# Mission TREEING 2030

## ~Making our planet safer and more secure for future generations~

**By providing value for our planet, for people and society, and for the market economy, we at the Sumitomo Forestry Group will strive to make our planet safer and more secure for current and future generations of people and all living beings. With our long-held strengths in harnessing and expanding the value of forests and wood, we will create change for a new future.**

Value for our planet × Value for people and society × Value for the market economy

Our Long-Term Vision Mission TREEING 2030 contains detailed business concepts for realizing the Sumitomo Forestry Group's vision with an eye toward achieving a decarbonized society in 2050. To elevate our commitment to achieving this vision, we have set the target year for our Long-Term Vision to 2030, which is the same as the Sustainable Development Goals (SDGs). Additionally, we organized the Group's value proposition into "Value for our planet," "Value for people and society," and "Value for the market economy," and then identified nine material issues linked to each.

As the first step toward creating a foundation for contributing to future growth and decarbonization, we are now implementing our Medium-Term Management Plan called Mission TREEING 2030 Phase 1, covering the three-year period ending in fiscal 2024. (See page 34.) Simultaneously increasing the value associated with our "Value for our planet," "Value for people and society," and "Value for the market economy," while keeping them intact, will position us to achieve our Long-Term Vision.

### Nine material issues and related SDGs

**Value for our planet**

1. To enhance the value of forests and wood through sustainable forest management
2. To realize carbon neutrality by leveraging forests and wood resources
3. To realize a circular bioeconomy by leveraging forests and wood resources

> P.61

**Value for people and society**

4. To provide comfortable and secure spaces for society at large
5. To improve the livelihood of the local communities where we operate
6. To create a vibrant environment for all workers

> P.62

**Value for the market economy**

7. To create new markets with forests and wood
8. To transform markets through DX and innovation
9. To establish a robust business structure

> P.63

### Business policy for achieving Mission TREEING 2030

1. Maximizing the value of forests and wood to realize decarbonization and a circular bioeconomy > P.16
2. Advancing globalization > P.20
3. Striving for transformation and the creation of new value > P.58
4. Transforming our business foundation for growth > P.80

### Financial performance target

2030 recurring income target

**250.0 billion yen**

### The Sumitomo Forestry Group's Wood Solutions

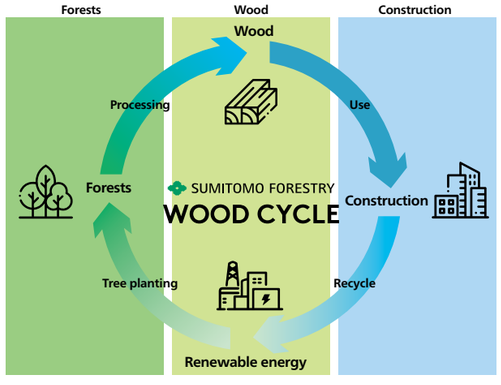
| | Forests | Wood / Renewable energy | Construction |
|---|---|---|---|
| Summary | **Accelerate the cyclical forest business**<br>We will promote zoning forest management to expand conservation forests, which absorb $CO_2$, and accelerate harvesting/replanting of working forests, which encourage carbon storage. With carbon offsets, we want to contribute to the decarbonization of other companies and society and realize a sustainable business. | **Promote "wood change"**<br>We will enhance the competitiveness of domestic timber while pursuing the value of wood in carbon storage. We want to promote the use of wood throughout society to contribute to decarbonization. | **Standardize carbon neutral design**<br>We will promote carbon neutral buildings by popularizing LCCM houses both in Japan and abroad, and by establishing and standardizing carbon neutral design methods to contribute to decarbonization of other companies and entities. |
| Concept | We will create a global forestry fund to expand forest area worldwide, with an emphasis on Asia. Through carbon offsets, we will contribute to other companies and society. | We will make Japanese forestry and wood product manufacturing more efficient with timber industrial complexes and promote the transition to wood-derived alternatives that increase carbon storage amounts. | We will popularize ZEH, ZEB and LCCM housing and net-zero carbon buildings and establish carbon neutral design (One Click LCA*1 x EPD*2) to contribute to the decarbonization of other companies and entities. |
| Beneficiaries | New customers who are seeking the value of $CO_2$ absorption | Supply chain partners | Building owners (general consumers, companies) |
| Contributions | $CO_2$ absorption | $CO_2$ reduction (Scope 3 – Category 1) | $CO_2$ reduction (Scope 3 – Category 11) |
| 2024 investments*3 | 2024<br>Forestry fund related investments (~2024)<br>**12.0 billion yen** | 2024<br>Timber industrial complexes investments (~2024)<br>**20.0 billion yen** | 2024<br>Overseas non-residential wooden building investments (~2024)<br>**30.0 billion yen** |
| 2030 targets | 2030<br>Owned/managed forest area<br>**500,000 ha** | 2030<br>Timber industrial complexes domestic timber usage<br>**1.0 million m³/year** | 2030<br>Number of housing units supplied yearly<br>**50,000 units** |

