

STATEMENT

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1. General economic trends

1.1 Growth in the Social Market Economy ¹

Long-term and continuous economic growth on the basis of the Social Market Economy - that is the clear principle for the Federal Government's economic policy. In the course of the year 2011, economic activity in Germany regained the pre-crisis level of spring 2008. The post-crisis recovery process was thus even more dynamic than the Federal Government anticipated a year ago. The upswing was – not least when compared internationally – very powerful indeed: gross domestic product expanded by 3.0 % (price-adjusted) in 2011, following an increase of 3.7 % the year before. However, in the course of last year the level of debt in a number of industrial countries – often coupled with doubts about their competitiveness – engendered tangible uncertainty on capital markets. As a result, expectations in the performance of the German economy fell significantly in the second half of 2011 (**table 1**).

Table 1: Selected key figures for macroeconomic trends in the Federal Republic of Germany ¹	2010	2011	Annual projection 2012
	Year-on-year changes (%)		
Gross domestic product (price-adjusted)	3.7	3.0	0.7
Employment (domestic)	0.5	1.3	0.5
Unemployment rate (as defined by the Federal Employment Agency) ²	7.7	7.1	6.8
Use of GDP (price-adjusted, in real terms)			
Private households and private non-profit institutions	0.6	1.5	1.2
Machinery and equipment	10.5	8.3	2.0
Construction	2.2	5.4	0.8
Domestic demand	2.4	2.2	1.1
Exports	13.7	8.2	2.0
Imports	11.7	7.2	3.0
Net foreign demand (contribution to GDP growth rate) ³	1.5	0.8	-0.3
Gross wages and salaries per person employed (nominal)	2.2	3.4	2.4

1 Up to 2011, preliminary figures from the Federal Statistical Office as of 11 January 2012;

2 Based on total number of persons employed;

3 Contribution to GDP growth rate.

Germany's economy was in an encouragingly robust state in the first half of 2012. This went hand in hand with a strong upturn in employment, to which the responsible attitude of the social partners has also contributed.

In its annual projection for 2012, the Federal Government expects a temporary phase of cyclical weakness, but not a recession. As the year progresses, the German economy will return to

1 Annual Economic Report “Boosting confidence - generating opportunities – continuing to grow with Europe” (2012): Federal Ministry of Economics and Technology. www.bmwi.de

a faster rate of growth. The Federal Government anticipates that price-adjusted gross domestic product will grow by 0.7 % in annualised terms. This implies that the German economy will continue to grow rather more strongly than the eurozone as a whole.

The Federal Government has also undertaken an initial estimate of the economic development in 2013 so that it can set out the key figures for the federal budget. It expects GDP growth (price-adjusted) of 1.6 % and a further slight drop in the unemployment rate to 6.7 %.

Growth in Germany has been mainly driven by the domestic economy in the last two years. And the forces driving growth will shift further towards the domestic economy. As a result of the significant slow-down in growth in the international and, in particular, in the European context, exports are only likely to record a moderate expansion this year. In view of the dynamic development in imports, the calculated contribution to growth by net foreign demand, which is derived from the difference between exports and imports, will be negative. In contrast, consumer spending will have an appreciable impact on growth. And the environment for investment remains favourable.

Continuous growth in Germany is closely related to growth in Europe - and vice versa. Germany continues to be an anchor of stability and growth in Europe. The internal European market and the common currency are some of the greatest achievements of Europe's process of integration. Europe must develop further into a union of stability. Each country is called on to improve its competitiveness and to put its public finances on a viable footing. The signing of the treaty on strengthening fiscal discipline by the European Council marks a milestone on this path.

1.2 Strengthening competition, freedom and responsibility

If our economy is to grow, it is vital that individuals, companies and financial markets have confidence in the performance of the German and the European economy. Safeguarding confidence in public finances, and making these finances viable in the long term, is a central task for fiscal policy in view of the debt problems in the eurozone. For this reason, Germany will comply fully with all the budget consolidation obligations it has taken on at national and European level. In the 2012 budget and the financial plan up to 2015, the Federal Government falls well below the maximum net borrowing level which is admissible each year according to the "debt brake" rules.

A key role is played by competition law: it must open up opportunities for growth both for large, international companies, and must also respond to the needs of small and medium enterprises (SMEs) and maintain diversity. The Federal Government has adopted a reform of

the Act Against Restraints of Competition in order to update the general framework for competition in Germany. In particular, the fields of merger control, monitoring of abuse of dominant positions, and procedures in the case of antitrust violations are further modernised and brought more into line with European law. The enforcement of cartel law is made even more efficient. This step towards reform is a clear regulatory signal which will strengthen the forces for growth and the competitiveness of the German economy.

According to the Basel III decisions, banks will have to meet tougher capital adequacy and liquidity rules in future. The intention is to boost the quantity and quality of bank capital for supervisory purposes. Also, the rules on monitoring the liquidity of banks are being harmonised at European level. Since the financial market crisis in autumn 2008, the confidence of many consumers has been shaken, and they are increasingly seeking expert and independent advice on decisions on investments and pension provision. The revision of the law on investment advisers and financial investments aims to give consumers better protection in future against avoidable losses and misleading financial advice in the case of financial products.

1.3 Safeguarding prosperity and future opportunities

To a large extent, growth in Germany is driven by innovation. It relies on people who enjoy competing, who are open to new technologies, and who are capable of innovation. These qualities are of crucial importance for the solving of our economic, social and environmental challenges.

Successful labor market reforms in recent years have resulted in a clear drop in unemployment. Unemployment is now lower than at any time since 1991, and the German unemployment rate is one of the lowest in Europe. The number of long-term unemployed has dropped by 40% compared with 2005.

This success is reflected in high demand for skilled labor. The scarcity of skilled labour is exacerbated by the fact that demographic change in Germany is resulting in a decline in the size of the working age population. The effects of the skills shortage are already being felt, and the Government is addressing this problem with education and training, family policy and immigration. It has taken an important step in the form of its concept to secure the availability of skilled workers. Here, the commencement of a system of controlled immigration of foreign skilled workers marks a major success. The Federal Government aims to perpetuate these successes and at the same time to find responses to the new challenges. Skilled workers safeguard innovation and prosperity in Germany - and this applies not only to the highly skilled, but to the entire workforce.

