## Contribution Through Our Business

### Overall Business and Scope of Impact

### Housing and Construction Business

### Distribution Business

### Manufacturing Facilities

### Forest Management

### Environmental Energy Business

### Business Responding to the Super-Aging Society
We at the Sumitomo Forestry Group strive in a wide range of business activities centered upon wood.

We have built strengths unique to our Group from the technology and know-how in wood accumulated for the almost 320 years since our founding to the brand cultivated with a network in Japan and overseas that connects us to our customers. The Sumitomo Forestry Group utilizes wood as a healthy and environmentally friendly natural resource to provide a diverse range of lifestyle-related services that contribute to the realization of a sustainable and prosperous society.

### Value Chain

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### Relevant Stakeholders

- Customers
- Business Partners
- Industries and Companies in the Same Business
- NPOs/NGOs
- Government and Regulatory Authorities
- Global Environment
- Employees and Their Families
- Global Society and Local Communities

### Relevant Material Issues*

1. Material Issue 1: Environmentally responsible society
2. Material Issue 3: Low-carbon society
3. Material Issue 4: Strengthen occupational health and safety
4. Material Issue 5: Strengthen risk management framework

1. Material Issue 1: Environmentally responsible society
2. Material Issue 3: Low-carbon society
3. Material Issue 4: Recycling society
4. Material Issue 5: Strengthen risk management framework

1. Material Issue 1: Environmentally responsible society
2. Material Issue 3: Improve safety and quality
3. Material Issue 4: Strengthen occupational health and safety
4. Material Issue 5: Strengthen risk management framework

1. Material Issue 1: Environmentally responsible society
2. Material Issue 3: Recycling society
3. Material Issue 4: Low-carbon society
4. Material Issue 5: Strengthen occupational health and safety
5. Material Issue 5: Strengthen risk management framework

### Relevant SDGs

* Material issues are CSR priority issues identified by the Sumitomo Forestry Group based on economic, environmental and social approaches.

**Mid-Term Sustainability Targets of Our 2021 Mid-Term Management Plan and Material Issues**
Sales/Product Development

Housing and constructions at the Sumitomo Forestry Group are mostly custom-built detached housing designed to each customer’s individual home specifications. We listen carefully to the requests of our customers to propose the best lifestyle based on their wishes. We enhance knowledge of each and every staff member to fully grasp the needs of our customers, and offer multiple communication opportunities such as meetings at model homes and showrooms. We also visualize image of the housing to provide accessible proposals through the adoption of tools such as virtual reality (VR) systems.

The Sumitomo Forestry Group pursues better housing performance from a wide range of perspectives, including earthquake resistance, fireproofing, insulation efficiency and universal design in product development.

Relevant Social Issues

Sales endeavors face the challenge of whether appropriate information can be provided comprehensively to customers. We strive to properly communicate data related to safety, performance and benefits of environmentally-friendly housing in addition to other information to offer proposals customers will be happy with.

Relevant CSR Initiatives

► Communication with Our Customers
The Sumitomo Forestry Group provides long-lasting, high-quality housing by fully taking into account safety, durability and the environmental impact at the design stage. We have maintained our ratio of houses certified as Excellent Long-term Housing for new custom-built houses through development such as Net Zero Energy Houses (ZEH) and the BF Method up until now.

**Relevant Social Issues**

The themes in particular for social challenges related to initiatives in the design stage are safety and the environment. We propose safe, secure lifestyles to customers in addition to ensuring we do not neglect considerations toward the global environment, including climate change.

**Relevant CSR Initiatives**

- Product Safety and Quality Control
- Home Building That Contributes to a Sustainable Society
- MOCCA (Timber Solutions) Business

The Housing and Construction Business procures a wide range of materials from timber and concrete to kitchens and toilets. For example, this business alone procures and uses 250,000m³ of wood annually. Promoting fair and responsible initiatives for these procurement activities are the social responsibility of the Group.

**Relevant Social Issues**

We believe that the procurement responsibilities of the Housing and Construction Business should include its business partners as well as upstream supply chain. Therefore, considerations are expansive from labor practices, human rights to environmental issues both in Japan and overseas.

**Relevant CSR Initiatives**

- Procurement Initiatives
Sumitomo Forestry considers safety while working carefully and efficiently to complete the construction on time for the customers. Therefore, we are building a system to ensure our policies and initiatives are carried out on-site by the construction contractors through thorough implementation of safety training and environmental education.

**Relevant Social Issues**

Construction sites are bound to face various dangers and occupational injuries. We cultivate the highest level of awareness about “Safety-First” practices and strive to realize accident-free construction sites with the cooperation of a variety of construction businesses. The Housing and Construction Business also takes measures such as the reduction of waste and considerations for the neighboring areas, such as noise and vibrations.

**Relevant CSR Initiatives**

- Occupational Health and Safety on Construction Sites
- Environmental Consideration on Construction Sites
- Contributions to Eco Cities Through Greening

The Sumitomo Forestry Group aims to provide housing residents can live in over the long term by pouring its strength into after-sales support. Therefore, we conduct regular inspections and customer satisfaction surveys for 25 years after homes are delivered to their owners in addition to setting up a call center.

**Relevant Social Issues**

We believe responsibility for our products (housing) lasts even after delivery as a housing manufacturer. Our Group recognizes maintenance as part of our responsibility for product liability to not only ensure long-term safety and environmental performance but also a home people can live in over the long term.

**Relevant CSR Initiatives**

- Communication with Our Customers
Procurement Initiatives

Basic Policy

The Sumitomo Forestry Group has been committed to responsible timber procurement and having established Timber Procurement Standard and Timber Procurement Philosophy and Policy in 2005 and 2007 respectively, to bring contributions to sustainable society via business activities of “wood” - a renewable resource.

In July 2015, Timber Procurement Philosophy and Policy were extended beyond timber and became subject to procurement of construction materials and other items, and reestablished as Sumitomo Forestry Group Procurement Policy. The Group’s economically, socially and environmentally responsible procurement today is being carried out based on this policy.

► Sumitomo Forestry Group Procurement Policy

Green Procurement and CSR Procurement

The Sumitomo Forestry Group formulated the Green Procurement Guidelines in 2002. The Guidelines establish standards for procuring products from two perspectives: the supplier’s stance toward the environment (corporate activities assessment) and the product’s impact on the environment throughout its life cycle (product assessment).

In 2013, the Group revised the Green Procurement Guidelines and added items to ensure progress of CSR initiatives concerning occupational health and safety and human rights under “corporate activity assessment.”

► Green Procurement Guidelines (extract)

Environmental Consideration and Legal Compliance in Responsible Material Procurement

The Sumitomo Forestry Group procures materials for its Housing and Construction Business in accordance with the Sumitomo Forestry Group Green Procurement Guidelines.

When adopting new products or reforming existing products, we create green procurement ledgers as well as waste disposal confirmation forms (product/packaging) in addition to product specifications which define the specifications, standards and quality criteria of products. Green procurement ledgers confirm aspects of procurement such as verifying the timber procured has been legally logged, confirming the no occurrence no volatile organic compounds (VOCs) as well as use of certified chemicals such as insecticides when adopting new products. Regarding materials made of wood, documentations such as legal certification are confirmed to ensure that procured wood materials comply with the Clean Wood Act. The waste disposal confirmation forms (product/packaging) verify aspects such as the type of offcuts, disposal methods and processing facilities.

We create two copies of each form and suppliers and we each keep copies.

► Status of Sumitomo Forestry Group Forest Certification/CoC Certification

<102> Sumitomo Forestry Group Sustainability Report 2019
Communication with Procurement Partners and Partner Evaluation

Sumitomo Forestry's Housing and Construction Business worksites are found in every region of the country, and they rely on support from the many business partners that the Sumitomo Forestry Group collaborates with. The Company considers communication with these companies to be vital in order to share with them its philosophy of improving the quality of homes while protecting the environment.

Main Communication Activities with the Business Partners of Sumitomo Forestry’s Housing and Construction Division

<table>
<thead>
<tr>
<th>Name/Scale</th>
<th>Description</th>
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<tbody>
<tr>
<td>Evaluation and feedback based on the Supplier Evaluation Standards</td>
<td>Material suppliers of the Housing and Construction Business (suppliers excluding on-site equipment manufacturers, precut factories, building material operators and frame centers) are evaluated every year per type of material based on items including corporate overview, quality, cost, delivery period, environmental response as well as services. We provide feedback from the evaluation results as a way of bettering our procurement. In fiscal 2018, we provided 235 feedbacks, a 100% implementation rate. In addition, we regularly audit supplier plants as part of the evaluation. In fiscal 2018, we carried out plant audit in 153 plants. If buildings are constructed with materials, which are not confirmed for performance quality, it would pose various risks for the people and the buildings. Therefore, we have formulated methods for auditing plants that focus on quality management to confirm whether material we procure are manufactured based on our quality standards and other aspects.</td>
</tr>
</tbody>
</table>

Initiatives for Sustainability in Timber and Timber Products

At Sumitomo Forestry Group, our Procurement Policy emphasizes procurement of sustainable timber and wood products. Sumitomo Forestry Group has established the Timber Procurement Committee to carry out due diligence on timber procurement to ensure that the procurement is performed in a sustainable manner with consideration of legal compliance, human rights, occupational health and safety, biodiversity, and indigenous/local communities. Personnel from the Construction Materials Development Department of the Housing and Construction Division also attend the Timber Procurement Committee meetings as members.

The Mid-Term Sustainability Targets published in May 2019 renewed our stated commitment to 100% procurement of sustainable timber and wood products, initiating an effort to reach this target by fiscal 2021.

Responsible Material Procurement

Sustainable procurement practices throughout the supply chain has come to be expected in material procurement that goes beyond checking on quality, cost and delivery dates to confirming efforts made by the material suppliers with respect to the environment, society and other aspects of CSR.

In the Mid-Term Sustainability Targets announced in May 2019, we commit to carrying out an annual sustainability procurement survey, through which we evaluate an extended set of targets in areas such as human rights, occupational health and safety, biodiversity conservation and sustainability of timber and wood products.

The plan calls for administering surveys on at least 90% of suppliers (based on the purchasing cost) by fiscal 2021.
Sumitomo Forestry Home houses primarily take advantage of the Big-Frame Construction Method (BF Method) and the Multi-Balance Construction Method (MB Method). We have been striving to increase the ratio of domestic wood of structural members and non-structural materials used in these two construction methods. By fiscal 2018, we had achieved 50% and 71% for these two materials, respectively.

About symbol for Independent assurance

Fiscal 2018 Ratio of Domestic Wood of Structural and Non-structural Materials for each MB Method Home FY2018

- 71%

Fiscal 2018 Ratio of Domestic Wood of Structural and Non-structural Materials for each BF Method Home FY2018

- 50%
Sumitomo Forestry believes that popularizing high-quality, durable houses as social assets plays an important role in creating a prosperous society. Based on this belief, and taking the opportunity of the enforcement of the Excellent Long-Term Housing Promotion Act in Japan in June 2009, the Company formulated a basic policy for product safety and quality control in its housing and construction business in fiscal 2009.

Sumitomo Forestry offers homes that integrate seismic resistance, durability, better insulation efficiency, Net Zero Energy Houses (ZEHs), the promotion of universal design, and easy upkeep to improve all aspects of home performance so as to offer customers homes where they can live in peace of mind and comfort for many years to come.
The Company is actively promoting the use of the Japanese Housing Performance Indication System*1 for customer peace of mind and safety as well as enhancing the value of property. In fiscal 2018, under the Japanese Housing Performance Indication System, implementation rate*2 of Design Performance Evaluation reached 99.0%, Implementation of Construction Performance Evaluation reached 98.4%, and the acquisition of Excellent Long-Term Housing certification reached 93.8%.

*1 Third-party evaluation system for design performance at the time of design and of construction performance upon completion so that customers can objectively assess the quality and performance of a house.

*2 The ratio of the number of applications against the total number of detached houses constructed, including extensions and/or alterations (applications for design and construction performance evaluation, April 1, 2018 - March 31, 2019) in the Housing and Construction Division.

### Japanese Housing Performance Indication System Implementation Rate

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design performance evaluation*</td>
<td>97.7%</td>
<td>98.6%</td>
<td>98.8%</td>
<td>98.9%</td>
<td>99.0%</td>
</tr>
<tr>
<td>Construction performance evaluation</td>
<td>94.9%</td>
<td>97.3%</td>
<td>97.8%</td>
<td>97.9%</td>
<td>98.4%</td>
</tr>
</tbody>
</table>

* The implementation of design performance evaluation has been the percentage in the number of acquisitions for the design performance evaluation during the term for detached houses built (including buildings that have not yet started construction in that term) up until fiscal 2014. However, it was changed to the percentage in the number of acquisitions for the design performance evaluation for buildings that have started construction in that term as of fiscal 2015.

### Certified Excellent Long-Term Housing

Sumitomo Forestry sets the standard specifications for its Sumitomo Forestry Home houses to exceed the highest level of Excellent Long-Term Housing*1 certification conditions*2 (applying the evaluation under the Japanese Housing Performance Indication System). From product development through to construction and after-service, the Company has established its framework for product safety and quality control in order to deliver high quality homes with superior overall balance.

*1 A life-long housing certification system of Ministry of Land, Infrastructure, Transport and Tourism which aims to popularize housing that will help realize a society that values its housing stock.

*2 Detached housing is evaluated for durability, seismic resistance, ease of maintenance and energy efficiency in accordance with the Japanese Housing Performance Indication System.

### Ratio of Houses Certified As Excellent Long-Term Housing for New Custom-Built Housing

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio of houses certified as Excellent Long-term Housing for new custom-built housing</td>
<td>91.2%</td>
<td>92.7%</td>
<td>93.3%</td>
<td>93.3%</td>
<td>93.8%</td>
</tr>
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</table>
### Excellent Long-Term Housing Standards and Standard Performance of Sumitomo Forestry Home Houses

<table>
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<th>Certification Type</th>
<th>Certification Criterion</th>
<th>Standard Performance of Sumitomo Forestry Home Houses</th>
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<tr>
<td>Durability</td>
<td>Long lasting</td>
<td>Equivalent to highest level 3</td>
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<tr>
<td></td>
<td>Rating measures for deterioration class 3</td>
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<tr>
<td></td>
<td>Measures to allow regular inspection</td>
<td></td>
</tr>
<tr>
<td>Seismic Resistance</td>
<td>Strong to earthquakes</td>
<td>Equivalent to highest level 3</td>
</tr>
<tr>
<td></td>
<td>Rating of earthquake resistance 2 or higher</td>
<td></td>
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<tr>
<td>Maintenance Requirement</td>
<td>Easy maintenance home</td>
<td>Equivalent to highest level 3</td>
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<td></td>
<td>Rating measures for maintenance level 3</td>
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<tr>
<td>Energy-saving performance</td>
<td>Energy-saving house</td>
<td>Equivalent to highest level 4</td>
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<tr>
<td></td>
<td>House Rating measures for energy conservation level 4</td>
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</table>

* The higher the rated level, the better evaluated.

### Framework for Product Safety and Quality Control

- Undertaking development such as new technology, materials, housing products and lifestyle proposals based on consumer needs and owner surveys.
- The Housing and Construction Division and Tsukuba Research Institute are collaborating in experiments at validation facilities and testing of prototypes, promoting the creation of products that incorporate customer feedback, including even in the details of guarantees.

- Sumitomo Forestry uses a unique system to check design and structure at the time of contracting and through the final design stage.

- The Materials Selection Subcommittee, which meets once every month to decide upon all materials, conducts design reviews. All materials are checked to ensure that they meet the acceptance and quality standards set by the Tsukuba Research Institute and the Materials Selection Subcommittee.
- After approved by the Materials Selection Subcommittee, materials are subjected to a further design review after actual on-site use (approximately two years later) to confirm whether the planned quantity can be shipped and whether or not there are any quality defects.
- Sumitomo Forestry centrally manages and shares up-to-date information on the construction, process management, quality control and safety management of each building through its own site management system.
- Each on-site operator, contractor manager and construction manager during such stages as foundation, construction and completion, conducts inspections which are managed using a construction management record. Additionally, the Head Office inspection division checks the status of the inspection and management.
- Sumitomo Forestry includes 25 years of free regular inspections with its homes. Paid inspections every 10 years beginning with the 30th year are provided up to the 60th year to support over the long term to ensure a long life in these important living spaces.
- Sumitomo Forestry has developed a 60-year Maintenance Program that offers renovation and maintenance proposals and manages maintenance records in order to support its customers.

Renovation

- The performance and reliability of Sumitomo Forestry’s proprietary materials used in anti-seismic reinforcement and so on are verified at the Tsukuba Research Institute. In addition, we are advocating seismic retrofitting by undergoing a technological evaluation of the Japan Building Disaster Prevention Association.

Renovation (Purchase for Resale)

- In order to make a diagnosis of the seismic resistance and deterioration conditions of a condominium, the original construction drawings and specifications are checked, and construction reviews, reinforcement checks, concrete strength measurements and other inspections are conducted in collaboration with third-party surveyors. Conducting major renovation work properly based on the results of these inspections increases the life-span of the building. In addition, all of the inspection results and descriptions of the renovation work are disclosed at the time of sale.
- Sumitomo Forestry has a number of support programs in place, including issuing its own warranty, providing existing housing home buyer’s defect warranty and latent defect insurance, and offering regular after-sales maintenance checks during the first year.
Seismic Resistant Housing

The Great Hanshin-Awaji Earthquake and the Great East Japan Earthquake as well as a recent major earthquake in Kumamoto have been among the disasters that have wrought enormous damage in Japan. In addition, major earthquakes are forecast to occur in the Nankai Trough, resulting in year-by-year increase in demand for seismic resistance for wooden houses.

In response to customer need for seismic resistant houses, Sumitomo Forestry Home Tech has developed original construction methods that enable heightened seismic resistance without diminishing high levels of the home’s structural strength, workability or insulation efficiency.

Development of K-type Corner Braces and RGS Panels

K-shaped corner brace bearing walls use 24 mm thick structural plywood that is in order to store 75 mm thick glass-wool insulation inside. This method has great workability because the materials are light, and it underwent a technological evaluation by the Japan Building Disaster Prevention Association (6.0KN/m² standard bearing wall).

GS panels for renovation (RGS panels) are used as a seismic resistance method to limit deformation by installing these right and left panels (structural plywood with a 24 mm thickness) made of special metals sandwiching highly rigid and highly damping rubber in vertical members. Even greater workability is provided by dividing these panels into top and bottom pieces as well. The method underwent a technological evaluation by the Japan Building Disaster Prevention Association (6.1KN/m² bearing wall).

Moving forward, we plan to develop new vibration dampers that can reduce earthquake damage to buildings to the greatest possible extent.

BF Method

Sumitomo Forestry started selling the Big-Frame Construction Method (BF Method) as a product for three-story building products in February 2005 and expanded this method to two-story products in October 2009 as well as to products with fire-resistant specifications in four-story buildings in April 2015. Thereafter, as awareness of customers grew about risks such as disasters, the BF Method that had further evolved to provide greater strength in high seismic resistance matched customer needs and is now one of Sumitomo Forestry’s main products.

The proprietary BF Method from Sumitomo Forestry is the first in Japan to realize the wooden beam Rahmen structure, which is used in high-rise buildings, in wooden houses.

The Rahmen structure is designed to stand up to horizontal forces such as earthquakes and wind through rigid-joints that unify the columns and beams with the fixings. The BF Method uses big columns with a large cross-section of 560 mm which is equivalent to roughly five standard 105 mm columns and incorporates structural materials in addition to a combination of metal-to-metal joints to achieve a robust Rahmen structure.

The beams and bases of the big columns join strongly thanks to the metal-to-metal joints. This brings about horizontal vibration resistance equal to a 22.4 (times/meter) shear resistance of walls. We ensure seismic resistance while being able to provide both large spaces and wide openings.

In addition, expanding and introducing a variety of original technology can support an even wider range of design requirements. Twin-bolt columns (shear resistance of walls equivalent to 33.6 times/meter) that doubles metal joints as well as double-large columns that layer two large columns (shear resistance of walls equivalent to 44.8 times/meter) provide freedom in floor plans and more spaciousness even on land with many restrictions. The pre-stressed timber beams are large-span beams enable the design for built-in garages ready for parking multiple vehicles, large open living rooms, multi-dwelling homes in addition to a wide range of other purposes.
Sumitomo Forestry conducts vibration tests on verification models of structural framework, using the BF Method as well as full-scale structures to examine seismic resistance in anticipation of a large-scale earthquake.

The full-size verification model for a three-story building constructed with the BF Method cleared testing for vibrations of a maximum acceleration of 2,699 gal, which is equivalent to the Great East Japan Earthquake (3.3 times the Great Hanshin-Awaji Earthquake). Our technology has been proven tough through a total of 22 harsh vibration tests; two of which were conducted at a magnitude of 7 equal to the Great East Japan Earthquake and 20 of which at a magnitude of 7 equal to the Great Hanshin-Awaji Earthquake. We also estimate strong aftershocks after a massive earthquake by implementing a repetition of a total of 246 vibration tests. We have repeatedly conducted testing with strong vibrations from a magnitude of 4 to a magnitude of a weak 6 and beyond to magnitude of 7 to ensure continued seismic resistance of the structural framework.