*1 A software that visualizes $CO_2$ emissions during construction. Our Company signed an exclusive agency agreement for Japan.
*2 An environmental labeling system based on quantitative environmental data evaluated and certified by a third party.
*3 Total investment from FY2022/12 to FY2024/12.

### Moving toward a decarbonized society using the wood cycle

One unique aspect of the Group can be found in its business activities around the wood cycle, the upstream to downstream value chain for the sustainable natural capital of wood. With our operations focused on the three pillars of accelerating the cyclical forest business in the forests area, promoting "wood change" in the wood area, and standardizing carbon neutral design in the construction area, we will provide unique wood solutions in Japan and abroad harnessing all of these businesses that lead to a carbon neutral society, from forestry management to procurement and manufacturing of timber and construction materials, wooden construction, and wood biomass power generation. We have set quantitative targets for each of the above three pillars, and by actively promoting initiatives to achieve these targets, we will contribute to the realization of a sustainable and prosperous society as well as our own business growth.

### Wood cycle



Special Feature

# Harnessing the Value of Forests and Trees

Wood Solution ①
Forests

## Accelerate the cyclical forest business

**In addition to absorbing $CO_2$, forests have a variety of public benefits, including biodiversity conservation, water source recharge, soil conservation, and prevention of sediment disasters. In order to ensure perpetual use of these timber resources while maintaining these forests' public benefits, the Group is promoting sustainable forest management in Japan and overseas under proper management by firmly zoning conservation forests and working forests.**

**2030 targets**
Forestry fund assets under management
**100.0** billion yen

Owned/managed forest land area target
277,000 ha ▶ **500,000** ha
As of December 31, 2021 (formulation of our long-term vision)

**Investment plan**
Forestry fund related investments (~2024)
**12.0** billion yen

### To Accelerate the Cyclical Forest Business

#### Formation of Forestry Funds

Our long-term vision includes accelerating the cyclical forest business as a pillar of the forestry area. By utilizing expertise from NeXT FOREST and forestry fund mechanisms, we plan to expand the global land area of owned and managed forests to 500,000 hectares by 2030. This increases $CO_2$ absorption and contributes to carbon offsets for other companies and society, making sustainable business a reality. The target size of assets to be included in forestry funds is 100.0 billion yen by 2030, with related investments of 12.0 billion yen by 2024.

#### Launch of Mangrove Conservation Project in Indonesia

In December 2022, Sumitomo Forestry made PT BINA OVIVIPARI SEMESTA a wholly owned subsidiary. This company owns and manages 9,738 hectares of mangrove forest in West Kalimantan, Indonesia. Proper management and conservation of mangroves, themselves an ecosystem with great value worldwide, as conservation forests will lead to a reduction in $CO_2$ emissions. We aim to create blue carbon*1 credits through mangrove conservation projects and engage in other ecosystem conservation projects over a wide area, including peatlands and rainforests.


A mangrove forest

*1 As coined by the United Nations Environment Programme (UNEP) in 2009, carbon embedded in the marine ecosystems of seagrass beds, seaweed beds, wetlands and tidal flats, and mangrove forests. The blue carbon of the acquired mangroves is estimated to be about 66 million t-$CO_2$.

