# WOOD PRODUCTS MARKET STATEMENT WITH FORECASTS

## (Market Statement 2023; Slovenia)

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## *1. General economic trends*

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Economic growth is slowing this year, particularly in the export part of the economy. The growth of private consumption is also lower, while investments in buildings and facilities continue to rise. The autumn forecast of the Institute of Macroeconomic Analysis and Development of the Republic of Slovenia plans a 1.6% real growth of GDP; in the 2 years to follow, we are once again expecting a slightly higher GDP growth (2.8% in 2024 and 2.5% in 2025). Economic activities in Slovenia's most important trading partners continues to slow down, particularly in Germany, which affects lower export growth. This year, the growth of export of goods and services will be slightly lower than the growth of foreign demand. High activities will continue in terms of investments in buildings and facilities which is, however, planned to slow down: according to the information about business tendencies in the construction industry, the indicator of new orders is decreasing, with information about construction permits also confirming that activities in this sector are slowing down. By contrast, remedying the consequences of August floods will have an encouraging influence on activities performed in the construction industry. Otherwise, the direct negative impact of floods on processing and transport activities and export is estimated to be of transitional nature; despite important impairments at local levels, said impact will not be significant at macroeconomic level. This year, investments in equipment and machinery will be lower than last year, since activities in this regard in the international environment are also slowing down while interest rates increase. Private consumption will increase at lower rates than last year; according to estimates, however, it will continue to increase slightly in the second half of the year due to high employment rate, continuous moderate real wage growth and government measures for the mitigation of the price growth of energy products and the elimination of the consequences of natural disaster and, to a lower extent, the replacement of durable and semi-durable products damaged in August floods.

Public financial incentives adopted by Slovenia in the past couple of years in order to mitigate the consequences of COVID-19 and the energy crisis are slowly petering out. However, new measures for the elimination of the consequences of floods are being introduced, with the estimation of damages and the preparation of the financial construction of the renovation currently underway. Numerous measures have been adopted or are currently being prepared for the elimination of the consequences of August floods and landslides. Immediate measures are governed by two acts, the Act Amending the Natural Disaster Recovery Act (the ZOPNN-F, 2023) and the Act Determining Intervention Measures for Recovery from the Floods and Landslides of August 2023 (the ZIUOPZP, 2023), while a system restoration act is also currently being prepared in order to regulate medium-term measures of various aspects of the rehabilitation of the flooded areas. Temporary measures are directed towards urgent recovery of damaged or destroyed public infrastructure, the simplification of processes and the acquisition of permits and public contracts, the assistance provided to municipalities, the economy, farmers and citizens through aid advances, extraordinary solidarity aid, measures intended to preserve jobs, crisis accommodations, tax exemptions, and other measures.

Pursuant to the moderation in economic activities of our main trading partners, the growth of export will slow down this year, while the added value of manufacturing activities will grow modestly after the last year's decrease. Considering the decrease in export and, even more so, import of goods in the first six months, as well as the deterioration of expectations in terms of foreign demand, we are expecting a decrease in trade in goods and added value in the transportation and storage sector, as well as a low increase in the added value of processing activities. To a certain extent, this will also be influenced by a decrease in competitiveness, which is the consequence of increased cost pressures and is also reflected in increased labour costs per production unit in processing activities. In the second half of this year, we are not expecting the export part of the economy to improve, which will temporarily also be influenced by a decrease in production in some companies dealing with processing activities due to floods and blocked transport routes in some regions. The largest contributors to this year's low growth in terms of processing activities will continue to be highly technologically demanding industries. The production of all energy-intense industries will be lower than a year ago. The highest reduction is expected in the chemical and paper industry. Through a gradual higher growth of foreign demand, export is expected to grow again in the next two years and the growth of the added value in processing industries is expected to be reinforced; the growth of service exchange will also continue. The largest contributors to the growth in terms of processing activities will continue to be highly technologically demanding industries. If we presuppose lower prices of energy products, the recovery of energy-intense industries is also expected.

The employment growth has been steadily settling down since the middle of last year. This is mainly the consequence of the slowing economic growth and the still high shortage of available workforce. In the first six months of this year, the growth has slowed down the most in the catering, construction and processing industry, i.e. activities that have still stood out the most in terms of employment growth and where the highest staff shortage can still be observed. Half of the companies that cannot fill their job vacancies are using overtime, while one fifth of them is retraining their employees, subcontracting their work, or refusing orders. During this last period, the lack of staff is also visible in the great contribution of employment of foreign workers to the total growth of employment rate; in June of this year, it has exceeded 90%. This year, the number of registered unemployed persons is also continuing to decrease but at a slower rate than last year. The growth of employment and the decrease of unemployment will continue to slow down until the end of the year, whereby a great lack of the workforce in the next two years will also not allow for a more visible growth in employment rates.

## *2. Policy measures*

At the beginning of November 2022, the Government of the Republic of Slovenia has adopted a new Operative programme for the implementation of the National Forest Programme 2022-2026 (the 2022-2026 OPNGP). The 2022-2026 OPNGP takes into consideration the system of goals and the direction of the adopted National Forest Programme (NFP), policies from other sectors influencing forests and forestry, and international commitments. On an overarching operational level and based on the scheme of priorities, actions and other tasks, the OPNGP connects, in a transparent manner, the contents of applicable sectoral operative documents and programmes, and provides necessary upgrades. In combination with the content, such a method allows the forest policy holders to direct sustainable forest and game management pursuant to the provision of all functions of forests and while taking into consideration the interests of the owners and the society as a whole within the Forest Dialogue. In doing so, rational and efficient use of available organisational, personnel-related and financial possibilities may be provided. The key basis for the preparation of the programme are goals and directions of the NFP, the findings set out in the Report on the execution of the National forest programme 2015-2019 (the 2015-2019 PNGP), the area plans for forest and game management for 2021-2030 (which were in preparation at the time of adoption of the OP) and the preliminary execution analysis of the 2017-2021 OPNGP which was prepared in the framework of the establishment of the new document.

The 2022-2026 OPNGP defines the priorities in the field of forests, forestry and game management which is related to suitable goals, actions and other tasks. The 2022-2026 OPNGP and the documents that have already been adopted and that are already being executed are connected through common denominators in order not to duplicate said actions. The 2022-2026 OPNGP has five priorities:

- providing carbon sinks in forests and the adaptation of forests to climate change, especially in order to maintain their resistance, stability, vitality, and health;
- maintaining and reinforcing the biodiversity of forests on the level of the landscape, ecosystem, species and genetics, as well as monitoring their resistance, stability, vitality, and health;
- optimising the guidance of forest and game management from the legal, organisational, and financial point of view in order to maintain the multifunctional role of forests and reinforce the development of the countryside and circular bioeconomy;
- promoting the harmonisation and communication between all stakeholders related to forests, forestry, and game management, as well as developing education, research and knowledge transfer and reinforcing international cooperation;

- guaranteeing sustainable game management.

Due to an extreme increase in the prices of energy-generating products in the second half of 2022, the Act Determining Measures to Mitigate the Consequences of Energy Commodity Price Rise in Business and Agriculture (the ZNUDDVE) was adopted in August 2022. The VAT rate which was reduced from 22% to 9.5% applied for the supply of electricity, natural gas, fuel wood and district heating. The reduced VAT rate applied for the entire heating season, from 1 September 2022 to 31 May 2023. Due to a high increase in the prices of wood pellets in the past heating season, the Government of the Republic of Slovenia has granted subsidies for the purchase of pellets from 1 September to 31 December 2022.

At the beginning of 2023, the Government of the Republic of Slovenia has adopted a decree governing the method of payment of a subsidy for the purchase of wood pellets, detailed conditions regarding evidences and payments, and detailed contents of the online application for claiming the subsidy. Natural persons with a built-in heating device for normal heat energy supply requirements of their own household in the Republic of Slovenia, who are using wooden pellets as fuel and who have purchased pellets in order to heat their household from 1 September 2022 to 31 December 2022 were entitled to receive the subsidy.

In May 2022, the Government of the Republic of Slovenia has adopted the Implementation documents for actions related to the development of the wood-processing industry by 2030, which has been prepared on the basis of outlines and goals set out in the 2021-2030 Slovenian Industrial Strategy, the examination of past and planned actions of ministries, the situational analysis, and several consultations with stakeholders. The actions are divided according to content sets which are important for the development of the wood-processing industry by 2030, as indicated by the starting points for the preparation of the implementation document or the implementation plan.
Above all, the situational analysis has shown that, after the improvement of the business environment (also for the improvement of the competitiveness of wood and wood composite products), the most necessary investments are the investments in the most state-of-the-art primary wood processing practices, mainly wood that is currently not being used in Slovenia on an industrial scale, and investments in the processing of wood for furniture and other end products. In parallel, industrial stakeholders are accentuating the need to provide suitable quantities of raw materials that will be processed by workers and business managers into innovative products with the highest possible added value using better education, experiences, and skills. The connectivity and the constructive dialogue between the industry and the R&D, educational and creative sector, policymakers and other stakeholders in the national and international environment have been recognised by stakeholders as an urgent condition in order to improve the knowledge of market conditions and identify suitable market approaches (whereby the accent is on products for the creation of living environments and interior working environments) which will made it possible to create said added value.
The actions are divided into the following categories:

1. Actions creating a suitable business environment for wood processing companies;
2. Actions supporting investments in the increase of wood processing capacities;
3. Actions supporting the provision of sufficient amounts of forest wood assortments for wood processing companies;
4. Actions introducing new business models and digitalisation for the improvement of business excellency of wood processing companies;
5. Actions supporting the provision of suitable personnel for the development of wood processing companies;
6. Actions promoting research, development and investments in the field of woodworking, and developing a support environment, including the connection with relevant stakeholders;
7. Actions promoting the use of wood in the private and public sector and increasing the promotion of wood.

In 2023, the renovation of the Slovenia's Smart Specialisation Strategy will continue from S4 to S5. S4 is a strategy intended to increase competitiveness by reinforcing the innovation capacities of the economy, diversifying the existing industry and service activities, and increasing new and rapidly growing industries or companies. The strategy for the new period until 2030 (which received an upgrade in the 2020-2022 period) put forward the sustainable aspect, identified the green transformation as its primary goal, and renamed itself to S5. The central set of S5 measures in the next period is divided into four substantive areas of investments to support: (1) the improvement of research and innovation capacities and the introduction of advanced technologies; (2) the improvement of the growth and competitiveness of micro, small or medium-sized enterprises (SMEs) and the creation of job vacancies in SMEs; (3) the development of knowledge and skills for smart specialisation, industrial transition, and entrepreneurship; (4) digital transformation. The implementation of S4 and S5 is based on the developmental cooperation model which emphasizes a tighter, more institutionalised cooperation between the government, the economy, knowledge institutions and other relevant stakeholders in the field of research, development, and innovation. When it comes to promoting the cooperation between innovation stakeholders, the strategic development-innovation partnerships (SDIP) play the key role; at State level, interdepartmental coordination is of key importance, since the implementation of S4 takes place in the framework of responsibilities of various ministries, and the same will apply for S5.

