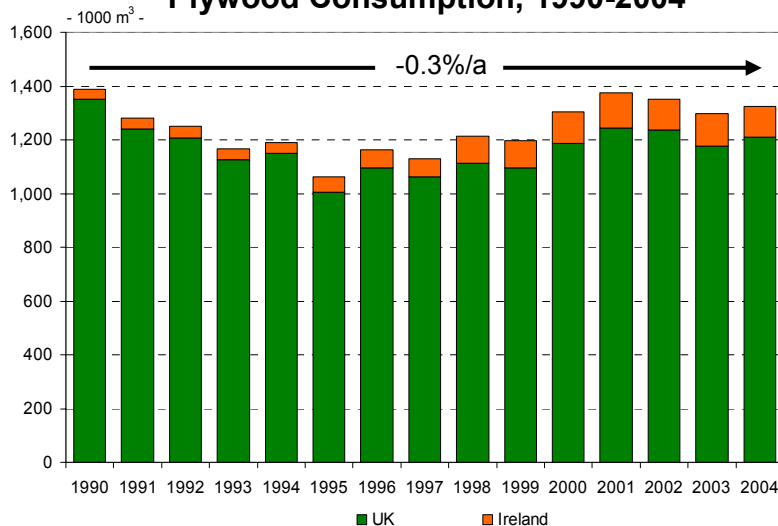
Production, consumption, capacity, new investments

Plywood Production, 1990-2004

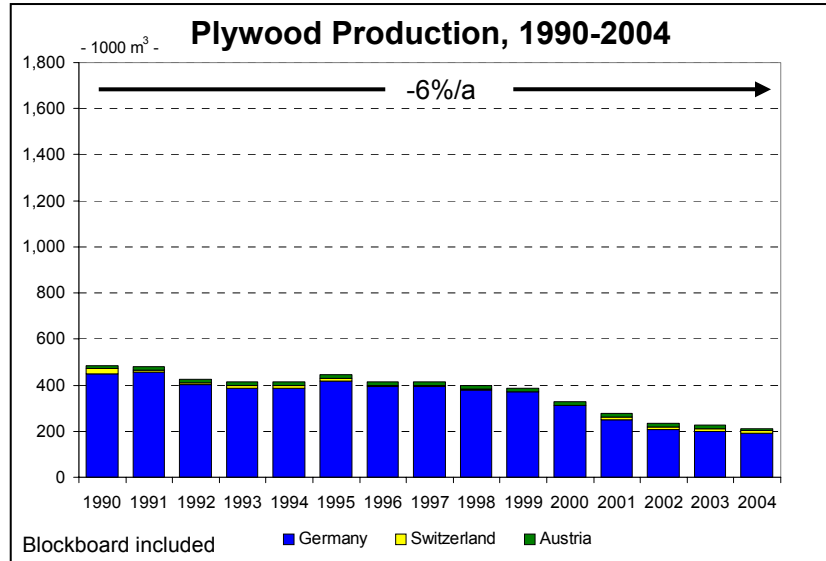


- There is no plywood production in the region since 2001, nevertheless, the region is the largest consumer of plywood in Europe with 17.6% of the total plywood market.
- After many years of continued growth, plywood consumption reached its highest level in 2001. The year 2002 initiated a downward trend driven by environmental concern. The year 2004 has seen a slight recovery. Volumes are expected to remain at the same level for 2005.
- Brazil, Malaysia, Finland and China are the largest country suppliers of plywood in the region. It is expected that these four countries will dominate the market in this region.

