

MARKET STATEMENT

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

**78th Session of the
UNECE Committee on Forests and the Forest Industry
4 to 6 November 2020 in Geneva**

Federal Ministry of Food and Agriculture

Bonn, 2020

1. General economic trends

1.1. German government interim projection forecasts clear recovery after historic slump¹

The Federal Government's projection is based on the assumption that there will be no second lockdown like the one in late March and April, when far-reaching measures were imposed to restrict social activity in public spaces with a view to protecting human life and health. Wherever infection rates rise again, targeted regional measures will be taken so that the economy will be able to continue on the path of recovery in the coming months. However, given the course the pandemic has taken in other important trading countries, the recovery process will probably be slow and prolonged.

The coronavirus pandemic has sent the German economy into its worst recession since the Second World War. Given the sharp decline in economic activity during the first half of 2020, the Federal Government is expecting GDP to drop by an annual average of 5.8% this year (price-adjusted). The second quarter alone saw GDP fall by 9.7% compared to the previous quarter. In May, however, the recession already bottomed out. The monthly indicators have since been showing clear signs of recovery. In light of the incipient upturn, a growth rate of 4.4% is expected for 2021. It may take until early 2022, however, for GDP to reach pre-crisis levels again (**Table 1**).

Table 1: Key figures of the 2020 interim projection

Gross domestic product by expenditure (price adjusted)	2019	2020	2021
Year-on-year change (in per cent)			
Gross domestic product¹⁾	0.6	-5.8	4.4
Private consumption ²⁾	1.6	-6.9	4.7
Public-sector consumption	2.7	4.8	-0.4
Gross fixed capital formation	2.5	-3.7	5.2
- of which equipment	0.5	-16.5	12.0
- buildings	3.8	3.8	2.4
- other investment	2.7	-1.7	3.1
<i>Changes in inventories and net acquisition of valuables (contribution to GDP growth)</i>	<i>-0.7</i>	<i>0.0</i>	<i>0.0</i>
Domestic demand	1.2	-3.6	3.6
Exports	1.0	-12.1	8.8

¹ <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2020/09/20200901-german-government-interim-projection-forecasts-clear-recovery-after-historic-slump.html>

Gross domestic product by expenditure (price adjusted)	2019	2020	2021
Imports	2.6	-8.1	7.5
<i>Net foreign demand (contribution to GDP growth)³⁾</i>	<i>-0.6</i>	<i>-2.3</i>	<i>0.9</i>
Private consumption ²⁾	1.3	0.5	1.2
Gainfully active persons (domestic)	45.3	44.9	45.1
Unemployed persons (Federal Employment Agency)	2.27	2.69	2.58

¹⁾ In 2020, calendar-adjusted growth is 6.1%, the rate over the course of the year is 4.9%.

²⁾ Including non-profit-making organisations.

³⁾ Absolute change in net foreign demand in per cent of pre-year GDP (= contribution to change in GDP).

The impact of the coronavirus pandemic has led the global economy into a deep recession that is worse than the 2008/09 financial crisis. Based on projections by international organisations (IMF, OECD), we expect an annualised decline of 4.4% in global GDP for 2020, and a 6.2% recovery for 2021.

In Germany, declines can be expected for the majority of GDP expenditure components. Owing to the negative development of sales markets, German exports will drop by 12.1% in 2020 (2021: +8.8%). The decline in domestic demand and in demand for intermediate goods from abroad is having an impact on imports. These will not fall as sharply as exports, however (8.1% in 2020; +7.5% in 2021), not least because of the comprehensive measures that have been put in place to bolster incomes and demand. The German current account surplus in terms of nominal GDP is therefore likely to decrease in 2020 and to remain below 2019 levels in 2021.

Investment in equipment is closely related to the capital-intensive export industry. Due to the recession in manufacturing brought about by the pandemic and due to the general rise in uncertainty, we expect investment in equipment to decline markedly in 2020 (-16.5%). As the economy gradually recovers, however, there will probably be an upward trend in 2021 (+12.0%).

The demand for investment in construction is proving robust. Major drivers are the ongoing low-interest rate environment and increased liquidity (2020: +3.8%). Next year, however, increasing price levels and capacity constraints on the part of companies will probably slow down this growth (2021: +2.4%).

In 2020, public-sector spending on consumption continues to have a stabilising effect on demand (+4.8%). It will remain at a high level in 2021, albeit with a slight reduction (0.4%).

Expenditure on capital investment by the state will rise markedly during the forecasting period before stabilising in 2021 (2020: +12.1%, 2021: 4.1%).

The labour market came under a lot of pressure from March to May. In 2020, gainful activity is likely to decline by 380,000 people. People in marginal employment are particularly affected. Short-time employment, which reached a record high in April (5.9 million people), continues to be instrumental in preventing lay-offs. Unemployment is likely to rise to 5.9% as an annual average. The latest figures, however, indicate a recovery in the labour market which is likely to continue throughout 2021 (annual average for 2021: +190,000 gainfully active persons, 110,000 unemployed persons).

1.3 The economic situation in Germany in July 2020²

Economic activity has bottomed out. After an unprecedented slump in April, things improved in May. The cyclical indicators published over the last month are sending out two signals: the German economy is experiencing a tangible recovery, but capacity utilisation remains very low. The relaxations of measures to protect against infections in Germany and abroad are permitting demand and supply to rise. The industrial sector reported an increase in output of +10.3% between April and May. There was a particularly sharp rise in the production index for vehicles and vehicle parts. According to the German Association of the Automotive Industry (VDA), June saw further increases; both new registrations (+18%) and production (+84%) were up from the May figures. Going forward, further improvements seem likely; the ifo and PMI indexes, as well as the level of new orders, are all pointing upwards. The recovery also embraced parts of the services sector. This is shown e.g. by the development in the retail trade (excluding vehicles), for which the May sales figures are now available: rising by 13.9%, the contrast to April was very pronounced. In the second half of the year, additional incentives to purchase are created by the temporary cut in value-added tax. Despite the macroeconomic recovery, the Federal Statistical Office is likely to report a clearly negative rate of change in gross domestic product on 30 July for the second quarter as a whole. This will primarily be due to the unprecedented slump seen in April. Positive figures for the gross domestic product will not come until the third quarter. Whilst the process of recovery in the German economy is dynamic, it is only just beginning. Capacity utilisation is still low. Industrial output in May was only at around 75% of its pre-coronavirus level; in the automotive sector, the figure was just less than 50% (approx. 74% in June according to VDA). Key factors influencing the fu-

² <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/Wirtschaftliche-Lage/2020/20200713-the-economic-situation-in-germany-in-july-2020.html>

ture course of the macroeconomic recovery will include the pace of the recovery in foreign demand for German goods. The month of May did see a sharp (nominal) rise of 11.6% in exports of goods. But exports to key trading partners which have been particularly badly affected by the pandemic (e.g. the United States and the United Kingdom) are trending less strongly than those to other partners (e.g. China). There are also disparities in the levels of orders coming from abroad. Orders from the eurozone are indicative of a recovery, but the sluggish improvement in orders from outside the eurozone underline the risks posed to the German economy by the global economic situation.

In May, exports of goods and services recovered to some extent in seasonally adjusted terms and in current prices from their sharp falls in the two preceding months (April: -22.4%; March, -10.8%), with a rise of 7.7% from the April figure. However, this means that the level of exports of goods and services is only around 75% of the pre-crisis figure. The two-month comparison for April/May still shows a tangible decline, of 24.0%. The different ways in which countries have been hit by the coronavirus pandemic is also reflected in the foreign trade statistics. Trade with countries which are particularly badly affected by the pandemic, including the United States and the United Kingdom, was much weaker than with countries reporting low rates of new infections, such as China. The recovery in imports of goods and services was comparatively weak in May, at +3.0% against April in seasonally adjusted and nominal terms (April: -18.0%; March: -6.8%). In the two-month comparison, imports fell by an unprecedented 19.7%.

Output in the goods-producing industries has picked up significantly following the dramatic slump in the two previous months. In seasonally adjusted terms, it rose by 7.8% from April. Growth was particularly pronounced in the industrial sector, at 10.3%. The expansion in the construction sector was comparatively moderate, at 0.5%. The growth in industrial output was largely driven by the resumption of automotive manufacturing, which had basically ground to a halt in April (approx. +216%). Despite this, the amount of vehicles produced in May was roughly half that of May 2019. Sharp increases in production were also reported in the key areas of mechanical engineering and the production of electrical equipment (+9.8% and +4.7% respectively); however, the respective indexes are still down to around 79% and 84% of the preceding year's levels. New manufacturing orders saw a monthly rise of 10.4% in May (April: -26.2%). Here, orders of capital goods expanded significantly, by 20.3% (vehicles: +44.4%), whilst smaller increases were recorded for consumer and intermediate goods, of 4.7% and 0.4% respectively.