In this way, the BF method responds to the needs of customers with powerful structures to bring security as well as flexible designs able to provide comfortably spacious spaces.
Sumitomo Forestry is a pioneer in establishing soft closers for all indoor furnishings such as sliding doors and hinged doors as an initiative to increase the safety of residents. In addition, an all flat design that does not create any level differences in flooring is now a standard specification while convex corners for inner walls and wall-mounted convex sections have an R-shape specification around living spaces and halls. We have set the standard specifications for the width of hallways to 780 mm to allow the use of assistive wheelchairs with the assumption that wheelchairs and care will be necessary in the future. We also flexibly respond to customer requirements through a freedom in design that includes slopes to entrances and the installation of home elevators.

In addition, Sumitomo Forestry is placing its strength in the design of living spaces to satisfy the needs of customers such as roof balconies without level differences from the interior, heat shocks, and the Air-Dream Hybrid total air conditioning system that reduces house dust and realizes a comfortable space without any temperature fluctuations. Sumitomo Forestry also provides comfortable bedroom environments with original wooden interiors that have indirect lighting to offer better sleep quality and reduce fatigue in indoor environments perfect for sleeping.

Promotion of Universal Design

R-Line Frames with Consideration to Safety  Ordinary Frame

Stairs with enhanced step visibility.  Ordinary stairs

Received KIDS DESIGN AWARD in FY2012
Net Zero Energy Houses (ZEH) and other housing measures in Japan offer guidance to creating eco products as well as advocate excellent long-term housing as an asset.

By promoting ZEH-specification housing, Sumitomo Forestry reduces each household’s primary energy consumption while also providing living spaces that are disaster-resistant and comfortable to live in year-round.

We provide environmentally friendly houses that meet the needs of each customer while contributing to the realization of a sustainable society.

The household sector in Japan still has high level emission of CO$_2$ although the trend has slowed down. Japan has launched policy targets that aim for more than half of all custom-built detached houses constructed by housing manufacturers and other companies to be ZEH compliant by 2020 in the measure to counter global warming approved by Cabinet decision in May 2016. ZEH is a scheme for housing to provide less than zero annual net primary energy consumption by combining equipment to generate energy such as high thermal insulation efficiency, energy-saving equipment, and solar power generation.

Wood is conventionally a renewable natural resource that absorbs and stores CO$_2$ during its growth process. As well as using wood for its principal structural members, Sumitomo Forestry has offered housing proposals where residents can live comfortably all year round by incorporating its own unique Ryouonbou design, which takes advantage of natural blessings such as the wind and sun. The Company’s expertise in utilizing these unique characteristics of wood and blessings of nature together with its technologies for the reduction of energy consumption, such as improvements in thermal insulation as well as the adoption of energy-saving equipment, and its technologies for the smart use of energy, such as equipment for generating and storing energy and HEMS$^{*1}$.

Given the ZEH targets established by the Japan, Sumitomo Forestry has set the goal of 80%$^{*2}$ ZEH housing by fiscal 2020, and had reached 40%$^{*2}$ as of fiscal 2018. We are making greater insulation efficiency in buildings and around openings as well as built-in solar power generation systems basic specifications as of April 2017 in our new housing.

*1 Home Energy Management System—a system whereby residents can visualize the amounts of energy they generate and use

*2 Values include Nearly ZEH while they exclude Hokkaido and Okinawa Pref. respectively. The fiscal 2018 results and 2020 target for Hokkaido are, respectively, 0% and 51%. While ZEH is defined as a primary energy reduction rate of 100% including solar power, Nearly ZEH is defined as between 75% to 100%.
Comparison of Materials by Thermal Conductivity

**Least Energy Required**
Insulation efficiency minimizes the energy lost by mitigating the effects of external heart and cold.

**Proficient Use of Energy**
High-efficiency equipment is used to reduce the amount of power consumed by the house.

**Wooden Houses with Superior Insulation**
If the thermal conductivity of wood is 1, the thermal conductivity of concrete would be almost 13 and steal upwards of 440. Wood as a material is a superior insulator to mitigate the transfer of heat. In addition, Sumitomo Forestry uses high-performance thermal insulators based on its own unique standards.

<table>
<thead>
<tr>
<th>Wood</th>
<th>Concrete</th>
<th>Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Approx. 13 time of wood</td>
<td>Approx. 440 times of wood</td>
</tr>
</tbody>
</table>

Wood is excellent material in thermal insulation

**Limiting Energy Loss with Highly Insulating Glass**
Windows cause the greatest loss of heat in living spaces. Shielding interior spaces from heat in the summer and preventing heat from escaping in the winter is vital. As windows cause the largest heat loss, Sumitomo Forestry uses low-E multi-layered glass with argon gas inside. Argon gas is injected between the multi-layers of glass to mitigate heat transfer to the air while the panes are coated with special metal film. The superior thermal insulation and insulation properties shield interior spaces from heat in the summer and prevent heat from escaping in the winter.

- Insulation of Sumitomo Forestry Home houses (in Japanese)
Sumitomo Forestry recommends the installation of solar power generation system, as well as residential fuel cell units. Double power generation can generate the necessary electricity for daily life in the home. Furthermore, Home Energy Management Systems (HEMS) realize zero energy homes (ZEH specifications) by proficiently managing energy consumption throughout the home.

**Water heaters that also generate electricity**

Heat and water are generated during the generation of electricity. That generated heat is not wasted and is collected to be used for making hot water and heating floors, greatly improving the efficiency of primary energy usage.
In September 2018, Sumitomo Forestry launched a renewed The Forest BF nationwide (excluding Okinawa), a detached house design that enables large, open spaces and built to ZEH specifications. The Forest BF represents a further structural enhancement of Sumitomo Forestry’s original Big-Frame (BF) construction method for large, open spaces and wide openings among the features allowing for greater freedom in the use of space. The latest design renewal offers distinctive features of design coordinating diverse aspect of external appearance and interior, as well as providing abundant lifestyle that can feel the nature and the taste of Japan. While attending in particular detail to the overall design as well as interior and exterior materials, we developed these homes especially for the younger generation homeowners in their 30s, and those with design sensibilities, making this a product that can appeal to a wider range of customers than previously.

In addition to offering insulation efficiency greater than the local standards, The Forest BF can also achieve ZEH, which requires zero or less primary energy consumption each year, through equipment such as solar power generation systems. Moreover, we have adopted versatile partitions that do not require structural materials to build a structure with less waste when changing room plans such as the partitions separating living areas for children and parents alike. This product aims to receive orders of 5,500 houses a year.

Trends in Installation Rates of Environmentally-Friendly Equipment (based on number of houses)

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar power generation systems</td>
<td>43%</td>
<td>35%</td>
<td>48%</td>
<td>46%</td>
<td>51%</td>
</tr>
<tr>
<td>Ene-Farm units</td>
<td>51%</td>
<td>43%</td>
<td>34%</td>
<td>34%</td>
<td>35%</td>
</tr>
<tr>
<td>Eco One*1</td>
<td>-</td>
<td>-</td>
<td>16%</td>
<td>18%</td>
<td>16%</td>
</tr>
<tr>
<td>Environmentally conscious</td>
<td>66%</td>
<td>58%</td>
<td>68%</td>
<td>69%</td>
<td>72%</td>
</tr>
<tr>
<td>equipment installation rate*2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 Hybrid electric and gas hot water and central heating systems
*2 Installation rate of solar power generation system or Ene-Farms until fiscal 2015. Fiscal 2016 includes Eco One on the left

Expanding Choices with the Launch of the Forest BF Design, a Home to Enjoy the Four Seasons

In September 2018, Sumitomo Forestry launched a renewed The Forest BF nationwide (excluding Okinawa), a detached house design that enables large, open spaces and built to ZEH specifications. The Forest BF represents a further structural enhancement of Sumitomo Forestry’s original Big-Frame (BF) construction method for large, open spaces and wide openings among the features allowing for greater freedom in the use of space. The latest design renewal offers distinctive features of design coordinating diverse aspect of external appearance and interior, as well as providing abundant lifestyle that can feel the nature and the taste of Japan. While attending in particular detail to the overall design as well as interior and exterior materials, we developed these homes especially for the younger generation homeowners in their 30s, and those with design sensibilities, making this a product that can appeal to a wider range of customers than previously.

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- Expanding Choices with the Launch of the Forest BF Design, a Home to Enjoy the Four Seasons (in Japanese)
- The Forest BF page (in Japanese)
Renovating to Improve Function and Asset Value

Sumitomo Forestry Home Tech Co., Ltd. promotes renovations from energy-saving points of view. This brings success in reducing the environmental impact by proposing solutions through thermo insulation as well as installation of facility equipment with high energy efficiency together with better thermal efficiency. The insulation renovation, specifically, can mitigate the health risk from heat shock in addition to lower the cost of heating and lighting.

We propose new lifestyles that reduce the energy consumed in daily life and decrease lifetime heating and lighting costs by heightening insulation efficiency and using energy-saving equipment.

We will continue to focus on seismic retrofitting proposals and actively strive to bring about excellent long-term housing in existing properties as well as long-term excellent extension and alteration standards by improving the performance in thermal efficiency, energy-savings and seismic retrofitting.

► Seismic Resistant Housing

Installation of a Thermal Insulator

Given Japan’s establishment in recent years as a major tourism destination country, we began focusing efforts on renovation of hotels and inns. In fiscal 2017, Sumitomo Forestry joined the All Japan Ryokan Hotel Association*1 and Sumitomo Forestry Home Tech joined the Japan Ryokan & Hotel Association*2. Sumitomo Forestry Group enjoys strong name recognition, and is building a track record in renovations.

Before Renovation of Japanese Inn   After Renovation

In 2017, Sumitomo Forestry and Kumagai Gumi Co. entered into a business and capital partnership and collaboration between Sumitomo Forestry Home Tech Co. and K&E K.K., companies belonging to the respective corporate groups is in progress. Sumitomo Forestry Home Tech handles interior renovations optimizing wood, while K&E is in charge of building exterior and other renovations that fully leverage its comprehensive abilities as a general contractor. The partners participate jointly in events as they move forward. By renovating the whole building, we are able to heighten its value as an asset.
*1 The association promotes Japanese inns and hotels throughout Japan to be more sanitary facilities, conduct better maintenance and stable management among other aspects of accommodation businesses.

*2 The organization aims to help provide comfortable accommodations for travelers from within Japan and overseas, improve the level of hospitality service and otherwise work to realize Japan's status as a tourism destination country, develop local economies, and promote the national health.

Moving Higurashi Bettei, Shisakajima, Reopened as a Commemorative Hall

Higurashi Bettei was designed by Magoichi Noguchi, a renowned architect of the Meiji period. Built as a guest house and other purposes for the Sumitomo family in 1906, it is located on the island of Shisakajima in the Seto Inland Sea, about 20km off the shore of Niihama (where the copper mine was located).

As one of 20 Sumitomo Group companies involved in the project to move the structure to a hilltop location in the city of Niihama, Sumitomo Forestry Home Tech was engaged in the reconstruction of the structure, which opened to the public in November 2018 as the Higurashi Bettei Museum and conveys the history of Sumitomo.

The history behind the construction of Higurashi Bettei is that it was built as an adjacent structure when Sumitomo's copper smelter was moved to Shisakajima in order to overcome the smoke pollution in Niihama caused by the Besshi Copper Mine operation. More than 110 years after its construction, the building was deteriorating despite its many invaluable design features inside and out. In the relocation construction work, we used timber produced in Ehime Prefecture to build the structure with improved seismic resistance. Design features such as fireplaces, ceilings and floors were carefully dismantled from the original structure, and reconstructed upon relocation.

Research and Development of Life Cycle Carbon Minus (LCCM) Housing

Sumitomo Forestry is engaged in the development of Life Cycle Carbon Minus housing to achieve negative CO₂ emissions across the entire life cycle of a home—from material procurement, occupation and renovation through to demolition and disposal—by using environmental sound equipment such as solar power generation systems.

In addition to effective use of electricity in housing that uses technology such as energy storage systems and sharing energy among multiple households, we conducted inspections through repeated simulations in our research into efficient use of energy which began in fiscal 2016. Sumitomo Forestry also began looking into the effectiveness of Vehicle-to-Home (V2H) and Vehicle-to-Grid (V2G) with energy provided between households and the introduction of electric vehicles, which are expected to become standard in the future. In the future, we plan further research and development not only of simple energy savings but also of the effects that wooden spaces have on human health and comfort, as well as the impact that the living environment has on the sensibilities of people.
Trees retain CO₂ as carbon even after they are turned into products. Constructing wooden houses can therefore be likened to building forests in the city. The total domestic carbon stocks* in timber that was used in construction of the houses in the MOCCA (timber solutions) business in fiscal 2018 reached 193,000 t-CO₂. The Sumitomo Forestry Group contributes to measure to counter global warming by increasing carbon stocks for forests and cities.

* CO₂ fixation is calculated by categorizing the actual amounts of timber used per tree species for new detached houses, rental housing, and MOCCA business, and calculating carbon content from the specific gravity of each tree species.

Sustainable Forest Management (Carbon Stocks for Forests and the Housing Business)

Housing Sales Adapted to Climate Change

Disaster Recovery Guidelines were put in place in the Housing and Construction Division and measures and action guidelines for operations were defined to quickly and accurately respond to damages from natural disasters to our customers’ houses as they become more prevalent due to climate change.

On November 2016, BF-Si Resilience Plus was released to pursue security, safety and comfort when disasters such as earthquakes or flooding strike. The BF Method that boasts structural strength only offered by Sumitomo Forestry ensures the safety of buildings and provides functionality for an uninterrupted lifestyle until recovery even when lifelines are cut thanks to equipment such as enhanced storage space, solar power generation systems, wall-mounted electrical boards and water tanks. A video intercom with a network camera allows the interior to be clearly seen with a wireless camera as well as gives owners the ability to check the state of their house in a disaster even while out-and-about. The large storage space helps keep rooms clean in daily life while the original built-in furniture effectively prevents the furniture from toppling in an earthquake and can achieve a space in harmony with the interior.

BF-Si Resilience Plus for Durability in Disasters and Greater Comfort in Each Day

Launch of BF-Si Resilience Plus Lifestyles with High Disaster Preparedness; Peace of Mind and Safety in Disasters Plus Everyday Comfort (in Japanese)
The Housing and Construction Division proposes housing to a broad range of customers from first-time home buyers to married couples that plan to live with their children in multi-generational homes or who plan to live as a couple after their children are grown.

DUE CLASSO was released as custom-built housing for double-income families in August 2017. In response to needs such as efficient traffic lines and room plans easy for families to interact as well as storage ideas and the latest equipment, DUE CLASSO proposes Saku-kaji (prompt housework), Tomo-kaji (housework together) and Shin-kaji (new housework). These innovations are plentiful and help families spend a wonderful time together in this important space created through family cooperation. DUE CLASSO helps create a living space to achieve a leisurely lifestyle in both personal and professional life.

In addition, Forest Selection BF was launched to propose 1,000 carefully selected plans from approximately 300,000 proven custom-built homes in November 2017. This housing is realizing living suited to the needs and lifestyles of customers from a rich selection of choices.

Both of these products promote ZEH specifications to provide living spaces that value the lifestyle environment as well as the global environment.

- **Launch of DUE CLASSO Houses for Dual-Income Families: Rich lifestyles through ingenious houses that expedite housework and work style reforms**
- **New Launch of Forest Selection BF Select Style Product: Choose from 1,000 Plans for and Custom-Built Lifestyle (in Japanese)**

### Initiatives for Overseas Housing

Sumitomo Forestry is furthering the expansion of the housing business overseas centered upon detached house sales in United States and Australia. We sell environmentally-friendly housing in addition to fully grasping the culture of each region and the way people live to provide housing tailored to the demand.

### Sales of Environmentally-Friendly Housing in Australia

The Sumitomo Forestry Group sells housing with high energy-saving performance overseas.

In 2001, Henley Properties, a Group company, drove forward efforts to enhance energy-saving performance in the Australian housing industry, such as pioneering its own standard specifications ahead of competitors, by recommending a five-star energy rating\(^1\) for the standard energy-saving performance in Victoria at the time. Efforts toward the environment accelerated further after the involvement of the Sumitomo Forestry Group in 2009. We conducted a variety of initiatives to reduce the environmental impact, including the realization of a commercial zero emission house\(^2\) for the general consumer for the first time as a major builder in the country.

In Victoria, we use a blended cement replacing approximately 20% of cement, the primary ingredient in concrete used in foundations of homes, with fly ash (ash produced when burning charcoal) and blast furnace slag (byproduct separated from iron ore in the iron manufacturing process in blast furnaces). The blended cement reduces CO\(_2\) emissions by about three tons per home in the construction stage.

Japanese housing generally uses multi-layered glass, but this is not common practice in Australia due to the cost. More than 80% of the new housing uses single-pane glass. However, in 2018, we were the first in Victoria to make multi-layered glass a standard specification to increase the insulation efficiency of homes\(^3\).

We are also actively working to improve airtightness. The homes built by our Group company have shown airtightness three times higher than the average home in Australia shown by airtightness inspections conducted in 2017\(^4\).
Henley Properties is taking advantage of the know-how cultivated in efforts to develop energy-saving housing over many years in a wide range of endeavors. As interest in realizing a sustainable society grows worldwide, Henley Properties is striving to develop housing with a high-level of energy performance by continually conducting improvements of materials and equipment as well as surveys of performance.

+1 An evaluation metric of the energy burden for heating and cooling the inside of a building in Australia. Insulation, windows, the type, size and orientation of the building, and the climatic zone are all items included in this metric. The highest rating of 10 stars indicates that no heating or cooling whatsoever is needed to maintain a comfortable indoor living environment. Five stars indicate that the building has high insulation performance, but that a minimum of energy is required for heating and cooling. The five star standard specifications pioneered by Henley Properties brought competitors to do the same. As a result the government of Victoria enacted policy to make five stars the standard. Thereafter, Henley Properties leading the environmental performance standards in the Australian housing industry through efforts that including raising the internal standard to six stars, which then led Victoria to also raise their standards to six stars.

+2 Environmentally-friendly housing expected to have an energy-saving effect of more than 70% compared to conventional housing.

+3 Multi-layered glass is effective in improving insulation efficiency of homes by limiting the thermal reflux to approximately 35% less compared to veneer glass.

+4 The average value for Henley Properties is 5 ACH where the average housing in Australia is 15.4 ACH (ACH is an index that indicates the air leakage per hour at a 50 Pa indoor-outdoor air pressure difference. The lower the value the higher the airtightness).

Received Five Star Housing Award for Providing Valuable Housing in Hong Kong

Soeng Jyu / 2GETHER, a multi-unit housing complex project jointly developed (25% owned by Sumitomo Forestry) from October 2013 to December 2017 by Sumitomo Forestry and HKR International Ltd.*, received a Five Star Housing award in the Housing category at an evaluation conference of the Hong Kong Professional Building Inspection Academy 2018.

Developed and sold in Hong Kong's Tuen Mun area, Soeng Jyu / 2GETHER (completed in December 2017) is a 25-story condominium complex (comprising 222 housing units, one day care center and a commercial facility [approximately 1,900m²]). In Hong Kong, which has a low rate of architectural greening, the complex received high praise for incorporating green walls as part of a highly environmentally conscious design.

Also, in Hong Kong, where homes are typically small, the building features a sophisticated level of completeness and the functionality of a fully appointed clubhouse exclusively for residents. These are among the features that earned praise for the project as one effort to help solve the societal problem of the supply of valuable housing.

Other features that helped earn the award include clearly delineated traffic flows among residences, the daycare center, commercial facility, clubhouse and parking lot, for a high level of security.

* The Hong Kong Professional Building Inspection Academy (BIA) has been holding evaluation conferences since its founding in 2012 in order to provide comprehensive evaluations of structures throughout Hong Kong with attention to the perspectives of those who use newly constructed buildings, the degree of completeness of buildings, their levels of sophistication, and the environment. Honoring the Most Outstanding Building Development and its Developers.
Collaborating to Build Affordable Housing Model Homes in Myanmar

Sumitomo Forestry worked with the Japan-Myanmar Association for Industry of Housing and Urban Development (JMHU)* and the Myanmar Construction Entrepreneurs Association (MCEA) to provide technical assistance and donations necessary to construct model homes of affordable houses (homes that are affordable for even low-income earners).

In Myanmar, where housing shortage has become a social issue, this project was aimed at building model homes for affordable housing while disseminating Japanese housing construction technical capabilities, quality and building materials. The model homes were built in the Mingaladon Township in the Yangon suburbs. Forty-two Japanese companies that are JMHU members donated money, housing materials, technological support or other forms of assistance. As a chairman member of JMHU, we did the basic design of the model structure, supervised construction and provided other support in an effort to help raise living standards and realize a more prosperous society in Myanmar.

* JMHU was dissolved in March 2019 upon the formation of the new Japan International Association for the Industry of Building and Housing (JIBH). In addition to taking over the projects of the former JMHU, the newly organized JIBH also hosts seminars and mutual exchange visits to exchange information with various related countries. At the same time, it joins together with government, administrative and private sectors in countries overseas to provide unified support for the development of the construction and housing industry.
At the beginning of every fiscal year, the Divisional Manager of the Housing and Construction Division formulates an Occupation Health and Safety Policy to provide notification based on circumstances such as the accidents that occurred in the previous period, the state of occupational health and safety promotion as well as compliance with relevant laws.

In addition, permeating a safety culture has been designated as a basic policy, and we are working to achieve this in primarily three ways; compliance with the law, promotion of occupation health and safety education and eradication of occupational injuries.

Always raising awareness toward the recognition of safety first permeates this safety culture. Offices, branches and building contractors set important management targets for the fiscal year to eliminate five-types of major accidents; falls, accidents with tools, things tipping over, accidents with heavy machines and heat strokes.