#### Established NeXT FOREST, a Joint Venture with IHI Corporation.

In February 2023, we established NeXT FOREST Corporation, a joint venture with IHI Corporation, launching a consulting service for the proper management of tropical peatlands by combining our established tropical peatland*2 management technology with IHI's satellite and drone-based observation technology. We will work to create high-quality credits by accurately measuring the amount of $CO_2$ absorption and carbon storage in forests and soil, and by properly assessing the value of natural capital.

*2 Land consisting of peat deposits which are formed plant debris not decomposed in water. When the groundwater level drops and peatland dry out, the peatland can be lost and emit large amount of $CO_2$ by forest fires or peat decomposition. As such, groundwater level management is critical.

Diagram of sustainable tropical peatland for promotion by NeXT FOREST

Balancing economic benefit and the social environment by dividing areas into working forests, conservation forests, and local resident areas


### The Creation of Forestry Funds

In October 2022, we established the forest asset management company Eastwood Forests, LLC in the United States. The company will manage forest assets through the forestry funds it sets up, returning profits from timber sales and other activities and carbon credits generated by the forests to investors, thereby contributing to carbon offsetting for society as a whole. The Group is identifying the needs of mainly domestic companies and sourcing forests in North America, Asia, and Oceania, and has formed its inaugural Eastwood Climate Smart Forestry Fund I, launched in 2023 through the new company.

*3 This content is not intended to solicit corporations to participate in this fund.

Wood Solution ②
Wood

## Promote "wood change"

**In the area of wood, we are promoting the substitution of wood for other materials ("wood change") while appealing to society for the various values that wood possesses, such as its carbon storage function. Through the establishment of timber industrial complexes, we are also working to maximize wood's added value and encourage the use of domestic timber.**

**2030 targets**
Timber industrial complexes Domestic timber usage volume
**1** million $m^3$/year

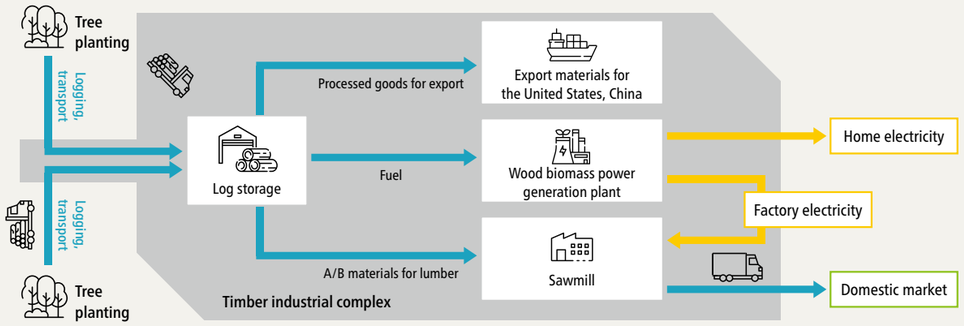
**Investment plan**
Timber industrial complexes investment amount (~2024)
**20.0** billion yen

### The Role of the Timber Industrial Complex

Japanese housing (for the wooden post-and-beam construction method) relies on imported timber for 90% of its horizontal timbers and 50% of its post timber. In order to diversify and mitigate the risk of relying on imports for the majority of structural members and raw materials, and to realize a stable supply chain, timber industrial complexes are important for building a supply system for domestically produced structural members.

The timber industrial complexes help realize long-term carbon storage through value-enhancing wood utilization, from use in timber, to energy, to chemicals. Specifically, we are working to launch timber processing business, among others, to maximize the value of low-grade timber and offcuts, as well as cascade use of all logs from sustainable forests. By encouraging substitution for wood-derived materials in various fields such as detached housing, non-residential construction, and bio-chemicals, we aim to build a circular business, improve the value of forests, and expand the use of domestic timber. By collaborating with business partners in each area and complementing each other's functions, we will realize the wood cycle and contribute to improving Japan's wood self-sufficiency rate and to local communities.

Timber industrial complex overview




### Toward the Establishment of Timber Industrial Complexes


Image from a PR video about global expansion by the Shibushi Port, published to Kagoshima Prefecture's official YouTube channel

In February 2022, Sumitomo Forestry signed a letter of agreement with Shibushi City, Kagoshima Prefecture, establishing the location for construction of a new plant. Currently, we are developing a business plan and selecting equipment with the aim of building a plant that can process exported logs and produce high-strength structural members that can be used not only for residential buildings but also for non-residential buildings. We will continue to consider projects in multiple locations throughout Japan, focusing on areas with abundant wood resources.

