Mission TREEING 2030: Our Long-Term Vision

**Announcing the formation of a forestry fund
aimed towards decarbonization and biodiversity conservation**

Toshiro Mitsuyoshi
President and Executive Officer
Sumitomo Forestry Co.

Today's Agenda

Part 1: Our Long-Term Vision

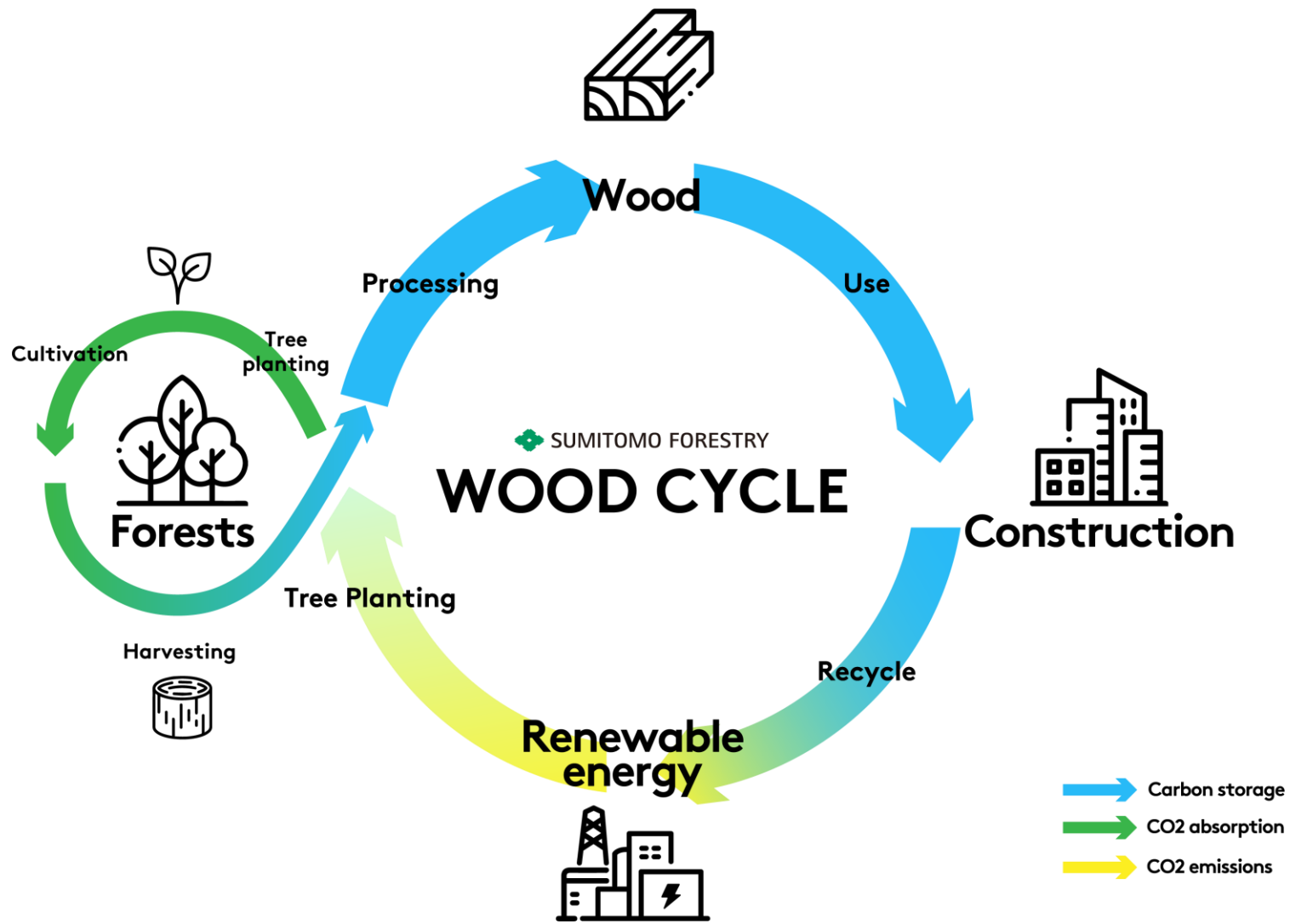- **Mission TREEING 2030**

- **Updates**

Part 2: Our forestry fund

- **Background**

- **Overview and details**
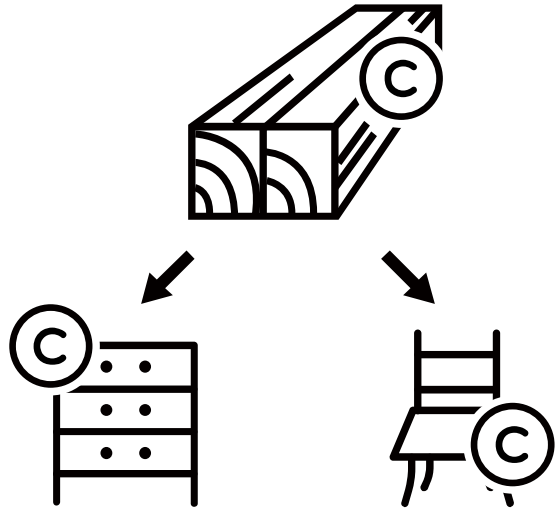
- **Summary and future goals**

Part 1

Our Long-Term Vision

Mission TREEING 2030

Carbon sequestration

Carbon sequestration refers to a tree's ability to capture CO_2 and store it inside as carbon. By utilizing harvested wood in buildings, furniture, and other wood products, we can prevent the carbon from releasing into the atmosphere for a long period of time.

We can also limit fossil fuel-based CO_2 emissions by constructing more buildings from wood—a process that emits few CO_2 emissions compared to other types of construction—and promoting the use of wood for generating bioenergy.

In other words…

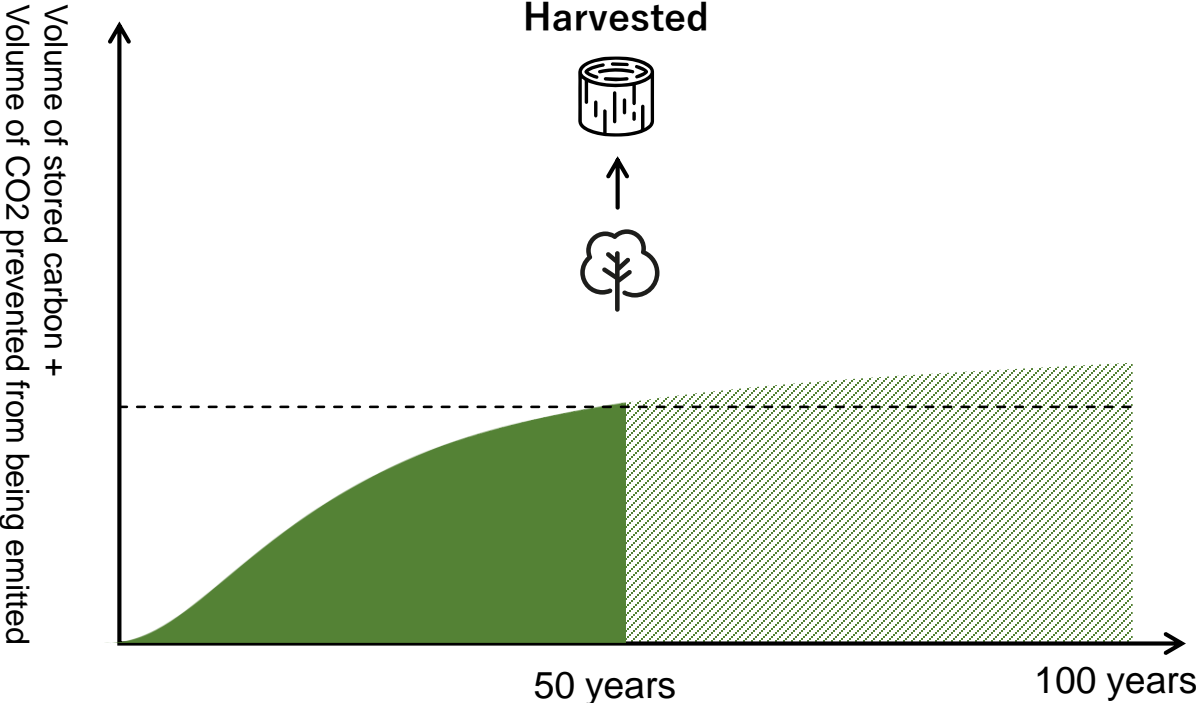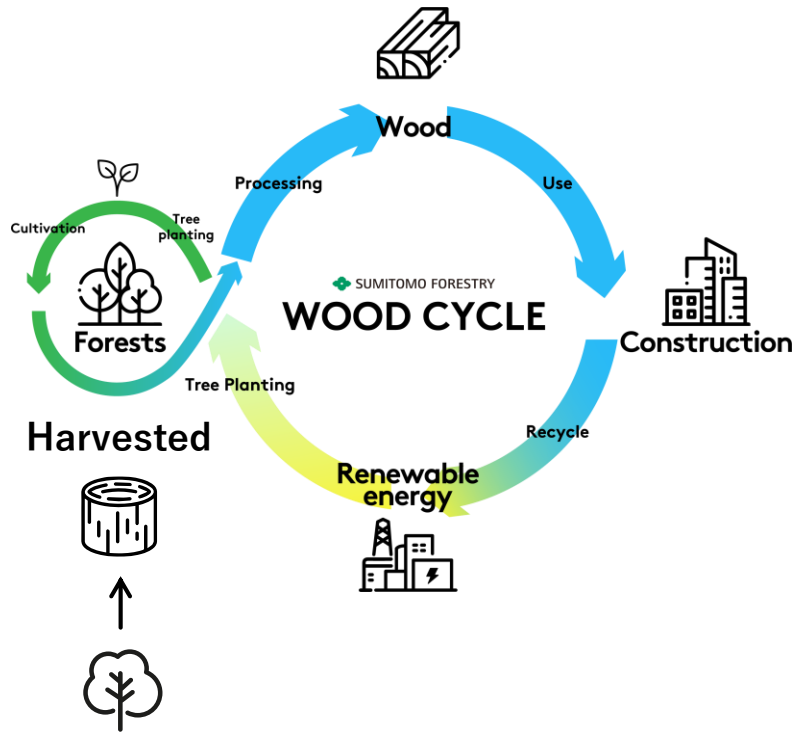> **By harvesting trees, replanting trees, and using the harvested wood, we can increase the global volume of stored carbon and contribute to decarbonization.**

A single cypress tree stores less additional carbon after maximizing the volume of CO2 it can capture.

Volume of stored carbon +
Volume of CO2 prevented from being emitted

50 years

100 years

Stored carbon per ha of forest
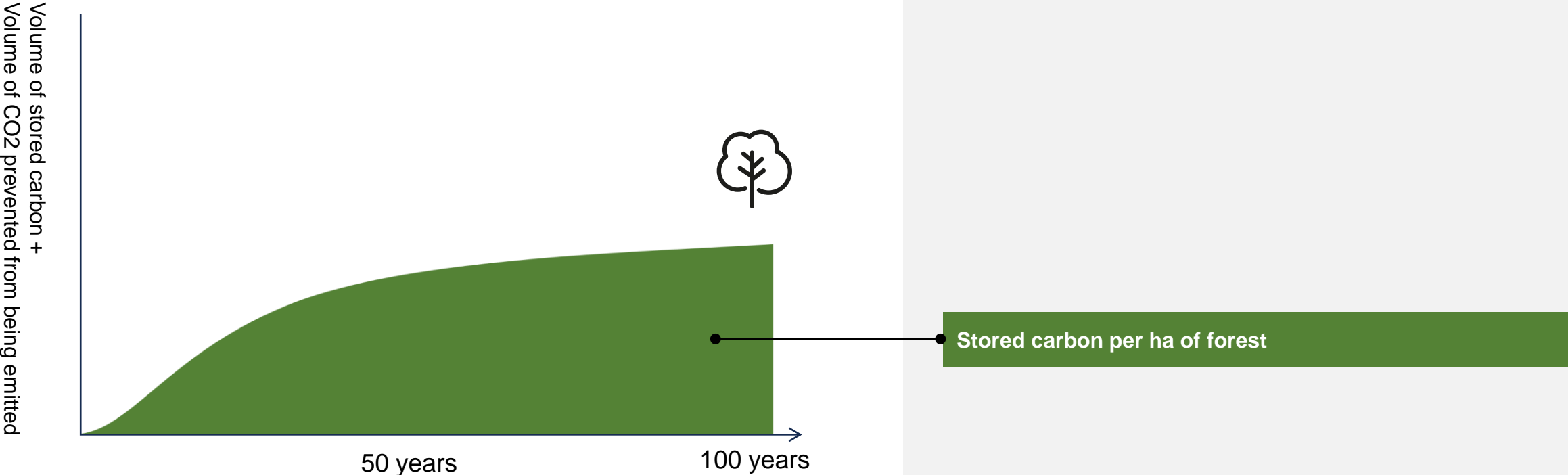
On first glance, harvesting a tree may appear to cause the volume of stored carbon to decrease.

