Portugal Market Report 2024

Index

1 GENERAL ECONOMIC TRENDS [1]

1.1 NATIONAL ACCOUNTS

In 2023, the Portuguese Gross Domestic Product (GDP) grew 2.3% in volume, following the growth rate of 6.8% in 2022 - the highest since 1987 - and 5.5% in 2021 (Statistics Portugal, 2024a).

In nominal terms, GDP increased by 9.6% (12.2% in 2022), reaching around 265.5 billion euros. In the context of high inflation, the implicit GDP deflator accelerated in 2023 to a rate of change of 7.1% (5% in 2022).

Domestic demand presented a positive contribution (1.4 p.p.) to GDP annual growth, although significantly lower than that observed in the previous year (4.5 pp). The 2023 less expressive shift reflects the deceleration of private consumption and Investment:

- Private consumption grew by 1.6% in real terms (5.6% in 2022) while public consumption decelerated to a growth rate of 1% in volume terms (1.4% in the previous year).
- Investment increased by 1% in real terms, slowing down from the 3.5% growth rate recorded in 2022.

The contribution of net external demand to GDP was positive (0.9 pp), but less intense than in 2022 (2.3 pp), with Exports and Imports of Goods and Services decelerating from 17.4% to 4.1% and 11.1% to 2.2, respectively.

In 2023, the Portuguese public debt attained 99.1% % of GDP (127.4%, in 2022). The lending of the General Government sector was 1.2% of GDP, recovering 1.5 pp from 2022. The positive trajectory reflects the 9.9% increase in revenue more than compensating the 5.2% expenditure increase (Statistics Portugal, 2024a).

1.2 TRADE AND PRICES

In 2023, exports of goods decreased by 1.1% (-€854 million), compared to 2022, amounting to €77,549 million, in nominal terms (Statistics Portugal, 2024b). The downward shift reflects primarily the decrease of exports to Intra-European Union (EU) counties (-€847 million; -1.5%) and, less significantly, to Extra-EU counties (-€7 million).

[1] The overview of recent developments in Portuguese Socio-economic situation was mostly based on the official statistical data (Publications & Database) of Statistics Portugal (www.ine.pt). The main references were the annual Statistical Yearbook of Portugal, the international trade and economic accounts, construction and housing publications and databases (Statistics Portugal, 2024a. 2024b,2024c, 2024d, 2024f)

Spain, France, and Germany remained the main clients of exports, concentrating 49.6% of the total (+0.2 p.p. compared to 2022).

Imports of goods decreased by 4.2% (-€4,584 million compared with 2022), amounting to €104,901 million, reflecting the decrease in imports from Extra-EU countries (-19.9%). Whilst the imports from Intra-EU upraised by €2,069 million (+2.7%). Spain, Germany, and France remained the main suppliers, accounting for 52.3% of imported goods (+3.2 p.p. compared with 2022).

The trade deficit in goods reached -€27,352 million, representing a decrease of €3,731 million (-12.0%) compared with 2002 (figure 1).

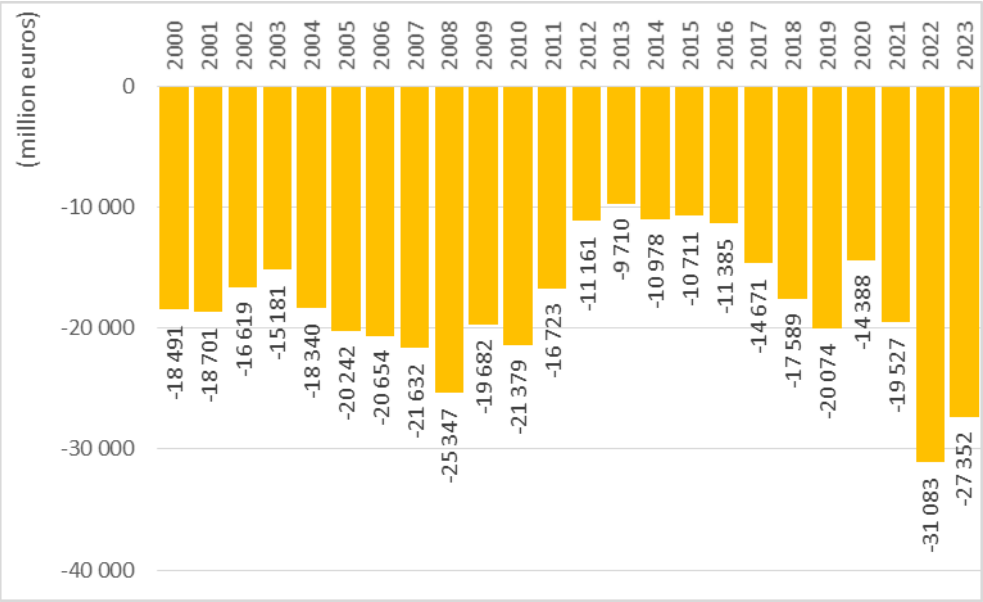

Figure 1 - National trade deficit.

In 2023, the average rate of change of the Portuguese Consumer Price Index (CPI) was 4.3%, 3.5 percentage points (pp) higher than in 2022 (Statistics Portugal, 2024a). The producer price index of agricultural products recorded an annual rate of change of 14.6% (22% in 2022).The agricultural crop output prices increased by 14.5% (18.5% in 2022) and animal output prices increased by 14.7% (28.4% in 2022). The index of purchase prices of the means of agricultural production increased by 2.1% (24.8% in 2022). The annual rate of change in goods and services currently consumed in agriculture (input I) stood at 1.8% (26.8% in 2022), while goods and services contributing to agricultural investment (input II) increased by 4.7% (10.7% in 2022).

1.3 ENVIRONMENT AND ENERGY

Portugal is energetically dependent on the outside, importing a large share of its primary energy consumption (70.2%, in 2022). Renewable energy sources contributed 34.7% to the gross final energy consumption (Statistics Portugal, 2024a).

In 2022, greenhouse gas emissions without LULUCF (Land Use, Land-Use Change, and Forestry), including indirect CO2 emissions, were estimated at 56.4 MtCO2 eq., corresponding to an increase of 0.1% in total emissions between 2021 and 2022.

The efforts of industrial enterprises to promote environmental performance standards in their production processes resulted in an investment of €195 million (+48.1% than in 2021).Expenditure totalled €392 million and income stood at €278 million (+€158 million less than in 2021).

1.4 DEMOGRAPHY

As of 31 December 2023, the resident population in Portugal was estimated to be 10,639,726 people, 123,105 more than in 2022 (10,516,621), increasing for the fifth consecutive year.

