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STATEMENT ON THE WOOD MARKET REVIEW AND PROSPECTS

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1. GENERAL ECONOMIC TRENDS AFFECTING FORESTS AND FOREST INDUSTRIES SECTOR

The Covid-19 pandemic and resulting limitations to economic activity caused global recession in 2020, which also affected Poland. The decrease in GDP was 2.7% in real terms compared to the previous year, when the GDP growth was 4.7%. Domestic demand decreased 3.7% (compared to a 3.6% increase in the previous year), and its contribution to the GDP growth was -3.5 percentage point. Despite the growth of public consumption (4.4% compared to the previous year), total consumption decreased 1.3%, and household consumption 3%. The highest decrease was observed in the case of gross accumulation (-12.9%), which meant a negative contribution to GDP growth equalling -2.6 percentage point. In 2020 gross added value in Poland dropped 2.8% and the decrease concerned primarily the service sector (and foremost the hotel industry and gastronomy, where it reached -45.5%) as well as the construction industry (-3.7%), while the industry recorded a relatively low decrease of -0.2%. On the other hand, the foreign trade balance provided a positive contribution to the GDP growth equalling 0.8 percentage point. It is expected that in 2021 the economy will regain its upward trend and the growth of GDP will be 3.8% in real terms, if the pandemic-related restrictions are limited. Consumption, which is expected to increase 4.1%, is assumed to be the main growth factor, while the increase in private consumption is forecasted at 4.3% and in public consumption at 3.4%. The prognoses also assume a slight growth of accumulation (1.6% in relation to 2020). The year 2022 should bring further improvement in economic situation with a 4.3% growth of GDP in real terms. It should bring a significant acceleration of accumulation (5% in relation to 2021) and further growth of consumption (4.2%), especially private consumption. It is assumed that the low cost of capital and the government's actions aimed at increasing the investment rate, innovativeness and productiveness of economy, will be an impulse to increase the investment demand.

In 2020 the decrease in sold production of industry was 1.7% in real terms, in relation to the previous year, and similar to manufacturing. The wood sector suffered less from the negative effects of the pandemic than the other industries and generated sales of PLN 150.7 billion ($ 38.6 billion, € 33.9 billion), which, in relation to 2019, meant an increase of 2.4% in the pulp and paper industry (including paper processing), 1.4% in the wood industry, and 0.8% in the furniture industry. Sold production of the wood industry amounted to 10.7% of the value of manufacturing and to 9.2% of total industry production. Its branch structure was dominated by the furniture industry (35%), followed by the pulp and paper industry (including paper processing) with a share of 33% and the wood industry with a share of 32%. The first half of 2021 brought a dynamic increase in sales in the case of total industry (of 18.2% in relation to the corresponding period of the previous year) and manufacturing (of 19.3%) alike. A similar phenomenon was observed in the wood sector – sold production increased 26.5% in the furniture industry, 20.8% in the wood industry and 12.5% in the pulp and paper industry (including paper processing). In the coming months the upward trends should hold on, but these prognoses are burdened with considerable uncertainty due to the persisting corona virus pandemic and the possibility of introduction of further restrictions slowing down the economy. This concerns situation in Poland as well as in the European Union states, which are Poland's main foreign trade partners.

The economic slowdown also took its toll on the labour market where the situation worsened. At the end of 2020 registered unemployment rate was 6.2% (5.2% in 2019). The average employment in industry and manufacturing decreased (-2.1% and -2.2%, respectively, compared to the previous year). It is estimated that in 2020 the forestry-wood sector employed 389 thou. people (2% less than in the previous year), of which 43 thou. people were employed in forestry (a 1% decrease) and 346 thou. in the wood sector (a 2.1% decrease). The furniture industry provided jobs for approximately 49% of the employed in the wood sector, the wood industry for 33%, and the pulp and paper industry (including paper processing) for 18%. Prognosis for the next years envisages a slight improvement on the labour market, i.e. registered unemployment rate should decrease to 6.0% at the end of 2021 and to 5.8% in 2022. Nevertheless, till the end of 2022, according to the assumptions, average employment may remain at a level similar to the current (a 0.1% increase).

In 2020 the dynamics of foreign trade turnover also decreased in Poland. The value of export (PLN 1062.5 billion; $ 272.7 billion; € 239.9 billion) was 1% lower (in fixed prices) than in the previous year (4.4%) and of import (PLN 1015.4 billion; $ 260.6 billion; € 229.4 billion) remained at a similar level (a 0.2% increase compared to 3% in 2019). The positive balance of foreign trade equalled PLN 47.2 billion ($ 12 billion; € 10.5 billion). Wood and wood products accounted for more than 9% of the value of export (PLN 91.5 billion; $ 23.5 billion; € 20.6 billion), of which 85% was export to the European Union states, and for 4% of the value of import (PLN 36.3 billion; $ 9.3 billion; € 8.2 billion). Furniture is one of the main commodity groups of Polish export – it accounts for approximately 5% of its total value. In the years 2021-2022, an increase in exports as well as in imports is expected along with worsening of the trade balance, for export is to increase slower that import.

In 2020 price index of consumer goods and services was 3.4%. The fastest price growth was observed for the prices of electric energy, food and tobacco products. A gradual diminish of inflation is expected in the next years – to 3.1% in 2021 and to 2.8% in 2022.

In the coming years two programmes, i.e. the *Polish Order* and the *National Plan of Restoration and Resilience Enhancement*, financed by the European Union funds, should be an impulse of the development of Polish economy. Economic situation of Poland to a large extent depends on the economic situation in global and European economy. The activity in global economy and trade observed in the second half of 2021 is higher than initially assumed, primarily due to the improvement in situation in the USA and China. Nevertheless, the possibility of repeated uncontrolled development of the Covid-19 pandemic burdens all forecasts as to the future economic situation in Poland, Europe and around the world with great uncertainty.