Volume of stored carbon + Volume of CO2 prevented from being emitted

Harvested

50 years

100 years

However, after harvesting the wood, we replant trees and use the wood for a variety of purposes.
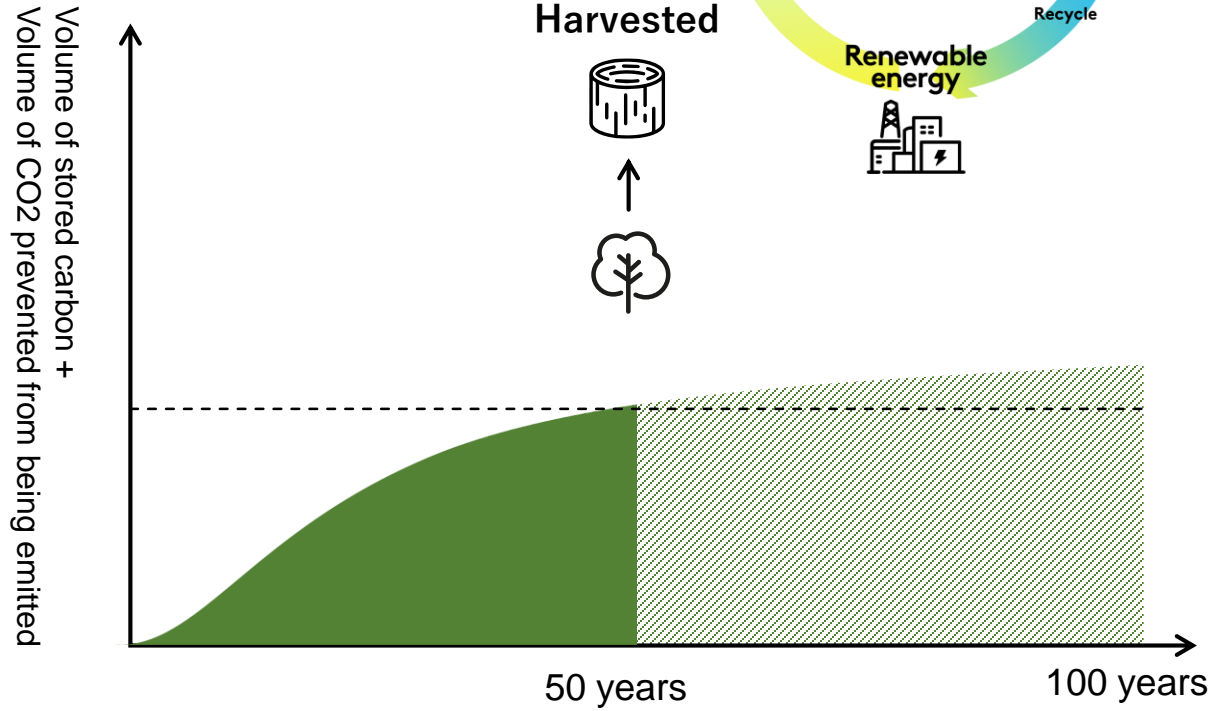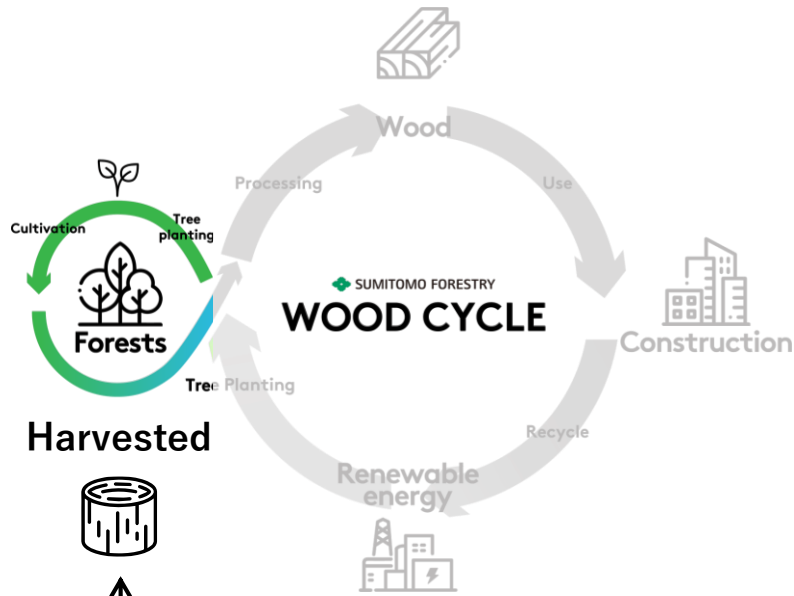
The young, replanted trees capture CO2 at a rapid pace, increasing the world's volume of stored carbon.
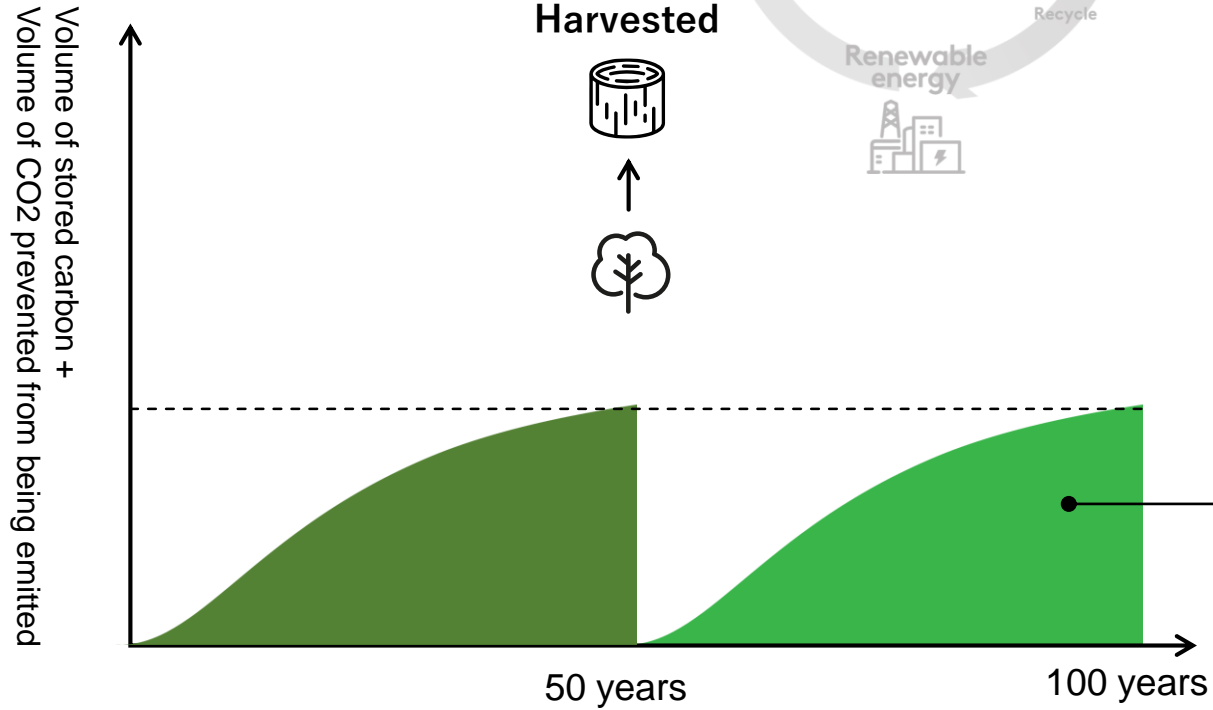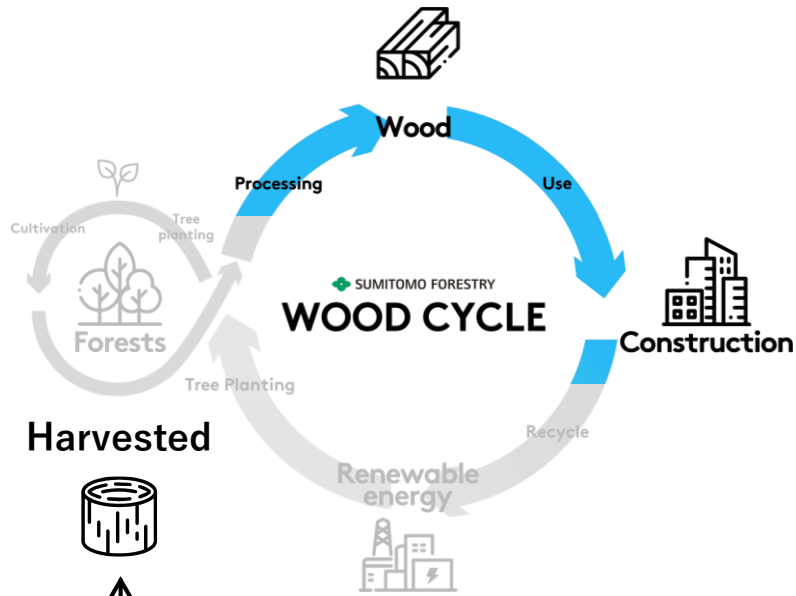
Then, by using the carbon-containing wood in buildings and furniture, we keep the carbon stored while also reducing CO_2 emissions compared to the construction of reinforced concrete buildings.

Wood Cycle diagram labels: Wood, Processing, Use, Cultivation, Tree planting, Forests, Tree Planting, Construction, Recycle, Renewable energy

SUMITOMO FORESTRY — WOOD CYCLE

Harvested

Volume of stored carbon + Volume of CO2 prevented from being emitted

50 years

100 years

Carbon stored in harvested wood

Stored carbon per ha of forest
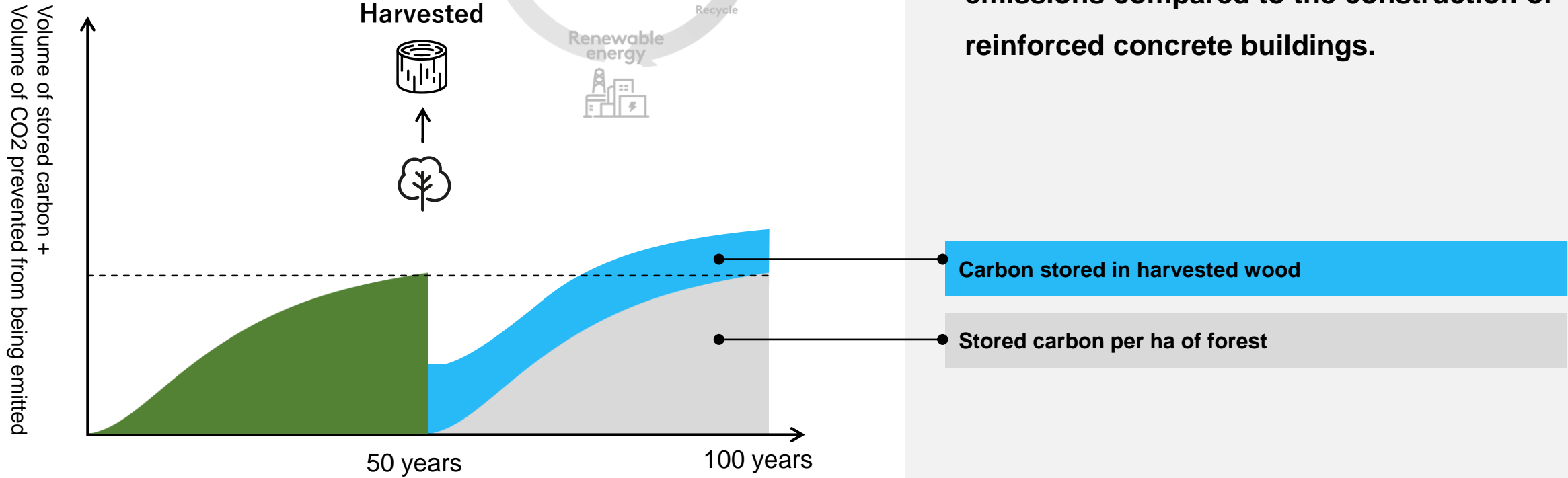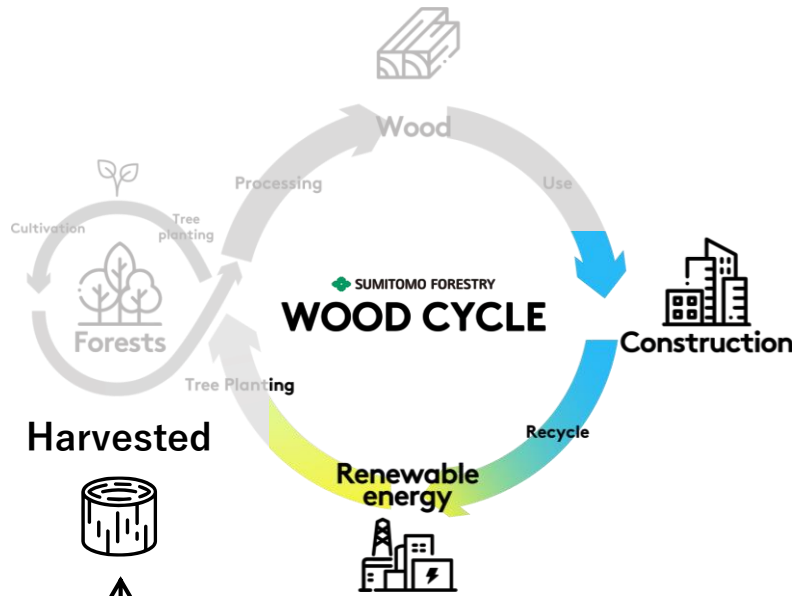
Constructing wood buildings emits much less CO2 compared to constructing reinforced concrete buildings. Using wood scraps and wood waste to generate bioenergy also emits less CO2 compared to generating thermal energy from coal.

CO2 prevented from being emitted by using wood as construction materials and sources of energy

Carbon stored in harvested wood

Stored carbon per ha of forest

Harvested

SUMITOMO FORESTRY
WOOD CYCLE

Wood
Processing
Cultivation
Tree planting
Forests
Tree Planting
Renewable energy
Recycle
Use
Construction

Volume of stored carbon + Volume of CO2 prevented from being emitted

50 years

100 years

By harvesting wood in a controlled way, replanting trees, and promoting the use of wood throughout society, we can contribute to decarbonization.

WOOD CYCLE

SUMITOMO FORESTRY

Forests — Cultivation — Tree planting — Processing — Wood — Use — Construction — Recycle — Renewable energy — Tree Planting

Harvested

Volume of stored carbon + Volume of CO_2 prevented from being emitted

50 years

100 years

CO_2 prevented from being emitted by using wood as construction materials and sources of energy

Carbon stored in harvested wood

Stored carbon per ha of forest

Conservation forests

Working forests

We do not harvest and replant all our forests. Instead, we zone forests into conservation forests intended for expanding our conservation efforts and working forests intended for wood production.

Conservation forests

Forests prized for their shared benefits, such as biodiversity conservation, preventing landslides and contributing to our culture of wellbeing

Working forests

Forests harvested and replanted to provide stable wood production for construction and furniture making

Conservation forests

Working forests

Just **2**% of our working forests
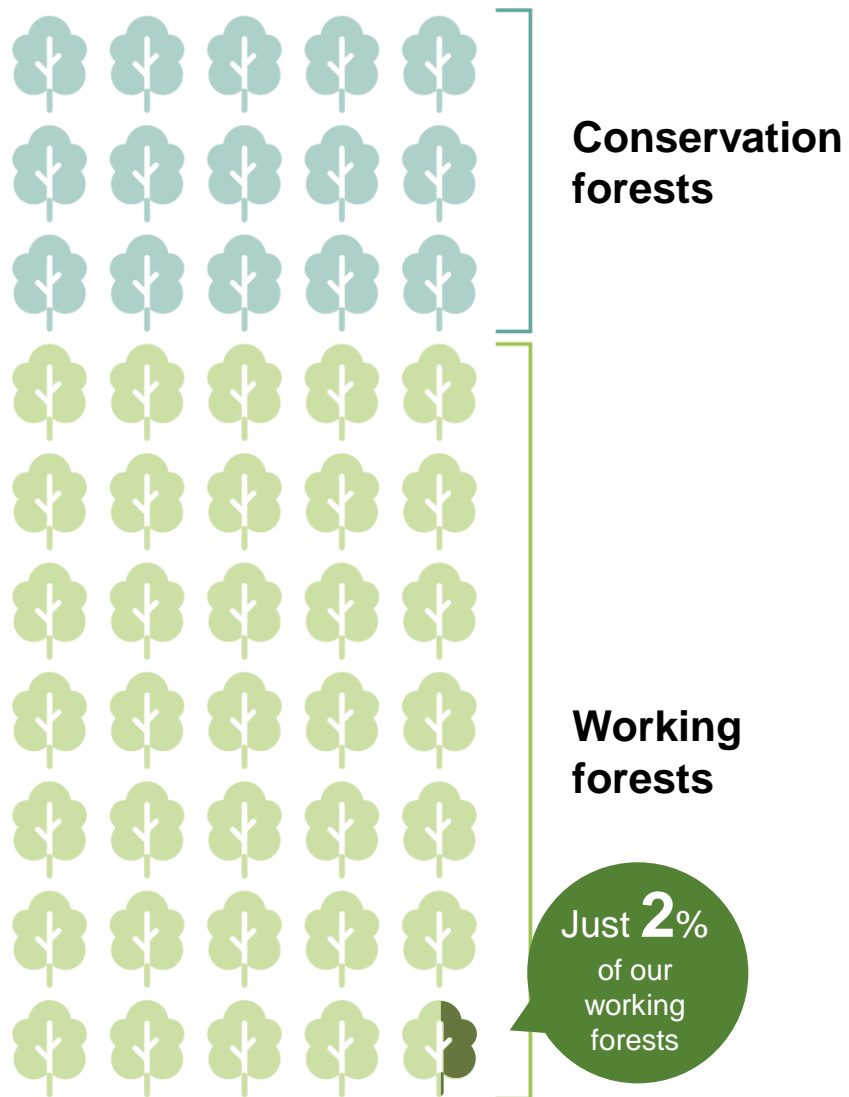
✓ Rejuvenating our Japanese cedar forests over the course of 50 years will allow us to consistently increase the total volume of captured CO_2.

✓ We set aside just 2% of our working forests per year for harvesting and replanting.

