Special Feature Expanding the Potential of Wood for Society and the Future

Pursuing the Realization of the "Wood Cycle" in the United States

The Sumitomo Forestry Group aims to realize the Wood Cycle in the United States by establishing an integrated supply chain spanning raw material procurement, production and sales of wood products, and housing supply.

Maximizing the value of wood through the first overseas timber industrial complex project*1

In July 2025, we made Plain Dealing Lumber, LLC*2 a subsidiary.

The plant is planned to process approximately 1,000 thousand m³ of logs annually and produce dimension lumber*3 and other products equivalent to those used in approximately 14,000 typical U.S. homes each year. In addition to sales to external markets, the wood products will be supplied to our FITP*4 operations, single-family homes business, and real estate development business.

Furthermore, utilizing approximately 40 hectares of unused land on the site, we are considering the manufacturing of mass timber*5 and the production and sale of other wood products, where future demand growth is expected. We are also exploring the use of wood chips and sawmill residues generated during the manufacturing process for biomass power generation fuel and biorefinery applications. Through the promotion of cascade utilization, which enables staged and effective use of wood resources, we aim to maximize the value of wood.

*1 Timber industrial complexes: From wood utilization to energy and chemical applications, timber industrial complexes aim to enhance the value of wood and achieve long-term carbon storage. Specifically, these complexes are wood processing operations that promote the cascade use of logs sourced from sustainable forests and maximize the value of low-grade wood and offcuts to ensure that nothing goes to waste.

*2 Renamed from Teal Jones-Plain Dealing, LLC in May 2026.

*3 Structural lumber including "2x4" lumber, primarily used in wood-frame wall construction methods.

*4 Fully Integrated Turn key Provider. Provides builders and developers with integrated services ranging from the design, manufacturing, delivery, and installation of wall panels, floors, and roof trusses. Establishes a stable supply of high-quality materials and an integrated construction framework to rationalize the overall construction process.

*5 Large-scale wood products such as CLT, manufactured by combining multiple wood materials.

Expanding business through synergies with existing businesses

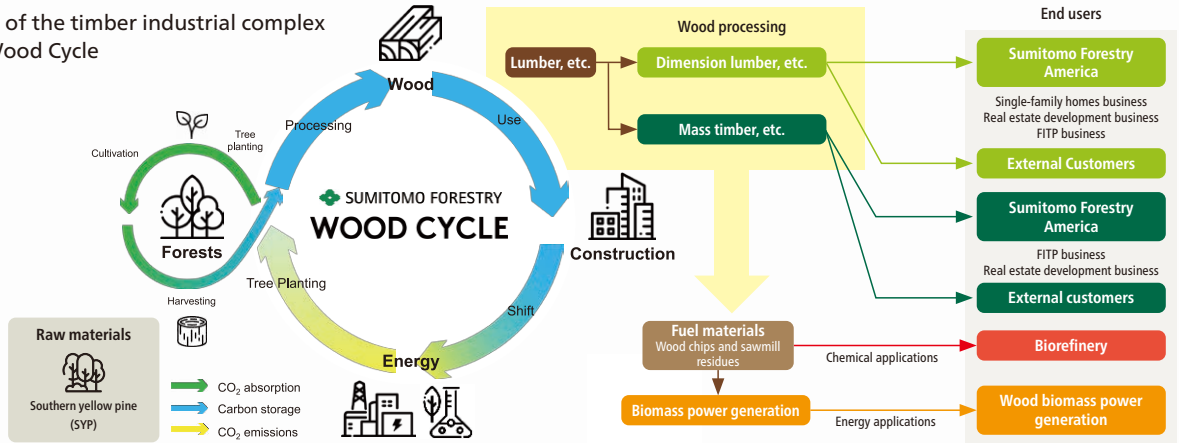
The area surrounding the plant is one of the regions where the Group actively operates its housing business in the United States. The plant's sales territory includes Dallas, Texas, where demand for wood products is particularly high within the state. Leveraging the plant's advantageous location near demand areas for our existing businesses, we will supply wood products to our single-family homes business and real estate development business through FITP operations. By strengthening collaboration within the Group, we will pursue greater stability in lumber supply and improved cost competitiveness. Through realization of the Wood Cycle in the United States, we aim to expand our business while supporting the sustainable growth and value creation of the Group.