The statistics for May on production and new orders indicate that the industrial sector has emerged from the worst of the recession. The ifo business climate and the PMI for industry

also improved substantially in May and June. The continuing low level of production and new orders does however show that the recovery has a long way to go. Also, the ongoing weakness in orders from outside Europe still poses a risk to the future recovery.

May saw a clear rise in consumption as shops re-opened. Retail sales (excluding vehicles) rose by 13.9% between April and May. In particular, retail sales of textiles, clothing and shoes rose by 173%, but were still well below the level seen in May 2019. Trade in furnishings also picked up strongly, at +42%, with turnover already exceeding the previous year's figure. Online trade saw a second successive monthly rise of more than 10% (April +11.3% and May +11.5%). However, new registrations of cars by private owners remained roughly at the previous month's level, i.e. below the pre-crisis level. The Ifo business climate in the retail trade improved appreciably in June, even if it remained negative. The GfK consumer climate index recovered further in July. Consumer prices picked up between May and June, rising by 0.6%, not least due to package tours, which have become possible again but are considerably more expensive. The inflation rate rose to 0.9% in June (May: 0.6%). The core inflation rate (excluding energy and food) saw little change, moving from 1.2% in May to 1.3% in June.

In the reference month of June, the pandemic-related problems on the labour market lessened. Seasonally adjusted unemployment rose by 69,000 persons, i.e. by much less than in April and May (+372,000 and +237,000 respectively). At 2.85 million, the number of persons registered as unemployed (unadjusted figure) was still 637,000 higher in the year-on-year comparison. The massive use of short-time work is preventing a sharper rise. The notifications of cyclically-related short-time work referred to 342,000 people in June, fewer than in the previous months (May: 1.14 million people; March/April: 10.66 million people). Particularly large numbers were reported in the metal industry, vehicle construction, the hotel, restaurant and catering industry, and "other services". At present, figures for actually realised short-time work are only available for April. These show that 6.8 million people received short-time work benefits for cyclical reasons. That number was far higher than the highest figure seen during the economic and financial crisis in 2008/2009. Preliminary estimates by the Federal Employment Agency suggest that May saw rather fewer people in short-time work, at around 6 million people.

May also registered a month-on-month decline of 314,000 persons in seasonally adjusted employment figures for Germany, following a drop of 273,000 people in April. These were the sharpest falls since German reunification. A downward revision of the employment figures for April is however likely. It can therefore be expected that the decline in May has already flattened out in comparison with the preceding month. Employment subject to social insurance payments shrank by 276,000 people in the lockdown month of April (March: -42,000), with

the manufacturing industry, the hotel, restaurant and catering industry, seconded workers and the wholesale and retail sectors being particularly affected. The leading indicators have recovered to some extent, but are not indicative of a sustained recovery within the next few months.

2. Policy measures affecting the forest sector and market drivers

2.1 Creating a regulatory framework for the digital transition³

Digitalization brings with it major opportunities for society and opens up enormous potential for additional value creation. The Federal Government is working with businesses, trade unions, the scientific community and civil society to put the conditions in place for successful digitalization. The changes to everyday life, commerce and work caused by digitalization are similar in scale to those resulting from the industrial revolution. They offer great economic opportunities in terms of new market opportunities, sales markets and jobs. They also offer a wide range of opportunities for individuals, with more products to choose from, new ways to communicate, and more flexible working arrangements.

However, the digital transition requires an “ordo-liberal” framework which ensures intact competition, takes greater account of the special features of digital markets, and clearly assigns responsibilities. The ninth amendment to the Act against Restraints on Competition (ARC), which was adopted by the Federal Cabinet on 28 September 2016, is an example of legislation that responds to the advance in digitalization.

The Federal Government wants to ensure coherent regulation and supervision in order to promote digitalization in Germany. The regulatory framework set out by the IT Security Act is to be developed and extended to ensure higher security levels for IT systems. The General Data Protection Regulation has put in place a uniform European legal framework for the processing of personal data. The Federal Government’s reform of procurement law has established simple and user-friendly procurement rules.

Europe’s ability to compete internationally much depends on the completion of the uniform digital single market. As a general rule, we therefore want to refrain from enacting national regulations unilaterally, thus making it easier for companies to implement their digital business models all over Europe.

³ <https://www.bmwi.de/Redaktion/EN/Dossier/economic-policy.html>

Programmes designed to promote the roll-out of high-performance broadband cable, provide funding for other digitalization projects, and to support our Plattform Industrie 4.0 are key to shaping the course of digitalization. A new European digital regulatory policy will have to focus on two goals: first of all, we ought to create a level playing field for investment and innovation, which will generate inclusive growth. Secondly, we must protect people’s personal rights and their right to data sovereignty.

2.2 Expanding renewables and boosting energy efficiency^{4, 5}

Germany’s electricity supply is becoming “greener” every year. The share of renewables in electricity consumption has steadily grown over the last few years – rising from around 6% in 2000 to around 42% in 2019. This means that the 35% target for 2020 was reached earlier than expected. By 2025, 40-45% of electricity consumed in Germany is to derive from renewables. This is the aim set out in the Renewable Energy Sources Act. The following **Figure 1** provides an overview of Germany’s electricity mix, i.e. illustrating the share of renewables.

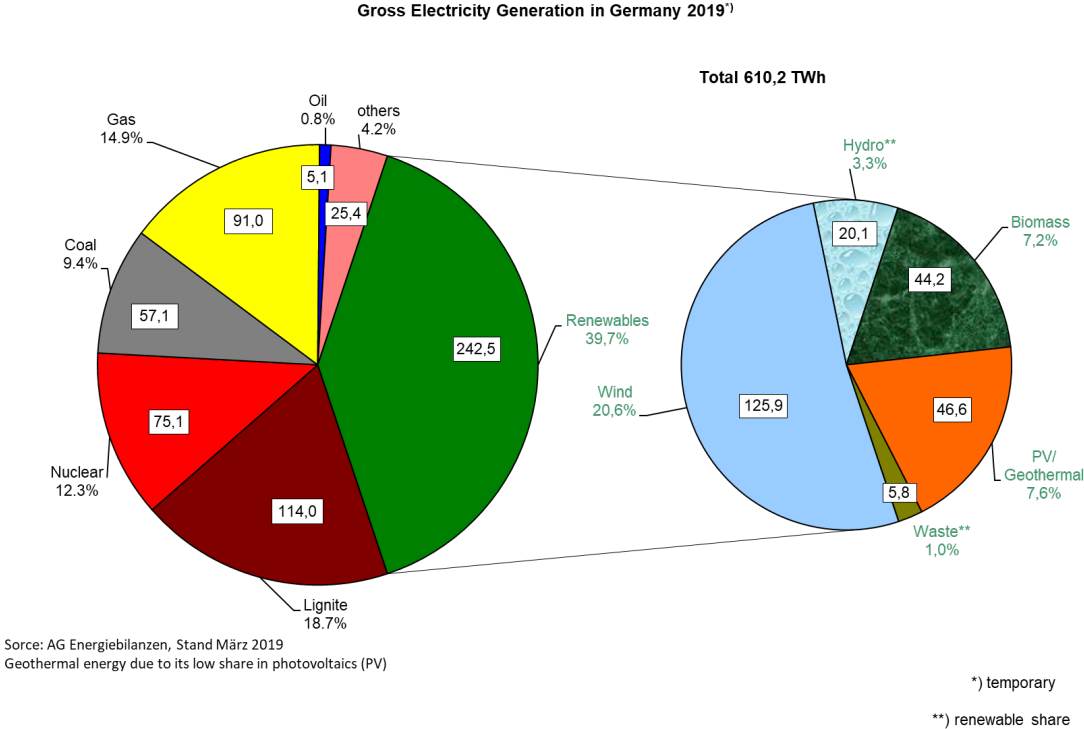


Figure 1: Gross electricity generation in Germany in 2019 in TWh; last update: September 2020

⁴ <https://www.bmwi.de/Redaktion/EN/Dossier/renewable-energy.html>

⁵ <https://www.bmwi.de/Redaktion/EN/Dossier/economic-policy.html>

Renewables are also becoming more important with regard to heat supply. At present, they account for 14.7% of final energy consumption for heat and cooling. By 2020, this share is to reach 14%.