In 2023, the Integrated National Energy and Climate Plans (NECP) will be updated; said update will take place until the beginning of 2024 pursuant to the recommendations of the European Commission. The NECP is an action strategic document setting out goals, policies and measures within five dimensions of the Energy Union for the period until 2030 (with a vision to 2040): (1) decarbonisation (greenhouse gas and RES emissions), (2) energy efficiency, (3) energy safety, (4) internal market and (5) research, innovation and competitiveness. The updated NECP will be adopted by the Government of the Republic of Slovenia and submitted to the European Commission pursuant to the Regulation (EU) 2018/1999 by 30 June 2024.

At the end of March 2023, the Government of the Republic of Slovenia has issued the Decree on the sub-measure for the support for the prevention of damage to forests due to forest fires and natural disasters and catastrophic events from the Rural Development Program of the Republic of Slovenia for the period 2014-2020 (the PRP 2014-2020). The aforementioned Decree allows for the co-financing of the implementation of the measures for fire protection of forests from the PRP 2014-2020.

In close cooperation with its partners, mainly agricultural and environmental organisations and institutions, the Ministry of Agriculture, Forestry and Food has prepared the proposal for the 2nd amendment of the Strategic Plan of the Common Agricultural Polic for 2023-2027 (the SN 2023-2027) which has been submitted to the European Commission for confirmation. The suggested amendments are also related to economy since the implementation of fire protection infrastructure arrangements will be enabled. The proposed amendment of the SN 2023-2027 also envisages an amendment of the performance indicators and a correction of financial tables with effects of all forestry interventions due to the later onset of the implementation of interventions.

The European Union is an important importer and user of goods related to deforestation and degradation of forests. This issue is addressed by the new European regulation (EU) 2023/1115: the Regulation on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 (the EUDR). The goal of the EUDR is to limit deforestation and forest degradation caused by consumption and manufacturing in the EU, thus reducing the contribution of the EU to greenhouse gas emissions and to the global decrease of biodiversity. The introduction of the EUDR which entered into force on 29 June 2023 replaces the currently applicable Regulation (EU) No. 995/2010 on the obligations of operators who place timber and timber products on the market (hereinafter referred to as the “EUTR”). When preparing the EUDR, the plan was to address the shortcomings discovered in the implementation of the EUTR, which is why the range of products is significantly expanded; in addition to wood, it also applies for the following primary products: oil palm, cocoa, coffee, soya, rubber and cattle, as well as products manufactured using these primary products, such as chocolate, furniture, printed paper, and some palm oil derivatives (listed in the Annex I of the adopted Regulation). For Slovenia, the implementation of the EUDR will require a significant upgrade and the designation of new competent institutions, whereby the experience with the implementation of the EUTR will have to be taken into consideration. Considering the fact that deforestation in Slovenia is a very restrictively regulated area which takes place on a negligible scale, and seeing that the surface area of forests continues to increase, controls will be focusing on products imported from third countries. In 2021 and in 2022, wood products (including paper) and rubber dominated imports and exports by their value, with their share exceeding 3/4. When it comes to import, forest wood assortments (roundwood) only represents 5% of value (7% when it comes to export) in 2021 and in 2022. A significant increase in the proportion of inspections for standard-risk and high-risk producer countries has also been noted. According to our estimates, the volume of controls will therefore increase by about 10 times when it comes to import/export of goods.

In August 2023, Slovenia was affected by severe storms which were a consequence of a large amount of rain falling in an extremely short period. High water flows in water courses, torrents, avalanches, landslides and standing water (floods) have been observed. The aforementioned storm, the direct damage of which is estimated to around EUR 9.9 billion, also caused significant damage in forests: deposits of material and debris, damaged forest roads and, as a consequence, avalanches and landslides. The storm has destroyed a total of 219 ha of forests and 1,711 km of forest roads in 87 municipalities which were no longer passable. According to the first estimates, the damage in forest stands amounts to EUR 1.9 million. The estimated damage due to landslides in forests amounts to EUR 90.3 million, while the estimated damage on forest roads amounts to EUR 45.7 million. The total estimated damage in forests amounts to EUR 138 million.

In order to rectify the consequences of the aforementioned natural disaster, the National Assembly of the Republic of Slovenia has adopted, at the end of August, the Act Determining Intervention Measures for Recovery from the Floods and Landslides of August 2023 (Official Gazette of the Republic of Slovenia, No. 95/23) setting out emergency intervention, remedial and preventive measures and the deviation from existing legislation in order to implement remedial measures. The Reconstruction and Development Law which is currently being prepared and is planned to be submitted to the National Assembly of the Republic of Slovenia by the Government of the Republic of Slovenia in October dedicates a total of EUR 50 million for the reconstruction of forest roads in local communities.

This year, new forest and hunting management plans for areas were prepared (territorial plans 2021-2030), which are currently in the process of being adopted by the Government of the Republic of Slovenia. The Government of the Republic of Slovenia is expected to approve them in November 2023. The territorial plans were prepared by the Slovenia Forest Service (hereinafter: SFS) and represent an important tool for the realisation of strategic directions at State level set out in the National Forest Programme (the NFP). In addition to the substantive revision and the reassessment of the regional plans through the integrated environmental impact assessment process, this renewal of the 10-year regional plans has placed a strong emphasis on the involvement of forest owners and other stakeholders in the process of drawing up and adopting said plans. Public unveiling of the plans took place in 2022. A special feature of these regional plans is the simultaneous treatment of forest and wildlife management issues, which is why they are an important instrument for forestry policy and for ensuring hunting management objectives; furthermore, they also contribute significantly to the interests of other areas (e.g. nature conservation, agriculture, and rural development). The regional plans contain a description of the region in question and also outline the main factors influencing forest management; furthermore, they also contain a description of the state and the development of the forest in question (timber stock, tree composition, diameter structure and increment etc.). Among other things they also set potential felling that will be realised in Slovenia by 2030. The highest possible annual felling for the next regulatory period in Slovenia amounts to 7.5 million $m^3$. An important component of all regional plans is to determine the function of the forest in question, which is important in order to provide for multifunctional forest management and participate in spatial planning. The key tasks of the regional plans are the following: identifying the main forest and hunting management challenges and preparing a strategy to address them; identifying areas where forest functions are emphasised, and setting the basis for making decisions related to the use of forest land; and identifying key directions for forest management and game management in various areas. The identification of areas with forest functions and the separation of areas in terms of recreation and tourism in regional plans are important features intended to ensure multifunctional forest management and participation in spatial planning.

This year, the Ministry of Economy, Tourism and Sport and the Ministry of Environment, Climate and Energy launched an investment cycle of EUR 85 million in the wood processing industry in order to increase the productivity and capacity of wood processing companies in Slovenia, as well as intensify the production of timber products with a higher added value, such as interior and building furniture, wooden buildings, as well as houses. Part of the funds have been provided by the Recovery and Resilience Plan (RRP) and the Climate Change Fund. The framework of the Recovery and Resilience Plan also includes two forestry projects, i.e. (1) digitalisation in forestry, and (2) seeds, nurseries, and forest protection, which was confirmed by the European Commission in July 2022. The combined funding for these two areas is around EUR 18 million. Both projects are already underway.

## *3. Market factors*

*Data sources: IMAD, SURS, SFS and SFI*

The latest data from the Statistical Office of the Republic of Slovenia (SURS) show that economic activity increased by 2.5% last year. Year-on-year GDP growth therefore amounted to 1.1% in the first half of the year. In the second half of the year, we are not expecting the trade in goods and services to increase or grow significantly, respectively, and we are also not expecting any added value in processing activities. This is influenced by the economic cooling of the situation in the international environment, and by the decreased competitiveness due to cost pressures, which will affect a lower growth in exports of goods and services this year, compared to the growth in foreign demand. The largest contributors to this year's low growth in terms of processing activities will continue to be highly technologically demanding industries. According to our estimates, the influence of floods on some companies from the processing sector, as well as on transport routes in the affected regions, will be somewhat limited and temporary. We do, however, expect a moderate growth of investments for buildings and facilities. According to information in terms of business tendencies in the construction industry, the indicator for new orders is decreasing; the fact that the activity is slowing down is also indicated by information about building permits. Elimination of the consequences of August floods will have an encouraging influence on activities in the construction sector. Accompanied by economic cooling in the international environment and increased interest rates, investments in equipment and machinery are set to decrease in the second half of the year as well. With the cooling of economic activity, stabilisation of the situation in the raw materials market, reduced supply chain issues and tightening of borrowing conditions due to a restrictive financial policy, the growth of the prices of the non-energy industrial goods is also slowing down, especially when it comes to durable industrial goods, the prices of which were only higher by 1.8% during the year in August (at the beginning of the year, they were higher by 7.9%). The growth of the prices of non-energy industrial goods remains high; according to our estimates, it amounts to approximately 6%.

The process of recovering regional plans for forest and game management for 2021-2030 which has lasted for three years has ended in 2023. These plans represent a strategic basis for forest management in the next 10 years and are an important instrument of forest policy and of ensuring hunting management goals, and significantly contribute to the development of other areas, such as preserving of natural and cultural heritage, protection of water sources and rural development. The priority of the SFS, the forest industry, owners of the forests and forestry work operators is to restore forests that have been damaged due to natural disasters. In 2022, logging has increased by 34% compared to 2021 (31% of all cutting in this year). In 2023, sanitary felling will increase compared to previous years, mainly due to extensive windfall, floods, and bark beetle gradation. In addition, extensive flooding in August 2023 damaged over 1,500 km of forest roads, which makes it impossible to access approximately 150,00 ha of commercial forests. The damage incurred on forest roads is estimated to around EUR 50 million, while the total damage in forests and forest infrastructure is estimated to EUR 138 million.

