

STATEMENT

**submitted by the
Delegation of Germany
to the**

**72nd Session of the
UNECE Committee on Forests and the Forest Industry
18 to 20 November 2014 in Kazan**

Federal Ministry of Food and Agriculture

Bonn, 2014

1. General economic trends ¹
- 1.1 German economy enjoying upswing

As projected in the 2013 Annual Economic Report, gross domestic product (GDP) expanded by 0.4 % as an average for 2013. Following a period of weakness due to poor weather in the 2012/13 winter semester, the German economy has shifted to a stable path of recovery. For 2014, the Federal Government assumes that GDP will record an annualized increase of 1.8 % (Table 1). The sound underlying cyclical dynamism is reflected in a broad-based and continuous upward development. The indicators of sentiment suggest that consumers and companies have confidence in a positive cyclical development. Economic growth in Germany will thus probably once again be far higher than the eurozone average.

Table 1: Selected key figures for macroeconomic trends in the Federal Republic of Germany ¹⁾	2012	2013	Annual projection 2014
	% change on preceding year		
Gross domestic product (output approach GDP, real)	0.7	0.4	1.8
Total employment	1.1	0.6	0.6
Unemployment rate in % (Federal Employment Agency definition) ²⁾	6.8	6.9	6.8
GDP by expenditure (real)			
Private consumption expenditure	0.8	0.9	1.4
Machinery and Equipment	-4.0	-2.2	4.0
Construction	-1.4	-0.3	3.2
Domestic demand	-0.3	0.7	2.0
Exports	3.2	0.6	4.1
Imports	1.4	1.3	5.0
External balance of goods and services (contribution to GDP growth) ³⁾	0.9	-0.3	-0.1
Total gross wages and salaries per employee	2.9	2.3	2.7

¹⁾ Up to 2013 results of the Federal Statistical Office; National Accounts Status: January 2014;

²⁾ In relation to the total labor force;

³⁾ Contribution to GDP growth rate.

¹ <http://www.bmwi.de/English/Redaktion/Pdf/2014-annual-economic-report,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf>

In arithmetical terms, growth this year will be driven solely by domestic forces. A crucial role for this domestic economic dynamism will be played by the good development of the labour market, which is on course for another record level of employment. The level of gainful activity is expected to rise this year by 240,000 people to 42.1 million. The favourable growth and profit outlook for companies will allow employment and wages to rise.

This will result in appreciable increases in income for private households. In view of the favorable environment, private households will spend considerably more on consumption and house-building. To the extent that no serious disruption occurs in the international environment, German exports will also rise again. The prospects for this have improved thanks to last December's decisions on a further liberalization of global trade in the context of the World Trade Organization. Higher investment in equipment and increasing exports will – in view of their high import content of over 40 % – also stimulate the level of German imports. Imports will rise faster than exports this year. This will reduce the German current account surplus. Rising imports and increasing foreign investment by German firms will foster Europe's economic recovery.

Macroeconomic productivity and corporate profits are likely to improve this year in the course of the upswing. There are no expectations of inflationary tensions. Unit wage costs will record a moderate increase. In view of this positive environment, a broad-based cyclical upturn can be expected.

1.2 The economic situation in Germany in September 2014

The underlying cyclical development in Germany continues to point upwards despite the slowdown in the second quarter. There were indications of a recovery in July.

The weakening seen in the second quarter was caused not only by weather-related shifts in production but also by the hesitant development in the eurozone and the uncertainty resulting from geopolitical developments. In July, industry received a considerably higher number of new orders again, particularly from abroad. Output in industry and construction picked up speed. The labour market is stable, the incomes are rising and consumer spending is boosting the economy.

Despite the slowdown in the second quarter, the underlying cyclical trend continues to point upwards. The goods-producing industry provided initial clear signals of a recovery in July. Various factors contributed to the previous weakening in the second quarter. As a late consequence of the mild winter, shifts in production reduced the level of output, particularly in the

construction sector. Also, the overall economic development was affected by the disappointing growth in the eurozone and the geopolitical events. The global economy is growing, but more hesitantly than expected. In addition to structural challenges which exist in many places, the various geopolitical conflicts are impeding a more positive development. They are increasing the level of uncertainty and influencing commercial decisions. However, the German economy remains in good shape. If the geopolitical developments permit and the level of uncertainty in the economy declines, the upswing will continue at a moderate pace.

1.3 Social market economy today – stimulating growth and cohesion

A central assumption for the projection is that the financial sector will remain stable and that in the Eurozone in particular there will be no negative developments which will cause a renewed significant increase in uncertainty amongst the market players.

Since the turn of the millennium, Germany's economy has developed well, but continues to face major challenges. The Federal Government wants to take advantage of the present good economic situation in order to strengthen the foundations for prosperity and participation of people in Germany and Europe on the basis of a Social Market Economy characterised by dialogue, co-operation and trusting social partnership. It will attain this in the coming years via the resolute implementation of four strategic economic policy goals – a targeted investment and innovation policy, the improvement of possibilities for participation and the fairness of participation, a successful continuation of the energy reforms and the stabilisation and deepening of economic and monetary union in Europe – in the context of a sound budgetary policy. Furthermore, the Federal Government aims to foster and develop the level of acceptance in society of German industry as well as its innovative potential and particular core skills.

Guided by clear budgetary principles, the Federal Government will continue the consolidation of the federal budget. It will shape revenues and expenditure in such a way that the budget is structurally balanced this year and the federal budget will avoid net new borrowing from next year on. In this way, the Federal Government is making a major contribution towards the planned reduction in the overall national debt rate to below 70 % of GDP by the end of 2017 and to below 60 % of GDP within ten years.

Germany has made substantial progress on the labour market. Long-term unemployment has fallen, and the number of employees subject to social security contributions has risen tangibly. This good development – particularly in the international comparison – in employment in Germany underlines the significance of an open and functioning labour market, a strong so-

cial partnership and free collective bargaining as fundamental pillars of the Social Market Economy.

With regard to housing, the Federal Government's policy is based on three aims: to strengthen investment activity, to revive the building of social housing, and to provide balanced backing in terms of tenant law and social policy. The Federal Government aims to keep investment in research constant at 3 % of GDP. It will continue to develop the High-Tech Strategy into a comprehensive, interdepartmental innovation strategy for Germany. The Strategy will cover both technological and societal innovations. The aim is to move the findings from all fields of research into applications.

The Federal Government will continue to roll out the energy reforms. Here, it will be guided by the "energy policy triangle" of the equally important aims of climate and environmental compatibility, security of supply and affordability. As the policies are rolled out further, greater attention must be paid to cost efficiency, economic efficiency, the ability to plan for the future, and reliability.