Occupational Health and Safety System for Housing Business Sites (Revised October 1, 2010)

Sumitomo Forestry prioritizes occupational health and safety above all else on housing construction sites. Therefore, we raise awareness about information and important items about safety in employees of the Sumitomo Forestry Group of course but also every worker involved with Sumitomo Forestry Home houses, such as on-site construction contractors.
Lost-Time Injury Frequency Rate for Contractors on Housing Construction Sites

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of occupational injuries*1</td>
<td>11</td>
<td>6</td>
<td>12</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Lost-time injury frequency rate*2</td>
<td>3.63</td>
<td>2.23</td>
<td>3.35</td>
<td>2.31</td>
<td>2.79</td>
</tr>
<tr>
<td>Work-related illness frequency rate</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*1 The number of work-related accidents resulting in payment of compensation benefits for absence from work in accordance with the Industrial Accident Compensation Insurance Act is disclosed.

*2 Lost-time injury frequency rate = Number of occupational fatalities or injuries resulting in an absence from work of at least one day ÷ Total number of working hours × 1,000,000

Training Designed to Improve Awareness for Occupational Health and Safety

Based on the results of the monthly health and safety patrols and work site surveys, the Housing and Construction Division and each branch organize training programs with specific cases promoting health and safety, targeting the OHS managers, as well as the leaders (subcontractors) in each job category on construction sites.

In addition, training is designed for maintaining safety such as when workers use grinders*, which are fraught with great hazard, and when they work with circular saws, which are susceptible to accidents due to misuse despite being simple and easy to use.

* Operation with an electric tool to cut by rotating a grinding stone
Together with Construction Contractors

Sumitomo Forestry publishes monthly safety and environment information that includes information and topics about safety and the environment to help prevent accidents and avoid risks by repeatedly raising awareness at branches and construction contractors.

Safety Training for Construction Contractors

Sumitomo Forestry conducts safety training throughout Japan by visiting building and demolition contractors throughout Japan. Directly instructing the people working on-site advances our initiatives toward on-site safety and the environment by building understanding about instructions from our company such as permeating a safety culture.

Education for Construction Contractors

Sumitomo Forestry holds monthly health and occupation councils at branches for the purpose of preventing construction accidents by promoting health and safety. On-site health and safety patrols help bring awareness about safety to construction contractors and provides advice to enhance knowledge, such as confirming the state of sites and improving guidance.

The District Safety Improvement Committee launched in fiscal 2018 is advancing system development to raising awareness and verify policies and measures in divisions related to safety by strengthening links with offices, divisions, and branches.
Sumitomo Forestry is working to advance toward building a sustainable circular society. Particularly at construction and building sites, where the environmental impact of waste is high, we endeavor to reduce environmental impact through appropriately restricting the production of industrial waste, reusing and processing materials for recycling.

**Initiatives to Reduce Waste**

**Initiative for Reduction of Industrial Waste Generated at New Housing Construction Sites**

*FY2018 Initiatives to Reduce Waste*

In July 2014, Sumitomo Forestry set up the Waste Reduction Working Group comprising representatives from the product development, material procurement, production management and environment divisions. The working group has been planning and implementing a wide range of measures to reduce waste on new housing construction sites.

We discovered two-thirds of all our waste is made up of wood waste, gypsum board and cardboard from detailed data about waste aggregated from the industrial waste management system used under this inter-region certification. We are working to reduce waste by concentration on these three primary forms of waste.

In fiscal 2018, we changed the packing materials for interior materials and the standard size of the sub-floor gypsum board and also revised our curing methods for flooring and other materials. In particular, revised curing methods can realize approximately 150 kg reduction of waste (cardboard) per home by replacing conventional disposable curing materials with reusable curing materials.

Furthermore, we strive to raise awareness on construction sites and conduct educational activities by providing feedback of data for waste emissions of each property.

**Reduction Rate of Industrial Waste Generated at New Housing Construction Sites**

The Sumitomo Forestry Group also upholds the fiscal 2020 target in its former Mid-Term CSR Management Plan to reduce the industrial waste generated at new housing construction sites by 30% from the fiscal 2013 level. In fiscal 2018, the initiative described above achieved major results, reducing the amount of industrial waste per new houses by 31.9% from the fiscal 2013 level and we achieved our fiscal 2020 target early.

► Promotion of Waste Reduction and Recycling
Sumitomo Forestry used the acquisition of the inter-region recovery and recycling certification to establish the Metropolitan Area Recycling Center in Kazo, Saitama Prefecture for advanced sorting and data collection. The Metropolitan Area Recycling Center started full operation in fiscal 2012 and has been collecting and processing waste produced by new housing construction sites of the metropolitan and six prefectures of Kanto (Metropolitan Tokyo, Kanagawa, Chiba, Saitama, Ibaraki, Tochigi, and Gunma prefectures).

Setting up the Metropolitan Area Recycling Center brings data feedback to product development, material procurement and production management divisions by facilitating the collection of specifications, construction branches as well as the detailed status and trends of waste generation in each region. This data is being leveraged in our initiatives to reduce waste.

### Initiative for Recycling of Industrial Waste Generated at New Housing Construction Sites

Sumitomo Forestry meticulously sorts waste produced on new housing construction sites. We will raise awareness through mediums such as posters including specific waste information to make sorting of the 11 categories of waste easier.

### Acquisition of the Inter-Region Recovery and Recycling Certification by the Ministry of Environment

Sumitomo Forestry acquired the inter-region recovery and recycling certification from the Ministry of the Environment in December 2010. This certification enabled us to build our own industrial waste recycling system by allowing transport of waste by proprietors other than waste disposal operators.

Our industrial waste management system for new housing construction sites helps contribute to the rationalization of waste disposal by using returning transportation for collecting waste while also securing traceability by applying bar codes to waste and collecting detailed data about the waste that is produced.

### Operations at the Metropolitan Area Recycling Center

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<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Reduction Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2013 (Baseline)</td>
<td>-</td>
</tr>
<tr>
<td>FY2015</td>
<td>-2.5%</td>
</tr>
<tr>
<td>FY2016</td>
<td>-8.8%</td>
</tr>
<tr>
<td>FY2017</td>
<td>-15.5%</td>
</tr>
<tr>
<td>FY2018</td>
<td>-31.9%</td>
</tr>
<tr>
<td>FY2020 (Target year)</td>
<td>-30%</td>
</tr>
</tbody>
</table>

- **Reduction Rate of Industrial Waste Generated at New Housing Construction Sites**

- Sumitomo Forestry Group Sustainability Report 2019
This initiative works to expand operation under the certification for the inter-region recovery and recycling, build processing routes led by Sumitomo Forestry, and further promote recycling even in regions outside the metropolitan area.

Flow of Materials Distribution and Collection of Industrial Waste Using Material Relay Centers

Waste Management for Demolition Work

Sumitomo Forestry is strengthening management by building a system able to confirm the type, quality and packaging of waste to transport from demolition work sites using mobile phones and smartphones.

The delivery confirmation invoice sent thanks to input into an electronic manifest checks whether the issuance is correct via our system.

Moreover, this system has been fully adopted by all demolition partners as of fiscal 2013.

Together with Construction Contractors

Sumitomo Forestry publishes monthly safety and environment information that includes information and topics about safety and the environment to help prevent accidents and avoid risks by repeatedly raising awareness at branches and construction contractors.

Conducting Environmental Training for Business Partners

In fiscal 2017, we began conducting joint trainings for personnel in charge of industrial waste management and administration personnel in charge of manifest input at demolition contractors at branches. This joint learning environment becomes a venue for communication with our business partners and realizes close contact between branch administration and demolition contractors to ensure smooth electronic manifest input vital to industrial waste management.
Sumitomo Forestry provides proposals for ideal home building to customers who are thinking about buying a home through continuous communication with useful and effective information offering.

We introduce information helpful in housing development such as the design examples as well as structural and technological information as part of the stream of home building. Next, we provide guidance at showrooms to help customers see Sumitomo Forestry home building and exhibitions to provide a first-hand experience of the warmth in wood. We also provide information in various other forms such as tours in the homes our customers are actually living in.

In addition, Japanese housing policy is encouraging the standardization of excellent long-term housing to transition to emphasis on the importance of creating high-quality stock which is easy to maintain so that each house can be valued and lived in for a long time. Sumitomo Forestry conducts housing maintenance and replaces equipment in addition to providing appropriate proposals such as exterior renovations to sustain comfortable living in the long term for every owner. We are able to create opportunities such as consultation and inquiries through ongoing communication at owners events held in each location throughout Japan in addition to sustaining ongoing asset value through long-term support for the comfortable living of our customers.

Sumitomo Forestry offers a unique application system that realizes ideal home building.

Once a customer applies, we meet to discuss everything from the exterior and room plan to the interior and housing exteriors with a home building team dedicated to the customer made up of a person in charge of sales, design, interior design, production and housing exteriors. At the point of application, each person with expert knowledge inquires about the requirements for the home such as the budget, family composition, lifestyle and any other areas of emphasis to help achieve the ideal home in all respects.

In addition, we ensure ideal home building by escorting our customers to the actual construction site and giving them an image of the real home upon completion.

Sumitomo Forestry has roughly 300 model homes and about 80 showrooms located throughout Japan. Technology housing display centers in Tokyo, Osaka and Nagoya specialize in appealing to the technological and performance features of Sumitomo Forestry Home houses.

Sumitomo Forestry provides first-hand experience of the attractive living it provides through these model houses.

Sumitomo Forestry model homes offer variety of homes on display such as western and Japanese styles to three-story homes in addition to smart homes.

1. **High-quality Luxurious Wooden Spaces**
   Each of these model houses let customers interact with luxurious wooden spaces that fully take advantage of design capabilities unique to Sumitomo Forestry, which has cultivated expertise in both the quality and charm of wood. In particular, visitors can get a taste of the high-quality atmosphere only provided in these real spaces from the flooring made from the world’s precious wood and wooden fittings that impeccable fluidity with the interior design.

2. **Design Proposals Founded in Comfortable Living**
   The strength of a structure is obviously important in a home, but a room plan, flow planning and storage plan as well as other aspects to provide comfortable lifestyles is also vital to every family living in the home. Visitors to these exhibitions can see the innovative room plans and ease of cleaning provided by Sumitomo Forestry with their own
eyes. Families with children can also get a picture about raising their children there, including proposals for floor plan and children room as well as a study corner perfect to raise children.

3. Environmentally-Friendly Design and the Latest Equipment

Sumitomo Forestry is revolutionizing design with the Ryouonbou design concept. This design concept aims to incorporate the soothing qualities of nature and facilitate a lifestyle which does not rely too much on air-conditioning and heating systems. Everyone can see the actual innovations at our model houses, such as a design to create airflow from the south to north of the home with wonderful light via deep eaves. Furthermore, the smart house exhibition builds in an Ene-Farm solar power generation system and fuel cell units for homes as well as central air-conditioning systems in addition to the latest environmental devices.

The Sumitomo Forestry model homes offer a unique line-up only possible from a housing builder. Every visitor can form a specific vision of their home while comparing a broad line-up of curtains, wallpapers, interior materials, furniture as well as exterior materials such as exterior walls and entrance doors in addition to plumbing equipment such as system kitchens and bathrooms.

1. Large Exhibition of a Variety of the Latest Equipment
   We exhibit system kitchens from multiple product manufacturers. Design features from the sink tops to the color and texture of doors from different manufactures can be examined while comparing the storage space and convenience. Our model homes also provide a sanitary corner for bathrooms sinks and other equipment so that visitors can imagine the usability of these kitchens, restrooms and any other rooms requiring plumbing.

2. Total Coordination of Interiors and Exteriors
   A wealth of floor materials, doors and windows, furniture and more are on display together with curtains and wallpaper with a wide variety of colors and patterns. These displays can provide a base to specifically consider an indoor feel suitable to the interior decor of each customer’s image. We also have brought together a broad line-up of exterior materials for entrance doors and external walls to help visitors solidify their exterior images, which can offer coordination for the entire home. Everyone can get a distinct individual feel with wood that varies in color and look for each tree species. The showrooms make available floor materials in addition to a broad range of other interior and exterior materials. Each person can experience the look and actual feel of these materials from the touch to texture which cannot be felt in catalogs or on websites.

3. Exhibition of the Housing Structure and Latest Environmental Devices
   Sumitomo Forestry puts on display the housing structure which brings the most concern. This lets potential buyers experience the strength for themselves. In addition, we have the latest environmental devices on display, such as solar power generation.
Technology Exhibition Houses

At model homes at which fosters opportunities to communicate with customers about home building, Sumitomo Forestry set up “technology exhibition houses” where displays special technologies and functionalities of Sumitomo Forestry Home houses in major cities.

The exhibition houses put in creativity in explaining excellent competencies of wooden homes and structural features of Big Frame Construction Method -Sumitomo Forestry’s own building method that is Japan’s first timber rigid frame structure so that visitors are able to understand through direct exposure to the basic structures of the homes.

Currently, the exhibition houses are in Tokyo, Osaka, and Nagoya, and total visitors exceeded 2,975 groups in fiscal 2018.

Inside of Technology Exhibition House

Respect for and Application of Customer Feedback

Operation of Sumitomo Forestry Customer Service Department

Sumitomo Forestry established the Customer Service Department in April 2000 as a Group-wide customer service help desk. Communicating the opinions and complaints of customers, including neighboring residents, to improve each department as well as management is an important mission for the Customer Service Department in enhancing customer first actions even further. The Customer Service Department holds periodic meetings and working groups with each business division and Group company as well as shares information to provide high-quality products and services which will bring sensation to our customers. The Department discusses the issues and examples of solutions to bring together as specific measures. The measures then are executed throughout the Group, and the Customer Service Department regularly evaluates progress and efficacy of the measures, and undertakes reviews and corrective actions, in line with the PDCA cycle.

Additionally, the Company regularly introduces example creative solutions that can be easily adapted in daily work routine and attributable to customer satisfaction as well as heart-warming stories on the intranet. Direct feedback and opinions of customers sent to the Customer Service Department, details of the consultations and their analysis results, and examples of superior response are consistently communicated to prevent recurrence of factors causing problems. The support for internal training and one-on-one meetings with Group companies are also provided.

Operation of Sumitomo Forestry Call Centers

Sumitomo Forestry established Sumitomo Forestry Call Centers that open 24 hours a day 365 days a year toll free as a consistent dedicated helpline throughout Japan that allows immediate support such as an emergency response lifeline to assist our customers. The telephone number is introduced on magnet cards, owner dedicated websites, magazines and other mediums so that this helpline will be used broadly by our customers.

Presently the centers are located in Tokyo and Fukuoka, and are linked together, shortening wait times for customers who call via the unified national free-dial number. In addition, the system is organized to enable response in emergency situations. The system facilitates prompt response to customer requests and consultations and also strives for improved customer satisfaction.
The Call Center has been receiving an increased number of calls as general housing support since July 2015. Counting of the total number of calls was changed in fiscal 2017 (to include calls from customers while excluding relevant business partners).

Customer Surveys

Sumitomo Forestry conducts resident surveys three times from the second to tenth year from when residents move in to collect opinions and feedback of owners in order to deliver greater satisfaction and services to customers.

The survey questions primarily elicit responses about specifications, design, building materials, systems and fixtures, and the support service provided by the staff. The Company then statistically processes and analyzes these results, and applies any findings to product development and employee training.

In fiscal 2018, the satisfaction ratio for overall satisfaction was 96.1% in the survey of new owners, and 95.0% in the survey of second-year owners.

Furthermore, Sumitomo Forestry has adopted the Net Promoter Score (NPS)* advocated by the housing industry for the purpose of enhancing customer satisfaction. In October 2017, we revised the five stage evaluation to an 11 stage evaluation for the questions above.

We will continue to provide high-quality products and services which bring sensation to our customers by further leveraging customer feedback through the NPS survey analysis.

* NPS is a new index used to measure customer loyalty (the amount of trust and affinity for the company and brand).
Communicating Information to Customers

Website Operation and Magazine Publication

Sumitomo Forestry operates its clubforest special website for owners of Sumitomo Forestry Home houses. As of March 2019, about 116,000 owners had registered as members.

Through a variety of content on the site, we provide information that is useful in helping members get more enjoyment and comfort out of their lives as homeowners. The site offers various contents such as a page where members can see photos of the construction site as its progresses, exclusive sales pages where only owners can purchase Sumitomo Forestry Home products at special discount prices and a 24-hour inquiry that accepts requests for building repairs.

Lovely Family is a home and lifestyle magazine sent out twice a year. It also features details about Group company activities such as renovation and utilization of lands. About 290,000 prints were issued for each issue in fiscal 2018.
MOCCA (Timber Solutions) Business

Basic Policy

Sumitomo Forestry is advancing the MOCCA (Timber Solutions) Business specialized in proposing wooden non-residential medium to large-scale construction to brand MOCCA (Timber Solutions) as a business.

Sumitomo Forestry has been engaging in forest management for more than 300 years. In addition, we create living spaces which take advantage of wood through our expertise in the various properties of wood worldwide. By dramatically furthering wide-ranging experience, knowledge and technology, we propose wider use of wood and timber in non-residential buildings, such as medium to large-scale construction.


(1 billion yen)

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Basic Concept of Product Safety and Quality Control in MOCCA (Timber Solutions) Business

Sumitomo Forestry is promoting MOCCA (Timber Solutions) Business in which proposes wider use of wood in non-residential buildings such as industrial and public facilities. The MOCCA (Timber Solutions) Department provides high-quality buildings with consideration for users’ health, safety, and comfort via wooden architecture, and obtained ISO9001 in September 2015 in response to customer expectations. Complying with this international standard, policies were established as shown in the following. Each plant sets tangible quality targets and a business expansion plan adhering to the policy to attain maintained safety and enhanced product quality.
Quality Policy

We will strive in the efforts below as an organization that loves wood because we believe it is the path to respond to the expectations of our customers by consistently providing high-quality buildings with consideration to people's health, safety, and comfort via wooden architecture.

1. **Continually better quality and improve customer satisfaction**
   We will work to heighten our quality performance and improve customer satisfaction while continually bettering the effectiveness of our quality management systems by conforming to standards and meeting the requirements of our customers.

2. **Complying with the law**
   We will have full knowledge of applicable laws and other requirements we see as a duty for the company in the design and construction of buildings.

3. **Establishing policies**
   We will set quality targets and periodically evaluate our success and revise those targets and goals to specifically promote this quality policy.

4. **Conducting Education and Training**
   We will conduct education and training for the staff we employ to raise awareness so that all of our employees working in the MOCCA (Timber Solutions) Department and the company will understand this quality policy.

5. **Publishing this policy**
   We will publish this policy externally on the Housing and Construction Division's MOCCA (Timber Solutions) Department website.

Product Safety and Quality Management System in MOCCA (Timber Solutions) Business

Sumitomo Forestry MOCCA (Timber Solutions) Department consolidates the quality management system under the aforementioned policy and is building a strict process management system.

The Department also conducts biannual internal audits at all construction sites to follow the PDCA cycle incorporated in the quality management system as stipulated by ISO9001.
Sumitomo Forestry completed the annex building for Senri Rehabilitation Hospital in Osaka in September 2017.

Most of the conventional hospitals had been built inorganically, with a priority on efficiency from the perspective of the hospital operation. The concept that gave rise to Senri Rehabilitation Hospital is consideration for the patients on what kind of hospital would provide the ideal environment. The annex building was completed in October 2007 as Japan’s first hospital to have a concept of rehabilitation resort.

The new annex building built for the 10th anniversary of the hospital maximizes the utilization of wood, both interior and exterior, to enable patients to relax as much as possible and feel the natural power as they undertake their recovery. It is a rehabilitation hospital that represents a new endeavor, with painting and music ward and a gardening ward, all of which use arawashi exposed timber* style.

In order to support those patients who experienced deep trauma through sudden illness and to regain their positive attitude and physical abilities, the hospital offers rehabilitation facilities that are close to real daily life environment. The ultimate goal is to return and live in their own home. To achieve this concept, it chose a design with uneven levels and stairs instead of making the facility completely accessible. In addition, painting and music ward and gardening ward are available separately for patients to find their new joy in life and possibility. Accessing to these wards is part of rehabilitation.

As with the main building, Creative Director Kashiwa Sato has undertaken design direction for the annex building. Paintings by Sato have been incorporated into the interior design to convey a sense of energy.

Wood offer comfort through all five senses, from its aroma, texture, and sound echoes in the air. The qualities of wood contribute not only to physical treatment but also physiological treatment during the stay. This integration of wood and medical sites of this annex building is a great example of the new possibility of MOCCA (Timber Solutions) Business.

In addition to this kind of medical facilities, Sumitomo Forestry aims to create attractive environments that motivate residents and provide impetus for the business success of residents and users by using timber in the structure and interior and exterior finishing materials of educational, elderly care, commercial and other facilities.

* A finishing technique in wooden constructions which structural members such as columns and beams are exposed to view.
Using Wood in Buildings to Help Transform Work Styles- Kokubunji Head Office
Building of Flavor Life Co. Ltd.

Flavor Life Co., Ltd., which has its head office in Kokubunji City, Tokyo, provides aroma products that incorporate blessing of nature into daily life. It is a company that creates lifestyles with fragrance and smiles through aromatherapy.

As a company that handles products made of natural materials, wish for a building that used natural materials it is a matter of course to wish Above all else, the company wanted an environment in which employees could work comfortably. A wooden-hybrid building was realized in July 2017 with the passion of the proprietor.