Rejuvenating our forests while protecting their ecosystem in order to increase the total volume of absorbed CO_2 (Sustainable forest management)

In this way, we ensure our forests are harvested and replanted in a controlled manner, while also contributing to decarbonization through the promotion of wood in construction and renewable energy.
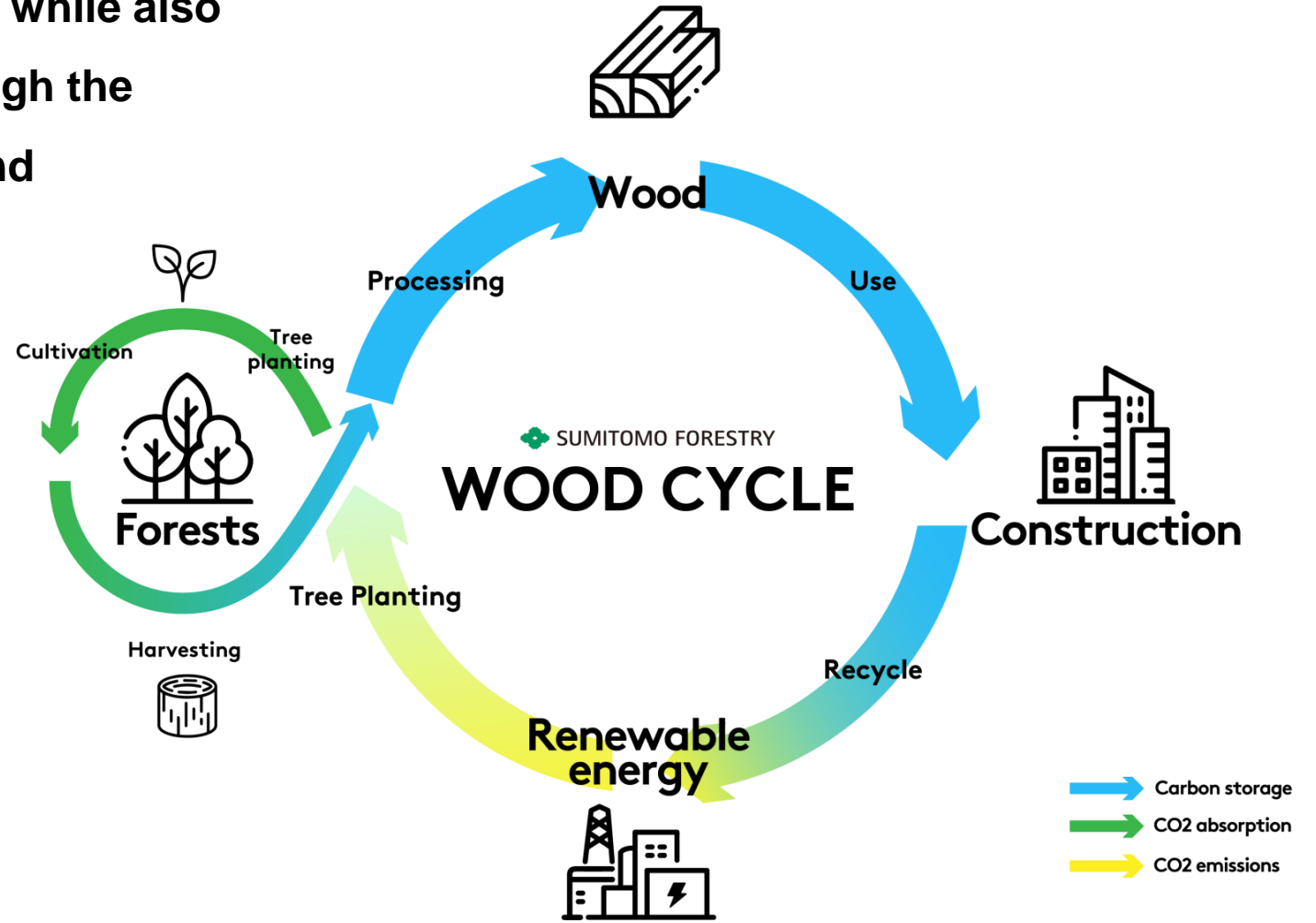
Part 1: Our Long-Term Vision

Updates
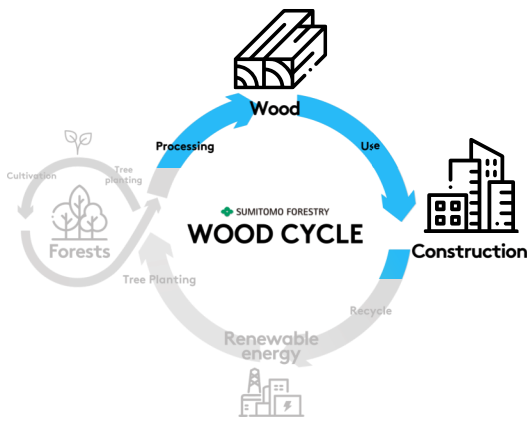
Promoting green building through a Japanese version of One Click LCA

We localized One Click LCA into Japanese, and it is now being used at large construction firms and architectural offices across Japan. The software visualizes the volume of carbon dioxide emitted during construction and will help promote green building throughout the Japanese construction industry.
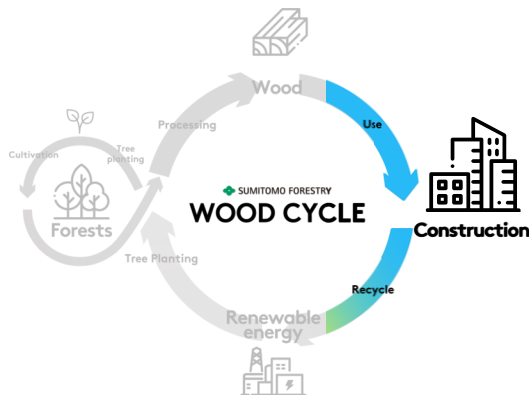
Non-residential buildings that contribute to decarbonization

We are building wood office buildings in Melbourne and Dallas. By reducing CO_2 emissions through the use of wood instead of steel or concrete, the buildings are contributing to decarbonization.

■ **Melbourne** (15-story wood office building)

A net-zero carbon building

Artist's rendering

■ **Dallas** (7-story wood office building)

Much lower CO_2 emissions than typical construction

Artist's rendering

Completion date   : September 2023
Volume of stored carbon : 2,300 t-CO2eq

Completion date   : October 2023
Volume of stored carbon : 3,800 t-CO2eq
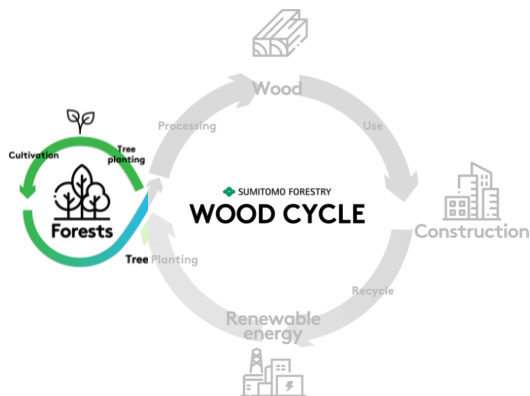
Developed AI model for monitoring tropical peatlands

NeXT FOREST, a joint venture with IHI, has developed an early AI model for monitoring tropical peatlands. By predicting underground water levels, the model can help the world control CO2 emissions from tropical peatlands.

What are tropical peatlands?

Tropical peatlands are composed of layers of organic deposits formed from dry vegetation. They are **a rich source of water and carbon**.

The world's tropical peatlands are believed to be storing a combined 89 billion or more tons of carbon—**10 times the world's carbon emissions** in 2017.

■ **A 3D topographical map reflecting underground water levels forecast by the AI**
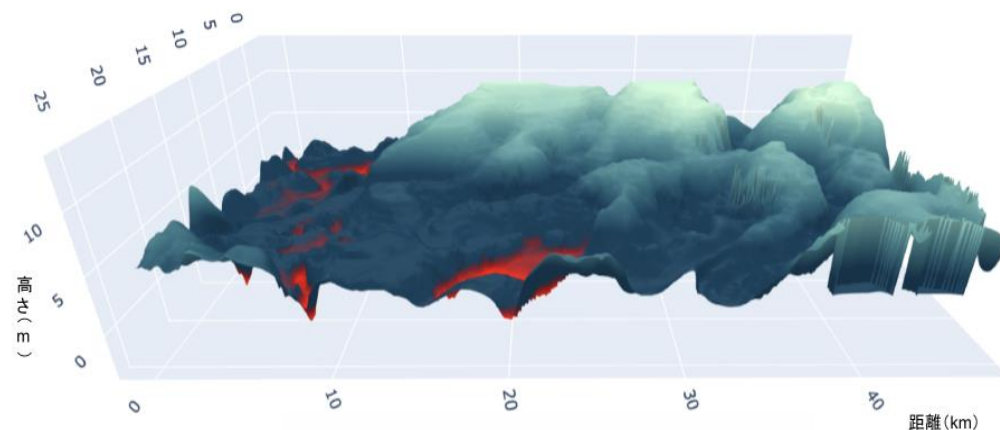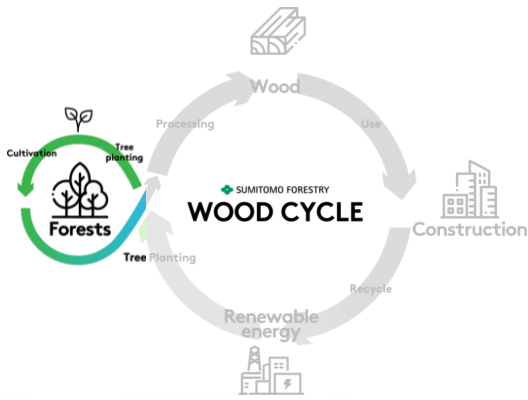
Launched a new project to conserve Indonesian mangroves

By managing Indonesian mangroves as conservation forests, we hope to reduce the CO_2 emissions. Our goals are to protect the mangrove ecosystem and generate blue carbon credits.[1]

[1]: Carbon credits related to carbon stored in marine ecosystems.

Acreage of owned ╱ managed forests

Mangrove acreage involved in project

9,738ha

＞＞＞

Currently | Approx. **290,000** ha

2030 Goal | **500,000** ha

An aerial shot of a mangrove we own and manage
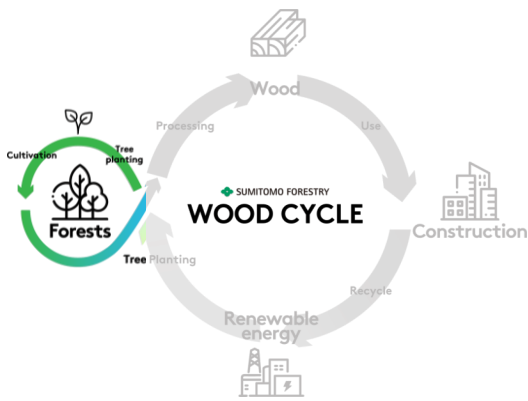
Framework of large-scale forestry fund for decarbonization

We have established a large-scale forestry fund in the United States to promote decarbonization. It is being funded by 10 Japanese companies.
* More details to come later on in the presentation.

Joint venture

- **Sumitomo Forestry**
- **Investor A**
- **Investor B**
- ⋮ etc.

Invest →

← Volume of captured CO_2

Dividends based on wood sales

NEXT FOREST

High-quality source for capturing CO_2

Global forestry fund (Operated by Sumitomo Forestry)

Wood profits ↑   ↓ Wood sales

Construction material makers, others with wood needs

Expand market

Forests owned and managed by forestry fund

- **Southeast Asia**
- **Oceania**
- **North America**
- ⋮ etc.

WOOD CYCLE
SUMITOMO FORESTRY

Wood
Processing
Use
Cultivation
Tree planting
Forests
Tree Planting
Construction
Recycle
Renewable energy

Part 2

Our forestry fund

Part 2: Our forestry fund

Background

CO2 emissions in Japan

2013

Emissions

1.24Bt

Industry
430 Mt

Transport
230 Mt

Energy
100 Mt

Construction
480 Mt

39% of CO2 emissions come from construction (Largest among all sectors)

Year

Sources: "Realization of Carbon Neutrality in 2050" diagram in "Green Growth Strategy Through Achieving Carbon Neutrality by 2050," published by the Ministry of Economy, Trade and Industry; "Greenhouse Gas Targets/Criteria for Each Category" in the Climate Change Adaptation Plan approved by the Cabinet on October 22, 2021.

CO2 emissions in Japan

2013

1.24Bt

2030

670 Mt

Emissions

Industry
430 Mt

Transport
230 Mt

Energy
100 Mt

Construction
480 Mt

Industry

Transport

Energy

Construction

Year

CO2 emissions in Japan

Emissions

2013
1.24Bt

| Industry 430 Mt |
| Transport 230 Mt |
| Energy 100 Mt |
| Construction 480 Mt |

2030
670 Mt

| Industry |
| Transport |
| Energy |
| Construction |

2050
Net zero

| Switch to Electricity |
| Switch to Hydrogen (e-fuels) |
| Switch to low-carbon energy sources (renewables, nuclear, CCS) |
| Fossil fuels |

We cannot achieve carbon neutrality through reduction and substitution alone

Year

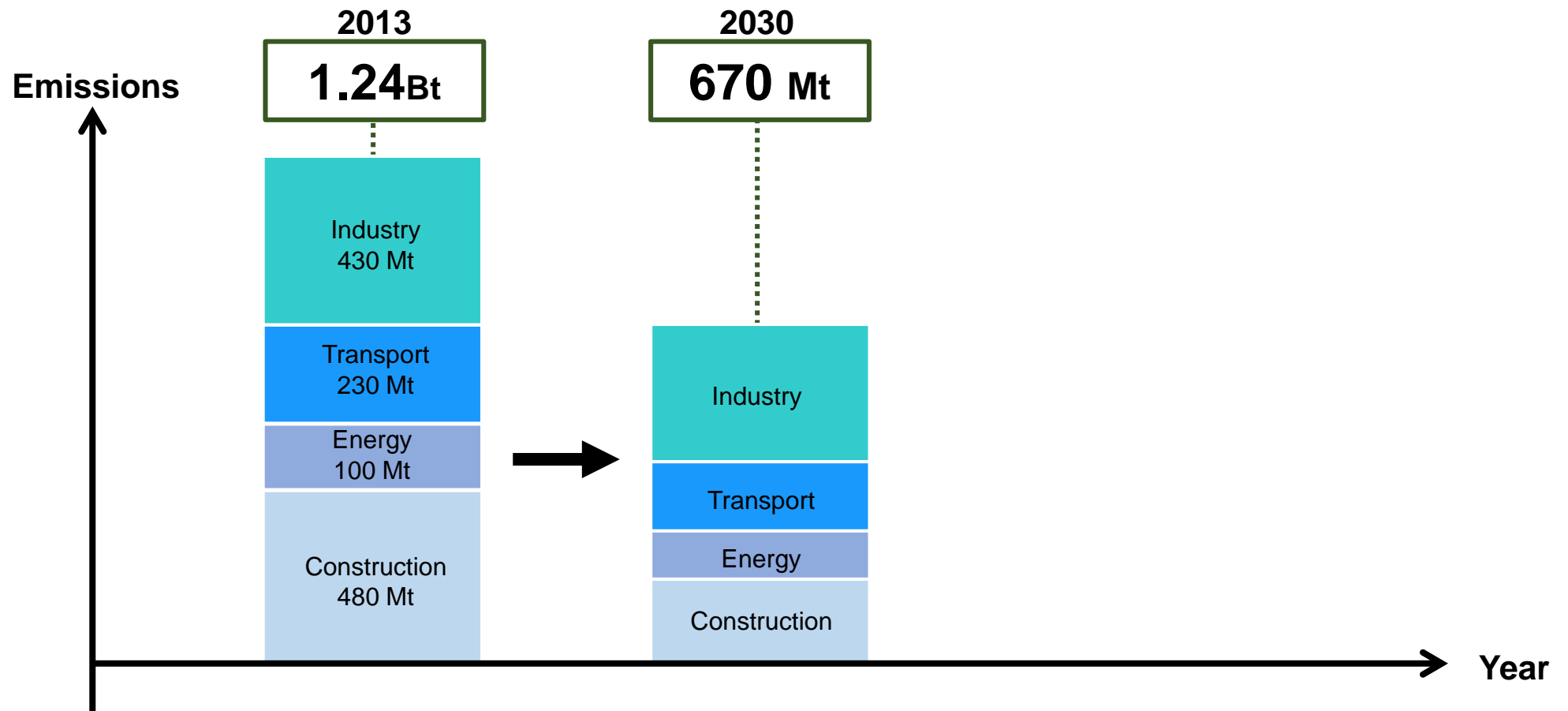Sources: "Realization of Carbon Neutrality in 2050" diagram in "Green Growth Strategy Through Achieving Carbon Neutrality by 2050," published by the Ministry of Economy, Trade and Industry; "Greenhouse Gas Targets/Criteria for Each Category" in the Climate Change Adaptation Plan approved by the Cabinet on October 22, 2021.