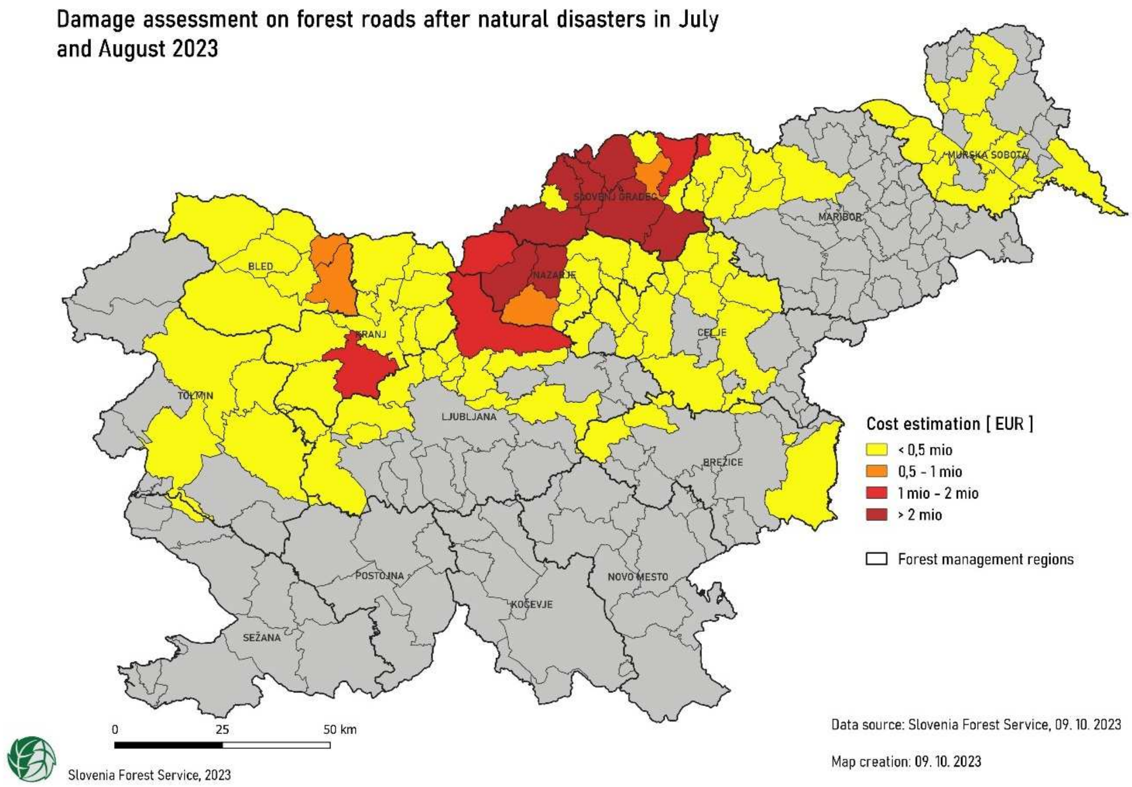


Image 1: Forest roads damaged during storms in August 2023, according to municipalities (Source: the Slovenia Forest Service)

In 2021, the import of oak logs with bark from the USA into the EU has stopped due to an oak disease called the „oak wilt", caused by the *Bretziella fagacearum* quarantine pest. In June 2023, the European Commission has issued a regulation setting out specific measures in terms of the import of oak logs with bark to the EU territory; inter alia, the time period of possible import is set out, as well as the provision that goods must include a phytosanitary certificate, and the provision setting out the timber storage and processing method. There are few processors of red and white oak logs in Slovenia.

The introduction of the prohibition of exporting round timber from Russia, initiated at the beginning of 2022, and the already applicable prohibition of exporting roundwood and wood-based products from Belarus, Ukraine and Turkey have also had an indirect influence on the round timber market in Europe; demand for roundwood in the European market kept on growing in 2022, thus also increasing the pressure on the increase in the prices of roundwood, as well as sawn timber.

In 2022, the Slovenian market of wood pellets and round timber of inferior quality was affected by the prohibition of the export of round timber and pellets from Serbia and Bosnia and Herzegovina. Due to the measures imposed by their governments, the import of round timber from Bosnia and Herzegovina to Slovenia has decreased by 10% in 2022 (and by 51% for pellets). In addition, the Slovenian market of wood pellets is also influenced by the Russian invasion on Ukraine, since Ukraine was the main importer of wood pellets for Slovenia in 2021, seeing as we imported no less than 41,000 tonnes of pellets (25% of total import). In 2022, the import of pellets from Ukraine has decreased by 46%; however, Ukraine still remains the second most important importer of wood pellets for Slovenia.

In the wood processing industry (NACE C16), in the current year 2023, the production index has decreased by 13.1% in the first seven months compared to the same period in the previous year. In addition, we have also noted a negative trend in the industry of paper and paper articles (NACE 17), since the industrial production index in the first seven months amounts to 82.5% compared to the same period in the previous year. In the furniture industry (NACE 31), the industrial production index has also decreased by 13% from January to July 2022, compared to the same period in the previous year. Sales revenues in NACE 16 decreased by 8.9% in the first seven months compared to the same period in the previous; furthermore, they decreased by 6% on the domestic market and by 10.5% in export. This year, sales revenues have also decreased in NACE 17 and NACE 31; for a total of 11.0% for the former and 7.6% for the latter.

For an efficient transition to a carbon-free society and in order to achieve the goal on climate neutrality of EU countries by 2050, Slovenia also allocated some assets to the economy in the field of forestry and woodworking. Among the most important ones are the Climate Change Fund financed by the Ministry of the Environment and Spatial Planning, the invitation to tender in order to promote more wood processing which was published by the Ministry for Economy, Tourism and Sport, and the financial support provided to companies for strategic sustainable and circular transformation by the Public Agency of the Republic of Slovenia for the Promotion of Entrepreneurship, Internationalisation, Foreign Investments and Technology (SPIRIT Slovenia). The Eco Found provides grants and favourable loans for environmentally friendly investments of operators.

## *4. Developments in the wood products market*

*Data sources: SURS, IMAD, CCIS: Wood Processing and Furniture Association, CCIS: Paper and Paper Converting Industry, SFS, SFI; recalculations, analysis and interpretation of SFI*

### *a) Roundwood*

**2022**

In 2022, the production volume of forest wood assortments (roundwood) amounted to 4.2 million of net cubic metres, i.e. 10% more than in 2021 and similar to the results achieved in 2020. One of the main reasons for the increase in the production of the roundwood in 2022 compared to 2021 is a larger scope of sanitary felling, mainly due to bark beetle gradation (+116% of tree felling due to insects in 2022 compared to 2021). The production of roundwood deciduous trees increased by 5% in 2022 compared to 2021, amounting to 2.0 million m$^3$. The production of roundwood coniferous trees also increased (by 14%), amounting to 2.2 million m$^3$. The biggest share in the structure of production of forest wood assortments from coniferous trees was held by the category of sawlogs and veneer logs with 77% and the biggest share in the structure of production of forest wood assortments from deciduous trees was held by fuel wood and firewood (51%).

The quantitative volume of the purchase of roundwood from private forests has only increased in the years during which extensive sanitary felling was implemented. Even though purchase quantities have been decreasing since 2016, they remain higher than the quantities of roundwood purchased from 2006 to 2013. In 2022, 63% of roundwood acquired from private forests have appeared in the market, while the rest was used for domestic needs. In the structure of purchase of roundwood from private forests, the purchase of coniferous logs prevailed in 2022 with more than 50%, followed by the purchase of wood for pulp and conifer panels. The Slovenian roundwood market and the fluctuation of its prices are becoming increasingly dependent on the situation in neighbouring countries, as well as on the broader European and global market. The prices of roundwood have reached a record high in 2022; despite this fact, the activity of private wood owners has not increased when it comes to felling. The average annual purchase price of coniferous logs has reached a record high in 2022, amounting to EUR 95.72/m$^3$ without VAT. This price represents a price increase of 15% compared to 2021 and is by 60% higher than the average price from 2016 to 2020. The record average annual prices have also been recorded for other groups of roundwood, with the exception of coniferous firewood. The trend of increasing prices of non-coniferous logs has also been continuing in 2022, with the most substantial rise noticeable in oak logs, the prices of which have been increasing since 2012. In 2022, the average purchase price of oak logs amounted to EUR 242.79/m$^3$ without VAT, i.e. 35% more than in 2021. The prices of wood for pulp and panels are fluctuating over the years. In terms of coniferous trees, the price has increased from 2018–2021 (approx. EUR 30/m$^3$ without VAT) to EUR 40.63/m$^3$ without VAT in 2022. In terms of deciduous panels, the average price in 2022 amounted to EUR 55.59/m$^3$ without VAT (+27% compared to 2021). The average annual price of coniferous firewood decreased in 2022 by 19% compared to 2021, while the average annual price of deciduous firewood increased by 33%, amounting to EUR 60.79/m$^3$ without VAT.

Roundwood export amounted to 1.39 million m$^3$ in 2022 (+3% compared to 2021). When it comes to the structure of export of roundwood, the category of round industrial timber of deciduous trees prevailed last year with 618,000 m$^3$, of which beech wood of all dimensions prevails with 63%. The import of roundwood in Slovenia in 2022 has decreased compared to 2020 and 2021, amounting to 0.78 million m$^3$ (-12% compared to 2021). In the import structure, the group of pulpwood (round and split) and other industrial roundwood of coniferous trees prevailed with 0.265 million m$^3$, followed by the import of coniferous logs with 0.238 million m$^3$. The trade surplus of roundwood amounted to 0.61 million m$^3$, of which 0.50 million m$^3$ of trade surplus for roundwood of coniferous trees was intended for industrial processing. In 2022, the largest quantities of roundwood were exported to Italy; in terms of structure, industrial roundwood of deciduous trees is prevailing with 58%, followed by Austria where the largest quantities of coniferous logs are still exported. Croatia is becoming an increasingly important importer of roundwood from Slovenia; last year, we increased our export to Croatia by 42% compared to 2021, with industrial deciduous roundwood prevailing. In 2022, the largest quantities of roundwood were exported from Austria; 69% of our imports is pulpwood (round and split) and other technical wood of coniferous trees. This is followed by export from Italy, from where we have imported the largest quantities of coniferous logs (67%) last year.

**2023**

This year, the volume of production of roundwood is expected to be slightly higher compared to the volume in the previous year, mainly due to natural disasters. Due to the overproduction of bark beetles out breaks, snow-breaks and windfall in the first half of 2023, the damage has exceeded the limits for the declaration of a natural disaster pursuant to the Act Determining Additional Measures to Remedy Damage Due to the Overpopulation of Bark Beetles (Official Gazette of the Republic of Slovenia, No. 14/18 and 65/20). In July, the storms that have caused extensive windfall have damaged over 540,000 m$^3$ of trees, according to the first estimates, which stands for one tenth of the annual felling of trees. If we also consider the trees marked for felling that have been attacked by bark beetles, around one million m$^3$ of woody mass is currently damaged in Slovenian forests, which represents one fifth of the annual felling of woody mass in Slovenian forests. Around 3.3 million m$^3$ of woody mass has been marked for felling between January and August 2023, while large quantities of damaged trees still remain in forests, mainly due to bark beetles and windfall.

At the beginning of this year, the prices of coniferous logs were still high; from January to April, the average purchase price of these assortments in private forests amounted to EUR 110/m$^3$ without VAT on a truck road. After that, prices started to decrease; in June, for example, said price amounted to EUR 83/m$^3$ without VAT, while in July, the price amounted to EUR 71/m$^3$ without VAT. In the first months of 2023, the prices of oak logs were also extremely high; the highest purchase price in private forests was recorded in February (EUR 276/m$^3$ without VAT), but these prices started to decrease in April as well. After an increase in the last quarter of 2022, the prices of beech logs also remained high in the first months of this year; the average purchase price in private forests in the first half of the year amounted to EUR 93/m$^3$ without VAT. The record prices of pulpwood (round and split) achieved in November and December 2022 have decreased in 2023; the average purchase price in private forests for coniferous trees amounted to EUR 40/m$^3$ in the first six months, while the price for deciduous trees amounted to EUR 62/m$^3$ without VAT. Just like industrial wood of inferior quality, the record prices in November and December 2022 were also achieved for firewood (the highest average price in November was EUR 79/m$^3$ without VAT). In 2023, prices started decreasing slightly but still remain high; the average price for the January-July 2023 period amounts to EUR 64/m$^3$ without VAT.

According to data provided by SURS about the purchase quantities of roundwood from private forests, the purchase remained the same in the first seven months of this year, compared to the same period of last year. The purchase increased the most in the segment of pulpwood (round and split) (+21%) and coniferous logs (7%). The purchase decreased the most in the segment of oak logs (-27%) and beech logs (24%), and also decreased in other roundwood groups, with the exception of aforementioned coniferous logs and coniferous pulpwood. Only around a half of the quantity of round timber entering the market in one year is considered in the research on the purchased quantity prepared by SURS.