Time spent in a workplace is no fleeting moment for the working people. It is surely fair to say that bringing comfort and coziness to a living space in which so much time is spent to be an important element of in promoting work style reform.

The effects of a peaceful workplace incorporating wood, in which employees say they can relax while working, and communicate more with coworkers, has begun to be reflected in employee satisfaction levels and productivity of work.

This wooden-hybrid building has a steel frame structure for the first three floors and a wooden-hybrid structure for fourth through seventh floors. Its most distinctive characteristic is its use of hybrid laminated engineered wood which the steel frame is completely covered in wood. Featuring a combination of the soft texture of wood and the strength of steel, it enables the wood to protect the steel from heat as a fire-resistant coating, contributing to disseminate incorporation of wood as a material for buildings.

The aim of Sumitomo Forestry is to create vistas lined with buildings that provide a sense of the warmth of wood in cities, where contact with wood is rare. We apply our knowledge and experience in using wood to propose new ways of doing so.

* This project was selected as a pilot program for sustainable buildings (wood type) of Ministry of Land, Infrastructure and Transport in fiscal 2015.

Toward the Future -Aiming for the Timberized Eco Cities with W350 Plan-

Sumitomo Forestry announced its W350 Plan in February 2018. The W350 plan is a research and technological development roadmap aiming to build a 350-meter-tall wooden high-rise building in 2041, which will mark the 350th year since foundation of business in 1961, in preparing to create Timberized Eco Cities. The plan is intended to develop future technologies that contribute to people’s lives, society and the global environment, including building construction methods, environmental technologies, wood for building materials and resources.

The plan is to move forward at a new research building of the Tsukuba Research Institute, where frame erection was completed in December 2018, and construction is slated for completion in October 2019.

Toward Realizing the W350 Plan

In February 2018, Sumitomo Forestry created and announced a research and technological development concept “W350 Plan” aiming to build a 350-meter-tall wooden high-rise building by 2041, which will mark the 350th year since foundation of business, in preparing to create Timberized Eco Cities.

Managed mainly by our research and development center, Tsukuba Research Institute, this research and technological development plan is a roadmap for the future technologies; to develop building construction methods, environmental technologies, wood for building materials and resources and will expand the possibility of wooden structures.

This plan of creating Timberized Eco Cities centered on wooden high-rise buildings will revitalize the forestry industry with increased demand of timber and mitigate climate change with increased fixation of CO\(_2\); in essence, Sumitomo Forestry will contribute to invigorate the community and to realize coexistence with the global environment.
Building outline:

- Height - 350m, Number of floors above ground - 70 floors
- Building use: Stores, offices, hotels, residences
- Building area: 6,500m²
- Design collaboration: Nikken Sekkei Ltd.
- Architectural area: 455,000m² (6,500m² × 70 floors)
- Amount of timber used: 185,000m³
- Structure: Wood and steel hybrid structure (Internally, pure wooden structure)

New Research Building of the Tsukuba Research Institute, Which will Serve as the Research Base for the W350 Plan

It has been 28 years since Tsukuba Research Institute was established. The deterioration of the main research building and increase in staff have become issues needing to be addressed. Post-tensioning\(^1\) technique, a new technology related to wooden structures used in this building will form the foundation for the W350 Plan. Energy saving technology and renewable energy will also be used with a view of achieving a zero energy building (ZEB).

The new research building is a three-story building with a floor area of 2,532.67m². The beams, pillars, and walls use arawashi\(^2\) exposed timber that has either received Ministry of Land, Infrastructure, Transport and Tourism (MLIT) certification or has been designed using the semi-fireproofing technique. Full building evacuation safety verification [Route C (Minister’s certification)]\(^3\) makes it possible to eliminate restrictions on wooden interiors so that spaces with the qualities of wood can be presented. The building greatly reduces CO\(_2\) emissions by installing solar panels on the roof and adopting absorption water chiller-heaters fired using wood pellets. Research and development of green technologies for non-residential wooden architectural structures will be conducted while office space will be used for verifications such as green layouts that seek to improve intellectual productivity. It will also be used to test greening on the roof, balconies, and external walls.

This facility has been accepted as a pilot program for sustainable buildings (wood type) in fiscal 2017 promoted by Ministry of Land, Infrastructure, Transport and Tourism. Plans include an office for housing 140 persons, and a gallery, etc., to provide information about timber.

With the new research building positioned as the cornerstone of the W350 Plan, we also began a construction plan for a six- to seven-story wooden building (20m to 30m tall) as the next actual step forward. This plan has been named “W30” and is currently under way.

\(^1\) A construction method where high-strength steel poles and wire ropes running through load-bearing members is tensioned to increase the fixation of position between members.

\(^2\) A finishing technique in wooden constructions which structural members such as columns and beams are exposed to view.

\(^3\) A method for verifying safety performance where everyone within a building is able to evacuate safely to the ground level given a pre-determined fire scenario. If safety can be confirmed, some of the regulations of the Building Standards Act of the Japanese government are eased, enabling greater freedom of design, such as exposing wood structural members to view. Route C designation requires certification by the Minister of Land, Infrastructure, Transport and Tourism, but since evacuation safety performance is confirmed using sophisticated calculation methods not stipulated by the notice, it allows for the highest level of design freedom.
Ad for the W350 Plan Received the Environment Minister’s Award for Environmental Excellence at the Nikkei Advertising Awards

The ad titled “Changing Cities into Forests. The W350 Plan Begins,” which ran in the Nikkei on February 15, 2018, received the Environment Minister’s Award for Excellences in the Environment Category at the 67th Nikkei Advertising Awards. The judging considered a total of 1,027 entries across all categories, with 59 receiving awards including the highest honors.

The award was conferred on this ad on its excellence as an ad that expresses the environmental aspect of the design that emphasizes wood as a renewable natural material, while also expressing the aspect of sophisticated technology involved in constructing a 350m, 70-story high-rise building with wood.
Contributions to Eco Cities Through Greening

Basic Policy

The use of as many plants as possible which are native to the region in urban development is a growing trend as society shifts toward a goal to co-exist with nature.

In the midst of these trends, Sumitomo Forestry Landscaping Co., Ltd. has defined guidelines Harmonic Plants® for selecting plants species based on greening areas with the concepts that using indigenous and local species in greening plans is in the best interest of natural revitalization. The Company has been promoting this model up until now.

There are plants that have grown in Japan since long ago (native plants) and plants that have come to Japan from abroad (migration plants) for trees. Among these migration plants, there are species that will overrun areas where native plants live due to their characteristics, which endanger the biodiversity of the region (invasive plants*). Some of these plants are cultivated plants classified as garden vegetation (agrotype).

Garden vegetation plans are separated into four areas that take into account the conservation level (protected areas, conservation areas, satoyama areas, urban areas) to select plant species based on these areas. For example, in urban areas when building gardens for residences, the colorfulness is represented by selecting a balance of greening plants from non-invasive migration plants around a main selection of native plants, including agrotype plants. In addition, the Group has in place a policy of not using invasive plants that clearly have an adverse impact on local ecosystems and a division responsible for coordinating technology at Sumitomo Forestry Landscaping Co., Ltd. checks that such species are not used.

* Specified alien species and alien species requiring caution as stipulated by the Invasive Alien Species Act

Approach to Planting Areas

![Diagram showing plant species in different areas: Protected Area, Conservation Area, Satoyama Area, Urban Area, with Harmonic Plants, Local Species, Native Plants, Migration Plants, and Invasive Plants indicated.]
Contributions to Property Development

Forest Garden Hadano Receives the First ABINC Certification As a Detached Housing Complex.

Forest Garden Hadano, a detached housing complex in Hadano City, Kanagawa Prefecture, received the first ABINC (Association for Business Innovation in harmony with Nature and Community) certification under the detached housing complex and city area category in March 2018. The ABINC certification system certifies results of biodiversity preservation activities of companies to promote coexistence of nature and people. The certification began the certification of office buildings and commercial facilities from 2014 and has expanded its scope to include housing complexes and factories.

Furthermore, detached housing complex and city area category and city area category and logistic facilities were newly added in fiscal 2017. Forest Garden Hadano received the first certification for the detached housing complex and city area category for its innovative initiatives.

The property design of Forest Garden Hadano is green property that coexists with life. It realizes rich greenery through the use of local tree species and Harmonic Plants®. Consideration toward sustainable circulation of water utilizing spring water was one of the major factors of receiving the certification.

Sumitomo Forestry Landscaping work together with the residents through holding study sessions, monitoring, and regularly supporting maintenance of garden vegetation to continue creating rich residential environment and support improvement of asset value.

Biodiversity Greening and ABINC Certification Support Business

We supported Aioi District (Hyogo Prefecture) of the IHI Corporation in obtaining the ABINC certification.

In fiscal 2018, the Branch conducted a landslide disaster prevention construction to reinforce the slopes with consideration of reusing resources such as fallen trees that had been blown down by winds in Hyogo Prefecture as well as timber and pruned branches produced by tree thinning and pruning as well as planting local tree species.

► HIGHLIGHT 2 Contributing to the Protection of Biodiversity
Participating in Gardening Exhibit at the 35th National Urban Greening Fair

From September through November 2018, the 35th National Urban Greening Fair “Yumehana Yamaguchi” was held at Yamaguchi Kirara Expo Memorial Park (sponsored by Yamaguchi Prefecture, Yamaguchi City, and Organization for Landscape and Urban Green Infrastructure, and advocated by the Ministry of Land, Infrastructure, Transport and Tourism).

The national urban greening fair is a flower and greenery fair that has been held every year since 1983 in different locations nationwide to promote the comfortable and prosperous living that greening provides.

At this fair, we exhibited a model garden rich in wood textures in collaboration with the Yamaguchi Branch of Housing and Construction Division of Sumitomo Forestry. Garden vegetation centered on native plants of Yamaguchi including Japanese sapphireberry, viburnum japonicum, elaecarpus japonicus and Nippon daisies for a design that considered of the local environment.

The garden won the Gold Medal, as well as the Special Prize presented by the Japan Landscape Contractors Association. It enabled us to communicate nationwide a comforting new garden design from Yamaguchi.

Education for Biodiversity Conservation

Publish of Biodiversity Handbook Vol. 2: Local Vegetation

We are receiving a wide range of concerns for information about what the local vegetation is to the production, distribution and consumption of native plants and the cultivation plans for native plants in addition to future trend of local vegetation required for greening that consider biodiversity.

Sumitomo Forestry Landscaping has responded to these concerns by publishing the Biodiversity Handbook Vol. 2: Local Vegetation in January 2018.

This handbook offers explanations while interweaving cutting-edge examples that use locally cultivated plants to address primarily the information below.

1. Reconstruction projects for the Great East Japan Earthquake using local plants
2. The development of large-scale test driving course using local plants in
3. Beach plant revitalization project using local plants
4. Urban redevelopment using local plants from the Edo period
5. Mixed tree revitalization using local plants cultivate on large-scale artificial grounds

We believe these initiatives will help as one measure for use of local plants toward future revitalization.
The Ministry of the Environment and The Ministry of Agriculture, Forestry and Fisheries of Japan newly released a list of alien species which harm biodiversity of Japan (list of potentially harmful alien species for biodiversity) for the purpose of deepening interest and understanding about alien species to incite the appropriate action by various independent entities.

This list not only stipulates the specified alien species up until now but also selects alien species which have the potential to become highly invasive to the ecosystem or kill or harm people as well as damage agriculture, forestry and fisheries.

Sumitomo Forestry Landscaping has reorganized criteria for alien species unique to its business in accordance with the regulations on the list of harmful alien species for biodiversity with considerations to further impact on the ecosystem. The Illustrated Guide to Home Trees published based upon this criteria has released a revised edition in March 2017 which replaces some of the tree species included therein.

We will continue to advocate Harmonic Plants® and the use of these standards for alien species to include in proposals for plants to customers as well as in raising the awareness of our employees.

**Overseas Greening Businesses**

In North Melbourne, Australia, we are leveraging our expertise in a design partnership with Tract Landscape, a local landscape design firm, for the Annadale estate project (1,087 total lots for sale), which is a joint residential development project between Sumitomo Forestry and NTT Urban Development.

In this design partnership that began in January 2017, Sumitomo Forestry proposed a concept, Growing Wellness Life & The Five Sense, for the basic design of Tract. Tract highly evaluated this proposal as a fantastic reference because a story is not usually incorporated into standard design plans in Australia and playground equipment using natural stone and logs was employed to better the motor skills of the children as well as the vegetation plans. Even in the second stage of park planning conducted thereafter, we proposed basic concepts to further tasks to bring together the basic design founded upon this idea.

Green zones in Australia and the U.S. is imperative to raise the value of the estate development and pursue the creation of efficiently green open spaces. We have just begun our efforts in the overseas greening business, but will continue to further these businesses in the future with the aim of creating beautiful and comfortable spaces loved by residents overseas.
Under the Sumitomo Group Procurement Policy, we carry out due diligence on timber procurement to ensure that the procurement is performed in a sustainable manner with consideration of compliance, human rights, labor practice, biodiversity, local communities, and other matters.

When performing due diligence, the Company ensures suppliers supply the timber that meets logging compliance requirements and use only the timber products made with raw materials that satisfy the requirements by consulting the provided information. In fiscal 2018, we conducted sustainability surveys at all 109 direct suppliers under study, as well as to 43 suppliers for overseas Group companies engaged in distribution. We strengthened the management system by scoring and improving the visualization of initiatives based on the responses from questionnaire survey. Moreover, we demanded improvement on the suppliers that did not satisfy our standards.

In addition, in order to comply with the Clean Wood Act from 2017, our applications for registration as Wood Related Entities were processed by the registration application agency, and we were registered. Also in compliance with the law, we completed our reporting on timber procurement for fiscal 2018.

**Relevant Social Issues**

In our verification of legal compliance and sustainability, we directly confront broad social challenges related to wood, such as human rights, occupational health and safety, biodiversity conservation and local communities. We continually endeavor to mitigate these issues, all of which impose risks on our business.

**Relevant CSR Initiatives**

- Procurement Initiatives
The Sumitomo Forestry Group strives to conduct procurement activities while making considerations about human rights and labor in all timber and wood products verified to be sustainably and legally compliant as well as conserve biodiversity and contribute to the local community. The progress of these initiatives is reported to the Timber Procurement Committee made up of managers from each section procuring timber to encourage continued improvements in the supply chain.

In addition, given that it is characterized as being a regional industry, Sumitomo Forestry Group maintains close communication with the suppliers and purchasers of timber and building materials in each region.

**Relevant Social Issues**

In efforts at the stage of procurement in distribution operations, we verify legal compliance and sustainability while also endeavoring to respond to broad social issues such as human rights, occupational health and safety, labor, biodiversity conservation and the local community.

In response, we have built a management system which deliberates matters such as timber procurement standards and illegal timber with the Timber Procurement Committee at its core. We are confirming traceability of timber and legal compliance while also confirming consideration towards human rights, labor and biodiversity conservation.

**Relevant CSR Initiatives**

- **Procurement Initiatives**

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Sumitomo Forestry Group commercializes and ships the timber that is procured not only as raw wood but also plywood, commercial timber, building materials and other products.

**Relevant Social Issues**

In developing and delivering products, we engage in appropriate information disclosure regarding our initiatives related to social challenges from not only the quality as products but also with certification of sustainability and legal compliance.

**Relevant CSR Initiatives**

- **Sales Initiatives**
The Sumitomo Forestry Group fulfills accountability by encouraging sales of certified timber as well as labeling with considerations to traceability.

Increasing support to generate demand for wood not only from Japan but overseas as well as increasing exports of Japanese timber is helping revitalize forestry in Japan.

Relevant Social Issues

Social challenges related to initiatives at the point of sales such as certified and Japanese timber include the depletion of forest resources, illegal logging and regional revitalization.

Our Group believes it is our social responsibility to respond to social challenges related to wood now and into the future by encouraging sales of certified materials and Japanese timber.

Relevant CSR Initiatives

▶ Sales Initiatives
Procurement Initiatives

Basic Policy

Sumitomo Forestry Group strives to contribute to a sustainable and prosperous society through business activities that use wood, a renewable resource. To do so, we engage in responsible timber procurement activities in accordance with our Timber Procurement Basic Policy formulated in 2005 and our Timber Procurement Principles and Policies formulated in 2007. To deliver legal and sustainable timber, we only engage in responsible timber procurement. In 2015 with the Sumitomo Forestry Group Procurement Policy, we expanded our scope beyond timber to include a wide range of other procured products, such as metals, ceramics, resin and other building materials, and based on this policy, are engaged in procurement activities that take into consideration the economy, society and environment.

Promotion System of Timber Procurement Management

Sumitomo Forestry Group established the Timber Procurement Committee, chaired by the general manager of the Sustainability Department and comprising managers from departments in charge of timber procurement for the trading and housing operations. (as of the end of March 2019). The committee discusses issues related to group-wide timber procurement, including procurement standards and risk assessments for illegal logging.

In fiscal 2018, the Timber Procurement Committee met three times as stipulated and confirmed legality and conducted the Sustainability Survey for all 109 direct import source companies who are covered in the study and 43 companies that our overseas group companies (distribution) procure from. Regularly (once a year or once every two years), we confirm legality and sustainability of both new and ongoing parties we conduct business with.

Sustainable Timber Procurement Initiatives

Promoting Initiatives Adhering to the Procurement Policy

Procurement Policy

Under the Sumitomo Group Procurement Policy, Sumitomo Forestry Group carries out due diligence on timber procurement to ensure that the procurement is performed in a sustainable manner with consideration of legal compliance, human rights, labor practices, biodiversity conservation, and local communities.
The Sumitomo Forestry Group utilizes wood as a renewable natural resource in its business operations. To contribute to a sustainable society, we are committed to procurement activities that take into account economic, environmental and societal interests and comply with the following policy:

1. **Procurement based on legal and highly reliable supply chains**
   Our procurement activities will strictly adhere to all relevant laws, regulations and societal norms, and be built on mutual understanding and trust with our business partners. Furthermore, to provide the highest quality products and services, we will work with our business partners to ensure that our procurement takes place within a sound and fair supply chain.

2. **Procurement based on fair opportunity and competition**
   We will provide all our suppliers, both Japanese and foreign, a fair opportunity for business. Selection of our business partners will be based on a comprehensive evaluation of the company’s reliability and technological expertise, the product’s quality, economic efficiency, delivery date and environmental performance, and the company’s CSR (Corporate Social Responsibility) initiatives, such as advocacy of basic human and worker rights, anticorruption efforts and so on.

3. **Procurement of sustainable timber and wood products**
   Wood is a renewable natural resource. To actively utilize it, we will work with our business partners on the following initiatives related to the procurement of timber and wood products:
   - Procure timber from forests that are sustainably managed
   - Work to improve the traceability of procured timber and wood products
   - Strictly adhere to the laws and regulations of the countries and regions of harvest, protect biodiversity and forests with high conservation value, and respect the cultures, traditions and economies of regions that coexist in harmony with forests.

4. **Communication**
   To ensure the transparency of our procurement efforts, we will disclose information appropriately. In addition, we will communicate with our stakeholders to further improve our procurement activities.

**Compliance**
Timber & Building Materials Business, Housing & Construction Business and each of the relevant Group timber procurement divisions confirm that the timber provided by suppliers has been legally harvested, or that the wood products they provide have been made only from legally harvested timber as a raw material. Each person in charge of procurement is required to follow the Timber Procurement Due Diligence Manual, gather the following information, cross-check relevant documents for each location and tree species, and confirm traceability of the entire supply chain all the way to the logging site.

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<td>3</td>
<td>Timber type</td>
</tr>
<tr>
<td>4</td>
<td>Tree species of timber type</td>
</tr>
<tr>
<td>5</td>
<td>Country or region of logging</td>
</tr>
</tbody>
</table>

Revised July 23, 2015
<table>
<thead>
<tr>
<th>No.</th>
<th>Category name</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Annual procurement volume (weight, area, volume or quantity)</td>
</tr>
<tr>
<td>7</td>
<td>If sold to a legal entity, the name and address of that legal entity</td>
</tr>
<tr>
<td>8</td>
<td>Results of supplier surveys and other, inspection records and other</td>
</tr>
<tr>
<td>9</td>
<td>Documents certifying that harvesting was conducted in accordance with laws and regulations of the logging country</td>
</tr>
</tbody>
</table>

With these information sorted by country, region, wood species, and timber type, risk assessment on the illegal logging or human rights violation is carried out based on procurement standards stipulated by the Committee. Risk categories are A (low risk), B (medium risk) and C (high risk). Timber and wood products in the B (medium risk) and C (high risk) categories should not be solely evaluated with documentation to prove that they are legally harvested according to that country’s laws and regulations. In addition, when necessary, company staff are sent for on-site inspections to ensure traceability back to the logging site.

**Consideration for Human Rights, Labor Practices, Biodiversity Conservation and Local Communities**

Following items are checked, through Sustainability Procurement Surveys to suppliers and local interviews for the products that are being procured:

- Whether the rights of workers, local and indigenous community are abused in the area where we procure the products and their raw materials from. If this is the case, whether suppliers check their logging practices take place with consideration for these rights.
- Whether the high conservation values forests are included in the area where we procure the products and their raw materials from. If this is the case, whether suppliers check their logging practices with consideration to forests with high conservation value.

**Review**

Each procurement division reports the status and progress of these initiatives to the Timber Procurement Committee, facilitating continuous improvements throughout the supply chain. In fiscal 2018, we strengthened the management system by scoring survey outcomes to improve the visualization of suppliers’ sustainability initiatives. Sumitomo Forestry requested that improvements be made at five suppliers that did not satisfy our standards.