2. Policy measures and market drivers affecting the forest sector

2.1 Reorienting energy policy

In an effort to promote biomass-generated electricity, the EU Commission presented the EU-Biomass Action Plan in December 2005 and called upon member states to draw up their own national biomass action plans. In line with the European Council's decisions from March 2007, EU-wide binding targets were set for 2020. Announced on January 2008, the EU-Climate and Energy package designed for use in implementing these ambitious goals has since been adopted (**table 2**).

Table 2: EU climate protection targets 2008 to be met by 2020	
overall energy demand	reduction by 20 %
renewable-generated electricity	share of 20 %
greenhouse gas emissions	CO ₂ -reduction by 20 %
renewable energy in fuel supply	increase share to 10 % ¹

1 Only binding if energy production is sustainable and second generation biofuels are available commercially

In line with the EU requirements, the Federal Government has made a clear commitment to promoting renewable energy sources and raw materials; in this context, the following factors must be considered when pursuing national targets:

- Biomass demand for energy production competes with food crops and the many uses of biomass as a raw material; competition for biomass also occurs between the various types of energy production.
- Hence, identification of additional wood sources inside and outside forests, which can be sustainably mobilised, are gaining importance as well as intensified cascaded use of wood (preference of material use and recycling over the use of wood for energy purposes).
- Identification of the most promising and efficient segments for the expansion of the material and energetic use of renewable resources in order to support climate protection targets (sequester CO₂ in forests, CO₂ storage in timber products, CO₂ reduction e.g. via substitution of fossil energy sources by fuelwood).
- Ensure environmentally sound production of renewables, *inter alia* through measures like legislation, sustainability standards or certification schemes.
- Considerable research effort is needed in the biomass and raw material sector in order to support breakthroughs in efficient and resource-saving innovative technologies (e.g. integrated solutions for industrial use and energy production such as biorefinery).

- Greater use of bioenergy and renewable materials must enjoy broader public acceptance (while complying with the requirements of sustainability).

The Federal Government took an important step towards the restructuring of Germany's energy supply by launching last year's energy package (*inter alia* a nuclear phase-out by 2022). The aim is for renewable energy sources to provide the bulk of our energy supply by 2050. The energy concept is being rapidly and resolutely implemented. To this end, Germany needs efficient infrastructure which meets the technical requirements of fluctuating production. In particular, the grids and 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.

2.2 Continuing trend towards renewable energy sources

In 2011, there was once again a massive increase in the use of renewable energy worldwide. Global investment in the sector rose by about 17 % over 2010 levels, reaching a record high of 257 billion US dollars. This was announced by the REN21 policy network² in its annual Renewables Global Status Report (GSR). Renewable energy now supplies 16.7 % of final energy consumption and about 20.3 % of global electricity consumption worldwide. Total investment in the sector was 40 billion US dollars higher than investment in fossil energy generation capacity. The number of countries that have adopted targets for the expansion of renewable energy has risen again, reaching 118. More than half of them are developing countries. Growth in the renewable energy sector mainly took place in China, the U. S. and Germany, as well as Spain, Italy, India, and Japan.

2011 saw a sharp increase in electricity generation from renewable energy sources in Germany (**table 3**); it rose by over 17 % on the previous year and, at almost 122 billion kWh, accounted for 20.0 % of total electricity consumption (2010: 17.1 %). Wind power and photovoltaics accounted for the greatest share of the increase. Biomass is one of the most important and most diverse renewable energy sources being used in solid, liquid and gaseous form to produce electricity

² The Renewable Energy Policy Network for the 21st Century (REN21) is a global network that was formed in 2005 after the "renewables 2004" conference in Bonn. It unites governments, international organisations and non-governmental organisations as well as representatives of the private sector, the financial sector, and civil society organisations from the energy, environment and development spheres. REN21 receives financial support from the German Environment and Development Ministries.

and heat and to manufacture biofuels. In 2011 nearly 70 % of total final energy from renewable sources was covered by the different types of biomass used for energy generation. Bioenergy (based on final energy consumption) accounted for 6.1 % of total electricity consumption, 9.5 % of total heat demand and 5.6 % of total fuel consumption. ³

Table 3: Contribution of renewable energy sources to energy supply in Germany (2011)	
Share of renewable energy sources (%)	
in total final energy consumption	12.2
in total gross electricity consumption	20.0
in total heat supply	10.4
in total fuel consumption ¹	5.6
in total primary energy consumption ²	10.9

1 Total consumption of engine fuels, excluding fuel in air traffic

2 Calculated using efficiency method; Source: Working Group on Energy Balances e.V. (AGEB)

Deviations in the totals are due to rounding

Source: BMU-KI III 1 according to Working Group on Renewable Energy-Statistics (AGEE-Stat) and Federal Environment Agency (UBA)

as at: March 2012; all figures provisional

Energy from biomass has become an important economic sector in Germany. In 2011, about 124,400 people were employed in the bioenergy-related sector (122,000 in 2010) with most of them working in agricultural and forestry raw material production and the newly developing industry producing biomass fuels such as pellets, wood chips or biogas. The total turnover for the entire bioenergy sector rose from 7.92 (2010) to 9.4 billion euro in 2011 (of which 5.75 billion were generated in electricity and heat sector; the rest: biofuels).