In the structure of export of roundwood in 2021 and 2022, deciduous roundwood intended for industrial processing is prevailing, with 63% accounting for beech wood of all dimensions. In 2022, the trade surplus of this group of roundwood amounted to 0.50 million m$^3$, which is a record amount, with the exception of 2015. In July and August of this year, Slovenian forests have been damaged by extensive storms, which is why external trade with roundwood is unpredictable and difficult to forecast. We estimate that the degree of export of roundwood in 2023 will be higher than in 2020-2022; in the export structure, large quantities of wood will come from sanitary felling. The import of roundwood is estimated to decrease compared to the previous years, whereby the least distinct decrease will be recorded in the segment of deciduous roundwood.

### *b) Wood biomass for energy*

The consumption of wood for energy purposes changes according to energy requirements which are mostly reflected in weather conditions, the energy efficiency of buildings and the prices of energy sources, as well as the policy and measures in the field of energy efficiency and the consumption of renewable energy sources. Slovenia has an overarching national target of achieving no less than a 27% share of renewable energy sources in terms of final gross consumption of energy by 2030, and wood biomass is the most important of these sources. However, the requirement of a no less than 35% improvement in energy efficiency also has an important influence on the consumption of wood for energy purposes, since this also contributes to the reduction of the consumption of energy and other natural resources, which is the first and crucial step for a transitioning to an environmentally neutral society.

In these past years, numerous households in Slovenia have started using electricity and natural gas heating; as a consequence, the number of households using wood fuel has been decreasing. The situation has changed in 2022 due to an increase in prices of all energy-generating products. In the structure of the use of energy-generating products in households, wood fuel represents the highest share - nearly 40%. Households use approximately 1.5 million tonnes of wood fuel on average, predominantly logs, followed by pellets, chips and finally briquettes.

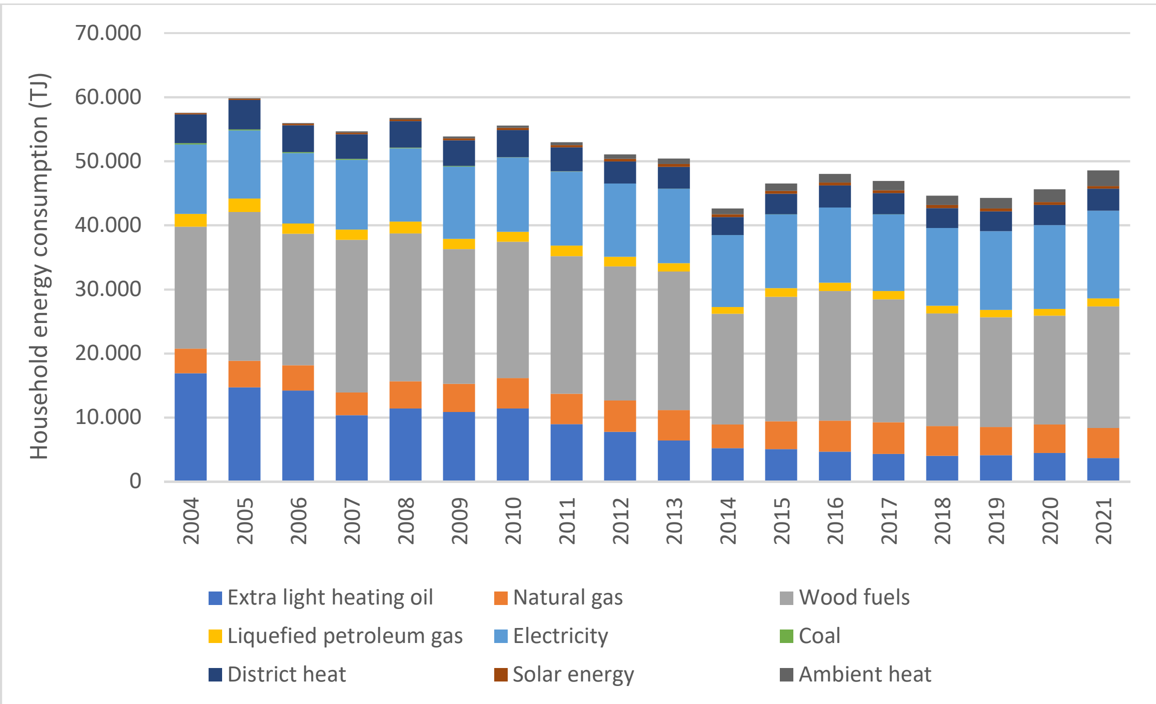


Image 2: Use of different energy-generating products in households (Source: SURS, 2023)

Wood fuels are and will continue to be an important energy source, particularly in rural areas, due to a long-standing tradition of wood consumption for heating, as well as due to access to woods and the still sufficiently high availability of wood. They are also more environmentally friendly than fossil fuels, especially when they are being used in modern systems and obtained pursuant to sustainability principles. The economic aspect is also important to consider. Wood fuel prices are monitored by the Slovenian Forestry Institute (hereinafter referred to as the SFI) and regularly published at http://wcm.gozdis.si/cene-lesnih-goriv.

In Slovenia, wood fuel is among the cheapest energy sources. If wood fuel prices are compared to heating oil prices (prices expressed in €/MWh and including VAT), it can be determined that wood chips, the cheapest among energy wood products, are 68% cheaper than heating oil, firewood is 38% cheaper than heating oil and pellets as the most expensive form of wood biomass are 22% cheaper than heating oil. In 2022, the prices of energy sources have increased significantly; in the second half of the year, we have recorded the highest increase in the prices of wood fuels ever since we have started monitoring the wood fuel market. As a consequence, the situation changed in the second half of 2022; however, wood fuel still remains the cheapest source. At the beginning of the 2022/2023 heating season, we recorded the lowest price difference between heating oil and pellets. Said difference amounted to less than 6%.

After a turbulent 2022 when the dynamics of price changes were extremely significant, the situation has been recovering slightly in 2023. At the end of the 2022/2023 heating season, the prices of both wood fuel and heating oil have decreased. The prices of pellets decreased by no less than 37% while the prices of heating oil have decreased by 24%. In May 2023 the price of extra-light heating oil was around 105 EUR/MWh (VAT included). The price of pellets, packed in 15 kg bags, cost 386 EUR/t or 82 EUR/MWh (VAT included) on average during the same period. At the end of the 2022/2023 heating season, the price difference between heating oil and pellets amounted to 22%.

Several factors have influenced the high prices of energy sources, as well as the extreme increase in the price of wooden pellets, in 2022. The beginning of war in Ukraine had an important impact which caused changes in the market of wood pellets in the EU and in the broader region. On the one hand, demand has increased due to a harsh 2020/2021 winter which caused an increase in the consumption of energy sources and a decrease in stock for the next heating season. Due to favourable electricity prices, combined heat and power systems, as well as wood pellets power plants, have also been functioning in the summer months. The demand for wood pellet boilers in household is continuously increasing, which is why the same logic applies to the demand for raw materials, and the competitiveness of wood pellets compared to fossil fuels is also increasing since the former are safer to supply. In addition to low stocks at the beginning of the 2021/2022 heating season, the offer was also influenced by the negative consequences of the COVID-19 pandemic on transport (ship, container, and truck transport) and on supply chains that were interrupted as a consequence, high costs of raw materials, electricity, and transport, and an increased demand in wood (higher prices and higher degree of competition). This all had an important impact on the prices of wood fuels in Slovenia which have started to increase in June 2022, while a lack of pellets and logs was occasionally observed on the market due to a high demand in spring and summer. In August 2022, the prices of pellets have increased by nearly 70% (compared to May 2022), while the prices of logs have increased by 30%. Prices of wood chips have remained more stable.

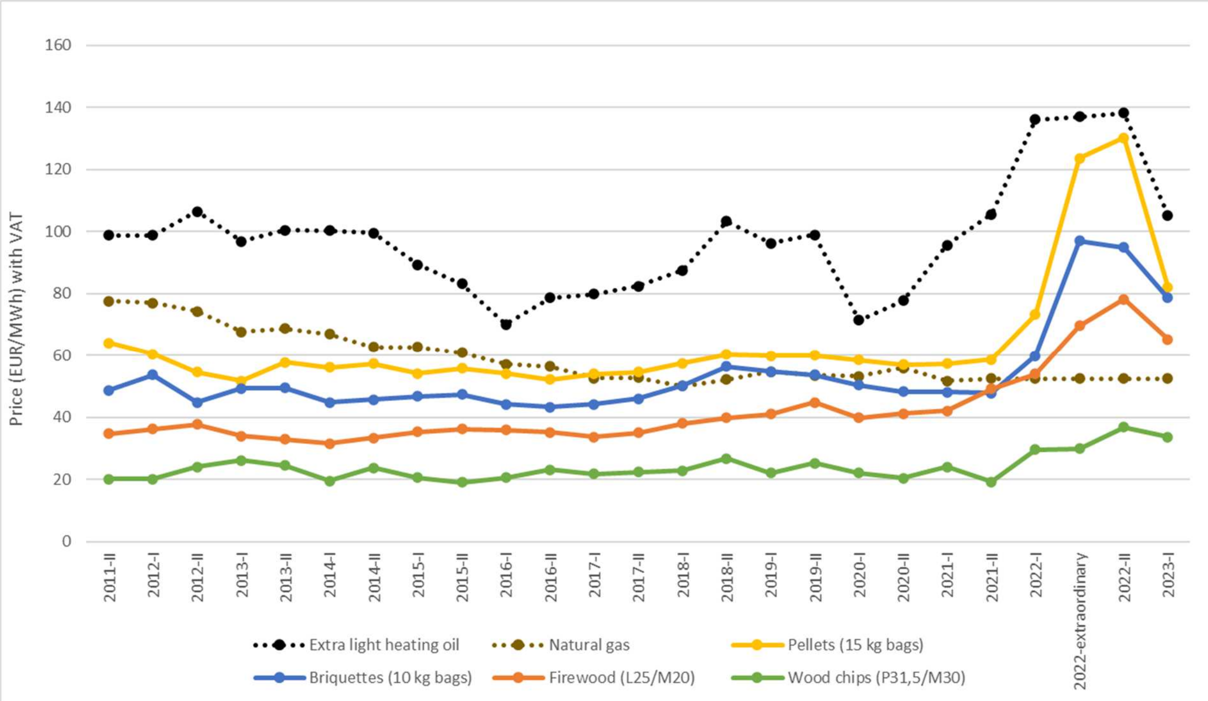


Image 3: Comparison of wood fuel and fuel oil prices in 2011-2023 at the beginning and end of the heating season (source: Slovenian Forestry Institute)

In Slovenia, logs are a locally available energy source allowing for the energy independence of households. For an efficient burning with the reduction of the emissions of dust particles, the logs to be used in small heating devices must be dry. On the Slovenian market, the biggest demand is for beech firewood with humidity levels of approx. 20% (air dry firewood) and lengths between 25 and 33 cm. The price of such firewood amounted to 260 EUR/t at the end of the heating season 2023/24, which is 17% lower compared to the beginning of the heating season.

