

Chapter III

Wood Product Demand, Wood Use and Wood Industry

1. Supply and Demand for Wood

(1) Global Wood Supply and Demand

In 2022, the global consumption of industrial roundwood decreased by 2% from the previous year to 2,026 million m³.

The global imports of industrial roundwood decreased by 17% from the previous year to 119 million m³. China was the world's largest industrial roundwood importer in 2022, accounting for 37% of global imports of industrial roundwood.

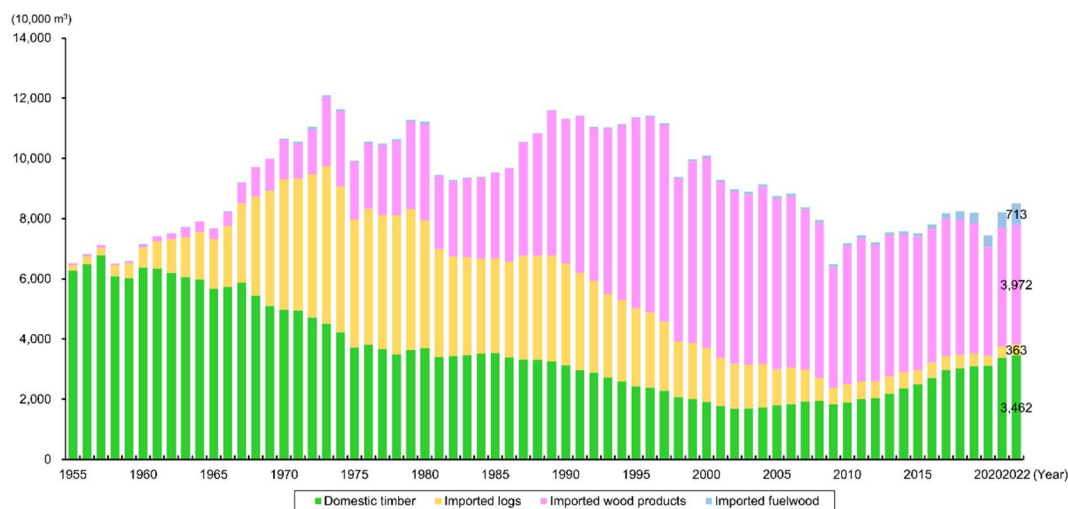
In 2022, the global production of sawn wood decreased by 2% from the previous year to 481 million m³. The global imports of sawn wood decreased by 7% to 137 million m³. The United States was the world's largest sawn wood importer in 2022.

(2) Wood Supply and Demand in Japan

Japan's wood demand bottomed out in 2009 and has since recovered. The total wood product demand in Japan in 2022 was 85.09 million m³ (roundwood equivalent), which was an increase of 3.6% from the previous year.

The domestic wood supply bottomed out in 2002 and has since recovered. It was 34.62 million m³ in 2022, which was an increase of 2.7% from the previous year (Fig. III-1).

The volume of imported wood in 2022 was 50.48 million m³, which was an increase of 4.3% from the previous year, due to an increase in the imports of wood products (Fig. III-1).



Source: Forestry Agency "Wood Supply and Demand Chart"

Fig. III-1 Wood supply in Japan

(3) Wood Prices

The prices of domestic roundwood and sawn wood products increased significantly in 2021 due to a shortage of imported materials as the demand recovered with the post-COVID-19 economic recovery. The prices have been declining since 2022, but the prices in 2023 remain at higher levels than in 2020 before the price increase.

(4) Addressing Illegal Logging

The Clean Wood Act, enforced in 2017, stipulates that all business entities must endeavor to use legally harvested wood and wood products, and that Wood-related Business Entities in particular shall confirm the legality of the wood and wood products they handle.

Wood-related business entities that properly and reliably take measures for ensuring the use of legally harvested wood and wood products may apply to a registering organization to obtain registration as a “Registered Wood-related Business Entities”. As of March 2024, 660 entities have been registered.

To further promote the distribution of legally harvested wood, a partial revision to the Clean Wood Act, which requires wood-related business entities engaged in processing, exporting, and importing to confirm legality, was passed in the National Diet in April 2023. The GOJ supports the establishment of legal and sustainable supply chain in wood producing countries through the contribution to ITTO. Japan has joined the Experts Group on Illegal Logging and Associated Trade (EGILAT) of Asia-Pacific Economic Cooperation (APEC), which shares information and exchanges views regarding measures to combat illegal logging.

2. Wood Use

(1) Significance of Wood Use

Wood use in buildings stores carbon absorbed by forests for a long time and contributes to reducing construction-related carbon dioxide emissions since wood consumes less energy than other materials during manufacturing and processing. Wood that is not suitable for material use or wood after use in buildings can be utilized as a carbon-neutral energy source to replace fossil fuels.

In addition, wood provides a comfortable and healthy indoor environment since it has humidity control function, high thermal insulation properties, and positive physiological and psychological effects.

(2) Wood Use in Buildings

In Japan, about 80% of low-rise (up to three stories) residential buildings are wooden on the basis of new building starts floor area. However, wooden buildings account for less than 10% of mid-to-high-rise (four stories and above) buildings and non-residential ones.

In recent years, as the technical and institutional environment for the use of wood has been developed to a certain extent, there is a growing number of leading examples of mid-to-high-rise and non-residential buildings with wooden structures (Fig. III-2). The Forestry Agency has been supporting the development of fire-resistant wooden materials and CLT in collaboration with other ministries and agencies. To further expand the use of wood, the public and private sectors are collaborating in examining challenges and solutions in wood use.



Ginza Takagi Building
(Chuo-ku, Tokyo)
(©SHELTER CO,LTD.)



Mito City Civic Center
(Mito City, Ibaraki Prefecture)
(©TAKENAKA CORPORATION)

Fig. III-2 Examples of wood use in buildings

(3) Use of Woody Biomass

Use for New Material

High value-added materials including lightweight, high-strength cellulose nanofibers (CNF) and heat-resistant, processible glycol lignin are being developed to replace fossil-based plastics with that from woody biomass. As for CNF, manufacturing facilities are under operation in various places, and some products using CNF have been put into practical use, including additives for foods and paint.

Lignin is expected to be utilized for high-value-added materials, and development for applying glycol lignin to products is underway.

Use for Energy

The quantity of woody biomass for energy use has been increasing recently. Japan's fuelwood consumption including wood chips, wood pellets, firewood, and charcoal in 2022 increased by 18.0% from the previous year to 17.39 million m³. The increase was mainly caused by a boom in woody biomass power plants.

The Forestry Agency is promoting the transportation and utilization of low-quality wood that has not been utilized. It is also encouraging heat-use and cogeneration, which has higher energy conversion efficiency.

(4) Spread of the Use of Wood among Consumers

The Forestry Agency has been promoting the Kizukai Undo (attention to wood use) initiative to disseminate the importance of wood use among consumers, including through the Japan Wood Design Award which acknowledges outstanding wood products and related activities that contribute to the re-discovery of the excellence and value of wood from the consumers' viewpoints.

The Forestry Agency has also been promoting "Mokuiku" (wood use education) activities to disseminate the excellence and significance of wood use among both adults and children.

3. Wood Industry

(1) State of the Wood Industry

The added value amount of lumber and the wood industry has been increasing in recent years. In 2021, the value rose to 1,049 billion yen.