2. POLICY MEASURES TAKEN IN POLAND OVER THE PAST 18 MONTHS, WHICH MIGHT HAVE A BEARING ON FOREST MANAGEMENT OR PRODUCTION AND TRADE OF FOREST PRODUCTS

The Covid-19 pandemic has been one of the main factors shaping economic situation around the world, in Europe and in Poland in recent months. In reaction to economic slowdown (which also affected Polish forestry-wood sector) caused by the increasing costs of health care, limitation of business activities, broken trade links and a change in patterns of social behaviour, Polish government launched a series of intervention packages aimed at minimising the negative consequences of the pandemic in economic and social sphere (*Anti-crisis Shield*, *Financial Shields of the Polish Development Fund*, *Branch Shield*, financial support of the Bank Gospodarstwa Krajowego and the Industry Development Agency). These financial tools were supplemented by the EU funds (within the operational programmes of the policy of coherence) in the form of so-called *Antivirus Fund Package*. Producers of wood products are also beneficiaries of these aid programmes.

The budget bill for 2022, which sets the lines of the medium-term socio-economic policy of Poland, is drafted based on the *Multiannual Financial Plan of the State for the years 2021-2024*, which encompasses the update of the *Convergence Programme 2021* and sets primary goals of socio-economic policy together with the measures of their implementation till 2024.

The *Plan* focuses mainly on the expected effect of the *National Plan of Restoration and Resilience Enhancement (KPO)* on Polish economy. *KPO* concerns the period of 2021-2026 and sets goals connected with restoration of the country and building of socio-economic resilience after the crisis caused by the Covid-19 pandemic, considering structural reforms and investments devised to serve this purpose. The basic goal of *KPO* is strengthening of social and territorial cohesion of Poland, and the specific objectives encompass: •innovative development of economy leading to an increased productivity of the economy, while considering digital transformation; •transformation toward green economy and development of green, intelligent mobility; •the growth of social capital and life quality (inter alia the development of health care and improvement in education quality). The *Multiannual Financial Plan of the State* and the *National Plan of Restoration* alike are in line with the long-term goals of the effective *Strategy for Responsible Growth till 2020 (with a time horizon till 2030)*. They also pertain to the forestry-wood sector and concern wood companies. In 2021 a draft of the *State Development Concept 2050* has been started as well. This document is to identify the most important challenges (economic, social, environmental, and spatial) which Poland is facing and to formulate possible scenarios of the country's development in a time horizon of 30 years, as well as to recommend strategic lines of public policies till 2050.

At the end of 2020, the *Strategy for Human Potential Growth 2030* was also adopted. The *Strategy* replies to the challenges connected with the improvement in human potential management and the assurance of social coherence (it contains elements also pertaining to the labour market and the employed in the forestry-wood sector) and is to contribute to, inter alia, the enhancement of society's competence and skills (including digital), the improvement in labour resources management and the use of these resources to a greater extent, the enhancement of the economy's competitiveness, the reduction of poverty and social exclusion, and to the improvement in accessibility of services rendered in response to demographic challenges. On the other hand, actions aimed at the improvement to the quality of social and cultural life are covered by the *Strategy for the Social Capital Growth 2030*, which assumes a greater involvement of citizens in public life, strengthening of the role of culture in building of identity and civil stances, and a greater use of the cultural and creative potential for development. Finding the way out of the trap of low total fertility rate and the assurance of generation substitution (which should have a positive effect on the labour market) is the primary goal of a draft of the *Demographic Strategy 2040*, which is presently in social consultation.

The *State's Scientific Policy* is a strategic document identifying the priorities as regards Polish system of higher education and science (also in relation to wood science). A draft of the *Policy* defines actions aimed at: i) the optimum use of the potential of science and higher education; ii) the growth of social confidence in research results and researchers; iii) the development of the science and higher education system in line with current trends and challenges.

3. MARKET DRIVERS

In a post-pandemic reality, the assumptions of the *Strategy for Responsible Growth till 2020 (with a time horizon till 2030)* will be implemented through a package of solutions aimed at socio-economic restoration and called the *New Order*. A draft of this programme contains a plan of the country development in the next decade and making an epochal civilizational jump within this period. The basic assumptions of the programme encompass, inter alia: i) better organised and appropriately financed health care (an increase of outlay to 7% of GDP within 6 years); ii) lower taxes (a higher tax-free sum); iii) higher salary and wealthier Polish families; iv) regulation of remote work; v) new regulations concerning health premiums; vi) launching of a fund financing modernisation of the country; vii) better accessibility of financing for purchase of one's own dwelling; viii) a possibility of building a house up to 70 m^2 solely on the basis of a filed application; and ix) changes concerning retirement pensions. The *New Order* fund envisages investments in infrastructure (including the IT infrastructure), transport, energy grid, modernisation of medical, educational, sports and cultural stations as well as of public space.

The *New Order* also considers support for entrepreneurs, including forestry-wood sector companies. In the case of small enterprises, the support consists in, inter alia, lowering of taxes, tax reliefs (e.g. for building prototypes, consolidation relief) or support for the development of family businesses. Medium enterprises can count on support for their foreign expansion, facilitation of access to *venture capital*, and tax reliefs concerning for example automation and robotization of production as well as innovative activities. For large companies (investors from Poland and abroad) there will be possibilities such as so-called *Interpretation 590* (i.e. an investment agreement (concluded directly with the Minister of Finance) concerning binding tax interpretations connected with undertaken investments), the *Centre for Investor Tax Service* (in the Ministry of Finance), simplifications regarding clearing of transfer prices, and support for employing innovative staff. The plans also encompass VAT changes, broadening of subcontractor protection, and an act on the employee share ownership programmes that will be conducive to the reduction of social stratification and will widen the range of capital sources. As regards cities, the change of regulations will facilitate creation and enlargement of national parks, establishment of a fund promoting ecological education of children and youth, and ecological certification of buildings.

In 2021 there was a launch of the *Government Programme Polish Incubator of Craftsmanship* and a new *act on craftsmanship* is being drafted. This act will be of great importance especially for small businesses, including wood enterprises (e.g. carpenter and furniture workshops). The goal of the *Incubator* is to strengthen the organisation of craftsmanship economic self-government as regards human and social potential as well as the institutional potential for the implementation of statutory tasks, including entrepreneurship development and dual training. The *Incubator* will be in effect in the period 2021-2030, and financing obtained by craftsmanship organisations by a manner of open contests may be allocated to, inter alia, the purchase of technical equipment or software, organisation of vocational contests for youth or consultation and training for employees and members of the organisations. On the other hand, the new *act on craftsmanship* is to address, inter alia, the new, updated definitions of craftsmanship and craftsman, and the issues connected with popularisation of dual training in craftsmanship and with supervision and inspection of training.