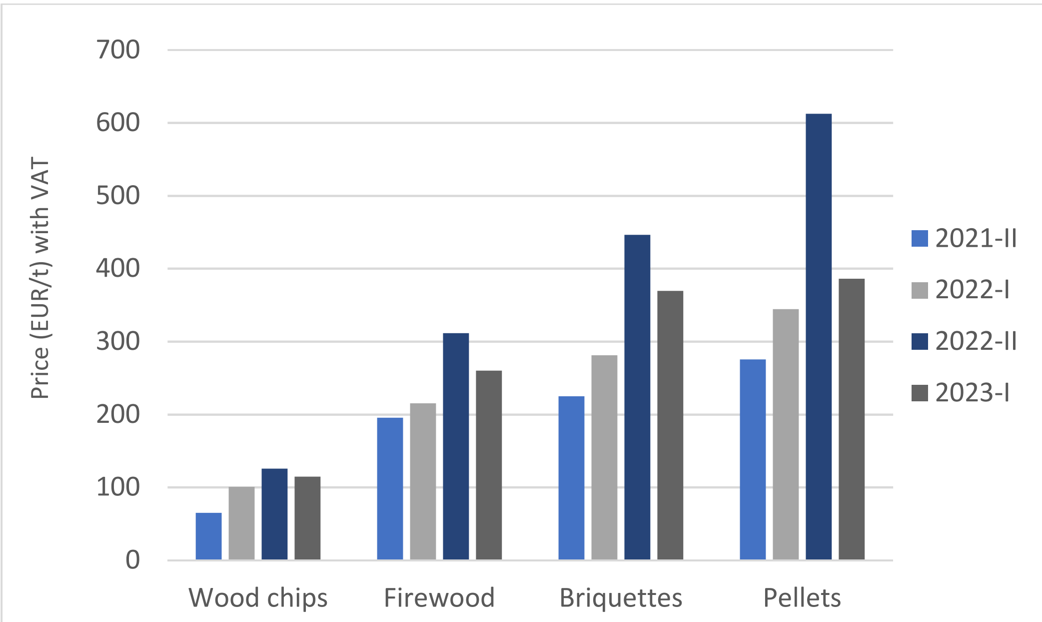


Image 4: Wood fuel prices (in EUR/t with VAT) in 2021-2023 at the beginning and end of the heating season (source: Slovenian Forestry Institute)

2022 is the second year in a row in which Slovenia remains a net exporter of wood pellets. Otherwise, Slovenia has remained a net exporter of wood pellets throughout this past decade, with the exception of 2017, until 2021. According to the information obtained by the Statistical Office of the Republic of Slovenia (SURS), export amounted to 164,679 tonnes in 2022 while import amounted to 125,614 tonnes. Compared to 2021, the quantities of both export and import have decreased: the former by 19% and the latter by 24%. The degree of import of pellets in 2022 was the lowest after 2014. According to statistical information, the average value of imported pellets on the Slovenian border amounted to EUR 329/t without VAT, while the average value of exported pellets amounted to EUR 359/t without VAT. Due to the war in Ukraine, this country was not the main importer of wood pellets to Slovenia during this past year, since imports from Ukraine have nearly halved during this past year compared to 2021. Last year, we imported the largest quantities of pellets (30,030 t) from Austria, followed by Ukraine (22,188 t) and Croatia (16,660 t). Compared to 2021, the import of pellets from Croatia has increased the most in 2022 (+108%).

The main consumers of wood pellets are households, followed by larger public buildings and other users. According to the data on the production of pellets in Slovenia, collected by SFI, the production of pellets in Slovenia has been constantly rising for the past decade. There are currently 23 registered producers in Slovenia. They are predominantly smaller producers, who annually produce up to 10,000 tons of pellets. Domestic production of pellets amounted to 164,000 tonnes in 2022, which is 10% more compared to 2021.

In the export amounts, the pellets of Slovenian producers are included as well as pellets, which were previously imported into Slovenia (a so-called re-export). Due to vibrant trade with pellets, the indicator of foreign trade deficit or surplus, which is calculated as a balance (import - export), is useful on the national level. In 2022, we exported the most pellets to Italy (80% of total export), followed by Austria (15%). We have also exported smaller quantities to Croatia, Slovakia, Lithuania and some other countries. During this past decade, we recorded a trade surplus in 2017, 2021 and 2022, which indicates a higher production than consumption of pellets. According to SURS, the trade surplus from last year amounted to 39,065 tonnes.

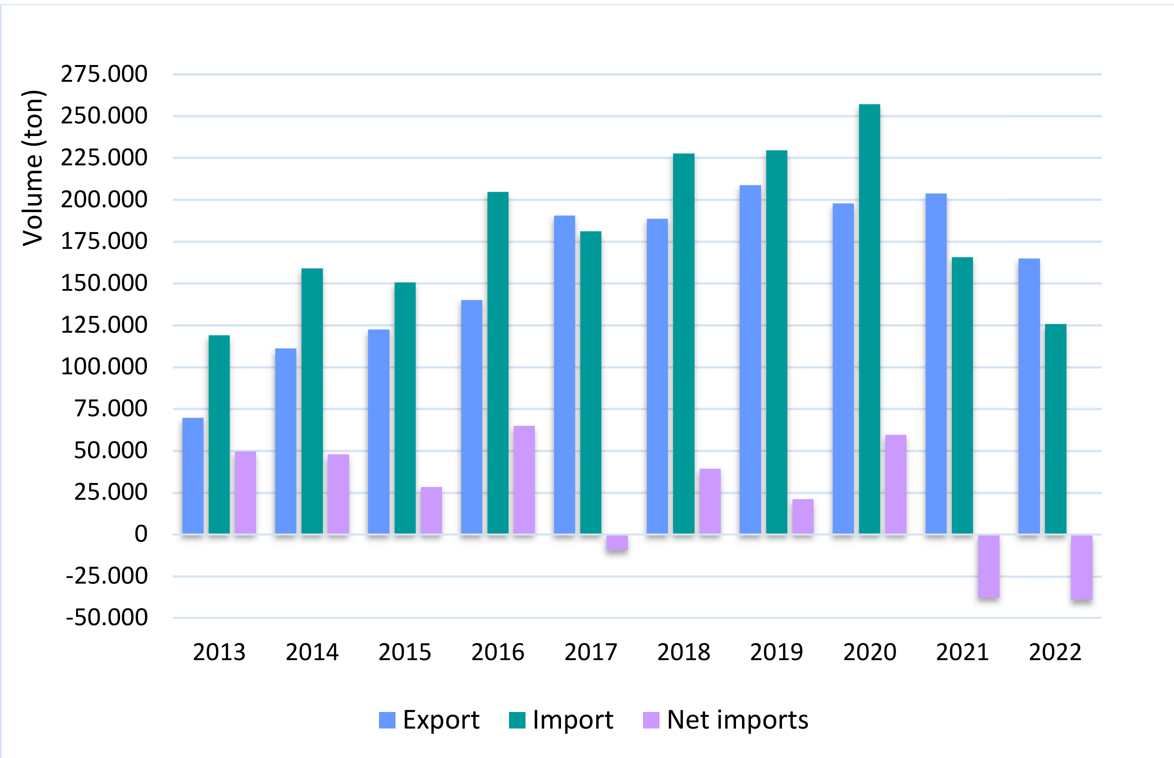


Image 5: External trade of wood pellets in 2013-2022 (Data sources: Statistical Office of the Republic of Slovenia, recalculations of SFI)

Wood chips are mainly used for energy purposes. The largest consumer of wood chips is Termoelektrarna toplarna Ljubljane, consuming over 120,000 tonnes per year. The consumption of wood chips in the production of wood products (fibreboard, pulp, chemicals) has decreased by more than a half in 2022 compared to 2021. According to data for foreign trade, Slovenia exported 622,000 tonnes of wood chips to foreign markets in 2022, of which 51% went to the Austrian market, 21% went to the Italian market, and 20% went to the Croatian market. In 2022, we imported 90,000 tonnes of wood chips, the majority of which (78%) was imported from Hungary, while 14% was imported from Austria.

The price of wood chips was the price of wood fuels that fluctuated the least during this past year. The prices of the wood chips that were sold most often, i.e. wood chips with a level of humidity of around 30% and with a particle size of around 31 mm (P31), have already increased the most at the end of the previous heating season (2021/2022); compared to the beginning of the previous heating season (2021/2022), the increase amounted to no less than 55%. After that, the prices have additionally increased by 24% before the beginning of the 2022/2023 heating season. The prices of wood chips at the end of the 2022/2023 heating season amounts to EUR 115/t with VAT, which is approximately 8.5% less than in October 2022, at the beginning of the heating season.

### *c) Certified wood products*

There are currently 260,747 ha of forests certified according to the FSC forest certification system, which is the same as in 2022 and represents 22% of the surface of all forests in Slovenia. 91% of FSC-certified forests are State-owned forests. The company SiDG d.o.o., which manages national forests, holds four group FSC certificates, along with the certification of national forests. There are currently 25,000 ha of private forests and 76 wood processing companies certified in a group FSC+SiDG scheme. In 2022, seven larger private forest holdings, with a total of 24,347 hectares, were certified in a group scheme FSC FM/CoC of SiDG.

The area according to the system PEFC for certified forests is increasing slightly and now encompasses 294,182 ha. The greater part of this area (81%) is represented by national forests, managed by the company Slovenski državni gozdovi d.o.o. An increasing number of forest owners, who manage their own forest, are involved in the regional certification scheme PEFC; there were more than 1283 of such owners last year.

Companies use the FSC and PEFC certificates for tracking wood origin predominantly as a marketing mechanism for export markets and compliance with green public procurement policies. The number of companies with the FSC certificate for tracking certified wood (CoC) is currently 262 (-4% from September 2022), and the number of companies with the PEFC certificate for tracking certified wood (CoC) is 99, which is 9% more compared to the same period last year.

### *d) Value-added wood products*

The Slovenian furniture industry produced net sales revenues in the amount of EUR 458 million in 2022, which is 5% more compared to 2021 and represents 1.1% of net sales revenues in relation to the whole processing industry in the country. The share in the total net sales revenues structure in foreign markets for the furniture industry NACE C31 amounted to 40.8% last year. Foreign market sales recorded a decrease of 1.2% last year compared to 2021. In 2022 the added value per employee in manufacturing C31 has increased by 5.6% compared to 2021 and amounted to EUR 36,909.

The furniture industry production index (the entire furniture industry in NACE C31), which also includes the production of wooden furniture, decreased by 13.0% in the first seven months of this year compared to the same period in the previous year. The net sales revenues within the comparative periods decreased by 7.6%, with 4.6% on the domestic and 11.3% on foreign markets, compared to the same period in the previous year.

***e) Sawn softwood***

The processing of coniferous roundwood is increasing and amounted to over 1.6 million m$^3$ in 2022, which represents a 9% increase compared to 2021. The quantitative scope of sawn softwood production amounted to 983,000 m$^3$ in last year, which is 9% more compared to 2021. The imported quantities of sawn softwood continue to decrease; in 2022, they have decreased by 6% compared to 2021, while the value of import has increased by 7%. Compared to 2021, the quantitative and the qualitative share of import has increased by 1% and 15%, respectively.