German industry depends on a reliable supply of raw materials, particularly when it comes to developing high technologies. First and foremost, it is up to the companies themselves to cover their needs on the market. The Federal Government will support them by improving the policy environment for resource efficiency and the closed-cycle economy, promoting domestic extraction of raw materials, ensuring fair and transparent conditions in the commodities trade, and entering into raw materials partnerships. In order to boost resource efficiency, the German Resource Efficiency Programme is to be developed further, a Resource Efficiency Platform established and advice for businesses and private citizens improved.

In comparison with other industrial nations, Germany is leading the way forward on cutting greenhouse gas emissions. The Federal Government is in favor of cutting greenhouse gas emissions within the European Union by at least 40 % by 2030 compared with 1990, as part of a triad of goals, i. e. greenhouse gas reduction, the expansion of renewables and energy efficiency.

1.4 Target of economic recovery in Europe

There are increasing signs of economic recovery in Europe. This is due not only to the measures at European level, but also to the considerable efforts made in the programme countries, as well as the supportive policy on the part of the ECB. Nevertheless, the crisis is not yet overcome. The crisis in the eurozone has been caused by a variety of factors. They range from

excessive borrowing by certain European countries to a lack of competitiveness, economic imbalances, design faults in the European Economic and Monetary Union and undesirable developments on the financial markets. The structural causes of the crisis must be further corrected. If Europe is to find a permanent way out of the crisis, it will need a comprehensive approach which combines in a socially balanced way structural reforms for better competitiveness with strict, sustainable budget consolidation and forward-looking investment in growth and jobs.

The Federal Government is committed to the rules of the strengthened Stability and Growth Pact and is working in Europe to ensure that they are properly applied. It is in favour of a resolute implementation of the imbalance procedure. This boosts confidence in a credibly sustainable fiscal and economic policy on the part of the member states and thus also strengthens the foundations for growth. The use of an EU progress scoreboard for jobs and social development should be pursued further.

2. Policy measures and market drivers affecting the forest sector

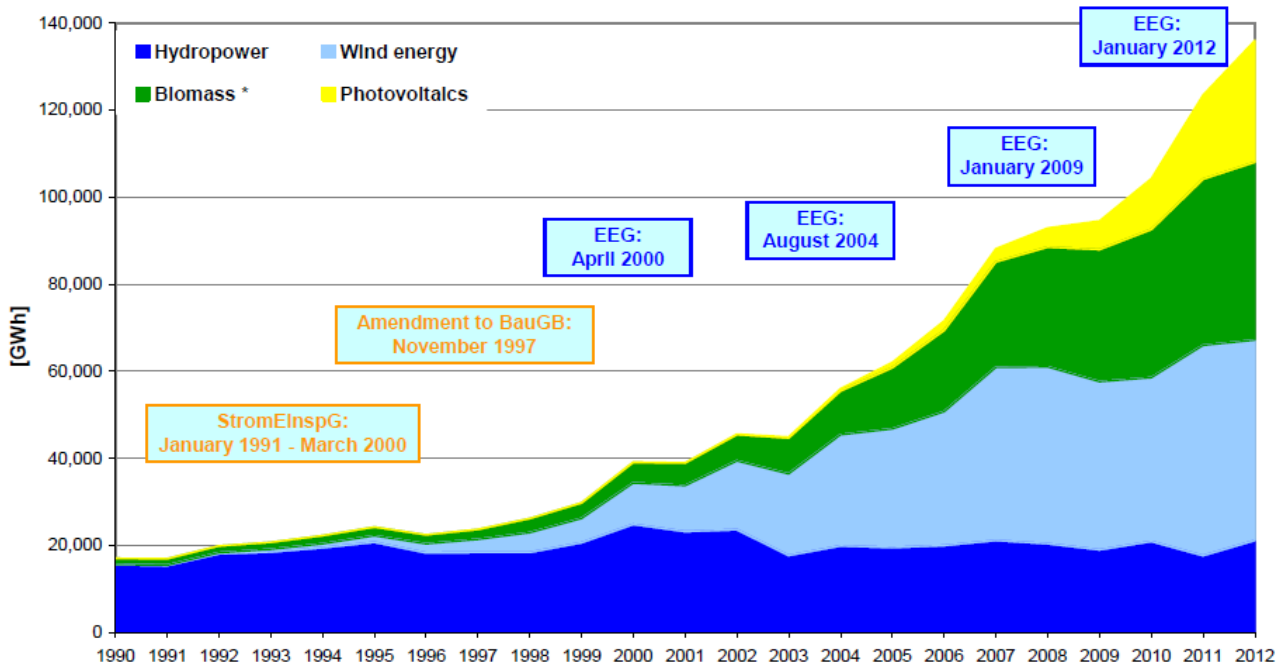
2.1 Developing renewable energy and securing energy supply

In order to meet the EU- Climate and Energy package of 2008 the Federal Government launched, on the basis of the 2010 Energy Concept², a fundamental restructuring of Germany's energy supply towards renewable energy and higher energy efficiency in 2011. The proportion of energy consumption covered by renewables is to rise to 30 % by 2030 and to 60 % by 2050; the share of gross electricity generation is to rise to at least 35 % by 2020 at the latest and to at least 80 % by 2050 at the latest. By 2020, primary energy consumption is to fall by 20 % and by 2050 by 50 % (base year: 2008).

As the development of renewables-based electricity generation demonstrates, the upswing of renewable energy in Germany is already in progress (Figure 1). Renewable energy share of total "final energy consumption" is 12.3 % (2013) of which about 2/3 are based on biomass (mostly wooden biomass). But for meeting the targets of EU-Biomass Action Plan, an ongoing development of energy saving, increase of efficiency and expansion of renewable energy sources as well as availability of renewable raw materials is necessary.

² http://www.bundesregierung.de/Content/DE/Anlagen/2012/02/energiekonzept-final.pdf?__blob=publicationFile&v=5

Figure 1: Development of renewables-based electricity generation in Germany 1990 - 2012
(1 GWh = 1 Mill. kWh)



* Solid and liquid biomass, biogas, sewage and landfill gas, biogenic fraction of waste; electricity from geothermal energy not presented due to negligible quantities produced;

StromEinspG: Act on the Sale of Electricity to the Grid

BauGB: Construction Code

EEG: Renewable Energy Sources Act

Source: Working Group on Renewable Energy-Statistics (AGEE-Stat); as at: February 2013

In the first step it is now important to liberalize the energy markets in Germany and Europe further. Competition in the energy sector is to ensure that all consumers can benefit from energy which is as low-cost as possible. The Federal Government has taken some initial steps to restrict the rise in the cost of subsidizing photovoltaic. Yet the Government is paying particular attention to maintaining security of supply to households and companies. The comprehensive expansion of the grids must put the necessary infrastructure in place so that the energy supply will remain secure even as the proportion of renewables grows. Also the public is being involved in projects at an early stage in order to boost public acceptance and the transparency of the expansion of the grid.