The energy transition is one of the Federal Government's key projects for a secure, environmentally compatible and economically successful future. As a next step in the energy transition, a consistent overall framework is needed to bring together the various fields of action, including energy efficiency, renewables, the electricity market, the grids, and digitalization.

The energy transition is not only making it possible to phase out nuclear power by the end of 2022, but is also helping Germany to attain its climate targets. At the core of the energy transition are energy efficiency and a further increase in renewables capacity. Just like our economy as a whole, the energy transition must be underpinned by the principles of the social market economy. This means that we need to bring together economic success and a highly level of social security. The share of renewables in our electricity supply is to increase to 65% by 2030, which is a major leap. We must ensure that our energy supply remains stable, at a cost that does not harm our businesses' ability to compete or our consumers' ability to buy.

Some smart reforms are needed to further integrate renewables in the electricity market and to make the electricity market 2.0 fit for a growing share of renewables. The Federal Ministry for Economic Affairs and Energy is putting the conditions in place for a digital infrastructure which will link up more than 1.5 million electricity generators and large consumers.

For the energy transition to be a success, it is necessary to significantly improve energy efficiency. The expansion of renewable energy on its own will not be enough for us to meet the climate targets set out in the decisions from the Paris conference and in the Energy Concept. The goal must be to consume as little energy as possible and to use renewables to cover the remaining needs. The key instrument steering energy efficiency policy in Germany is the National Action Plan on Energy Efficiency (NAPE), which defines the strategic direction of efficiency policy and brings together key measures, programmes and instruments.

2.3 Enhancing energy efficiency in buildings^{6, 7, 8}

The construction sector is one of the most resource-intensive industries in Germany. Besides, around 35 % of our total final energy consumption goes on providing the comforts we need in the home, with most of it being used to provide heating and hot water. About 90 % of all utilised mineral resources are used to manufacture construction materials and products. This means that the construction sector accounts for a significant share of the required energy and the CO₂-emissions they cause. Less fossil energy is usually required to manufacture and dispose of construction materials made from wood than materials made from finite mineral resources. Building with wood can therefore make a considerable contribution to reducing CO₂-emissions and, consequently, to climate change mitigation.

More than half of all finished products made from wood (excluding paper) are used in the construction sector. This makes the construction sector the most significant area in which wood products are used. Increased demand has led to wood construction becoming the driving force in wood use – with positive effects on employment and value creation for the entire forestry & wood cluster. As a result, the number of people employed in wood construction has risen by more than 10 % within a period of ten years.

While only 6 % of single-family and two-family houses were built from wood at the beginning of the 1990s, this percentage has tripled to around 18 % in the past 25 years. But the use of wood in multi-family residential construction paints a very different picture. The percentage here is still only 2 % (**Table 2**). In high-rise apartment building construction, wood construction is limited to a few reference buildings and flagship projects. In cities, wood construction is therefore still clearly under-represented, although the technical and economic advantages of wood as a construction material are obvious when it comes to meeting the growing demand for affordable urban housing. These advantages, especially in urban densification projects, include short building periods, high load capacity in spite of its light weight and flexibility when it comes to adding new storeys or extensions. Alongside new construction, the modernisation and renovation of existing buildings also plays an important role.

⁶ <https://www.bmwi.de/Redaktion/EN/Dossier/enhancing-energy-efficiency-in-buildings.html>

⁷ <https://www.bmwi.de/Redaktion/EN/Artikel/Energy/energy-efficiency-strategy-for-buildings.html>

⁸ https://www.charta-fuer-holz.de/fileadmin/charta-fuer-holz/dateien/service/mediathek/Web_RZ_FNRC_0094_Charter_for_Wood_180918.pdf

Table 2: Timber construction rates in Germany in 2019 (in %)

Single-family and two-family houses	20.3
Multi-family houses	3.5
Non-residential buildings	17.8

Source: Destatis

Roughly two-thirds of the wood used in the construction sector is used in modernisation and renovations, such as to create extra living space or to renovate buildings in a way that increases their energy efficiency. More than 60 per cent of German residential buildings are older than 35 years and are therefore in greater need of renovation. This is where wood can provide energy-efficient solutions (e.g. energy-efficient insulation).

Where consumption is high, there is a lot of potential for energy savings. There are many benefits of improving energy efficiency and using renewable energy to power the home. These include lower energy costs, greater living comfort, a higher property value and secure provision for retirement, as well as the valuable contribution that is made mitigating climate change. The Federal Ministry for Economic Affairs and Energy will further on support with a range of attractive funding programmes. Since 2000, around five million property-owners have implemented energy-efficiency measures in their buildings while benefiting from government funding. Making homes energy efficient saves a great deal of money in heating costs and allows to enjoy a pleasant indoor climate. The Federal Government wants to make Germany's building stock virtually climate-neutral by 2050. In order to do this, more of our heating needs to be covered by renewables and our buildings made more energy-efficient.

Since 1 July 2017, the Federal Ministry for Economic Affairs and Energy has been providing support for local and district heating systems based on renewable energy. For the first time, funding will be available not just for individual technologies or components, but for innovative overall systems that rely on renewables for at least of 50 % of the heat or cooling energy they deliver. The 4th generation heating systems can help significantly raise the share of renewables, make better use of waste heat, and allows for systems to be operated at lower temperatures compared to traditional heating systems. This helps minimise losses, enhances energy efficiency and promotes the use of renewable energy in local and district heating systems. In a first step, funding will be provided for feasibility studies (for up to 60 % of the cost). At a later stage, there will also be funding for a 4th generation heating networks system (30 - 50 % of the project cost).

Through a combination of energy conservation and the use of renewable energy, the Federal Government aims to cut primary energy demand in the building stock by approx. 80 % by 2050 (compared with 2008). The existing set of instruments is already reaching large numbers of building owners and landlords, and encouraging them to invest in energy conservation in their buildings. In order to meet the ambitious goals set out as part of the energy concept in the buildings sector by 2050, additional investment is needed to make homes more energy efficient and use more renewable energy for heating. To achieve this, the “Energy Efficiency Strategy for Buildings” lays down key principles, such as giving people advice on energy, the continued development of energy conservation legislation, customised renovation roadmaps for individual buildings, the placing of the “CO₂ Building Renovation Programme” on a permanent footing with increased funding (KfW funding programmes for energy-efficient building and renovation) and the further development of the market incentive programme to use renewable energy sources in the heating and cooling market.

2.4 National Forest Strategies

The National Forest Strategy 2020⁹ concentrates on forest resources. It was 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 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. The strategy identifies nine main areas of action and related subordinated goals. They range from silvicultural approaches to measures for timber mobilisation, intensification of “cascaded use of wood”, increased 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.

By means of an close to nature and environmentally compatible increase in forest productivity, the tapping of additional land potential and the sustainable use of large timber reserves, particularly in small private forests, a major contribution can be made to increasing the stabil-

⁹ The National Forest Strategy 2020

http://www.bmel.de/SharedDocs/Downloads/EN/Publications/ForestStrategy2020.pdf?__blob=publicationFile

ity and vitality of forests and securing the future timber supply. The National Forest Strategy mentions the following approaches as suitable ways of achieving this:

- Creation of diverse, stable and high yield mixed forests
- Risk reduction by avoiding unstable density or excessive stocks as a consequence of consistent forest tending (cleaning, thinning)
- Planting of site-adapted species of trees with a high level of resistance and growth rate
- Forest planting concepts and production periods which lead to optimum yields in harmony with nature conservation and environmental protection requirements
- Use of high quality, site-adapted, resistant and high yield forest plants
- Maintaining the genetic diversity of forest plants.

Research and development represent another key element in the implementation of this strategy. Via the Agency for Renewable Resources, the Federal Ministry of Food and Agriculture provides funding for a large number of projects under the Renewable Resources Funding Programme ¹⁰. 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 ligno-cellulose biorefinery etc.).

In order to tackle future challenges of the German forest and timber cluster successfully, preparatory work on a new National Forest Strategy 2050 has been initiated.

2.5 German “Charter for Wood 2.0”¹¹

The “Wood Charter 2.0”, which was published on 26 April 2017, focusses on ensuring of a continuous raw material supply and on factors that will help increase the timber demand, as well as on different aspects of a cycle-driven economy and resource efficiency, in order to mitigate climate change and create additional value. It has become a milestone in the Federal Government’s “Climate Action Plan 2050”¹². With the objectives of mitigating climate change, creating value and utilizing resources efficiently, the German “Charter for Wood 2.0” focuses on qualitative growth in order to support vital international, European and national political objectives. In this context the “Charter for Wood 2.0” further develops and substantiates the German Federal Government’s “Forest Strategy 2020”.