The population increase resulted from the growth of +155,701 people in net migration (crude rate of net migration +1.47%), which counterbalanced the negative natural balance of -32,596 people (crude rate of natural increase -0.31%), resulting. in a crude rate of increase of 1.16% (Statistics Portugal, 2024a).

1.5 LABOUR

In 2023, the active population in Portugal amounted to 5,325.2 thousand people, corresponding to an activity rate of the working-age population (16 to 89 years) of 61%, 1.2 percentage points (pp) higher than in the previous year.. The active population with at least upper secondary education in the total population aged 25 to 64 was 23.9 p.p. higher than in 2011 (from 31% to 54.9%).

The employed population was estimated at 4,978.5 thousand people, increasing by 97.1 thousand people (2.0%) in comparison to 2022. In 2023, 83.5% of the total employed population had permanent contracts (Statistics Portugal, 2024a).

In 2022 the average monthly (gross) earnings of employees in Portugal were €1,369 This figure was 75 euros (5.8%) higher than in the previous year (GEP, 2024).

1.6 CONSTRUCTION

In 2021, the Portuguese housing stock was estimated at 3.6 million buildings and 6.0 million conventional dwellings, representing an increase of approximately 0.8% and 1.7% vis-à-vis 2011 (Statistics Portugal, 2024c). In 2023, 23,439 building permits were issued, lessening -6.1% vis-à-vis 2022. The number of licenses for new construction for family housing totalled 14,042, representing a decline of -9.4% (Statistics Portugal, 2024d).

2 POLICY MEASURES IMPACTING FOREST MANAGEMENT AND FOREST PRODUCTS TRADE[2]

2.1 CLIMATE CHANGE AND ENERGY

The Portuguese framework for climate and energy policy (APA, 2024a) is aligned with the European Commission strategic package to tackle in different areas the Paris Agreement global challenge.

The European Green Deal envisage to tackle climate and environmental-related challenges setting the policy initiatives with the overarching aim of making Europe climate neutral in 2050. The European Green deal is the roadmap for the EU to become climate-neutral by 2050. The goal of zero net emissions is enshrined in the climate law.

The Commission has put EU on track to exceed 2030 targets with the completion in 2023 of the key 'Fit for 55' legislative package for delivering the EU's 2030 climate targets

A new set of guidelines to assist Member States in updating and implementing comprehensive national adaptation strategies, plans and policies in line with the European Climate Law, the EU Strategy on adaptation to climate change and the revised Renewable Energy Directive.

Those instruments are being or have been transposed to the Portuguese legal system, underlining for the direct or indirect application/impact on forest sector:

- Climate Basis Law (Law 98/2021) setting out the basis for the national climate policy;
- The Roadmap for Carbon Neutrality 2050-RNC2050 (Government Order 107/2019), establishing the vision and pathways to achieve carbon neutrality by 2050;
- The National Roadmap for adaptation 2100, a project aiming to evaluate de vulnerability of the Portuguese Territory to climate changes in the XXI century
- The National Strategy for Climate Change Adaptation, (approved by the Government Order 56/2015 and extended until 31 December 2025 by the Government Order n.º 53/2020), establishing objectives and the model for the implementation adaptation solutions in different sectors, comprising forestry, biodiversity and energy, to the effects of climate change;

[2] Based on references disseminated by the National Authorities empowered within the policies of forests, environment, economy and energy, mainly: the Portuguese Agency for Environment (apambiente.pt), endorsed on Climate Change themes; the Directorate-General of Economic Activities (https://www.dgae.gov.pt/) with attributions on circular economy (https://eco.nomia.pt/); the Directorate-General of Energy and Geology (http://www.dgeg.gov.pt/), with competence on energy policies; the Institute for Nature Conservation and Forests (https://www.icnf.pt/), the National Authority for Nature Conservation and Biodiversity and the National Authority for Forests.

- The National Integrated Energy and Climate Plan 2030 (Government Order n.º 53/2020),climate and energy keystone policy instrument towards a carbon neutral future, for 2021-2030 decade, , which is now being revised;
- The Climate Change Adaptation Action Program (Government Order 130/2019), complements and systematizes the work carried out in the context of the National Strategy for Climate Change Adaptation, foreseeing implementing adaptation measures (its second objective).

2.1.1 CLIMATE BASIS LAW

Portuguese Climate Basis Law recognizes the climate emergence situation, setting within the objectives of climate policy, namely:

- To promote the use of energy from renewable sources and their integration into the national energy framework system;
- To promote the circular economy, improving energy and resource efficiency;
- To develop and reinforce current sinks and other carbon sequestration services, strengthening national resilience and capacity to adapt to climate change;
- To foster prosperity, green growth and social justice, fighting inequalities and generate more wealth and employment;
- To protect and promote the regeneration of biodiversity, ecosystems and services;
- To stimulate sustainable financing and promote information on climate risks.

The climate policy governance is endorsed under:

- The Council of Climate Action, a specialized body, whose function is to elaborate studies, evaluations and opinions on climate action and related legislation;
- The Municipalities mandatory obligation to prepare and approve municipal climate action plans, which are to be incorporated, at regional level, under a regional climate action plan.

The sectoral climate policy encompasses the promotion of State policies envisaging the production of electricity from renewable sources.

The use of residual forest biomass for energy is to be articulated with the instruments of rural fires prevention and land management, namely with the system of Rural Fire Integrated Management and with the Regional Forest Management Plans;

Moreover, the subordinating principles of the energetic national policies covers, namely:

- The development of criteria to grant green certificates to attest the renewable electricity and gases sources;

- The certification of origin of residual forest biomass;
- The inspection on a regular basis of the biomass categories being used on electric production;
- The ban on the utilization of quality standard wood, biomass from dedicated energy crops and residual biomass from far away/distant origins on the production of energy from biomass;

2.1.2 ROADMAP FOR CARBON NEUTRALITY 2050

Portugal has committed internationally to reduce its greenhouse gas emissions so that the balance between emissions and removals from the atmosphere, namely through the use of forests, will be zero by 2050. The goal of a net zero carbon footprint has been labelled "carbon neutrality".

The main objective of the Roadmap for Carbon Neutrality 2050 is to identify and analyse the implications associated with technically feasible, economically viable and socially accepted alternative trajectories.

The roadmap will embark on alternative, low-carbon development paths until 2050 in four areas of intervention linked to those sectors mainly responsible for greenhouse gas emissions and carbon sequestration: energy; transport and mobility; waste; agriculture forest and land use. These will be based on three multifaceted aspects: socioeconomic scenarios; circular economy; societal participation.

The Roadmap consider and systematise the work done under the National Strategy for Adaptation to Climate Change, endorsing within its actions lines to tackle impacts and vulnerabilities the: prevention of rural wildfires; implementation of practices of soil conservation and fertility; increase the resilience of ecosystems, species and habitat's to the effects of climate change; prevent the installation and expansion of invasive species, diseases transmitted by vectors, agricultural and forest pests and diseases. The financing instruments mobilized to implement the actions and measures of the roadmap are laid down on it.