According to our estimates, a similar state of flows of sawn softwood is expected in 2023 as in 2022, despite the fact that the production of coniferous logs will increase compared to the previous years due to bark beetles and storms. For the first seven months of this year, sawmills report a decrease in sales and prices of their products.

In 2023, the average sales prices of sawn softwood have decreased compared to 2022, according to SFI, but still remain higher than in 2021. After the increase in prices of sawn products at the beginning of 2023, the prices of most products have, on average, decreased slightly since spring. In August of this year, the median value of spruce construction wood amounted to EUR 270/m$^3$ without VAT, which represents a 10% decrease compared to August 2022. In August of this year, the median value of edged non-construction spruce wood amounted to EUR 280/m$^3$ without VAT, which represents a 7% decrease compared to August 2022.

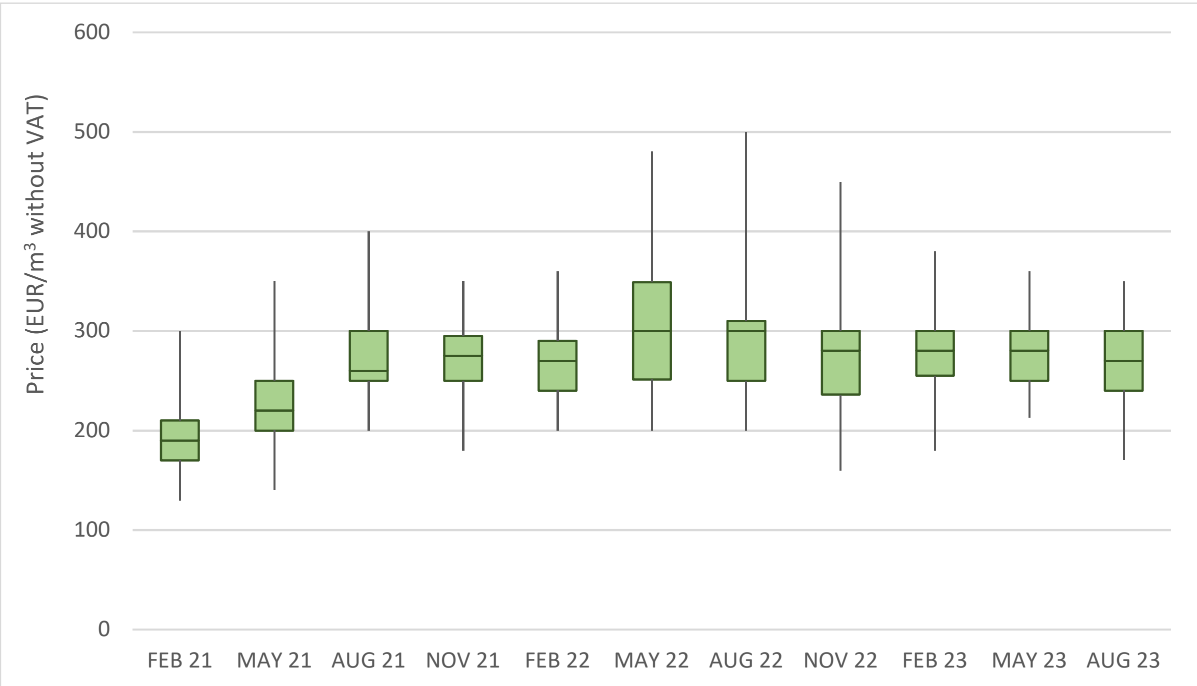


Image 6: Minimal, maximal, and median values of collected purchase prices for **spruce construction wood** for 2021 and for the current year 2022. The **construction timber** category consists of the following products: **construction timber C24/S10**, non-dried; **construction timber C24/S10**, dried; **planks** of 18-24 mm mm, non-dried; planks of 28-40 mm mm, non-dried; **boards** of 40-50 mm, non-dried; boards of over 50 mm, non-dried; **beams** of 60x80 mm (up to 5 m), non-dried; beams of 100x200 mm (up to 5 m), non-dried; beams of 140x140 mm (up to 5 m), non-dried; beams of 140x140 mm (over 6 m), non-dried; **slats** of 50/30 - 50/50 mm (3-5 m in length) marked CE, dried; slats of 50/30 - 50/50 mm (3-5 m in length) not marked CE, dried; slats 50/30 - 50/50 mm (3-5 m in length) not marked CE, non-dried. Purchase prices are shown in EUR/m$^3$ not including VAT and transport.

At the beginning of 2023, high prices of sawmill residues of coniferous trees have been recorded; the median value of selvedges or wood splinters in February amounted to EUR 40/prm without VAT, while the median value of sawdust amounted to EUR 25/t without VAT. Prices have reduced in the spring;

the prices of selvedges or wood splinters dropped to EUR 25/prm without VAT in May. In the summer, the largest price drop was recorded for sawdust (-34 % compared to February 2023).

In the second half of last year, the decreasing competitiveness of the sawmill industry became apparent, particularly at the expense of extremely high electricity prices. In 2023, the competitiveness of the operating transactions continues to decrease, mainly due to a decrease in orders, the reduction of prices of primary wood products on the market, and the competitiveness in the market of forest wood assortments.

### *f) Sawn hardwood*

Sawn hardwood production continues to increase; in 2022, it amounted to 143,000 $m^3$, which is the highest amount after 2007. According to the latest research performed by the SFI, Slovenia currently has less than 20 sawmills that process over 5,000 $m^3$ non-coniferous logs per year. When it comes to their current operations, these sawmills present a couple of challenges: (1) technological development; (2) know-how in the processing of deciduous trees which is more specific than the processing of coniferous logs; (3) achieving a higher added value of the product; (4) complexity when it comes to timely and constant supply of non-coniferous logs; (5) a demanding market; (6) low product prices.

In 2022, the estimated use of sawn hardwood decreased by 12% compared to 2021, amounting to 106,000 $m^3$. In 2022, the import of sawn hardwood decreased by 16% compared to the previous year, while export increased by 2%.

The export of oak industrial roundwood, particularly logs, is increasing. In 2022, 42% of total export was transported to China, followed by Italy (28%). Due to an increase in export, domestic processors of oak logs had some difficulties with sufficient supply of raw materials during this past year. The forecasts for 2023 indicate a slightly decreased export of industrial oak wood, mainly due to a decreased scope of export to China, Italy and Germany. At the same time, export to Croatia, Spain, Austria and Vietnam is planned to increase.

This year, estimates show that the scope of production of sawn hardwood will be comparable to 2022. Due to a decreased estimated export (approx. -34% compared to 2022), the use of deciduous trees sawlogs will also increase.

The quantities and values recorded in the production, the import and export of sawn wood from tropical tree species are negligible. A similarly low level of sawn wood from tropical trees foreign trade is foreseen for this year.

### *g) Wood-based panels (including veneer)*

Production of all types of wood-based panels (including veneer) was just under 254,000 $m^3$ in 2022, 58% of which was coniferous. Production therefore decreased by 3% compared to 2021, namely due to a decreased scope of production of panels and fibreboard. After an increase in the consumption of wood boards recorded during this past year, said consumption decreased once more in 2022, by 16% compared to 2021. This indicates a decrease in the consumption of those products in the construction of buildings and the construction industry as a whole. For 2023, we estimate that the volume of production will continue to decrease by approx. 7% compared to 2022. The production of veneer logs and boards is planned to decrease, while the most significant decrease will be recorded in the fibreboard production segment. It is also estimated that the consumption of wood-based panels and veneer will decrease by 15-20%.

In 2022, 168,000 $m^3$ of particle boards (including OBS boards) were used in the manufacture of furniture and in construction, which amounts to a 11% decrease compared to the previous year. All particle boards are being imported since 2015 when the last particle board factory declared bankruptcy. For 2022, we are predicting a further reduced consumption of particle boards than in 2022.

The consumption of fibreboards in Slovenia has been fluctuating through the ages and is one of the lowest consumptions compared to other types of wood-based panels. The consumption of these panels was particularly extremely low in 2019-2022, oscillating between 22,000 and 26,000 m$^3$. In 2022, the consumption of fibreboards increased by 9% compared to 2021. There is one company engaged in the production of MDF and HDF fibreboards in Slovenia.

Plywood panel production is dominated by tri-layer shuttering composite conifer panels, of which the greater part of production is exported. In 2022, the production of panels decreased by 8% compared to 2021, reaching the lowest levels after 2018. The consumption of plywood panels decreased significantly in 2022 – by 36% compared to 2021, amounting to 49,000 m $^3$.

Domestic production of veneer has been increasing in these past years, amounting to 28,000 m$^3$ in 2022 (+23% compared to 2021), which is the highest rate after 2011. For 2023, a production volume comparable to 2022 is planned. The quantities recorded in the production, the import and export of veneer from tropical tree species are negligible. The best part of sliced veneer manufacture is performed as a service for customers within the EU.

### *h) Pulp and paper*

The production volume of mechanical pulp decreased in 2022 to 73,000 tonnes (-14% compared to 2021), reaching the lowest levels after 2013. In 2022, a company with a long-standing tradition operating in the field of manufacturing newspaper paper, coated graphic paper, and wrapping and packaging paper has temporarily stopped its production process due to financial issues. In 2022, the import of mechanical pulp represented 6% of the total import of all types of wood pulp. The exported quantities of mechanical pulp were negligeable, particularly in 2022; the production in Slovenia has been integrated in its entirety.

According to the Chamber of Commerce and Industry of Slovenia, the Slovenian production of paper is continuing to decrease; in 2022, it amounted to a total of 591,000 tonnes, i.e. the smallest rate after 2004. The largest loss (-21% compared to 2021) is recorded in the segment of coated graphic paper. In the structure of paper produced, the share of packaging paper and paperboard has been increasing over the last two years, while the share of graphic paper has been decreasing. According to the information provided by the Chamber of Commerce and Industry, the production of paper and paperboard is expected to further decrease this year compared to last year, namely to around 500,000 tonnes, one of the reasons for which is the extensive investment work carried out at the MM Količevo d.o.o. paper mill during the year, as well as all renovation work which had to be carried out after the flood and damage to the paperboard machine of said company.

In the first seven months of 2023, the C 17 industry recorded a 17.5% decrease in the industrial production index compared to the same period in the previous year. Furthermore, sales venues in the industry also decreased by 11% in the first seven months of this year, compared to the same period of last year.

### *i) Innovative wood products*

In 2023, the Gold National Innovation Award of the Slovenian Chamber of Commerce and Industry was awarded to the company iQwood, proizvodnja lesnih elementov, d.o.o., for their innovation of the "world's thinnest solid bearing wall made out of wood and without glue". Their slim, yet highly load-bearing solid wood wall was manufactured made without the use of glues or other chemicals. Through this innovation, they will make the healthiest solid wood walls available to a wider audience. At the same time, this new product will allow for an expansion of use, from the single-family segment to use in larger public buildings. The iQwood innovation is a unique example since it takes into account all aspects of the circular economy where wood is used as the only raw material; since wood is a renewable material, the production is energy-efficient. In addition, no substances harmful to health and the environment are produced in the process.