(2) Strengthening the Competitiveness of the Wood Industry

The scaling-up and consolidation of sawmills and plywood mills are progressing to stabilize the supply of products with reliable quality and performance at low cost in order to strengthen global competitiveness of wood industry in Japan.

In order to strengthen local competitiveness of small and medium-sized sawmills, the Forestry Agency promotes their initiatives to produce a wide range of products, as well as to collaborate with local log producers, local builders, and other stakeholders to meet the needs of local communities.

In addition, it is essential to establish a supply system for Japanese Agricultural Standards (JAS) products of reliable quality and performance. The MAFF is working to rationalize the classification and criteria of the JAS in line with actual usage conditions, as well as supporting demonstrative use of JAS structural wood products.

(3) Development and Dissemination of Products and Technologies toward Utilization of Japan's Forest Resources

The Forestry Agency is promoting; 1) the development and dissemination of milling and drying technologies for large-diameter logs, the supply of which is expected to increase as Japan's forest resources grow; 2) the standardization of dimensions of CLT panels and other wood materials and the technological development of fire-resistant wooden materials in order to expand the wood use in non-residential and mid-to-high-rise buildings; and 3) the development of new products, such as softwood floorboards with increased surface hardness in order to increase demand in the fields of renovation and furniture manufacturing.

(4) Each Sector of the Wood Industry

Sawmilling Industry

Shipments of sawn wood products have remained flat in recent years. In 2022, shipments rose to 8.6 million m³, which was a decrease of 5.4% from the previous year. The quantity of industrial wood received by sawmills was 16.36 million m³ in 2022.

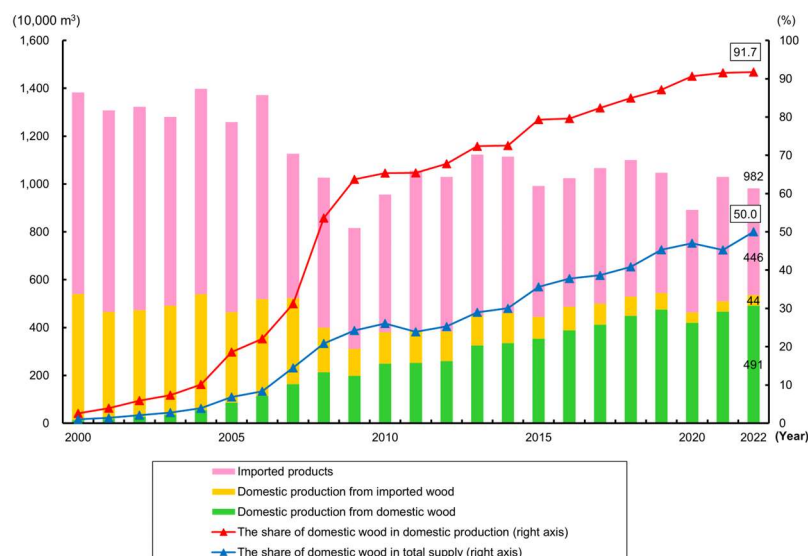
Glued Laminated Timber Manufacturing Industry

Glued laminated timber production in 2022 totaled 1.66 million m³ of which structural use accounted for 1.58 million m³. Japan's import of glued laminated timber products in 2022 stood at 1.04 million m³.

Plywood Industry

Production of plywood in 2022 was 3.06 million m³, which was a decrease of 3.6% from the previous year. Most of this – 2.66 million m³ - was for structural use, while 30 thousand m³ was used as concrete formwork.

The share of domestic wood in domestic plywood production in 2022 rose to 91.7% (4.91 million m³). In 2022, the total wood supply for plywood, including imported products, was 9.82 million m³. Domestic wood accounted for 50.0% of total wood supply for plywood in Japan (Fig. III-3).



Source: Forestry Agency "Wood Supply and Demand Chart"

Fig. III-3 Supply of wood for plywood

Wood Chip Manufacturing Industry

Production of wood chips (excluding fuel use chips) in 2022 was 5.28 million tons, which was a decrease of 13.0% from the previous year.

Japan's import of wood chips in 2022 totaled 11.31 million tons, accounting for 68.2% of wood chip supply in Japan.

Particle Board and Fiberboard Industry

Production of particle board in 2022 was 0.98 million m³, which was a decrease of 1.9% from the previous year. Production of fiberboard in 2022 was 0.72 million m³, which was a decrease of 0.4% from the previous year.

Precut Processing Industry

"Precut lumber" refers to lumber that is pre-processed into the required shapes and sizes of building components, such as posts and beams, which enables quick and easy assembling of the components onsite.

The share of precut lumber in the lumber used for the post-and-beam construction method, which is one of the main construction methods for houses in Japan, reached 94% in 2022.

Wood Distribution Industry

In the distribution of domestic logs in 2018, 41% was distributed through the timber market, 19% was sold to wood suppliers, while 40% was transported directly from logging sites to mills.



The Kagoshima Yusui Factory of MEC Industry Co., Ltd., funded by construction and real estate companies and local wood-related companies, has been fully operational since 2022 as a new wood-processing and distribution base in Yusui Town, Kagoshima Prefecture.

The factory has introduced a line that can handle large-diameter logs up to 60 cm in diameter, conducting integrated operations of log procurement, sawing, and manufacturing and sales of products and housing. The log utilization volume is expected to be 55,000 m³ in FY2024.



MEC Industry Kagoshima Yusui
Factory

Chapter IV

National Forest Management

1. Roles of National Forests

(1) Distribution and Roles of National Forests

National forests occupy 7.58 million ha of land, which account for approximately 20% of the land area of Japan and approximately 30% of the total forest area. They are widely distributed in the remote mountainous areas and headwaters areas, and they play important roles in fulfillment of the multiple functions of forests, including land conservation and watershed conservation.

National Forests, which have diverse ecosystems such as planted forests and primeval natural forests, are a place for the growth and habitat of various wildlife including rare species. They also provide fields for health and recreation in forests.

(2) National Forests Management

National forests, an important asset of the country, are managed by the Forestry Agency in an integrated manner under the National Forest Management Program.

2. Specific Initiatives under the National Forest Management Program

(1) Further Promotion of Management with Emphasis on Public Benefits

The Forestry Agency manages each national forest in accordance with the five forest types categorized based on the expected functions of “mountain disaster prevention”, “nature conservation”, “recreational use”, “comfortable environment development”, and “watershed conservation”.

Approximately 90% of national forests are protection forests such as watershed conservation. The Forestry Agency improves devastated land and protection forests through forest conservation projects in order to ensure safe and secure life.

The Forestry Agency designates and manages “Protected Forests” and “Green Corridors” in order to conserve biodiversity. As of March 2023, Protected Forests were designated at 658 locations covering approximately 1,014,000 ha of land, which accounted for 13.4% of national forest area. “Green Corridors” were formed as of March 2023 at 24 locations, covering approximately 584,000 ha of land, and accounting for 7.7% of national forest area. The Forestry Agency takes measures to protect rare species of wildlife and prevents deer and other wildlife from damaging forests.

(2) Contribution to Revitalizing Forest and Forestry

Through the organizations, technical capabilities and resources of the National Forest Management Program, the Forestry Agency is (I) developing and disseminating technologies for low-cost and effective forestry practices, such as utilization of containerized seedlings, drones and Information and Communication Technology (ICT) and an integrated harvesting and planting system; (II) establishing cooperative forest management areas to collaborate with private forests to promote development of forestry road systems and forest operations; and (III) promoting stable wood supply to lumber and plywood mills through “System Sales”.