Starting from 2021, small entrepreneurs that are natural persons gained an additional protection thanks to the implementation of the amendment to the civil code and to the act on consumer rights, which granted them consumer rights in relations with other entrepreneurs. Moreover, entrepreneurs running single-person businesses, whose income did not exceed PLN 120 thou. in 2020, can take advantage of lower social insurance premiums (so-called *Small ZUS Plus*). Individual consumption is to be stimulated by the continuation of social programmes targeted at families with children (such as: *Good Start*, *Family 500+*, *Toddler+*, *Mother 4+*, *Family Caring Capital*) and seniors (*Senior+*, *The Active+*).

In the sphere of the environment and energy, a bill concerning so-called *Modernisation Fund* was finished in 2021. The *Fund* is to be an instrument supporting the achievement of the energy-climate policy goals and to finance the modernisation of Polish energy sector and activities reducing the emission of greenhouse gases and other air pollutants. In addition, regulations facilitating two programmes, i.e. *Stop Smog* and *Clean Air*, financing thermo-modernisation of buildings, were implemented. A database called *Central Record of Building Emissivity*, which collects information on the emission sources in the communal-living sector and public aid granted in this area, was also created.

4. DEVELOPMENTS IN FORESTS AND FOREST PRODUCTS MARKETS SECTORS

4. (A) Wood raw materials

The years 2019 and 2020 were a period of significant reduction in wood harvesting in Poland (which resulted not only from slowing down of the entire economy due to the Covid-19 pandemic, but also from a relatively large increase in harvesting in previous years resulting from the necessity of management of wood from windfalls caused by the hurricane in 2017). In 2020 40.6 million m^3 of roundwood was harvested, i.e. more than 6% less than in the previous year and 13% less than in 2018. 82% of harvested roundwood was softwood. More than 94% of harvested roundwood originated from the State Forests, while 0.9 million m^3 was harvested from afforested areas. Approximately 88% of harvested roundwood was wood for industrial processing (35.9 million m^3), the rest was fuelwood (4.7 million m^3). Raw material for material purposes was dominated by pulpwood (51%; 18.4 million m^3), followed by sawlogs and veneer logs with a 47% share (16.9 million m^3) and other wood of industrial nature with a 2% share (0.6 million m^3).

Approximately 11% of harvested roundwood was exported (4.6 million m^3 – a level similar to that of the previous year), 96% of which was roundwood for industrial processing (4.4 million m^3, of which 87% was softwood) and 4% fuelwood (less than 0.2 million m^3). Poland imported more than 3 million m^3 of roundwood (which was 7% of harvested volume), almost twice and much as the year before. Import was also dominated by industrial roundwood (98%; almost 3 million m^3), while fuelwood import was at the previous year’s level and amounted to approximately 62 thou. m^3. Tropical species import was marginal and amounted to less than 2 thou. m^3.

The persisting Covid-19 pandemic (and the anticipated next waves of it) makes it hard to anticipate next developments on the wood market in the coming years. Nevertheless, due to the assumed increase in economic activity and the increased demand for raw wood material already signalised by the industry, it may be assumed that in the period 2021-2022 roundwood harvesting will increase to 42.1 million m^3 and 43 million m^3, respectively, i.e. 3% annually. The growing demand should slowly reduce the dynamics of roundwood export, however no sooner than in 2022 to 4.4 million m^3 (an almost 4% decrease in relation to 2020). The main exports will be, as previously, roundwood for material processing (fuelwood export will be insignificant and should remain at the level of 0.2 million m^3). On the other hand, roundwood import should demonstrate an upward trend and the increase may be 4-5% annually (to 3.3 million m^3 in 2022). Fuelwood import will be also insignificant (probably its import will be approximately 70 thou. m^3 annually). However, the final volumes and directions of roundwood import may be determined by, hardly predictable, roundwood export restrictions being introduced in Belarus (Poland is the leader of roundwood import from Belarus), i.e. duties imposed on export of wood and wood products in force till the end of 2021 with the possibility of their extension.

4. (B) Wood energy, with a focus on government policies promoting wood energy

In 2019 energy generation from renewable sources (RES) amounted to 9.5 million toe in Poland, which meant an approximately 5% increase compared to the previous year. Almost 66% (6.2 million toe) of this figure was energy from biomass, including largely wood biomass. Nevertheless, there is a noticeable downward trend in the biomass share within renewable energy generation – in 2018 the share was 68%, and in 2015 74%. The share of energy generated from renewable sources within total energy generation was 15.7% in 2019, and the share within energy consumption 9%.

Recently, one can observe a growing interest in photovoltaics in Poland (in 2020 solar power stations delivered 176% more energy to the system than in the previous year), especially in prosumer photovoltaics. A considerable aid for prosumers (whose number in March 2021 was 507,972, and combined power of their installations reached 3293.8 MW) investing in photovoltaic panels, and thus increasing profitability of those installations, is the programme *My Current 3.0.*, which co-finances the purchase and installation of micro installations of electric power ranging from 2 to 10 kW that satisfy the demand from existing residential buildings. The dynamics of co-combustion of biomass and coal has been growing (which has been significantly influenced by the growing prices of CO_2 emission permits), as well as the dynamics of the development of bio-gasworks and water power stations.

According to the *National Plan for Energy and Climate for the years 2021-2030*, the share of renewable sources within final gross energy consumption is to be 21-23% in 2030 in Poland. This is to be possible thanks to a greater use of advanced bio-fuels, the development of marine wind power industry and the enhanced dynamics of installation of RES micro installations. It is estimated that in the next years approximately 13% of domestic biomass potential (considering the environmental protection requirements) may be allocated to energy purposes. Mechanisms of the RES development support, including biomass sources, will be aimed at the assurance of maximum flexibility of these sources at the lowest cost of energy generation and at satisfying local energy demand (also that connected with waste management) and the use of local potential.