2.3 The transformation of the energy system is feasible - and it pays off ⁴

A comprehensive scientific study commissioned by the Federal Environment Ministry and carried out by renowned research institutes shows that the medium and long-term targets which the German government defined for the transformation of the energy system can be reached on schedule. These targets relate to the expansion of renewable energies, energy efficiency and climate protection. Moreover, the institutes found that renewable energies will be significantly cheaper in the long term than an energy supply based on coal, oil and gas. The

³ Renewable energy sources (2012): Data of Federal Ministry for the Environment, Nature Conservation and Nuclear Safety based on information supplied by the Working Group on Renewable Energy Sources-Statistics

http://www.erneuerbare-energien.de/files/english/pdf/application/pdf/ee_in_deutschland_graf_tab_en.pdf

⁴ Long-term scenarios and strategies for the deployment of renewable energies in Germany in view of European and global developments (final report 29. März 2012);

http://www.erneuerbare-energien.de/english/renewable_energy/downloads/doc/48532.php

research institutes (DLR Stuttgart), Fraunhofer IWES Kassel and IfnE Teltow) developed various scenarios for the study. These differ in particular with regard to the assumptions made for the development of long-term storage of excess electricity from renewables, the transport sector, electricity saving targets and climate targets. Strict ecological standards were applied in all cases.

The guiding question of the study was under what conditions the measures adopted last year to transform the energy system could be implemented by 2050. The key result is that the political expansion targets for renewable energies will be securely reached under any scenario. The basis for this is the Renewable Energy Sources Act (EEG). According to the findings of the study, the share of renewable energies in electricity production will be about 40% in 2020 under all scenarios, and thus considerably above the 35% target defined by the German government. Their share already reached 20% last year. For 2050 the three main scenarios of the study forecast a renewables' share of about 85% to 87%. The targets for renewable energies in the mobility and heat sectors will be reached or even exceeded.

The study also addresses the economic effects of the transformation of the energy system. At present, renewables are still more expensive than coal, oil and gas. However, while the prices for fossil energies are likely to continue to rise further, renewable energies are becoming more and more cost effective. If the energy targets are pursued consistently, experts expect electricity from renewable sources to cost an average of 7.6 cents/kWh in 2030, while the costs for electricity from hard coal and natural gas will then have risen to more than 9 cents/kWh.

By the end of 2010 about 150 billion euros had been invested in installations for renewable electricity and heat production in Germany. In the course of the transformation of Germany's energy system this investment volume could increase to around 200 billion euros for the decades to come. At the same time, spending on imported fossil energy sources, which totalled almost 70 billion euros in 2010, will go down dramatically. According to the study, Germany's import spending on fossil energies is expected to decrease by 30 to 35 billion euros per year by 2030 due to the increased use of renewable energies.

2.4 Reducing greenhouse gas emissions

Climate protection remains the greatest challenge facing environmental policy. Climate researchers have identified numerous developments indicating that climate change is already underway. For example, of the ten hottest years on record since global temperatures started being compiled in the mid-19th century, seven of these have occurred during the past decade. In the view of many scientists, there is a high degree of probability that this development is

attributable to human influence. For this reason, human-induced emissions of greenhouse gases - particularly carbon dioxide generated from fuel combustion - must be drastically reduced across the globe.

In the 1997 Kyoto Protocol to the United Nations Convention on Climate Change, the industrialized nations committed themselves to reducing their emissions of six greenhouse gases by at least 5% over 1990 levels within the commitment period 2008-2012. The member states of the European Union reached an agreement on how they will divide up their share of emissions reductions amongst themselves: under this agreement, Germany's emissions reductions target is 21%.

From 1994 through 2006, Germany cut its greenhouse gas emissions by nearly 19%. This was chiefly a result of modernization processes in the new Länder, but measures implemented as part of the German government's climate protection programmes played a key role as well. Germany expects to fulfill its 21% emissions reductions target within the 2008-2012 commitment period without needing to adopt any additional measures.

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 4** demonstrates, in 2011 renewable energies contributed to climate protection with CO₂ savings of about 126 million tonnes (2010: 118 million tonnes) of which bio-based energies accounted for more than a half (contribution to GHG reduction: 50.2 %; contribution to CO₂ reduction: 53.3 %).

Table 4: Greenhouse gas(GHG) and CO₂ emissions in Germany (2011)				
million tonnes	GHG		CO₂	
total GHG emissions 2011	917			
total CO ₂ emissions 2011			812	
Greenhouse gas(GHG) and CO₂ reductions by renewables (2011)				
	all renewables	bio-based	all renewables	bio-based
electricity generation	87.3	24.7	82.1	24.9
heat generation	37.2	35.4	37.3	35.5
biogenic fuel generation	4.8	4.8	6.9	6.9
Total	129.3	64.9	126.3	67.3

Deviations in the totals are due to rounding

Source: BMU-KI III 1 according to Working Group on Renewable Energy-Statistics (AGEE-Stat) and Federal Environment Agency (UBA)

As at: March 2012; all figures provisional

2.5 Protecting the global climate – strengthening the role of renewables

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 (taking 1990 as a base year). By 2020 power generated from wind power, biomass, solar power and other renewables is to account for a minimum of 35 % of the total (2011: 20 % achieved) and in heat consumption up to 14 % (2011: 10.4 % achieved). 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 % (2011: 5.6 % achieved).

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 modernisation and technological innovation the programme aims at stepping up the number of jobs within the renewable energy sector. Some examples of measures:

- To increase the share of renewables within the electricity sector significantly, an amendment of the Renewable Energy Sources Act (EEG) with new provisions for regulating tariffs also for biomass entered into force in 2012.
- Obligations to use renewables in new buildings are laid down in the Renewable Energies Heat Act. All owners of newly erected buildings are obliged to use a certain amount of renewables for their heat requirements (solar radiation, geothermal energy, ambient heat or biomass). For example, the use of biomass has to cover at least 50 % of the new building’s heat demand. However, pellets, wood chips and fuelwood may

only be used in furnaces which comply with strict national provisions on air quality control and have a particularly high boiler efficiency factor. Alternatively it is possible to improve insulation of buildings, obtain heat from district heating systems or use heat from combined heat and power generation (CHP). An amendment of this act is scheduled for 2013.