CO2 emissions in Japan

Emissions

2013
1.24 Bt

| Industry 430 Mt |
| Transport 230 Mt |
| Energy 100 Mt |
| Construction 480 Mt |

2030
670 Mt

| Industry |
| Transport |
| Energy |
| Construction |

2050
Net zero

| Switch to Electricity |
| Switch to Hydrogen (e-fuels) |
| Switch to low-carbon energy sources (renewables, nuclear, CCS) |
| Fossil fuels |
| Carbon sequestration, other methods |

Absorb CO2

Offset inevitably remaining CO2 emissions by increasing the volume of CO2 that can be absorbed by forests.
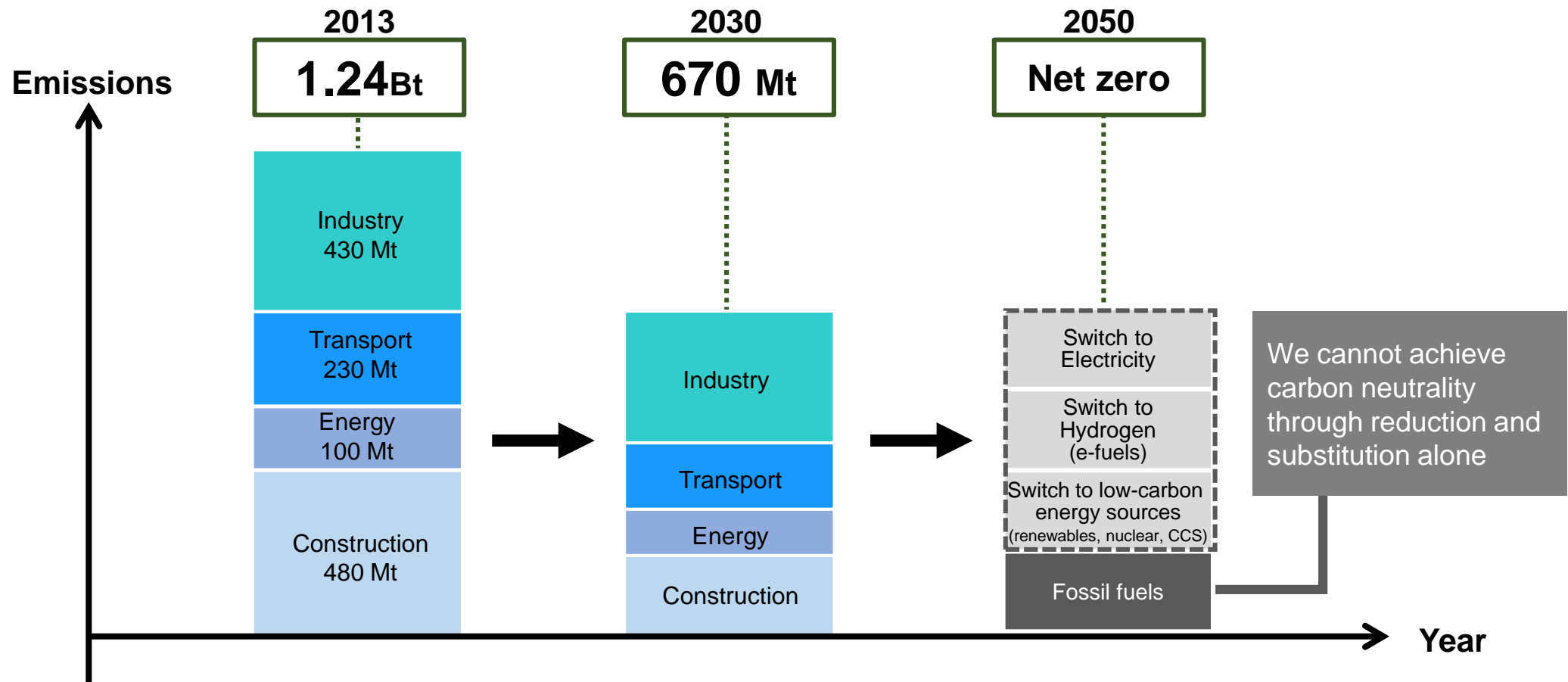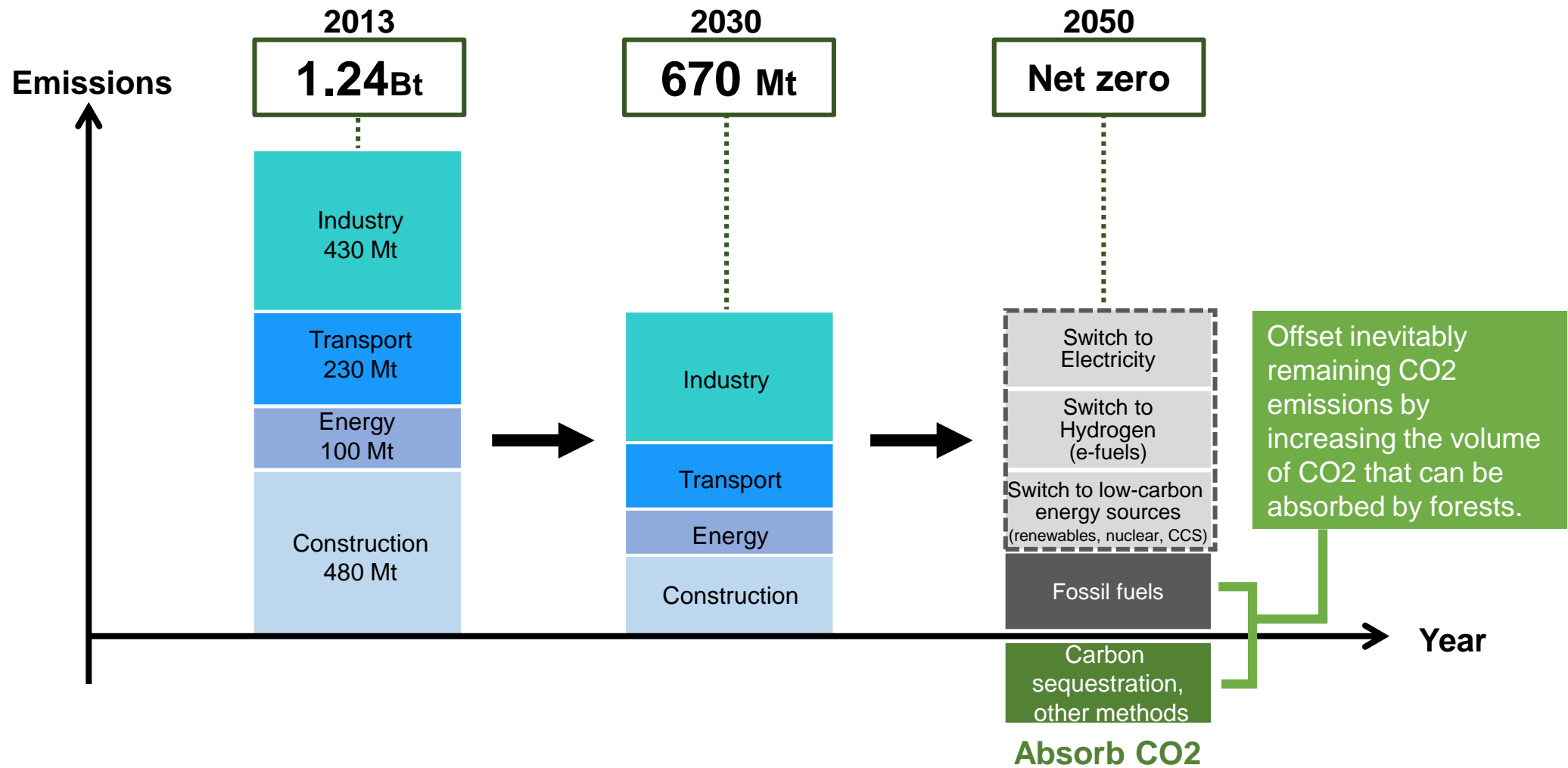
Year

Sources: "Realization of Carbon Neutrality in 2050" diagram in "Green Growth Strategy Through Achieving Carbon Neutrality by 2050," published by the Ministry of Economy, Trade and Industry; "Greenhouse Gas Targets/Criteria for Each Category" in the Climate Change Adaptation Plan approved by the Cabinet on October 22, 2021.

From a corporate perspective, carbon credits are becoming attractive

Carbon credits

Companies that cannot reduce their carbon dioxide emissions in spite of their best efforts can offset these emissions by "purchasing" the carbon reductions and captured carbon of another company.
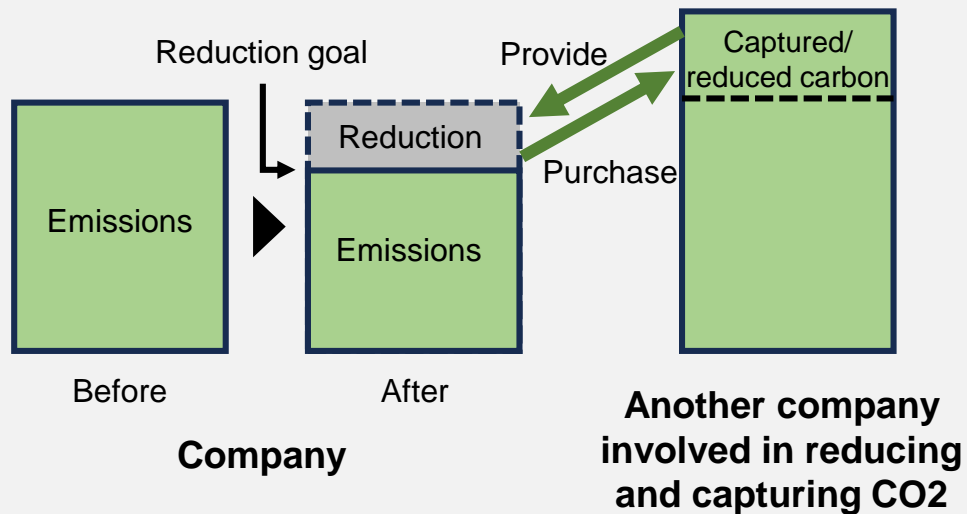
■ **Carbon credits issued around the world**

Source: A graph published in the World Bank's "State and Trends of Carbon Pricing 2023"

How carbon credits are generated and issued

■ **How credits are generated**

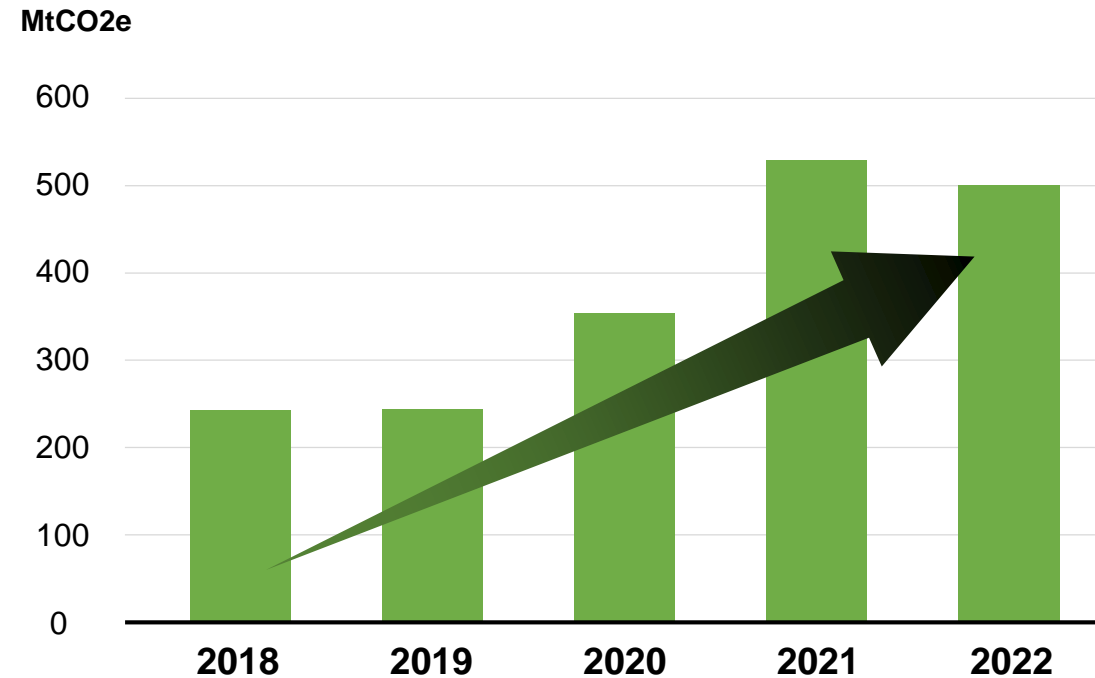| Capture / Storage | NbS (Nature based) | • Forest management
• Planting / replanting
• Grassland conservation |
	TbS (Technology based)	• DACCS* • Biocoal • BECCS**
Avoidance / Reduction	NbS (Nature based)	• Forest conservation • Peatland management
	TbS (Technology based)	• Renewables • Energy-cutting • Fuel substitution • Increased transport efficiency

* DACCS: Directly capturing CO2 in the atmosphere and storing it
** BECCS: Biofuels + CCS

■ **How credits are issued**

| UN / Government
Compliance credits | CDM, JCM, J-Credits, etc.
↓
Strictly regulated, but have high integrity |
| Private
Voluntary credit | VCS, ACR, Gold Standard, etc.
↓
No legal regulations, but quality harder to guarantee |

Source: "Carbon Credit Report," published by the Ministry of Economy, Trade and Industry

But there is debate on what type of credit one should buy. There are reports of credits that don't reflect factual data.