4. (C) **Certified forest products**

In Poland, the *Programme for the Endorsement of Forest Certification Schemes* (PEFC) is dominant in certification of forest management, while the *Forest Stewardship Council* (FSC) system dominates certification of delivery chain (Chain of Custody (CoC)). The PEFC certification covers 7.2 million hectares of forests (as of October 2021), and the FSC system 6.6 million hectares, which means approximately 77% and 72%, respectively, of the area of forests in Poland. Polish forests account for 2% of global PEFC certified forests and for 6% of European PEFC certified forests. As regards the FSC system, the numbers are 3% and 12%, respectively. Polish companies hold 239 active PEFC CoC certificates for wood products (2% of their global number and 2% of their number in Europe) and 2443 FSC CoC certificates (5% their global number and 11% of their number in Europe). In the case of the FSC system and the PEFC programme alike the most certificates are held by production companies, i.e. manufacturers of sawnwood (of various processing stages), pallets, flooring materials, wood-based panels, wood pulp, paper and paperboard, paper products, and furniture.

4. (D) **Sawn softwood**

In 2020 4.7 million m^3 of sawnwood (together with impregnated and non-impregnated sleepers) was manufactured in Poland, of which almost 90% was sawn softwood (4.2 million m^3), which meant that sawn softwood production was almost 6% lower than in the previous year (the drop of sawnwood production, like of other wood products, was largely caused by the economic slowdown resulting from the corona virus pandemic). Poland imported 1.2 million m^3 of sawn softwood (almost 30% of the production volume), i.e. 12% more than in 2019, and exported approximately 23% of domestic production sawn softwood (1 million m^3), which meant a 13% increase in export in relation to 2019.

It is assumed that in the period 2021-2022 sawn softwood production will be slowly growing and it may amount to 4.3 and 4.4 million m^3 of sawn softwood, respectively, i.e. 2-3%

annually. Former trends in foreign trade in sawn softwood should remain unchanged, i.e. sawn softwood import will be greater than its export and will increase to 1.3 million m^3 in the analysed period, meaning a more than 5% increase compared to 2020. Export, depending on foreign demand, may increase to 1.1 million m^3, and probably will be approximately 15% higher than in 2020.

4. (E) Sawn hardwood

In 2020 sawn hardwood production (less than 0.5 million m^3) recorded a considerable drop, i.e. 14% compared to the previous year. Sawn hardwood import was also lower (almost 7%), meaning that Poland imported 0.2 million m^3 of sawn hardwood. In relation to the sawn hardwood production volume, its import was more than 51%. Tropical sawn hardwood accounted for approximately 7% of import (17 thou. m^3; 18% more than in the previous year). Export of sawn hardwood increased 16% compared to 2019 and amounted to 0.2 million m^3, which was 45% of the production volume.

As in the case of sawn softwood, production of sawn hardwood should increase in the next years – 4-5% annually (to more than 0.5 million m^3 in 2022), but it still will not be the level of 2019. The significance of import in satisfying domestic demand for sawn hardwood will grow and its volume will probably increase to 0.3 million m^3 in 2022 (which will be 57% of the anticipated production volume). Sawn hardwood import will still exceed its export. Poland may export less than 0.3 million m^3 of sawn hardwood in the analysed period, i.e. 53% of the production volume.

4. (F) Veneer sheets

In 2020 veneer production also decreased in Poland and amounted to less than 39 thou. m^3, meaning a more than 17% decrease compared to the previous year. 55% of the production was hardwood veneer. Domestic market in veneer shaped its import which was almost twice the production volume and amounted to 74 thou. m^3 (a level close to that of 2019). Approximately 38% of domestic veneer production volume was exported (15 thou. m^3), meaning a 10% increase in export.

It is forecasted that in the period 2021-2022 veneer production will increase to 45 thou. m^3; however, in the end year of the forecast it still may not reach the level of 2019, when it amounted to 47 thou. m^3. Domestic production of veneer will be supplemented by its import, which in the period 2021-2022 may amount to 75 and 78 thou. m^3, respectively, while its export may increase to 15-16 thou. m^3 and thus will reach 37-36% of the production volume.

4. (G) Wood-based panels

In 2020 11.9 million m^3 of wood-based panels was manufactured in Poland (1% less than in 2019). As in previous years, the assortment structure of the production was dominated by particleboards, whose production reached 6.6 million m^3 and share 55%, i.e. was similar to the previous year. The OSBs' share within this production was approximately 13% (0.8 million m^3, 11% less than in the previous year). Fibreboards accounted for 41% of total volume of wood-based panels manufactured in Poland (4.8 million m^3, 0.5% less than in 2019) and were dominated by dry-process fibreboards with a 66% share and the production volume of 3.2 million m^3, which, however, meant a 13% drop compared to the previous year. On the other hand, wet-process porous fibreboard production increased 42% and reached 1.6 million m^3, which accounted for 33% of total fibreboard production. The downward trend in the production of hardboards remained unchanged (a drop to 90 thou. m^3, 11% in relation to 2019). Plywood accounted for approximately 4% of total production of wood-based panels and the production volume was 0.5 million m^3 (7% less than in 2019). In 2020 Poland imported 3.1 million m^3 of wood-based panels. Their import was 4% greater than in the previous year and accounted for 26% of domestic production. Its structure was dominated by particleboards (1.9 million m^3; 60% of wood-based panel import volume), of which 13% (0.2 million m^3) were OSBs – twice as much as in 2019. Poland also imported 0.9 million m^3 of fibreboards (9% more than in the previous year) and 0.4 million m^3 of plywood (a 13% increase). Fibreboards were dominated by dry-process fibreboards (80%; 0.7 million m^3), followed by wet-process hardboards (18%; 0.2 million m^3), while import of wet-process porous fibreboards was insignificant and amounted to less than 17 thou. m^3 (2%). The 2020's export amounted to 3.5 million m^3 of wood-based panels, i.e. 12% more than in 2019, of which 0.3 million m^3 was plywood (8% more than in the previous year), 1.1 million m^3 particleboards (a 27% increase compared to the previous year), and 2 million m^3 fibreboards (a 5% increase). 36% (0.4 million m^3) of exported particleboards were OSBs, while fibreboard export was dominated by wet-process porous fibreboards (48%; approximately 1 million m^3) and dry-process fibreboards (32%; 0.7 million m^3).