- Since the Federal Market Incentive Programme for renewable energies was launched in 2000 it has successfully provided financial support, amounting to 346 million euros within one decade, which in turn has triggered investments of more than 2 billion euros.
- Sustainability Ordinances for biofuels and electricity from biomass will ensure that when producing biomass for biofuels and electricity, a minimum requirement for sustainable management of resources and for the conservation of natural habitats are complied with. Furthermore the entire production, processing and supply chain must show a certain potential for reducing greenhouse gases.
- The Act on Combined Heat and Power Generation and regulations for small and medium combustion installations in order to reduce particulate emissions are additional examples for improvements of underlying conditions for renewables.
- The German National Biomass Action Plan (2009), which outlines measures for the expansion of bioenergy, is expected to influence future developments on the wood energy market. Another important cornerstone in order to increase the share and efficiency of biomass for material purposes is the National Action Plan for the Industrial Use of Renewable Resources (2009).

2.6 On the way to a “green economy”

With its National Energy Strategy the Federal Government is ensuring that

- Energy supplies 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. The aim is to make Germany one of the most energy-efficient economies while retaining a high level of prosperity. 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 reorganisation 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 revamping 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.

2.7 Nature conservation

Sustainable forestry is very close to nature in comparison to other forms of land use. High nature conservation standards for forestry are anchored in the Federal Forest Conservation Act and Federal Nature Conservation Act and the corresponding laws of the Länder. When it comes to forest management, stiff requirements are imposed today on the protection and the preservation of nature and the environment. In Germany's forests as a rule measures for the preservation and the protection of biodiversity are integrated into use. This means that, in principle, no distinction is made between commercial forests and conservation forests. This is one of the main components of modern multifunctional forestry. Forest conservation will continue to be an integral part of modern forestry in the future.

2.8 Promoting research, development and innovation

The Federal Government is providing targeted support for research and innovation. With numerous activities in the fields of promoting research and innovation, training, support for new start-ups, and standardisation, an outstanding climate is being created for innovation, not least when compared internationally. These measures are packaged in the High-Tech Strategy 2020⁵. At the same time, society must remain receptive to innovations, new technologies and dynamic market trends. Education and training must keep increasing people's level of understanding of new technologies and economic interrelationships.

3. Underlying conditions for the forest product markets sector

Globalisation means that there are challenges and opportunities that are not limited to within national borders. Industrial uses of renewable resources make an important contribution to protecting the climate and the environment, saving fossil fuel reserves, expanding domestic sources of raw material and sustaining rural areas. In order to ensure food supply as well as a sustainable supply of raw materials and energy for a growing world population, it is necessary to face global challenges, such as the mitigation of climate change, the sustainable use of renewables and the preservation of natural environment. In view of the finite fossil resources,

⁵ Link: <http://www.hightech-strategie.de/en/index.php>

sustainable forest management makes an important contribution to securing future needs. This means that the demand for natural resources will increase on a global scale and it is of growing interest to use these resources responsibly.

3.1 Sustainable forest management and forest products certification

The basic standards for securing the sustainable management of German forests are set by the Federal Forest Act. This legal framework outlines the main guidelines which are specified, giving due consideration to the typical regional-forest and forest-ownership patterns, by respective regulations at Länder-level.

Additionally, about 70 % (2011) of the total forest area has been voluntarily certified so far, including 7.4 million ha forests certified according to PEFC criteria (Programme for the Endorsement of Forest Certification Schemes) and about 600,000 ha according to FSC criteria (Forest Stewardship Council). The Federal Government supports this initiative and is backing the further development, harmonization and mutual recognition of the competing certification systems. It takes the view that wood and wood products may only be procured from stocks with credible certificates.

Certified forest management is important due to the fact that illegal logging and overexploitation still prevail in a number of wood-exporting countries, notably in the tropics. To avoid purchasing illegally produced timber the Federal Government adopted a joint instruction for wood products in January 2007. In accordance with this procurement regime, wood products procured by the Federal Administration must demonstrably come from legal and sustainable forest management. The bidder has to furnish proof of this by presenting a certificate of FSC, PEFC or comparable certificates or by producing individual specifications. Comparable certificates or individual specifications are accepted if the bidder can prove that the criteria of FSC or PEFC applying to the respective country of origin have been met.

A study conducted jointly by the Johann Heinrich von Thünen Institute (vTI) and the Federal Agency for Nature Conservation with the purpose of evaluating the efficiency of the federal procurement regime has shown that the certification of forest management is indeed a successful way of ensuring that purchased products are produced sustainably. Against this backdrop, the regulation was renewed in January 2011 and is now valid without any time restrictions⁶. A review will be conducted in 2013 in order to ascertain if and how wood and wood-based products from countries with which the EU has concluded Voluntary Partnership Agreements (VPA) can be included in the procurement regime.

⁶ Internet-link to the joint instruction and related explanatory notes:
<http://www.bmelv.de/SharedDocs/Standardartikel/EN/Agriculture/forestTimberHunting/ProcurementRulesWoodProducts.html>

3.2 Sustainable and legal wood-trading policies

An important initiative at international level is the EU-FLEGT (Forest Law Enforcement, Governance and Trade) Action Plan on Illegal Logging, representing a joint-action programme against illegal logging. The Federal Government is backing preparations and negotiations with potential candidate countries of voluntary FLEGT partnership agreements (VPA) with the EU. So far negotiations with six tropical countries have been concluded successfully. With several others negotiations are ongoing.

The EU-FLEGT approach is supplemented by the EU timber regulation (995/2010), which is designed to contribute effectively to combating illegal logging and associated trade at global level. The regulation prohibits the placing of illegal timber on the common market and commits operators who place timber and wood-based products on the market to furnishing proof of legality by applying due diligence systems. The regulation will be effective from March 2013. The German Government supports this approach and is an active player within the development and implementation of this regulation.

Work on improved methods for timber origin identification (genetic and isotopic fingerprinting methods) continues. Germany initiated an international project with ITTO to implement these methods in the Congo Basin (which started this year) and another project with Biodiversity International to establish an international facility in Malaysia in order to coordinate all related work (which started in 2011). Countries and organisations are invited to participate in these projects!