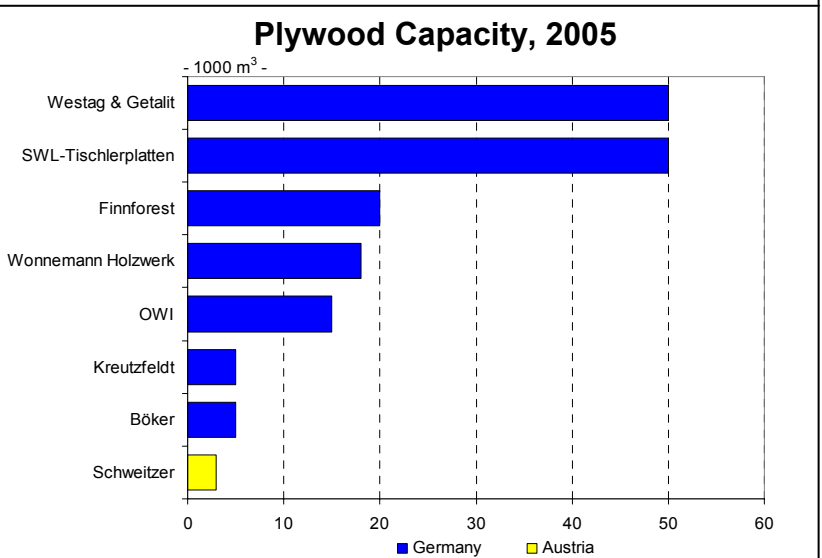
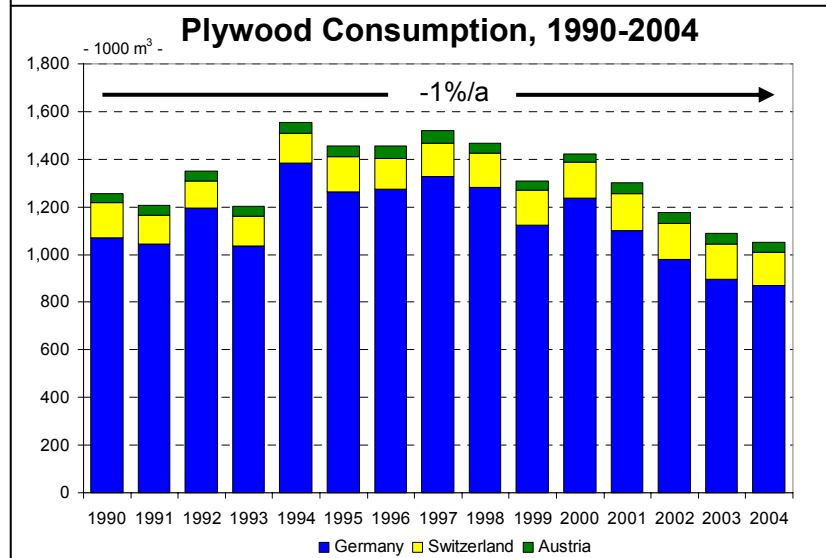
Plywood Consumption, 1990-2004

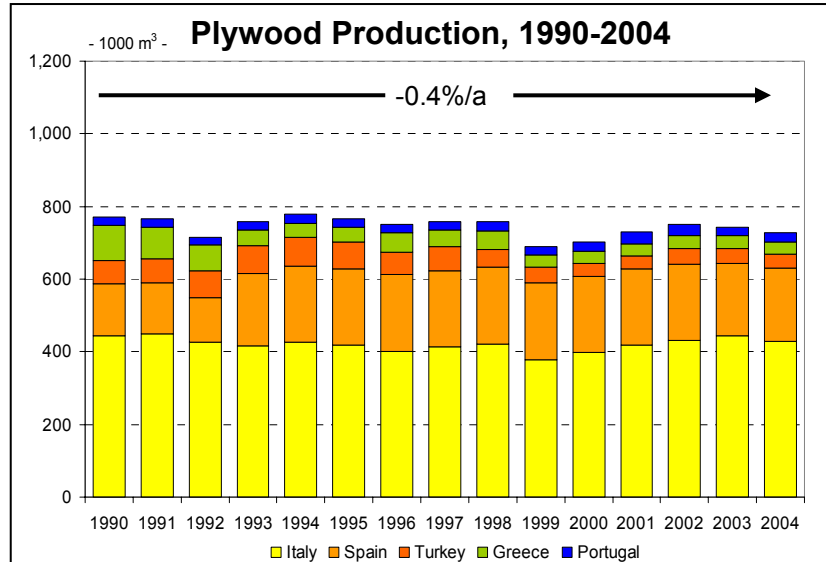


There is no plywood production in the region

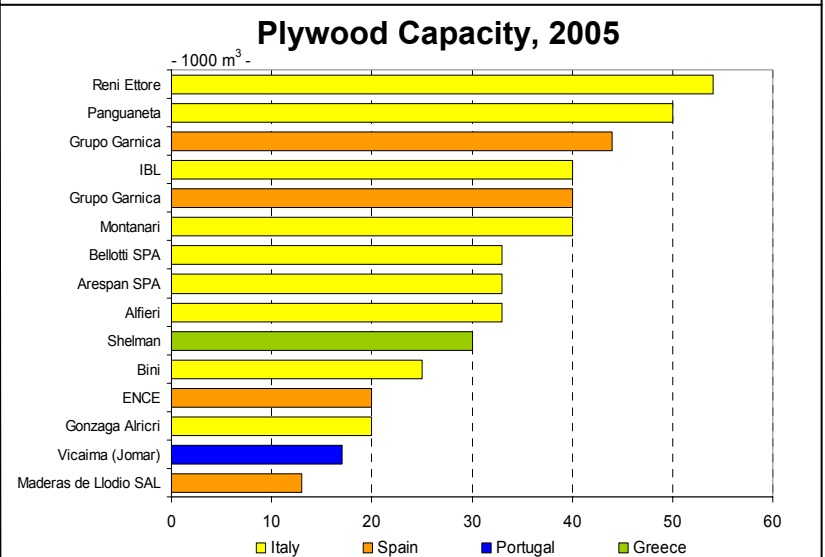
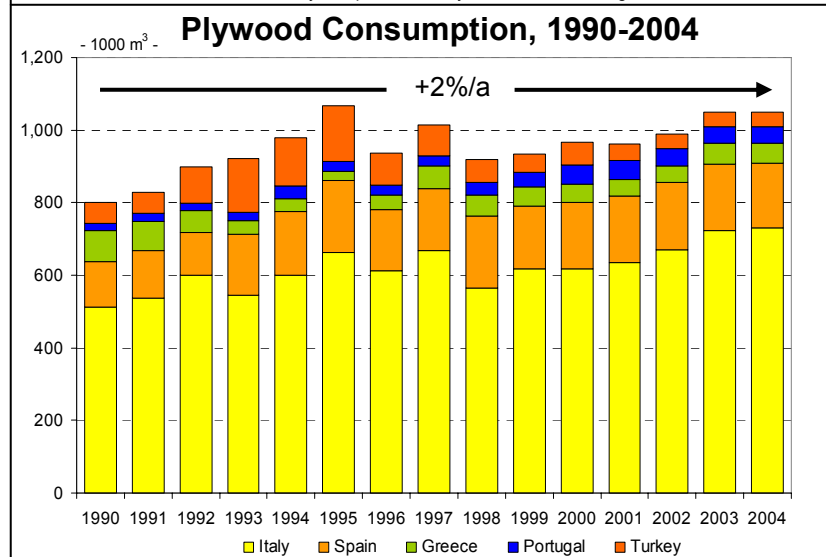