2.1.3 THE NATIONAL ROADMAP FOR ADAPTATION 2100

The National Roadmap for Adaptation 2100 will set guidelines on adaptation to climate change for territorial and sectoral planning.

The preparation of the National Roadmap for Adaptation 2100 started in 2020 and is expected to end in 2023. The work underlying the preparation of the Roadmap aims to assess Portugal's vulnerability to climate change, as well as estimate the costs of economic sectors in adapting to the expected impacts of climate change by 2100.

2.1.4 NATIONAL STRATEGY FOR CLIMATE CHANGE ADAPTATION 2020

The National Strategy for Climate Change Adaptation 2020, now extended until 31 Dec 2025, sets goals and the model for the implementation of solutions for the adaptation

of different sectors to the effects of climate change: agriculture, biodiversity, economy, energy and energy security, forests, human health, security of people and goods, transport, communications and coastal zones.

For this purpose, the Strategy aims to improve the level of knowledge about climate change and promote the integration of adaptation to climate change in sectoral policies and territorial planning instruments. Also intends to help central, regional and local administration and policy makers to find the means and tools to implement adaptation solutions based on technical-scientific knowledge and good practices.

This Strategy includes six thematic areas that cut across all sectors, including forestry: research and innovation, financing and implementation, international cooperation, communication and dissemination, adaptation in spatial planning and adaptation in water resources management. comprise

2.1.5 NATIONAL INTEGRATED ENERGY AND CLIMATE PLAN 2030

The National Integrated Energy and Climate Plan 2030 comprises on its targets the reduction of greenhouse gases by -45% to -55% and using renewable sources by 47% up to 2030

The Plan recognizes the role of forests and forest biomasses toward the measures of action to decarbonize the economy, promote sustainable agriculture and enhance carbon sequestration, advocating the:

- Augmentation of the natural capacity of forests as carbon sinks;
- Promote more effective forest management with the reduction of burned area;
- Enhance the role of bioeconomy through the intensification of active afforestation, promotion of more efficient forestry practices and upgrading ecosystem services;
- Promotion of circular use of materials, including wood and non-wood forest productions and derived products, and the cascading use of energy, enabling the transition to a circular economy;
- Progress with green taxation;
- Promotion of R&D projects that support the transition to a low-carbon economy.

The Plan covers also actions to reinforce and promote renewable sources and reduce the country dependency on energy, endorsing within its measures the acceleration of the contribution of small renewable production in market mechanisms by promoting their aggregation and enhance the purchase and use of decentralized heat and cold production systems from renewable energy sources.

2.1.6 CLIMATE CHANGE ADAPTATION ACTION PROGRAM

The Climate Change Adaptation Action Program complements and systematizes the work carried out in the context of the previews National Strategy for Adaptation to Climate Change. The Program elects eight lines of action with direct intervention in the territory and infrastructures, complemented by a transversal line. These lines aim to address the main impacts and vulnerabilities identified for Portugal.

The Program lines of action and correspondent measures encompass:

- Rural fire prevention (e.g. economic valorisation of biomass; creation of discontinuity buffers and plots; reconfiguration of infrastructures and support systems);
- Conservation and improvement of soil fertility (e.g. erosion control; water retention; soil composition and structure);
- Diseases, pests and invasive species (e.g. enhancement of genetic material; disease control and invasive alien species; surveillance; information and communication);
- Capacity building, awareness raising and adaptation tools (e.g. monitoring and decision making; capacity building and planning; communication).

The operationalization of the Program is ensured through two parallel approaches to promote adaptation actions: one in the short term (by 2020); and one in the medium term (by 2030). These approaches embody guidelines to mobilize financial resources. Additionally, at medium term, policies and political instruments are also defined and, the Plan, promotes the implementation of structural actions to reduce the vulnerability of the territory and economy to climate change impacts.

2.2 DESERTIFICATION

The National Action Program to Combat Desertification (PANCD), approved in 2014 (Government order n.º 78/2014, of 24 of December), follows international agreements in the framework of the United Nations Convention to Combat Desertification (UNCCD). The first strategic objective of the PANCD concerning soil and water conservation is a consequence of UNCCD commitments. The map of susceptibility to desertification for mainland Portugal was drawn under the framework of this Program.

2.3 CIRCULAR ECONOMY AND CASCADING USE OF BIOMASS

Portugal is one of the EU member states that has come up with a Circular Economy strategy, roadmap and action plan, in line with the goals of the European Commission.

The ambition set out for Portugal 2050 was designed to leverage and spur development of work within the Action Plan for the Circular Economy (APCE), Government Order n.º 190-A/2017, which advocates on its elements (ECO.NOMIA, 2024):

- A carbon neutral economy that is efficient and productive in its use of resources encompassed by neutral GHG emissions and effective use of materials, with the significant fall in their extraction, importing and in final waste generated, attaining better management and value extraction from the resources in circulation;
- Knowledge as impulse, enhancing solutions in products, services, business models, consumption/use and behaviour with lower emissions and resource intensity, integrated into business models that spur job creation, efficient and effective use of mobilized resources, and their lasting economic value;
- Inclusive and resilient economic prosperity through economic development impacting all sectors of society and the resilience against price and risk volatility and gradually decoupled from negative environmental and social impacts;
- A flourishing, responsible, dynamic and inclusive society.

The plan considers three levels of actions:

- Macro, structural in scope, produces transversal and systemic effects which enable society to appropriate the principles of the circular economy;
- Meso, or sectoral, covering actions or initiatives defined and accepted by all players in the value chain of sectors relevant to raising productivity and the efficient use of resources, seizing the economic, social and environmental benefits;
- Micro, regional or local, related to actions or initiatives defined and accepted by all regional and/or local government, economic and social actors which incorporate a local economic aspect and which emphasise this in the approach to social challenges.

The different levels of actions are inter-related and reinforce each other positively, creating feedbacks that evolve the context iteratively and allow knowledge, policies, projects and results to be consolidated, spurring the actors involved.

The plan is based on the understanding and experience common to four areas of governance (science, technology and high education; economy; **environment, agriculture, forestry and rural development**), comprising the “inter-ministerial group” which drafted the APCE. This involved a survey of current performance, known measures, an analysis of the European action plan, and benchmarking against other circular economy plans, from which actions were proposed with their respective guidelines.

The example of Portuguese forest sector is reiterated by the long term practices under the principals of circular economy and cascading use, covering resources efficiency and reutilization of by-products and residues.