In April 2020, the Timber Harvesting Rights System was enforced. Under this system,

forestry management entities can acquire the right to steadily harvest trees in certain designated areas of national forests for a certain period, while ensuring multiple functions of the forest.



In the Kumagawa River basin in Kumamoto Prefecture, record-breaking heavy rains from July 3rd to 4th, 2020, caused severe damage such as numerous hillside failures and river flooding.

At the request of Kumamoto Prefecture, Kyushu National Forest Regional Office carried out restoration projects for 36 damaged forest conservation facilities and forest lands in private forests in Ashikita district, where hillside failures were particularly concentrated. The project was completed in September 2023 (total project cost: approximately 3.1 billion yen).



Completion report to the Governor of Kumamoto Prefecture and presentation of a letter of appreciation from the Governor

(©2010kumamoto pref. Kumaon)

(3) National Forests as “Forests for People”

The Forestry Agency provides various organizations (e.g. schools, voluntary groups, corporations, traditional woodworkers) with places for field activities such as forest environmental education and forest management practices, by designating forests for such activities within national forests. The Forestry Agency also undertakes “model projects” to manage forests in cooperation with local parties and nature conservation groups.

The Forestry Agency leases national forests to local governments and residents.

“Recreation Forests” are managed and administered in partnership with municipalities and other stakeholders in local communities such as the tourist industry. In FY2022, a total of about 100 million people visited “Recreation Forests”.

And 93 of “Recreation Forests” that have potential attractiveness as tourism resources were selected as “Japan’s Forests with Breathtaking Views” (Fig. IV-1). To encourage more people to visit these forests, the Forestry Agency has provided information on web sites in English and has improved facilities by posting multilingual signs, and intensive environmental maintenance, such as facility repairs.



QR Code for “Japan’s Forests with Breathtaking Views” website



Poroto Recreation Forest



Tsurugisan Recreation Forest



Togakushi-Omine Recreation Forest



Kumamoto Recreation Forest



Shirakami-Sanchi - Anmon Falls Recreation Forest

Source: Forestry Agency

Fig. IV-1 Examples of “Japan’s Forests with Breathtaking Views”

Reconstruction after the Great East Japan Earthquake

1. Recovery of Forests, Forestry and the Wood Industry

(1) The Great East Japan Earthquake

On March 11, 2011, the Great East Japan Earthquake, the largest earthquake ever recorded in Japan, hit the eastern part of Japan. It caused a strong earth tremor over a broad area and brought a great tsunami which devastated entire coastal communities along the eastern coast of the Tohoku region.

In July 2011, the GOJ developed the fundamental reconstruction policy, titled the Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake, setting the timeframe for reconstruction at 10 years.

In March 2021, the GOJ established “Basic Guidelines for Reconstruction from the Great East Japan Earthquake After the “Reconstruction and Revitalization Period””.

(2) Recovery of Forests

The Great East Japan Earthquake caused damages to forests and forest conservation facilities and forest roads in 15 prefectures. By FY2021, the recovery works had been completed.

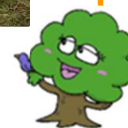
Approximately 164 km of coastal disaster-prevention forests damaged by the tsunami required restoration work. The restoration work was completed on about 163km of them as of the end of March 2024. It is necessary to continue the project for growing the seedlings.

Fukushima Prefecture promotes efforts in collaboration with NPOs, companies, and others as the "Fukushima Forest and Coastal Forest Regeneration Projects".

Meiwa Co., Ltd. (Minamisoma City, Fukushima Prefecture), which is engaged in the construction and management of power transmission lines, participated in the project, planting 400 Japanese black pine trees in 2020. The company has been conducting tending activities in spring and autumn since 2021.



Weeding
(© MEIWA Co.,Ltd.)



(3) Recovery of Forestry and the Wood Industry

The Great East Japan Earthquake damaged 115 wood processing/distribution facilities and 476 non-timber forest products facilities. Distribution of plywood materials and wood chips was disrupted as large-scale plywood and paper mills along the Pacific Coast were damaged.

The restoration of 98 wood processing/distribution facilities was completed by the end of March 2014, and their operations have restarted. The production of logs and wooden products has generally recovered to the respective levels before the earthquake.

(4) Promotion of Wood Use for Reconstruction and Contribution by Forests and Forestry

More than 25% (about 15,000) of “emergency temporary houses” were constructed with wood.

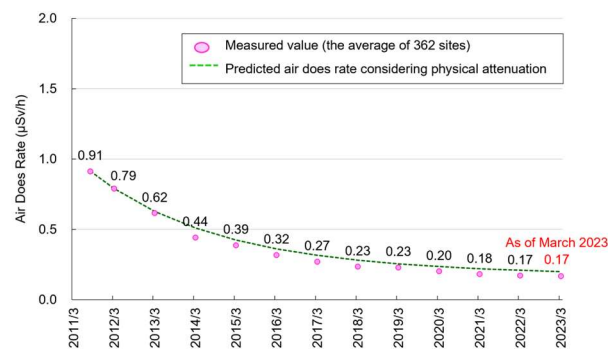
By the end of December 2020, approximately 25% of public housing built for disaster victims had been constructed with wood.

The use of wood has been promoted in the reconstruction of public buildings. Furthermore, woody biomass facilities such as power plants have been introduced in the disaster-affected prefectures, contributing to reconstruction.

2. Reconstruction after the Nuclear Accident

(1) Measures against Radioactive Substances in Forests

Air dose rate in forests in Fukushima Prefecture has been declining year by year (Fig. V-1).



Source: Forest planning division of Fukushima Prefectural Government, *the current state and prediction of radioactive materials in forests (FY 2022)*

Fig. V-1 Changes of Air Dose Rate in forests in Fukushima Prefecture

The GOJ conducts monitoring and research about trends of distribution of radioactive substances within forests.

For decontamination of the forests, the measures in the vicinity of residence had been given top priority. Based on “Comprehensive Efforts towards the Regeneration of Forests and Forestry in Fukushima” (March 2016), the Forestry Agency is undertaking comprehensive projects to implement forest management such as thinning and to deal with radioactive substances, and projects to restore “satoyama forests” around residential areas.

For ensuring safety and security against radiation for forest workers, the Forestry Agency published a guidebook for forest workers in 2016.

To supply safe wood products to consumers, the Forestry Agency supports research and analysis on radioactive materials of wood products and the relevant work environment, and initiatives to develop arrangements for certifying the safety of wood products.

The Forestry Agency has launched the “Restoration of satoyama and hardwood forest project” in cooperation with people in Fukushima Prefecture and promotes the restoration of satoyama hardwood forest for shiitake mushroom logs. Municipalities have created a plan (a restoration plan) for restoring log forests that set out the area of log forests to be regenerated, the implementation system, and other related matters. They have implemented full-scale harvesting of hardwood forests since FY2022.

(2) Supply Safe Forest Products

The GOJ set standard limits for radioactive substances in foods at 100 Bq/kg for general foods. As of March 28, 2024, 22 items of non-timber forest products have shipping restrictions.