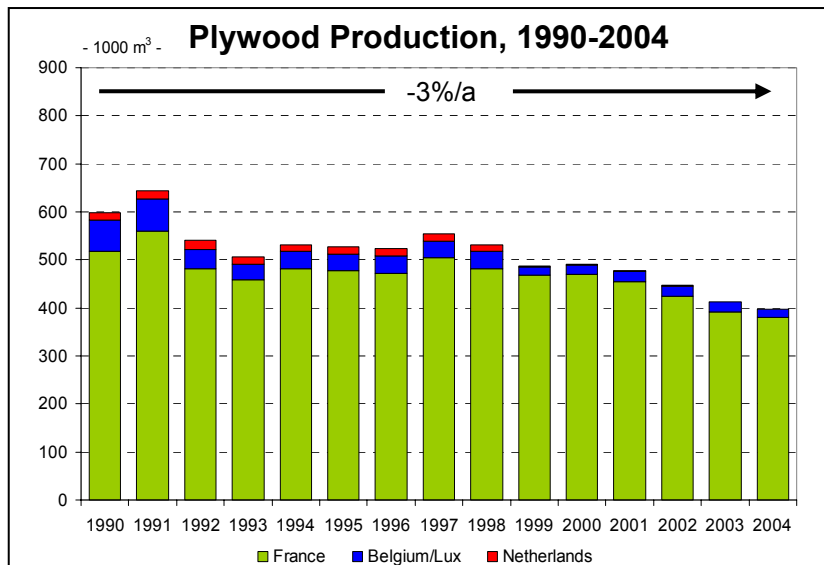
- Germany has been focusing on blockboard rather than plywood which results on a small production of plywood.
- The plywood production in Germany increased slightly in 2004 reaching 16,000 m³.
- Germany is a significant importer of plywood and its consumption decreased slightly in the region since 2000 due to OSB substitution.
- Major plywood suppliers to this region are Finland, Brazil and Russia.
- Softwood plywood will be increasingly replaced by OSB since there is a build-up of OSB production capacity in Europe.



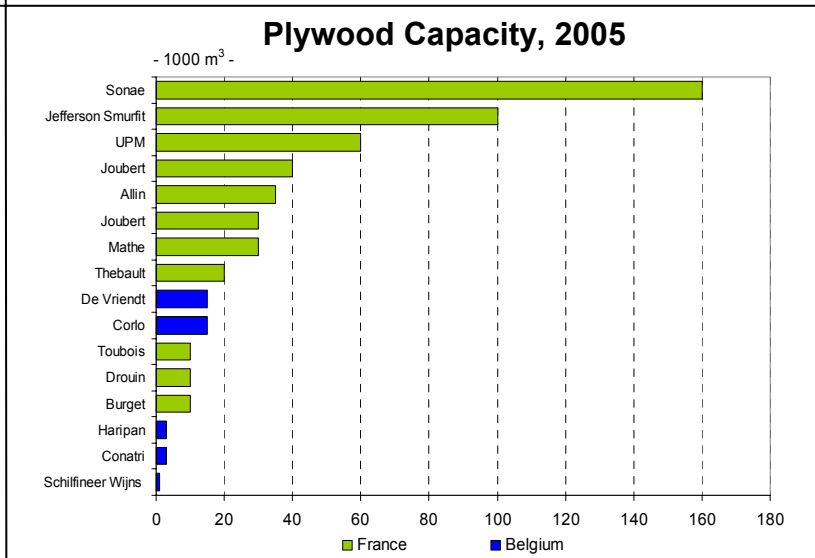
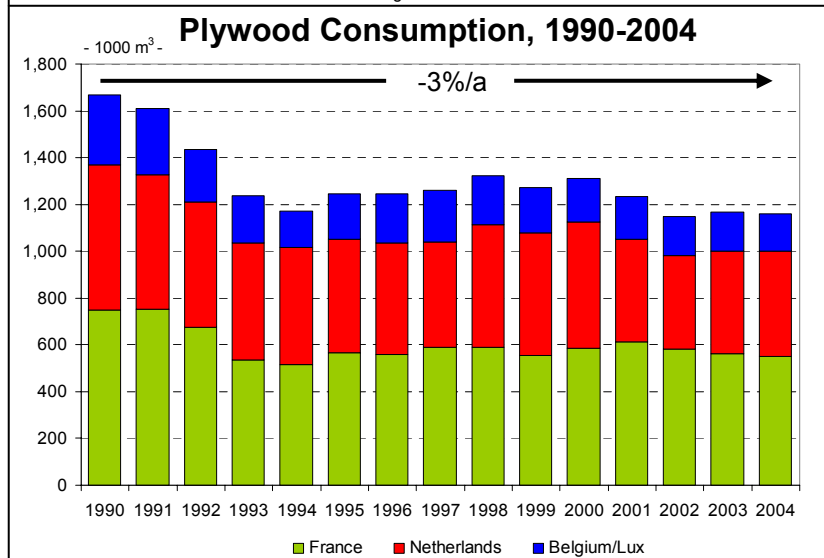