Image 7: The iQwood construction system - a patented, solid, extremely stable, and safe timber construction (Source: lumar.si)

One of the winners of the bronze prize for the best innovation was Alples d.d., a company operating in the furniture industry, with its innovation "sensory elements with an emotional impact". They have created a wooden furniture product (the "furniture function of the future"), which allows the use of an interactive support function to restore and maintain current or desired well-being and activity using a mobile phone, following suggestions received from nature.

Image 8: Furniture of Alples d.d. in the "Dom24h" house - a sensory element with an emotional impact (Source: alples.si)

Another significant achievement in 2023 is the establishment of the "The New European Bauhaus Academy Pioneer Hub for Sustainable Built Environments with Renewable Materials (NEBAP HUB)" university centre, set up by the University of Primorska in cooperation with the InnoRenew CoE institute. The centre will focus on regenerative and inclusive spaces that reduce environmental impacts through decarbonisation and lead to positive social and economic impacts, which also include health and well-being. The New European Bauhaus is the main initiative of the European Commission for Sustainable Construction, while the InnoRenew CoE institute is an important link between the Slovenian timber industry in the European space.


Image 9: The new building of the InnoRenew CoE institute is an example of activities that are compliant with the values of the New European Bauhaus; furthermore, it also boasts the title of the largest timber building in Slovenia. Incorporating sustainable construction principles, it has been shaped to create a better user experience (Source: innorenew.eu).

### *j) Residential construction and construction*

The trend of residential construction is slowly increasing after 2015. In 2022, 13,219 dwellings were under construction in Slovenia, of which 4,286 were completed by the end of the year, which is 6% more than in 2021. In 2022 most of the dwellings were completed in the Osrednjeslovenska statistical region (23% of all), followed by the Podravska statistical region (19% of all). On the other hand, the fewest dwellings were completed in the Zasavska region (1%). In the first eight months of this year, 3,918 building permits were issued for new buildings and the change of use of buildings, which is 11% less compared to the same period in 2022. Compared to the same period in 2022, 13% less building permits were issued for non apartment buildings, and 10% less building permits were issued for non-apartment buildings.

Company activity within the Manufacture of other builders' carpentry and joinery (NACE: C16.230), which consists of the manufacture of prefabricated wooden buildings, builder's joinery (windows, doors, stairs…) and glued laminated roof trusses and roofing, was again successful last year, with a reported highest net profit in the industry C16 Manufacture of wood and of products of wood. According to CCIS, this segment had a EUR 41 million net profit last year, which is 23% more than net profit in 2021 and no less than 80% more than in 2020. The growth of sales revenues created by companies in this industry on foreign markets decreased by 0.4% compared to 2021, but net sales revenues in foreign markets increased by 21.5%.

Slovenia is a traditional net exporter of wooden windows and doors. The increasing trend in the import of wooden doors is continuing in 2022 (+27% compared to 2021); the same applies for wooden windows (30% compared to 2021). The export of wooden doors increased by 4% last year compared to the year before, while the export of wooden windows increased by 30% and by 39% compared to the average in the 2017-2020 period. When it comes to data related to foreign trade, we unfortunately cannot provide the data on the so-called “re-export”, i.e. the quantities that we import and immediately export.

## *5. Gender equality and human rights in the forestry sector*

Gender equality means that men and women have equal rights, opportunities, and responsibilities when it comes to all aspects of life, including the forestry sector. Legally (legal equality between women and men = parity) and practically speaking, women and men must be granted equal visibility, power, and participation in all areas of public and private life. Gender equality, however, also means accepting the differences between women and men and valuing people equally, in all their diversity. Despite the fact that gender equality is a fundamental human right and one of the core values of the European Union, the gender gap still remains a global challenge. This is noticed most often in the role of the family, since women are often taking on the majority of the tasks related to the care of children and other family members, which can affect their participation in the labour market. Gender equality in the forestry sector is a moral issue and, more importantly, also a crucial issue for sustainable forest management and the achievement of the goals of sustainable development.

When it comes to the number of persons employed, employment in Slovenia has been steadily on the rise over the last decade (with the exception of 2020).(Source: SURS). On the contrary, the employment rate has been decreasing in the activity of “Agriculture and hunting, forestry, and fishing”. If we only focus on the forestry sector, the numbers are quite diverse. The number of employees was increasing until 2019 and plummeted in 2020. In 2022, approximately 6,500 people were employed in the forestry sector; this number amounted to 6,800 in 2021 and to 6,200 in 2020. There are a lot of self-employed entrepreneurs in the forestry sector. According to information provided by SURS, no less than 80% of employees were self-employed entrepreneurs in 2022. While, at the level of Slovenia, the employment rate has been at its highest level in the past decade in 2022, the highest number of employees in the forestry sector was achieved in 2019, after which the rates fell.

Women represent less than one half of working population (46% in 2022), of which 90% are employed and 10% are self-employed or assisting family members. When it comes to the gender structure of unemployment, more women than men were unemployed in 2021 (52%); in 2022, the tables have turned, with less than half of women (49%) being unemployed. Another positive information is the statistic that the share of employed women has been growing through the ages and is higher than the European average. The gender equality index in Slovenia in 2022 amounted to 1.1 point less than the European average (68.6 out of 100 points), meaning that Slovenia is ranked 12th out of the 27 EU countries. In terms of the employment rate of women with children, Slovenia is at the very top of all EU countries. Furthermore, data shows that three times more women than men were exclusively responsible for taking care of children. In addition, Slovenia also has one of the lowest shares of women and men in the EU who are working shorter hours in order to comply with their care obligations.

Traditional gender roles are still entrenched in the forestry sector. The traditional perception of the role of a woman in the society has an impact on their representation in the forestry sector. Furthermore, social expectations still exist that influence the way in which the ownership (of forests) is being transferred from one generation to another. Since working in a forest is often a physically demanding and dangerous task, it represents a risk for a breach of the right to a safe and healthy work environment, which is also why forestry is not a gender-neutral sector. However, women contribute to the success of the forestry sector in numerous, both formal and informal methods. In Slovenia, more and more women are taking part in forestry and becoming forest owners, which shows a shift towards a higher degree of gender equality in this industry. By making sure that men and women have an equal access to forest resources, services, and opportunities, we can increase the social, economical, and environmental benefits of forests for everyone.

There are more men than women employed in the Slovenian forestry sector; furthermore, men also hold a higher degree of leading positions. When it comes to the ownership structure, 41% of women are forest owners, which places Slovenia at the very top of the structure in the EU. However, the size of women’s estates are smaller, on average, which means that they also have less wooded areas than men (only 35%). The relatively high degree of women owners does not mean an equal representation in decision-making bodies and interest groups. The SFS, which is the largest employer of foresters in Slovenia, has employed 152 women (20%) in 2022; however, the share of women is higher when it comes to support services. There are only 15% of women employed as foresters at the SFS. Among them, younger women with less than 10 years of service are prevailing (35%), followed by women with 10 to 20 years of service (26%). About a half of women employed as foresters (50.5%) at the SFS have a higher university education, followed by female foresters with a master's degree (second Bologna level) (12%). One quarter of female foresters employed at the SFS are district foresters. In the framework of managing State forests, the company Slovenski državni gozdovi (SiDG) employs 12% women, of which only 4% are foresters. At the SFI, which is the only public research institute in the field of forestry in Slovenia, women represent 46% of all employees (2022), while female researchers account for 44% of all researchers.

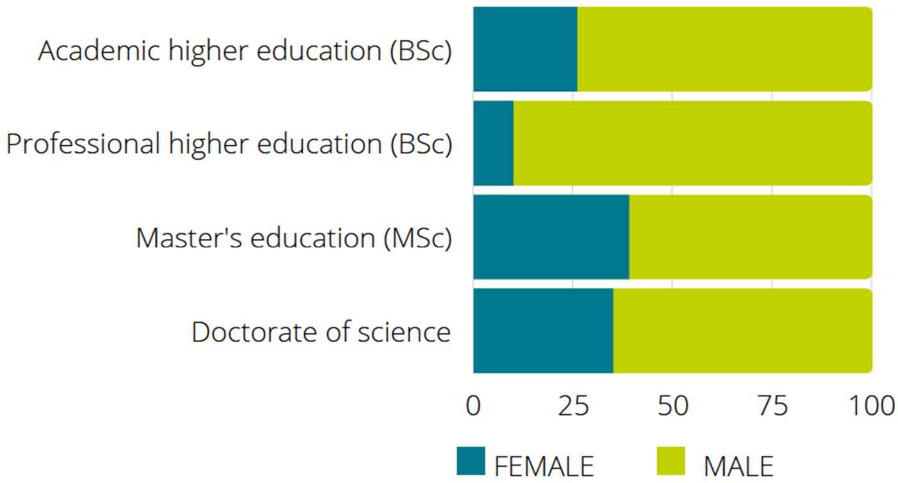


Image 10: The share of women in higher education in the field of forestry in the past 20 years (situation in 2020)

Gender differences affect the relationship towards forest ownership and management. Family tradition is still the strongest factor motivating female forest owners. Female owners also often connect forest ownership with felling and sale of timber, which applies to the majority of forest owners, regardless of their gender (Krajnc et al., 2021). However, one of the more typical differences between the two genders is that female forest owners are more inclined to provide for the ecological and social functions of the forest, instead of the economical ones. Moreover, female owners often don't have a special purpose in mind for their forest, or they are mainly motivated by nature conservation goals. Despite this fact, research conducted among private forest owners (Ščap et al., 2021) shows that there are no significant differences in the intensity of felling between the two genders when they opt for felling.

In Slovenia, the project Fem4Forest managed by the SFI (https://www.interreg-danube.eu/approved-projects/fem4forest) plays an important role when it comes to raising awareness about gender equality, human rights, and gender differences. The project proposes an innovative interactive model or a learning approach supporting a more active role of women in the forestry sector.