At last the aim has to be to integrate renewable energy into the electricity market, to restrict costs to a reasonable level, to ensure a high degree of investment security, and to improve the interplay of renewable energy with the rest of the energy supply. In particular, the storage capacities must be expanded. They have to keep pace with the creation of new wind and solar capacities.

In addition to energy savings, energy efficiency also plays a vital role in a successful re-orientation of energy policy. It reduces the level of dependency on imports and cuts the costs of energy for companies and consumers. Germany wants to become one of the world's most energy-efficient and environmentally-friendly economies, while at the same time enjoying competitive energy prices and a high level of prosperity. In Germany, renewables accounted for 25.4 % of electricity consumption (up from 23.6 % in 2012), 9 % of national heat supply, and 12.3 % of total final energy consumption (Table 2).

Table 2: Contribution of renewable energy sources to energy supply in Germany		
Share of renewable energy sources (%)		
	2012	2013
in total final energy consumption	12.3	12.3
in total gross electricity consumption	23.6	25.4
in total heat supply	9.3	9.0
in total fuel consumption	5.9	5.3
in total primary energy consumption	11.3	11.5

Source: Working Group on Renewable Energy-Statistics (AGEE-Stat)

2.2 Reducing greenhouse gas emissions

From 1994 through 2006, Germany cut its greenhouse gas emissions by nearly 19 %. This was chiefly a result of modernization processes in the new Laender, but measures implemented as part of the German government's climate protection program played a key role as well. In 2007 Germany fulfilled its 21 % emissions reductions target. It already achieved a reduction of 23.8 % in 2013 against 1990.

On 5 December 2007, the German government unveiled its Integrated Energy and Climate Programme, which aims to set a global example in the fields of energy and climate policy and is suited to the needs and capabilities of a modern national economy. The launch was timed to coincide with the kick-off of the United Nations Climate Change Conference in Bali, which was held from 3-15 December 2007. The programme is based on the conviction that

- energy must be used with much greater efficiency than is currently the case and
- a much higher priority must be placed on the use of low-carbon energy.

The adopted measures aim to prove that climate protection is both affordable and compatible with economic growth. For this reason, the German government is pursuing policies that deliver favorable results in keeping CO₂ emissions low, but that are also as cost-effective as possible. Our aim is to achieve positive environmental outcomes without having a negative impact on consumers and the competitiveness of German business. As table 3 demonstrates, in 2013 renewable energies contributed to climate protection with CO₂ savings of about 150 million tons (2012: 141 million tons).

Table 3: Greenhouse gas (GHG) and CO₂ emissions in Germany (2013)			
million tons	GHG		CO ₂
total GHG emissions	951.1		
total CO ₂ emissions			834.4
Greenhouse gas (GHG) and CO₂ reductions by renewables (2013)			
	all renewables	bio-based	all renewables
Total	145.8	64.5	149.6

Source: Working Group on Renewable Energy-Statistics (AGEE-Stat) and Federal Environment Agency (UBA)

2.3 On the way to a “green economy”

Even without nuclear power Germany is sticking to the target of reducing emissions of greenhouse gases by 40 % by 2020 and by at least 80 % by 2050 (base year 1990). By 2020 power generated from wind power, biomass, solar power and other renewables is to account for a minimum of 35 % of the total and in heat consumption up to 14 %. In the course of the further development of its Biomass Strategy the Federal Government has revised the original goal of expansion for biofuels. In the year 2020 the target now is 10 % instead of 12 %.

Following the main guiding principles “security of supply”, “economic efficiency” and “environmental protection”, the Energy and Climate Programme contains about 30 key elements including a package of different acts and ordinances. Offering incentives for modernization and technological innovation the programme aims at stepping up the number of jobs within the renewable energy sector. With its National Energy Strategy the Federal Government is ensuring that

- energy supply will not be interrupted,

- the cost of power does not become prohibitive,
- Germany remains an attractive place to do business and that
- climate change mitigation targets will be met.

Boosting energy efficiency is the key to this, by using modern technologies to reduce electricity consumption or by refitting our buildings, which in any case raises their value. It will be putting in place the pertinent legal framework and introducing economic incentives, while making sure that all measures taken are affordable, cost-efficient and effective.

A faster phase-out of nuclear energy requires a faster reorganization of energy supply - a process started under the National Energy Concept. Climate protection will remain the decisive driving force. The climate targets agreed in the Energy Concept will be adhered to. This sends a strong signal about investment in innovation and technological progress. The thorough re-vamping of energy supply in Germany is a task for future decades, and is thus above all an opportunity for future generations. Political decisions aimed at combating climate change, saving energy and the latest decisions to close down nuclear power in Germany are increasingly exerting an influence on forestry, timber markets and timber trade.

2.4 Timber markets and wood demand

Forests play the key role in timber and fuelwood supply, which has increased significantly during the past decade. Besides timber demand, this is mainly due to the renaissance of bioenergy with woody biomass as the most important raw material source. Renewable raw materials like timber and woody biomass offer significant opportunities to mitigate the effects of climate change, secure supply and promote economic development. CO₂ is sequestered not only while trees grow, but also stored in timber products. Every cubic meter of timber removes about 1 ton of CO₂ from the atmosphere and stores it in the form of carbon, in some cases over many decades. Sustainable material use of timber is favorable regarding climate protection and energy saving. Its carbon balance is mostly superior to those of competing raw materials. In addition, it helps to reduce energy consumption and to replace fossil fuels at the end of the life cycle. Finally, the whole wood product chain serves to boost domestic value creation, especially in rural areas.

Renewables are becoming increasingly important in a society geared towards sustainable development. As a multi-purpose raw material, the demand for woody biomass has increased greatly, with it being put to several major uses. Due to its many different utilization possibilities it has the potential to successfully break into new markets. Against the backdrop of economic growth scenarios and due to the ongoing ambitions to achieve the given climate protec-

tion targets 2020 and beyond (“bio-based economy”), some studies expect a shortage in timber supply³⁴.

Depending on the degree of mobilization of existing biomass stocks, worst-case scenarios are indicating supply deficits. However, these estimated supply “gaps” must be considered as theoretical figures because in real terms, markets as well as enterprises will react to an ongoing shortfall of timber and woody biomass in due time. Besides price movements, such developments may cause suitable reactions on the markets, such as reduction of production capacities, shutdown of facilities or relocation of investments to more favorable raw material supply regions.

One key to preventing such developments from coming true is to mobilize existing timber and woody biomass stock not only in forests but also to tap additional raw material sources outside forests (e.g. re-use of residues and recovered wood, fast growing species on arable land, landscape care wood). Policy efforts are aimed at tapping such additional potentials of forest timber. However, the prospects of success are uncertain and the subject of intensified political discussion. They are largely determined by market development as well as by the underlying economic and political conditions.

2.5 Competing requirements of society as a challenge for multifunctional forestry

Following moderate growth in the 1990s, the use of timber as a raw material and fuel in Germany has risen substantially since the turn of the millennium. The use of wood resources has been based on domestic availabilities, especially those of forest resources. Further growth is expected due to the economic development in general, rising energy prices and the political environment for the promotion of renewables.