It is estimated that wood-based panel production in the period 2021-2022 will grow to 12.1 million m^3 and 12.4 million m^3, respectively. The upward trend in production should be characteristic of all types of panels, and hence in 2022 plywood production may be 0.5 million m^3 (a 10% increase in relation to 2020), particleboard production 6.7 million m^3 (a 1% increase), of which OSB production approximately 1 million m^3 (an 18% increase), and fibreboard production 5.1 million m^3 (a 14% increase). Upward trends should also be observed in foreign trade. It is anticipated that import dynamics will be higher than export dynamics, thus in 2022 Poland may import 3.3 million m^3 of wood-based panels (5% more than in 2020) and export 3.5 million m^3 (0.4% more than in 2020). The assortment structure of exported and imported wood-based panels alike should not change significantly in the analysed period.

4. (H) **Pulp and paper**

In 2020 wood pulp production in Poland (without pulp from fibres other than wood fibre and pulp from recovered paper and paperboard (1 million tons)) was 6% higher than in 2019 and amounted to 1.7 million tons[1]. Almost 1 million tons of cellulose was produced (5% more than in the previous year), 0.7 million tons of mechanical wood pulp and semi-chemical wood pulp (an 8% increase), and 56 thou. tons of wood cellulose pulp for chemical processing (a 3% drop of production). The growing demand is the reason for considerable supplementation of domestic market in wood pulp with imports. In 2020 wood pulp import accounted for 67% of the production and amounted to 1.2 million tons, of which 91% was cellulose (1.1 million tons; a 5% increase in relation to the previous year), and was accompanied by insignificant amounts of mechanical wood pulp and semi-chemical wood pulp (77 thou. tons) and wood pulp for chemical processing (16 thou. tons). Wood pulp export is relatively insignificant – in 2020 it was 9% of the production (0.2 million tons; 39% more than in the previous year). More than 97% of the export volume was cellulose.

In the next years wood pulp production should remain at a level similar to 2020, i.e. 1.7-1.8 million tons. Former trends in foreign trade may also remain unchanged, i.e. the importance of import for domestic market will grow, i.e. 1.2 million tons in 2022 (it is anticipated that the import share within wood pulp production will increase to 70%), and export will remain relatively low (0.2 million tons).

In 2020 5.1 million tons of paper and paperboard was manufactured in Poland (5% more than in the previous year). The assortment structure of production was dominated by packaging paper (70%), whose production amounted to 3.6 million tons (a 6% increase compared to 2019). Graphic paper accounted for 15% of the production volume (0.8 million tons; however, its

[1] Data changed by Statistics Poland compared to previously given data.

production dropped 5%), and household and sanitary paper for 12% (0.6 million tons; a 12% increase in production). For many years Polish market in paper and paperboard has been to a relatively large extent supplemented with foreign deliveries – in 2020 they amounted to 91% of domestic production volume (import amounted to 4.7 million tons, which was an 8% increase in relation to the previous year). Poland imported mainly packaging paper (70%; 3.3 million tons; a 10% increase in imports in relation to the previous year) and graphic paper (25%; 1.2 million tons). On the other hand, 48% of domestic production of paper and paperboard (2.5 million tons) was exported, i.e. 2% more than in 2019. Export was dominated by packaging paper (with a 76% share within the export volume; 1.9 million tons; 5% more than in the previous year) and graphic paper (21%; 0.6 million tons; an 8% drop in export).

It is anticipated that till 2022 Poland's production of paper and paperboard will grow to 5.4 million tons (more than 4% in relation to 2020). In the analysed period foreign trade in paper and paperboard should be characterised by an insignificant growth of both import (to 4.8 million tons; 1% annually) and export (to 2.6 million tons; 5% in relation to 2020), and the assortment structures of both should remain unchanged.

4. (I) **Value-added wood products**

In Poland the most important group of value-added wood products is furniture. In recent years its production has been systematically growing. Also, in 2020, despite the significant slowdown of the economy caused by the corona virus pandemic, furniture production increased more than 3% in real terms and amounted to PLN 41.8 billion ($ 10.7 billion, € 9.4 billion). Approximately 72% of the production was wooden furniture (PLN 30.1 billion, $ 7.7 billion, € 6.8 billion) together with furniture elements (of the value of PLN 2.6 billion ($ 0.7 billion, € 0.6 billion)). Most of it was furniture for sitting (upholstered and non-upholstered), whose share within wooden furniture production was 32%, and furniture for dining rooms and living rooms with a share of 24%. The demand for furniture manufactured in Poland is primarily generated by foreign consumers. Approximately 89% of wooden furniture (in terms of value) was exported (PLN 26.8 billion, $ 6.9 billion, € 6.1 billion), and it was 9% more than in the previous year (in current prices). Furniture elements accounted for approximately 6% of wooden furniture export value (PLN 1.6 billion, $ 0.4 billion, € 0.4 billion), while dominating furniture types were furniture for sitting (mainly upholstered; with a 35% share; PLN 9.3 billion, $ 2.4 billion, € 2.1 billion) and furniture for dining rooms and living rooms (with a 18% share; PLN 4.8 billion, $ 1.2 billion, € 1.1 billion). Wooden furniture import was still relatively insignificant and increased to PLN 2.9 billion ($ 0.7 billion, € 0.7 billion) in 2020, i.e. almost 19% (in current prices) in relation to the previous year. In relation to the production volume it was 10% (8% in 2019). As in the case of production and export, the assortment structure of furniture import was also dominated (in terms of value) by furniture for sitting (upholstered and non-upholstered) and furniture for dining rooms and living rooms (with respective shares of 18% and 16%).