3.3 Wood demand and raw material potential

Germany has 11.1 million hectares of forests (31 % of territory) which have been sustainably managed for about 300 years. The fact that increment (average of about 11 m³/ha) has been higher than the amount of removals has led to the creation of substantial timber stocks (3.4 billion m³; average about 330 m³/ha). This has resulted in an additional accumulation of some 700 million m³ since 1986. 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

metre 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 favourable regarding climate protection and energy saving. Its carbon balance is mostly superior to those of competing materials. In addition, it helps 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 utilisation 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 protection targets 2020 and beyond (“bio-based economy”), the EUwood-study (2010) expects that timber demand for material and energy purposes, for example in Germany, could reach volumes of about 190 million m³ by 2020 and up to 240 million m³ by 2030 (**tables 5 and 6**).

Depending on the degree of mobilisation 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 favourable raw material supply regions.

Table 5: Wood balance scenario 2020 for Germany in IPCC scenario A1			
(million m³ per year)			
consumer	demand 2020	potential 2020	wood source
sawmills	41.7	78.0	removals (over 7 cm diameter)
veneer, plywood, panels	29.6	20.8	forest residues
paper	13.6	3.4	bark
other material use	5.6	5.5	landscape care wood
woodfuels, biofuels	9.9	16.2	sawmill by-products
biomass powerplants	41.6	7.6	other industrial wood residues
households, others	49.0	4.9	black liquor
		9.8	solid wood fuels
		9.4	post consumer wood
	190.9	155.5	
	- 35.4		computed supply deficit

Table 6: Wood resource balance 2030 for Germany in IPCC scenario A1			
(million m³ per year)			
consumer	demand 2030	potential 2030	wood source
sawmills	50.0	78.3	removals (over 7 cm diameter)
veneer, plywood, panels	44.4	20.7	forest residues
paper	17.1	3.4	bark
other material use	6.0	6.2	landscape care wood
woodfuels, biofuels	14.6	19.4	sawmill by-products
biomass powerplants	65.7	8.8	other industrial wood residues
households, others	51.0	6.3	black liquor
		12.3	solid wood fuels
		10.1	post consumer wood
	238.7	165.6	
	- 73.1		computed supply deficit

Source: Mantau, U. et al. (2010: 143): EUwood-Study “Real potential for changes in growth and use of EU forests”. Final report: TREN/D2/491-2008. Hamburg/Germany

One key to preventing such developments from coming true is to mobilise 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.

3.4 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 22 million cubic metres of forest resources were used for energy generation in private households in 2010⁷. 9.5 million cubic metres of softwood were used; this timber is, however, also much in demand for use as a material (roundwood, industrial wood). Consequently, the timber industry has had to face some regional bottlenecks in spruce supply over the past years. Ongoing de-

⁷ Mantau U. (2012); Energieholzverwendung in privaten Haushalten 2010: INFRO Informationssysteme für Rohstoffe, Universität Hamburg

mand resulted in some reduction of the respective timber stock as well as in net imports of about 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 mobilising 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 growing future demand without jeopardising sustainability rules. Subsequently some arguments are listed, which are being considered in current forest policy discussion:

- The overall audit of the 2008 National Forest Inventory Study of timber stocks, timber increment and cutting shows that, from 2002 to 2008, approximately 10 % more timber was grown than was felled and that growing stock rose by 2 %. However, in the case of spruce, which is, in terms of quantity and for the profitability of the forest sector, the most important tree species, stock reduction occurred (harvesting and forced felling exceeded growth by 32 %). A high utilisation rate has thus already been achieved throughout Germany.
- Given the comparatively high level of timber stocks accumulated in historical and regional terms, these could even be reduced to a certain extent without violating the principles of sustainability. Yet, such a cutback in stocks is subject to controversy. A general reduction in stock could only be achieved by a general shortening of rotation periods. In this regard it is important to know that in Germany it is not the Federal Government but the forest owners concerned who stipulate the rotation periods.
- Shorter rotation periods have so far been inconsistent with the Federal Government's and the Länder forest promotion policies that have been in force for decades (close-to-nature silviculture with a high percentage of hardwood and long rotation periods, old tree and habitat tree schemes etc). It would, at present, be difficult to enforce market and funding policy incentives fostering shorter rotation periods. Moreover, regulatory policy requirements in this regard would interfere with property rights.
- The forest policy target of "reduction in stocks/shorter rotation periods" meet with strong opposition from nature conservationists. Requirements and policy decisions for nature conservation are increasingly curbing timber production in forests (e.g. the setting-up of national parks in forests, implementation of the target of "5 % set-aside for natural forest development" of the National Biodiversity Strategy and restrictions on timber use in Natura 2000 areas). In addition, nature conservation would like to have the very hardwood potential set aside that is intended for increased use. Further potential

that is presumed to lie in small private forest properties is largely beyond forest policy control.

- Demographic processes suggest that this situation will tend to worsen rather than improve. The general trend is for the percentage of forest owners who take either little or no interest in forestry as a source of income to rise. This holds true for joint beneficiaries under a will, urban forest owners and increasingly for forests owned by nature conservation organisations and foundations (e.g. National Natural Heritage). Incidentally, the decision on whether to harvest or to market wood rests solely with the forest owner.
- The options for increasing forest increments seem to be limited. Opportunities lie in a replacement of tree species and provenances by more vigorous alternatives, fertilisation and modification of silvicultural treatment. This is called into question by the following factors: The size of the annual regeneration area is small. It is only after several decades that the change of tree species or provenances will result in an increase in raw wood potential. It is also disputed whether this could be an alternative, given the role played by other factors such as production security, falsification of flora and nutrient sustainability. These measures are furthermore subject to the targets set by owners and are inconsistent with the current forest policy goals of the Federal Government and the Länder which have so far championed close-to-nature silviculture with a high proportion of hardwood and long rotation periods.
- An appreciable expansion of the forest areas is hardly to be expected in view of the competition for use posed by settlement and traffic areas, the production of food and agrarian raw materials. This applies equally to short-rotation plantations.
- Another aspect to satisfying demand is to increase imports of wood, semi-finished and finished products. The option to cover the forecast demand for raw wood via the global market on a lasting basis seems uncertain. Regarding raw material imports there may be only limited options due to a generally growing global demand, additional costs for transport and adverse impacts on life-cycle-balances. However, examples of major export countries round the globe demonstrate that there is some potential in this respect.