2.4 SUSTAINABLE BIOECONOMY

Portugal is one of the EU member states that has come up with an Action Plan for Sustainable Bioeconomy (Government Order 183/2021).

In line with EU policies, namely the 2018 EU bioeconomy strategy update, the European Green Deal and with the Development Goals of the United Nations 2030 Agenda, the Plan recognizes the central role of sustainable and circular bioeconomy as an efficient option to promote, deepen and facilitate the green transition.

It is assumed present challenges requires jointly actions in diversified and transformative strategic areas, entailing commitments and measures to promote sustainable production and new business models, research and innovation and priority access to financing (APA, 2024b).

The PT Action Plan for Sustainable Bioeconomy cover five key intervention axis:

- Enhance sustainable production and the intelligent use of bio based regional resources;
- Promote research, development & Innovation, strengthening scientific capabilities and the national technological excellence;
- Develop sustainable circular bioindustries, innovating value chains and processes;
- At societal level, promote knowledge and skills capabilities through education and training; and
- Monitoring Bioeconomy to assess developments, understand the limits of ecosystems and promote certification

The Plan also covers the measures under the Portuguese Recovery and Resilience Plan (RRP) within the promotion of sustainable bioeconomy, endorsing public and private investments on textiles, clothing, footwear and the actions for natural resins valuing.

The bioeconomy potential of primary bio resources, resulting from well established forestry chains, agriculture, fishing and aquaculture activities, is underlined and linked with the other sectors of the economy, envisaging the promotion of new synergies. The plan vision is focused on processing and adding value to bio raw materials, accounting with the involvement of traditional sectors in establishing new productive chains.

2.4.1 FORESTRY AND FOREST BASED CHAINS

The Action Plan for Sustainable Bioeconomy emphasizes the forestry key role as a contributor to bioeconomy.

Besides the forest territorial representation on Portuguese territory (36%), the bio resources based on forests, to be further processed, are integrated under a plethora of activities, comprising, timber for construction, wood furniture, textiles, clothing and

footwear, bioplastics, paper, chemicals (as derived from resins), cork stoppers, bioenergy, etc..

From the bioeconomy perspective, the whole Portuguese forest sector has long demonstrative examples of the application of good practices:

- Resin, presently, natural resins are being valued as a bioproduct, potentiating larger applications on the market;
- Biocharcoal, its application to improve soil fertility is being considered as an option instead of chemical fertilizers;
- Wood residues and post-consumer timber have been used largely, following the circular economy principles, as raw by materials on wood panels and furniture industries.

The development of forest based bioconomy faces several structural challenges, summarizing the large prevail of smallholding and absent forest owners, associated with the high risks linked to forest investments.

In this context, the Action Plan for Sustainable Bioeconomy lines up on the measures to promote bioeconomy based on forest the structuring of primary activities through the :

- Promotion of active sustainable forest management;
- Scale up the unity of management areas (ex: from Integrated areas of Landscape Management to Forest Management Unities & land tenure reform);

Strengthening research, development & Innovation, envisaging the sustainability of raw materials supply and along the value chains, is too considered of outmost relevance to promote bioeconomy based on forests.

2.5 GENDER AND HUMAN RIGHTS RELATED TO FOREST SECTOR

In Portugal, since 2017, the economic activities directly related with forest chains are, on average, responsible for 74 thousand jobs, corresponding to 2.3% of the total employment (Table 1). The sector employment is larger when wholesale and retail trade are included, with around 100 thousand employees (GEP 2024).

Employment in the forest sector is more concentrated in coastal areas. Nevertheless, forest jobs are also significant in the remaining territory, having an essential role in the mitigation of economic structural fragilities in inland regions.

Table 1 - Forest sector employment.

Activity	2017	2018	2019	2020	2021	2022
Forestry, logging and related services	8 731	6 660	5 908	6 093	8 992	9 675
Manufacture of wood, wood products, except furniture; of cork and cork products	24 754	25 549	25 543	24 550	24 897	26 206
Manufacture of pulp, paper and paperboard and related products	11 561	12 847	12 747	13 114	13 238	13 783
Manufacture of furniture	24 202	33 185	28 159	26 277	27 700	27 117
Resins and resin products	302	172	205	208	317	307
Fruits and nuts	151	208	242	448	545	592
Forest sector (total)	69 701	78 621	72 804	70 690	75 689	77 680
Total	2 946 903	3 060 489	3 110 949	3 085 566	3 102 345	3 337 082

The Gender Employment Gap[3] (EUROSTAT, 2024) was on average 6.3%, since 2017 (5.6%, in 2023). In part, this is also reflected on the lower rates of occupational accidents (Table 2) observed in women in comparison to men (GEP 2024).

Table 2 - Occupational accidents in 2022 in total economy and forest related activities

	Total		Homens		Mulheres	
	(number)	(%)	(number)	(%)	(number)	(%)
Agriculture, Forestry and Fishing	6 703	3,6	5 461	4,4	1 242	2,1
Manufacture of wood, wood products, except furniture; of cork and cork products	2 560	1,4	2 165	1,7	395	0,7
Manufacture of pulp, paper and paperboard and related products	755	0,4	596	0,5	159	0,3
Manufacture of furniture	2 871	1,6	2 331	1,9	159	0,3
TOTAL	184 622	100	125 523	100	59 099	100

Gender inequality still prevails regarding the average gross monthly earnings of employees as shown in table 3 (GEP, 2024). The Gender Pay Gap[4] was on average 11% since 2017 (12.5%, in 2022). In forest and forest based activities a GPG>0 was observed too (EUROSTAT, 2024).

Table 3 – Average monthly wage by sex.

(euros)	2017	2018	2019	2020	2021	2022
Total	1 133	1 170	1 210	1 251	1 294	1 368
Men	1 237	1 274	1 312	1 349	1 396	1 476
Women	1 011	1 047	1 087	1 131	1 172	1 238

2.6 FORESTS POLICY

The Portuguese forest sector is subordinated to the instruments of political administration provided in the 1976 Portuguese Constitution and endorsed by the Forest Policy Act of 1996 (Law n.º 33/96), as well as other specific legislation.

The European commitments for forest policies are incorporated in the Portuguese National Strategy for Forests (NSF), which was approved in 2006 and updated in 2015, by the Government Order n.º 6-B/2015.

The NSF assumes the maximization of the total economic value of forest as its main purpose, and it's organized in the following strategic objectives: minimization of fire risks and biotic agents; specialization of the territory; enhancement of productivity through sustainable forest management; internationalization and increase in products value; to enhance efficiency in general and to improve the sector's competitiveness.

The NSF aims and targets are articulated within seven Regional Forest Plans (PROF).

[3] Gender Employment Gap: the difference between the employment rates of men and women aged 20-64

[4] Gender Pay Gap: represents the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees.