¹⁰ Renewable Resources Funding Programme <http://international.fnr.de/index.php?id=152>

¹¹ <https://www.charta-fuer-holz.de/>

¹² http://www.bmub.bund.de/themen/klima-energie/klimaschutz/klima-klimaschutz-download/artikel/klimaschutzplan-2050/?tx_ttnews%5BbackPid%5D=3915

The following priority fields of action and their central topics provide the framework for specific action and create the basis for further development:

- Using wood in urban and rural construction (increasing the share of wooden buildings in the various building categories, increasing the use of wood in building renovations, curbing prejudice against wood in leading regulations and guidelines, more consideration of the effects on climate change mitigation in strategies, programmes, manuals and guidelines for the construction sector).
- The potential of wood in the bioeconomy (increasing the number of patent registrations, increasing the proportion of hardwood used as a material).
- Material and energy efficiency (increasing raw material yields and reducing the use of materials in the wood sector, reducing energy consumption in the forestry and wood sector, increasing the efficiency/reducing emissions of wood combustion plants).
- Forests and wood as resources (increasing viable forest wood potential in the long-term, safeguarding the long-term availability of softwood, increasing the amount of raw wood harvested in small private forests, increasing the short-term and medium-term potential of wood by tapping unutilized as well as alternative sources of raw materials, ensuring that imported wood products are sourced legally and sustainably).
- The forestry and wood cluster (increasing revenues and value creation in the forestry and wood cluster, safeguarding employment, especially in rural areas).
- Forests and wood in society (expanding the scope of communication with consumers and the information available to them in order to promote awareness of the positive aspects of forest and wood use for society).
- Research and development (increasing investments in research and development by the forestry and wood cluster as well as by public sponsors, maintaining and expanding staff capacities in research, science and teaching).

2.6 The Rovaniemi Action Plan of UNECE/FAO

Green economy, according to UNEP, is a system which results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive. Sustainably managed forests play an essential role in the carbon cycle and provide essential environmental and social values and services beyond their contribution as a source of wood (e.g. biodiversity conservation, protection against erosion, watershed protection and employment in often fragile rural areas). The forest sector has therefore a key role to play in the transition towards a more sustainable economy.

The “Rovaniemi Action Plan for the Forest Sector in a Green Economy” (RAP) was adopted on 13 December 2013 at the joint session of the UNECE Committee on Forests and the Forest Industry (COFFI) and the FAO European Forestry Commission (EFC). It proposes a vision, strategies and objectives for the forest sector in the UNECE region and possible actions towards a green economy. Possible actions could be implemented by international organizations, governments of Member States, the private sector, civil society and other stakeholders. For each action, possible actors were identified by the stakeholder meetings. The Action Plan is meant to inspire voluntary action and provide the basis for plans and activities to focus on the contribution of forests in a green economy. It provides suggestions and is not a work programme for any of the bodies mentioned¹³.

Strategies and concepts like this have been initiated in order to tackle future challenges (e.g. climate change, energy savings, exit from nuclear power, balance different interests of society on forests). They offer suitable framework conditions for the access into a green economy at the same time offering opportunities to renewable raw materials and energy as well as to bio-based product composites. Against this backdrop, actions within those strategies may also contribute to the RAP-targets simultaneously. The following selection of actions and projects on national and subnational level may offer a first impression about possible national German contributions to the targets of the Rovaniemi Action Plan (**Table 3**).

Table 3: Possible contribution to the targets of the Rovaniemi Action Plan (RAP)

Possible contribution to the targets of the Rovaniemi Action Plan (RAP)	RAP
Legality of wood origin (Timber Trade Safeguard Act as of 15 July 2011; Thünen Centre of Competence on the Origin of Timber)	A.0 A.7
Certification sustainable sources of wood and wood products	A.1
Adaption of forests to the ongoing climate change	B.3
Forest protection (e.g. against fires, storms, pests, beetles)	A.3
Maintenance of forest genetical resources, breeding fast growing tree species	A.3
Forest inventories	B.4
Improve harvest techniques including cost reduction	C.3
Greenhouse gas monitoring forests and timber	A.5
Life-cycle-assessment incorporating the whole value-added-chain from forests via timber products to recycling	B.4
Contribution to the development of green building standards	A.6
Cluster and market analyses forest and timber sector	E.0
Wood mobilization; rawmaterial supply timber and paper industry	A.3

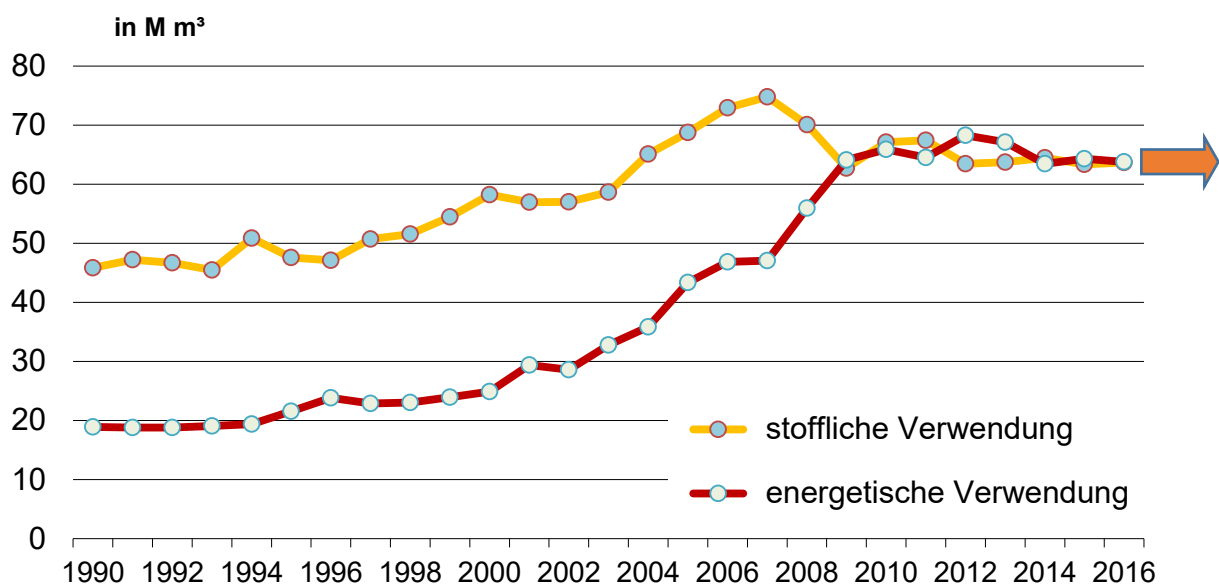
¹³ <https://sustainabledevelopment.un.org/partnership/?p=2584>

Wood-cascading, energy efficiency and avoidance of waste	B.2
Product innovations (e.g. wood-polymer composites, sustainable building movement, lignocellulose biorefinery)	A.4 A.6
Emissions and emission control of harmful substances	B.1
Energetic use of wood including combined heat and power	A.4
Research and development (e.g. http://www.fnr.de/ , Wood-Wisdom era net)	A.4
Communication on benefits of forests and timber for society and the environment competitions/awards timber construction (all media)	E.2 E.4

3. Development in forest products sectors

3.1 Timber and roundwood markets

Forests play the key role in timber and fuelwood supply, which has increased significantly during the two decades since 1990. After the boom period 2003 to 2007 and the downturn in the wake of the subsequent financial crisis, the material use of wood is largely stable at around 65 million m³. In recent years the energetic use of wood has been more or less balanced at the same level as the material timber use. The levelling of fuelwood utilization is mainly attributable to the declining application in private households as a result of warm winter seasons and lower oil prices (**Figure 2**).