The rising use of fuelwood in private households exacerbates raw material competition, especially in respect of the availability of softwood. According to current evaluations, nearly 34 million cubic metres of wood resources (this figure has tripled within 10 years) and thereof 22 million cubic metres of split logs directly from forests were used for energy generation in private households (2010)⁵. 9.5 million cubic meters of softwood were used in this context. This

³ Mantau, U. et al. 2010: EUwood - Real potential for changes in growth and use of EU forests. Final report. Hamburg/Germany, June 2010. 160 p.

⁴ The European Forest Sector Outlook Study EFSOS II

http://www.unece.org/fileadmin/DAM/timber/efsos/data/Country_profiles.pdf

⁵ Mantau U. (2012); Energieholzverwendung in privaten Haushalten 2010; INFRO Informationssysteme für Rohstoffe, Universität Hamburg

timber is, however, also partially in demand for use as a material (industrial roundwood, industrial wood). Consequently, the timber industry has had to face some regional bottlenecks in spruce supply over the past years. Ongoing demand resulted in some reduction of the respective timber stock in forests as well as in net imports of about 3.4 million m³ of roundwood.

Against this backdrop, momentum is increasing in the ongoing debates on maximum sustainable harvesting potential, the identification of wood resources being available for sustainable mobilisation and the growing competition between material and energetic use of timber. In general, the annual timber harvest in German forests is still below increment. There is space for mobilizing additional domestic forest resources e.g. regarding hardwood species and small forest holdings. One decisive question is to what extent German forests will be able to contribute to meet future demand without jeopardizing sustainability rules.

2.6 How to best meet future challenges

Expectations of society on forest functions are increasing not only due to a higher demand for timber and woody biomass as renewable materials, but also as a consequence of more stringent requirements regarding nature conservation, adaptation of forests to climate change, their possible contribution to reducing greenhouse gas emissions and services for recreation. Taking into account those expectations and keeping in mind the needs of future generations as well as the acceptance of possible decisions and actions, initiatives should in principal be based on the equal consideration of the three dimensions of sustainability (ecological, economic and social matters).

As renewable resources will gain importance in a society based on such a principle, this raises the question as to how forests can best contribute towards meeting the numerous future challenges within the framework of multifunctional forestry. One major task of future forest policy is to aim at striking a resilient balance between differing interests and growing demands made on forests and their sustainable performance.

The National Forest Strategy 2020⁶, developed in an open process by interested stakeholders and adopted by the Federal Cabinet in September 2011, is the latest initiative aimed at evaluating the different demands in an overall context and establishing the underlying conditions

⁶ Link:

http://www.bmelv.de/SharedDocs/Downloads/EN/Publications/ForestStrategy2020.pdf;jsessionid=453FF007C448188F61100C6177A3C37E.2_cid296?_blob=publicationFile

that enable forestry and timber management to meet the challenges in a sustainable and, if possible, optimum manner. The Strategy therefore contains a number of different approaches for possible action in order to specifically define the forest management goals and to identify ways of solving the problems and conflicts thrown up by the wide-ranging, different social interests (9 main areas of action and related subordinated goals are identified).

The areas of action range from silvicultural approaches to measures for timber mobilisation, intensification of “cascaded use of wood”, increase the efficiency of timber use and optimisation of the closed substance cycle to the cultivation of fast growing species outside forests and an increase in timber imports. Research and development represent another key element in the implementation of this strategy. Via the Agency for Renewable Resources, the Federal Ministry of Food, Agriculture and Consumer Protection provides funding for a large number of projects under the Renewable Resources Funding Programme⁷. These projects are inter alia targeted at increased timber mobilisation and efficient use of wood (tapping additional potential through fast-growing tree species, pilot plant lignocellulose biorefinery etc.).

The National Forest Strategy 2020 should, furthermore, be in harmony with the Federal Government's other strategies such as the National Sustainability Strategy, the National Biodiversity Strategy, the Biomass Action Plan and measures to mitigate climate change. Attempts to improve the efficiency of raw material utilisation and to reduce energy consumption in the timber sector also constitute core activities in the Federal Government's action plan for the industrial use of renewable resources⁸ that are also currently being put into practice.

2.7 National Forest Climate Fund

The Forest Climate Fund⁹ is part of the programme associated with the Energy and Climate Fund. A decision by the German Bundestag called for it to be established from 2013 under the joint responsibility of the Federal Ministry of Food and Agriculture and the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.

Due to carbon storage, build-up of carbon stocks in forests and the prevention of emissions as a result of an enhanced use of timber, recycling and energy recovery, German forestry and

⁷ Link: <http://international.fnr.de/index.php?id=152>

⁸ Link http://www.bmelv.de/SharedDocs/Downloads/Broschueren/AktionsplanNaWaRo.pdf?__blob=publicationFile

⁹ <http://www.bmel.de/EN/Forests-Fisheries/Forests/Texte/ForestClimateFund.html>

forest industries are playing an important role in combating climate change. The Federal Government therefore regards it as a necessity to promote measures aimed at tapping the potential of forests and timber for CO₂ reduction and energy generation as well as measures aimed at adapting German forests to climate change, and in this way to help the Federal Government achieve its climate goals.

Measures are to be funded in the following priority areas:

- Adaptation of forests to climate change,
- Safeguarding of carbon storage and increasing the CO₂ sequestration of forests,
- Increasing of carbon storage in wood products and reduction/substitution of CO₂ via wood products,
- Research and monitoring,
- Information and communication.

3. Development in forest products sectors

3.1 Wood raw materials

An overview of supply and use of all wood raw materials is provided in the wood resource balance (Table 4). It shows the relevance of the different assortments of wood raw materials for satisfying the demand for material and energetic use. The following table reveals the developments which have taken place in the period 2000 to 2010 (more recent data are not available so far).