Current status / Challenges

Current status
- Secured stable log procurement and sawmill functions in the United States
- Established a foundation integrating lumber production, processing, and logistics
- Commenced production and sales of dimension lumber

Challenges
- Establishing collaboration frameworks with existing U.S. housing businesses
- Manufacturing and sales of mass timber and other wood products
- Exploring utilization of wood chips and sawmill residues generated during manufacturing processes

The role of the timber industrial complex in the Wood Cycle



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Expanding the Value of Wood Through Medium- to Large-scale Wooden Construction

Medium- to large-scale wooden construction creates new value for wood in urban spaces while contributing to the environment. The Sumitomo Forestry Group is expanding this potential throughout society.

Contributing to a decarbonized society through medium- to large-scale wooden construction

The Sumitomo Forestry Group is expanding the wooden construction technologies and expertise cultivated in the detached housing business into medium- to large-scale buildings, including offices, apartment buildings, commercial facilities, and public facilities, and is promoting wood construction and wood interior utilization as one of its growth strategies.

The construction sector generates substantial CO_2 emissions throughout the processes of material manufacturing, transportation, and construction. Wood, however, is a renewable material that absorbs CO_2 during growth and continues to store carbon over the long term even after being used as a building material. Therefore, medium- to large-scale buildings with greater wood usage can deliver greater carbon storage effects.

By actively adopting wooden structures and wooden-mixed structures, the Group reduces CO_2 emissions during construction while contributing to decarbonization across the entire construction sector.

Expanding the value of wood across cities and industries

Medium- to large-scale wooden construction is not simply a replacement of materials. The texture, warmth, and humidity-regulating properties of wood enhance the comfort of living and working environments while bringing harmony with nature and functionality to urban spaces. The Group is also scientifically verifying the effects of wooden spaces on people's physical and mental well-being and promoting the creation of enriched living environments that contribute to user well-being. Furthermore, the expansion of medium- to large-scale wooden construction creates broader industrial opportunities ranging from wood supply and processing to design and construction, generating significant ripple effects for regional economies through revitalization of the forestry and timber industries. As a company engaged consistently from forest management through construction, the Sumitomo Forestry Group will continue contributing to the realization of a sustainable society by maintaining healthy forests through continued wood utilization and connecting urban spaces with nature.

Current status / Challenges

Current status

- Expanded wooden construction technologies and design and construction expertise cultivated in the detached housing business into medium- to large-scale buildings
- Accumulated experience in wooden and wooden-mixed structures for offices, apartment buildings, commercial facilities, and public facilities
- Continued alliance with Kumagai Gumi Co., Ltd.
- Secured fire-resistant and earthquake-resistant performance through fire-resistant wooden materials and proprietary construction methods
- Contributed to decarbonization through reductions in CO_2 emissions during construction and carbon storage through wood utilization
- Promoted revitalization of regional economies and circular utilization of forest resources through expanded use of domestic timber

Challenges

- Improving cost competitiveness compared with reinforced concrete and steel-frame structures
- Developing personnel responsible for design and construction and securing partner companies
- Reducing regulatory burdens and review processes related to wooden and hybrid structures
- Ensuring stable timber supply and optimizing the supply chain
- Expanding recognition among clients and investors regarding the value of medium- to large-scale wooden construction

Zoom In

Challenge undertaken "Midorino no Niwa," a medium- to large-scale wooden-mixed apartment building

As part of efforts to deepen initiatives in medium- to large-scale wooden construction, the Sumitomo Forestry Group designed and constructed "Midorino no Niwa," a six-story company housing complex featuring a wooden-mixed structure, and has commenced its use. The project is positioned as a demonstration project aimed at establishing a standard model for medium- to large-scale wooden-mixed apartment buildings.

By adopting proprietary fire-resistant wooden materials, the building secures fire resistance while retaining the natural texture of wood. In addition, by utilizing materials and construction methods compatible with wooden-mixed and reinforced concrete structures, the project rationalizes design and construction processes, reduces construction costs, and shortens construction periods, thereby promoting the broader implementation of medium- to large-scale wooden construction. The project also calculates embodied carbon from the design stage and works to reduce CO_2 emissions throughout the building lifecycle. Furthermore, the Tsukuba Research Institute is continuously measuring the "effects of wood" in the building, scientifically verifying both environmental and residential value and returning the findings to society.

These advanced initiatives were recognized through the receipt of a Wood Design Award. The Group will continue promoting widespread adoption of wooden and wood-based buildings as standard models while contributing to the realization of a decarbonized society.

Features

- Reduced construction costs and shortened construction periods through rationalized construction utilizing materials and construction methods compatible with mixed structures
- Reduced CO_2 emissions throughout the building lifecycle
- Verification of the "effects of wood" involving employees

Constructed in Tsukuba City, Ibaraki Prefecture, as company housing for Sumitomo Forestry. The building adopts a hybrid floor-plan structure with reinforced concrete in the center and wooden structures on both ends.