■ **How forest conservation businesses may inflate data for credits**

● **Issuing credits correctly**

Deforestation forecast

Correct amount of credits

Current forest acreage

Future forest acreage
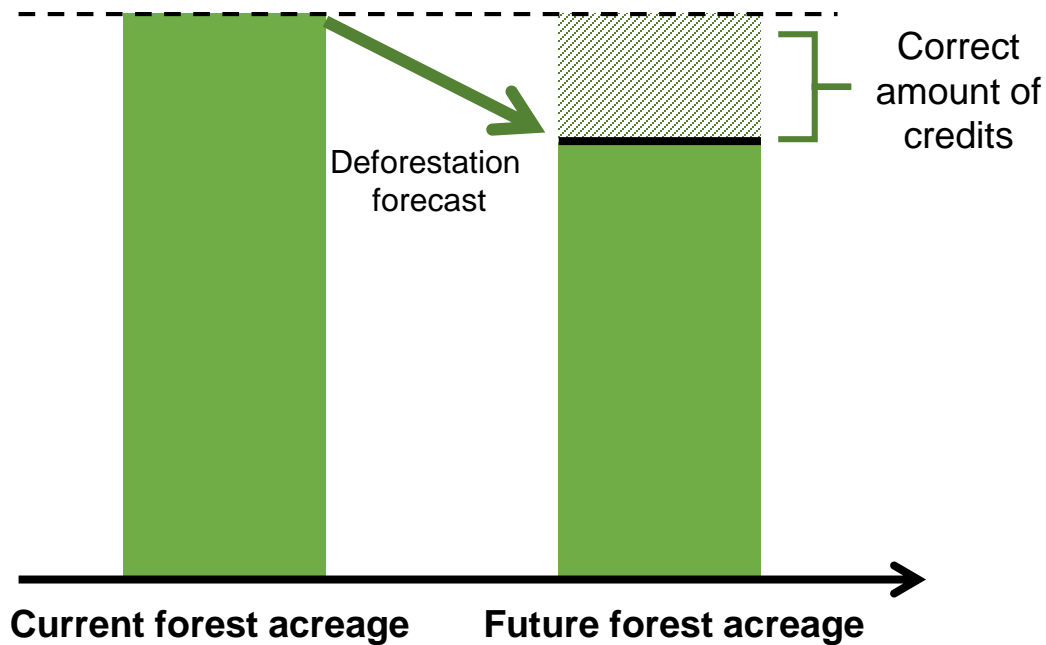
* Assuming acreage is maintained through forest conservation

● **Issuing credits based on inflated data**

Inflated estimates of harvesting volumes

Correct amount of credits

Inflated amount of credits

Current forest acreage

Future forest acreage
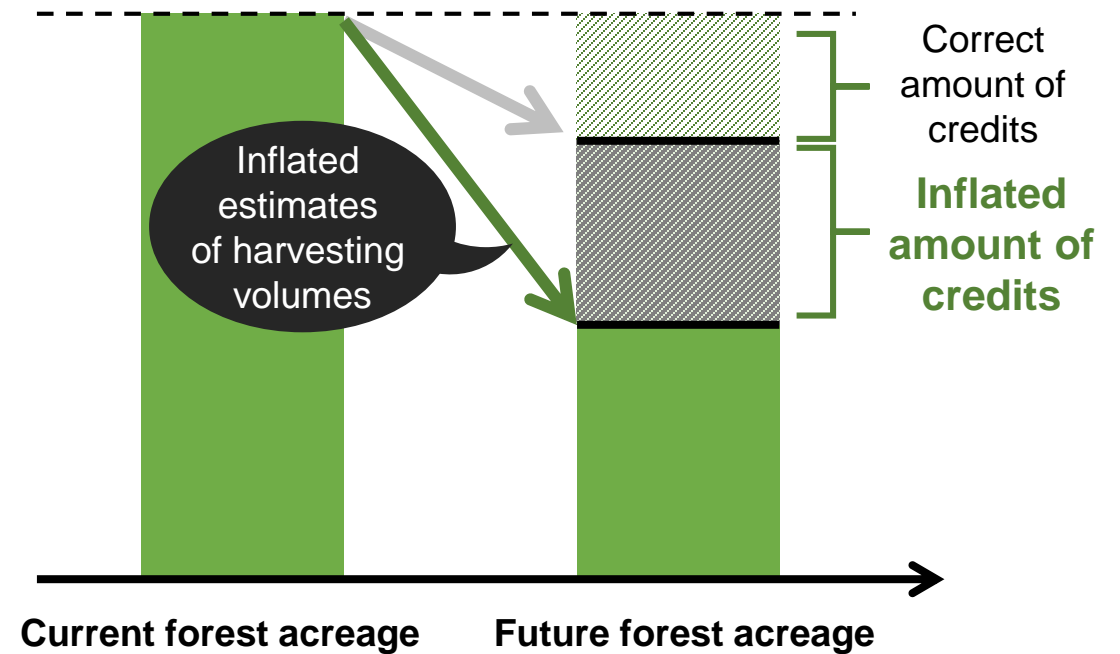
* Assuming acreage is maintained through forest conservation

Forests are also being increasingly valued for functions that shared benefit (e.g., biodiversity conservation and water supply purification)

■ Living Planet Index (LPI)

The LPI indicates the state of nature and biodiversity.
From 1970 to 2018, biodiversity has dropped 69% in richness.

Global Living Planet Index
Confidence limits
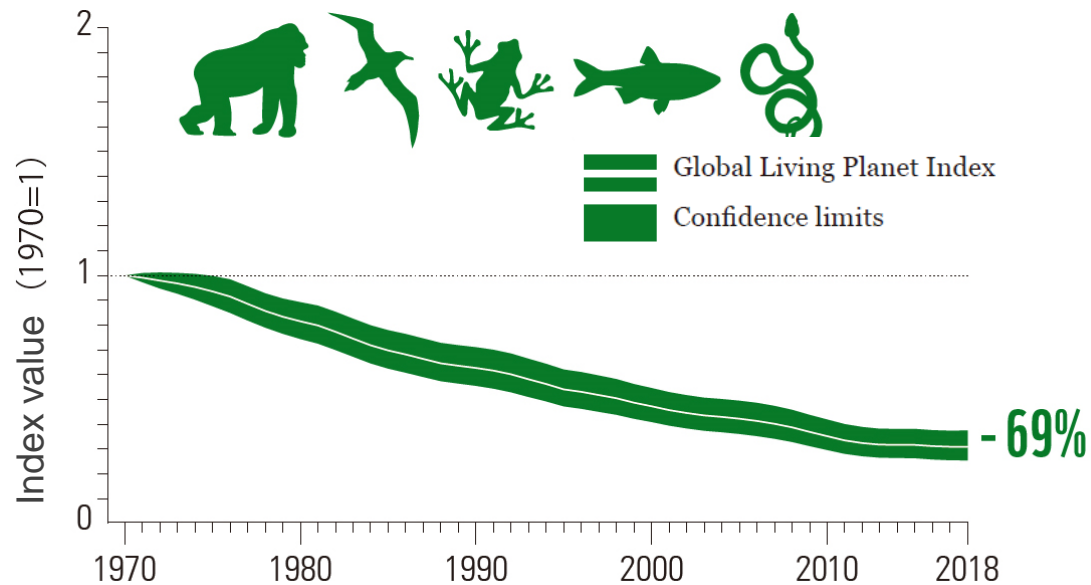
Source: "Living Planet Report 2022," published by the WWF

■ "National Strategy for Biodiversity, 2023-2030" (Ministry of the Environment)

Key points

Fundamentally transforming society towards nature positivity

Preserving healthy ecosystems and maintaining or recovering nature's gifts

Promoting socioeconomic activities that protect natural capital

Source: "National Strategy for Biodiversity, 2023 – 2030," published by the Ministry of the Environment

Environmental issue

We cannot achieve decarbonization without carbon sequestration conducted by forests.

Corporate issue

We must generate and use high-quality credits related not just to capturing CO_2, but also to preserving ecosystems.

Cyclical forest management across the world conducted by Sumitomo Forestry

■ **Our forestry businesses across the world**

Total area: Approximately **288,000**ha
Certified forest area: Approximately **229,000**ha

Legend:
- ■ Managed Area
- ■ Certified Area
- ■ Operations Area

Papua New Guinea
- 12,000ha (35%)
- 20,000ha (65%)
- **31,000ha**

Indonesia
- 32,000ha (20%)
- 125,000ha (76%)
- **172,000ha**

Japan
- 27,000ha (56%)
- 48,000ha (100%)
- **48,000ha**

New Zealand
- 28,000ha (76%)
- 37,000ha (100%)
- **37,000ha**
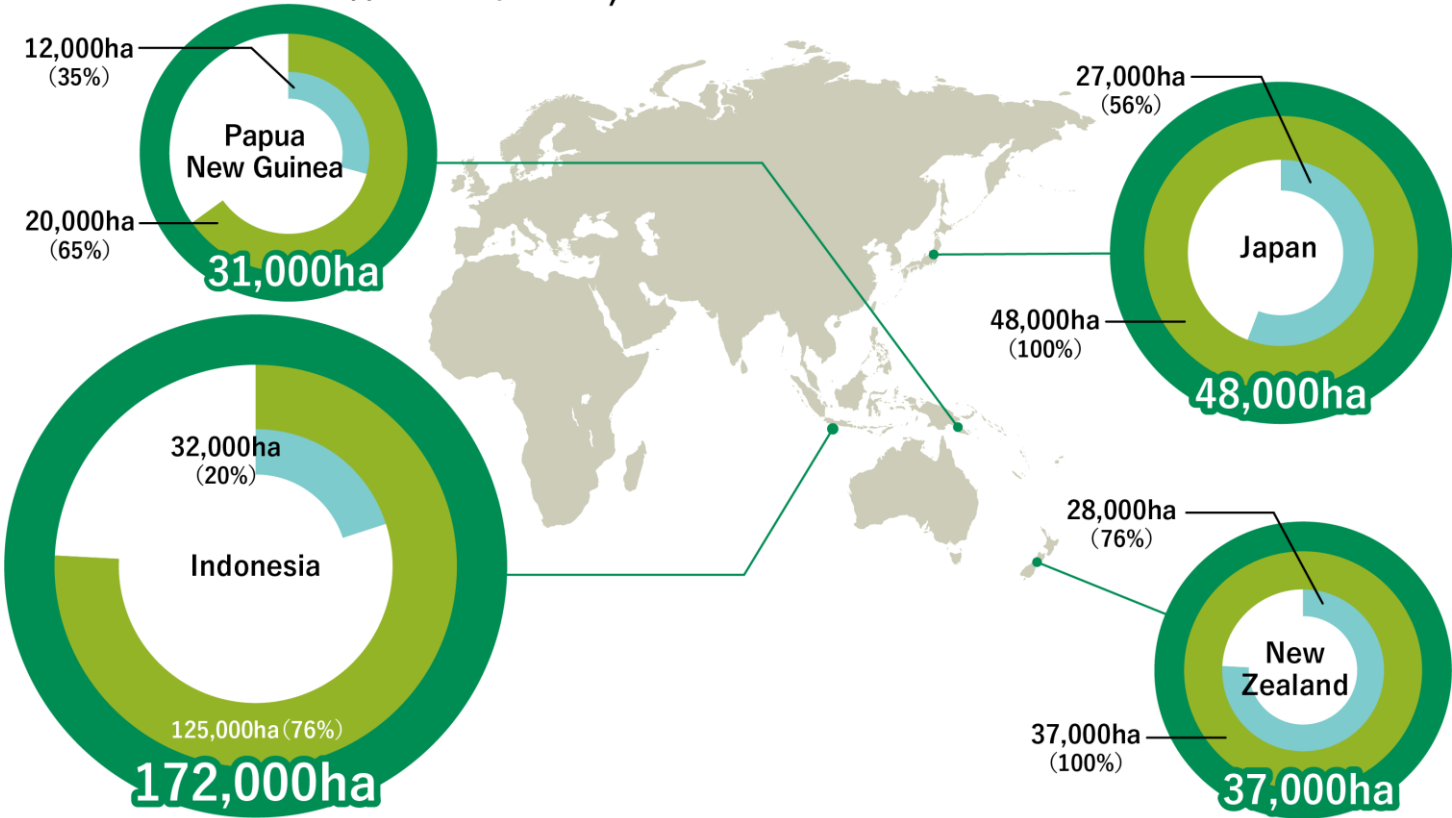
288,000 ha
Acreage of owned / managed forests

369,000 t
Volume of CO_2 we absorb annually

66.37 Mt
Total volume of stored carbon
(As of December 2022)

To spread this kind of cyclical forest management more widely in order to

accelerate decarbonization efforts across the world,

we established a global forestry fund with other Japanese companies

Part 2: Our forestry fund

Overview and details

Eastwood Climate Smart Forestry Fund I

A large-scale forestry fund for promoting decarbonization
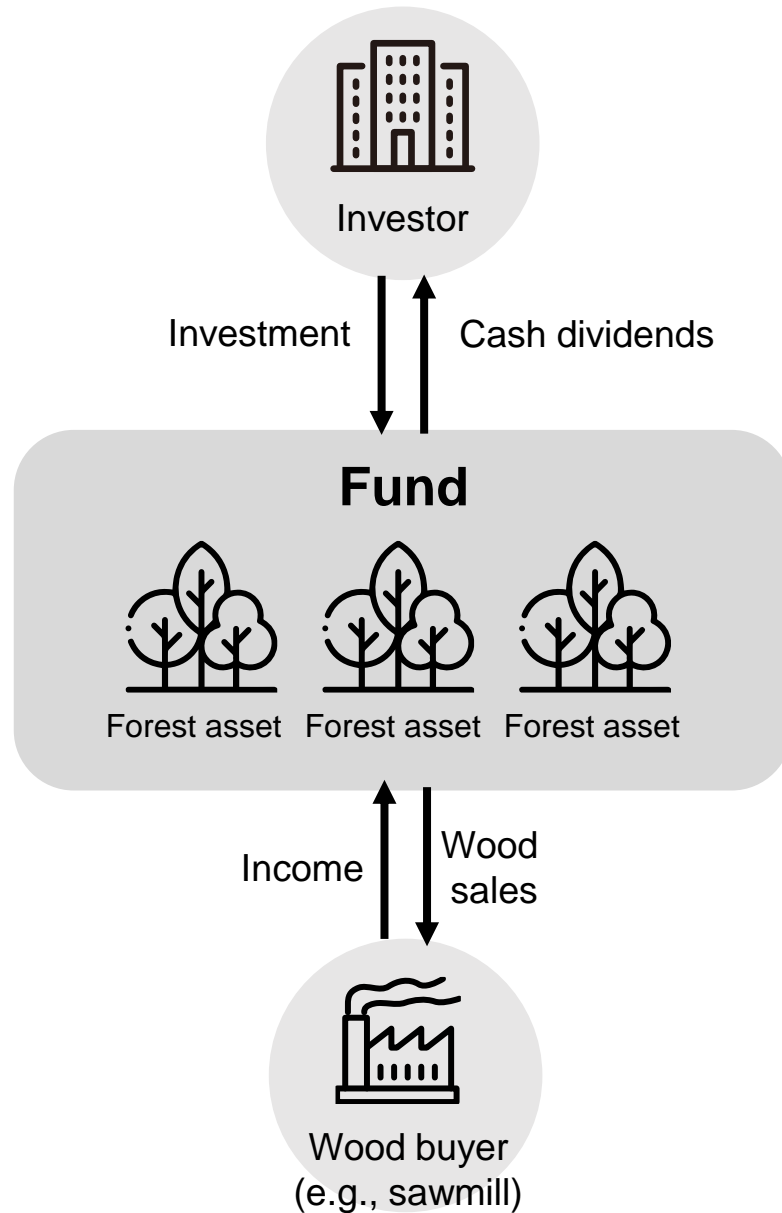
Generally speaking, a forestry fund involves gathering funding from investors to purchase and manage forests for the purpose of producing wood for sale.