Table 4: Wood resource balance Germany 2000 and 2010							
Supply	Wood Resource Balance			2000	2010	Δ	Use
	2000	2010	Δ				
	mill. m ³			mill. m ³			
Sawlogs	30,3	37,3	7,0	30,3	37,3	7,0	Sawmill industry
Other roundwood	17,8	36,5	18,7	14,3	16,9	2,6	Pulp industry
Forest residues	3,1	8,0	4,9	7,2	10,6	3,4	Panel industry
Bark	3,6	4,7	1,0	3,7	2,3	-1,4	Other material uses
Landscape care wood	1,9	4,5	2,6	0,4	4,6	4,3	Solid wood fuels
Short rotation coppice	0,0	0,0	0,0	8,6	22,6	14,1	Large-scale firing plants (≥ 1MW)
saw mill by products	11,5	15,0	3,5	4,3	7,2	2,9	Small-scale firing plants (< 1MW)
Other industrial residues	3,9	5,8	1,8	12,0	33,9	21,9	Private households
Black liquor	2,0	3,6	1,6	0,0	0,1	0,1	Other energetic uses
Post consumer wood	5,5	14,0	8,4	0,0	0,0	0,0	Balance adjustment
Solid wood fuels	0,4	4,6	4,3				
Balance adjustment	0,7	1,5					
total	80,8	135,4	54,6	80,8	135,4	54,6	total

Source: Mantau, U. (2012): Holzrohstoffbilanz Deutschland : Entwicklungen und Szenarien des Holzaufkommens und der Holzverwendung von 1987 bis 2015. Hamburg: Universität Hamburg, 65 p

Total supply and use of wood raw materials increased about 55 million m³ in the period 2000 to 2010. Supply of primary wood raw materials from forests increased about 30.6 million m³. This increase is mainly driven by higher demand of sawlogs for the sawmill industry and higher demand of other roundwood (fuelwood) for private households and firing plants. Energetic use of wood resources accounts to 47% of the total wood resource use in 2010. A significant increase can also be stated for the supply of post consumer wood. The major share of the increased supply is used by large-scale firing plants, while the material use of post-consumer wood in the panel industry for the production of particle boards remains on a quite constant level.

3.2 Roundwood markets

The domestic use of roundwood is dominated by softwood. Roughly three quarters of the used roundwood were coniferous species. The German timber industry is even more based upon softwood processing. Roundwood utilisation accounts for about 90 % softwood and only 10 % hardwood species. Predicted growth of global wood demand on the one hand and limited softwood potentials in German forests on the other hand suggest that there will be a major future challenge for the enterprises (e.g. to open up additional import opportunities for softwood; to develop new markets for hardwood products). It is necessary to develop alternative utilisation and supply strategies with specific emphasis on improved raw material efficiency and intensified “cascaded” use of wood.

According to official harvest statistics, in 2012 about 53 million m³ were felled (plus 1.7 % compared with 2011). The species group “spruce” accounted for 48 % of the total felling, “pine” for 25 %, “beech” for 23 % and “oak” for 4 %. Comparing the development of felling in recent years with German forest resource assessment data clearly show that in comparison with potential coniferous wood resources (in particular potential resources of spruce) in hardwood there is still considerable untapped potential.

The official felling statistics (2013: 53.2 million m³ commercial volume under bark, average of the last decade: about 57 million m³) do not completely cover the volumes, harvested in the forest (Table 5). Especially removals in enterprises managing smaller forest areas (*inter alia* registration problems) and fuelwood consumption are underestimated (it is particularly unlikely that the use of forest residue volumes is fully recognized).

Table 5: Comparison between official felling statistics, WEHAM potential and estimates of use in million m³ of solid wood under bark per year (after deduction of harvesting losses)					
Year	Wood harvest according to official felling statistics	Timber harvest potential according to the WEHAM basic scenario Federal Forest Inventory	Estimates of felling		
			Inventory Study 2008	Thünen Institute of International Forestry and Forest Economics	University of Hamburg
2002	42,4			48.5	47.5
2003	51,2.	70.9	70.5	52.5	51.5
2004	54.5	70.9	70.5	59.0	54.6
2005	56.9	70.9	70.5	66.3	62.4
2006	62.3	70.9	70.5	69.6	
2007	76.7	70.9	70.5	76.7	73.3
2008	55.4	78.4	70.5	64.1	71.9
2009	48.1	78.4		61.3	
2010	54.4	78.4		67.7	73.8
2011	56.1	78.4		68.2	
2012	52.3	78.4		66.5	
2013	53.2	75.8		68.8	

Source: BMEL, Thünen-Institute

In order to provide more realistic accounts of harvesting volumes additional methodological approaches can be used. Results from the Forest Inventory Study 2008 estimate the average annual harvest in the period 2003 to 2008. The Federal Forest Inventory allows at a ten-year interval the determination of felling and verifies the derivation on the demand side. In 2015, new data from the ongoing third Federal Forest Inventory will, for the first time for the entire German forest area, allow a detailed verification of timber use in forests broken down by the Laender and categories of forest ownership.

Roundwood markets are closely linked to developments in the construction sector. Regarding wood consumption this industry sector is most important, for in Germany almost 2/3 of removals are transformed into products designed for building construction and housing elements. The German construction, housing and property industries form a key sector for growth and employment. With a workforce of around 3.8 million and a gross value added of

400 billion euros, it is among the most important sectors in the national economy. In Germany there are about 16 million buildings, of which 80 % are older than 25 years. This means a huge dormant potential to be mobilized.

Since the first Thermal Insulation Ordinance entered into effect in 1978 the energy efficiency of buildings has been improved step by step. In spite of this many buildings still do not meet any energy saving requirement. Building owners and tenants increasingly realise that energy saving is not only an environmental issue but also most interesting in economic terms. For example, the cost for heating and hot water make up around 87 % of total energy consumption of private households. 80 % of those costs could be saved by professional refurbishment such as improvements in building shells, energy efficiency and modern building services.

Important incentives for investments in the building sector besides the Renewable Energies Heat Act is the development of a German Green Building Certificate in close cooperation between the Federal Government and research institutions and interested associations. The first German Sustainability Certificates were granted to office buildings in January 2009¹⁰. Ecological advantages of sustainable wood products may open up new perspectives within the building sector, especially in respect of modernization and renovation. However, thanks to advanced insulation technology, low-energy buildings are in general independent of construction material (timber, concrete etc.). This means intensified competition between construction materials and a constant need for innovation.