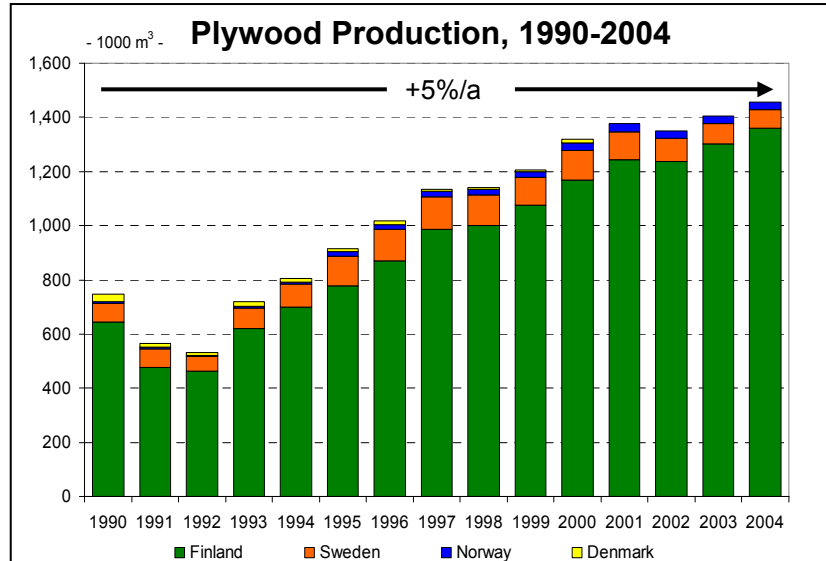
- The production output decreased in 2004 due to capacity reductions in Italy.
- Demand on the local market has been quite stable.
- The good market situation has, however, recently inspired some companies to decide to increase their production such a Grupo Guernica and Belotti.
- Russia, Brazil, Finland, China and France are the most important suppliers of plywood in the region.
- The depreciation of the USD against the EUR is not helping plywood exports outside of the EU.
- In general, plywood producers in this region are small sized.



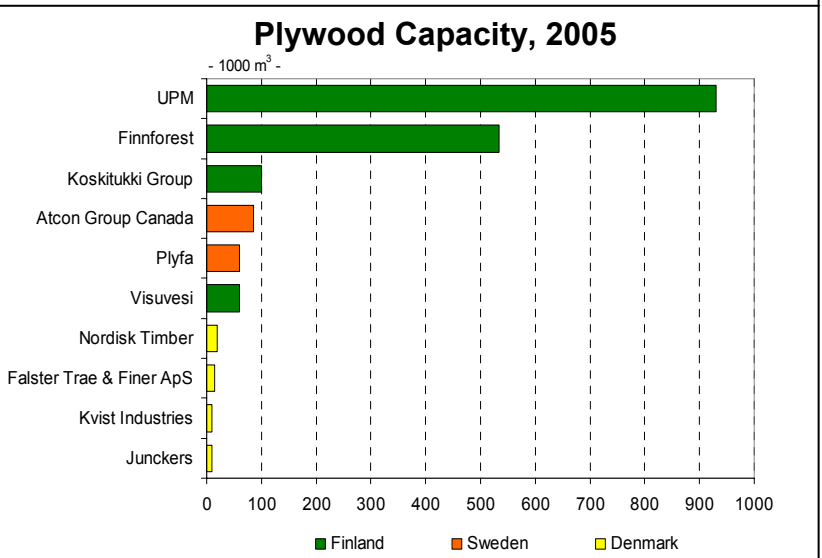
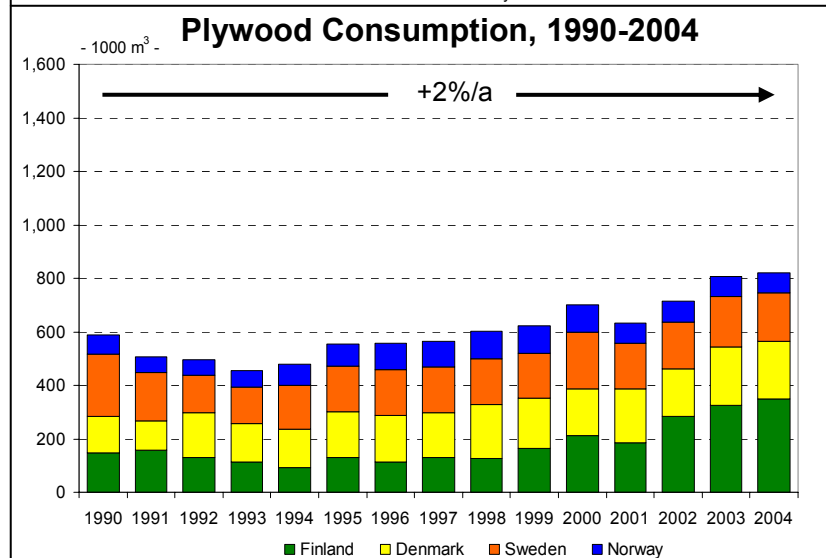