The PROF (Decree-Law n.º 16/2009, in its present redaction) are national sectorial policy instruments, embodied under the scope of the Portuguese territorial planning legal system. At regional scale, they encompass the strategic framework, guidelines and specific norms regarding the use, occupation and forest management.

2.7 FOREST MANAGEMENT

The Forest Intervention Zones (ZIF) created by Decree-Law n.º 127/2005 (altered by Decree-Law n.º 15/2009, with Declarations of rectification n.º 10/2009, Decree-Law n.º 2/2011, n.º 27/2014 and n.º 67/2017) endorse the association of forest owners and/or forest producers for a common management, enabling the cooperative management of forest lands and mitigating their splitting up. This legal instrument permits the combination of forest properties to create larger management unities. The ZIF main objectives are: to promote sustainable management in forest spaces; to coordinate, in a planned way, the protection of forest and natural spaces; to reduce ignition and fire propagation conditions; to recover these spaces.

The Forest Management Plan (FMP) legislation (Decree-Law 16/2009, in its present redaction) establish mandatory FMP on public and community forests, on private properties, above a size defined regionally under each PROF, and on the "forest intervention zones" (ZIF). In the Mainland, about 4,336 FMP are approved, which cover 1.996 million hectares, corresponding to 62% of the total forest area. Eucalyptus stands have a FMP coverage rate above the national average.

The small forest holdings, below the size of mandatory FMP and not integrated by a ZIF zone, are still subject to the minimum standards endorsed by each PROF. These standards entail:

- Preventive forestry standards;
- General forestry standards;
- Forestry models adopted within each PROF following the homogeneous division of the region in sub-regions.

2.8 HARVEST AND CUTTING LEGAL REGIME

The Decree-Law 31/2020 establishes the mandatory declaration of cuts, extraordinary cuts, thinning or uprooting of forest trees to be commercialized or auto-consumed by industry, endorsing as well the communication of the operations within the primary transformation and exports of wood to grant its traceability. The declaration is to be made in digital format in the specific electronic Cutting Information System (SiCorte) located at the Institute for Nature Conservation and Forests (ICNF, I.P.), the National Forest Authority website.

The premature cutting of *Eucalyptus* and *Pinus* species in areas superior to two hectares requires the previews authorization by the National Forest Authority (Decree-Law n.º 173/88). In Eucalyptus the criteria defined by law to consider the felling as

premature entail the stands with at least 75% of trees with less than 12 centimetres, of diameter, or 37.5 centimetres, of perimeter, at chest height.

2.9 AFFORESTATION

The legal regime of afforestation and reforestation actions is regulated by Decree-Law n-º. 32/2020, the third amendment to Decree-Law 96/2013. This legal regime establishes the essential technical standards to be considered in the scope of afforestation and reforestation project design, and the minimum qualifications required for project design and subscription.

2.10 TIMBER AND TIMBER PRODUCTS MARKETS

The European Timber Regulation (EUTR) aims to counter illegal logging and associated trade in timber and timber products in EU member states, ultimately envisages contributing to the sustainable management of forests and to reduce emissions from deforestation and forest degradation beyond EU borders. The EUTR key obligations to counter the trade in illegally harvested timber and timber products are:

- Prohibits the placing on the EU market of illegally harvested timber and products derived from such timber;
- Requires traders who place timber products on the EU market for the first time to exercise 'due diligence'.

The legislation to apply the timber regulation in Portugal (Decree-Law n.º 76/2013) establishes the register of all the operators with activity in the country as mandatory. The register is made electronically through a platform named «RIO system». The link to the «RIO system» is located at the website of ICNF, I.P., the competent authority for the application of the Regulation, and is accessible since the 26 of July, 2013. The main indicators are also available in the same website (https://www.icnf.pt/florestas/fileirasflorestais/operadordemadeiraederivados).

It was considered that the register of the operators was a good instrument to verify the application in Portugal of the obligations laid down by the timber regulation. The register was considered essential to identify the operators working in Portugal, enabling to plan the monitoring actions to verify the application of the "due diligence"

2.11 FOREST BIOMASS FOR ENERGY

The production and use of forest biomass for energy is regulated by the Decree-Law n.º 5/2011 (chanced by Decree-Law n.º 179/2012, Decree-Law n.º, 166/2015 and Decree-Law n.º 48/2019). Within its terms, in order to benefit the incentive established by the legislation, the promoters of forest biomass power plants are, namely, obliged to:

- Organize and maintain a system of data records that allows the identification of the type and characteristics of the biomass consumed at the plant;

- Present an action plan for 10 years developed in close articulation with forest producer and local authorities, aiming the sustainability of the supply of biomass on the long-run.

The legal regime of forest biomass for energy new centrals is endorsed by the Decree-Decree-Law 64/2017 (altered by the Decree-Laws 105/2023, 73/2022, and 120/2019) and Ordinance 267/2022. This regime bound the definition of new biomass power centrals, entailing the installation for the production of electrical and thermal energy, with the production in cogeneration or trigeneration, which uses biomass as fuel, and may incorporate a maximum percentage of 5% of fossil fuel as auxiliary and starter fuel. Other requirement is the installation of new biomass plants within the proximity to critical fire risk zones.

3 RESEARCH AND INNOVATION IN FORESTRY

The Portuguese National Strategy for Forests (NSF) acknowledges the different components of the value of forests services - regulating, cultural, supporting and provisioning, such as timber and cork - stressing the need for tools to improve their economic valuation and to assess the forest ecosystem's condition.

Within that scope, new technological advances based on digitalization processes and Artificial Intelligence (AI) are seen to be instrumental in the analyses of complex forestry and environmental data, enabling predictive modelling and the application of better sustainable practices on forests and forestry based values.

Those tools are being developed and implemented under the concept of Forest 4.0. It is recognized they are transforming forestry and the knowledge about forests and based activities, namely, to provide greater protection, prediction and anticipation of the impact of rural fires, both on the forests assets, on the forest based sector, on energy use and on transportation.

The Forest 4.0. tools are considered a top priority of forest research and investments in public and private policies, strategies and investments. These goals are being transposed to public support/subventions to the economy and forest activities.

The Recovery and Resilience Plan (RRP) is guided by a concept of sustainability inspired by the United Nations Sustainable Development Goals (SDGs), and comprises on its pillars:

- The Green Transition package covering a set of reforms and investments in technologies and ecological capacity including renewable energy, the adaptation to climate change, circular economy and biodiversity;
- The Digital Transformation package aiming to implement and promote networks of high capability, digitalization of processes in public services and private enterprises, with a focus on small and medium-sized enterprises (SMEs), supporting digital capability and research.

