

# GREEN FOREST

Sumitomo Forestry Group News Letter

Vol. 29  
November  
2022



Introducing  
a Thai Company

## Grand Star Co., Ltd.

Website Link



### Business Outline and Message from Top Management

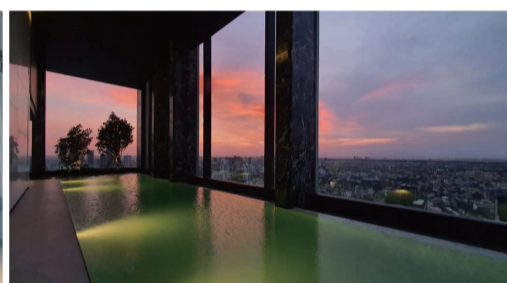
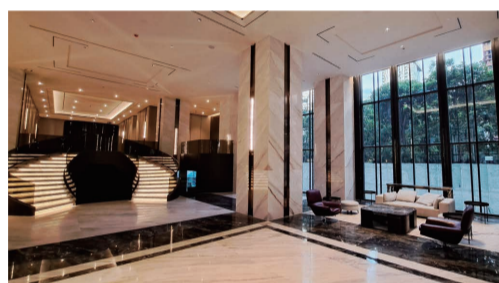
Mr. Vitavas Vibhagool  
Director of Grand Star Co., Ltd.

Grand Star Co., Ltd. (GS) is a joint venture company with Sumitomo Forestry, Property Perfect PCL (PF), and Grande Asset PCL (GA), established for developing and selling HYDE Heritage Thonglor, a 45-story luxury condominium in Thailand. HYDE Heritage Thonglor is Sumitomo Forestry's first high-rise condominium project in Thailand.

As one of the partner companies, Sumitomo Forestry provided design and greening proposals as well as supervision for construction, whereas PF, a major Thai developer and its subsidiary GA, supervised design and construction. The property

has many luxurious facilities, such as a sky pool on the 40th floor and two sky gardens. Also, we provide a luxurious experience equivalent to 5-star hotel services to all residents through concierge services and on-demand services. In addition, responding to the shift toward environmentally friendly practices, the project promotes clean energy through 30 EV chargers for residents. This helps to reduce greenhouse gas emissions. The HYDE Heritage Thonglor is located in the center of Bangkok, just a two minute walk from Thonglor station, in an area that is famous among wealthy people and expatriates.

The partnership between Sumitomo Forestry, one of the leading housing developers in Japan, and PF and GA, and long-standing expertise and commitment to high quality, provide a high satisfaction living space and environment to our customers. As a joint venture company, Sumitomo Forestry, PF, and GA are working together to promote sales for not only domestic customers but also for international investors. I am very proud of having developed HYDE Heritage Thonglor with Sumitomo Forestry.



Members of Grand Star

### Attraction of the Thai Housing and Real Estate Business

The population in Thailand is expected to grow until 2030, and strong demand is expected to continue. Along with the improvement of living standards, there are more people wanting higher quality housing. We feel that the opportunities have increased for the Sumitomo Forestry Group to offer the knowledge and technology it has cultivated domestically and overseas to Thailand.

### Message to the Sumitomo Forestry Group Employees

Despite the impact of COVID-19, we have held persistent discussions with our partners and found the best improvements and solutions for the times. Through this tenacity, we have completed the HYDE Heritage Thonglor, and will politely handle the property so that residents are satisfied until it is handed over. Moving forward, we will continue to grow closer to the Thai people and do business that brings them happiness.

## Construction Completion Ceremony

The Governor of Bangkok, the Japanese Ambassador to Thailand, and others came to the ceremony to celebrate its completion at the end of July. We celebrated with "Yosakoi," a Japanese traditional dance, and a Japanese drum performance.