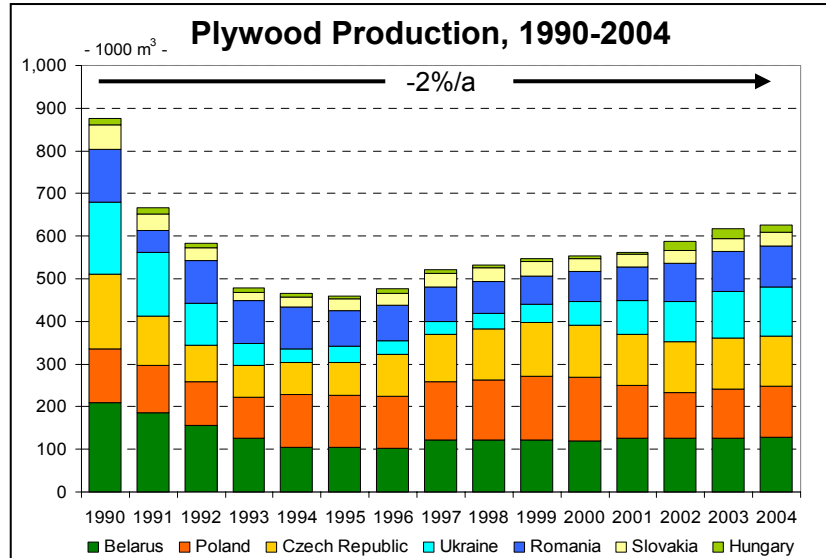
- Plywood demand increased by 6% compared to the previous year with a slight increase of exports (1%) and a clear increase in imports (5%).
- The year 2004 has been rather stable for Belgium and there are no major changes foreseen for 2005.
- The Netherlands is a net importer of plywood and increased their imports by 7% from 2003 to 2004.
- Finland, Brazil and Indonesia are the main suppliers in the region.



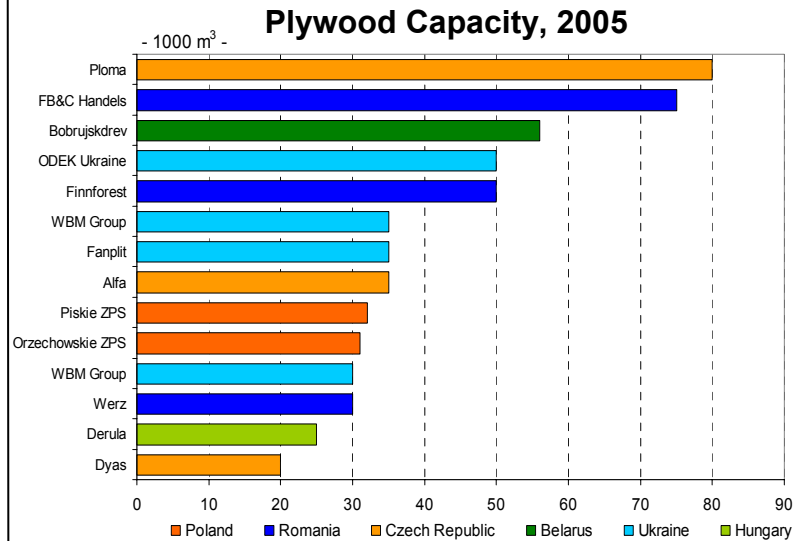
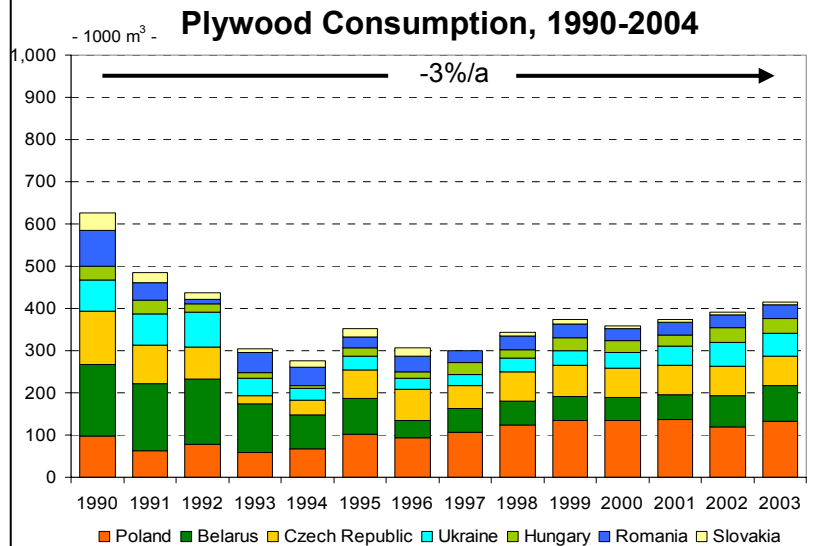