**Timber Procurement Management System**

**Access to Information**

Confirm that their suppliers can supply only legally harvested timber or wood products made from legally harvested timber.

**Risk assessment**

Assess risks related to illegal logging for each country or region, tree species and timber type. (Also check CSR items other than legal compliance through surveys and local interviews.)

**Risk reduction measures**

Take measures to reduce risk, e.g., checking and obtaining additional information (evidence), conducting field surveys by employees, and converting to procurement of forest certified timber.
Reinforcing Measures for the Sustainability of Timber Products

There is increasing concern about deforestation as climate change. Our Group’s timber procurement sustainability measures comply with our own Timber Procurement Due Diligence. In May 2019, we newly implemented an Action Plan to further reinforce evaluation standards for sustainability.

Policy on “Sustainable Timber and Wood Products”

We define timber and wood products as sustainable if they fulfill one of the following:

1. Certified timber and pre-certified timber: FSC, PEFC, and SGEC
   (Regardless of CoC connection, we place emphasis on certification at time of production and promote a shift to certified timber)
2. Timber from plantation forests
3. Natural timber where forestry management and distribution can be assessed as sustainable.
   (this does not include timber from conversion forests = timber harvested from natural forests that were converted to farm land such as oil palm plantations)
4. Recycled wood

In the “Mid-Term Sustainability Targets as part of the 2021 Mid-Term Management Plan” announced in May 2019, Even in situations where legality can be confirmed, we will promote the gradual increased use of alternative wood (natural timber from forest thinning or plantation timber) to stop the handling of items that do not fall under our definition of sustainable timber or wood products. By our target fiscal year of 2021, we strive to achieve our procurement goal of 100% sustainable timber and wood products.

Reinforcing Timber Procurement Due Diligence Through Our Action Plan

The Company engages in responsible timber procurement as a Group in accordance with the Sumitomo Forestry Group Procurement Policy. To respond to recent concerns, in May 2019, we launched an Action Plan to reinforce on a regular basis our timber procurement due diligence. Major areas of reinforcement to further promote responsible procurement include the appointment of the director in charge of sustainability as the chairman of the Timber Procurement Committee, the holding of regular study sessions for persons in charge of procurement, and for suppliers with low scores, a two-year probation period to implement requested improvement measures and the cessation of transactions in the event that no improvement is seen.

Education for Personnel in Charge of Procurement

As concern about deforestation increases worldwide, interest is focusing on efforts by companies with regard to procurement of tropical timber. In this connection, we held a seminar on October 31, 2018 titled “Timber Production in Indonesia and Malaysia and Efforts Toward Sustainable Forest Management.” It was attended by a total of 32 managers and other responsible personnel at international distribution departments handling tropical timber and other imported timber. At the seminar, participants learned the latest information about timber legality certification systems in both countries, the current state of certified timber, and sustainable forest management.

Each year, we keep up with changing circumstances by providing seminars and training sessions on the latest societal and environmental issues. These are separate from the ordinary training provided to all employees by the Personnel Department.
To formulate and implement our Action Plan, to respond sincerely to societal demands and to promote responsible procurement, we organized a stakeholder dialogue with environmental NGOs, ESG specialists and researchers (held in July 2019).

Experts from the certified NPO Sustainable Management Forum of Japan, the World Wildlife Fund (WWF) Japan, FoE Japan, Global Environment Forum, Institute for Global Environmental Strategies, Takasaki City University of Economics and Waseda University participated to discuss various themes, such as the implementation of the Sustainability Procurement Survey, the process and timeframe for demanding improvements, timber from conversion forests and recycled timber.

During the discussions, in addition to considering ways to build capacity, participants agreed on the need for adequate communication with suppliers in implementing Sustainability Procurement Surveys and requesting improvement measures in a manner that would enhance the quality of suppliers and consequently, lead to utilization of sustainable forest resources throughout the industry. For timber from converted forests, while keeping close watch on measures for sustainable commodity production in other industries, it should be confirmed that appropriate assessment, such as for forests with high protection value (HCVA), is being conducted. Participants voiced the opinion that recycled timber should be defined as timber that has been used once by the consumer (building materials, etc.) and that wood waste, old fruit trees and such should undergo the same level of due diligence as regular timber.

With these opinions in mind, the Company revised and is implementing its Timber Procurement Management Regulations and its Timber Procurement Due Diligence Manual to fulfill its goal of 100% sustainable timber and wood materials as outlined in the Management Plan 2021.
Several environmental groups have expressed concerns about forest management and timber production in Romania in terms of whether or not logging has been appropriately conducted. In April 2017, members of the Timber Procurement Committee conducted on-site inspections, first gathering information through meetings with such organizations as the Ministry of Environment and Forests of the Romanian Government, the Embassy of Japan in Romania, ASFOR (Romanian Forest Association), among others. The members also went to a supplier manufacturing facility and inspected representative logging sites of logs that were transported to the facility. At the manufacturing facility, they confirmed that the supplier properly checks transport permits and the logs bundled on the trailer when receiving raw material logs at the lumber manufacturing plants.

For example, the visiting team was able to confirm that the supplier was thorough in segregated management to ensure that logs exceeding the amount permitted were not used and that they engaged in such measures as reporting to forestry authorities. The team received an explanation about forest management from a forest ranger at the logging site and checked the actual hammer stamp mark and process when loading the trailer in the field. In addition, they were able to confirm the dedication to preserving the rare forest ecosystem by observing forest conservation areas under the Romanian government’s jurisdiction.

The Company regularly meets with environmental groups that we receive concerns from, most recently, in January 2019, where we obtained information and provided the latest on our Group initiatives.
Concrete Form Plywood from Indonesia

In recent years, several environmental groups have expressed their concerns about the legality of the logs used as raw material for plywood manufactured in Indonesia. In Indonesia, the SVLK timber legality verification system is in place, requiring timber product manufacturers and exporters to register by obtaining SVLK business certification issued by an independent evaluation and certification organization recognized by the National Accreditation Committee. Upon doing so, the business obtains documentation (V-Legal documents) from the independent verification and certification body certifying the timber as legal, and expressly confirming the legality of the entire supply chain, from logging to timber processing at manufacturing plants to export. In July 2018, we conducted an on-site inspection of the concrete formwork paneling plywood manufacturing plant that serves as our supplier. At a timber yard near the harvesting site, we were able to use QR-code labeling on tags attached to logs to confirm the harvesting information at the Indonesian Ministry of the Environment and Forestry website, as well as with V-Legal documentation. After the same logs were transported to the plant, we were once again able to use QR codes at a plant timber yard to access the ministry website and V-Legal documents, successfully tracing them back through the transport process to their harvest location.

In terms of the procurement of raw material logs used to process plywood, the Company continues to work with suppliers on various initiatives as we strive to fulfill our “Mid-Term Sustainability Targets as part of the 2021 Mid-Term Management Plan” to achieve the targets of 100% procurement of sustainable timber and wood products.
In terms of concrete formwork plywood for the construction of sports facilities, in November 2018, environmental NGOs reported to the Organizing Committee their concerns that the Company’s supplier may be using raw material logs that were not appropriately managed or harvested. With this, we responded by submitting relevant documents and explaining to the Olympic Organizing Committee that these types of raw material logs were not part of the Company’s supply chain. As a result, the Olympic Organizing Committee concluded that the concerns were unfounded and not eligible for reporting, which was disclosed in February 2019 on their website.

Promoting Certified Timber

Sumitomo Forestry Group works with its procurement partners to build a reliable supply chain and to procure sustainable timber. As an index to confirm whether timber was obtained from forests with sustainable forest management, we support and utilize the Forest Certification System, a third-party certification system.

Furthermore, the Company itself receives the Forest Certification and we believe we can contribute to the system’s wider use by providing the market and consumers certified forest timber.

Sumitomo Forestry Group has obtained FM certification for 221,000 hectares and CoC certification for 10 organizations.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Certification System</th>
<th>Date Certified</th>
<th>Certification Number</th>
<th>Certification Issuing Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumitomo Forestry Co., Ltd. Timber and Building Materials Division, Branch</td>
<td>FSC®</td>
<td>December 14, 2017</td>
<td>CU-COC-823910/ CU-CW-823910</td>
<td>Control Union Certifications</td>
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<tr>
<td>Sumitomo Forestry Co., Ltd. Timber and Building Materials Department, Branch</td>
<td>PEFC</td>
<td>December 14, 2017</td>
<td>CEF1201</td>
<td>Japan Gas Appliances Inspection Association (JIA)</td>
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<td>Sumitomo Forestry Co., Ltd. Timber and Building Materials Division, Branch</td>
<td>SGEC</td>
<td>January 24, 2017</td>
<td>JIA-W045</td>
<td>Japanese Forest Technology Association (JAFTA)</td>
</tr>
<tr>
<td>Organization</td>
<td>Certification System</td>
<td>Date Certified</td>
<td>Certification Number</td>
<td>Certification Issuing Body</td>
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<tr>
<td>Sumitomo Forestry Co., Ltd.</td>
<td>SGEC</td>
<td>October 1, 2017</td>
<td>JAFTA-W038*2</td>
<td>Japan Forest Technology Association (JAFTA)</td>
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<tr>
<td>Timber and Building Materials Division, Hokkaido Branch</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Materials Development Department, Housing and Construction Division</td>
<td></td>
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<td></td>
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<td>Sumitomo Forestry Wood Products Co., Ltd.</td>
<td>SGEC</td>
<td>September 25, 2016</td>
<td>JAFTA-W017</td>
<td>Japan Forest Technology Association (JAFTA)</td>
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<td>Sumitomo Forestry Crest Co., Ltd.</td>
<td>FSC®</td>
<td>April 18, 2018</td>
<td>SGHK-COC-006693</td>
<td>SGS</td>
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<tr>
<td>PT. Kutai Timber Indonesia (KTI) (Indonesia)</td>
<td>FSC®</td>
<td>January 10, 2015</td>
<td>TT-COC-002009</td>
<td>BM TRADA</td>
</tr>
<tr>
<td>PT. Sumitomo Forestry Indonesia</td>
<td>FSC®</td>
<td>April 26, 2016</td>
<td>TT-COC-005903</td>
<td>PT. Mutuagung Lestari</td>
</tr>
<tr>
<td>Sumitomo Forestry (Singapore) Ltd.</td>
<td>FSC®</td>
<td>December 5, 2018</td>
<td>NC-COC-005542 / NC-CW-005542</td>
<td>NEP Con</td>
</tr>
</tbody>
</table>

*1 CoC (Chain of Custody) certification is a system that covers the processing and distribution of forest products. In addition to determining whether the forest product was from a certified forest (certified timber) at each stage of processing and distribution, it certifies risk assessments for uncertified timber. When all companies in the entire process obtain CoC certification, a certification mark can be displayed on the product.

*2 Includes operators other than Sumitomo Forestry Group companies due to being a comprehensive certification.

**Major Forest Certification Systems**

**FSC (Forest Stewardship Council®) (FSC-C113957)**

FSC is an organization founded in 1993 led by World Wide Fund for Nature (WWF) and consists of representatives from environmental organizations, forest workers, timber users and traders, human rights organizations, and local forestry unions. It is considered a pioneer amongst forest certification system operators.

Adhering to the 10 principles and 56 regulations encompassing environmental impact, local society, and indigenous people’s rights, FSC-accredited certification bodies will undertake reviews. Recently, country or regional standards as well as the review procedure for small-scale forest owners have been introduced to provide greater support for diverse forests and owners.
PEFC (Programme for the Endorsement of Forest Certification)

Forestry organizations of 11 European countries established PEFC together in 1999 as an organization to mutually authenticate the system of each country. PEFC does not directly authenticate an individual forest, but when the PEFC’s required conditions that adapted “the inter-governmental process” implemented by 149 countries is met, the country’s own forest certification system is authenticated by PEFC. Joined by non-European countries in 2003, the organization originally called Pan European Forest Certification Schemes changed its name to Program for the Endorsement of Forest Certification. Since then, PEFC has shown drastic growth, and to date its total certified area is the largest across the world.

Sustainable Green Ecosystem Council (SGEC)

SGEC authenticates forest management that demonstrates both rich natural environment and sustainable timber production in Japan. With reverence for Japan’s indigenous natural environment, social customs, and culture, the review premises on seven criteria. SGEC can also authenticate forestry operations and distribution systems under CoC. SGEC joined PEFC in November 2014 and submitted a mutual authentication application to PEFC in March 2015, which was mutually approved in June 2016.

Promoting the Use of Certified Timber

The most important aspect of selling certified timber is managing the procurement of certified timber separately from other types of timber. With CoC certification, because we are inspected by a third party, we are able to guarantee that timber and other products are from certified forests and sell them to our customers.

Sumitomo Forestry Group has set a goal to achieve by 2020 at least a 12% sales volume ratio of imported certified timber and other products. In fiscal 2018, the actual figure was 11%.

Furthermore, for sales of SGEC certified timber, Japan’s forest certification system, we have set a sales volume target of 85,000 square meters or more by 2020. In fiscal 2018, the actual figure was 78,000 square meters.

Smooth Response to the Clean Wood Act

The Act on the Promotion of Use and Distribution of Legally Harvested Wood and Wood Products (the Clean Wood Act) was enacted in May 2017 to encourage use of timber from trees harvested in compliance with the laws and regulations of Japan and other countries and to create a market where illegally logged timber, which damages the environment, is not made available. Sumitomo Forestry was the first in the country to register the Timber and Building Materials Business, which imports and sells timber, as a Type 1 Wood-Related Entity on November 22, 2017. This same division was registered as a Type 2 Wood-Related Entity on August 1, 2018. Subsequently, Sumitomo Forestry Wood Products was registered as a Type 1 and Type 2 Wood-Related Entity (purchase and sale of timber) on February 20, 2018, and furthermore, the Housing and Construction Business (on March 16, 2018) and Sumitomo Forestry Crest (on May 9, 2018) were registered as Type 2 Wood-Related Entities as part of our efforts to procure legal timber throughout the entire Group.
<table>
<thead>
<tr>
<th>Registered Wood Related Entity</th>
<th>Type</th>
<th>Registration Date</th>
<th>Registration Number</th>
<th>Agency Issuing Registration</th>
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<tr>
<td>Timber and Building Materials Division</td>
<td>Type 1, Type 2 Wood Related Entity</td>
<td>November 22, 2017</td>
<td>No. JIA-CLW-I II 17001</td>
<td>Japan Gas Appliances Inspection Association</td>
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<tr>
<td>Building Materials Procurement and Logistics Department, Housing and Construction Division</td>
<td>Type 2 Wood Related Entity</td>
<td>March 16, 2018</td>
<td>No. HOWTEC-CLW-II 0001</td>
<td>Japan Housing and Wood Technology Center</td>
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<tr>
<td>Sumitomo Forestry Wood Products</td>
<td>Type 1/Type 2 Wood Related Entity</td>
<td>February 20, 2018</td>
<td>No. JAFTA-CLW-I II-3</td>
<td>Japan Forest Technology Association</td>
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<tr>
<td>Sumitomo Forestry Crest Co., Ltd.</td>
<td>Type 2 Wood Related Entity</td>
<td>May 9, 2018</td>
<td>No. JIA-CLW-II 18002</td>
<td>Japan Gas Appliances Inspection Association</td>
</tr>
</tbody>
</table>

### Participation in JBIB (Japan Business Initiative for Biodiversity)

Sumitomo Forestry participates as a member of the Japan Business Initiative for Biodiversity (JBIB), made up of companies that engage in activities aimed to conserve biodiversity. In fiscal 2018, the supply chain working group conducted research and worked on creating lists of disclosed information that could be used to assess risk.

### Communication with Our Business Partners

In the distribution operations of timber and building materials, given that it is characterized as being a regional industry, Sumitomo Forestry maintains close communication with the suppliers and purchasers of timber and building materials in each region.

#### Main Communication Activities with the Business Partners of the Timber and Building Materials Division

<table>
<thead>
<tr>
<th>Name/scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Sumirin club -a membership organization to communicate with regional suppliers of timber and building materials Number of members: 871 companies (as of July 2018)</td>
<td>Established in different regions around Japan as a forum for communication with business partners for distribution operations of timber and building materials. Training sessions and informational exchange meetings are held two or three times a year in each region, allowing members to deepen mutual friendships, promote product R&amp;D, enhance production and distribution, and support improvements in the industry as a whole.</td>
</tr>
<tr>
<td>Publication of Building Materials Monthly Monthly print run of approximately 4,200 copies</td>
<td>With a history spanning more than half a century, this monthly magazine publishes timely information and topics regarding timber, building materials and the housing industry from a distinctive perspective unique to Sumitomo Forestry.</td>
</tr>
</tbody>
</table>
Sales Initiatives

Basic Policy

Sumitomo Forestry Group engages in responsible procurement in accordance with the Sumitomo Forestry Group Procurement Policy. Up to now, we have been promoting the procurement of sustainable timber as domestic timber, plantation timber and certified timber. In keeping with our “Mid-Term Sustainability Targets as part of the 2021 Mid-term Management Plan”, we will work for still more widespread use of sustainable timber and building materials throughout the broader community by procuring 100% sustainable timber and wood products.

Promotion for Sales of Environmentally-friendly KIKORIN-PLYWOOD

Sumitomo Forestry has set a ratio of products that use plantation trees and certified timber from the procurement of import wood board products such as plywood as a 2020 target and it strives to expand this business. Plywood that uses 50% or more plantation timber, FSC-certified or PEFC-certified timber is marketed as KIKORIN-PLYWOOD, and some of its revenue is invested in plantation businesses in Indonesia. This product made using 50% or more plantation timber, was praised as being environmentally conscious. It received a Commendation Prize in the 1st EcoPro Awards* on September 12, 2018. It accounted for 9.1% of our plywood sales volume during fiscal 2018, amounting to about 50,541m³. We will contribute to environmental protection by expanding this volume fivefold in fiscal 2020 to 240,000m³.

* Hosted by the Japan Environmental Management Association for Industry. It was established in fiscal 2004 in order to help further develop and spread the use of Japanese eco-products by broadly communicating information about eco-products among current and prospective clients while also supporting the efforts of the relevant suppliers. The EcoProducts Awards were renovated in fiscal 2018, now presented as the EcoPro Awards.

Plantation-derived timber Panel ratio (FY2020 target) More than 33%
Plantation-derived timber Panel ratio (FY2018) 25.2%

Sales of KIKORIN-PLYWOOD

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
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<tr>
<td></td>
<td>31,900m³</td>
<td>28,100m³</td>
<td>30,200m³</td>
<td>46,255m³</td>
<td>50,541m³</td>
</tr>
</tbody>
</table>
Overseas demand for timber is forecast to grow in emerging countries including China propelled by economic development and population growth. Under these circumstances, Japanese timber exports have also been on the rise in recent years, and a target of 262,000 m³ has been set for Japanese timber export volume within our Mid-Term Sustainability Targets, to be reached in fiscal 2021 as we explore overseas market opportunities for Japanese timber.

In fiscal 2018, export volumes from existing ports centering around Kyushu increased in response to robust demand from China, while new port development and the start of exports from ports other than in Kyushu also began, resulting in a 33.3% annual increase in domestic timber exports to 160,000 m³.

Fiscal 2018 Breakdown of Net Sales in the Timber & Building Materials Business (Non-consolidated)
Product Development/Raw Material Procurement

We work to meet customers’ needs not just through design, but also by moving forward with product development that optimizes the characteristics of raw materials. Our slab and board operations include lightweight plywood and board development using light plantation timber such as Falcata (Albizia falcataria) and balsa. For building materials and carpentry operations, we develop materials for such applications as flooring and furniture that optimize the sense of quality wood. Our manufacturing operations include systems for using raw materials without any waste.

Relevant Social Issues

Forests around the world continue to decline due to practices such as illegal logging and excessive slash-and-burn farming, making sustainable timber procurement a crucial issue.

We procure plantation timber and certified timber which are legal and highly sustainable in order to achieve ongoing timber and materials procurement that considers sustainability and biodiversity.

Relevant CSR Initiatives

- Procurement Initiatives
By operating according to the ISO9001 International quality management system and through management that meets or exceeds JIS/JAS product quality requirements, we go beyond merely manufacturing high-quality products as we strive to build products with even greater safety.

With so many employees working at our manufacturing plants, our Group regards the establishment of a safe, healthy work environment to be our responsibility, and we therefore continually pursue a goal of zero occupational injuries. We also recycle and make energy and resource saving efforts in our manufacturing processes.

**Relevant Social Issues**

In our manufacturing operations, it is crucial that we strive (1) to manufacture and market safe, reliable products, (2) to create positive work environments, and (3) to reduce environmental impact. In manufacturing products that are reliable and safe, we place great importance on customer feedback in our efforts to promote the development and sale of reliable and safe products and services that consider the environment and society.

In promoting a vibrant work environment where a diverse workforce can unleash their skills and individuality, we enhance our manufacturing plant safety policies and improve working environments, to provide safe, secure work environments. In addition, in order to reduce the environmental impact of our business activities, we are working to reduce greenhouse gas emissions while increasing recycling rates.

**Relevant CSR Initiatives**

- Product Safety and Quality Control
- Occupational Health and Safety
We ship and sell processed and manufactured products not only in Japan, but in countries around the world.

We have been moving forward with continual improvements such as redesigning packaging to cut waste, revising delivery methods to provide customers with greater ease of access, and reductions in greenhouse gas emissions.