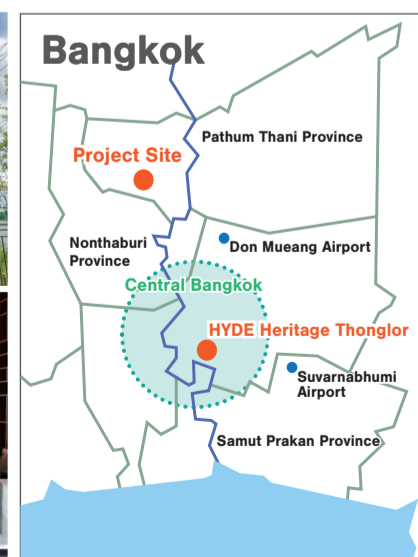
## Topics

Sumitomo Forestry has been developing another real-estate project with PF since 2019. The project is a low-rise house named "Lake Forest" in Pathum Thani Province, about a 1-hour drive to the center of Bangkok. Total units will be approximately 1,400 detached house and storefront townhouses.\* The project has a huge lake in the center surrounded with beautiful green plants. Residents can enjoy beautiful greenery while walking around lake-promenade.

\*Where the first floor is a store and the second and above are residences

We are proceeding with development by dividing the area of 1,400 units into five areas by property and price range. With this method, it is possible to offer demanded design and plans reflecting the market needs.

Sumitomo Forestry is proposing Japanese concept design for the project since Japanese designs are preferred in the Thailand market.



- Sales gallery: Combines wood materials to naturally match the green space around the gallery.
- Façade: Imaging "Kura," Japanese traditional warehouse. In addition to the façade design, we are now presenting a garden design. Its concepts come from a modern Japanese garden so that it corresponded to the Japan-like Façade.

Website Link  
(Thai language only)





## Sumitomo Forestry Group Laboratory

# Tsukuba Research Institute, a Research Site for the Science of Trees!

Since Tsukuba Research Institute, Sumitomo Forestry, was established in 1991, it has developed various technologies that form the foundation of each of Sumitomo Forestry Group's businesses.



New research building completed in 2019

The institute is the research and technology development department of Sumitomo Forestry Group and it takes on the challenge of meeting the expectations of our employees.

The institute consists of seven groups: the Administration Group and Planning Group, as the foundation for research activities; the Resources, Materials, Architecture, and Wood Innovation Groups, as researching groups; and the Housing Technology and Product

Development Center, which is in charge of research and development related to housing technology. We have a variety of research and development themes.

We have a network with researchers around the world, take on even challenges that we cannot solve on our own, and promote research and technology development in order to meet diverse needs. We will continue to create the "new value of trees" to achieve our long-term vision "Mission TREEING 2030." Please look forward to our future outcomes.



**Masakazu Takahashi**  
General Manager, Tsukuba Research Institute  
Sumitomo Forestry CO., LTD.

Joined Sumitomo Seika Chemicals CO., LTD. as a researcher in 1986, and then the Japan Overseas Cooperation Volunteers in 1996. After returning from the dispatch destination, Syria, worked at Sumitomo Chemical Co., Ltd. and assumed current position in April 2022.



## Introduction of the Research Fields

### Materials Group

We are conducting research and technology development that enhance the potentials of wood.

We have developed a water-resistant wooden board made from chips and fibers. In the Board Test Laboratory, we can prototype in a factory environment. In collaboration with overseas manufacturing bases, we conduct research and development aimed at improving board quality and productivity.

We create new value from wood, such as by developing highly weather-resistant wood coatings that can withstand outdoor exposure to wind, rain and sunlight, and by researching and developing bioplastics made from wood.



Board Test Laboratory

### Resources Group

Tissue culture technology regenerates heritage trees and precious trees. It is one of our core technologies.



Clone cherry blossoms bloom on the premises of the institute

We use the genomic selective breeding to select elite trees by the genetic information of trees, and will speed up the project to develop trees that grow quickly and have high strength.

We will achieve mass production of seedlings and more efficient tree planting through breeding and seedling raising technology.



We are developing greening technology suitable for rooftops, balconies, and walls of high-rise buildings. To adapt to the high-rise environment, we are verifying measures against water leakage and strong winds on the roof terrace of the new research building.



### Architecture Group

We develop construction methods for wooden buildings and components with fire and earthquake resistant performance. The Big-Frame Structure, which made rahmen structures possible in wooden houses for the first time in Japan, and the post-tensioning seismic technology, which enhances the fixation of structural connections. We have repeatedly verified them in full-scale tests and put them into practical use.