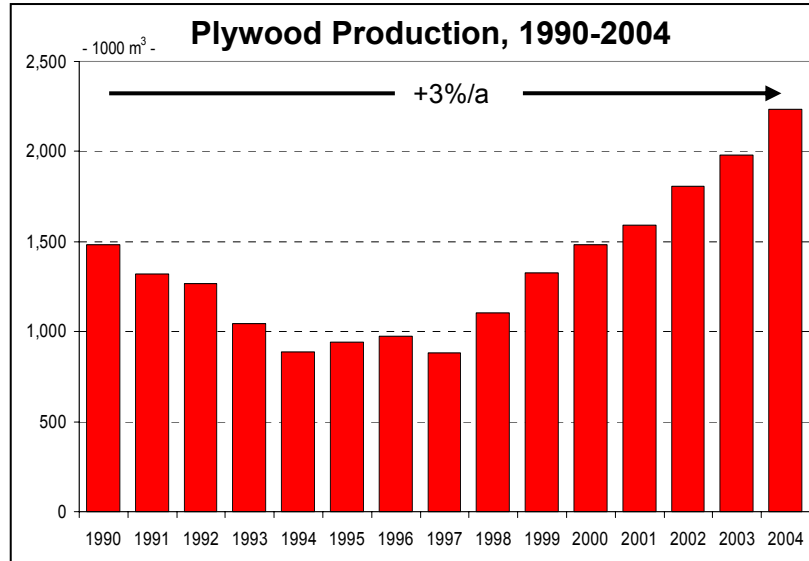
- Plywood production increased in 2004 partly due to the introduction of new investments and good utilisation rate for the Finnish plywood producers.
- The Swedish producers have been stable in terms of production/consumption.
- Finland is a key exporter for European countries.
- A good demand level supported the higher output and exports figured at a higher level than in previous years. Exports increased following more favourable market conditions in North America, the UK and Germany.
- The year 2005 is expected to be a good year with full capacity utilisation and strong demand.



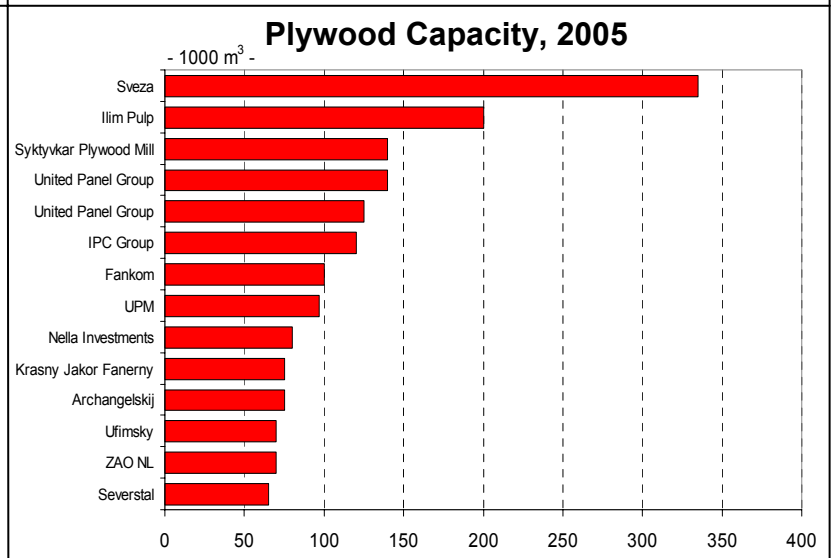
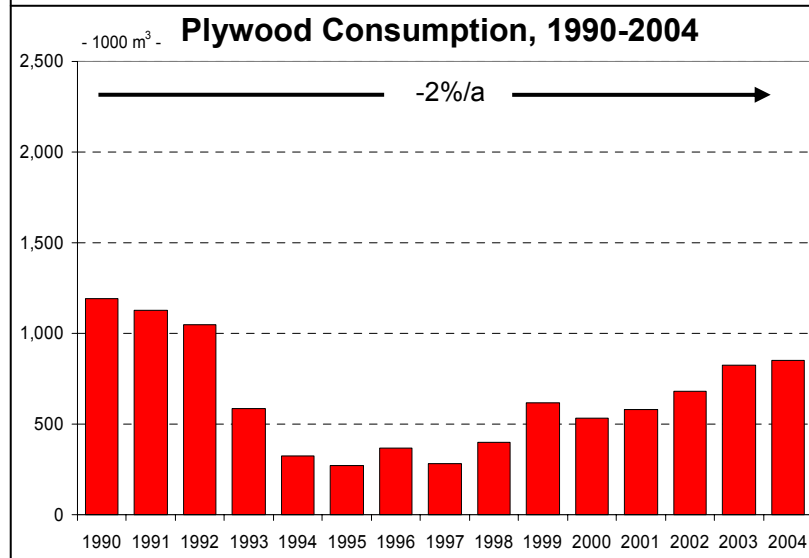