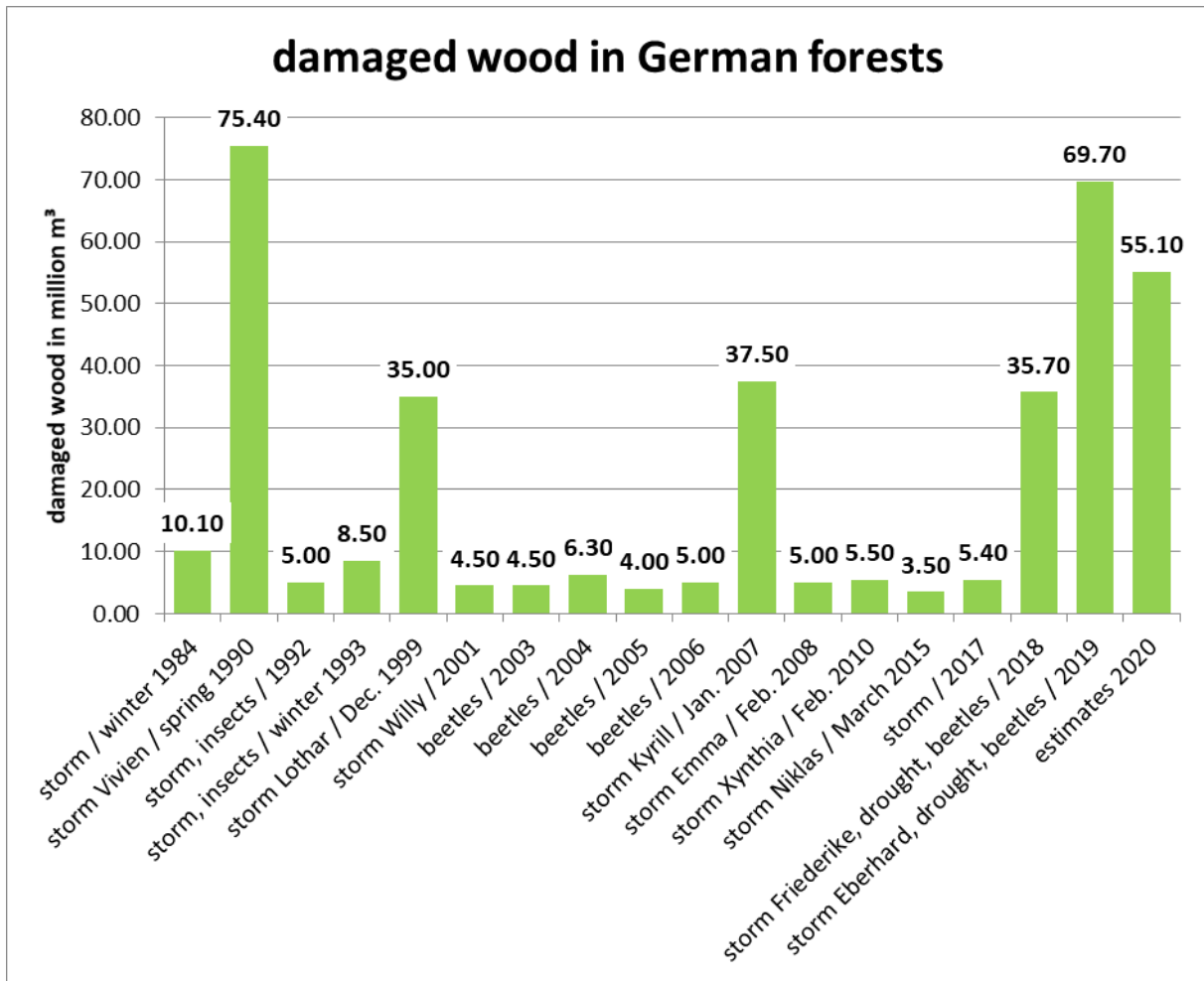


Source: Mantau U (2018): INFRO Holzrohstoffbilanzen und Stoffströme des Holzes – Entwicklungen in Deutschland 1987 bis 2016. Schlussbericht. Hamburg

Figure 2: Development of material utilization (yellow line, starting on higher level) and energetic utilization (red line, starting on lower level) of wood in Germany (million m³)

In late 2017 as well as during 2018 and 2019, roundwood production in Germany was strongly affected by windthrow, drought and pests. Heavy storms led to significant forest damage. The following drought period during 2018 and 2019 caused additional severe calamities by bark beetle infestation in many regions. The damages mainly affected softwood, especially spruce. It is reported that in 2018 and 2019 the damage due to drought and bark beetle infestation accounted to 35 million m³ and 70 million m³, respectively. In 2020 another 55 million m³ damaged wood are estimated (**Source: BMEL** Figure 3).

A total volume of about 160 million m³ of damaged timber, accumulated within three consecutive years, have led to continued oversupply, severe market pressure and dropped timber prices. About 245,000 ha forest area has been affected so far in Germany. The damage does not only concern the forest ecosystem, but also threatens the existence of many forest holdings. In order to combat spreading bark beetle disease and to preserve timber quality, the clearing of affected forest areas is most important. But storage sites have already been filled. Forestry companies are reaching limits regarding work force, logistics and financial resources. Another future challenge is the question of reforestation with special focus on climate change aspects (financing, seedlings, species etc.). Against the backdrop of ongoing climate change it is supposed that in some regions spruce may not be able to maintain as a species as it seems not to be robust enough against storms and drought. Therefore, it is unclear which species will be used for planting in upcoming years.



Source: BMEL

Figure 3: Appreciable calamities in German forests

The Federal Government has already taken first measures to deal with forest damage during the year 2018. The German Bundestag has decided on an additional 25 million Euros (earmarked) within the 2019 budget of the “German Joint Task for the Improvement of Agricultural Structures and Coastal Protection (GAK)” for a period of 5 years. The government's draft budget for 2020 and the 2023 financial planning foresees doubling the funding for the management of extreme weather events in forests from 5 million to 10 million Euros per year. Additionally, tax reliefs for the year 2018 have been achieved in favor of heavily affected forest enterprises. Furthermore, there are particularly favorable financing conditions for reforestation measures offered by Landwirtschaftliche Rentenbank (Development Agency for Agribusiness and Rural Areas).

As forest damage heavily increased during 2019, these measures will not be sufficient. Hence, the Federal Government will provide further financial resources for necessary measures as part of the national climate package.

What needs happen to deal with the forest damage immediately and in the long term? The following corner stones may provide a basis for further action:

1. Combating bark beetle spread (i.a. evacuation of affected forest areas considering biodiversity aspects)
2. Transportation relief (i.a. temporary increase of permitted total weight for heavy duty vehicles from 40 tonnes up to 44 tonnes and temporary suspension of the driving ban on Sundays and holydays)
3. Acceleration and simplification of approval procedures for wood storage sites (wet and dry storage)
4. Prompt reforestation of damaged forest areas taking into account climate change as well as the need of high-quality seed and planting material (climate resilient mixed stands)
5. Adaptation of the wild population to the requirements of close-to-nature forest management
6. Restoration/maintenance of the infrastructure in the forest (e.g. network of forest roads, fire-fighting ponds, defusing of the situation in areas contaminated with ammunition) and coordination of measures with the nature conservation authorities
7. Support of small private forest owners (e.g. intensify advice on the adaptation of forests to climate change including training)
8. Backup for sufficient and well-trained staff (i.a. reversing staff reductions of the past; rising attraction and expansion of education in forestry science, timber construction and wood technology with practical relevance)
9. Expansion of research and development with special focus on forests, timber and climate protection
10. Intensification/expansion of forest monitoring (i.a. systematic detection of forest damage using new technologies such as remote sensing)
11. Review and adaption of the German Forest Damage Compensation Act (i.a. definition of thresholds for forest crisis, traffic and tax regulations)
12. Strengthening the climate-friendly use of wood originating from sustainable forest management (major project: continued and intensified implementation of the Timber Charter 2.0 measures focusing on i.a. climate protection, cycle-driven economy, raw material and energy efficiency, intensified use of hardwood products)
13. Strengthening cooperation on European and international level in the field of sustainable forest management (other countries are facing similar challenges as Germany)

- 14: Intensification of public relations in the forest and wood sector (i.a. fact-based information and education about the interrelationships of forest, wood, climate protection and conservation of finite resources)

In addition to the above-mentioned key points and possible measures, an overarching, comprehensive, medium- and long-term strategy for the conservation and sustainable development of the German forest is necessary. To this end, the expiring National Forest Strategy 2020 will be further developed into a Forest Strategy 2050 during this legislative period.

3.2 Method to detect more realistic harvests and removals

According to official harvest statistics, in 2019 about 68.2 million m³ commercial volume under bark were felled (+5.7 % compared with 2018). The fellings are still strongly affected by damaged timber from drought and bark beetle. According to official statistics, the species group “spruce” accounted for 69 % of the total felling, “pine” for 14 %, “beech” for 15 % and “oak” for 3 %. Comparing the development of removals in recent years with German Forest Resource Assessment data seems to show that in comparison with potential coniferous wood resources (in particular potential resources of spruce) in hardwood there is still considerable untapped potential. However, the official felling statistics (average of the last decade: about 56 million m³) are obviously not able to cover the real timber volumes, harvested in and removed from the forest. Especially removals in enterprises managing smaller forest areas (i.a. registration problems) and fuelwood removals are underestimated.