Fire resistant verification building for burning tests



Post-tensioning seismic technology is also used in the new research building and Sophia University Building No. 15 (P.3)

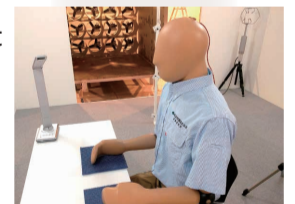


Development of a wooden buckling restraint brace that prevents buckling during earthquakes

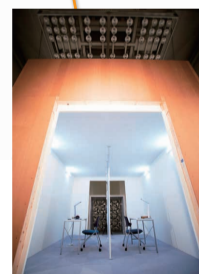
### Wood Innovation Group

We use brain science to quantify the impact of trees and greenery on human sensitivity. We are evaluating the value of trees and greenery that are implemented in offices and commercial facilities.

We use them to create spaces that contribute to improving intellectual productivity, promoting health, and reducing stress.



We verify the effects of the living environment on people from psychological and physiological perspectives. In our artificial climate room, various conditions such as light, wind, temperature, and humidity can be recreated to produce a winter environment in summer, for example.



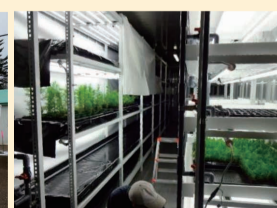
Mixed environment experiment room

### Housing Technology and Product Development Center

At the requests of business divisions, we provide technical support necessary for commercialization and quality improvement, such as material testing, structural testing, and performance verification. We also conduct tests for new materials that a certain division is considering dealing with.



Larch with autumn leaves



"Neo Planter," a container-type seedling-raising equipment used at the Forestry Office in Hokkaido



Four-story full-scale load test

### Surprising Episode of Tsukuba Research Institute

#### We are researching keeping larch winter buds from sleeping!

Larch trees are deciduous conifers, and in winter it slows down its tissue growth and goes into a state of dormancy to withstand the extreme cold climate. The Tsukuba Research Institute has developed a technology promotes germination and growth even in winter by controlling light, temperature, and humidity artificially in a container-type seedling-raising equipment. This allows larch seedlings to be shipped throughout the year.





Exterior

## Sophia University Building No.15 Completed

Building No.15 of Sophia University (a private university in Tokyo), designed and constructed by Sumitomo Forestry, has been completed. It is a three-story fire-resistant wooden structure. The manufacturing of materials for the structural framework produced less CO<sub>2</sub> compared to similar reinforced concrete or steel facilities.

The amount of carbon stored by the wood used in the structural framework is equivalent to that of approximately 280 Japanese cedar trees, each 40 years old. The building aims to be a sustainable landmark in the area and is being used as a base for adult education and community exchange.

Amount of carbon storage in the wood used for Building No.15's structural framework

Carbon storage amount: 84t-CO<sub>2</sub>



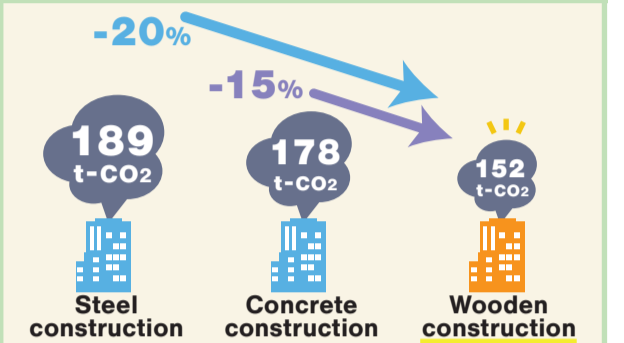
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Timber 111.85 m<sup>3</sup>

Approx. 280 40-year-old Japanese cedar trees

CO<sub>2</sub> emissions during manufacturing of Building No. 15's structural framework when compared



### Exterior Features

- The exterior of the building is covered with a lattice with intersecting wood of different width. The latticework represents the founding principles of Sophia University: "diversity," "interaction with others," "truth," and "tradition." The latticework is made of Japanese cedar trees grown in Tokyo, to support local production for local consumption.
- The exterior walls are coated with Sumitomo Forestry's original S-100 (silicon-based powerful water repellent paint). S-100 is a translucent material that makes the grain of the wood to stand out. It prevents stains with its high water repellency and lubricity, and prevents degradation and deterioration, leading to the beautiful appearance of the wood lasting for a long time.
- The building uses wall greening and rooftop greening. It contributes to the environment by preventing the rise of temperatures in urban areas and improving the cityscape.