## 6. Tables

### a) Economic indicators

| | 2022 | Autumn forecast (September 2023) 2023 | 2024 | 2025 |
|---|---|---|---|---|
| **GDP** | | | | |
| GDP, real growth in % | 2.5 | **1.6** | **2.8** | **2.5** |
| GDP, nominal growth in % | 9.1 | **10.4** | **6.9** | **5.6** |
| GDP in EUR billion, current prices | 57.0 | **63.0** | **67.3** | **71.1** |
| Exports of goods and services, real growth in % | 7.2 | **0.1** | **3.3** | **3.8** |
| Imports of goods and services, real growth in % | 9.0 | **-3.9** | **5.3** | **3.9** |
| *External balance of goods and services (contribution to growth in p.p.)* | *-1.0* | ***3.7*** | ***-1.5*** | ***0.1*** |
| Private consumption, real growth in % | 3.6 | **0.9** | **2.3** | **1.8** |
| Government consumption, real growth in % | -0.5 | **1.4** | **1.9** | **2.2** |
| Gross fixed capital formation, real growth in % | 3.5 | **4.5** | **5.5** | **4.3** |
| *Change in inventories and valuables (contribution to growth in p.p.)* | 1.0 | **-3.8** | **1.5** | **0.0** |
| **EMPLOYMENT AND PRODUCTIVITY** | | | | |
| Employment according to the SNA, growth in % | 2.9 | **1.2** | **1.0** | **0.7** |
| Number of registered unemployed, annual average, in '000 | 56.7 | **48.8** | **46.6** | **44.9** |
| Registered unemployment rate in % | 5.8 | **5.0** | **4.7** | **4.5** |
| ILO unemployment rate in % | 4.0 | **3.6** | **3.5** | **3.4** |
| Gross wage per employee, nominal growth in % | 2.8 | **8.6** | **5.6** | **5.5** |
| Gross wage per employee, real growth in % | -5.6 | **1.0** | **1.7** | **2.7** |
| - private sector | -2.4 | **0.9** | **2.5** | **2.7** |
| - public sector | -10.4 | **1.2** | **0.1** | **2.6** |
| Labour productivity (GDP per employee), real growth in % | -0.4 | **0.4** | **1.9** | **1.7** |
| **BALANCE OF PAYMENTS STATISTICS** | | | | |
| Current account BALANCE in EUR billion | -0.6 | **2.8** | **1.9** | **2.0** |
| - as a % of GDP | -1.0 | **4.4** | **2.8** | **2.8** |
| **PRICES AND EFFECTIVE EXCHANGE RATE** | | | | |
| Inflation (Dec/Dec), in % | 10.3 | **5.4** | **3.1** | **2.3** |
| Inflation (annual average), in % | 8.8 | **7.6** | **3.9** | **2.7** |
| Real effective exchange rate deflated by unit labour costs | -0.4* | **3.9** | **1.3** | **0.7** |
| **ASSUMPTIONS** | | | | |
| Foreign demand (imports of trading partners), real growth in % | 9.4 | **1.4** | **2.7** | **3.2** |
| GDP in the euro area, real growth in % | 3.3 | **0.8** | **1.3** | **1.6** |
| Brent Crude oil price in USD/barrel | 100.8 | **82.2** | **81.8** | **77.6** |
| Non-energy commodity prices in USD, growth | 5.3 | **-11.0** | **-3.0** | **1.0** |
| USD/EUR exchange rate | 1.054 | **1.090** | **1.096** | **1.096** |

*Source: IMAD (Institute of Macroeconomic Analysis and Development of the Republic of Slovenia), Autumn Forecast of Economic Trends, September 2023. Year 2022 SURS, BoS, ECB, EIA, 2023-2025 IMAD forecasts.*

*Note: *assessment of IMAD*

## b) Production and foreign trade

| Product | Unit | Historical data | | Estimate | Forecast |
|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 |
| Sawlogs and veneer logs, coniferous | | | | | |
| Production | 1000 $m^3$ ub | 1,510 | 1,687 | 2,150 | 2,000 |
| Imports | 1000 $m^3$ ub | 287 | 239 | 150 | 180 |
| Exports | 1000 $m^3$ ub | 286 | 283 | 650 | 550 |
| Apparent consumption | 1000 $m^3$ ub | 1,511 | 1,643 | 1,650 | 1,630 |
| Sawlogs and veneer logs, non-coniferous | | | | | |
| Production | 1000 $m^3$ ub | 467 | 497 | 630 | 600 |
| Imports | 1000 $m^3$ ub | 43 | 31 | 30 | 30 |
| Exports | 1000 $m^3$ ub | 248 | 247 | 370 | 350 |
| Apparent consumption | 1000 $m^3$ ub | 263 | 281 | 290 | 280 |
| of which, tropical logs | | | | | |
| Imports | 1000 $m^3$ ub | 1 | 1 | 0 | 1 |
| Exports | 1000 $m^3$ ub | 0 | 0 | 0 | 0 |
| Net Trade | 1000 $m^3$ ub | 1 | 1 | 0 | 0 |
| Pulpwood (round and split), coniferous | | | | | |
| Production | 1000 $m^3$ ub | 262 | 275 | 430 | 380 |
| Imports | 1000 $m^3$ ub | 264 | 268 | 170 | 200 |
| Exports | 1000 $m^3$ ub | 239 | 278 | 400 | 360 |
| Apparent consumption | 1000 $m^3$ ub | 288 | 264 | 200 | 220 |
| Pulpwood (round and split), non-coniferous | | | | | |
| Production | 1000 $m^3$ ub | 386 | 424 | 490 | 450 |
| Imports | 1000 $m^3$ ub | 117 | 84 | 80 | 90 |
| Exports | 1000 $m^3$ ub | 372 | 371 | 450 | 410 |
| Apparent consumption | 1000 $m^3$ ub | 131 | 137 | 120 | 130 |
| Wood chips, particles and residues | | | | | |
| Domestic supply | 1000 $m^3$ | 1,360 | 1,360 | 1,360 | 1,400 |
| Imports | 1000 $m^3$ | 272 | 273 | 240 | 240 |
| Exports | 1000 $m^3$ | 922 | 1,107 | 1,150 | 1,200 |
| Apparent consumption | 1000 $m^3$ | 710 | 525 | 450 | 440 |
| Other industrial roundwood, coniferous | | | | | |
| Production | 1000 $m^3$ ub | 18 | 4 | 6 | 6 |
| Other industrial roundwood, non-coniferous | | | | | |
| Production | 1000 $m^3$ ub | 30 | 41 | 46 | 46 |
| Wood fuel, coniferous | | | | | |
| Production | 1000 $m^3$ ub | 106 | 191 | 240 | 220 |
| Wood fuel, non-coniferous | | | | | |
| Production | 1000 $m^3$ ub | 937 | 957 | 1,050 | 1,050 |

| Product | Unit | Historical data | | Estimate | Forecast |
|---|---|---|---|---|---|
| | | **2021** | **2022** | **2023** | **2024** |
| Sawnwood, coniferous | | | | | |
| Production | 1000 $m^3$ | 904 | 983 | 990 | 980 |
| Imports | 1000 $m^3$ | 563 | 530 | 530 | 530 |
| Exports | 1000 $m^3$ | 840 | 848 | 850 | 850 |
| Apparent consumption | 1000 $m^3$ | 627 | 665 | 670 | 660 |
| Sawnwood, non-coniferous | | | | | |
| Production | 1000 $m^3$ | 140 | 143 | 145 | 145 |
| Imports | 1000 $m^3$ | 99 | 83 | 80 | 80 |
| Exports | 1000 $m^3$ | 118 | 121 | 80 | 80 |
| Apparent consumption | 1000 $m^3$ | 121 | 106 | 145 | 145 |
| of which, tropical sawnwood | | | | | |
| Production | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Imports | 1000 $m^3$ | 3 | 2 | 2 | 2 |
| Exports | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Apparent consumption | 1000 $m^3$ | 2 | 2 | 2 | 2 |
| Veneer sheets | | | | | |
| Production | 1000 $m^3$ | 23 | 28 | 27 | 25 |
| Imports | 1000 $m^3$ | 14 | 13 | 14 | 14 |
| Exports | 1000 $m^3$ | 29 | 32 | 33 | 30 |
| Apparent consumption | 1000 $m^3$ | 8 | 9 | 8 | 9 |
| of which, tropical veneer sheets | | | | | |
| Production | 1000 $m^3$ | 1 | 1 | 1 | 1 |
| Imports | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Exports | 1000 $m^3$ | 1 | 1 | 1 | 1 |
| Apparent consumption | 1000 $m^3$ | 1 | 1 | 1 | 1 |
| Plywood | | | | | |
| Production | 1000 $m^3$ | 102 | 94 | 90 | 98 |
| Imports | 1000 $m^3$ | 57 | 26 | 30 | 30 |
| Exports | 1000 $m^3$ | 80 | 71 | 70 | 70 |
| Apparent consumption | 1000 $m^3$ | 79 | 49 | 50 | 58 |
| of which, tropical plywood | | | | | |
| Production | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Imports | 1000 $m^3$ | 20 | 17 | 15 | 15 |
| Exports | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Apparent consumption | 1000 $m^3$ | 20 | 17 | 15 | 15 |

| Product | Unit | Historical data | | Estimate | Forecast |
|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 |
| Particle board (including OSB) | | | | | |
| Production | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Imports | 1000 $m^3$ | 197 | 175 | 140 | 140 |
| Exports | 1000 $m^3$ | 9 | 8 | 6 | 6 |
| Apparent consumption | 1000 $m^3$ | 189 | 168 | 134 | 134 |
| of which, OSB | | | | | |
| Production | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Imports | 1000 $m^3$ | 36 | 33 | 26 | 26 |
| Exports | 1000 $m^3$ | 2 | 2 | 2 | 2 |
| Apparent consumption | 1000 $m^3$ | 33 | 31 | 24 | 24 |
| Fibreboard | | | | | |
| Production | 1000 $m^3$ | 136 | 132 | 120 | 125 |
| Imports | 1000 $m^3$ | 57 | 28 | 25 | 30 |
| Exports | 1000 $m^3$ | 167 | 136 | 130 | 140 |
| Apparent consumption | 1000 $m^3$ | 26 | 24 | 15 | 15 |
| Hardboard | | | | | |
| Production | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Imports | 1000 $m^3$ | 8 | 4 | 2 | 4 |
| Exports | 1000 $m^3$ | 7 | 4 | 2 | 3 |
| Apparent consumption | 1000 $m^3$ | 1 | -1 | 0 | 1 |
| MDF (Medium density) | | | | | |
| Production | 1000 $m^3$ | 136 | 132 | 120 | 125 |
| Imports | 1000 $m^3$ | 39 | 24 | 23 | 26 |
| Exports | 1000 $m^3$ | 155 | 131 | 128 | 137 |
| Apparent consumption | 1000 $m^3$ | 20 | 24 | 15 | 14 |
| Other fibreboard | | | | | |
| Production | 1000 $m^3$ | 0 | 0 | 0 | 0 |
| Imports | 1000 $m^3$ | 10 | 0 | 0 | 0 |
| Exports | 1000 $m^3$ | 5 | 0 | 0 | 0 |
| Apparent consumption | 1000 $m^3$ | 5 | 0 | 0 | 0 |

| Product | Unit | Historical data | | Estimate | Forecast |
|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 |
| Wood pulp | | | | | |
| Production | 1000 m.t. | 86 | 73 | 63 | 68 |
| Imports | 1000 m.t. | 250 | 249 | 260 | 250 |
| Exports | 1000 m.t. | 5 | 1 | 2 | 2 |
| Apparent consumption | 1000 m.t. | 331 | 322 | 321 | 316 |
| Paper & paperboard | | | | | |
| Production | 1000 m.t. | 654 | 591 | 500 | 500 |
| Imports | 1000 m.t. | 435 | 367 | 390 | 390 |
| Exports | 1000 m.t. | 579 | 545 | 500 | 500 |
| Apparent consumption | 1000 m.t. | 510 | 412 | 390 | 390 |
| Wood pellets | | | | | |
| Production | 1000 m.t. | 149 | 164 | 175 | 180 |
| Imports | 1000 m.t. | 166 | 126 | 120 | 130 |
| Exports | 1000 m.t. | 204 | 165 | 140 | 160 |
| Apparent consumption | 1000 m.t. | 111 | 125 | 155 | 150 |

*$m^3$ ub = cubic metre without bark
*m.t. = metric tonne