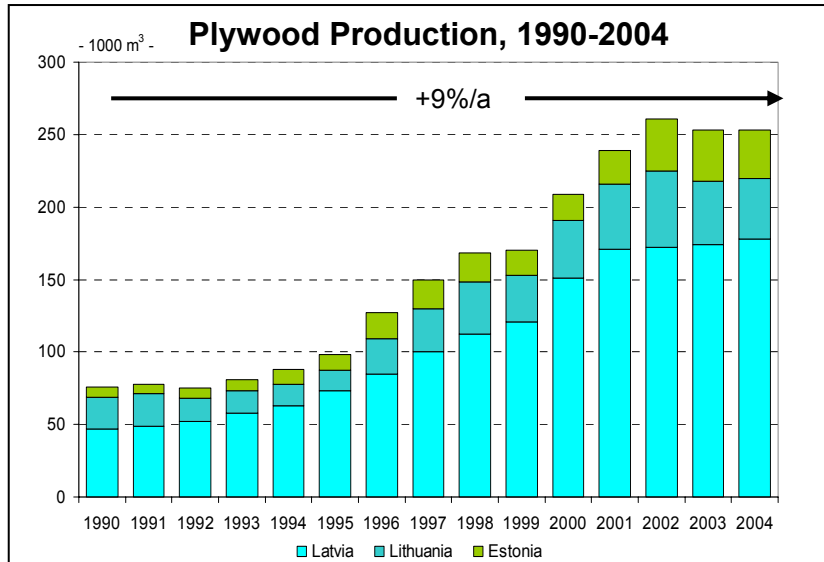
- There has been a good plywood situation in the Eastern European region.
- Western Europe remains the most important sales region (mainly Germany, Austria, Denmark and the Netherlands).
- There are a long tail of local plywood producers ranging between 1,000 and 20,000 m³ and having an average capacity of 7,800 m³.



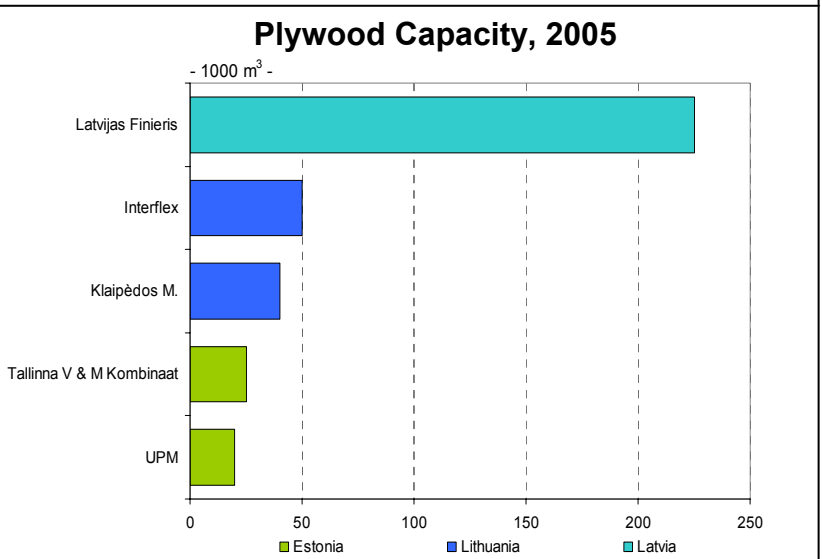
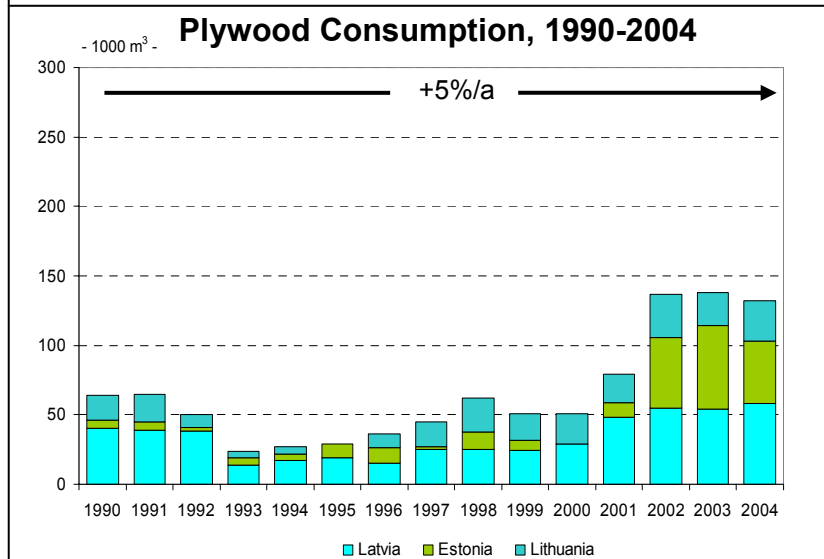