The production of shiitake mushrooms on sawdust medium has recovered to almost the level before the Great East Japan Earthquake, but that on logs has not recovered even now.

The Forestry Agency has collected, analyzed, and provided information on the supply and demand of mushroom logs in response to the decrease in production volume in Fukushima Prefecture and other mushroom log production areas, which has affected log procurement in many prefectures.

The Forestry Agency established Guidelines Concerning Management of Log Cultivation of Mushrooms to Decrease Radioactive Cesium. Shipping restrictions on mushrooms are to be lifted when cultivation is managed based on this guideline and it has been determined that no mushrooms are produced whose radioactivity exceeds the standard limits. The Forestry Agency supports the maintenance of simple greenhouses and equipment for measuring radioactive substances, which are necessary for safe mushroom production.

Since 2021, if a system for properly managing and inspecting mushrooms and edible wild plants is developed under the shipping and inspection policy set by prefectures, it can be possible to ship the products which are confirmed not to exceed the limit for general foods by non-destructive inspection. As a result, the shipments of Matsutake mushrooms, unpeeled bamboo shoots, Nameko mushrooms, Naratake mushrooms, and Mukitake mushrooms have resumed in some restriction areas.

Appendix

1. Forestry-related Fundamental Figures

Item	Unit	2000	2005	2010	2015	2018	2019	2020	2021	2022
i Nominal gross domestic product (GDP)	billion yen	535,418	532,516	505,531	538,032	556,630	557,911	539,808	552,571	559,710
Forestry	billion yen	176	137	196	234	249	248	232	269	277
Forestry / GDP	%	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05
ii Total number of workers	million	64.46	63.56	62.57	64.01	66.82	67.50	67.10	67.13	67.23
Forestry	million	0.07	0.06	0.08	0.07	0.07	0.08	0.06	0.06	0.07
Forestry / Total # of workers	%	0.11	0.09	0.13	0.11	0.11	0.12	0.09	0.09	0.10
iii Land area of Japan	million ha	37.79	37.79	37.80	37.80	37.80	37.80	37.80	37.80	37.80
iv Forest	million ha	25.15	25.12	25.10	25.08	25.05	25.05	25.05	25.05	25.02
Forest / Land area	%	67.5	67.4	67.3	67.3	67.2	67.2	67.2	67.2	67.1
v Protection forest	million ha	8.93	11.65	12.02	12.17	12.21	12.23	12.25	12.26	12.27
Protection forest / Forest	%	35.5	46.4	47.9	48.5	48.7	48.8	48.9	48.9	49.0
vi Growing stock of forest	billion m ³	3.5	4.0	4.4	4.9	5.2	5.2	5.2	5.2	5.6
vii Total wood supply/demand	million m ³	101.01	87.42	71.88	75.16	82.48	81.91	74.44	82.13	85.09
Domestic production	million m ³	19.06	17.90	18.92	24.92	30.20	30.99	31.15	33.72	34.62
Import	million m ³	81.95	69.52	52.96	50.24	52.28	50.92	43.29	48.41	50.48
Self-sufficiency rate	%	18.9	20.5	26.3	33.2	36.6	37.8	41.8	41.1	40.7
viii New housing starts	million units	1.23	1.24	0.81	0.91	0.94	0.91	0.82	0.86	0.86
Proportion of wooden structure	%	45.2	43.9	56.6	55.5	57.2	57.8	57.6	58.7	55.6

Sources i: Cabinet Office "Annual Report on National Accounts for 2022"

ii: Ministry of Internal Affairs and Communications "Annual Report on the Labour Force Survey"

iii: Geospatial Information Authority of Japan "The Report of Statistical reports on the land area by prefectures and municipalities in Japan"

iv, v, vi: Forestry Agency

vii: Forestry Agency "Wood Supply and Demand Chart"

viii: Ministry of Land, Infrastructure, Transport and Tourism "Housing Starts"

Note "Total wood supply/demand", "Domestic production" and "Import" in "vii" refer to the volume in roundwood equivalent.

2. Forestry Output

(Unit: billion yen)

Item	2000	2005	2010	2015	2018	2019	2020	2021	2022
Forestry output	531.15	417.05	425.70	454.47	501.73	497.28	483.06	545.66	580.66
Wood production	322.18	210.50	195.29	234.08	264.83	270.00	246.43	325.41	360.46
Softwood	265.33	177.41	170.16	198.19	209.99	213.01	179.02	251.70	278.78
Sugi (Japanese cedar)	123.78	87.53	93.50	118.09	126.44	127.43	107.39	147.26	167.45
Hardwood	54.72	31.71	23.76	19.51	18.42	16.95	15.82	15.25	14.53
Firewood and charcoal production	6.16	6.09	5.08	5.31	5.54	5.81	5.96	6.23	6.39
Grown mushroom production	196.89	198.50	218.91	210.52	225.37	216.67	225.96	209.16	207.95
Minor forestry products production	5.92	1.96	6.42	4.55	5.99	4.80	4.71	4.86	5.86
Forestry income produced	351.91	245.78	229.22	251.02	266.45	264.35	253.57	286.45	307.00

Source Ministry of Agriculture, Forestry and Fisheries (MAFF) "Forestry Output"

Notes 1. "Wood production" includes the output of wood chips for fuel since 2011.

2. "Softwood" in wood production includes output of other softwood and wood for pulp.

3. "Firewood and charcoal production" includes the output of bamboo charcoal and charcoal dust since 2001.

4. "Grown mushroom production" includes the output of eryngii mushrooms and other varieties of grown mushrooms since 2001.

5. "Minor forestry products production" includes the output of Japan wax and Japanese lacquer since 2002, the output of wild grass (wild vegetables and wild herbs) since 2010 and the output of gibier since 2016.

6. Due to rounding, some totals may not correspond with the sum of the separate figures.

3. Current State of Forest Resources

(Unit: 1,000 ha, million m³)

Classification			Total		Standing timber area (canopy cover more than 30%)				Treeless land (canopy cover less than 30%)		Bamboo groves
					Planted forest		Natural forest				
			Area	Growing stock	Area	Growing stock	Area	Growing stock	Area	Growing stock	Area
Total			25,025	5,560.20	10,093	3,545.49	13,553	2,013.72	1,204	0.99	175
National forest	Subtotal		7,657	1,300.55	2,247	553.73	4,756	746.21	653	0.60	0
	Under the Forestry Agency's jurisdiction	Subtotal	7,587	1,295.37	2,243	553.32	4,696	741.44	649	0.60	0
		State-owned	7,510	1,276.54	2,176	534.72	4,693	741.22	640	0.60	0
		Government reforestation	77	18.83	66	18.61	2	0.22	8	0	-
		Other	0	0	-	-	-	-	0	0	-
	Under other Agencies' jurisdiction		70	5.18	5	0.41	61	4.77	4	-	-
	Private and public forest	Subtotal		17,368	4,259.65	7,846	2,991.76	8,796	1,267.50	551	0.39
Public forest		Subtotal	3,009	659.13	1,334	427.73	1,548	231.11	121	0.30	6
		Prefecture	1,296	268.78	534	156.28	710	112.25	52	0.24	1
		Municipality/Property ward	1,713	390.36	800	271.44	838	118.86	69	0.06	5
Private forest		14,311	3,596.71	6,500	2,562.28	7,220	1,034.34	426	0.09	165	
Others		47	3.81	12	1.75	28	2.05	4	0	3	

Source Forestry Agency

Notes 1. Data cover the forests defined in Article 2 of the Forest Act.