Investor

Investment | Cash dividends

Fund

CO_2 CO_2 CO_2 CO_2 CO_2 CO_2

Forest asset   Forest asset   Forest asset

Income | Wood sales

Wood buyer
(e.g., sawmill)
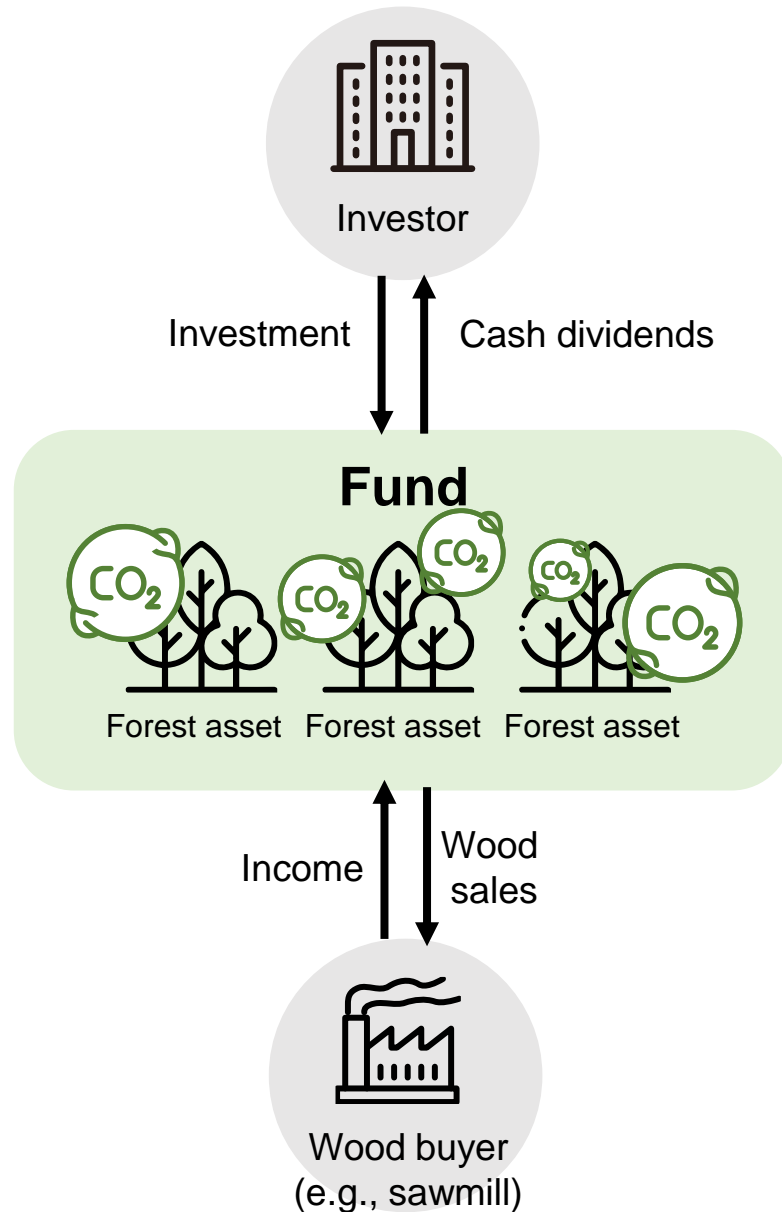
Our fund involves properly managing

the forests we purchase to increase

the amount of absorbed CO2 while

also preserving the health of these

forests in terms of biodiversity and

their ability to purify the water supply.
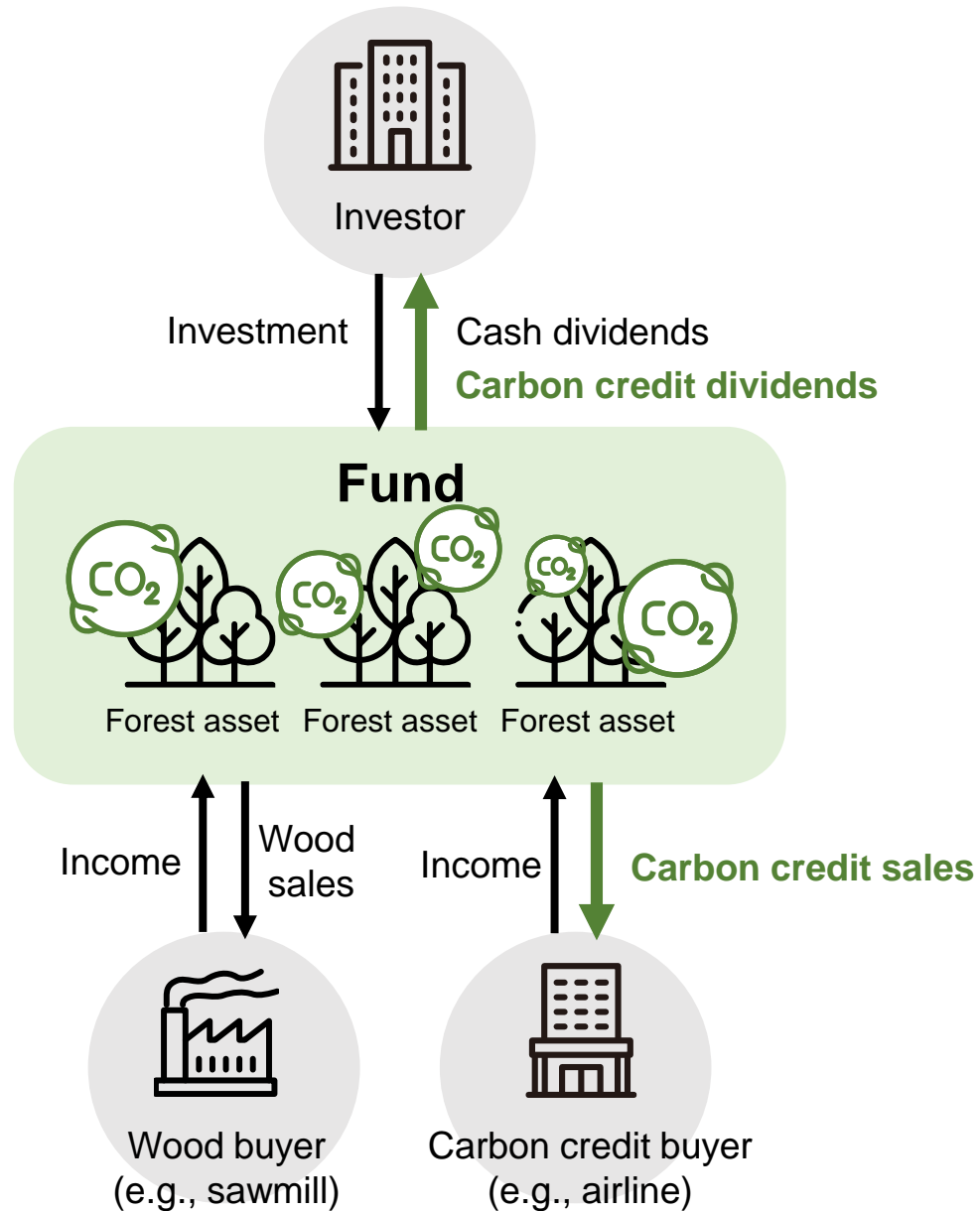
By increasing the volume of absorbed CO2, we can issue **carbon credits** to investors and other companies to help them offset their CO2 emissions.

Investors

Total investment Approx.

60 billion JPY

*As of July 2023

Fund summary

Name	Eastwood Climate Smart Forestry Fund I
Size	Approx. 60 billion JPY (415 million USD; based on exchange rate of 144.46 JPY to USD recorded on July 3, 2023)
Assets	Mainly forests in North America
Duration	15 years
Management	Eastwood Forests Co., Ltd (Sumitomo Forestry Group) SFC Asset Management, LLC(Sumitomo Forestry Group)
Established	June 2023
Investors	Eneos Corp., Osaka Gas Co., Tokyo Century Corp., Japan Post Co., NYK, Fuyo General Lease Co., Sumitomo Mitsui Banking Corp., Sumitomo Mitsui Trust Bank, Unicharm Corp., Sumitomo Forestry Co.

* This material is not intended to promote investment in the fund.

Fund markets

The United States, which has a long history of forestry funds, forests are considered an attractive alternative investment because they physically grow.

■ **The history of forestry funds in the United States**

1974 —— 1980 ——————— 1998 ——— 2008 ——→

ERISA

This law requires corporate investors who manage corporate pensions to diversify their investments. Its passage led to forests becoming an attractive target for investors, as they are unique among real estate investments in that they physically grow.

TIMO (Forest investors)

TIMO is a forest-focused fund management group that created an investment fund in the 1980s, establishing the idea of the forestry fund.

REIT Tax Simplification Act

The act allowed forests to be invested in as real estate. It also provided tax breaks for financial products created from forest investments, which encouraged more individuals to invest in forests.

Global Financial Crisis

Following the crisis, investors began to look for alternative investments that would not be affected by financial markets. They found their solution in forests, which also allowed investors to diversify their risk more safely.

Forests: Real assets that physically grow

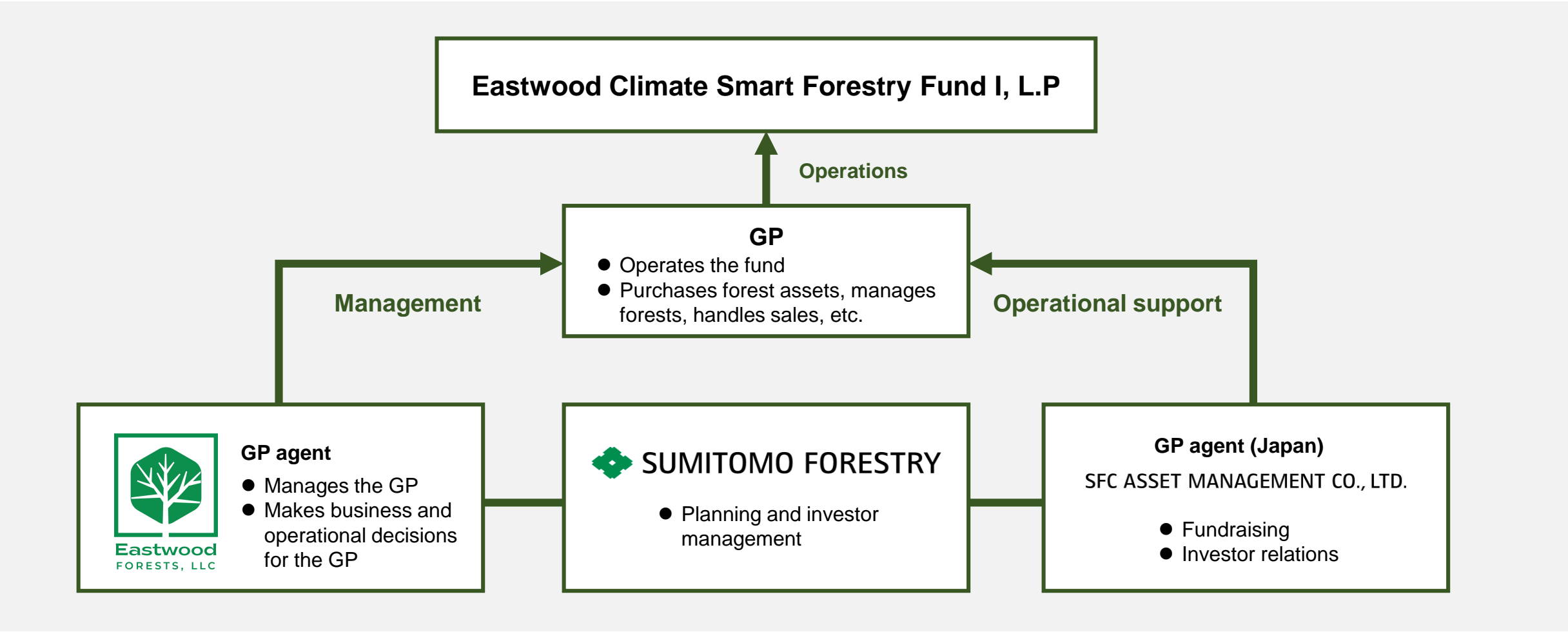Unlike standard real estate and other real assets, forests promise physical growth through a cycle of harvesting and tree-planting /cultivating.

An attractive alternative investment

Forest assets have little correlation with traditional financial assets such as stocks and bonds. As a result, they are an attractive option for including in a portfolio for investors who wish to diversify their risk.

Organization

The fund is managed by a team from Eastwood Forests, who are market leaders specializing in forestry funds designed to create long-term climate benefits.

Eastwood Climate Smart Forestry Fund I, L.P

Operations

GP
- Operates the fund
- Purchases forest assets, manages forests, handles sales, etc.

Management

Operational support

GP agent
- Manages the GP
- Makes business and operational decisions for the GP

Eastwood FORESTS, LLC

◆ SUMITOMO FORESTRY
- Planning and investor management

GP agent (Japan)