In order to provide more realistic accounts of harvesting volumes an additional methodological approach has been developed in Germany. The method is based on the recalculation of the used amount of roundwood, differentiated into the various users (Jochem et al. 2015)¹⁴. Databases are official statistics, statistics of industry associations, and results of various empirical studies (e.g. fuelwood consumption in private households).

Also, results from the most recent third Federal Forest Inventory Study 2012 and the Carbon Inventory Study 2017 estimate the average annual harvest in the period 2003 to 2012 and 2013 to 2017 respectively. The third Federal Forest Inventory allows at a ten-year interval the determination of fellings and verifies the derivation on the demand side. The Carbon Inventory is an intermediate inventory conducted in the middle of the obligatory ten-year circle of the

14 Jochem D, Weimar H, Bösch M, Mantau U, Dieter M (2015): Estimation of wood removals and fellings in Germany: a calculation approach based on the amount of used roundwood. *Eur J Forest Res* 134(5):869-888, DOI:10.1007/s10342-015-0896-9

Federal Forest Inventory. Results of the statistical data for the most recent years as well as for the period 2003 to 2012 are provided in **Table 4**.

Table 4: Comparison between official felling statistics with results of Federal Forest Inventory 2012 and WEHAM-potential (in million m3 of solid wood under bark per year)

Year/ Period	official statistics	Federal Forest Inventory 2012 (Ø 2003-2012)	WEHAM- potential	Carbon Inven- tory 2017 (Ø 2013-2017)	Thünen Estima- tion on Round- wood Fellings
2003-2012	56.8	75.7	78.3		74.0
2013	53.2		77.7	62.0	73.4
2014	54.4				68.8
2015	55.6				70.8
2016	52.2				67.9
2017	53.5				68.3
2018	64.6				76.6
2019	68.2				77.6

Source: BMEL, Thünen-Institute^{15,16}

Still, the domestic use of roundwood is dominated by softwood (roughly about three quarters of the used roundwood are coniferous species). The German timber industry is further based upon softwood processing. Roundwood utilisation accounts for nearly 90 % softwood and only little more than 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. This situation seems to accelerate due to the heavy damage in coniferous forest areas in Germany.

¹⁵ TI-WF (2020): Fellings and Use of Roundwood [online]. Hamburg: Thünen Institute of International Forestry and Forest Economics. Access: www.thuenen.de/en/wf/figures-facts/production-and-use/fellings-and-roundwood-use/

¹⁶ Hennig P, Schnell S, Riedel T (2019) Rohstoffquelle Wald - Holzvorrat auf neuem Rekord. AFZ Wald 74(14):24-27

3.3 Positive development in timber construction

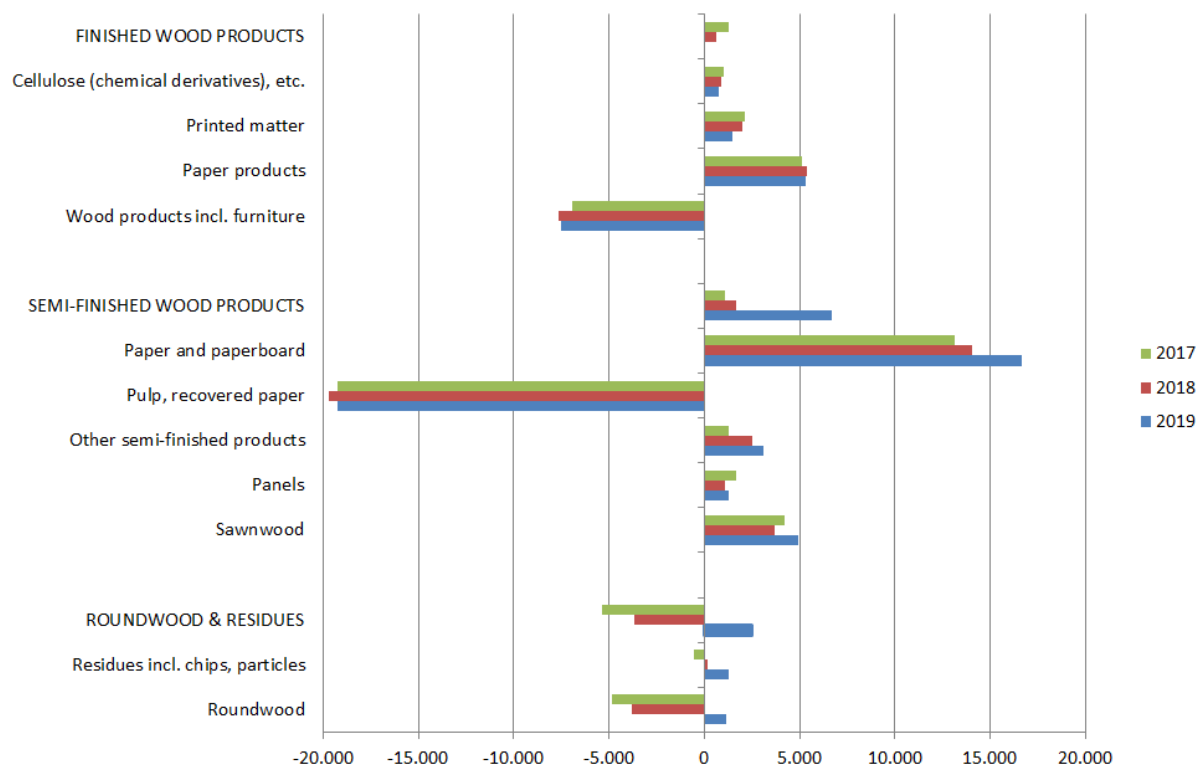
Roundwood markets are closely linked to developments in the construction sector. Regarding wood consumption this industry sector is most important. In Germany roughly between one half and two third of removals are transformed into products designed for building construction and housing elements. The German construction, housing and property industries form a key sector for growth (turnaround 2019 estimated at about 140 billion Euros) and labor force (about 2.5 million employees). 80 % of the 19.2 million residential buildings in Germany are older than 25 years. In 2019 the number of new residential building permits has increased against the previous year from 490 units to 108,071 units. For the year 2019, the share of new wooden buildings in the whole building market has slightly decreased from 18.4% in 2018 to 18.2 % in 2019.

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

German trade with wood and wood-based products showed an increase in net imports from the years 2017 to 2019¹⁷, measured in roundwood equivalents ($m^3(r)$): -3.0 million $m^3(r)$ in 2017, -1.4 million $m^3(r)$ in 2018 and 9.2 million $m^3(r)$ in 2019, respectively. In monetary terms, however, net trade shows a surplus in both recent years. Also, net exports are slightly increasing: In 2017 net exports of 6.3 billion Euros of wood and wood-based products could be achieved. 2018 and 2019 show a further increase to 6.5 billion and 7.0 billion Euros, respectively.

The following **Figure 4** and **Figure 5** show the German trade balance of wood and wood-based products of different product groups in the years 2017 to 2019 in 1,000 $m^3(r)$ and in 1,000 million Euros.