# Special Feature Harnessing the Value of Forests and Trees

Wood Solution Construction

## Standardize carbon neutral design

**In the area of construction, we have established the pillar of standardizing carbon neutral design. By helping to spread ZEH, ZEB, life cycle carbon minus housing, and net-zero carbon buildings in Japan and abroad, we are striving to cut operational carbon (carbon during occupancy), which accounts for 70% of $CO_2$ emissions in the construction sector. At the same time, we are working to cut the remaining 30% from embodied carbon (carbon during construction) in construction, with the aim of establishing carbon neutral design through the dissemination of $CO_2$ emissions visualization software and other means.**

**2030 targets**

Annual housing units supplied

**27,000 units ▶ 50,000 units**

As of December 31, 2021
(formulation of our long-term vision)

| | |
|---|---|
| Japan | 10,000 units |
| United States | 23,000 units |
| Australia | 5,500 units |
| Other*1 | 11,500 units |

*1 Total for housing complexes, single family rentals, etc. in real estate development in the U.S., Australia, Europe, and Asia, including those via JVs.

**Investment plan**

Overseas non-residential wooden building investment (~2024)

**30.0 billion yen**

### Progress in Cutting Embodied Carbon

Global energy-based $CO_2$ emissions in 2021 were 36.3 billion tons, 37% of which came from the construction sector, making decarbonization of the construction sector a top global priority. We will strive to reduce $CO_2$ emissions during occupancy (operational carbon) through technological innovation and diffusion of ZEH, ZEB, and others. Still, it is expected that the world's building area will double its current size by around 2060 due to economic development in emerging countries and other reasons. In the future, reducing $CO_2$ emissions during construction (embodied carbon) is expected to become even more important. To support this, the Sumitomo Forestry Group is also focusing on the development and dissemination of life cycle carbon minus (LCCM) housing, which reduce $CO_2$ emissions throughout the house's life cycle, and is promoting decarbonization at both the construction and occupancy/operation stages.

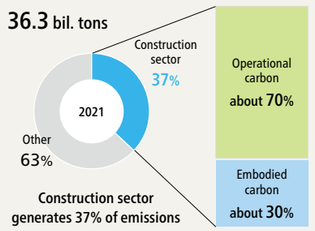
#### Supporting Emissions Reductions with $CO_2$ Emissions Visualization Software

To reduce embodied carbon, it is necessary to consider the environmental impact of a building over its entire life cycle and calculate the embodied carbon from the procurement of raw materials for construction to disposal. One Click LCA (Life Cycle Assessment) software, for which we became the sole distributor in Japan in January 2022, is used in 130 countries around the world to support businesses in reducing $CO_2$ emissions by precisely calculating embodied carbon. The software is ISO compliant and supports more than 50 types of environmental certifications worldwide, including European standards.

In Europe, regulations are currently being tightened to reduce $CO_2$ emissions in the construction industry, and it is expected that greenhouse effect coefficient data disclosure will be mandated for all timber and building materials by 2030. In February 2023, we launched a project to promote acquisition of the EPD*2 environmental certification label for timber and building materials manufacturers in order to support this carbon neutral design throughout the construction industry. By providing and supporting the Japanese version of EPD Generator, which is support software for acquiring EPD labeling, we aim to help manufacturers achieve labor savings and reduced acquisition costs. In addition, we launched a One Click LCA calculation contract business for developers, general contractors, and design firms. We contribute to the decarbonization of society by supporting the construction industry as a whole in reducing $CO_2$ emissions.