2. "Others" refers to forests that are not subject to the "Regional Forest Plans" for non-national forest under Article 5 of the Forest Act, and for national forest under Article 7-2 of the Forest Act.

3. Figures are as of March 31, 2022.

4. Symbol of "-" means "not applicable".

5. Due to rounding, some totals may not correspond with the sum of the separate figures.

4. Planted Area by Tree Species

(Unit: ha)

	Total	Softwood					Hardwood
		Sugi (Japanese cedar)	Hinoki (Japanese cypress)	Matsu (Pine)	Karamatsu (Japanese larch)	Other	
2000	(31,316) 28,480	(8,223) 7,967	(11,574) 10,745	(233) 223	(2,524) 2,493	(4,954) 4,014	(3,808) 3,038
2005	(25,584) 22,498	(5,216) 5,011	(7,096) 6,307	(226) 183	(3,534) 3,423	(5,728) 4,611	(3,784) 2,963
2010	(18,756) 16,388	(4,132) 3,844	(2,820) 2,262	(247) 237	(4,604) 4,418	(4,265) 3,381	(2,688) 2,246
2015	(19,429) 16,607	(5,537) 5,390	(2,039) 1,930	(185) 168	(4,467) 4,027	(5,250) 3,450	(1,950) 1,642
2018	(21,568) 19,340	(6,899) 6,597	(1,845) 1,760	(277) 272	(5,486) 5,165	(5,106) 3,799	(1,956) 1,747
2019	(22,788) 20,562	(7,189) 7,005	(1,821) 1,745	(311) 308	(6,466) 6,139	(5,046) 3,692	(1,954) 1,673
2020	(22,777) 20,686	(7,571) 7,359	(1,894) 1,738	(309) 294	(6,681) 6,198	(4,412) 3,445	(1,910) 1,653
2021	(23,015) 20,266	(8,207) 7,477	(2,230) 1,798	(249) 210	(6,662) 6,271	(3,760) 2,901	(1,906) 1,609
2022	(24,133) 20,796	(9,127) 8,253	(2,298) 1,673	(205) 168	(6,732) 6,153	(3,907) 3,033	(1,864) 1,516

Source Forestry Agency

Notes 1. Figures do not include national forest.

2. Figures in parentheses refer to the total area which includes area planted as lower layer of multi-layered forest.

3. Matsu includes Japanese red pine and Japanese black pine.

5. Planted Forest Area by Age Classes

(Unit: 1,000 ha)

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI
1985	604	895	1,263	1,691	1,762	1,569	947	337	240	205	178	137	111	83	148						
1989	436	700	943	1,351	1,691	1,746	1,413	777	270	224	183	151	118	93	79	52	62				
1994	278	421	699	937	1,336	1,686	1,719	1,388	735	262	213	172	139	112	86	67	105				
2001	131	226	350	589	874	1,149	1,599	1,677	1,522	946	353	204	171	144	112	89	62	52	70		
2006	88	168	227	352	593	873	1,143	1,582	1,649	1,500	918	345	200	168	141	106	90	62	120		
2011	73	114	159	231	347	584	852	1,111	1,565	1,631	1,473	921	345	194	164	138	105	87	174		
2016	68	102	114	164	224	348	582	846	1,108	1,529	1,592	1,428	893	340	190	162	135	104	86	172	
2021	77	97	103	112	159	229	346	580	842	1,092	1,487	1,535	1,380	861	337	186	161	133	103	88	168

Source Forestry Agency

Notes 1. Figures are as the end of each fiscal year.

2. The maximum age class of planted forests for each year is as follows: 1985 is age-class XV, 1989 and 1994 are age-class XVII, 2001, 2006, and 2011 are age-class XIX, 2016 is age-class XX, and 2021 is age-class XXI. Age classes beyond these are included in the respective maximum age class for each year.

3. Data cover the forests defined in Article 5 or Article 7-2 of the Forest Act.

6. Thinned Area and Use of Thinnings

(FY)	Thinned area (1,000 ha)			Volume of thinnings used (million m ³)					
	Total	Private and public forest	National forest	Total	Private and public forest				National forest
					Subtotal	Sawnwood	Roundwood	Others	
2010	556	445	110	6.65	4.43	2.70	0.42	1.31	2.22
2013	521	400	121	8.11	5.65	3.23	0.44	1.97	2.46
2014	465	339	126	7.69	5.21	2.91	0.33	1.97	2.47
2015	452	341	112	8.13	5.65	2.97	0.35	2.32	2.48
2016	440	319	121	8.23	5.76	2.95	0.30	2.51	2.47
2017	410	304	106	8.12	5.56	2.75	0.28	2.53	2.56
2018	370	269	101	7.46	4.94	2.37	0.25	2.32	2.52
2019	365	268	98	7.68	5.21	2.53	0.30	2.37	2.47
2020	357	261	96	7.29	4.79	2.26	0.28	2.25	2.50
2021	365	269	96	7.82	5.00	2.45	0.30	2.25	2.82
2022	329	236	93	7.46	4.80	2.37	0.24	2.18	2.66

Source Forestry Agency

Notes 1. Volumes are in roundwood equivalent.

2. "Sawnwood" means the wood such as wood building materials and wood packaging materials.

3. "Roundwood" means the wood such as scaffolding timber and stakes.

4. "Others" includes the wood such as wood chip and wood powder (sawdust).

5. Due to rounding, some totals may not correspond with the sum of the separate figures.

7. Forest Area by Owners

	2015		2020	
	Forest area (ha)	Proportion of total area (%)	Forest area (ha)	Proportion of total area (%)
Total	17,626,761	100.0	17,616,863	100.0
Private	13,563,827	77.0	13,560,696	77.0
Public	3,370,380	19.1	3,407,898	19.3
Prefecture	1,271,571	7.2	1,310,110	7.4
Public corporation	391,189	2.2	351,519	2.0
Municipality	1,406,063	8.0	1,434,838	8.1
Property ward	301,557	1.7	311,431	1.8
Incorporated Administrative Agencies	692,554	3.9	648,269	3.7

Source MAFF "Census of Agriculture and Forestry"

Notes 1. Due to rounding, some totals may not correspond with the sum of the separate figures.

2. "Incorporated Administrative Agencies" include Independent Administrative Agencies, National University Corporations and Special Corporations.

8. Number of Forestry Management Entities and their Forest Areas

(Unit: entity, ha)

	Total		Less than 3 ha		3-5 ha		5-20 ha		20-50 ha		50-100 ha		100 ha or more	
	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area
Total	34,001	3,322,691	1,520	628	6,236	22,979	15,220	148,280	6,045	176,477	2,151	142,598	2,829	2,831,728
Corporation	4,093	1,245,256	983	210	201	757	765	8,398	611	19,542	423	29,441	1,110	1,186,908
Private company	1,994	663,822	656	114	90	322	372	3,868	270	8,221	143	9,562	463	641,736
Cooperative	1,608	314,120	271	87	65	256	268	3,229	267	8,842	229	16,117	508	285,588
Agricultural cooperative	47	15,354	-	-	1	3	4	40	8	298	4	283	30	14,730
Forest owners' cooperative	1,388	212,763	238	87	51	198	229	2,751	234	7,702	209	14,682	427	187,343
Other cooperatives	173	86,003	33	-	13	55	35	438	25	842	16	1,152	51	83,516
Other corporations	491	267,314	56	8	46	179	125	1,301	74	2,480	51	3,763	139	259,583
Non-corporation	29,080	723,038	536	417	6,031	22,207	14,399	139,244	5,374	154,949	1,648	107,263	1,092	298,959
Individual	27,776	616,223	494	398	5,883	21,634	13,940	134,299	5,093	146,131	1,484	95,694	882	218,067
Public	828	1,354,397	1	1	4	15	56	638	60	1,986	80	5,894	627	1,345,862

Source MAFF "2020 Census of Agriculture and Forestry"

Notes 1. The symbol "-" means "not applicable".