The value of builder's carpentry and joinery products (also value-added products) remained at a level similar to that of the previous year (in real terms) and amounted to PLN 8.6 billion ($ 2.2 billion, € 1.9 billion). However, production volume of most of the products from this group decreased compared to 2019, i.e. 2 million m^2 of mosaic was manufactured (1% less than in the previous year), almost 54 million m^2 of other floor panels (a more than 3% production drop), and 18.3 million m^2 of wooden windows and doors (production almost 7% lower). More than 68% (in terms of value) of builder's carpentry and joinery products manufactured in Poland (including wooden houses) was exported (PLN 5.8 billion, $ 1.5 billion, € 1.3 billion), and it was more than 4% more than in 2019 (in current prices). Main exports were wooden windows and doors. On the other hand, Poland imported products from this commodity group of the value of PLN 0.8 billion ($ 0.2 billion, € 0.2 billion), meaning a 5% increase in import (in current prices) and 9% of the production. As in previous years, Poland's main imports were wooden windows.

Wooden packaging, as products of high added value, is also of importance. Wooden packaging production in Poland reached the value of PLN 2.7 billion ($ 0.7 billion, € 0.6 billion). The primary product in this group are pallets (flat and box) and their production amounted to 1.9 million tons (125.3 million pieces). Still, this meant a 4% production drop compared to the previous year (a 7% drop in terms of quantity). 90% of wooden packaging production (in terms of value) was exported (PLN 2.5 billion, $ 0.6 billion, € 0.6 billion), meaning a 20% increase in relation to 2019 (in current prices). Export was dominated by pallets. On the other hand, Poland's import of wooden packaging increased 9% in terms of value (in current prices) in relation to the previous year and amounted to PLN 0.3 billion ($ 0.09 billion, € 0.08 billion), and it was also dominated by pallets.

Production of paper products in Poland remained at a level similar to that of 2019 (in fixed prices) and reached the value of PLN 28.9 billion ($ 7.4 billion, € 6.5 billion). Approximately 62% of the production was corrugated paper and paperboard and packaging from paper and paperboard, and 26% toilet and sanitary articles for households. Poland exported paper products of the value of PLN 11.6 billion ($ 3 billion, € 2.6 billion), which was 8% more than in the previous year in current prices. In relation to the production, export was 40% and was dominated by paperboard packaging. Poland's import of paper products reached the value of PLN 6 billion ($ 1.6 billion, € 1.4 billion), i.e. almost 11% more than in 2019 (in current prices). As in the case of export, primary imports was paperboard packaging.

4. (J) **Housing and construction**

In 2020 construction and assembly production in Poland increased 0.9% in real terms (compared to 4.8% in the previous year) and amounted to PLN 230.6 billion ($ 59.1 billion, € 51.9 billion). The greatest increase was observed in the case of construction of civil engineering facilities (3.9%), and a relatively insignificant in the case of specialist construction works (0.3%), while building erection recorded a drop of sales (almost 1%). Average employment in construction also dropped (to 651 thou. people; a 1.7% decrease compared to the previous year). On the other hand, in 2020 business conditions in housing were relatively good. The number of dwellings completed (220.8 thou.) increased 6.5% compared to the previous year (in the case of dwellings intended for sale or let the increase was 8.6%). The number of dwellings with issued construction permits or filed construction project also increased (2.9%). A negative phenomenon, however, was that the number of dwellings whose construction had been commenced decreased (5.7%).

In the first half of 2021 situation in Polish construction industry was instable. The construction and assembly production sales decreased 2.8% in relation to the corresponding period of the previous year (only the category of "specialist construction works" recorded a 3.7% increase). On the other hand, housing demonstrated good results. The number of dwelling completed increased 8.6% as well as, what is important, the number of dwellings under construction (4.7%), the number of dwellings whose construction had been commenced (44.6%) and the number of dwellings with issued construction permits or filed construction project (40.2%). Despite that, general economic conditions in construction are assessed as negative, i.e. it is anticipated that employment will be reduced and the prices of construction and assembly works will rise. According to companies, the basic barriers to development are the increased cost of employment and materials and the uncertainty as to the development of economic situation in the coming months (which is largely connected with the unpredictable development of the corona virus pandemic and its effects). However, the use of production capacity in the construction industry has risen to 82%, while in the mid 2020 it was 77%.

Due to a considerable deficit of dwellings in Poland, it is important to take actions to support dwelling construction, including dwellings intended for let, especially for the lesswealthy (primarily by means of the *National Dwellings Programme*). The recent key solutions in this area encompass: i) financial support in the form of grants from the Subsidy Fund for communes for construction of social and communal dwellings; ii) bonuses for refurbishment of older than 20 years buildings belonging to the Social Construction Association; iii) the possibility of obtaining the ownership of a social dwelling based on the lease with a clause of ownership possibility; iv) the establishment of the Governmental Fund for Housing Development that financially supports communes whose budgets suffered from the Covid-19 pandemic; v) dwelling bonuses increased with subsidies from the Covid-19 Counteraction Fund for tenants who have lost their income due to the corona virus the pandemic; and vi) financial support for the creation of additional utilitarian areas intended for satisfying the needs of the elderly. Of great importance is also the intensification of the activity of Polskie Domy Drewniane S.A. company, whose aim is construction of energy-saving residential wooden houses in the technology of prefabricated wooden frames (investments are already being implemented and subsequent are planned – single houses (also intended for service rendering) as well as housing estates).