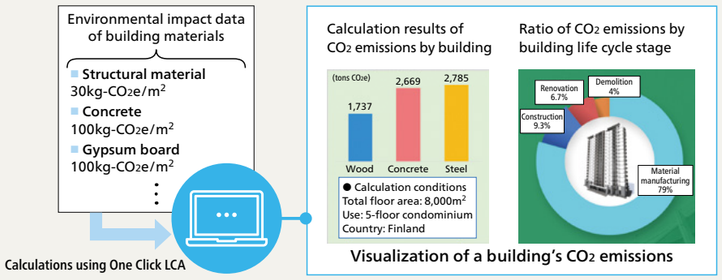
*2 EPD (Environmental Product Declaration): An ISO-compliant environmental certification label that visualizes $CO_2$ emissions over the entire product life cycle, from resource extraction to disposal.

Global $CO_2$ Emissions from Energy



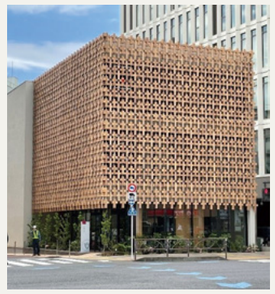

Source: Global Alliance for Buildings and Construction (2022)

Illustration of One Click LCA in Use

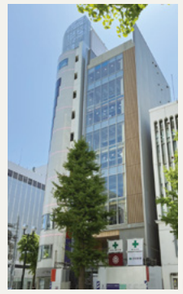



### A Wooden Campus to Turn a Town into a Forest

The Sophia University Yotsuya Campus Building No. 15, completed in 2022, is a three-story fire-resistant wooden structure designed and constructed by Sumitomo Forestry. Compared to similar facilities built with standard reinforced concrete or steel frames, it reduced $CO_2$ emissions during material production for the structural framework by 15% and 20%, respectively. The structural framework uses 111.85 $m^3$ of wood and stores about 84 tons of carbon (on a $CO_2$ basis), which is equivalent to the carbon storage of about 280 40-year old Japanese cedar trees. The facility will help turn its town into a forest, contributing to the achievement of the SDGs and the realization of a decarbonized society. By increasing the number of environmentally conscious buildings like these, we aim to contribute to the decarbonization of society as a whole.



This building also contributes to local production for local consumption by cedar from the Tama area for the exterior



Fire-resistant engineered wood with built-in steel frame protects steel from heat

### The "with TREE" Medium- to Large-scale Wooden Construction Brand

In March 2021, Sumitomo Forestry and Kumagai Gumi Co., Ltd. launched the "with TREE" brand of medium- to large-scale wooden construction, which adopts the concept is "architecture good for both the environment and your health." Its brand name is derived from "creating wooden buildings with high value and positive effects in cooperation with customers, with community, and with trees." In June 2022, construction began on a 10-story fire-resistant wood-frame building with one basement floor under the same brand name in Sapporo, Japan, through a joint venture with Kumagai Gumi Co., Ltd. The upper floors are made of hybrid laminated engineered wood, which contributes to the decarbonization of the city through the carbon storage action of wood. Going forward, we will make contributions toward the realization of a decarbonized society through the conversion to wooden structures and woodification of medium- to large-scale buildings.

**One Click LCA Partner Voice**

**Ms. Aditi Chitnis**
Eastern Europe, Asia & Middle East Team Lead
LCA & EPD Business Development

#### Toward Greater Environmentally Conscious Construction in Japan and Decarbonizing the Construction Industry

One Click LCA is a Finland-based company in the building and manufacturing life cycle assessment (LCA) calculation software and platform business. We globally provide One Click LCA software for visualizing and calculating $CO_2$ emissions in the construction industry, and are continuously developing the software to comply with regulations, standards, etc. in Europe and other parts of the world.

Our mission is to help people achieve carbon neutrality. While awareness of the need to reduce embodied carbon is growing in Europe, countries around the world, including Japan, tend to have their concerns slanted more toward operational carbon. Through this partnership with Sumitomo Forestry, we expect to provide enhanced customer support to users in Japan, and through the use of One Click LCA, we hope to promote the spread of environmentally conscious construction in Japan and the decarbonization of the construction industry.

# Special Feature Harnessing the Value of Forests and Trees

Con-struction × Over-seas

**Under Mission TREEING 2030, our long-term vision through 2030, we aim to accelerate our decarbonization efforts overseas as well by advancing globalization as one of our business policies.**

Global Housing, Construction and Real Estate Business > P.48

**2030 targets**

Annual overseas housing units supplied
Around 17,000 units ▶ 40,000 units
As of December 31, 2021 (formulation of our long-term vision)

| | |
|---|---|
| United States | 23,000 units |
| Australia | 5,500 units |
| Other*1 | 11,500 units |

*1 Total for multi-family housings, single family rentals, etc. in real estate development in the U.S., Australia, Europe, and Asia, including those via JVs.