Moreover, the NextGenerationEU package aims to reinforce some public programs and funds and contribute to long-term sustainable growth and the response to the challenges of the twin climate and digital transitions.

The public and private forestry stakeholders have been proactively and efficiently using the public and private funds to support investments to incorporate new technologies into forestry practices. The governance organization within research and innovation frames the quality of the results attained with those investments. Network approaches have been established to accomplish those goals.

The Competence Centres (CC) are foreseen in the National Strategy for Forests (NSF) and in the Agriculture's Strategy for Agro-food and Forestry Research and Innovation. They bring together a set of existing capabilities in the various dimensions of knowledge of forestry through the involvement of entities from the National Scientific and Technological System (STCN), Forest companies, and public Administration bodies. The partners forming part of the CC are embodied within the definition of sectoral research agendas.

So far, the Competence Centres in activity explicitly focusing on the forest sector are the:

- CC of cork oak and cork;
- CC of *Pinus pinea* and pine nuts;
- CC of *Pinus pinaster*.;
- the CC of oaks and endemic broadleaves is still in the phase of being launched.

4 MARKET DRIVERS

4.1 GENERAL OVERVIEW

The Portuguese forest sector has long been export oriented. Forest products exports have been among the country's main exports, accounting in the current millennium for 9% of the total exports, while the sector is only responsible for 4% of the imports (figure 2). After 2012 the exports surpass the imports in more than 2.5 thousand million euros (table 4), making it one of the most international markets dependent sector of the Portuguese economy (Statistics Portugal, 2024b).

Portugal is a price-taker in international markets. The fact that a large share of forest production is exported and that Portugal is primarily a price taker makes it very vulnerable to market developments elsewhere (Rego *et al*, 2014).

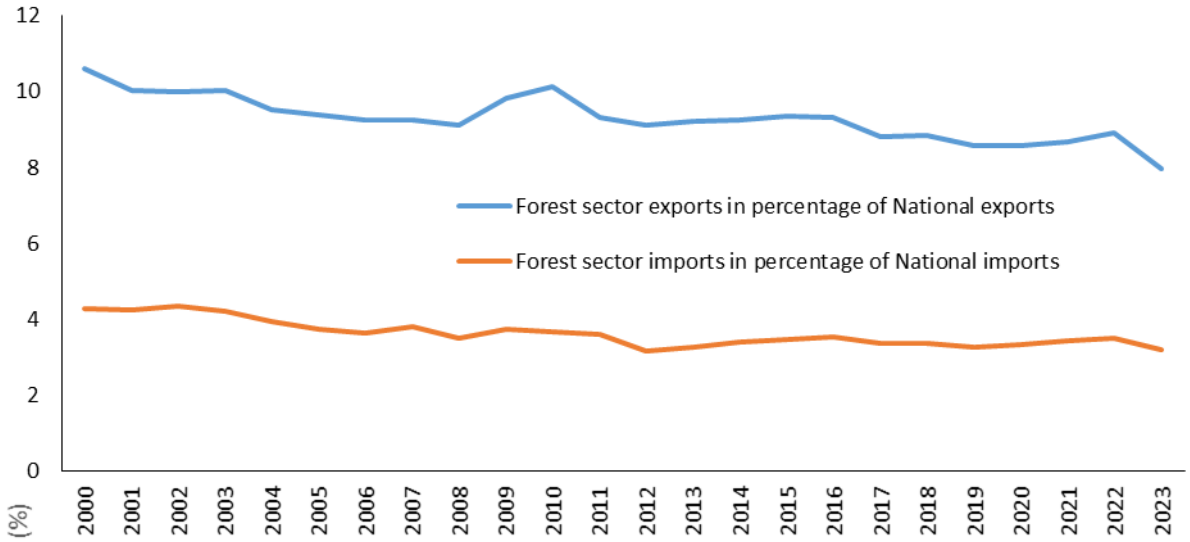

Figure 2 – Forest sector exports & imports in the context of the Portuguese international trade.

Table 4 - National and forest sector commercial balance.

	Commercial balance (million €)		Coverage rate of exports over imports (%)	
Year	Forest sector	National	Forest sector	National
2000	1 127	-18 491	158	60
2001	1 059	-18 701	153	60
2002	1 194	-16 619	161	63
2003	1 525	-15 181	182	66
2004	1 487	-18 340	177	63
2005	1 450	-20 242	176	61
2006	1 685	-20 654	183	63
2007	1 714	-21 632	175	64
2008	1 664	-25 347	174	61
2009	1 496	-19 682	178	62
2010	1 983	-21 379	192	64
2011	2 224	-16 723	204	72
2012	2 676	-11 161	251	80
2013	2 861	-9 710	254	83
2014	2 904	-10 978	246	81
2015	3 112	-10 711	250	82
2016	3 081	-11 385	243	81
2017	3 120	-14 671	234	79
2018	3 180	-17 589	226	77
2019	2 585	-20 074	201	75
2020	2 363	-14 388	205	79
2021	2 670	-19 527	194	77
2022	3 138	-31 083	182	72
2023	2 792	-27 808	183	74

4.2 CERTIFICATION SCHEMES

The export orientation of Portuguese forest sector is the dominant factor on the option for certification schemes. Presently two systems are followed:

- The Programme for the Endorsement of Forest Certification (PEFC) with 341 thousand hectares of certified area, 5,234 forest producers and managers, 256 Chain of Custody certificates related to 698 certified enterprises (PEFC Portugal, 2024).
- The Forest Stewardship Council (FSC) with 621,168 hectares of certified area, corresponding to 33 certificates of forest management, 8 certificates of forest ecosystems service, 649 Chain of Custody certificates, and 2 projects certification (FSC Portugal, 2024).

5 DEVELOPMENTS IN FOREST PRODUCT MARKETS

5.1 WOOD AND TIMBER BASED PRODUCT MARKETS

The overview of timber production in current millennium as shown by the forestry accounts (table 5) done by Statistics Portugal (2024f) under the national economic accounts, indicates that the production, in value (real prices: base 2016), of coniferous timber for industrial uses has been decreasing, observing the average annual variation of -1%, between 2000 and 2022. Even so, in the current decade (2010 to 2022) positive changes of 0.3% (annual) and 4% (total) are to be noted. The non-coniferous roundwood shows a positive shift since 2000 (average 2%) and between 2020 and 2022 (9%).

The comparison of the production in volume (cubic meters) between 2023 vis-à-vis 2000 (Faostat, 2024), as reported under the Joint Forest Sector Questionnaires (JFSQ), shows: In the coniferous timber removals the reduction shift of -1.5% on average; whilst the non-coniferous timber has been rising on average 2.4%. In the present decade (between 2010 and 2023) the trends were similar, thought the average increase in non-coniferous was higher (3.4%), whereas in coniferous the decline was lower (-0.6%).