2. "Forestry management entities" corresponds to one of the followings. The entities (I) own more than 3 hectares of forest, and also have conducted forestry or have established a "Forest Management Plan" for the past five years, (II) have been entrusted with forestation or (III) have harvested more than 200 m³ of logs for the past one year through the entrustment and the purchase of standing trees.

9. Roundwood Production

(Unit: 1,000 m³)

		2000	2005	2010	2015	2018	2019	2020	2021	2022	Relative change from the previous year (%)
Total		17,034	16,166	17,193	20,049	21,640	21,883	19,882	21,847	22,082	1.1
By tree species	Subtotal	13,707 (80)	13,695 (85)	14,789 (86)	17,815 (89)	19,462 (90)	19,876 (91)	18,037 (91)	20,088 (92)	20,386 (92)	1.5
	Sugi (Japanese cedar)	7,671	7,756	9,049	11,226	12,532	12,736	11,663	12,917	13,238	2.5
	for sawnwood	7,258 <57>	6,737 <58>	6,695 <63>	7,869 <66>	8,237 <66>	8,582 <67>	7,841 <68>	8,630 <67>	8,900 <69>	3.1
	Hinoki (Japanese cypress)	2,273	2,014	2,029	2,364	2,771	2,966	2,722	3,079	2,971	▲ 3.5
	Akamatsu (Japanese red pine), Kuromatsu (Japanese black pine)	1,034	783	694	779	628	601	570	529	559	5.7
	Karamatsu (Japanese larch), Ezomatsu (Yezo spruce), Todomatsu (Sakhalin fir)	2,410	2,910	2,816	3,268	3,366	3,405	2,940	3,183	3,362	5.6
	Other	319	232	201	170	165	168	142	380	256	▲ 32.6
	Hardwood	3,327 (20)	2,471 (15)	2,404 (14)	2,236 (11)	2,178 (10)	2,007 (9)	1,845 (9)	1,759 (8)	1,696 (8)	▲ 3.6
	Sawnwood	12,798 (75)	11,571 (72)	10,582 (62)	12,004 (60)	12,563 (58)	12,875 (59)	11,615 (58)	12,861 (59)	12,937 (59)	0.6
By use	Plywood	138 (1)	863 (5)	2,490 (14)	3,356 (17)	4,492 (21)	4,745 (22)	4,195 (21)	4,661 (21)	4,912 (22)	5.4
	Chips	4,098 (24)	3,732 (23)	4,121 (24)	4,689 (23)	4,585 (21)	4,263 (19)	4,072 (20)	4,325 (20)	4,233 (19)	▲ 2.1

Source MAFF "Wood Supply and Demand Report"

- Notes 1. Figures in parentheses refer to the percentage of each to total volume.
 2. Figures in angle brackets refer to the percentage of Sugi for sawnwood to the volume for sawnwood of all species.
 3. Roundwood Production excludes forest residue.
 4. Total figures is the sum of "Sawnwood", "Plywood", and "Chips".
 5. Due to rounding, some totals may not correspond with the sum of the separate figures.
 6. Production of roundwood for LVL is added to "Plywood" since 2017.

10. Wood Supply and Demand Chart (roundwood equivalent)

(Unit: 1,000 m³)

Demand / Supply		Demand						Domestic consumption										Export																	
		Industrial use						Wood for mushroom production		Fuel wood		Total				Industrial use				Wood for mushroom production		Fuel wood				Total		Industrial use				Wood for mushroom production		Fuel wood	
Supply	Total	Subtotal	Sawnwood	Plywood	Pulp and chips	Other	Wood for mushroom production	Fuel wood	Total	Subtotal	Sawnwood	Plywood	Pulp and chips	Other	Wood for mushroom production	Subtotal	Charcoal	Firewood	Wood chips for fuel	Total	Subtotal	Roundwood	Sawnwood	Plywood	Pulp and chips	Other	Subtotal	Charcoal	Firewood	Wood chips for fuel					
																															Total	Subtotal	Roundwood	Sawnwood	Plywood
	Roundwood	Sawnwood	Plywood	Pulp and chips	Other	Subtotal	Charcoal	Firewood	Wood chips for fuel	Roundwood	Sawnwood	Plywood	Pulp and chips	Other	Subtotal	Charcoal	Firewood	Wood chips for fuel																	
	Import	Total	(18,855)	67,494	26,263	9,820	29,547	1,865	209	17,390	82,052	64,457	25,973	9,596	28,349	539	209	17,385	745	62	16,579	3,042	3,038	1,324	290	224	1,197	2	5	1	0	3			
		Industrial use	(6,242)	27,678	16,105	5,355	4,472	1,746			(6,242)	24,643	15,818	5,131	3,275	419						3,035	3,035	1,324	287	224	1,197	2							
		Forest residue	94	94			94				94	94																							
		Import	39,723	39,723	10,158	4,465	24,980	120			39,719	39,719	10,155	4,465	24,980	120							3	3	3										
		Wood for mushroom production	209						209		209																								
		Fuel wood	(12,613)								(12,613)	17,385							(12,613)	745	62	16,579	5												
		Total	34,617	24,144	12,937	4,912	4,563	1,732	209	10,264	31,583	21,114	12,651	4,692	3,366	405	209	10,260	49	57	10,154	3,034	3,029	1,324	286	220	1,197	2	5	1	0	3			
Industrial use		24,050	24,050	12,937	4,912	4,469	1,732			21,020	21,020	12,651	4,692	3,272	405							3,029	3,029	1,324	286	220	1,197	2							
Forest residue		94	94			94				94	94																								
Wood for mushroom production		209						209		209						209																			
Fuel wood	10,264							10,264	10,260								10,260	49	57	10,154	5														
Domestic production	Total	50,477	43,351	13,326	4,908	24,983	134		7,126	50,468	43,342	13,322	4,904	24,983	134		7,126	696	6	6,424	8	8	4	4	4	4									
	Roundwood	3,628	3,628	3,168	443	3	14			3,623	3,623	3,167	439	3	14						5	5	5	1	4										
	Subtotal	39,723	39,723	10,158	4,465	24,980	120			39,719	39,719	10,155	4,465	24,980	120						3	3	3	3											
	Sawnwood	10,158	10,158							10,155	10,155											3	3	3											
	Plywood	4,465	4,465		4,465					4,465	4,465																								
	Pulp	5,055	5,055			5,055				5,055	5,055																								
	Chips	19,925	19,925			19,925				19,925	19,925																								
Fuel wood	Other	120	120				120			120	120																								
	Total	7,126						7,126	7,126								7,126	696	6	6,424															

Source: Forestry Agency "Wood Supply and Demand Chart", 2022

- Notes 1. Figures in parentheses of the volume of pulp and chips and fuel wood, for example wood chips from mill residue or construction waste, are not included in the "total" and "subtotal".
2. "Forest residue" refers to branches or roots carried into mills for use.
3. Due to rounding, some totals may not correspond with the sum of the separate figures.