**Relevant Social Issues**

We do business in each country by complying with the rules and regulations from a compliance perspective for shipments and product sales. The extent to which delivery can be made more efficient by reducing the greenhouse gas emissions associated with transport has become a societal issue. In order to reduce the environmental impact of our business activities, our Group is working to reduce greenhouse gas emissions while increasing recycling rates. We have increased loading efficiency as we use the return trips after construction materials delivery for the transport of waste materials.

**Relevant CSR Initiatives**

- Product Safety and Quality Control
- Reducing CO₂ Emissions from Transportation
PT. Kutai Timber Indonesia (KTI), a production site in Indonesia, has been working to build a system for sustainable forest management in cooperation with local plantation cooperative associations to heighten the ratio of plantation timber used as raw materials.

KTI also began reforestation with fast-growing trees such as Falcata (Albizia falcataria) in 1999. With the system of "social forestry", KTI has aimed to support the environment, community and economy by distributing seedlings to local residents for free to plant on the lands they own and promises to purchase timber when the trees are mature at its market value. In addition, the KTI Reforestation Cooperative supported by KTI (KBM KTI)* has acquired the FSC-FM certification for forests owned by KTI (KAM-KTI)*.

In the future, KTI will strive to expand the manufacture and sales of products with high environmental value by expanding the area of certified forests and procuring sustainable timber in order to fulfill the requirements of many of our business partners.

* KAM KTI: FSC-C023796, KBM KTI: FSC-C133562
PT. Sinar Rimba Pasifik uses sustainable timber that takes into consideration the environment and at the same time, manufactures high-quality wood interior materials (floors, stairs, counters, etc.) of a consistent design and supplies products primarily for Sumitomo Forestry houses. The timber used as the main raw material procured for these products is solely plantation timber or certified timber.

In fiscal 2018, approximately 60% of our overall timber used was imported from abroad, and all of the imported timber from our overseas suppliers is certified timber based on AHEC (American Hardwood Export Council) or QWEB (Quebec Wood Export Bureau). The remaining 40% of our overall timber used is timber from plantation forests purchased from a forestry company in Indonesia (Perum Perhutani), all of which is material that has received SVLK (Sistem Verificasi Legalitas Kayu) certification.

We will continue to pursue sustainable timber procurement and manufacture and sell high-value-added products that use verified as legal and sustainable timber.
Product Safety and Quality Control

Basic Policy

In response to legal requirements and customer requests, we use PDCA cycles as we work to ensure and improve product safety and quality at each stage of our business activities, from planning and product development to production and sales. Moving forward with continual improvement is a policy we pursue in our manufacturing operations in order to elevate the quality of the products and services we provide.

Product Safety and Quality Control in the Domestic Manufacturing Operation of Wood Building Materials

Basic Policy for Product Safety and Quality Control

Sumitomo Forestry Crest Co., Ltd. has established a quality policy based on ISO 9001 as described below. Each plant and division has formulated specific quality targets and action plans in line with our quality policy, and is committed to maintaining safety and improving quality.

Operating in keeping with the 2015 version of the ISO 9001 quality management system, we strive to elevate quality and service by reinforcing its integration with our actual business operations.

Sumitomo Forestry Crest Co., Ltd.'s Quality Policy

1. Provide products that always give first priority to customer satisfaction, from product development and manufacture, to distribution and post-construction follow-up.
2. Cooperate with internal and external partners, understand appropriate costs, and manufacture in a way that ensures safety, performance and quality.
3. Establish quality targets, and develop systems that allow all employees to make continual improvements.

Framework for Product Safety and Quality Control

Since October 2010, Sumitomo Forestry Crest Co., Ltd. has been operating with integrated ISO 9001 at its plants nationwide. Having developed a framework for quality control based on the quality policy as well as a strict framework for process control, the company manufactures products of high quality. Furthermore, by utilizing a quality information management system, the company endeavors to reflect customer feedback and demands at production sites.

Internal audits are also carried out twice a year at all plants for the purpose of following the PDCA cycle for the quality management system established under ISO 9001. In order to ensure product safety, we have put in place a system in which any key information on a product defect can be communicated by the person in charge through an emergency contact network to the company president within two hours of obtaining the information.
Promotion of Quality Improvement Activities Based on Company-Wide Targets

Sumitomo Forestry Crest Co., Ltd. has set quality targets at each plant and division, and is promoting quality improvement activities.

During fiscal 2018, it strived to enhance and maintain quality control systems at manufacturing locations as well as at business partners' plants.

These management control systems will be maintained in fiscal 2019 as continual improvements are also made, including measures to help prevent human error through standardization of procedures, revision of logs, work operation standardization and QC process chart compliance.

Sumitomo Forestry Launches Full-Scale Sales of Light, Low-Cost and Attractively-Designed Wooden Fire-Prevention Door Using Balsa

Sumitomo Forestry Co., Ltd. launched in May 2015 full-scale sales of original wooden fire-prevention doors, made from “balsa” known as the lightest timber in the world, which are lighter, less-expensive and more attractively-designed than existing products. The product was developed to meet the needs of wooden fire-prevention doors in three- and four-story buildings in urban areas, and in constructions for mixed use such as medical facilities with adjacent accommodation. The doors are also environmentally-friendly products, with the raw material balsa being sourced from plantation timber raised from saplings and processed by a Group company, PT. Kutai Timber Indonesia (KTI).
Three-Company Technical Study Session on Particle Board

In 2018, three particle board companies, KTI and RPI of Indonesia and VECO of Vietnam, began holding study conferences aimed at mutually elevating their levels of particle board manufacturing technology, while improving quality. While the effort is similar to those conducted in the past, leadership by national staff is leading to greater awareness among all companies.

Basic Policy and Framework for Safety and Quality Control

Group companies engaged in the manufacture of wood building materials overseas have acquired quality certifications such as ISO 9001, Japanese Industrial Standards (JIS) and Japanese Agricultural Standards (JAS). In line with the requirements of these certifications, each company has established policies and standards for quality control, and through education and training, strives to ensure that its employees understand them well. Furthermore, each company is making ongoing improvements to quality control management systems by means of annual certification audits through external organizations as well as periodic internal audits.

The quality standards of every company are being further improved to provide greater safety by focusing on communication and feedback from users about product safety and quality, especially in the production of products for Japan which demands the utmost safety and quality.

Quality Management

Updating to ISO9001:2015

Six consolidated companies have completed their update to ISO9001:2015: Nelson Pine Industries (NPIL), Kutai Timber Indonesia (KTI), Rimba Partikel Indonesia (RPI), AST Indonesia (ASTI), Canyon Creek Cabinet (CCC), and Vina Eco Board (VECO).

Under the new quality management system, we will move forward with even greater continual improvement, maintaining and increasing the safety and quality of our products.

Three-Company Technical Study Session on Particle Board

In 2018, three particle board companies, KTI and RPI of Indonesia and VECO of Vietnam, began holding study conferences aimed at mutually elevating their levels of particle board manufacturing technology, while improving quality. While the effort is similar to those conducted in the past, leadership by national staff is leading to greater awareness among all companies.
Occupational Health and Safety

Occupational Health and Safety Initiatives

Initiatives in Japan

Basic policy of Sumitomo Forestry Crest Co., Ltd. is to move “from zero accidents to zero danger.” Its goal is to achieve zero occupational injuries by nipping danger in the bud. To achieve this, Sumitomo Forestry Crest began operating an Occupational Health and Safety Management System (OHSMS) in July 2012, and acquired OHSAS 18001 certification in February 2013. Through repeating the PDCA management cycle with near-miss incident reports submitted voluntarily by employees (643 reports by 505 employees in fiscal 2018), and sharing opinions through small-circle activities at each workplace (held weekly), efforts are being made to reduce risks while engaging in production. In addition, with OHSAS 18001 set to migrate to ISO 45001 in March 2021, we plan to migrate systems in fiscal 2019.

There was one occupational injury in fiscal 2018. Measures to prevent recurrence have been established by reviewing procedures and equipment based on inspections and factor analysis.

Number of Occupational Injuries in the Manufacture of Wood Building Materials in Japan

<table>
<thead>
<tr>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

* The number of work-related accidents resulting in payment of compensation benefits for absence from work in accordance with the Industrial Accident Compensation Insurance Act is disclosed.

Safety Patrols and Risk Assessments

Each plant of Sumitomo Forestry Crest regularly conducts safety patrols at the workplace. Any sign of danger discovered in these patrols is immediately addressed with safety measures to prevent that risk from being realized. Furthermore, Sumitomo Forestry Crest is committed to ensuring the safety of its workplaces, responding from the following three perspectives by identifying operations and facilities at risk, such as of workers getting caught in or between machinery.

1. Reduce the frequency with which sources of danger are approached (keep people away, use of protective equipment etc.)
2. Reduce the likelihood of accidents (covers, auto-shut off, etc.)
3. Reduce the severity of injuries (protective gear, lower speeds, etc.)
### Overseas Initiatives

We are proactively moving forward with risk assessment (recognizing unsafe conditions at facilities) and danger prediction training (not having workers engage in unsafe actions, increased sensitivity to unsafe conditions) at overseas manufacturers*, particularly in Indonesia. We also implemented safety promotion procedures at other preceding group companies in our efforts to ensure workplace safety.

* Six consolidated group companies: Nelson Pine Industries (NPIL), Kutai Timber Indonesia (KTI), AST Indonesia (ASTI), Sinar Rimba Pasifik (SRP), Canyon Creek Cabinet (CCC), and Vina Eco Board (VECO).

### Number of Occupational Injuries in the Manufacture of Wood Building Materials in Overseas

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
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<tr>
<td>Count</td>
<td>6</td>
<td>18</td>
<td>16</td>
<td>23</td>
<td>11</td>
</tr>
</tbody>
</table>

* Indicates the number of injuries eligible for compensation benefits for a temporary absence from work under the Industrial Accident Compensation Insurance Act of Japan.
Forest Management

Value Chain of Forest Management

Sumitomo Forestry Group was the first to modernize seedling production considering a decline in producers and other concerns. We are contributing to the sustainability of forest resources and active resource production through efforts such as the construction of greenhouse-type cultivation facilities with proper environmental management using proprietary production technology for seedling containers.

We have put in place a system able to produce 1.6 million seedlings annually throughout Japan as of fiscal 2018.

We also engage in tree cultivation under the concept of “the right tree in the right place,” with consideration of soil conditions at a given plantation, orientation and geography, etc.

Relevant Social Issues

In addition to resource recycling and other environmental issues, we have taken the first step toward sustainable forest management. These steps are related to solving broad social challenges such as regional revitalization with the establishment of seedbeds, in addition to resource recycling and other environmental challenges.

Relevant CSR Initiatives

- Sustainable Forest Management
- Protecting and Utilizing Domestic Forest Resources
The Sumitomo Forestry Group manages a total of approximately 48,000 hectares of company-owned forests in Japan and a total of around 230,000 hectares of company-owned plantation forest area overseas.

The Group works to maintain and enhance the public functions of forests by carrying out underbrush clearing, pruning, thinning and other appropriate management required for them to grow.

**Relevant Social Issues**

Forests are managed in a way that allows the diverse needs for timber to be lastingly satisfied by maintaining a healthy ecosystem throughout the forest while receiving the benefit of the timber it provides. Within Japan, this management not only contributes to revitalizing the forestry industry, but also to addressing both economic and environmental challenges, such as climate change measures and biodiversity conservation.

**Relevant CSR Initiatives**

- Protecting and Utilizing Domestic Forest Resources
- Forest Management Overseas
- Consulting Business
- Reforestation Activities Contributing to the Society
The Sumitomo Group logs in forests it owns or manages based on long-term logging plans.

Forest operations include appropriate thinning, which helps to preserve and increase forest resources, while taking into consideration the surrounding environment including the ecosystem. The Group aims for highly productive management of its forests based on operational plans that follow the principle of performing the appropriate management for the appropriate tree species on the suited land. The timber that is harvested is transported to business partners and plants. The Sumitomo Forestry Group furthers mechanization of transport operations and supports the use of domestic timber through the reduction of costs.

**Relevant Social Issues**

Sumitomo Forestry Group realizes sustainable forest management through long-term planned harvesting to address a variety of social challenges, including resource recycling and response to climate change as well as the conservation of biodiversity.

In addition, ensuring the safety of every worker is an important issue when harvesting trees. Sumitomo Forestry Group pays close attention to the occupational health and safety of every employee who is working for the Group, including business partners.

**Relevant CSR Initiatives**

- Sustainable Forest Management
- Occupational Health and Safety in the Forestry Business

The Sumitomo Forestry Group prepares plantations that have been harvested to build an environment allowing subsequent planting.

**Relevant Social Issues**

The Sumitomo Forestry Group always recognizes sustainability from an environmental perspective in a cycle that starts with planting, cultivation, harvest, use, and back to planting. We strive to address social challenges such as use of Japanese timber and forest revitalization.
Forests perform a variety of functions for the public good, such as storing and purifying water, preventing floods and landslides, and absorbing and retaining CO$_2$, which is linked to global warming, preserving biodiversity, production of timber, and recreation.

On a basis of appropriate management, the Sumitomo Forestry Group advances sustainable forest management both in Japan and overseas to ensure that timber resources will be available in perpetuity while preserving the public functions of forests.

In the domestic forestry business, production in company-owned forests is aimed at realizing profitable forestry together with ensuring legality with due consideration for biodiversity and unique local cultures. By practicing sustainable forest management, we have obtained and maintain certification of 100% of certifiable forests.

We operate under the following philosophy when obtaining new forests in our overseas forestry business.

1. To build good relationships with surrounding villages and local communities.
2. The major presumption is that HCVA$^{*1}$, HCSA$^{*2}$ and FPIC$^{*3}$ are to be implemented. It is also possible to eliminate environmental risk, and there must be no identified past environmental problems.
3. FSC®-FM certification must be obtained (FSC-CW and PEFC certification are also desirable).

(FSC-C113957)

$^{*1}$ High Conservation Value Assessment: inspection and assessment to establish conservation policies for areas specified as having high conservation value, such as rare flora and fauna habitat.

$^{*2}$ High Carbon Shock Assessment: inspection and assessment to specify and restrict development in areas with high carbon absorption volumes so that the volume of carbon retained by forests does not decline when forest land is converted to other uses.

$^{*3}$ Free Prior Informed Consent: Prior sharing of information and consensus formation with indigenous people and others in cases where there is likelihood that operations could impact the lands, territories or resources of indigenous people.
Area of Forest Managed and Owned in Fiscal 2018

**Total area:**
Approximately 277,000 ha

- **Japan**
  Approximately 48,000 ha

- **Indonesia**
  Approximately 162,000 ha

- **Papua New Guinea**
  Approximately 31,000 ha

- **New Zealand**
  Approximately 36,000 ha

Niihama Forest

New Zealand Forests
Promoting Certification of Forests

In upstream forest management, middlestream timber distribution and downstream construction of wooden houses, the Sumitomo Forestry Group promotes the acquisition of FSC forest certification as well as PEFC forest certification and the mutually authenticable SGEC forest certification both domestically and abroad.

### Status of Forest Certification

<table>
<thead>
<tr>
<th>Uncertified forest*: 56,000 ha</th>
<th>24%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestically certified forest: 48,000 ha</td>
<td>100%</td>
</tr>
<tr>
<td>Overseas certified forest: 173,000 ha</td>
<td>76%</td>
</tr>
</tbody>
</table>

### Status of Sumitomo Forestry Group Forest Certification/FM Certification*1

<table>
<thead>
<tr>
<th>Certified Forests (Company)</th>
<th>Certified Area (ha)</th>
<th>Certification System</th>
<th>Date Certified</th>
<th>Certification Number</th>
<th>Certification Issuing Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests Owned by Sumitomo Forestry</td>
<td>47,746</td>
<td>SGEC</td>
<td>September 25, 2006</td>
<td>JAFTA-010</td>
<td>Japan Forest Technology Association (JAFTA)</td>
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<tr>
<td>Open Bay Timber Ltd. (OBT) (Papua New Guinea)</td>
<td>12,854</td>
<td>FSC®</td>
<td>December 5, 2018</td>
<td>NC-FM/COC-005600</td>
<td>NEP Con</td>
</tr>
<tr>
<td></td>
<td>7,066</td>
<td>FSC®</td>
<td>December 5, 2018</td>
<td>NC-CW/FM-003093</td>
<td>NEP Con</td>
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<tr>
<td>OBT Total</td>
<td>19,920</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT. Wana Subur Lestari (WSL) (Indonesia)</td>
<td>40,750</td>
<td>PHPL*2</td>
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<td>LPPHPL-006-IDN</td>
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<td>Koperasi Serba Usaha Alas Mandiri KTI (KAM KTI) (Indonesia)</td>
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<td>FSC®</td>
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<td>SA-FM/COC-002083</td>
<td>Woodmark</td>
</tr>
</tbody>
</table>

* Uncertified forest includes social forestry and other plantation area

*1 Sumitomo Forestry Group Sustainability Report 2019
Certified Forests (Company) | Certified Area (ha) | Certification System | Date Certified | Certification Number | Certification Issuing Body
---|---|---|---|---|---
Koperasi Bromo Mandiri KTI (KBM KTI) (Indonesia) | 460 | FSC® | January 4, 2017 | SA-FM/COC-005493 | Woodmark
Tasman Pine Forests Ltd. (TPF) (New Zealand) | 36,200 | FSC® | September 7, 2016 | SGS-FM/COC-010806 | SGS South Africa (Pty) Ltd

*1 Forest Management (FM) certification authenticates sustainable forest management by having a third-party inspect based on objective indicators with focus on: (1) compliance with laws and system frameworks, (2) forest ecosystem and biodiversity maintenance and conservation, (3) respect for rights of indigenous people and local communities, and (4) maintenance and enhancement of forest productivity.

*2 Pengelolaan Hutan Produksi Lestari (PHPL) is an Indonesian certification of sustainable production forest maintenance.

**Seedling Farming and Cultivation: a First Step Toward Sustainable Forest Management**

Securing superior seedlings is a crucial first step toward sustainable forest management. Stable production of superior seedlings enables appropriate forest establishment. Sumitomo Forestry was the first to modernize seedling production. We are contributing to the sustainability of forest resources and active resource production through efforts such as the construction of greenhouse-type cultivation facilities with proper environmental management. With the opening of a new facility in Midori City, Gunma Prefecture in fiscal 2018, we have established a system capable of cultivating 1.6 million seedlings a year with five locations throughout Japan. Also, in overseas plantation forest operations, we practice sustainable forest management, producing our own seedlings for planting, cultivation, logging and replanting.

**Cultivation: Preserving the Public Functions of Forests Through Appropriate Management**

The Sumitomo Forestry Group manages a total of approximately 48,000 hectares of company-owned forests in Japan and a total of around 230,000 hectares of company-owned plantation forest area overseas. The Group works to maintain and enhance the public functions of these forests by carrying out underbrush clearing, pruning, thinning and other appropriate management required for them to grow.

Carbon stocks* of forests in Japan owned by Sumitomo Forestry Group at the end of fiscal 2018 were 13.1 million t-CO$_2$ (+40,000 t-CO$_2$ from the previous year). Carbon stocks at overseas plantation forests were 7.38 million t-CO$_2$ (-450,000 t-CO$_2$).

* The amount of CO$_2$ absorbed by forests and stored as carbon. Calculated using a formula that multiply volume density, carbon content, and other coefficients set per type of tree against the accumulated amount in the forest. Furthermore, if there is a purchase of large forest during this period, they are omitted as its increase of accumulated amount within the last year cannot be identified. Natural trees and planted trees are within the scope in Japan but only planted tree are included for overseas.
Carbon Stock of Forests in Japan and Overseas

The Sumitomo Forestry Group logged approximately 70,000 m³ of trees in Japan and approximately 930,000 m³ of trees overseas in fiscal 2018 in forests it owns or manages based on long-term logging plans. Harvested trees are milled and processed before finally reaching the market as products such as housing and furniture. In the case of timber turned into structural members for housing, the products are used for several decades. Even after being dismantled or at the end of their product life, wooden construction and timber products can be reused as fiberboard or other wood materials in construction or as raw material for making paper, and all that time it will continue to retain CO₂. The CO₂ released when timber is ultimately burned as a wood fuel is what has been absorbed from the atmosphere as trees grow, and therefore it does not represent an increase in CO₂ in the atmosphere over the life cycle of the tree.

Logging and Transport: Supplying Timber Products Through Systematic Logging

The Sumitomo Forestry Group logged approximately 70,000 m³ of trees in Japan and approximately 930,000 m³ of trees overseas in fiscal 2018 in forests it owns or manages based on long-term logging plans. Harvested trees are milled and processed before finally reaching the market as products such as housing and furniture. In the case of timber turned into structural members for housing, the products are used for several decades. Even after being dismantled or at the end of their product life, wooden construction and timber products can be reused as fiberboard or other wood materials in construction or as raw material for making paper, and all that time it will continue to retain CO₂. The CO₂ released when timber is ultimately burned as a wood fuel is what has been absorbed from the atmosphere as trees grow, and therefore it does not represent an increase in CO₂ in the atmosphere over the life cycle of the tree.

Site Preparation and Planting: Preparing for the Next Cycle

Harvesting and using timber alone will lead to a diminishing of forest resources. The Sumitomo Forestry Group therefore promotes sustainable forest management by always planting new trees after harvesting.