SFC ASSET MANAGEMENT CO., LTD.
- Fundraising
- Investor relations

Organization: About Eastwood Forests

Eastwood
FORESTS, LLC

Eastwood Forests, LLC

Chapel Hill,
North Carolina

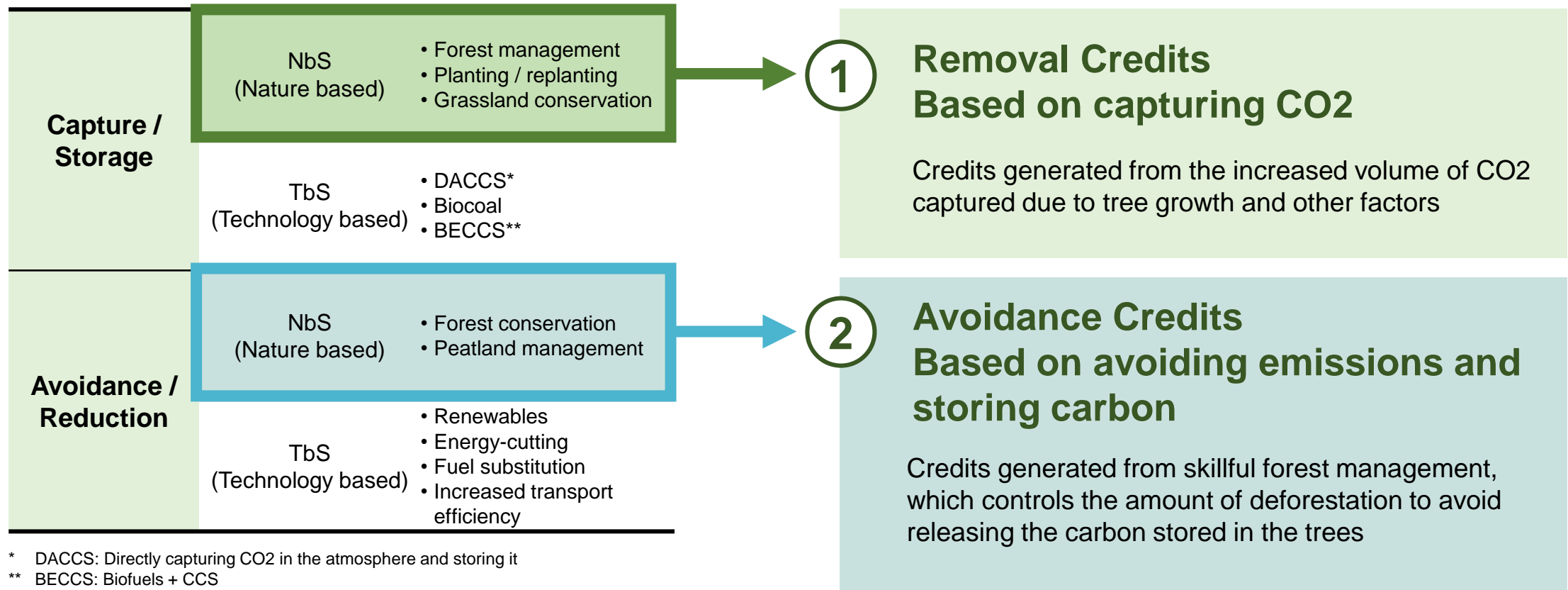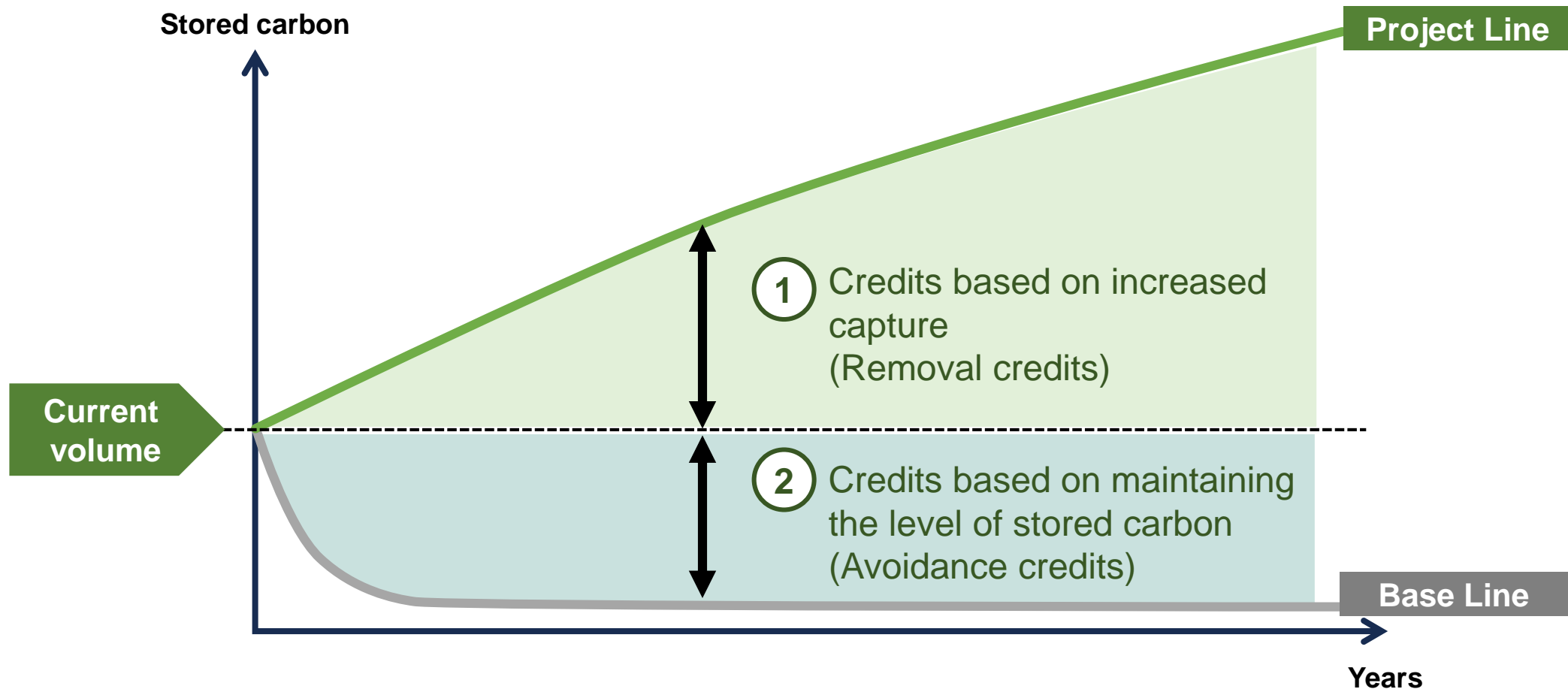|	
Name	: Eastwood Forests, LLC
Location	: Chapel Hill, North Carolina
Business	: Forest asset management
President & CEO	: Alex Finkral
Established	: October 28, 2022 (Business commenced on November 1)
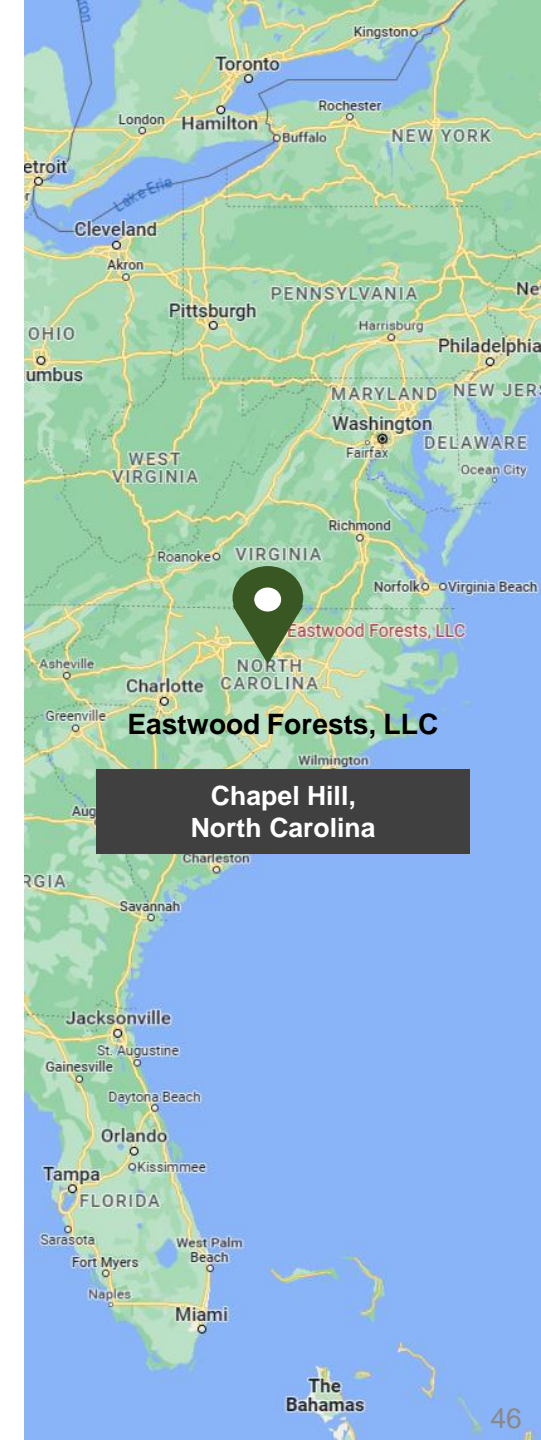
Approaches to carbon credit generation

■ **How credits are generated**

Capture / Storage	NbS (Nature based)	• Forest management • Planting / replanting • Grassland conservation
	TbS (Technology based)	• DACCS* • Biocoal • BECCS**
Avoidance / Reduction	NbS (Nature based)	• Forest conservation • Peatland management
	TbS (Technology based)	• Renewables • Energy-cutting • Fuel substitution • Increased transport efficiency

**① Removal Credits
Based on capturing CO2**

Credits generated from the increased volume of CO2 captured due to tree growth and other factors

**② Avoidance Credits
Based on avoiding emissions and storing carbon**

Credits generated from skillful forest management, which controls the amount of deforestation to avoid releasing the carbon stored in the trees

* DACCS: Directly capturing CO2 in the atmosphere and storing it
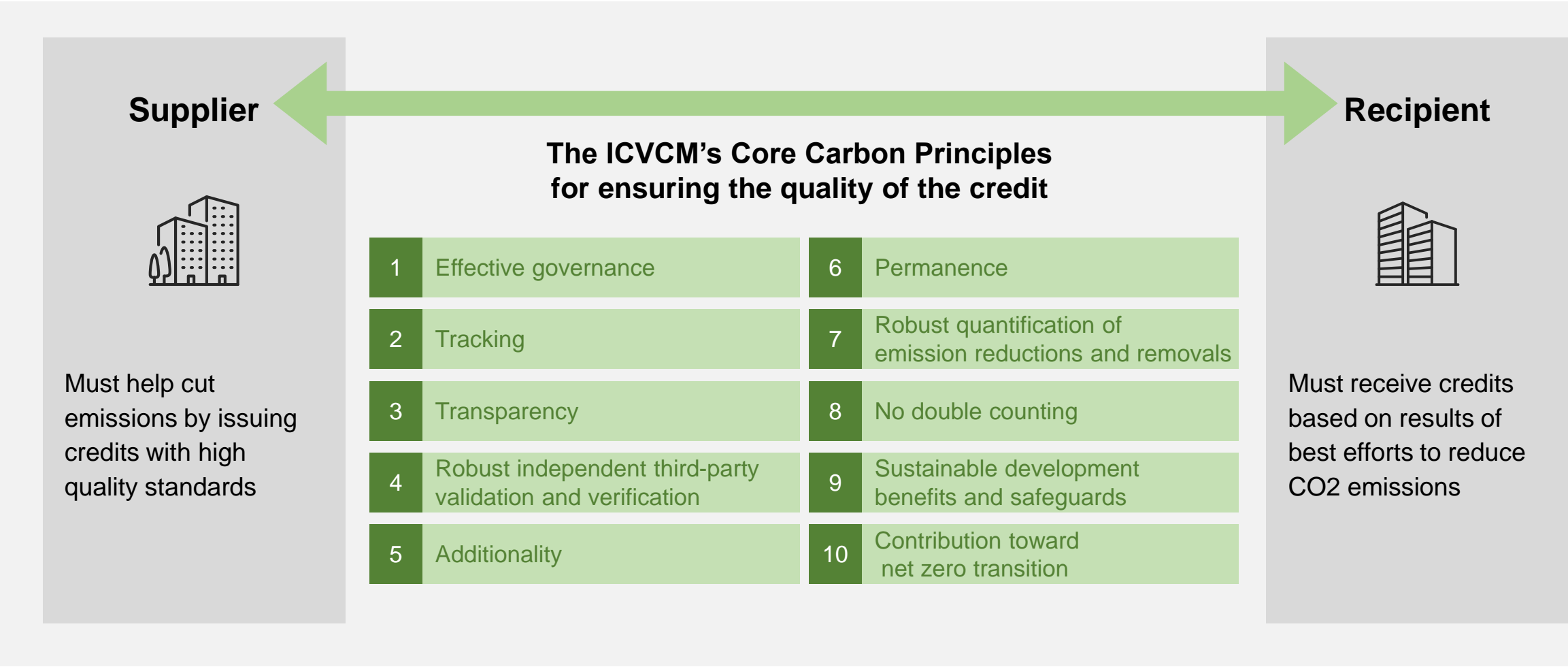** BECCS: Biofuels + CCS

Approaches to carbon credit generation

The gap between the baseline (the volume of captured and stored carbon based on a model that prioritizes wood harvesting) and the project line (the volume of captured and stored carbon based on forest management conducted through our fund) represents the amount of credits that will be generated.

Stored carbon

Project Line

Current volume

1. Credits based on increased capture (Removal credits)

2. Credits based on maintaining the level of stored carbon (Avoidance credits)

Base Line

Years

How to maintain the integrity of our credits

Eastwood Forests shall ensure transparency in regards to the usage of the credits for both the credit suppliers and the recipients so it can manage the fund in a way that meets quality standards.
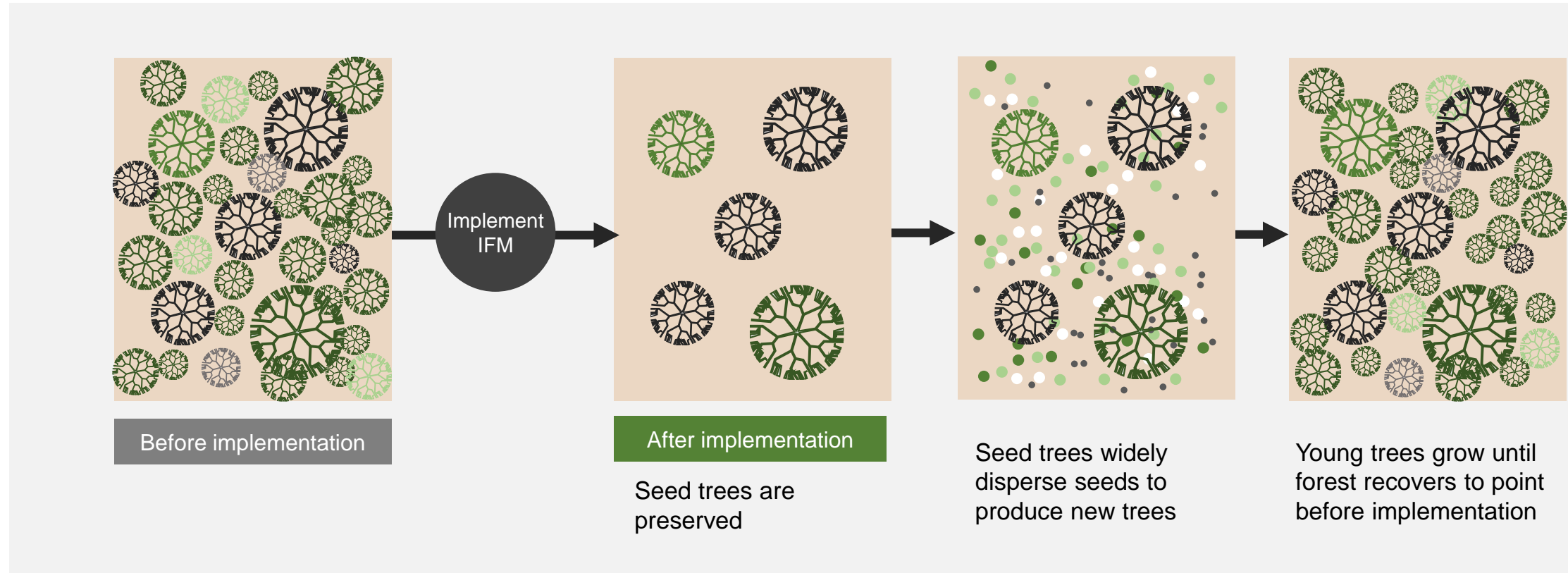
Supplier ← → **Recipient**

The ICVCM's Core Carbon Principles for ensuring the quality of the credit

1	Effective governance		6	Permanence
2	Tracking		7	Robust quantification of emission reductions and removals
3	Transparency		8	No double counting
4	Robust independent third-party validation and verification		9	Sustainable development benefits and safeguards
5	Additionality		10	Contribution toward net zero transition

Must help cut emissions by issuing credits with high quality standards

Must receive credits based on results of best efforts to reduce CO2 emissions

Method for ensuring the quality of the credit

Choose forest management methods such as IFM that are optimized towards that goal
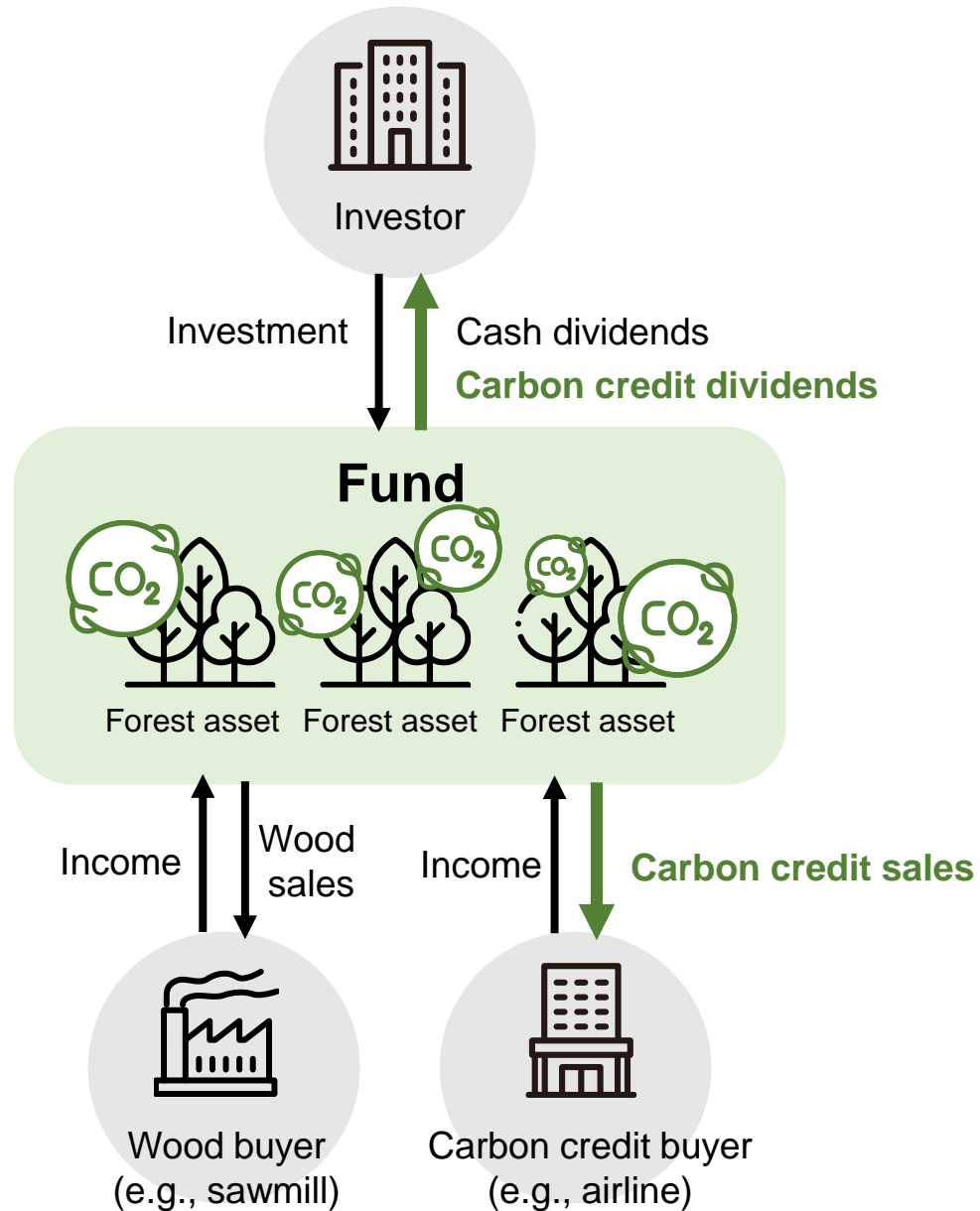
IFM, or improved forest management, involves improving forest management practices to produce more forests, leading to increased volumes of captured and stored carbon that can be used to generate carbon credits. It is entirely different from the aggressive management practice of harvesting every tree offering valuable wood.