11. Wood Supply/Demand (roundwood equivalent)

(Unit: 1,000 m³)

	Wood supply/demand				Wood demand for industrial use by sector				Wood supply for industrial use by source	
	Total	Wood for industrial use	Fuel wood	Wood for mushroom production	Sawnwood	Plywood	Pulp and chips	Others	Domestic production	Import (roundwood and wood products)
1955	65,206	45,278	19,928	...	30,295	2,297	8,285	4,401	42,794	2,484
1960	71,467	56,547	14,920	...	37,789	3,178	10,189	5,391	49,006	7,541
1965	76,798	70,530	6,268	...	47,084	5,187	14,335	3,924	50,375	20,155
1970	106,601	102,679	2,348	1,574	62,009	13,059	24,887	2,724	46,241	56,438
1975	99,303	96,369	1,132	1,802	55,341	11,173	27,298	2,557	34,577	61,792
1980	112,211	108,964	1,200	2,047	56,713	12,840	35,868	3,543	34,557	74,407
1985	95,447	92,901	572	1,974	44,539	11,217	32,915	4,230	33,074	59,827
1990	113,242	111,162	517	1,563	53,887	14,546	41,344	1,385	29,369	81,793
1995	113,698	111,922	721	1,055	50,384	14,314	44,922	2,302	22,916	89,006
2000	101,006	99,263	940	803	40,946	13,825	42,186	2,306	18,022	81,241
2005	87,423	85,857	1,001	565	32,901	12,586	37,608	2,763	17,176	68,681
2010	71,884	70,253	1,099	532	25,379	9,556	32,350	2,968	18,236	52,018
2015	75,160	70,883	3,962	315	25,358	9,914	31,783	3,829	21,797	49,086
2018	82,478	73,184	9,020	274	25,708	11,003	32,009	4,465	23,680	49,505
2019	81,905	71,269	10,386	251	25,270	10,474	31,061	4,464	23,805	47,464
2020	74,439	61,392	12,805	242	24,597	8,919	26,064	1,812	21,980	39,412
2021	82,130	67,142	14,742	246	26,179	10,294	28,743	1,926	24,127	43,015
2022	85,094	67,494	17,390	209	26,263	9,820	29,547	1,865	24,144	43,351

Source Forestry Agency "Wood Supply and Demand Chart"

Notes 1. "Others" includes items such as roundwood for export.

2. The symbol "..." means "unknown or lack of investigation".

3. Due to rounding, some totals may not correspond with the sum of the separate figures.

4. "Fuel wood" includes wood chip for fuel utilized by woody biomass power plants since 2014.

12. Trend of Domestic and Imported Wood Supply/Demand (roundwood equivalent)

(Unit: 1,000 m³)

		2000	2005	2010	2015	2018	2019	2020	2021	2022	Relative change from the previous year (%)
Total wood supply/demand		101,006	87,423	71,884	75,160	82,478	81,905	74,439	82,130	85,094	3.6
Wood for industrial use		99,263	85,857	70,253	70,883	73,184	71,269	61,392	67,142	67,494	0.5
Wood for mushroom production		803	565	532	315	274	251	242	246	209	▲ 15.0
Fuel wood		940	1,001	1,099	3,962	9,020	10,386	12,805	14,742	17,390	18.0
Domestic production		19,058	17,899	18,923	24,918	30,201	30,988	31,149	33,721	34,617	2.7
Import		81,948	69,523	52,961	50,242	52,277	50,917	43,290	48,409	50,477	4.3
Self-sufficiency rate (%)		18.9	20.5	26.3	33.2	36.6	37.8	41.8	41.1	40.7	▲ 0.4
Wood demand for industrial use by sector	Total	99,263	85,857	70,253	70,883	73,184	71,269	61,392	67,142	67,494	0.5
	Domestic production	18,022	17,176	18,236	21,797	23,680	23,805	21,980	24,127	24,144	0.1
	Import	81,241	68,681	52,018	49,086	49,505	47,464	39,412	43,015	43,351	0.8
	Self-sufficiency rate (%)	18.2	20.0	26.0	30.8	32.4	33.4	35.8	35.9	35.8	▲ 0.1
	Sawnwood	40,946	32,901	25,379	25,358	25,708	25,270	24,597	26,179	26,263	0.3
	Domestic production	12,798	11,571	10,582	12,004	12,563	12,875	11,615	12,861	12,937	0.6
	Import	28,148	21,330	14,797	13,354	13,145	12,395	12,982	13,318	13,326	0.1
	Self-sufficiency rate (%)	31.3	35.2	41.7	47.3	48.9	51.0	47.2	49.1	49.3	0.2
	Plywood	13,825	12,586	9,556	9,914	11,003	10,474	8,919	10,294	9,820	▲ 4.6
	Domestic production	138	863	2,490	3,530	4,492	4,745	4,195	4,661	4,912	5.4
	Import	13,687	11,723	7,066	6,384	6,511	5,729	4,724	5,633	4,908	▲ 12.9
	Self-sufficiency rate (%)	1.0	6.9	26.1	35.6	40.8	45.3	47.0	45.3	50.0	4.7
	Pulp and chips	(6,537)	(7,974)	(6,192)	(6,667)	(6,792)	(6,258)	(5,634)	(7,210)	(6,242)	▲ 13.4
	Subtotal	42,186	37,608	32,350	31,783	32,009	31,061	26,064	28,743	29,547	2.8
	Domestic production	4,749	4,426	4,785	5,202	5,089	4,651	4,420	4,744	4,563	▲ 3.8
	Import	37,437	33,181	27,565	26,581	26,920	26,410	21,644	24,000	24,983	4.1
	Self-sufficiency rate (%)	11.3	11.8	14.8	16.4	15.9	15.0	17.0	16.5	15.4	▲ 1.1
	Others	2,306	2,763	2,968	3,829	4,465	4,464	1,812	1,926	1,865	▲ 3.2
	Domestic production	337	316	379	1,061	1,536	1,534	1,750	1,862	1,732	▲ 7.0
	Import	1,969	2,447	2,589	2,767	2,930	2,931	62	65	134	106.2
Self-sufficiency rate (%)	14.6	11.4	12.8	27.7	34.4	34.4	96.6	96.6	92.8	▲ 3.8	
Wood for mushroom production	Subtotal	803	565	532	315	274	251	242	246	209	▲ 15.0
	Domestic production	803	565	532	315	274	251	242	246	209	▲ 15.0
	Import	-	-	-	-	-	-	-	-	-	-
	Self-sufficiency rate (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Fuel wood	Subtotal	940	1,001	1,099	3,962	9,020	10,386	12,805	14,742	17,390	18.0
	Domestic production	233	159	155	2,806	6,248	6,932	8,927	9,348	10,264	9.8
	Import	707	842	943	1,156	2,772	3,454	3,878	5,394	7,126	32.1
	Self-sufficiency rate (%)	24.8	15.9	14.1	70.8	69.3	66.7	69.7	63.4	59.0	▲ 4.4

Source: Forestry Agency "Wood Supply and Demand Chart"

Notes 1. Self-sufficiency rate is calculated by domestic production divided by total or subtotal in each category.