3.5 How to best meet future challenges?

The above-mentioned arguments clearly demonstrate the complex initial situation for identifying best possible solutions. 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 consideration 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 to 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 2020⁸, developed in an open process by interested stakeholders and adopted by the Federal Cabinet in September last year, is the latest initiative aimed at evaluating the different demands in an overall context and establishing the underlying conditions 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).

The areas of action range from silvicultural approaches to measures for timber mobilisation, intensification of “wood cascading”, increasing 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, among other things, provides funding for a large number of projects under the Renewable Resources Funding Programme⁹. These are 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. Measures to improve the efficiency of raw material utilisation and reduce energy consumption in the timber sector also constitute core activities in the Federal Government's Action Plan for the Industrial Use of Renewable Resources, that are also currently being put into practice.

8 Link:

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

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

4. Development in forest products sectors

4.1 Wood raw materials

Whereas wood utilisation in Germany during the 1990ies rose moderately from about 60 million m³ to 80 million m³, it then escalated until 2011 to over 140 million m³ per year. In 2008 the global financial crisis resulted in an economic slump but in the meantime the 2007 production levels have been achieved again. Numerous investments in roundwood processing facilities during the 5 years from 2002 to 2007 resulted in significant growth of output. Enterprises benefited from buoyant global markets and realised high sales volumes especially with export business.

With the exception of the categories roundwood, wastepaper and value-added products (including furniture), German timber trade is characterised by net export surpluses (quantitative) since 2004. Due to high imports of coniferous roundwood there was a roundwood net import surplus in 2011 of about 4 million m³.

The German timber industry is mainly based upon softwood processing (roundwood utilisation accounts for about 80 % softwood and 20 % hardwood species). Predicted growth of global wood demand on the one hand and limited softwood potentials in the forest 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). Material utilisation of industrial roundwood accounts for about 90 % softwood and 10 % hardwood species. It is necessary to develop alternative utilisation and supply strategies with specific emphasis on improved raw material efficiency and intensified “cascaded” use of wood.

4.2 Roundwood markets

According to official harvest statistics, in 2011 about 56 million m³ were felled (plus 3.1 % compared with 2010). Of the total felling, the species groups “spruce” accounted for 50 %, “pine” for 24 %, “beech” for 22 % and “oak” for 4 %. It is assumed in the medium and long term that roundwood demand in Germany will continue to increase. 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 (2011: 56.1 million m³ commercial volume under bark, Ø of the last decade: about 55 million m³) do not completely reflect the volumes, harvested in the for-

est. Especially the wood consumption in enterprises managing smaller forest areas (*inter alia* registration problems) and fuelwood consumption are underestimated (it is particularly unlikely that the use of non-solid volumes is fully recognized).

More realistic harvest volumes can alternatively be derived from the inventory data of the Federal Forest Inventory and the Forest Inventory Study 2008. At a ten-year interval, the Federal Forest Inventory determines the felling and verifies the derivation on the demand side. The current forest inventory data come from the Forest Inventory Study 2008. 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 Länder and categories of forest ownership.

In addition, nationwide felling can be derived from consumer surveys (timber industry etc.). The vTI-Institute of Forest Based Sector Economics determines as well as the Institute of Wood Sciences (University of Hamburg), on an annual basis, the estimates of felling on the demand side (**table 7**). The Federal Government and subordinate authorities draw upon those statistics depending on the issue addressed by them.

Table 7: 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	Estimate of fellings		
			Inventory Study - 2008	vTI Institute of 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	78.3		61.3	
2010	54.4	78.3		67.0	73.8
2011	56.1	78.3		68.4	

Quantities in million cubic metres of solid wood under bark (diameter > 7 cm);
 Data of University of Hamburg (Mantau) only for solid wood
 Source: vTI Institute for Forest Based Sector Economics;

Roundwood markets are strongly 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 mobilised.

Action was taken in 1978 when the first Thermal Insulation Ordinance entered into effect. Since then the energy efficiency of buildings has been improved step by step. Nevertheless we are still a long way from where we would like to be. 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 modernisation 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.

4.3 Sawnwood (softwood/hardwood)

In 2011, about 11,800 people were employed in the German sawmilling industry (5.2 % against 2010). The total turnover amounted to 4.2 billion euros (change from previous year: 13.0 %). With an export quota of 31.9 %, the export turnover amounted to 1.3 billion euros. Compared with 2010, the entire export turnover increased by 2.5 % (companies with 50 and more employed persons).¹¹

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

¹¹ „16.1 Säge-,Hobel-u.Holzimprägnierwerke“ (StBA: F 4 R. 4.1.1: Tab. 1.1; 1.2; 1.3)

With about 21.6 million m³, the domestic production of sawn softwood (sawnwood coniferous) increased by 2.0 % in 2011 compared with 2010. The apparent consumption of coniferous sawnwood was estimated to 18.8 million m³ (2.1 % compared with 2010). In 2011 the German exports of sawn softwood amounted to 6.7 million m³ and the imports to 3.9 million m³ in 2011. The annual apparent consumption of sawn hardwood amounted to 0.9 million m³ (16.3 % compared to 2010) and the domestic production to 1.0 million m³ (12.1 % compared with 2010).

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

In 2011, the German panel industry employed approximately 11,700 people (- 4.1 % against 2010) and recorded a total turnover of 4.5 billion euros. Compared with 2010, the total turnover increased by 5.6 %. About 33.9 % of turnover depended on foreign trade (1.5 billion euro). Compared with 2010, the entire export turnover increased by 2.8 % (companies with 50 and more employees)¹². The annual production of the German panel industry amounted to 6.9 million m³ of particle boards and to 4.7 million m³ of fibreboards. The apparent consumption of particle boards was estimated to be 7.3 million m³ (- 2.1 % compared with 2010) and of fibreboards to be 2.6 million m³ (24.1 % compared with 2010).