- The year 2004 has been extremely successful in Russia with the output totalling 2.2 million m³ which is 13% higher than the production in 2003.
- For 2005, plywood production is expected to increase by 17% and reaching approximately 2.6 million m³.
- Growth in the plywood industry is driven by the exports to EU and US.
- A large number of smaller scale plywood producers exist in Russia and have an average capacity of 25,000 m³.

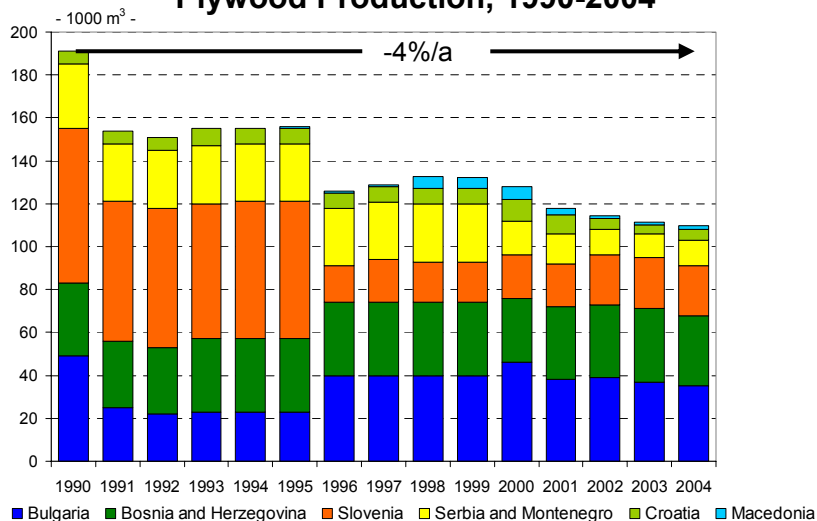




- The year has been reasonably good for the Baltic's plywood producers. Plywood production increased slightly in 2004.
- The main export markets for plywood are Germany and the UK which performed in line with the 2003 results while sales to the Mediterranean region improved.

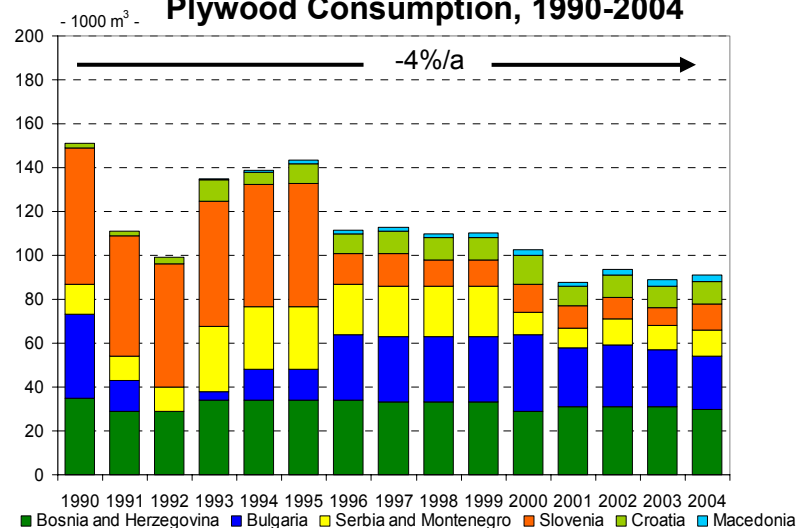


Plywood Production, 1990-2004



- The year 2004 saw a decline in production for the Bulgarian plywood industry. The outlook for 2005 is not optimistic due to difficult exports, shortage of logs and the fierce competition of Chinese plywood into the European market.
- The plywood production in Slovenia rose slowly and its consumption followed the same trend. Germany, Croatia and the Netherlands have been the most important markets for Slovenian plywood.

Plywood Consumption, 1990-2004



Plywood Capacity, 2005

No available information

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