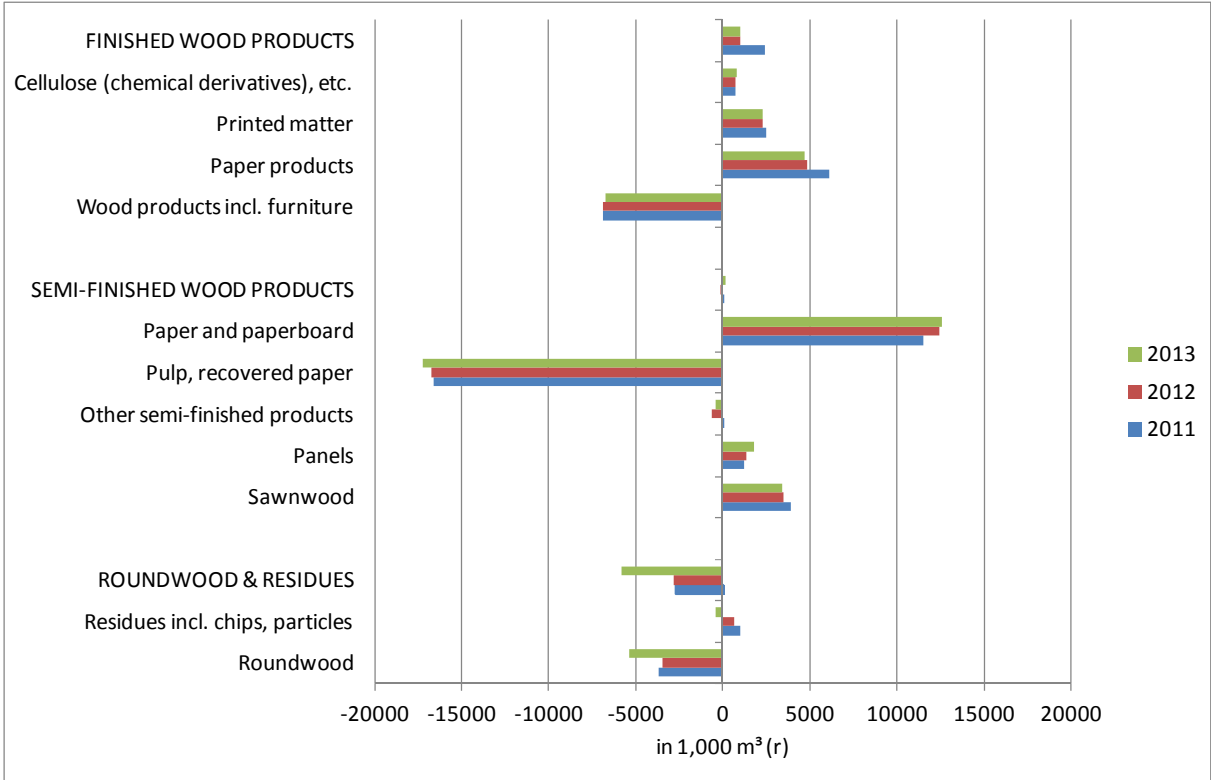
3.3 Trade policy issues - Trade with wood and wood based products

German trade with wood and wood based products showed in the period 2011 to 2013 a further rise in net imports, measured in roundwood equivalents (m^3 (r)). After decades of net exports, the situation in Germany has changed. In 2011 net imports were identified for the first time (146,000 m^3 (r)), followed by net imports of 1.9 million m^3 (r) in 2012 and 4.6 million m^3 (r) in 2013. In monetary terms, exports show a surplus in all recent years, however, with a decreasing trend. In 2011 net exports of 8.2 billion Euros of wood and wood based products could be achieved. 2012 showed a slight decrease to 7.0 billion Euros. Preliminary data for 2013 describe a nearly constant value of net exports of almost 7.0 billion Euros.

¹⁰ further information: www.nachhaltigesbauen.de ; www.dgnb.de

The following figures demonstrate the German trade balance of wood and wood based products regarding different product groups from 2011 to 2013 in million m³ (r) (Figure 2) and in 1,000 million Euros (Figure 3).

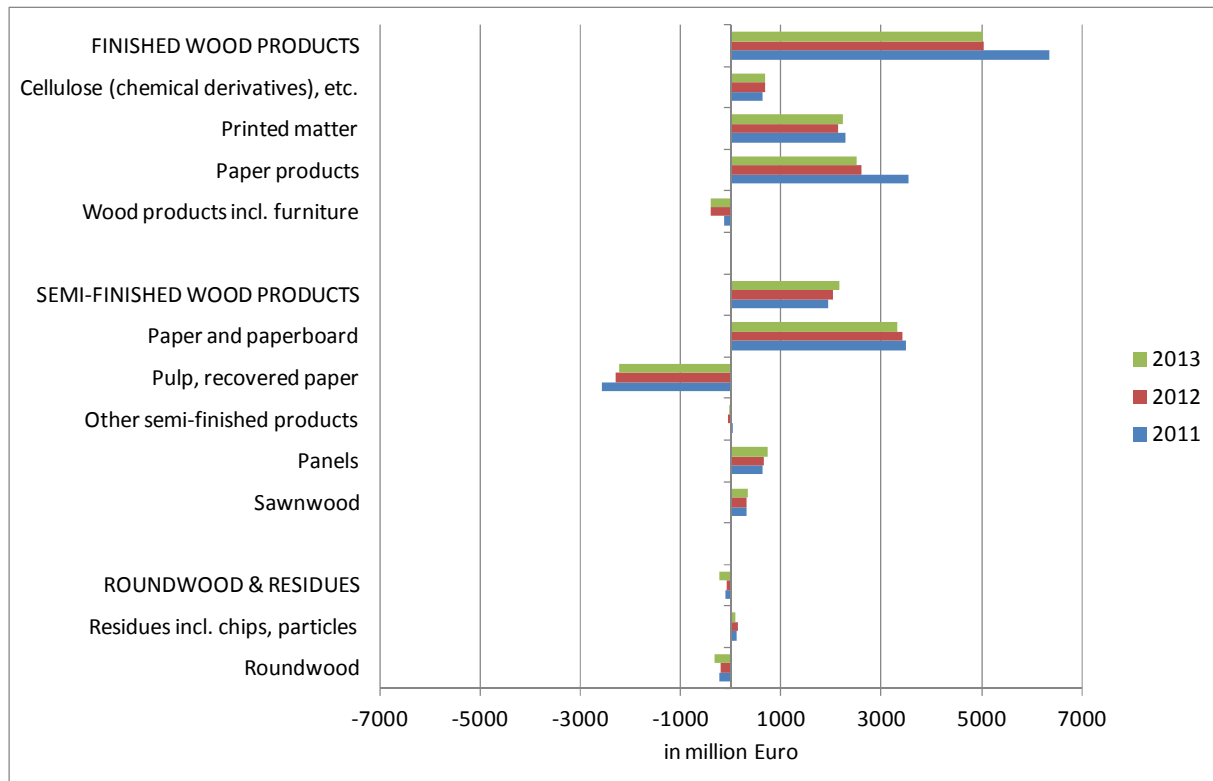
Figure 2: Trade balance of product groups of wood and wood based products 2011 to 2013 (in 1,000 m³ (r))



Data source: Statistisches Bundesamt, calculated by Thünen Institute. 2013: Preliminary data.

The main product group “roundwood & residues” shows net imports in the time period considered. Within this main group the products had significantly different trade balances until 2013. While roundwood showed net imports, residues had an export surplus. In 2013 residues experienced also a net import in quantity, while monetary values still show net exports. Trade with semi-finished wood products is nearly balanced from 2011 to 2013, measured in roundwood equivalent (m³ (r)). In monetary values semi-finished wood products achieved a constant annual export surplus of about two billion Euros. Within this main product group, pulp and recovered paper were indicated by significant net imports, while the export surplus was mainly based on sawnwood, panels and paper and paperboard.

Figure 3: Trade balance of product groups of wood and wood based products 2011 to 2013 (in million Euros)



Data source: Statistisches Bundesamt, calculated by Thünen Institute. 2013: Preliminary data.