### Interior Features

- Incorporates materials of natural origin and natural elements with a biophilic design.
- Timber is extensively used for walls and the interior. This improves the comfort and productivity of visitors and enhances their well-being.

### Structure

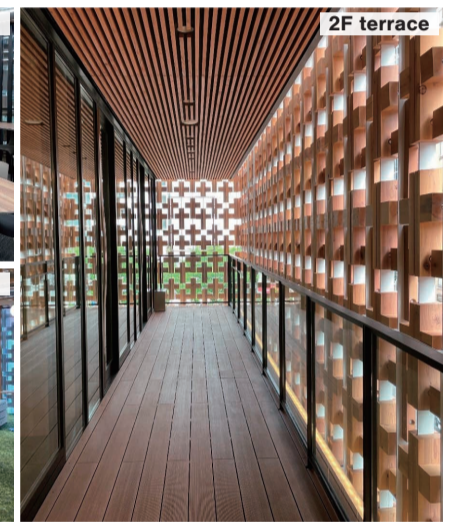
- Post-tensioning earthquake-resistance technologies are used to increase the degree of anchoring between members.
- Sumitomo Forestry's original pure laminated engineered fire-resistant wood, Kigurumi FR®, is used as the structural material.



2F classroom



3F classroom



2F terrace

Sumitomo Forestry will promote wooden construction in Japan and overseas that stores carbon as Harvested Wood Products (HWP) over the long term with the aim of decarbonizing the construction sector.

## Visiting Sumitomo Forestry Group Locations!

# Sumitomo Forestry Vietnam



### Our working area

We moved our office on August 2022. It's about 2km away from the center of the city and located in a relatively calm area. There are not many high-rise buildings nearby, and it has a view to the city.



### Area surrounding the office

The crab specialty restaurants 94 Thuy and Quan 94 are near the office. The shops are famous and listed in many travel guides, but opinions are divided as to which is the original, as it is common in Vietnam for shops to imitate popular ones.



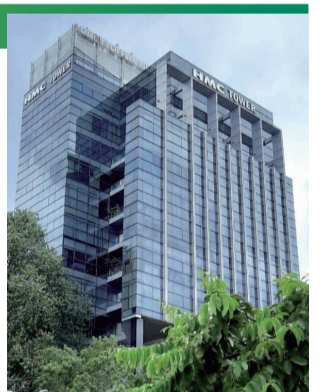
### Recommended food

Com Tam, a specialty of southern Vietnam. Pork ribs and a fried egg are laid on top of broken rice and then topped with a sweet chili sauce. It is often eaten for lunch.

## Business Overview

Sumitomo Forestry Vietnam was established in May 2012. It began in the distribution business for various types of timber and building materials in Vietnam, centering on the sale of particleboard\* from Vina Eco Board Co., Ltd. In 2017, Sumitomo Forestry, through its wholly-owned subsidiary Sumitomo Forestry Singapore, Ltd., entered into a capital and business alliance agreement with An Cuong Wood-Working Joint Stock Company. Sumitomo Forestry Vietnam is building and strengthening its value chain connecting the Vietnam market's upstream to downstream based on transactions with both companies. With a total of 10 staff members, Sumitomo Forestry Vietnam is working hard every day to expand its business.

\*Board made by heating and compressing wood chips



Sumitomo Forestry's Business in Vietnam

### Q&A

#### Q1.

**When is everyone in the office most passionate?**

During sales meetings. We exchange opinions on new projects evenly with experienced national staff.

#### Q2.

**What tools do you always use?**

We use Grab (a ride-hailing app). Motorcycles are the most common means of transportation in Vietnam, so we use them instead of taxis.

#### Q3.

**What is the office atmosphere like?**

It feels homey. There are three national staff members who have been at the company since we were established, and the staff know each other very well so it is also easy for representatives to get along with everyone.