**Investment plan**

Overseas non-residential wooden building investment (~2024)
**30.0 billion yen**

## Progress in Medium- to Large-Scale Wooden Construction Business in the United States, Australia, and Europe, Targeting Greater Decarbonization in Japan and Overseas

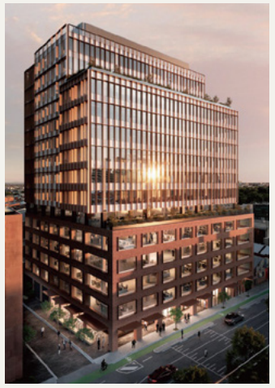
The market for medium- to large-scale wooden construction buildings is expanding in response to the global trend toward ESG investment. In our long-term vision, we have identified the creation of new markets for forests and wood as one of our key challenges, and are promoting the medium- to large-scale wooden construction business in the United States, Australia, and Europe.

Wooden construction has the potential to make significant contributions to decarbonization by storing carbon absorbed by wood over a long period of time. Compared to steel or reinforced concrete construction, wood can greatly reduce $CO_2$ during construction (embodied carbon), and therefore demand for medium- to large-scale wooden construction (mass timber construction*2) is increasing both in Japan and overseas. With the aim of realizing net zero carbon buildings*3, Sumitomo Forestry is pursuing joint development projects for large-scale wooden office buildings. Construction is currently underway in Melbourne, Australia, for a mixed structure of reinforced concrete and timber with 15 floors above ground and two floors below (over six floors will be wooden). This building is scheduled for completion in September 2023, and is expected to be the tallest wooden office building in Melbourne*4. Sumitomo Forestry is also developing a six-story wooden office building in London, United Kingdom. This project is the first entry of Sumitomo Forestry's housing and real estate business in Europe. In addition, we are developing a seven-story wooden office building in Dallas, Texas, and a three-story wooden office building near Atlanta, Georgia, both in the United States.

With an eye to 2030, the target year of our long-term vision, we aim to supply 40,000 housing units per year overseas and contribute to the realization of a decarbonized society by providing new value to people's lives, society, markets, and economic activities through the broad, global spread of high-quality wooden buildings.

*2 Architecture using mass timber products, such as CLT and LVL, which are engineered woods of relatively large mass and volume and formed by combining multiple layers of timber.
*3 A building that emits virtually zero $CO_2$ (operational carbon) during use.
*4 Per research by Wood Solutions, an Australian government-affiliated organization (as of June 2021).

Australia



Renderings of the completed 36 Wellington Project in Melbourne (left and bottom right) and photograph of construction (top right)

United Kingdom

Paradise Project in London

United States

Southstone Yards Project in Dallas

The Garren Project in Atlanta

## Advancing our FITP Business to Resolve Issues and Generate Synergies in the United States Single Family Homes Business

The United States housing industry faces structural problems including a shortage of craftsmen, rising costs due to higher labor costs, and longer construction times. To combat these issues, the Sumitomo Forestry Group is advancing its Fully Integrated Turn-Key Provider (FITP) business, which provides integrated services from panel design to manufacturing, delivery, and installation. In September 2022, the Company entered the component manufacturing business near Washington, D.C., with the acquisition of Structural Group, a manufacturer of component products for homebuilders. In December of the same year, construction began on a plant in North Carolina to manufacture wall panels and roof and floor trusses for single-family and multi-family housing. Through these efforts, we have been able to establish a system that enables us to provide a full range of services on the east coast of the United States, from procurement of materials to housing sales. By advancing the FITP business, we will shorten construction times, reduce costs, improve quality, and reduce waste at construction sites by promoting streamlined construction and creating new value (value engineering). In the United States, we aim to supply 23,000 housing units per year, and we will develop our business structure in anticipation of future labor shortages in the United States construction industry. By establishing the FITP business, we aim to strengthen the Group's overall value chain in the United States, diversifying our revenue sources and building a stable portfolio.