In 2023, wildfires incidence in Portugal kept the declining shift registered since 2018 (figure 3). This trend followed the extreme impact of their severity in 2017, when a total burnt area of 537,131 hectares was registered comprising: 497,462 hectares in forest space (328,851 hectares in forest stands and 168,611 hectares in scrublands); and 39,669 hectares in agriculture areas. In 2023, from 1 January to 15 October, the total burnt area was 34,420 hectares, with 32,275 hectares in forest space (19,281 hectares in forest stands and 12,994 hectares in scrublands); 2,145 hectares of the total burnt area were in agriculture lands (ICNF, 2023).

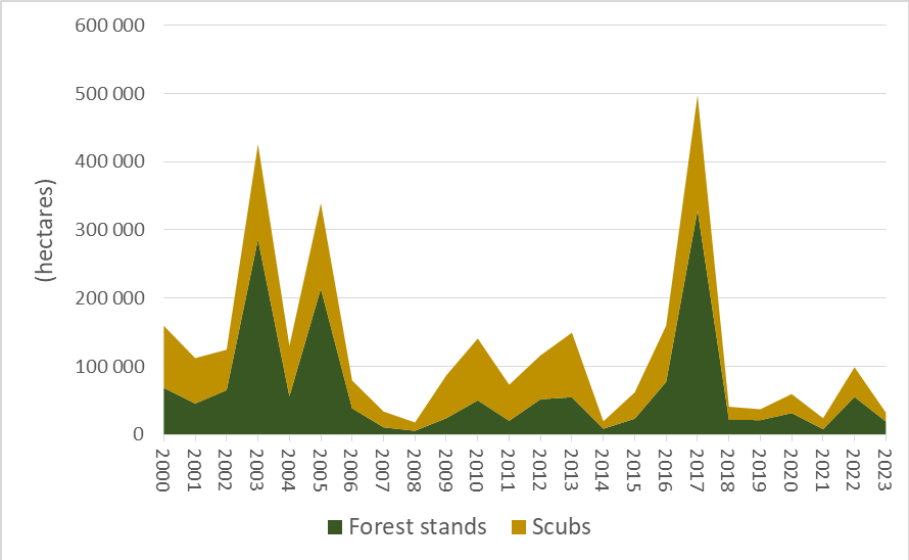

Figure 3 – Burnt areas in forest space, comprising forest stands and scrublands.

The quality of burnt wood is depreciated or even unappropriated for industrial uses. Thought, a part of the burnt wood can be used by wood based chains, changing on the short term the markets pattern.

Table 5 – Forest production structure between 2000 and 2022.

			2000	2010	2020	2022	2020/2022	2000/2022		2010/2022	
			10^6 euros				rate of change (%)				
							annual	annual average	total	annual average	total
Forestry and logging output at basic prices			1 304	1 172	1 214	1 217	0,3	-0,3	-7	0,3	4
	Forestry goods at basic prices		1 006	855	748	759	2	-1	-24	-1	-11
	Timber	Coniferous timber for industrial uses	191	142	141	147	5	-1	-23	0,3	4
		Sawlogs and veneer logs - coniferou	162	119	125	129	4	-1	-20	1	9
		Pulp wood (round & split) - conifero	27	17	12	12	4	-3	-54	-2	-27
		Other wood - coniferous	6	6	5	6	26	0,1	1	-0,02	-0,2
		Non-coniferous timber for industrial uses	205	269	271	294	8	2	44	1	9
		Sawlogs and veneer logs -non-conife	2	6	5	8	49	11	221	3	30
		Pulp wood (round & split) - non-con	201	261	264	285	8	2	42	1	9
		Other wood - non-coniferous	2	2	1	1	12	-1	-22	-2	-22
		Biomass for energy	50	50	59	60	2	1	20	2	20
		Growing stock	261	132	56	59	5	-4	-78	-5	-56
	Other products	Cork	355	244	197	178	-10	-2	-50	-2	-27
		Nursery forest plants	6	4	4	4	13	-1	-27	1	12
		Other forestry products	19	17	24	23	-4	1	25	4	39
	Secondary non forest activities		62	64	96	96	1	3	54	5	51
	Net added value		795	756	709	689	-3	-1	-13	-1	-9

5.2 ESTIMATES FOR 2024 AND PROSPECTS FOR 2025

The estimates for 2024 and prospects for 2025 (annex) forecast a steady trend into a "business as usual scenario" as no substantial changes in capacity are foreseen in the short term.

On tropical timber and derived products a "business as usual" on imports and exports is also assumed. Despite the restrictions impose by the timber regulation (Reg. EU 995/2010) on tropical wood markets, it is assumed the experience resulting from its application already for some years prevents major and significant changes in trade patterns in the years to come.

The new policy measures encompassing bioeconomy, circular economy and bio based cellulose products prospects a raising shift in end timber products demand, in particular wrapping products and in recovered materials, as well as in forest biomass for energy production.

The core changing drivers of timber and derived products production and trade are considered to be:

— The rise of risks, such as wildfires and phytosanitary disturbances, also deriving from climate change incidence, might lessen the production in forests, namely in timber and non-timber products, to critical levels incompatible and impacting their stable and sustainable supply;

- The prospected impacts on production and trade patterns resulting from environmental and societal pressure also reflected in legalisation bounds the roundwood national production scale up;
- The limitations deriving from international supply chains restrictions and the rising transport costs;