The main product group of finished products basically shows net exports in volume and value. The only exceptions are wood products including furniture which have an import surplus in the period 2011 to 2013. Paper products, printed matter and chemical derivatives offer net exports in both quantity and value.

3.4 Sawnwood (softwood/hardwood)

In 2013, about 17,876 people were employed within the German sawmilling industry (- 3.5 % against 2012). The total turnover amounted to 5.5 billion euros (change against previous year: + 3.6 %). With an export quota of 26.8 %, the export turnover amounted to 1.5 billion euros. Compared with 2012, the entire export turnover increased by 4.6 % (companies with 20 and more employed persons).¹¹

¹¹ „16.1 Säge-,Hobel-u.Holzimprägnierwerke“ (StBA-genesis table 42271-0003)

With about 20.4 million m³, the domestic production of sawn softwood (sawnwood coniferous) increased by 1.8 % in 2013 compared with 2012. The apparent consumption of coniferous sawnwood was estimated 18.2 million m³ (+ 2.1 % compared with 2012). German exports of sawn softwood amounted to 6.2 million m³ and the imports to 3.9 million m³ in 2013. The annual apparent consumption of sawn hardwood amounted to 0.9 million m³ which shows a decrease of 4.1 % compared to 2012. The domestic production increased about 4.1 % and is still at a level of 1.0 million m³ of sawn hardwood.

3.5 Wood-based panels (particle board, fibreboard, MDF, OSB, plywood)

In 2012, the German panel industry employed approximately 13,203 people (+3.3 % against 2012) and recorded a total turnover of 4.6 billion euros. Compared with 2012, the total turnover increased by 0.9 %. About 32.0 % of the turnover is depended on foreign trade (1.5 billion euro). Compared with 2012, the entire export turnover increased by 1.1 % (companies with 20 and more employees)¹². The annual production of the German panel industry amounted to 6.8 million m³ of particle boards (including OSB) and to 5.1 million m³ of fiberboards. The apparent consumption of particle boards (including OSB) was estimated 7.0 million m³ (- 3.3 % compared with 2012) and, regarding fibreboards, 3.1 million m³ (- 4.1 % compared with 2012).

3.6 Pulp and paper

In 2013, approximately 37,768 people were employed in the German pulp and paper industry (- 0.8 % compared with 2012) at about 179 production sites (- 0,6 % against 2012). The total turnover amounted to 16.1 billion euro (change from previous year: - 2.0 %). With an export quota of 53.7 %, the export turnover amounted to 8.6 billion euro. Compared with 2012, the entire export turnover decreased by 0.8 % (companies with 20 and more employed persons)¹³. The annual production of paper and paperboard amounted to 22.4 million tons (- 1.0 % against 2012)¹⁴, comprising 3,000 different varieties of paper. The apparent consumption of graphic papers, papers and boards for packaging, sanitary and household papers and other papers and board in total was calculated to be 19.9 million tons (- 1.0 % compared with 2012). Wood consumption by German pulp and paper mills was estimated to be 10.2 million m³ in 2013, which is a minus of 1.5 % compared with 2012¹⁵.

¹² „16.21 H.v.Furnier-,Sperrholz-, Holzfaserplatten-und-spanplatten“ (StBA-genesis table 42271-0003)

¹³ „17.1 H.v.Holz-u. Zellstoff, Papier,Karton u.Pappe“ (StBA-genesis table 42271-0003)

¹⁴ VDP (2014): Paper 2014: Annual Report. Tab. N8; N16, N18)

¹⁵ VDP (2014): Paper 2014: Annual Report. Tab. N8; N16, N18)

3.7 Pellet industry

German producers of wood pellets benefited from growing demand for renewable energy generation. Producing 0.3 million tons in 2005 (of which domestic consumption was about 0.2 million tons) it was possible to increase annual production to 2.2 million tons in 2013 (a slight minus of 1.7 % compared to 2012). Export volume last year: about 0.7 million tons. Consumption remains on a lower level than production: 1.9 million tons in 2013 - a plus of 10.5 % compared with 2012. So far main raw material sources for pellet production are wood residues originating from softwood sawmills. In future, additional sources may become important (e.g. residues from forests, fast growing species, hardwood species).

3.8 Value added wood products (including furniture)

The German woodworking and furniture industry (manufacturers of assembled parquet floors, of other builders' carpentry and joinery, of wooden containers and of other products of wood and manufacturers of office and shop furniture, of kitchen furniture and of other furniture ¹⁶) employed approximately 147,540 people in 2013 (- 3.3 % compared with 2012). 49,660 of these were employed in the woodworking industry, 97,880 in the furniture industry. The total turnover amounted to 25.6 billion euro, a decrease of 4.2 % compared with 2012. The decrease in the furniture industry was by far higher (- 5.9 %) than in the woodworking industry (- 0.7 %). However, the turnover of the furniture industry is still higher (16.9 billion euro) than the one of the woodworking industry (8.7 billion euro). With an export quota of 24.1 %, the export turnover amounted to 6.2 billion euro. The export quota of the furniture industry is considerably higher than the export quota of the woodworking industry (28.7 % compared to 15.1 %). The export quota of the woodworking industry shows a slight decrease compared with 2012 (- 0.9 %). An increase can be stated for the furniture industry (+ 1.5 %).

¹⁶ In accordance with NACE Codes 16.22, 16.23, 16.24, 16.29, 31.01, 31.02, 31.09



TF1
UNECE TIMBER FORECAST QUESTIONNAIRE
Roundwood

Country: Germany	Date:
Name of Official responsible for reply:	
Official Address (in full):	
Telephone:	Fax:
E-mail:	