### Employee Voices

#### Advancing the FITP Business to Contribute to the Environment and Local Communities

Builder Solutions Group (BSG)*5 acquired a manufacturing company that handles trusses, panels, and other components in the northern portion of the United States east coast in 2022, bringing the manufacturing and installation functions of housing components in-house. The FITP business overseen by BSG streamlines the entire process and provides integrated delivery, thereby shortening construction times and reducing costs, as well as reducing waste at construction sites. In February 2023, the Company announced the establishment of a wall panel and truss manufacturing plant (in North Carolina) that it will operate. This plant is expected to begin production in the first quarter of 2024. Going forward, we will also look to collaborate with Group builders throughout the United States to strengthen our supply system of components and construction capabilities, aiming to stabilize the foundation of our housing and real estate business in the United States and to develop the FITP business. We also hope to contribute to the local community by creating employment opportunities, among other benefits.

*5 Builder Solutions Group: A wholly owned subsidiary of Sumitomo Forestry in the United States that oversees and promotes the FITP business.

**Satoshi Fujita**
Director and President
Builder Solutions Group, LLC

## The First Major Australian Builder to Install Solar Panels as Standard on Order Homes

In October 2022, the Australian subsidiary Henley Properties Group became the first major Australian builder to make solar panel installation standard on all its order homes. Henley Properties will promote ZEH in Australia with order homes that uses energy generated by solar power generation to cover daily energy consumption. In addition, full electrification is now the standard specification, saving up to 75% of utility costs together with solar power generation. These initiatives will reduce Scope 3*6 $CO_2$ emitted during daily life by up to 100%. The Australian government has set the goal of achieving net zero greenhouse gas (GHG) emissions by 2050, and is expected to revise the NCC (National Construction Code), to take effect in October 2023 and place more emphasis than ever before on lower environmental impact and energy conservation. We will contribute to the decarbonization of society through the reduction of $CO_2$ emissions during occupancy by promoting environmentally conscious housing with solar panels and ZEH/ZEB not only in Australia but also in Japan and other countries.

*6 Scope 3: Greenhouse gas emissions in the supply chain.

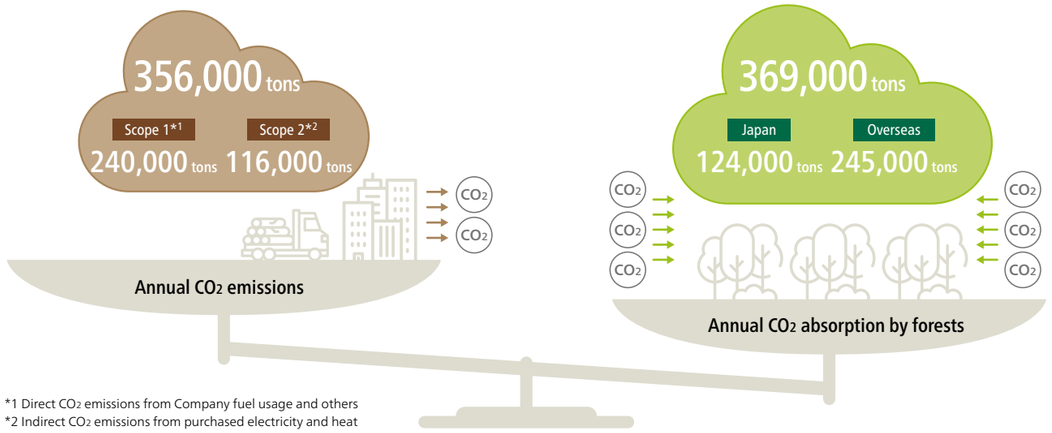
Solar panels to be installed as standard

# Contributions to Decarbonized Society

**The Sumitomo Forestry Group is working to reduce greenhouse gas emissions from its business activities, increase the $CO_2$ absorption volume of forests, promote carbon storage through increased use of timber, and achieve long-term carbon storage through wooden construction. Through its business activities, the Group contributes to the construction of a decarbonized society.**

## The Sumitomo Forestry Group's $CO_2$ emission and absorption volumes
(Data collection period: January to December 2022)

The Group's $CO_2$ emission and absorption volumes (annual)
Thanks to the $CO_2$ absorption volume of the forests it owns and manages, the Group is carbon negative (Scope 1, Scope 2)




*1 Direct $CO_2$ emissions from Company fuel usage and others
*2 Indirect $CO_2$ emissions from purchased electricity and heat

### $CO_2$ emissions in the value chain

For Scope 3, Sumitomo Forestry aims to reduce $CO_2$ by actively proposing products and services that lead to decarbonization for its customers and business partners.