Special Feature Expanding the Potential of Wood for Society and the Future

3 Expanding the Value of Wood into New Frontiers Through Technology

The Sumitomo Forestry Group continues taking on challenges in a broad range of fields aimed at solving environmental and social issues by expanding the potential of wood through technology.

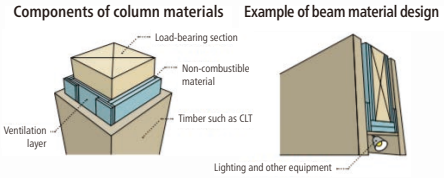
Fire-resistant technologies supporting medium- to large-scale wooden construction

Social trends
As promotion of wood utilization in buildings accelerates toward the realization of a decarbonized society, ensuring earthquake resistance and fire resistance in medium- to large-scale wooden construction is becoming increasingly necessary from the perspectives of disaster prevention and mitigation. At the same time, fire-resistant wooden materials face the challenge of relatively high costs, creating a need for technological development that balances performance and economic efficiency in order to expand adoption.

Development of fire-resistant wooden materials

To address these challenges, Sumitomo Forestry established a proprietary structure utilizing commercially available timber such as CLT and non-combustible materials and developed the cost-competitive original wooden fire-resistant material "Kigurumi CT." In 2021, the product obtained certifications from the Minister of Land, Infrastructure, Transport and Tourism for three-hour fire-resistant beam structures and two- and three-hour fire-resistant column structures.

By overcoming cost challenges while enabling application to medium- to large-scale wooden construction, the technology is raising the fire-resistance performance of wooden construction to a new level.



Measures against hay fever from the forestry sector

Social trends
Japanese cedar pollen allergy is a social issue affecting approximately 40% of the Japanese population. Much of Japan's land area is covered with planted cedar forests established after World War II, and most of these forests are over 20 years old, the age at which they produce pollen. In response, the Japanese government announced the "Comprehensive Policy for Hay Fever Measures" in May 2023, promoting measures such as harvesting and replanting cedar plantations, utilizing cedar timber, and expanding production of low-pollen seedlings.

Practical application of mass-production technology for pollen-free cedar seedlings

Referring to seedling propagation technologies for pollen-free cedar developed by organizations including the Forestry and Forest Products Research Institute and Niigata University, Sumitomo Forestry is working to establish mass-production methods through tissue culture. In July 2024, we entered into an agreement with the Tokyo Metropolitan Government regarding commercialization of pollen-free cedar production and are advancing propagation and cultivation of seedlings using cones provided by the Tokyo Metropolitan Government. In collaboration with seedling producers in Tokyo, we aim to establish a production system capable of producing more than 100,000 seedlings annually and commercialize the business around 2030. We are advancing practical application of this technology as a means of contributing to the resolution of the social issue of hay fever while creating new value for forest resources.

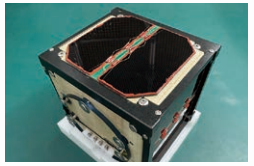
Pollen-free cedar cones cultivated by the Tokyo Metropolitan Government

Expanding wood utilization through demonstration in space

Technical background
Wood generates minimal residue when burned and is lightweight and highly permeable to radio waves. These characteristics have attracted attention for potential applications in the space sector. As the use of satellites continues to expand, conventional metal satellites generate fine particles during atmospheric reentry and combustion, which may affect the global environment and communications. Wood is therefore being explored as an alternative material to help address these challenges.

Joint development of the world's first wooden satellite

Through joint research with Kyoto University, Sumitomo Forestry developed the world's first wooden satellite, LignoSat. By utilizing wood, the satellite burns up completely upon atmospheric reentry, helping to suppress the generation of fine particles. In addition, the research demonstrated that even under the extreme conditions of outer space, wood exhibits excellent durability and stability, with virtually no cracking, warping, or deterioration. By exploring the potential of wood utilization in space and developing technologies for utilizing wood under harsh environments based on the knowledge gained through this research, we aim to expand the use of wood on Earth as well.



100 mm cubic wooden satellite "LignoSat"

The satellite structure uses solid magnolia wood harvested and dried from Sumitomo Forestry-owned forests. The structure adopts the traditional Japanese woodworking technique "Tomegata Kakushi Arikumi Tsugi," which enables precise and robust assembly without the use of screws or adhesives.