In fiscal 2018, we planted forests on 139 ha in Japan, and on 5,829 ha overseas. The newly planted trees will absorb CO₂ during their growth and retain it as carbon.
In recent years, the degradation across Japan of artificial forest plantations of cedar, Japanese cypress and other species has resulted in the alarming loss of the multifaceted functions of forests, such as water source recharge. The reasons for this devastation include the stagnation of timber value and worsening profitability as well as the inability for proper thinning or other management of the forests. In order to prevent further devastation of forests by revitalizing the forestry industry, the government of Japan has set a goal of raising Japan’s timber self-sufficiency rate to roughly 50% by 2025.

**Breakdown of Company-Owned Forests**

The Sumitomo Forestry Group owns a total of approximately 48,000 hectares (about 1/800 of the national land area) of forest land area. Company-owned forests are categorized as either “commercial forests,” where the production of timber is the priority, or “environmental forests,” where conservation of the environment is the focus.

Sumitomo Forestry acquired a forestry certification from Japan’s Sustainable Green Ecosystem Council (SGEC) for all company-owned forests in 2006 and third-party evaluations have confirmed that the forests are being properly managed, including with regard to measures to conserve biodiversity. New forest purchases after the acquisition of the forest certification have each been under evaluation for certification and our certification rate is 100%.

Forest operations include appropriate thinning, which helps to preserve and increase forest resources, while taking into consideration the surrounding environment including the ecosystem. Sumitomo Forestry also aims for highly productive management of its forests based on operational plans that follow the principle of performing the appropriate management for the appropriate tree species on the suited land.
Japan’s own forestry certification system through which forest management is verified as sustainable by third parties. Certification is based on seven criteria that include the preservation of biodiversity and the conservation and maintenance of soil and water resources. Due to the June 2016 approval of mutual recognition of the PEFC international forest certification system, international recognition has increased.

The forests owned by Sumitomo Forestry exclude the lands leased to Kawanokita Development Co., Ltd., which is a Group company responsible for operating a golf course. Newly purchased forests are excluded because they underwent expanded inspections during the subsequent fiscal year.

The programme for the Endorsement of Forest Certification Schemes is an international NGO that mutually authenticates certification standards created in each country and region as criteria to be shared internationally. Forest certification systems in 49 countries have joined PEFC of which 44 have been mutually recognized as forest certification systems.

**Distribution and Area of Company-Owned Forests (as of March 31, 2019)**

- **Hokkaido**: 18,200 ha (74%)
  - Plantations: 20%
  - Natural forest: 7%
  - Other: 7%
- **Kyushu**: 9,200 ha (22%)
  - Plantations: 69%
  - Natural forest: 9%
  - Other: 12%
- **Honshu**: 5,900 ha (15%)
  - Plantations: 34%
  - Natural forest: 5%
  - Other: 57%
- **Shikoku**: 14,700 ha (23%)
  - Plantations: 62%
  - Natural forest: 6%
  - Other: 32%

Total area of Company-owned forests approximately 48,800 ha (around 1/800 of Japan’s land area)
Seedling Production for Regional Revitalization

Increasing number of municipalities are working to foster forest resources that are not yet effectively utilized as one part of regional revitalization measures. Areas of clear cutting is expected to increase in the future as the harvesting period approaches for cedar and Japanese cypress planted after World War II, and a stable supply of seedlings is desired for reforestation. However, due to circumstances such as a lower number of producers, it is expected that the resources will be insufficient.

Sumitomo Forestry was the first to modernize seedling production. We are contributing to the sustainability of forest resources and active resource production through efforts such as the construction of greenhouse-type cultivation facilities with proper environmental management using proprietary production technology for seedling containers.

More specifically, starting from the development of an environmental control greenhouse facility in Hyuga City, Miyazaki in 2012, we established the know-how for production in Mombetsu City, Hokkaido as well. The production per unit of area significantly increased by controlling the temperature and humidity and allowing cultivation throughout the year compared to conventionally raising seedlings in the open. We opened greenhouse facilities in Gero City, Gifu Prefecture in fiscal 2016, in Motoyama City, Kochi Prefecture in May 2017, and in Midori City, Gunma Prefecture in fiscal 2018 to establish a system capable of cultivating 1.6 million seedlings a year throughout Japan.

We are also linking to local municipalities to contribute to the revitalization of the region by establishing greenhouses with local employment as well as the development and standardization of new technology related to seedling cultivation in addition to as well.

Cultivating Sumitomo Forestry Seedlings Throughout Japan

- **Hyuga City, Miyazaki**
  - Greenhouse No. 1: 915m²
  - Outdoor No. 1: 845m²
  - Japanese cedar (cutting): 800 thousand trees

- **Mombetsu City, Hokkaido**
  - Greenhouse No. 1: 363m²
  - Greenhouse No. 2: 462m²
  - Japanese larch, etc. (seedling)
  - Clean larch (cutting): 100 thousand trees

- **Motoyama, Kochi**
  - Greenhouse: 1,575m²
  - Outdoor: 1,071m²
  - Japanese cedar (seedling), Japanese cypress (seedling)
  - 200 thousand trees

- **Gero, Gifu**
  - Greenhouse: 1,056m²
  - Outdoor: 912m²
  - Japanese cedar (seedling), Japanese cypress (seedling), and Japanese larch (seedling)
  - 400 thousand trees

- **Midori City, Gunma Prefecture**
  - Greenhouse: 936m²
  - Outdoor: 1,071m²
  - Japanese larch, Japanese cedar
  - 100 thousand trees

**Total: 1,600 thousand trees**
Efforts in Fast-Growing Trees

Sumitomo Forestry has begun efforts in fast-growing tree forests that are gaining more attention in recent years. Fast-growing trees are trees such as Chinese fir, chinaberry, willow and white birch that grow quickly and allow harvests in a short cutting cycle compared to Japanese cedar or Japanese cypress.

The Hyuga Forestry Office is conducting a test harvest of Chinese fir in the Hitoyoshi company-owned forest in Kumamoto prefecture. This test monitors aspects that include the reduction in weeding and tolerance against elements like wild animals through growth surveys and other research to examine the potential as a new tree species for garden vegetation.

In addition, Sumitomo forestry is also advancing the implementation of plans for test harvesting these fast-growing trees with the Forest and Landscape Research Center.

Launch of FRD Forestry Roadway Design Support System

Forests in Japan often have insufficient roads or strip roads in place which prevent smooth management of forests and transport of the timber that is harvested. Currently, when constructing roads or strip roads in forests, lines are drawn by hand over a paper topographical map before visiting the site to see if that plan for the road network can be executed as is. This process of examination is usually done over and over again. The work to create these line drawn plans as well as check and verify the site rely heavily on individual intuition and experience as well as cost a vast amount of time and labor.

This software takes advantage of precise topographical data obtained from aerial laser and other measurements to design forestry road networks such as forest roads and strip roads. The main feature is a function for automatic design able to automatically create the line drawings by inputting the site of departure and destination in the operation screen. This feature creates low-cost line drawn plans based on parameters, including requirements such as longitudinal slope and the curvature radius, width, and operation costs specified in advance. In addition, the software packs more features than necessary for the job, such as allowing the design of safety lines that reflect areas which should be avoided due to potential collapse and other circumstances when creating a plan. The on-site exploration of the line drawn plans for roadways designed in the software offers efficient on-site verification.
Spearheading Forest Revitalization and Developing Power Assist Suits for the Forestry Industry

Sumitomo Forestry exhibited the TABITO-03 prototype at the International Robot Exhibition 2017 to demonstrate the first power assist suit for the forestry industry able to reduce physical labor by 17%. In fiscal 2018, we tested the improved TABITO-04, featuring improvements making it easier to put on and take off, as well as more effective functionality. This consortium is comprised of the Forest Research and Management Organization, ATOUN Inc. and the Nara Institute of Science and Technology. Development is moving forward with the aim of practical application by 2025.

The power assist suit for forestry work now under development can reduce manual labor done by forestry workers by 17%. This is the first time a reduction in the physical load has been broken down into data in the forestry industry. The load on the shoulders and feet of works can also be reduced by wearing this assist suit when carrying heavy seedling packs and planting tools for several dozen kilometers. Forestry workers make their way to worksites by climbing up sudden slopes on mountain routes that zig-zag through the landscape when working in steep mountain forests. Practical applications of the power assist suit for the forestry industry would dramatically improve work efficiency in the shortest climbs and descents without worry of exhaustion.
As national governments throughout Southeast Asia strengthen their promotion of natural forest conservation, they are implementing restrictions on harvesting and exports, among other measures that reduce the supply of natural wood. In addition, as momentum toward SDGs and sustainable development increases, it has become necessary to convert to timber obtained through forest plantation and certified forest management practices that ensure both environmental consciousness and stable supply. The Sumitomo Forestry Group implements forest plantation operations that take local communities and ecosystems into consideration to enable a stable and sustained timber supply while helping to reduce the impact on natural forests.

**Overseas Plantation Area (Unit: ha)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of Plantation Business</th>
<th>Managed Area</th>
<th>Plantation Area for Social Forestry</th>
<th>Planted Area in FY2018</th>
<th>Logged Area in FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>PT. Mayangkara Tanaman Industri</td>
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<td>2,558</td>
<td>2,991</td>
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<td>PT. Wana Subur Lestari</td>
<td>40,750</td>
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<td>2,134</td>
<td>2,392</td>
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<td></td>
<td>PT. Kutai Timber Indonesia (KTI)</td>
<td>4,400</td>
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<td></td>
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<td>PT. Rimba Partikel Indonesia (RPI)*1</td>
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<td>637</td>
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<td></td>
<td>Other*2</td>
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</tr>
<tr>
<td>Papua New Guinea</td>
<td>Open Bay Timber Ltd. (OBT)</td>
<td>31,260</td>
<td>0</td>
<td>469</td>
<td>113</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Tasman Pine Forests Ltd. (TPF)*3</td>
<td>36,360</td>
<td>0</td>
<td>668</td>
<td>753</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>217,434</td>
<td>11,879</td>
<td>5,829</td>
<td>6,249</td>
</tr>
</tbody>
</table>

* The land area is calculated by conversion from the number of seedlings distributed at RPI. Vegetation determined to have withered is included in the harvest.

* Others includes data of environmental reforestation for social contribution and consulting business for other companies

* Acquisition of the forest area managed by TPF was completed in June 2016.

Sumitomo Forestry Group Sustainability Report 2019
The Sumitomo Forestry Group is expanding three approaches to conducting plantation forest operations; industrial tree plantation, environmental reforestation, and social forestry. The purpose of industrial tree plantation is to produce wood and increase the supply of plantation timber (raw material). By zoning its managed land appropriately, the Group aims to achieve both the conservation of valuable ecosystems and the development of local communities through plantation forest operations.

In addition, the Group also conducts environmental reforestation, planting trees for environmental conservation. It aims to contribute to environmental conservation through the expansion of forested areas and the fulfillment of the ecosystem services function of forests, by actively planting trees on land where natural regeneration would otherwise be difficult. The Group has also been engaged in “social forestry” which shares the economic benefits of forest plantation with local communities while enlisting the cooperation of local residents.

**Plantation Forest Operations in West Kalimantan, Indonesia (Industrial Tree Plantation)**

Since 2010, under the license from Indonesian Ministry of Environment and Forestry permitting utilization of timber from commercial forests*, Sumitomo Forestry has been committed to a large-scale forest plantation business conducted in cooperation with the ALAS Kusuma Group, a company involved in forestry management and plywood manufacturing in Indonesia. The project covers areas in which forest degradation has advanced due to commercial harvesting from the 1960s to the mid 1990s in addition to repeated illegal logging and slash-and-burn farming practices. In these types of lands, Sumitomo Forestry Group actively uses devastated forests where productivity is not expected as plantation forests while taking on the responsibility of preserving forests with high conservation value. In addition, we believe it is important to prevent further degradation of forests by providing an economic infrastructure to local communities through businesses.

The Group aims to plant trees with appropriate management for each piece of land with consideration to different environmental factors such as topography and soil conditions in its plantation forest operations. Furthermore, we conduct research and monitoring based on the latest knowledge from third parties to continually improve our operations. The planting, cultivation and harvesting work done by human hands largely contribute to local communities by creating jobs.

* Issued by the Indonesian government, this is a business license to engage in industrial tree plantation operations in Indonesia. The license is valid for 60 to 100 years.
<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Signed a contract with International Finance Corporation (IFC)—member of the World Bank Group for the provision of advisory services. In accordance with the concept of High Conservation Values Forests (HCVF)* that draws great attention in recent years, Sumitomo Forestry conducted assessments on its operational properties with IFC and investigated whether the property use plan is implemented as stated and adequate consideration is made for biodiversity and livelihood of local residents. The reports of the investigation results were audited by a third-party organization, and valuable comments made by stakeholders on the report were adapted in the business plan.</td>
</tr>
<tr>
<td>2013</td>
<td>Held public hearings where stakeholders such as local residents, companies in the communities, academics, NGOs, and government officers were invited to share the results of the investigations. Obtained the PHPL certification, formally called Sertifikat Pengelolaan Hutan Produksi Lestari issued by Ministry of Forestry (Departemen Kehutanan) on sustainable forest management.</td>
</tr>
<tr>
<td>2015</td>
<td>Held public hearings with stakeholders prior to plantation forest harvest with the aim of deepening stakeholders’ understanding about our businesses and consideration to environment and social issues that we promote. This venue also actively pursued cooperation from our stakeholders to prevent forest fires. Participants not only shared a lot of positive feedback but also gave us comments fruitful in the formulation of our business plans.</td>
</tr>
<tr>
<td>2016</td>
<td>Advanced efforts with the Indonesian Ministry of Environment and Forestry to build a model for sustainable plantation forest operations and peat management methods in peatlands through our businesses and research activities. The Commissioner of Peat Land Recovery visited the local grounds to observe the peat management technology. Gained high praise for groundwater level control technology and the newest initiatives founded in data as well as introduced both in an international venue for government officials as beneficial examples for Indonesia.</td>
</tr>
<tr>
<td>2017</td>
<td>Entered into a Memorandum of Understanding (MOU) with the Indonesian Ministry of Environment and Forestry for a pilot project that aims to examine unique water level management technologies to sustainably manage peatlands and establish peatland management models in Indonesia. The term of this project is set for five years. The project is being conducted with the cooperation of the Ministry of the Environment and Forestry as well as the Peatland Restoration Agency. The peatland management technology from this project was introduced as an example of excellent, leading-edge peat management at the November 2017 United Nations Climate Change Conference (COP23) held in Bonn, Germany.</td>
</tr>
<tr>
<td>2018</td>
<td>In 2018, the Group formulated a grievance mechanism with the help of the IFC. Together with the University of Indonesia, we also conducted a social survey of operational and surrounding areas on a three-year plan. We reported on peatland management technology at the December 2018 United Nations Climate Change Conference (COP24) held in Poland.</td>
</tr>
</tbody>
</table>

* In considering the value of forests, it goes beyond their value as absorbers of greenhouse gases, outlining methods of extracting each one of the many aspects of value forests contain. These aspects include their value as habitats of rare, endangered animal species, as water resources, as providers of essential natural services such as soil erosion control, and as land that has an intimate relationship with the lifestyles and cultures of local communities.
Conservation of Peat Swamp Forests

Conventionally, reforestation in peatlands* pushed water out of the soil and dried the land by digging many drainage routes for planting. However, drying-out land results in the decomposition of organic matter in the peat soil and acts to heighten global warming due to the emission of greenhouse gases. Dried peat, once ignited, is very difficult to extinguish, creating the risk of large-scale forest fires. The soil needs to always be in a damp state to prevent fires, but this means maintaining a constant groundwater level throughout the year through proper water level management is extremely vital. Therefore, in drawing up a forestation plan, the Sumitomo Forestry conducts detailed measurements and surveys based on which the following areas are identified: (1) forests to be protected with riparian forest and high rarity value, (2) areas to set as buffer zones between protection zones and plantation zones, and finally (3) areas the final determination as plantation zones. In plantation zones, water routes that function as round log transport, water level control, and fire belts are constructed while allowing a constant water level in the peatlands to always be maintained without affecting the rivers by not directly connecting the water routes and the rivers. Maintaining a constant groundwater level not only prevents forest fires and minimizes the breakdown of peats but also limits the emission of greenhouse gases. These results have been announced at relevant government agencies, universities and other institutes and some aspects have even been adopted as new policy measures. In addition, we actively release technical abstracts as we work to spread technologies to reduce environmental impact. The technology we have developed also has the potential to be utilized in reforestation of areas devastated by large-scale fires.

* Characteristics of the peat soil found in the peat swamps is known to emit enormous amounts of greenhouse gases, typically carbon dioxide and methane gas, if the soil was inappropriately exploited. Owing to joint researches by Japanese and Indonesian academic institutes, this project takes consideration to minimize greenhouse gas emissions that accrue as the peaty soil dissolves during exploitations.
Landscape Management Overview

Monitoring by satellite

(3) Plantation zone
Management to prevent soil dehydration

(1) Riparian forest

(1) Protected forest

(2) Buffer zone
Buffer zone for gradually transitioning from protected forests to tree plantation zones, etc.

Road maintenance
Canal
In Japan, the Sumitomo Forestry Group manages approximately 48,000 hectares of company-owned forests. Contractors conduct planting, weeding, improvement cutting, thinning and clear cutting operations. For the purpose of preventing occupational injury to these contractors, the Group conducts safety patrols and holds Workplace Safety Conferences at each forestry office once every half year.

In fiscal 2018, there were 4 instances of occupational injury requiring payment of compensation benefits for absence from work in accordance with the Industrial Accident Compensation Insurance Act in Sumitomo Forestry-owned forests. As a result, with the contractors involved, response measures to prevent recurrence were discussed and agreed. Additionally, warnings were issued to other contractors through the Workplace Safety Conferences.

### Number of Occupational Injuries Involving Contractors at Forestry Work Sites in Company-Owned Forests

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

### Overseas Initiatives in Forestry

The Sumitomo Forestry Group manages a total of approximately 230,000 hectares of company-owned plantation forests overseas. As in company-owned forest, overseas plantation companies (Open Bay Timber Ltd., PT. Mayangkara Tanaman Industri, PT. Wana Subur Lestari and Tasman Pine Forests Ltd.) take thoroughgoing companywide safety measures and are thoroughly equipped to prevent occupational injury. Regular safety lectures are also provided.

### Number of Occupational Injuries Involving Contractors at Forestry Work Sites in Company-Owned Forests

<table>
<thead>
<tr>
<th></th>
<th>Open Bay Timber Ltd.</th>
<th>PT. Mayangkara Tanaman Industri PT. Wana Subur Lestari</th>
<th>Tasman Pine Forests Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
The Sumitomo Forestry Group in Japan has enhanced educational activities at its Workplace Safety Conferences, including occupational safety instructions using examples of common forestry accidents, as well as environmental education, lectures given by experts on such topics as emergency first aid, and on-site safety guidance. Furthermore, so as to prevent lack of concentration when performing dangerous work by becoming accustomed to the work, the Group conducts safety education repeatedly.

At the Workplace Safety Conferences held at various forestry offices in fiscal 2018, experts from the Forestry and Timber Manufacturing Safety & Health Association gave lectures on accident prevention measures based on analysis of causes of recent forestry occupational injuries, and on-site emergency training was also conducted.
Consulting Business

Domestic Case Example

Supporting Municipalities in Introducing Forestry ICT Platforms

While quantitative forest resources are analyzed through aerial surveys and forest resource data systems are prepared in some advancing areas, many of the forests in Japan do not have sufficient forest resource information. Sumitomo Forestry built the Forestry ICT Platform together with AS Locus Corporation as a measure to address this situation. The Forestry ICT Platform is a holistic system with a wide range of functionality related to advance forest resource information as well as forests and forestry that has been provided to municipalities throughout Japan and organizations in the forestry business since fiscal 2013. The key distinctive feature of this platform is that it is provided in regionally customized form, with a variety of forest and forestry-related data and functions optimized for local characteristics. We have supported 13 municipalities with the platform as of the end of fiscal 2018.

Supporting the Creation of a Forest and Forestry Master Plan for Itoshima City, Fukuoka Prefecture

Sumitomo Forestry is providing consulting in planning of forest management and forestry development conducted by local municipalities by taking advantage of its wealth of knowledge in forest management cultivated in company-owned forests over a long period of time. As part of these efforts, we supported the creation of a Forest and Forestry Master Plan in Itoshima City, Fukuoka Prefecture as an initiative to use local forest resource since January 2016.

This plan is the foundation for measures related to proper forest maintenance and effective use of city lumber in Itoshima, which is positioned as the basic plan under which businesses are to build supply chains for city use of timber that takes advantage of ICT promoted by Itoshima.

As methods to create this master plan, we are zoning areas that consider attributes such as the growth rate and accessibility of forests as well as the environmental conservation functions after grasping the amount of forest resources within the city limits through aerial laser measurement. Sumitomo Forestry formulated a harvesting plan and a plan for a transportation network that would be optimal to haul timber cultivated in the forest out by defining policies for conducting operations in the forest for each zone. Moreover, we also examined the systems to build to execute measures that follow this master plan.

Itoshima expects to achieve regional revitalization that utilizes the forest based on this Forest and Forestry Master Plan in the future.
Corporate needs for forest management are diverse. In recent years, a considerable number of companies have been conducting forest conservation and planting activities in developing countries to mitigate the impact on forests in overseas countries and regions where they engage in various business activities, and to otherwise fulfill their corporate social responsibilities.