Annual $CO_2$ emissions, Scope 3*3
**9,400 thousand tons**

Scope 3, Category 11 (use of sold products) (63.2%)
**5,937 thousand tons**

*3 Most Scope 3 emissions are $CO_2$ emissions from Category 11 (use of sold products) and Category 1 (purchased goods and services).

## The Sumitomo Forestry Group's potential carbon stock (as of December 2022)

Carbon stock of owned and managed forests and currently standing wooden buildings and HWP (Harvested Wood Products)

**Carbon stock of forests**
**66,370 thousand tons*4**

Japan **13,730 thousand tons**
Overseas **52,640 thousand tons**

**HWP*5 existing carbon stock**
**24,357 thousand tons**

Japan Cumulative houses **7,561 thousand tons*6**
Overseas Cumulative houses **2,150 thousand tons*7**
Overseas Cumulative wood products **14,646 thousand tons*7**

*4 Method to calculate carbon stock of forests: Cumulative amount x Bulk density x Biomass magnification factor x (1+ratio of underground area as a ratio of above ground area) x Carbon content (utilizing the specific number of each tree species)

*5 HWP (Harvested Wood Products)
*6 Carbon stock of Japanese housing HWP was calculated with the cooperation of Tokyo University of Agriculture and Technology based on the number of housing unit starts, the number of owners, and wood usage per floor area to determine carbon stock and amounts of change from housing.
*7 HWP carbon stock from overseas housing and manufacturing facilities was calculated with the cooperation of Tokyo University of Agriculture and Technology using figures for Japanese housing as reference.

Sustainable forest management
https://sfc.jp/english/sustainability/environment/forest/

## Indicators and data on each of the forests, wood, and construction fields

* Data collection period: January to December 2022

### Forests

■ Area of owned forests in Japan
Approximately **48,000 ha**

■ Area of owned/managed forests overseas
Approximately **240,000 ha**

■ Ratio of Company-owned forest area in Japan harvested annually
Less than **1%**

■ Domestic and overseas reforestation rate
**100%**

■ Number of trees planted annually
Japan **0.30 million trees**
Overseas **8.30 million trees**

■ Number of seedlings produced annually
Japan Container seedlings
Approximately **1.90 million capacity**
Overseas Seedling production
Approximately **8.24 million**

■ Ratio of domestic forests that are sustainably managed with consideration to biodiversity
**100%**

■ Forest certification acquisition rate
Japan **100%**
Overseas **93.3%**
* Forest certification acquisition rate for the operating area (planted area)

### Wood

■ Sustainability procurement survey implementation rate for imported wood product suppliers
**100%**
* Ratio of suppliers who completed the sustainability procurement survey among all suppliers who were subject to timber procurement due diligence by the Company's Timber Procurement Committee.

■ Recycling rate of manufacturing site waste
Japan **99.4%**
Overseas **98.0%**

■ Volume of wood and wood products handled
**8,290,000 $m^3$**

■ Power supply from wood biomass power generation (converted to number of households)
**399,000 households**
* Total power supply from the five wood biomass power generation facilities in Japan. 238,000 households when converted to ownership ratio.

### Construction

■ ZEH order ratio of new, custom-built detached houses in Japan
**77.2%**
* Order-based value that includes ZEH, Nearly ZEH, ZEH Oriented

■ Ratio of new, custom-built detached houses in Japan that have acquired long-life quality housing certification
**96.3%**
* Limited to private residences and those with at least the applicable floor area.

■ Recycling rate of waste from housing demolition sites
**94.4%**

■ Cumulative number of houses transferred
Japan
Approximately **340,000 units**
Overseas
Approximately **90,000 units**