¹⁷ Trade data for 2019 are preliminary

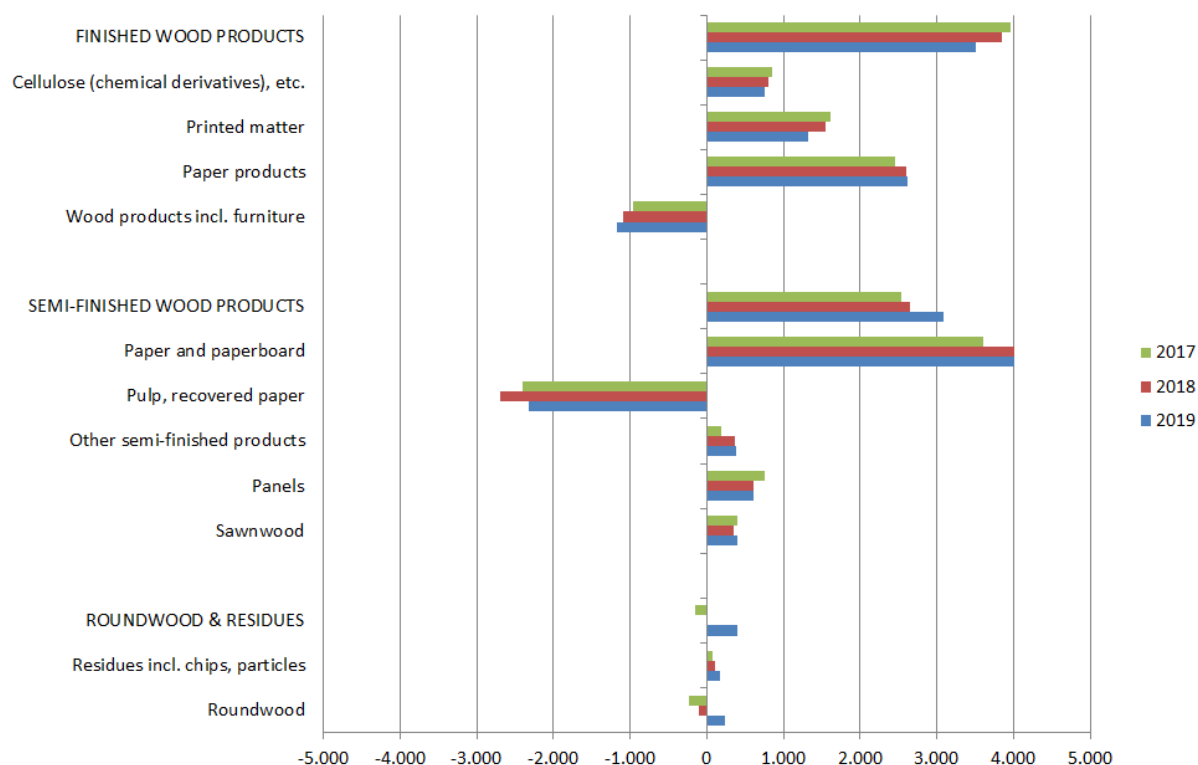


Source: Federal Statistical Office, calculated by Thünen Institute. 2019: Preliminary data

Figure 4: Trade balance of product groups of wood and wood-based products in the years 2017 to 2019 (in 1,000 m³ (r))

The main product group of roundwood and residues shows net imports in the years 2017 and 2018 and a change to net exports in 2019. The change in 2019 is mainly due to a strong increase of domestic supply of roundwood because of ongoing drought and bark beetle damage. 2019 is the first year since 2008 which shows net exports of roundwood. Measured in monetary values, already 2018 showed net exports of roundwood and residues. In 2019 a further increase can be seen from 6 million to 406 million Euro.

Trade with semi-finished wood products shows an increase in net exports measured in roundwood equivalent m³(r) as well as in Euro. In 2017, net export summed up to 1.1 million m³(r) and further increased to 1.7 million m³(r) in 2018 and to 6.7 million m³(r) in 2019. Net exports in monetary values show an annual export surplus of 2.5 billion Euro in 2017, 2.6 billion euro in 2018 and 3.1 billion Euro in 2019. Within this main product group, pulp and recovered paper show significant net imports, while the export surplus is mainly due to paper and paperboard and to a minor degree to panels and sawnwood.



Source: Federal Statistical Office, calculated by Thünen Institute. 2019: Preliminary data

Figure 5: Trade balance of product groups of wood and wood-based products in the years 2017 to 2019 (in million Euros)

The main product group of finished products basically shows net exports in volume and in value, however, decreasing in quantity and in value. Net exports measured in roundwood equivalent $m^3(r)$ decreased from 1.3 million $m^3(r)$ in 2017 to 0.6 million $m^3(r)$ and to 5.000 $m^3(r)$ in 2019, while values decreased in the same period from 4.0 billion Euro in 2017 to 3.9 billion Euro in 2018 and to 3.5 billion Euro in 2019. This development is mainly due to increased net imports of wood products including furniture and decreasing net exports of printed matter, while paper products still show a slight increase in net exports.

3.5 Sawnwood (softwood/hardwood)

In 2019, about 18,765 people were employed in the German sawmilling industry (+5.5 % against 2018). The total turnover amounted to 6.2 billion euros (-3.0 % against previous the year). With an export quota of 31.9 %, the export turnover amounted to nearly 2.0 billion eu-

ros. Compared with 2018, the entire export turnover decreased slightly by 2.4 % (companies with 20 and more employed persons)¹⁸.

With about 23.3 million m³, the domestic production of sawn softwood (coniferous) increased by 3.1 % in 2019 compared with 2018. The apparent consumption of coniferous sawnwood slightly decreased to 19.3 million m³ (-1.0 % compared with 2018). German exports of sawn softwood amounted to 8.3 million m³ and the imports to 5.2 million m³ in 2019. The annual apparent consumption of sawn hardwood amounted to 0.9 million m³ and shows an increase of 17.6 % compared to 2018. The domestic production increased about 9.2 % and is at a level of 1.3 million m³ of sawn hardwood.

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

In 2019, the German panel industry employed 14,195 people (-0.1 % against 2018) and recorded a total turnover of 4.7 billion euros. Compared with 2018, the total turnover decreased by 6.1 %. About 35.7 % of the turnover depended on foreign trade (1.7 billion euro). Compared with 2018, the entire export turnover decreased by 7.6 % (companies with 20 and more employees)¹⁹. The annual production of the German panel industry amounted to 6.9 million m³ of particle boards (including OSB) (-1.6 %) and to 5.4 million m³ of fiberboards (-4.5 %). The apparent consumption of particle boards (including OSB) was estimated to be 7.3 million m³ (-3.4 % compared with 2018) and of fibreboards to be 3.6 million m³ (-4.0 % compared with 2018).

3.7 Pulp and paper

In 2019, approximately 39,279 people were employed in the German pulp and paper industry (+1.5 % compared with 2018) at about 176 production sites (+0.6 % against 2018). The total turnover decreased to 17.1 billion euro (change from previous year: -5.7 %). With an export quota of 58.6 %, the export turnover amounted to 10.0 billion euro. Compared with 2018, the entire export turnover decreased by 5.2 % (companies with 20 and more employed persons)²⁰. The annual production of paper and paperboard amounted to 22.1 million tons (-2.7 % against

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

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

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

2018)²¹. 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 18.8 million tons (-6.1 % compared with 2018 and according to actual data of the German Pulp and Paper Association). Wood consumption by German pulp and paper mills was estimated to be 9.3 million m³ in 2019, which is a minus of 1.6 % compared with 2018²¹.

3.8 Pellet industry and producers of other agglomerates


German producers of wood pellets and other agglomerates still show significant increases in annual production. In 2019 production increased to 3.7 million tons (+35.4 % compared to 2018). About 737,000 tons of pellets and briquettes have been exported in 2019 (+7.4 % compared with 2018), while imports decreased in 2019 to 554,000 tons (-24.1 % compared to 2018). Domestic consumption increased in 2019 to 3.5 million tons (a plus of 27 % compared with 2018). Main raw material sources for pellet production are wood residues originating from softwood sawmills. Additional sources only play a minor role (e.g. residues from forests, fast growing species, hardwood species).

3.9 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 ²²) employed 152,442 people in 2019 (+0.1 % compared with 2018). 54,610 of these were employed within the woodworking industry, 97,832 in the furniture industry. The total turnover amounted to 29.1 billion euro, an increase of 0.4 % compared with 2018. The increase is evenly distributed between the woodworking industry (+0.3 %) and the furniture industry (+0.4 %). The turnover of the furniture industry is significantly higher (19.1 billion euro in 2019) than turnover of the woodworking industry (10.0 billion euro). With an export quota of 24.6 % the export turnover amounted to 7.2 billion euro in 2019. The export quota of the furniture industry is considerably higher than the export quota of the woodworking industry (31.4 % compared to 11.7 %). The export turnover of the woodworking industry increase compared with 2018 (+1.8 %). This is also due for the export turnover of the furniture industry (+1.2 %).