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ANNEX

Table 6 - TIMBER FORECAST QUESTIONNAIRE, roundwood

Code	Product	Unit	2022	2023	2023	2024	2025
1.2.1.C	SAWLOGS AND VENEER LOGS, CONIFEROUS						
	Removals	1000 m^3 ub	1 682	1 262		1 400	1 600
	Imports	1000 m^3 ub	241 #	230 #	388	300	330
	Expor	1000 m^3 ub	43 #	35 #	42,1	40	41
	Appar	1000 m^3 ub	1 880	1 457	1 608	1 660	1 889
1.2.1.NC	SAWLOG S, NON-CONIFEROUS						
	Remo	1000 m^3 ub	356	350		300	340
	Impor	1000 m^3 ub	663 #	580 #	669	660	650
	Expor	1000 m^3 ub	22 #	25 #	9,383	12	20
	Apparent consumption	1000 m^3 ub	997	905	1 010	948	970
1.2.1.NC.T	of which, tropical logs						
	Imports	1000 m^3 ub	21 #	20 #	16,44	18	20
	Exports	1000 m^3 ub	5 #	5 #	3,96	4	5
	Net Trade	1000 m^3 ub	16	15	12	14	15
1.2.2.C	PULPWOOD (ROUND AND SPLIT), CONIFEROUS						
	Removals	1000 m^3 ub	1 213	1 166		1 200	1 190
	Imports	1000 m^3 ub	122 #	100 #	143	150	130
	Exports	1000 m^3 ub	12 #	20 #	12,9	15	13
	Apparent consumption	1000 m^3 ub	1 323	1 246	1 296	1 335	1 307
1.2.2.NC	PULPWOOD (ROUND AND SPLIT), NON-CONIFEROUS						
	Removals	1000 m^3 ub	8 586	8 133		8 300	8 400
	Imports	1000 m^3 ub	2 100 #	2 000 #	2 209	2 100	2 150
	Exports	1000 m^3 ub	191 #	200 #	193	200	195
	Apparent consumption	1000 m^3 ub	10 495	9 933	10 149	10 200	10 355
3	WOOD CHIPS, PARTICLES AND RESIDUES						
	Domestic supply	1000 m^3	1 865 C	1 700 C	1 170	1 750	1 800
	Imports	1000 m^3	2 435 C	1 838 C		1 800	1 850
	Exports	1000 m^3	417 C	155 C		200	250
	Apparent consumption	1000 m^3	3 884	3 384	2 853	3 350	3 400
1.2.3.C	OTHER INDUSTRIAL ROUNDWOOD, CONIFEROUS						
	Removals	1000 m^3 ub	118	121		120	120
1.2.3.NC	OTHER INDUSTRIAL ROUNDWOOD, NON-CONIFEROUS						
	Removals	1000 m^3 ub	181	168		170	180
1.1.C	WOOD FUEL, CONIFEROUS						
	Removals	1000 m^3 ub	996	794		800	850
1.1.NC	WOOD FUEL, NON-CONIFEROUS						
	Removals	1000 m^3 ub	1 387	1 680		2 000	2 500

Graça Maria Louro: The estimation calculated from the non-coniferous sawn production published in 2024 by Statistics Portugal and reported in PT JFSQ 2024 is inferior (91, in 2022, and 75 in 2023).

Graça Maria Louro: Tropical logs= 844,552, of which 16,444 of tropical species and 828,108 of non troical species, mostly eucaliptus

Table 7 - TIMBER FORECAST QUESTIONNAIRE, forest products.

Product Code	Product	Unit	Historical data		Revised	Estimate	Forecast
			2022	2023	2023	2024	2025
6.C	SAWNWOOD, CONIFEROUS						
	Production	1000 m^3	807	765		800	780
	Imports	1000 m^3	130	186		160	150
	Exports	1000 m^3	242	266		260	260
	Apparent consumption	1000 m^3	696	685		700	670
6.NC	SAWNWOOD, NON-CONIFEROUS						
	Production	1000 m^3	182	180		180	185
	Imports	1000 m^3	120 E	202		150	200
	Exports	1000 m^3	34 E	197		150	160
	Apparent consumption	1000 m^3	268	185		180	225
6.NC.T	of which, tropical sawnwood						
	Production	1000 m^3	12	8	5,480	5	7
	Imports	1000 m^3	26 E	31	131	100	110
	Exports	1000 m^3	10 E	174	104	90	100
	Apparent consumption	1000 m^3	27	-135	32	15	17
7	VENEER SHEETS						
	Production	1000 m^3	20 C	20 C		20	20
	Imports	1000 m^3	38 C	213 C	209	200	180
	Exports	1000 m^3	67 C	78 C	59	60	70
	Apparent consumption	1000 m^3	-10	155	170	160	130
7.NC.T	of which, tropical veneer sheets						
	Production	1000 m^3	0	0		0	0
	Imports	1000 m^3	4 E	186		50	40
	Exports	1000 m^3	6	13		12	10
	Apparent consumption	1000 m^3	-2	173		38	30
8.1	PLYWOOD						
	Production	1000 m^3	103 C	110 C	92	100	100
	Imports	1000 m^3	95 C	136 C		105	110
	Exports	1000 m^3	19 C	67 C		50	50
	Apparent consumption	1000 m^3	179	179	161	155	160
8.1.NC.T	of which, tropical plywood						
	Production	1000 m^3	82	80	76	80	78
	Imports	1000 m^3	14	8		10	9
	Exports	1000 m^3	6	7		6	7
	Apparent consumption	1000 m^3	90	81	77	84	80
8.2	PARTICLE BOARD (including OSB)						
	Production	1000 m^3	766	695		700	750
	Imports	1000 m^3	331	368		340	350
	Exports	1000 m^3	514	515		515	515
	Apparent consumption	1000 m^3	583	548		525	585
8.2.1	of which, OSB						
	Production	1000 m^3	0	0		0	0
	Imports	1000 m^3	50	55		50	55
	Exports	1000 m^3	4	2		3	3
	Apparent consumption	1000 m^3	46	53		47	52
8.3	FIBREBOARD						
	Production	1000 m^3	526 C	447 C			
	Imports	1000 m^3	338 C	260 C			
	Exports	1000 m^3	330 C	312 C			
	Apparent consumption	1000 m^3	534	395		0	0
8.3.1	Hardboard						
	Production	1000 m^3	0	0		0	0
	Imports	1000 m^3	61	26			
	Exports	1000 m^3	11	5			
	Apparent consumption	1000 m^3	50	22		0	0
8.3.2	MDF/HDF (Medium density/high density)						
	Production	1000 m^3	494	447		450	460
	Imports	1000 m^3	257	187		200	220
	Exports	1000 m^3	305	264		300	280
	Apparent consumption	1000 m^3	447	370		350	400
8.3.3	Other fibreboard						
	Production	1000 m^3	32	0		0	0
	Imports	1000 m^3	20 E	46		30	35
	Exports	1000 m^3	15 E	44		25	30
	Apparent consumption	1000 m^3	37	3		5	5
9	WOOD PULP						
	Production	1000 m.t.	2 869 C	2 714 C		2 800	2 750
	Imports	1000 m.t.	140 C	143 C		140	140
	Exports	1000 m.t.	1 252 C	1 401 C		1 300	1 350
	Apparent consumption	1000 m.t.	1 757	1 456		1 640	1 540
12	PAPER & PAPERBOARD						
	Production	1000 m.t.	2 243 C	1 830 C		1 900	1 950
	Imports	1000 m.t.	948 C	813 C		900	820
	Exports	1000 m.t.	1 981 C	1 595 C		1 800	1 700
	Apparent consumption	1000 m.t.	1 210	1 049		1 000	1 070
5.1	WOOD PELLETS						
	Production	1000 m.t.	747	558		600	650
	Imports	1000 m.t.	7 E	3		3	4
	Exports	1000 m.t.	523	387		560	540
	Apparent consumption	1000 m.t.	231	174		43	114