Table 1

Economic indicators

Indicator	2015	2016	2017	2018	2019	2020
	% change on previous year (in real terms)					
Gross Domestic Product	104.2	103.1	104.8	105.4	104.7	97.3
Sold production of industry	106.0	103.6	106.2	105.4	105.1	98.3
Construction and assembly production	103.7	97.6	110.9	114.7	104.8	100.9
Dwellings completed	103.2	110.6	109.2	103.8	112.1	106.5
Dwellings under construction	103.0	101.5	103.8	104.9	103.8	100.4
Average paid employment						
- total	101.3	103.1	102.9	101.9	101.8	98.3
- in the enterprises sector	101.3	102.8	104,5	103.5	102.7	98.9
Registered unemployment rate (*at the end of the year*)[1]	9.7	8.2	6.6	5.8	5.2	6.2
Average monthly gross real wages and salaries						
- total	104.5	104.3	103.7	105.4	104.8	101.7
- in the enterprises sector	104.5	104.4	103.9	105.4	104.1	101.5
Price indices of consumer goods and services (*inflation*)	99.1	99.4	102.0	101.6	102.3	103.4
Investment outlays	107.1	88.8	106.5	115.4	103.1	90.1
Trade						
millions of PLN, current prices						
Exports	750835.8	803477.8	882619.5	951324.2	1023591,4	1062513,5
Imports	740973.3	786470.1	880078.4	970830.8	1018479,0	1015359,5
Balance of trade	+9862.5	+17007.7	+2541.1	-19506.6	+5112,4	+47154,0
millions of USD, current prices						
Exports	200342.8	205047.7	231591.3	264786.0	267062,9	272655,2
Imports	197682.1	200672.4	231034.9	270157.6	265758,7	160610,5
Balance of trade	+2660.7	+4375.3	+556.4	-5371.6	+1304,2	+12044,7
millions of EUR, current prices						
Exports	179578.2	184842.9	206647.3	223596.4	238147,5	239880,3
Imports	177232.9	180924.6	206084.4	228172.3	236976,0	229373,8
Balance of trade	+2345.3	+3918.3	+562.9	-4575.9	+1171,5	+10506,5

[1] as a ratio of registered unemployed persons to the economically active civil population

UNECE

TF1

TIMBER FORECAST QUESTIONNAIRE
Roundwood

Note: Complete only if data for 2020 have been revised.

Country:	**Poland**	**Date:**	**15.10.2021**
Name of Official responsible for reply:	**Ewa Ratajczak**		
Official Address (in full):	**Sieć Badawcza Łukasiewicz - Instytut Technologii Drewna**		
	Research Network Łukasiewicz - Wood Technology Institute, 60-654 Poznan, Winiarska 1		
Telephone:	**(00 48 61) 8492401**	**Fax:**	**(00 48 61) 8224372**
E-mail:	e_ratajczak@itd.poznan.pl g_bidzinska@itd.poznan.pl		

Product Code	Product	Unit	Historical data 2019	Historical data 2020	Revised 2020	Estimate 2021	Forecast 2022
1.2.1.C	SAWLOGS AND VENEER LOGS, CONIFEROUS						
	Removals	1000 m^3 ub	14 269,008	14 191	14 166,568	14 400	14 500
	Imports	1000 m^3 ub	256,507	200 #	1 227,366	1 250	1 300
	Exports	1000 m^3 ub	1 808,871	1 700 #	1 708,900	1 650	1 600
	Apparent consumption	1000 m^3 ub	12 716,644	12 691	13 685,034	14 000	14 200
1.2.1.NC	SAWLOGS AND VENEER LOGS, NON-CONIFEROUS						
	Removals	1000 m^3 ub	2 730,698	2 767	2 746,574	2 800	2 900
	Imports	1000 m^3 ub		80 R#			
	Exports	1000 m^3 ub		150 R#			
	Apparent consumption	1000 m^3 ub		2 697			
1.2.1.NC.T	of which, tropical logs						
	Imports	1000 m^3 ub	1,137	1 #	1,558	2	2
	Exports	1000 m^3 ub	0,074	0 #	0,163	0	0
	Net Trade	1000 m^3 ub	1,063	1	1,395	2	2
1.2.2.C	PULPWOOD (ROUND AND SPLIT), CONIFEROUS						
	Removals	1000 m^3 ub	15 576,956	13 874	13 886,434	14 500	14 600
	Imports	1000 m^3 ub	631,944	600 #	1 185,002	1 200	1 250
	Exports	1000 m^3 ub	2 095,246	2 050 #	2 034,959	2 100	1 900
	Apparent consumption	1000 m^3 ub	14 113,654	12 424	13 036,477	13 600	13 950
1.2.2.NC	PULPWOOD (ROUND AND SPLIT), NON-CONIFEROUS						
	Removals	1000 m^3 ub	4 837,371	4 464	4 468,159	4 900	5 300
	Imports	1000 m^3 ub		560 R#			
	Exports	1000 m^3 ub		75 R#			
	Apparent consumption	1000 m^3 ub		4 949			
3	WOOD CHIPS, PARTICLES AND RESIDUES						
	Domestic supply	1000 m^3	9 393,206 N	9 400 C	9 680,239	9 800	9 900
	Imports	1000 m^3	3 004,478	2 500 C	2 864,157	2 700	2 600
	Exports	1000 m^3	665,278	483 C	567,221	500	400
	Apparent consumption	1000 m^3	11 732,406	11 417	11 977,175	12 000	12 100
1.2.3.C	OTHER INDUSTRIAL ROUNDWOOD, CONIFEROUS						
	Removals	1000 m^3 ub	727,671 N	516 N	572,094	650	700
1.2.3.NC	OTHER INDUSTRIAL ROUNDWOOD, NON-CONIFEROUS						
	Removals	1000 m^3 ub	57,327 N	52 N	39,647	40	50
1.1.C	WOOD FUEL, CONIFEROUS						
	Removals	1000 m^3 ub	2 504,929 N	2 300 N	2 297,226	2 350	2 400
1.1.NC	WOOD FUEL, NON-CONIFEROUS						
	Removals	1000 m^3 ub	2 563,973 N	2 420 N	2 416,078	2 450	2 500

Please return (preferably by e-mail) to Timber Section no later than 15 October 2021.

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

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

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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.
N - National estimate

The trade turnover is based on data that includes the estimated value of trade turnover by entities exempt from the reporting obligation. These trade turnover figures are estimated at 3%.

red colour - corrected data

Roundwood: sawlogs and veneer logs and pulpwood and wood fuel - with removals from tress and shrubs outside the forest, including forest chips, with stump
Roundwood removals underbark
Residues - production excluding recovered wood

UNECE

TF2

TIMBER FORECAST QUESTIONNAIRE
Forest products

Note: Complete only if data for 2020 have been revised.