²¹ VDP (2020): Paper 2020: Annual Report. Tab. N8; N16, N18

²² In accordance with NACE Codes 16.22, 16.23, 16.24, 16.29, 31.01, 31.02, 31.09

 UNECE TF1 TIMBER FORECAST QUESTIONNAIRE Roundwood		Country: Germany			Date:		
		Name of Official responsible for reply: Holger Weimar					
		Official Address (in full): Thünen Institute Leuschnerstr. 91, 21031 Hamburg/DE					
		Telephone: +49 40 73962 314			Note: Complete only if data for 2019 have been revised.		
		E-mail: holger.weimar@thuenen.de					
Product Code	Product	Unit	Historical data		Revised	Estimate	Forecast
			2018	2019	2019	2020	2021
1.2.1.C	SAWLOGS AND VENEER LOGS, CONIFEROUS						
	Removals	1000 m ³ ub	35.000 Re	37.426 N		39.100	37.900
	Imports	1000 m ³ ub	4.500 Re	4.100 #	4.300	3.900	4.100
	Exports	1000 m ³ ub	2.800 Re	2.250 #	5.300	6.000	4.500
	Apparent consumption	1000 m ³ ub	36.700 Re	39.276	36.930	37.000	37.500
1.2.1.NC	SAWLOGS AND VENEER LOGS, NON-CONIFEROUS						
	Removals	1000 m ³ ub	3.527 N	3.287 N		3.150	3.200
	Imports	1000 m ³ ub	200 #	200 #		150	200
	Exports	1000 m ³ ub	900 #	1.000 #		800	900
	Apparent consumption	1000 m ³ ub	2.827	2.487		2.500	2.500
1.2.1.NC.T	of which, tropical logs						
	Imports	1000 m ³ ub	8 #	8 #		8	8
	Exports	1000 m ³ ub	2 #	2 #		2	2
	Net Trade	1000 m ³ ub	6	6		6	6
1.2.2.C	PULPWOOD (ROUND AND SPLIT), CONIFEROUS						
	Removals	1000 m ³ ub	7.952 N	9.338 N		10.500	9.300
	Imports	1000 m ³ ub	3.900 Re	4.100 #	2.500	2.200	3.000
	Exports	1000 m ³ ub	1.100 Re	2.250 #	2.000	2.500	2.000
	Apparent consumption	1000 m ³ ub	10.752	11.188		10.200	10.300
1.2.2.NC	PULPWOOD (ROUND AND SPLIT), NON-CONIFEROUS						
	Removals	1000 m ³ ub	3.222 N	3.302 N		3.550	3.700
	Imports	1000 m ³ ub	300 #	200 #		150	200
	Exports	1000 m ³ ub	400 #	600 #		400	500
	Apparent consumption	1000 m ³ ub	3.122	2.902		3.300	3.400
3	WOOD CHIPS, PARTICLES AND RESIDUES						
	Domestic supply	1000 m ³	14.941 C	14.890 C		14.900	15.000
	Imports	1000 m ³	2.094 C	1.344 C		1.500	1.800
	Exports	1000 m ³	2.739 C	2.653 C		2.600	2.500
	Apparent consumption	1000 m ³	14.296	13.582		13.800	14.300
1.2.3.C	OTHER INDUSTRIAL ROUNDWOOD, CONIFEROUS						
	Removals	1000 m ³ ub	74 N	71 N		95	95
1.2.3.NC	OTHER INDUSTRIAL ROUNDWOOD, NON-CONIFEROUS						
	Removals	1000 m ³ ub	0 N	0 N		5	5
1.1.C	WOOD FUEL, CONIFEROUS						
	Removals	1000 m ³ ub	9.118 N	9.218 N		9.200	9.200
1.1.NC	WOOD FUEL, NON-CONIFEROUS						
	Removals	1000 m ³ ub	13.240 N	13.525 N		13.400	13.400

Please return (preferably by e-mail) to Timber Section no later than 11 September 2020.

By e-mail to stats.timber@un.org.

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 Forecast Questionnaire (#). 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

TIMBER FORECAST QUESTIONNAIRE
Forest products

Country: Germany	Date:
Name of Official responsible for reply: Holger Weimar	
Official Address (in full): Thünen Institute Leuschnerstr. 91, 21031 Hamburg/DE	
Telephone: +49 40 73962 314	Note: Complete only if data for 2019 have been revised.
E-mail: holger.weimar@thuenen.de	

Product Code	Product	Unit	Historical data		Revised	Estimate	Forecast
			2018	2019	2019	2020	2021
6.C	SAWNWOOD, CONIFEROUS						
	Production	1000 m ³	22.610	23.307	23.505	24.000	24.500
	Imports	1000 m ³	5.162	4.797	5.131	5.000	5.000
	Exports	1000 m ³	8.264	8.787	9.220	9.500	10.000
	Apparent consumption	1000 m ³	19.508	19.317	19.416	19.500	19.500
6.NC	SAWNWOOD, NON-CONIFEROUS						
	Production	1000 m ³	1.160	1.266	1.169	1.100	1.150
	Imports	1000 m ³	392	401	371	330	330
	Exports	1000 m ³	780	760	746	650	720
	Apparent consumption	1000 m ³	772	908	794	780	760
6.NC.T	of which, tropical sawnwood						
	Production	1000 m ³	1 N	2 N		2	2
	Imports	1000 m ³	72	73		70	70
	Exports	1000 m ³	36	33		35	35
	Apparent consumption	1000 m ³	36	41		37	37
7	VENEER SHEETS						
	Production	1000 m ³	88 C	98 C		95	95
	Imports	1000 m ³	112 C	104 C		105	105
	Exports	1000 m ³	63 C	58 C		60	60
	Apparent consumption	1000 m ³	138	144		140	140
7.NC.T	of which, tropical veneer sheets						
	Production	1000 m ³	1 N	1 N		1	1
	Imports	1000 m ³	10	8		8	8
	Exports	1000 m ³	3	2		2	2
	Apparent consumption	1000 m ³	8	7		7	7
8.1	PLYWOOD						
	Production	1000 m ³	118 C	111 C		115	115
	Imports	1000 m ³	1.620 C	1.469 C		1.450	1.450
	Exports	1000 m ³	393 C	372 C		380	380
	Apparent consumption	1000 m ³	1.345	1.207		1.185	1.185
8.1.NC.T	of which, tropical plywood						
	Production	1000 m ³	0 N	0 N		0	0
	Imports	1000 m ³	158	151		150	150
	Exports	1000 m ³	45	40		40	40
	Apparent consumption	1000 m ³	113	111		110	110
8.2	PARTICLE BOARD (including OSB)						
	Production	1000 m ³	6.988 N	6.878 N		6.900	6.950
	Imports	1000 m ³	2.967	2.723		2.700	2.675
	Exports	1000 m ³	2.433	2.332		2.350	2.375
	Apparent consumption	1000 m ³	7.522	7.269		7.250	7.250
8.2.1	of which, OSB						
	Production	1000 m ³	1.230 N	1.163 N		1.170	1.200
	Imports	1000 m ³	848	786		770	750
	Exports	1000 m ³	513	525		530	550
	Apparent consumption	1000 m ³	1.566	1.424		1.410	1.400
8.3	FIBREBOARD						
	Production	1000 m ³	5.675 C	5.419 C		5.450	5.550
	Imports	1000 m ³	1.408 C	1.476 C		1.455	1.420
	Exports	1000 m ³	3.319 C	3.284 C		3.310	3.415
	Apparent consumption	1000 m ³	3.763	3.611		3.595	3.555
8.3.1	Hardboard						
	Production	1000 m ³	0 N	0 N		0	0
	Imports	1000 m ³	228	212		215	210
	Exports	1000 m ³	150 E	116 E		120	115
	Apparent consumption	1000 m ³	77	97		95	95
8.3.2	MDF/HDF (Medium density/high density)						
	Production	1000 m ³	3.803 N	3.629 N		3.650	3.700
	Imports	1000 m ³	517	491		490	460
	Exports	1000 m ³	2.910 E	2.787 E		2.800	2.900
	Apparent consumption	1000 m ³	1.411	1.333		1.340	1.260
8.3.3	Other fibreboard						
	Production	1000 m ³	1.872 N	1.790 N		1.800	1.850
	Imports	1000 m ³	662	772		750	750
	Exports	1000 m ³	259	381		390	400
	Apparent consumption	1000 m ³	2.275	2.182		2.160	2.200
9	WOOD PULP						
	Production	1000 m.t.	2.398 C	2.349 C	2.326	2.300	2.350
	Imports	1000 m.t.	4.654 Re	4.480 C	4.433	4.450	4.500
	Exports	1000 m.t.	1.076 Re	1.215 C	1.215	1.200	1.200
	Apparent consumption	1000 m.t.	5.976	5.614	5.544	5.550	5.650
12	PAPER & PAPERBOARD						
	Production	1000 m.t.	22.682 C	22.073 C	22.073	21.500	21.900
	Imports	1000 m.t.	11.153 Re	9.656 C	10.495	10.300	10.500
	Exports	1000 m.t.	13.681 Re	13.500 C	13.653	13.300	13.600
	Apparent consumption	1000 m.t.	20.154	18.230	18.915	18.500	18.800
5.1	WOOD PELLETS						
	Production	1000 m.t.	2.415 N	2.821 N		3.000	3.200
	Imports	1000 m.t.	375	278	292	325	350
	Exports	1000 m.t.	641	695	732	630	935
	Apparent consumption	1000 m.t.	2.149	2.405	2.300	2.495	2.615

Please return (preferably by e-mail) to Timber Section no later than 11 September 2020.

By e-mail to stats.timber@un.org.

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 Forecast Questionnaire (#). 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.