Drawing on its knowledge of forest management in Japan and overseas, Sumitomo Forestry implements its consulting business for the restoration of degraded forests in tropical regions, the rehabilitation of biodiversity, and for the protection and cultivation of forests that takes into account local communities.
Mitsui Sumitomo Insurance Co., Ltd.'s Project for the Rehabilitation and Regeneration of the Paliyan Wildlife Sanctuary (Environmental Reforestation / Social Forestry)

Mitsui Sumitomo Insurance Co., Ltd. has been involved since 2005 in efforts to restore the devastated forests in the Paliyan Wildlife Sanctuary (Gunung Kidul Regency in the Special Region of Yogyakarta) in Indonesia. Sumitomo Forestry has provided associated consulting services.

During the first phase of activities to March 2011, around 300,000 trees were planted on 350 hectares of land. As second phase of activities since April 2011, with a goal of creating a framework for local people to voluntarily protect their abundant forest areas, Sumitomo Forestry has been providing support for an agricultural guidance program aimed at improving the livelihoods of local residents, the establishment of an inclusive organization to examine ways of managing protected forests, and an environmental education program in cooperation with local schools. As third phase of activities since April 2016, we have been supporting additional planting in areas with few trees in protected forests as well as social forestry through local communities around protected forests.

As part of this project, the Company has also opened the doors to its plantation forests, seminar house and other related facilities in a positive effort to make information on its experiences and know-how on forest restoration available to the public. These have been well attended by local elementary and middle school students, by Indonesian and foreign university students and experts in such fields as forestry, the environment and education, as well as by many government officials.

Technical Support (Citizen Participation Type Reforestation) Consulting Services Related to Indonesian Forestry Conservation Plans Through Environment Programs for Free Capital Assistance (Environmental Reforestation / Social Forestry)

The Japan International Cooperation System is working in citizen participation type reforestation in Manupeu Tanah Daru National Park in Indonesia (East Nusa Tenggara), Bromo Tengger Semeru National Park (East Java) and Ujung Kulon National Park (West Java) over five years starting in 2015. Sumitomo Forestry has been involved as a consultant in these activities. Reforestation was conducted in 2015 and fiscal 2016. In fiscal 2017, Sumitomo Forestry implemented fire prevention measures through maintenance such as cutting grass, patrols, and environmental education for citizens. The purpose of these operations is to teach forest management to local residents through joint plantation activities so that they will be able to continue managing forests after they have been returned.

Biodiversity Conservation in Company-Owned Forests in Japan and Plantation Forests Overseas
Reforestation Activities Contributing to the Society

Distribution of Free Seedlings and Buy Back Guarantee of Logs

Indonesian Group companies KTI and RPI distribute free tree seedlings to local communities guaranteeing that the companies will buy round logs as raw materials at the current market value once the seedlings grow into harvestable woods. In November 2015, KTI's aforementioned operations were recognized by the Indonesia Ministry of Environment and Forestry and awarded the Minister’s Prize for contributing to local communities by generating stable income while protecting communal societies as well as environments.

Number of Seedling Stocks Given to Indonesia

<table>
<thead>
<tr>
<th>Company</th>
<th>FY2018 results</th>
</tr>
</thead>
<tbody>
<tr>
<td>KTI</td>
<td>1,020,000 trees</td>
</tr>
<tr>
<td>RPI</td>
<td>220,000 trees</td>
</tr>
</tbody>
</table>

Promoting Certification of Forests Together With Local Communities

KTI organized KSU ALAS MANDIRI KTI (KAM KTI)*, which is a community plantation cooperative association. In 2008, KTI obtained the first FSC®-FM certificate for the 152-hectare plantation and has expanded its certification to 1,005 hectares in 2015. Koperasi Bromo Mandiri-KTI (KBM KTI)*, which is a second reforestation cooperative with the same certification, acquired a certificate for 206 hectares in January 2017. In 2018, the area expanded to 460 hectares and began extracting raw wood. The area of certified forest has reached a total of 1,465 hectares. These certified forests will strengthen the manufacture and sale of products with high environmental value based on a growing supply of certified timber materials.

* KAM KTI: FSC-C023796, KBM KTI: FSC-C133562

Sustainable Plantation Business by Leveraging Forestry Certification System

Of an approximately 30,000-hectare plantation owned and managed by OBT* of Papua New Guinea, about two-thirds, or 20,000 hectares, has received FSC® forest certification. Under the goal to plant on the 500-hectare land a year, OBT practices sustainable forest management that lays basis for communities and environment to function in harmony. The area planted in fiscal 2018 was 469 hectares.

Approximately 36,000 hectares managed by Tasman Pine Forests Ltd. (TPF) of New Zealand has been FSC®-FM certified*. In fiscal 2018, they planted approximately 668 hectares of forest, carrying out sustainable forest management in harmony with the local community and environment.

* OBT: CW certification FSC-C019117, FM certification FSC-C103694, TPF: FM certification FSC-C132002
Contributing to Reforestation in Collaboration with Governments

Since 2013, Sumitomo Forestry has teamed up with the Japan International Cooperation Agency (JICA) to engage in forest management activities with Dien Bien Province in Vietnam, including forest conservation and planting of deforested areas. Our comprehensive support has also included livelihood assistance to help reduce excessive dependency on forests. Among Vietnam's poorest areas, Dien Bien has suffered severe forest depletion due to practices by local residents such as expansion of farmland and burning of fields. Given its importance as the location of a hydroelectric generator dam and sources of water crucial for all of Vietnam, however, we assist with a portion of the support that JICA provides to the province, such as the formation of organizations to protect forests, conservation activities, forest planting, fruit tree and vegetable cultivation support, as well as helping to provide feed for fish and livestock. As of fiscal 2018, we had reforested a total of approximately 19.5 hectares in five locations.

In Dien Bien Province, where open livestock grazing has been the local custom, the resulting damage to planted tree seedlings has become an issue as it prevents them from taking root and growing. We are therefore promoting a forestation model that introduces the use of protective barriers. The seedling survival rate has increased compared to previous forestation models, thus confirming the effectiveness of the forestation model using protective barriers. The results have been acknowledged by the provincial Rural Agricultural Development Bureau, and received an award in October 2018.
The Sumitomo Forestry Group aims to further use scrap wood produced during construction and renovation of housings in urban areas and unused forest resource from forests as fuel for wood biomass power generation plants to promote renewable energy and enhance forest value.

In fiscal 2018, 394,000 tons of wood fuel was manufactured and procured to be supplied to fuel-burning electric power generation plants. Of that total, unused forest resource comprised 297,000 tons. We will continue to work on building up systems for the efficient, stable collection of unused forest resource.

Relevant Social Issues
We promote the use of construction debris and unused forest resource, generating fresh demand for timber at the procurement stage of the energy business, revitalizing the timber industry, which is a crucial issue for local businesses.

Relevant CSR Initiatives
▶ Procurement Initiatives

The energy business of the Sumitomo Forestry Group strives to recycle wood waste into wood resources through our business operations supplying chips as fuels including for biomass power generation plants. We make chips from waste wood such as offcuts produced in the logging process for timber as well as wood waste produced on construction sites, in addition to unused forest resource from plantations.

Relevant Social Issues
The Sumitomo Forestry Group strives to develop and standardize renewable green energy while expanding the applications for wood and increasing its asset value.

Relevant CSR Initiatives
▶ Procurement Initiatives
The Sumitomo Forestry Group is making progress in the generation of renewable energy and we aim to build a power generation system able to generate 300MW in the future.

The wood biomass power generation business at the core of these efforts is expanding our energy business by leveraging the characteristics and conditions of each area in four regions.

**Relevant Social Issues**

The theme of social challenges related to initiatives at the power generation and wholesale stage is an insufficient supply of sustainable energy services. The trend toward expansion of renewable energy is not only occurring in Japan but worldwide. However, many countries are still in the middle of trials for renewable energy.

Our Group strives to expand and standardize the renewable energy business.

**Relevant CSR Initiatives**

- Contributing to the Reduction of Greenhouse Gases Through the Renewable Energy Business
Unused wood resource is left-over woody biomass generated from logging or thinning of standing trees in forests. Wood biomass power generation plants are operating in each area and the demand for wood biomass is growing following the adoption of the FIT law (Feed-in Tariff for Renewable Energy). By using unused wood resource, we can expect an effective increase in the value of forests while also promoting renewable energy. In fiscal 2018, the Group used 297,000 tons of unused wood resource. We will continue to work on building up systems for the efficient, stable collection of unused forest resource.

### Effectively Extracting Unused Forest Resource for Mombetsu Biomass Power Plant

Mombetsu Forestry Office introduced Scandinavian harvesters and forwarders able to turn in small circles in 2015 to begin efforts to deliver log harvest/thinnings (unused forest resource) as biomass electric power generation plant fuels.

Moreover, by selecting forestry equipment with high-level driving performance in narrow forest areas, operators are able to execute all harvesting and transport operations while on the machine. We consider this is an initiative that improves safety and will play a role even in eliminating occupational injuries.

*1 Self-propelled high-performance forestry machine that brings together each operation to cut, de-limb, and vertically cross-cut* timber, which had traditionally been done with a chainsaw

*2 Self-propelled high-performance forestry machine that collects and feeds vertically cross-cut timber on a cargo bed

*3 To cut crude timber to a standard length
At the Mombetsu Biomass Power Plant, incinerator ash emitted by the biomass boiler is used to manufacture foundation fill material (product name “Rovander”) for forest roads. This environmentally-friendly product is aimed at building a cyclical operation in which the amount of waste is controlled, reducing environmental impact by helping maintain forests using a by-product of power generated with timber resources.

In addition, Rovander has been recognized as meeting environmental safety standards, and is a Hokkaido Government-certified Recycled Product.

Forests are approaching the cutting cycle throughout Japan while the challenge is the cycle of these forests from harvest through use and reforestation. Encouraging further use of forests from use of unused forest resource to other wood resources helps realize a sustainable society.

The Sumitomo Forestry Group leverages the wood procurement network throughout the entire Group. This led to a joint venture with the Electric Power Development Company to establish a manufacturing and sales company for wood pellets*1 in July 2018. The new company aims for use of unused forest resource from forests in Japan*2 as fuel for power generation in addition to examining the largest wood pellet supply system in Japan for the purpose of commercialization by 2021. Proper management of forests and a stable supply of domestic timber secure sources for sustainable wood resources.

Forests have a variety of public welfare benefits from the production of timber to the cultivation of groundwater, the prevention of sediment run-off and absorption of carbon dioxide. Through these efforts, Sumitomo Forestry and Electric Power Development Company promote domestic reforestation and regional revitalization as well as sustain and conserve the social welfare functions of forests by using unused forest resource as renewable energy.

*1 Wood ground, dried and compressed into a pellet form
*2 Unused woody biomass generated from logging or thinning of standing trees in forests

The system to recognize superior industrial waste disposal operators evaluates and certifies superior industrial waste disposal operators through the prefecture or city. In order to receive this recognition, the business must satisfy a full set of criteria including legal compliance, business transparency, efforts in environmental friendliness, and a healthy financial strength. The validity of certification in industrial waste disposal is extended from five to seven years by receiving recognition through this system.

At the Mombetsu Biomass Power Plant, incinerator ash emitted by the biomass boiler is used to manufacture foundation fill material (product name “Rovander”) for forest roads. This environmentally-friendly product is aimed at building a cyclical operation in which the amount of waste is controlled, reducing environmental impact by helping maintain forests using a by-product of power generated with timber resources.

In addition, Rovander has been recognized as meeting environmental safety standards, and is a Hokkaido Government-certified Recycled Product.
The Sumitomo Forestry Group is advancing renewable power generation by establishing solar power generation systems at model homes as a prerequisite for power use at companies in addition to its wood biomass power generation and solar power generation businesses. In fiscal 2018, the combined output of power generation that resulted from all of these efforts was 485,950,000kWh.

The Amount of Power Generation Shifted*1 to Renewable Energy

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**Basic Policy**

The Sumitomo Forestry Group is advancing renewable power generation by establishing solar power generation systems at model homes as a prerequisite for power use at companies in addition to its wood biomass power generation and solar power generation businesses. In fiscal 2018, the combined output of power generation that resulted from all of these efforts was 485,950,000kWh.

*1 Results are only for solar power generation in fiscal 2015

*2 The amount of electricity generated from wood biomass power generation covers only consolidated subsidiaries and includes the use of coal as an auxiliary fuel to ensure smooth operation and maintenance
Wood Biomass Power Generation Business

The Sumitomo Forestry Group operates wood biomass power generation facilities that are fueled by recycled chips primarily using leftover from construction as raw materials, wood not suitable as a building material, and thinning leftover in forests and other unused forest resource.

The CO₂ emitted by burning wood does not contribute to CO₂ in the atmosphere as part of the life cycle of the timber because the CO₂ in the atmosphere is absorbed through photosynthesis as the trees grow (concept of carbon neutrality). Therefore, the Group has been engaged in wood biomass power generation as a type of business that contributes greatly to the advancement of forestry, such as the effective use of wood, reductions in CO₂ emissions and the maintenance of local forest environments.

In February 2011, the Sumitomo Forestry Group entered this sector with the operation of the urban-oriented Kawasaki Biomass Power Generation Plant (generation capacity: 33 MW), which primarily uses scrap construction wood as fuel. Thereafter, full operations began at the Mombetsu Biomass Power Plant in December 2016 with a generation capacity of 50 MW, the Tomakomai Biomass Power Generation Plant in April 2017 with a generation capacity of 6.2 MW and the Hachinohe Biomass Power Generation Plant in April 2018 with a generation capacity of 12.4 MW. All of these plants generate power primarily from unused forest resource from Japan. Once the Kanda Biomass Power Generation Plant begins full operation in 2021, the Group will have a total power generation capacity of roughly 177 MW, which will supply electricity to approximately 387,000 households.

Drawing on past experience in the wood biomass power generation business, the Group will continue to expand renewable energy business operations suited to local conditions and other requirements, aiming to build a power generation system with a capacity of 300MW primarily generated from wood biomass.

<table>
<thead>
<tr>
<th>Business</th>
<th>Location</th>
<th>Power generation capacity</th>
<th>Start of operations</th>
<th>Main features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kawasaki Biomass Power Generation Business (Joint investment with Sumitomo Joint Electric Power Co., Ltd. and Fuluhashi EPO Corporation)</td>
<td>Kanagawa Prefecture Kawasaki City</td>
<td>33MW</td>
<td>February 2011</td>
<td>• Largest biomass power generation facility in Japan that primarily burns scrap wood as fuel • Utilizes recycled chips produced from construction debris and waste pallets from Tokyo and surrounding suburbs, as well as pruned branches • Equipped with environmental mechanisms, such as flue gas desulfurization equipment, an exhaust gas denitrizer and a bag filter, the urban-sourced biomass power generation plant clears Kawasaki City’s strict environmental standards</td>
</tr>
</tbody>
</table>
Sumitomo Forestry owns a solar power generation facility that generates 3,429 kW in Kashima City, Ibaraki Prefecture.

The Company gives consideration to mitigating the environmental impact of the power generation facility and expanding applications for the use of timber by installing some wooden mounting frames that are mainly made of domestically produced Japanese cedar.

### Business Location

<table>
<thead>
<tr>
<th>Business</th>
<th>Location</th>
<th>Power generation capacity</th>
<th>Start of operations</th>
<th>Main features</th>
</tr>
</thead>
</table>
| Mombetsu Biomass Power Generation Business    | Hokkaido Mombetsu City | 50MW                      | December 2016       | • Unused timber and forest material is primarily procured from within a 75km radius of the power plant and turned into chips at an adjacent plant before being used as fuel.  
• Palm kernel shell, plus some coal is also partially used as an auxiliary fuel |
| Tomakomai Biomass Power Generation Business   | Hokkaido Tomakomai City| 6.2MW                     | April 2017          | • All of the fuels are from unused forest resource in Hokkaido.               |
| Hachinohe Biomass Power Generation Business   | Aomori Prefecture Hachinohe City | 12.4MW                  | April 2018          | • Unused forest resource from forestlands in the Sanpachi-Kamikita-Shimokita region of Aomori Prefecture, timber offcuts, and railway forest thinnings from the nearby railway lines will be used as the main source of fuel  
• Some palm kernel shell will be used |
| Kanda Biomass Power Generation Business       | Fukuoka Prefecture Miyako District | 74.0MW                  | June, 2021          | • Fuel uses thinnings and unused forest resource from northern Kyushu in addition to American pellets and Indonesian palm kernel shell |

### Solar Power Generation Business

Sumitomo Forestry owns a solar power generation facility that generates 3,429 kW in Kashima City, Ibaraki Prefecture.

The Company gives consideration to mitigating the environmental impact of the power generation facility and expanding applications for the use of timber by installing some wooden mounting frames that are mainly made of domestically produced Japanese cedar.
Sumitomo Forestry provides long-term healthcare for the elderly through consolidated subsidiary Sumirin Fill Care Co., Ltd. (Chiyoda-ku, Tokyo; formerly Fillcare Co., Ltd.), which joined the Sumitomo Forestry Group in December 2007, and Sumirin Care Life Co., Ltd. (Nada-ku, Kobe; formerly Shinko Care Life Co., Ltd.), a consolidated subsidiary whose shares were acquired in April 2017.

In May 2018, Sumirin Fill Care opened Gran Forest Nerima-Takamatsu, its 16th private-pay elderly care facility, with nursing care and day-service. The facility brings to 768 the total number of living spaces provided by Sumirin Fill Care. During the three years since fiscal 2016, it has added 324 living spaces to the total by opening five private-pay elderly care facilities with nursing care within the 23 wards of metropolitan Tokyo and one facility in Kobe. The company is operating a total of three day-service center facilities.

Sumirin Care Life has begun construction on Elegano Nishinomiya, an elder residential facility with 309 living units and peripheral services, slated to begin operating in the spring of 2020. Elegano Nishinomiya will be a mixed-use facility combining the location of a Group-run long-term care insurance business. This will enable the facility to provide appropriate support based on care plans that accommodate a wide range of residents, from those living independently to those needing assisted living or nursing care. Construction began in June 2018, with a Senior Residence Gallery sales center opening in September that year, providing virtual-reality simulated model room experiences. Once Elegano Nishinomiya is completed, it will bring to 998 the total number of living spaces available in combination with the existing three facilities. The company also operates a total of eight Service Stations offering visiting nurse services, in-home nursing care and day-care facilities.

Efforts to Help Extend Healthy Lifespans from the Customer’s Perspective —Providing Visibility Using ICT, and Health Maintenance Programs with Specialist Support—

With the segment of the population requiring nursing care expected to increase drastically from 2025, when all members of the Baby Boom generation will have reached old age, attention is focusing on a wide range of efforts to help the elderly maintain activities for daily living (ADL) and extend their healthy lifestyles.
Sumirin Fill Care is adopting the ICT-equipped Life Rhythm Navi Plus Doctor resident monitoring system in private-pay elderly care facilities that have opened since fiscal 2016. The system analyzes data from numerous sensors such as bed sensors, motion-detection sensors, and temperature/humidity sensors. It provides a detailed real-time grasp of the interior environments of living spaces, as well as residents’ sleep states and activities, converting all of this information into data.

Bringing “visibility” to resident monitoring data in this way can be useful in preventing falls and in keeping up on the condition of each resident. Advice from specialized medical institutions based on the data makes it possible to effectively maintain and improve the medical condition of each patient. Also, implementing the system in conjunction with nurse-call functions enables unified management of information from residents, enhanced information sharing and collaboration among staff, which is expected to help reduce staff workloads.

A system using Sumirin Fill Care’s Life Rhythm Navi Plus Doctor won the highest honor in the Living of the Year 2017 prize contest (hosted by the Council of Senior Housing Industry Executives) for advanced systems using ICT. Beginning in fiscal 2019, Sumirin Fill Care plans to phase the system in at facilities where it has yet to be adopted.

In fiscal 2018, Sumirin Fill Care made still more progress with these types of systems, developing and making available the Forest Life daily health support service program.

Forest Life focuses attention on four elements that determine healthy lifespans: high-quality sleep, comfortable living environments (air quality), healthy diet (swallowing function\(^2\)) and appropriate exercise (walking function). This is a service aimed at extending the healthy lifespans of residents by using ICT technology to bring visibility to their status in terms of these four elements, in combination with guidance by doctors and rehabilitation specialists based on data that has been rendered “visible”.

In fiscal 2018, the system was adopted in a verification trial at Gran Forest Gakugei Daigaku, a private-pay elderly care facility operated by Sumirin Fill Care. On the basis of the trial results, the decision was made that its implementation would be phased in at other facilities beginning the subsequent fiscal year.

*1 Life Rhythm Navi is a registered trademark of EcoNaviSta Ltd.

*2 The function by which food in the mouth is transported to the stomach.

Providing Day-to-Day Peace of Mind and Vitality Through Links to Healthcare and a Varied Activity Program

Sumirin Care Life Co. currently operates three large-scale private-pay elderly care facilities in Kobe that combine independent living and nursing care services. Sumirin Care Life facilities have at least double the number of staff on duty as are specified under nursing care insurance standards, and nursing staff are on site 24 hours a day. All facilities also include conjoining clinics and partnerships with participating general hospitals as part of the high level of overall service provided. The quality of service has earned high praise from external institutions.

The Elegano Nishinomiya facility slated to open in spring 2020 will help each and every resident live full intellectual and individualistic day-to-day lives through a Senior College Program featuring diverse lectures in the arts, sciences, sports and other topics by guest speakers invited from outside based on residents’ requests. In addition to nursing care and nurse staff, as well as an adjoining clinic and partnerships with external medical institutions, staff sports instructors, certified nutritionists and care managers will work as a team to provide preventive medicine and support tailored to the circumstances of each resident. The system is aimed at further heightening the quality of service provided.