2. "Others" includes items such as roundwood for export.

3. Figures in parentheses refer to the volume of wood chip from mill residue or construction waste. They are not included in the "total" and "subtotal".

4. Symbol of "-" means "not applicable."

5. The symbol "..." means "unknown or lack of investigation".

6. Due to rounding, some totals may not correspond with the sum of the separate figures.

7. "Fuel wood" includes wood chip for fuel utilized by woody biomass power plants since 2014.

8. Among "relative change from the previous year", "self-sufficiency rate" field is the difference from the previous year.

13. Wood Supply by Country (roundwood equivalent)

(Unit: 1,000 m³, %)

			2000	2005	2010	2015	2018	2019	2020	2021	2022
Imported wood	North America	Subtotal	(28.9)	(18.8)	(19.2)	(17.5)	(16.3)	(15.3)	(14.8)	(14.6)	(14.7)
		U.S.A	28,700	16,129	13,506	12,415	11,898	10,893	9,068	9,835	9,937
		Canada	14,460	6,844	5,838	6,057	6,273	5,754	5,488	5,590	6,174
	Southeast Asia		14,240	9,285	7,668	6,359	5,625	5,139	3,580	4,245	3,763
		Subtotal	(13.7)	(12.2)	(8.9)	(8.3)	(7.4)	(6.9)	(6.9)	(6.7)	(6.7)
		Malaysia	13,569	10,511	6,287	5,848	5,421	4,949	4,215	4,504	4,492
		Indonesia	6,690	5,888	3,773	2,917	2,514	2,213	1,771	1,820	1,730
		Others	5,858	4,137	2,304	2,804	2,759	2,548	2,333	2,625	2,669
	Russia Federation		1,021	486	209	127	148	187	111	59	92
			(7.5)	(8.6)	(3.3)	(2.9)	(3.3)	(3.5)	(3.3)	(3.3)	(2.4)
	Europe		7,429	7,411	2,343	2,081	2,411	2,459	2,050	2,202	1,606
			(4.7)	(6.9)	(7.1)	(7.6)	(8.0)	(8.4)	(9.3)	(7.9)	(9.1)
	Others	New Zealand	4,675	5,937	4,967	5,374	5,880	5,974	5,695	5,311	6,139
			(4.4)	(3.4)	(3.9)	(2.3)	(2.0)	(2.0)	(1.8)	(1.9)	(1.6)
		Chile	4,374	2,878	2,720	1,638	1,484	1,393	1,086	1,291	1,083
			(3.8)	(4.6)	(6.7)	(5.6)	(5.5)	(4.9)	(4.9)	(3.7)	(3.3)
		Australia	3,795	3,952	4,726	3,987	4,055	3,479	2,994	2,457	2,208
			(8.7)	(10.2)	(11.0)	(6.6)	(6.3)	(6.0)	(4.3)	(5.1)	(5.2)
		China	8,604	8,729	7,722	4,662	4,604	4,271	2,628	3,432	3,505
			(2.5)	(3.0)	(3.0)	(2.8)	(2.6)	(2.5)	(2.6)	(3.2)	(2.4)
	Viet Nam		2,445	2,544	2,084	1,967	1,901	1,777	1,591	2,144	1,588
						(7.6)	(8.1)	(9.0)	(9.5)	(11.0)	(11.3)
						5,418	5,939	6,446	5,840	7,364	7,599
	Other		(7.7)	(12.3)	(10.9)	(8.0)	(8.1)	(8.2)	(6.9)	(6.7)	(7.7)
			7,651	10,591	7,663	5,696	5,911	5,823	4,245	4,476	5,193
	Subtotal		(81.8)	(80.0)	(74.0)	(69.2)	(67.6)	(66.6)	(64.2)	(64.1)	(64.2)
			81,241	68,681	52,018	49,086	49,505	47,464	39,412	43,015	43,351
Domestic wood			(18.2)	(20.0)	(26.0)	(30.8)	(32.4)	(33.4)	(35.8)	(35.9)	(35.8)
			18,022	17,176	18,236	21,797	23,680	23,805	21,980	24,127	24,144
Total			99,263	85,857	70,253	70,883	73,184	71,269	61,392	67,142	67,494

Sources Ministry of Finance "Trade Statistics of Japan", Forestry Agency "Wood Supply and Demand Chart"

Notes 1. Figures refer to the sum of domestic/imported roundwood volume and imported products volume (sawnwood, plywood, and pulp and chips) converted into roundwood equivalent.

2. "Others" of "Southeast Asia" includes Philippines, Singapore, Brunei, Papua New Guinea, and Solomon.

3. "Others" of "Others" includes African countries.

4. "Others" of "Others" includes Viet Nam until 2014.

5. Figures in parentheses refer to the percentage of each volume to the "total" volume of each year.

6. Due to rounding, some totals may not correspond with the sum of the separate figures.

14. Number of Mills/Factories and Production Volume

		Unit	2000	2005	2010	2015	2018	2019	2020	2021	2022
Sawnwood	Number of mills	mill	11,692	9,011	6,569	5,206	4,582	4,382	4,115	3,948	3,804
	Arrival of logs	1,000 m ³	26,526	20,540	15,762	16,182	16,672	16,637	14,851	16,650	16,363
	Shipment	1,000 m ³	17,231	12,825	9,415	9,231	9,202	9,032	8,203	9,091	8,600
Plywood	Number of mills	mill	354	271	192	185	180	176	173	158	155
	Arrival of logs	1,000 m ³	5,401	4,636	3,811	4,218	5,287	5,448	4,626	5,093	5,355
	Surface-untreated plywood production	1,000 m ³	3,218	3,212	2,645	2,756	3,298	3,337	2,999	3,172	3,059
	Surface-treated plywood production	1,000 m ³	1,534	1,037	647	524	580	562	551	494	516
Glued laminated timber	Number of factories	factory	281	259	182	157	165	162	148	132	140
	Production	1,000 m ³	892	1,512	1,455	1,485	1,923	1,920	1,740	1,982	1,659
Cross laminated timber	Number of factories	factory	...	...	...	...	9	9	11	11	9
	Production	1,000 m ³	...	...	...	...	14	13	13	15	15
Wood chips	Number of mills	mill	2,657	2,040	1,577	1,424	1,303	1,250	1,196	1,082	1,110
	Production	1,000 tons	...	6,005	5,407	5,745	5,706	5,266	4,753	6,070	5,278
		(1,000 m ³)	10,851	...	...	...	...	...	...	...	...

Sources MAFF "Wood Supply and Demand Report", Japan Laminated Wood Products Association

Notes 1. "Sawnwood" excludes sawmills with output power less than 7.5kW.

2. Figures of LVL are added to figures of "Plywood" since 2017.

3. Figures of glued laminated timber are based on the data from Japan Laminated Wood Products Association until 2016.

4. "Wood chips" excludes chips for fuel.

5. The symbol "..." means "unknown or lack of investigation".

Full text (in Japanese) of the “Annual Report on Forest and Forestry for FY2023” is available on the website of the Forestry Agency:

<https://www.rinya.maff.go.jp/j/kikaku/hakusyo/r5hakusyo/index.html>

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