4.5 Pulp and paper

In 2011, approximately 37,900 people were employed in the German pulp and paper industry (- 0.8 % compared with 2010) at about 154 production sites (0,7 % against 2010). The total turnover amounted to 17.5 billion euro (change from previous year: 8.4 %). With an export quota of 51.2 %, the export turnover amounted to 8.9 billion euro. Compared with 2010, the entire export turnover increased by 6.1 % (companies with 50 and more employed persons)¹³. The German paper industry is the number one in Europe. After the USA, China, Japan it ranks fourth in the world. The annual production stood at 22.7 million tonnes (- 1.6 % against 2010), 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 estimated to be 19.9 million tonnes (- 0.1 % compared with 2010). Wood consumption by German pulp and paper mills was estimated to be 10.7 million m³ in 2011 (compared with 2010: 0.9 %)¹⁴.

12 „16.21 H.v.Furnier-,Sperrholz-, Holzfaserplatten-und-spanplatten“ (StBA: F 4 R. 4.1.1: Tab. 1.1; 1.2; 1.3)

13 „17.1 H.v.Holz-u. Zellstoff, Papier,Karton u.Pappe“ (StBA: F 4 R. 4.1.1: Tab. 1.1)

14 VDP (2011): Paper 2011: Annual Report. Tab. N2; N8; N16, N18)

4.6 Pellet industry

German producers of wood pellets benefited from growing demand for renewable energy generation. Producing 0.3 million tonnes in 2005 (of which domestic consumption: 0.2 million tonnes) it was possible to increase production and domestic consumption in 2011 to 1.88 million tonnes (7.4 % against 2010). 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). Fuelwood consumption in Germany is expected to further increase in 2012.

4.7 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 ¹⁵) employed approximately 118,000 people in 2011 (1,6 % compared with 2010). 33,000 of these were employed in the woodworking industry, 85,000 in the furniture industry. The total turnover amounted to 22.3 billion euro, an increase of 7.4 % compared with 2010. The increase in the furniture industry was lower (6.6 %) than in the woodworking industry (9.7 %). However, the turnover of the furniture industry is still higher (16.1 billion euro) than the turnover of the woodworking industry (6.3 billion euro). With an export quota of 25.6 %, the export turnover amounted to 5.7 billion euro. With 28.7 % the export quota of the furniture industry is considerably higher than the export quota of the woodworking industry (17.7 %). In total, the export quota rose by 1.6 % in 2011.

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



TC1
UNECE TIMBER COMMITTEE FORECASTS
Roundwood

Country: Germany		Date: 19 Sept 2012
Name of Official responsible for reply: Johann Georg Dengg		
Official Address (in full):		
Federal Ministry of Food, Agriculture and Consumer Protection		
Telephone:	0049 228 99529 3359	Fax:
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Note:
Complete only if data for 2011 have been revised.

Product Code	Product	Unit	Historical data		Revised	Est.	2012	2013
			2010	2011				
1.2.1.C	SAWLOGS AND VENEER LOGS, CONIFEROUS							
	Removals	1000 m ³	26.952	25.497			26.200	26.200
	Imports	1000 m ³	6.488 #	7.000 #	4.791		4.500	4.500
	Exports	1000 m ³	3.017 #	3.000 #	1.683		1.700	1.700
	Apparent consumption	1000 m ³	30.423	29.497			29.000	29.000
1.2.1.NC	SAWLOGS AND VENEER LOGS, NON-CONIFEROUS							
	Removals	1000 m ³	2.797	3.520			3.400	3.400
	Imports	1000 m ³	340 #	540 #	140		150	150
	Exports	1000 m ³	906 #	1.100 #	755		750	750
	Apparent consumption	1000 m ³	2.231	2.960			2.800	2.800
1.2.1.NC.T	of which, tropical logs							
	Imports	1000 m ³	41 #	30 #	26		25	25
	Exports	1000 m ³	5 #	5 #	5		5	5
	Net Trade	1000 m ³	36	25	21		20	20
1.2.2.C	PULPWOOD (ROUND AND SPLIT), CONIFEROUS							
	Removals	1000 m ³	9.223	9.288	9.288		9.300	9.300
	Imports	1000 m ³	250 #	250 #	1.892		2.000	2.000
	Exports	1000 m ³	1.250 #	1.250 #	752		800	800
	Apparent consumption	1000 m ³	8.223	8.288	10.428		10.500	10.500
1.2.2.NC	PULPWOOD (ROUND AND SPLIT), NON-CONIFEROUS							
	Removals	1000 m ³	3.436	3.962	3.962		3.950	3.950
	Imports	1000 m ³	150 #	150 #	399		400	400
	Exports	1000 m ³	400 #	400 #	362		350	350
	Apparent consumption	1000 m ³	3.186	3.712	3.998		4.000	4.000
3 + 4	WOOD RESIDUES, CHIPS AND PARTICLES							
	Domestic supply	1000 m ³	11.662 C	13.133 C			13.000	13.000
	Imports	1000 m ³	3.858 C	3.645 C			3.600	3.600
	Exports	1000 m ³	4.561 C	4.732 C			4.600	4.600
	Apparent consumption	1000 m ³	10.958	12.046			12.000	12.000
1.2.3.C	OTHER INDUSTRIAL ROUNDWOOD, CONIFEROUS							
	Removals	1000 m ³	1.767	1.659			1.700	1.700
1.2.3.NC	OTHER INDUSTRIAL ROUNDWOOD, NON-CONIFEROUS							
	Removals	1000 m ³	1.213	1.433			1.400	1.400
1.1.C	WOOD FUEL, CONIFEROUS							
	Removals	1000 m ³	4.499	5.266			5.400	5.600
1.1.NC	WOOD FUEL, NON-CONIFEROUS							
	Removals	1000 m ³	4.532	5.517			5.700	5.900

Please return (preferably by e-mail) to Timber Section no later than 14 September 2012.