Product Code	Product	Unit	Historical data		Revised 2013	Estimate 2014	Forecast 2015
			2012	2013			
1.2.1.C	SAWLOGS AND VENEER LOGS, CONIFEROUS						
	Removals	1000 m ³	23.457	23.784		23.900	24.400
	Imports	1000 m ³	4.500 #	4.000 #		4.500	4.500
	Exports	1000 m ³	1.700 #	1.100 #		1.400	1.400
	Apparent consumption	1000 m ³	26.257	26.684		27.000	27.500
1.2.1.NC	SAWLOGS AND VENEER LOGS, NON-CONIFEROUS						
	Removals	1000 m ³	3.175	3.057		3.100	3.100
	Imports	1000 m ³	150 #	150 #		200	200
	Exports	1000 m ³	750 #	800 #		900	900
	Apparent consumption	1000 m ³	2.575	2.407		2.400	2.400
1.2.1.NC.T	of which, tropical logs						
	Imports	1000 m ³	25 #	16 #		16	16
	Exports	1000 m ³	5 #	2 #		2	2
	Net Trade	1000 m ³	20	14		14	14
1.2.2.C	PULPWOOD (ROUND AND SPLIT), CONIFEROUS						
	Removals	1000 m ³	8.900	8.663		8.800	8.300
	Imports	1000 m ³	2.000 #	2.000 #		2.500	2.500
	Exports	1000 m ³	800 #	800 #		800	800
	Apparent consumption	1000 m ³	10.100	9.863		10.500	10.000
1.2.2.NC	PULPWOOD (ROUND AND SPLIT), NON-CONIFEROUS						
	Removals	1000 m ³	4.310	3.633		3.700	3.600
	Imports	1000 m ³	400 #	300 #		200	200
	Exports	1000 m ³	350 #	250 #		300	300
	Apparent consumption	1000 m ³	4.360	3.683		3.600	3.500
3	WOOD CHIPS, PARTICLES AND RESIDUES						
	Domestic supply	1000 m ³	12.098 C	13.483 C		14.200	14.100
	Imports	1000 m ³	2.410 C	3.170 C		3.100	3.100
	Exports	1000 m ³	2.782 C	2.628 C		2.600	2.600
	Apparent consumption	1000 m ³	11.726	14.026		14.700	14.600
1.2.3.C	OTHER INDUSTRIAL ROUNDWOOD, CONIFEROUS						
	Removals	1000 m ³	1.579	1.560		1.600	1.650
1.2.3.NC	OTHER INDUSTRIAL ROUNDWOOD, NON-CONIFEROUS						
	Removals	1000 m ³	1.442	1.355		1.400	1.450
1.1.C	WOOD FUEL, CONIFEROUS						
	Removals	1000 m ³	4.529	4.886		5.000	5.400
1.1.NC	WOOD FUEL, NON-CONIFEROUS						
	Removals	1000 m ³	4.947	6.270		6.300	6.600


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Questions? Please contact Alex McCusker at the above address or telephone +41 22 917 2880.

The historical data are from the most recent Joint Forest Sector Questionnaire (blank) or the Timber Committee Forecast (#). For explanations please see cover letter.

These data are flagged with E, R, N or C for secretariat estimate, repeat, national estimate or calculated totals (from subitems). If there is no flag, this indicates officially supplied data.

 TF2 UNECE TIMBER FORECAST QUESTIONNAIRE Forest products		Country: Germany			Date:		
		Name of Official responsible for reply:					
Official Address (in full):							
Telephone:							
Fax:							
E-mail:							
Product Code	Product	Unit	Historical data		Revised 2013	Estimate 2014	Forecast 2015
			2012	2013			
5.C	SAWNWOOD, CONIFEROUS						
	Production	1000 m ³	20.076	20.428		21.000	21.000
	Imports	1000 m ³	3.931	3.943		4.200	4.200
	Exports	1000 m ³	6.177	6.160		7.000	7.000
	Apparent consumption	1000 m ³	17.831	18.211		18.200	18.200
5.NC	SAWNWOOD, NON-CONIFEROUS						
	Production	1000 m ³	1.005	1.050		1.030	1.030
	Imports	1000 m ³	450	411		410	410
	Exports	1000 m ³	576 E	585 E		670	670
	Apparent consumption	1000 m ³	879	876		770	770
5.NC.T	of which, tropical sawnwood						
	Production	1000 m ³	6 N	4 N		5	5
	Imports	1000 m ³	106	106		105	100
	Exports	1000 m ³	48	41		45	40
	Apparent consumption	1000 m ³	64	70		65	65
6.1	VENEER SHEETS						
	Production	1000 m ³	127 C	104 C		100	100
	Imports	1000 m ³	119 C	81 C		80	80
	Exports	1000 m ³	66 C	56 C		55	55
	Apparent consumption	1000 m ³	179	129		125	125
6.1.NC.T	of which, tropical veneer sheets						
	Production	1000 m ³	0 N	0 N		0	0
	Imports	1000 m ³	27	19		20	20
	Exports	1000 m ³	8	7		8	8
	Apparent consumption	1000 m ³	19	12		12	12
6.2	PLYWOOD						
	Production	1000 m ³	178 C	161 C		140	140
	Imports	1000 m ³	1.336 C	1.310 C		1.350	1.300
	Exports	1000 m ³	298 C	293 C		320	300
	Apparent consumption	1000 m ³	1.216	1.179		1.170	1.140
6.2.NC.T	of which, tropical plywood						
	Production	1000 m ³	17 N	14 N		0	0
	Imports	1000 m ³	144	136		140	140
	Exports	1000 m ³	41	33		15	15
	Apparent consumption	1000 m ³	119	116		125	125
6.3	PARTICLE BOARD (including OSB)						
	Production	1000 m ³	6.781 N	6.806 N		6.900	6.820
	Imports	1000 m ³	2.645	2.428		2.790	2.700
	Exports	1000 m ³	2.182	2.227		2.280	2.250
	Apparent consumption	1000 m ³	7.244	7.007		7.410	7.270
6.3.1	of which, OSB						
	Production	1000 m ³	1.167	1.253		1.230	1.200
	Imports	1000 m ³	417	455		510	500
	Exports	1000 m ³	500	540		490	490
	Apparent consumption	1000 m ³	1.084	1.167		1.250	1.210
6.4	FIBREBOARD						
	Production	1000 m ³	5.063 C	5.071 C		5.000	4.900
	Imports	1000 m ³	1.194 C	1.165 C		1.000	950
	Exports	1000 m ³	3.022 C	3.132 C		3.050	3.000
	Apparent consumption	1000 m ³	3.235	3.104		2.950	2.850
6.4.1	Hardboard						
	Production	1000 m ³	2.297	2.284		2.250	2.200
	Imports	1000 m ³	183	152		150	150
	Exports	1000 m ³	1.356	1.341		1.300	1.200
	Apparent consumption	1000 m ³	1.124	1.095		1.100	1.150
6.4.2	MDF (Medium density)						
	Production	1000 m ³	1.478	1.454		1.450	1.400
	Imports	1000 m ³	397	383		380	360
	Exports	1000 m ³	1.299	1.299		1.300	1.300
	Apparent consumption	1000 m ³	576	537		530	460
6.4.3	Other fibreboard						
	Production	1000 m ³	1.288	1.333		1.300	1.300
	Imports	1000 m ³	614	630		470	440
	Exports	1000 m ³	366	492		450	500
	Apparent consumption	1000 m ³	1.536	1.472		1.320	1.240
7	WOOD PULP						
	Production	1000 m.t.	2.636 C	2.609 C		2.600	2.600
	Imports	1000 m.t.	4.848 C	4.743 C		4.660	4.660
	Exports	1000 m.t.	1.126 C	1.255 C		1.230	1.200
	Apparent consumption	1000 m.t.	6.358	6.097		6.030	6.060
10	PAPER & PAPERBOARD						
	Production	1000 m.t.	22.603 C	22.393 C		22.400	22.450
	Imports	1000 m.t.	10.871 C	10.575 C		10.600	10.500
	Exports	1000 m.t.	13.404 C	13.070 C		13.000	13.100
	Apparent consumption	1000 m.t.	20.070	19.898		20.000	19.850

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