Country: Poland | Date: 15.10.2021

Name of Official responsible for reply: Ewa Ratajczak

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Product Code	Product	Unit	Historical data 2019	Historical data 2020	Revised 2020	Estimate 2021	Forecast 2022
6.C	SAWNWOOD, CONIFEROUS						
	Production	1000 m^3	4 430,541	4 350	4 181,055	4 300	4 400
	Imports	1000 m^3	1 105,454	1 073	1 236,692	1 250	1 300
	Exports	1000 m^3	845,142	890	957,688	1 000	1 100
	Apparent consumption	1000 m^3	4 690,853	4 534	4 460,059	4 550	4 600
6.NC	SAWNWOOD, NON-CONIFEROUS						
	Production	1000 m^3	563,184	530	486,046	510	530
	Imports	1000 m^3	267,872	219	249,866	280	300
	Exports	1000 m^3	190,118	183	220,611	250	280
	Apparent consumption	1000 m^3	640,938	567	515,301	540	550
6.NC.T	of which, tropical sawnwood						
	Production	1000 m^3	0,000	0	2,698	3	3
	Imports	1000 m^3	14,488	13	17,055	18	18
	Exports	1000 m^3	1,956	3	4,789	5	5
	Apparent consumption	1000 m^3	12,532	10	14,964	16	16
7	VENEER SHEETS						
	Production	1000 m^3	47,140	42 C	38,894	41	45
	Imports	1000 m^3	73,204	63 C	74,074	75	78
	Exports	1000 m^3	13,524	12 C	14,881	15	16
	Apparent consumption	1000 m^3	106,820	93	98,087	101	107
7.NC.T	of which, tropical veneer sheets						
	Production	1000 m^3	0,550	1	0,331	1	1
	Imports	1000 m^3	0,214	0	0,188	0	0
	Exports	1000 m^3	0,017	0	0,274	0	0
	Apparent consumption	1000 m^3	0,747	1	0,245	1	1
8.1	PLYWOOD						
	Production	1000 m^3	518,746	500 C	482,953	510	530
	Imports	1000 m^3	369,031	404 C	415,230	430	450
	Exports	1000 m^3	286,245	266 C	308,620	310	330
	Apparent consumption	1000 m^3	601,532	638	589,563	630	650
8.1.NC.T	of which, tropical plywood						
	Production	1000 m^3	3,225	3	2,367	3	3
	Imports	1000 m^3	4,193	3	2,673	3	3
	Exports	1000 m^3	0,254	0	0,582	0	0
	Apparent consumption	1000 m^3	7,164	5	4,458	6	6
8.2	PARTICLE BOARD (including OSB)						
	Production	1000 m^3	6 588,000	6 200	6 571,164	6 600	6 650
	Imports	1000 m^3	1 871,806	1 415	1 871,856	1 850	1 900
	Exports	1000 m^3	898,312	1 052	1 137,125	1 100	1 150
	Apparent consumption	1000 m^3	7 561,494	6 563	7 305,895	7 350	7 400
8.2.1	of which, OSB						
	Production	1000 m^3	938,055	930	832,614	930	980
	Imports	1000 m^3	124,257	149	245,655	200	220
	Exports	1000 m^3	364,100	380	412,740	420	450
	Apparent consumption	1000 m^3	698,212	699	665,529	710	750
8.3	FIBREBOARD						
	Production	1000 m^3	4 867,641	4 700 C	4 843,633	4 960	5 110
	Imports	1000 m^3	783,674	720 C	851,432	875	945
	Exports	1000 m^3	1 922,401	1 938 C	2 018,935	1 980	2 000
	Apparent consumption	1000 m^3	3 728,914	3 482	3 676,130	3 855	4 055
8.3.1	Hardboard						
	Production	1000 m^3	102,345		90,684	110	110
	Imports	1000 m^3	141,820		150,558	160	180
	Exports	1000 m^3	406,542		398,434	350	300
	Apparent consumption	1000 m^3	-162,377		-157,192	-80	-10
8.3.2	MDF/HDF (Medium density/high density)						
	Production	1000 m^3	3 655,906	3 550	3 177,657	3 250	3 350
	Imports	1000 m^3	628,498	693 E	684,295	700	750
	Exports	1000 m^3	659,558	980 E	652,805	650	700
	Apparent consumption	1000 m^3	3 624,846	3 263	3 209,147	3 300	3 400
8.3.3	Other fibreboard						
	Production	1000 m^3	1 109,390	1 050	1 575,292	1 600	1 650
	Imports	1000 m^3	13,356	13	16,579	15	15
	Exports	1000 m^3	856,301	924	967,696	980	1 000
	Apparent consumption	1000 m^3	266,445	140	624,175	635	665
9	WOOD PULP						
	Production	1000 m.t.	1 622,544	1 251 C	1 716,539	1 730	1 750
	Imports	1000 m.t.	1 087,446	1 195 C	1 152,142	1 180	1 230
	Exports	1000 m.t.	114,321	143 C	159,426	160	170
	Apparent consumption	1000 m.t.	2 595,669	2 302	2 709,255	2 750	2 810
12	PAPER & PAPERBOARD						
	Production	1000 m.t.	4 879,733	4 901 C	5 128,862	5 250	5 350
	Imports	1000 m.t.	4 322,588	4 245 C	4 677,252	4 700	4 750
	Exports	1000 m.t.	2 425,412	2 485 C	2 473,949	2 550	2 600
	Apparent consumption	1000 m.t.	6 776,909	6 661	7 332,165	7 400	7 500
5.1	WOOD PELLETS — Pellets and briquettes, of pressed and agglomerated wood and vegetable waste and scrap (CPA 16.29.15)						
	Production	1000 m.t.	1 405,800	1 380 E	1 352,898	1 450	1 500
	Imports	1000 m.t.	251,447	114	176,289	180	200
	Exports	1000 m.t.	743,008	408	710,984	750	800
	Apparent consumption	1000 m.t.	914,239	1 086	818,203	880	900

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N - National estimate

Sawnwood - with sleepers (impregnated and non-impregnated)

The trade turnover is based on data that includes the estimated value of trade turnover by entities exempt from the reporting obligation. These trade turnover figures are estimated at 3%.

Plywood (product code 8.1) - no bamboo plywood

Wood pulp (product code 9) is reported in metric tonnes (no air-dry weight)

Wood pulp - excluding pulp from fibres other than wood and excluding pulp from recovwered fibre pulp

red colour - corrected data