By e-mail to stats.timber@unece.org. By fax to +41 22 917 0041

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.



TC2
UNECE TIMBER COMMITTEE FORECASTS
Forest products

Country: Germany	Date: 19. Sept. 2012
Name of Official responsible for reply:	Johann Georg Dengg
Official Address (in full):	
Federal Ministry of Food, Agriculture and Consumer Protection	
Telephone: 0049 228 99529 33	Fax:
E-mail: Johann.Dengg@bmlfuw.bund.de	Note: Complete only if data for 2011 have been revised.

Product Code	Product	Unit	Historical data		Revised	Estimate	Forecast
			2010	2011	2011	2012	2013
5.C	SAWNWOOD, CONIFEROUS						
	Production	1000 m ³	21.161	21.593	21.632,5	20.600	20.600
	Imports	1000 m ³	3.912	3.924	4.148,9	4.400	4.300
	Exports	1000 m ³	6.649	6.712	7.070,7	6.400	6.700
	Apparent consumption	1000 m ³	18.425	18.806	18.710,7	18.600	18.200
5.NC	SAWNWOOD, NON-CONIFEROUS						
	Production	1000 m ³	898	1.007	995,6	1.000	1.000
	Imports	1000 m ³	472	478	446,5	450	450
	Exports	1000 m ³	620	612	615,2	580	580
	Apparent consumption	1000 m ³	751	873	826,9	870	870
5.NC.T	of which, tropical sawnwood						
	Production	1000 m ³	9	9 N		0	0
	Imports	1000 m ³	119	119		120	120
	Exports	1000 m ³	52	52		50	50
	Apparent consumption	1000 m ³	76	76		70	70
6.1	VENEER SHEETS						
	Production	1000 m ³	183 C	187 C		185	190
	Imports	1000 m ³	132 C	119 C		120	115
	Exports	1000 m ³	87 C	81 C		80	75
	Apparent consumption	1000 m ³	229	225		225	230
6.1.NC.T	of which, tropical veneer sheets						
	Production	1000 m ³	0 N	0 N		0	0
	Imports	1000 m ³	33	25		25	25
	Exports	1000 m ³	13	9		10	10
	Apparent consumption	1000 m ³	20	15		15	15
6.2	Panels						
	Production	1000 m ³	12.441 C	11.905 C		11.820	11.810
	Imports	1000 m ³	4.239 C	4.672 C		4.800	4.800
	Exports	1000 m ³	5.998 C	5.462 C		5.470	3.270
	Apparent consumption	1000 m ³	10.682	11.115		11.150	13.340
6.2	PLYWOOD						
	Production	1000 m ³	232 C	218 C		220	210
	Imports	1000 m ³	1.288 C	1.406 C		1.400	1.400
	Exports	1000 m ³	337 C	349 C		350	350
	Apparent consumption	1000 m ³	1.183	1.274		1.270	1.260
6.2.NC.T	of which, tropical plywood						
	Production	1000 m ³	18 N	17 N		15	15
	Imports	1000 m ³	146	162		150	150
	Exports	1000 m ³	47	45		45	45
	Apparent consumption	1000 m ³	117	134		120	120
6.3	PARTICLE BOARD (including OSB)						
	Production	1000 m ³	7.634 N	6.940 N		6.900	6.900
	Imports	1000 m ³	2.218	2.570		2.500	2.500
	Exports	1000 m ³	2.414	2.227		2.200	
	Apparent consumption	1000 m ³	7.438	7.282		7.200	
6.3.1	of which, OSB						
	Production	1000 m ³	1.134	1.140		1.150	1.150
	Imports	1000 m ³	373	415		400	400
	Exports	1000 m ³	528	547		550	550
	Apparent consumption	1000 m ³	979	1.008		1.000	1.000
6.4	FIBREBOARD						
	Production	1000 m ³	4.575 C	4.748 C		4.700	4.700
	Imports	1000 m ³	733 C	697 C	911	900	900
	Exports	1000 m ³	3.246 C	2.886 C	2.981	2.920	2.920
	Apparent consumption	1000 m ³	2.061	2.558		2.680	2.680
6.4.1	Hardboard						
	Production	1000 m ³	1.699 N	1.977 N		1.900	1.900
	Imports	1000 m ³	191	180		180	180
	Exports	1000 m ³	1.311	1.175		1.200	1.200
	Apparent consumption	1000 m ³	580	982		880	880
6.4.2	MDF (Medium density)						
	Production	1000 m ³	1.762 N	1.594 N		1.600	1.600
	Imports	1000 m ³	471	456		450	450
	Exports	1000 m ³	1.917	1.688		1.600	1.600
	Apparent consumption	1000 m ³	315	361		450	450
6.4.3	Other fibreboard						
	Production	1000 m ³	1.114 N	1.177 N		1.200	1.200
	Imports	1000 m ³	71	61	275	270	270
	Exports	1000 m ³	18	23	119	120	120
	Apparent consumption	1000 m ³	1.167	1.215		1.350	1.350
7	WOOD PULP						
	Production	1000 m.t.	2.763 C	2.725 C	2.725	2.540	2.500
	Imports	1000 m.t.	4.218 C	4.098 C	3.693	3.510	3.500
	Exports	1000 m.t.	957 C	1.069 C	583	630	600
	Apparent consumption	1000 m.t.	6.023	5.754	5.835	5.420	5.400
10	PAPER & PAPERBOARD						
	Production	1000 m.t.	23.072 C	22.704 C	22.690	22.300	22.500
	Imports	1000 m.t.	10.794 C	10.533 C	10.780	10.560	10.600
	Exports	1000 m.t.	13.916 C	13.299 C	13.670	13.940	14.000
	Apparent consumption	1000 m.t.	19.949	19.938	19.800	18.920	19.100

Please return (preferably by e-mail) to Timber Section no later than 14 September 2012.

By e-mail to stats.timber@unece.org. By fax to +41 22 917 0041

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.