■ **Example: Producing wood while preserving young trees so the forest will recover faster**

Before implementation

Implement IFM

After implementation

Seed trees are preserved

Seed trees widely disperse seeds to produce new trees

Young trees grow until forest recovers to point before implementation

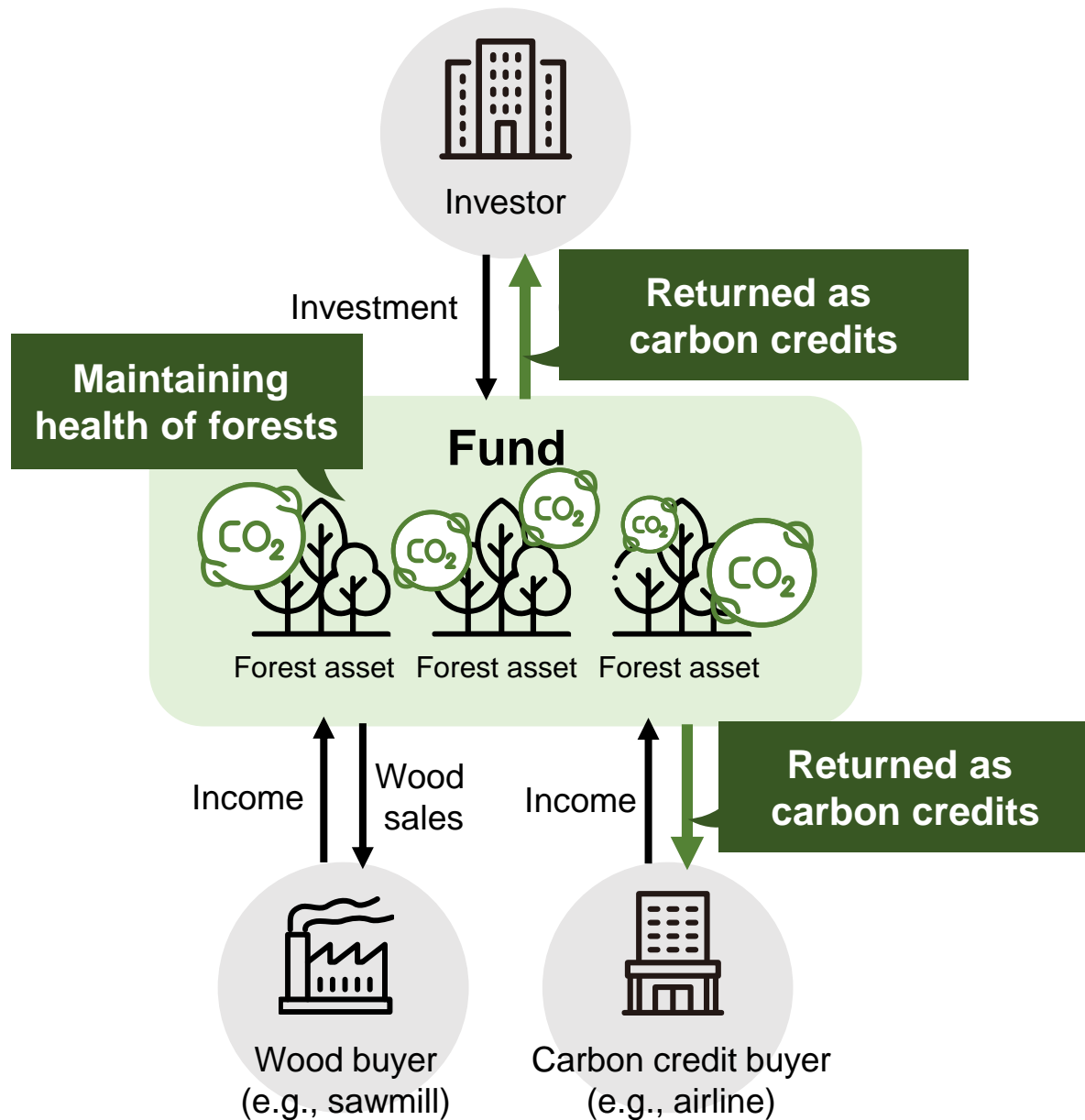Part 2: Our forestry fund

Summary and future goals

**Here is a summary on the key points of the fund.**
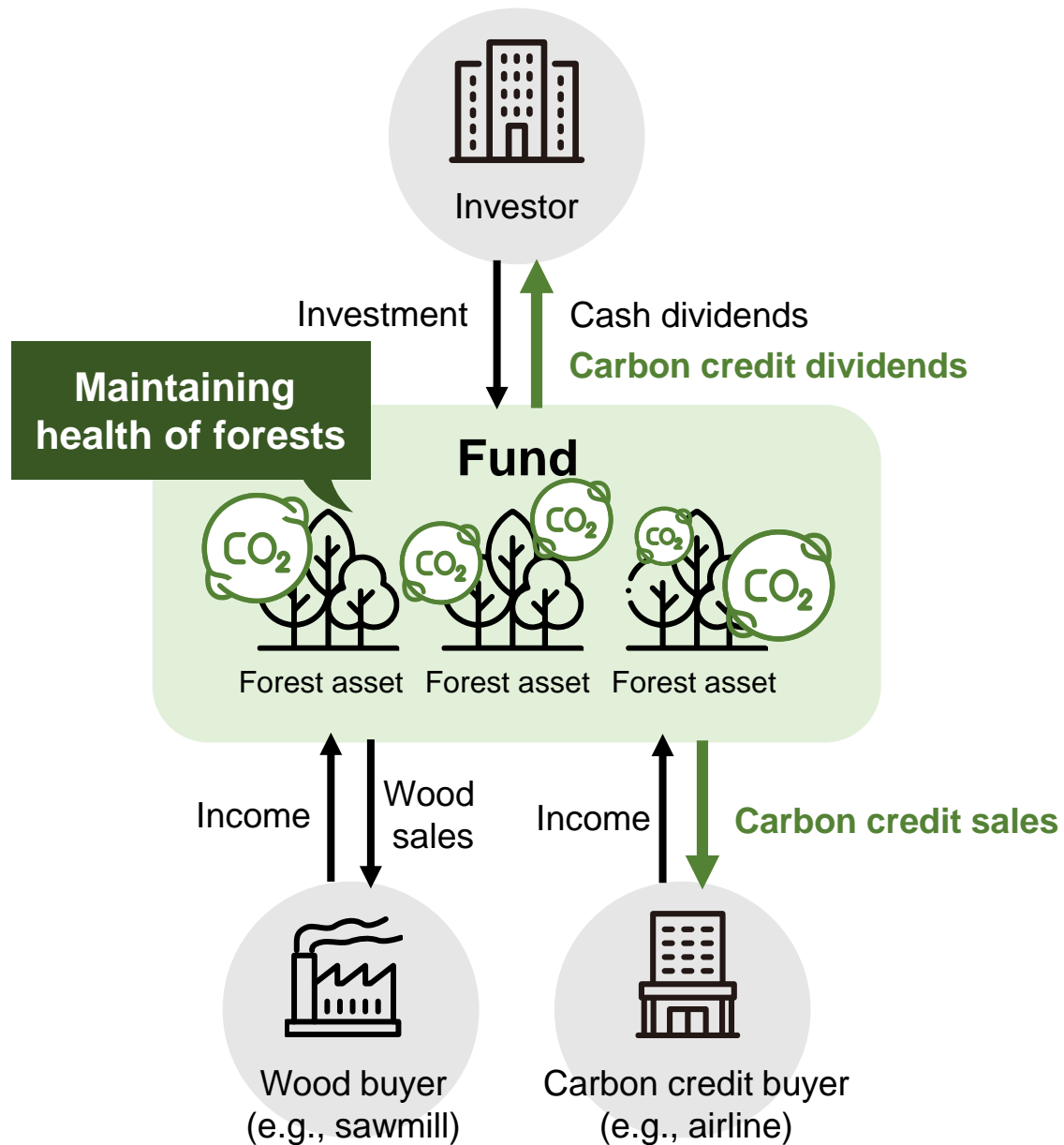
First, the fund will not only generate economic value from wood production but will also benefit the environment by properly managing the health of our forests.
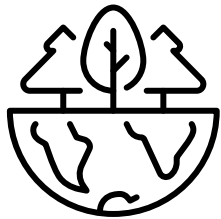
Second, we can maintain a steady level of captured CO2, which we can use to help our investors offset their own carbon-emitting activities.

Finally, because healthy forests promise more wood production, the fund will make us more competitive overall, even in the wood and construction sectors.
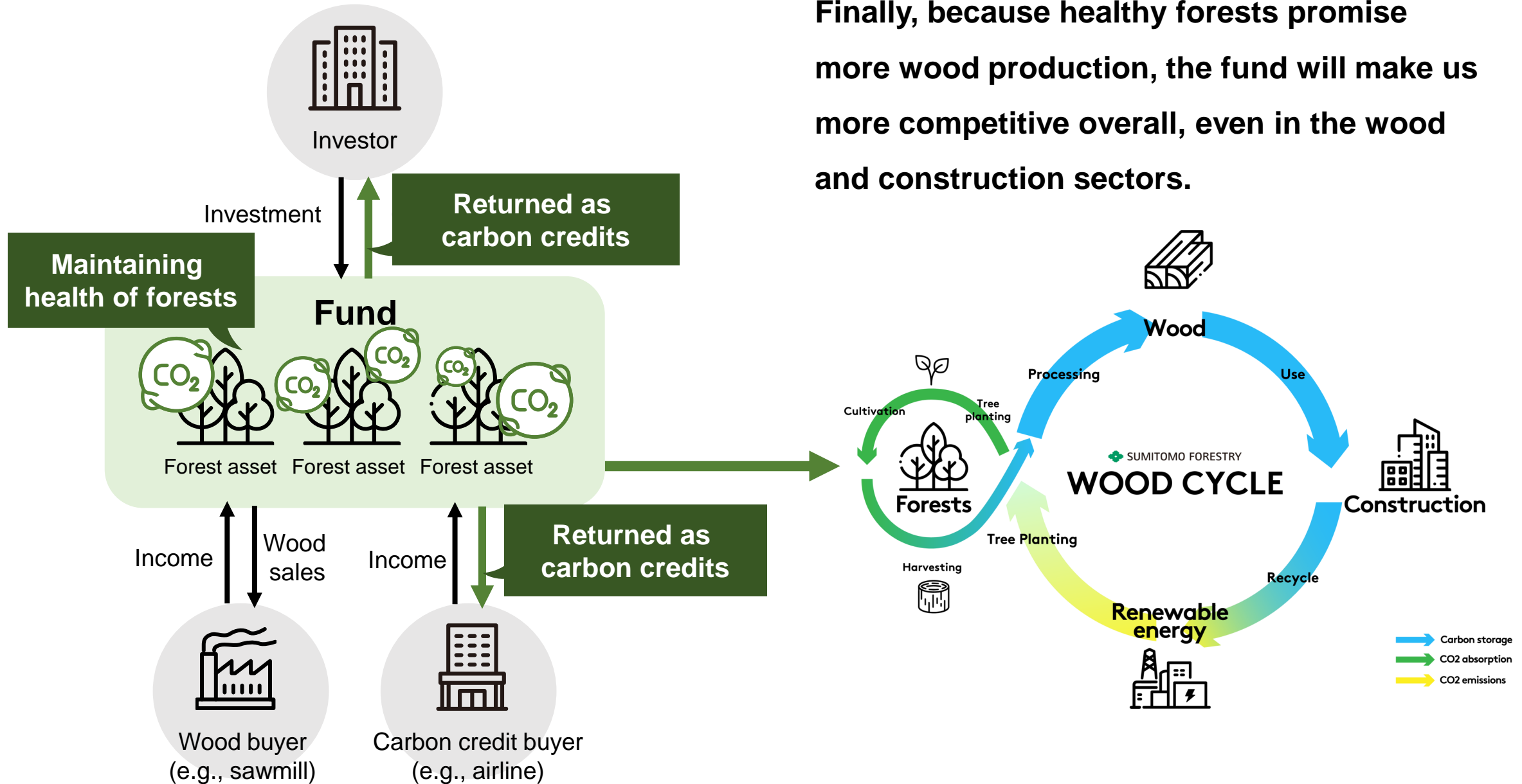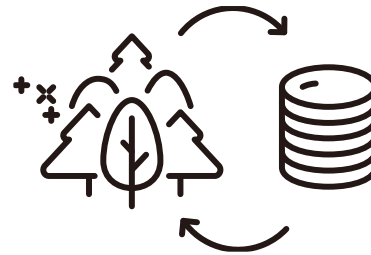
Future goals

Expansion to other markets

Expand the fund to forestry businesses in Japan, Asia, and Oceania. (Currently looking into a few options, including Indonesian tropical peatlands)

A forestry fund that monetizes natural capital

Develop a framework for the fund that can monetize the value produced by a healthy forest, such as biodiversity conservation.

Incorporate a forest monitoring system that involves observations from space
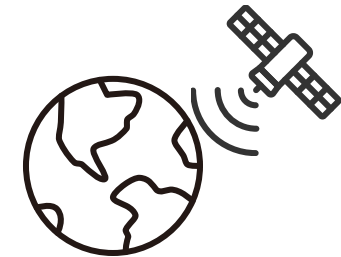
Incorporate NeXT FOREST—a system developed with IHI for monitoring and conserving forests using satellites and drones—into our forest management.
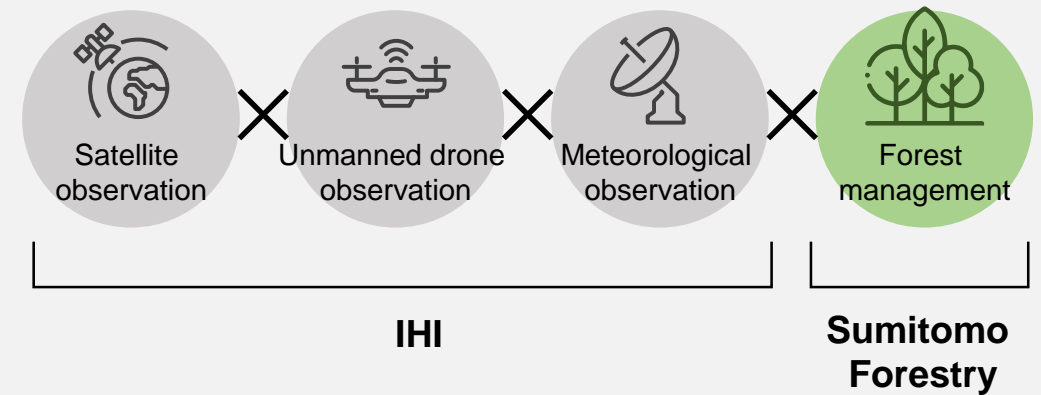
Future goals

We hope to make NeXT FOREST a global standard in forest monitoring so businesses around the world can manage their forests at a higher quality.
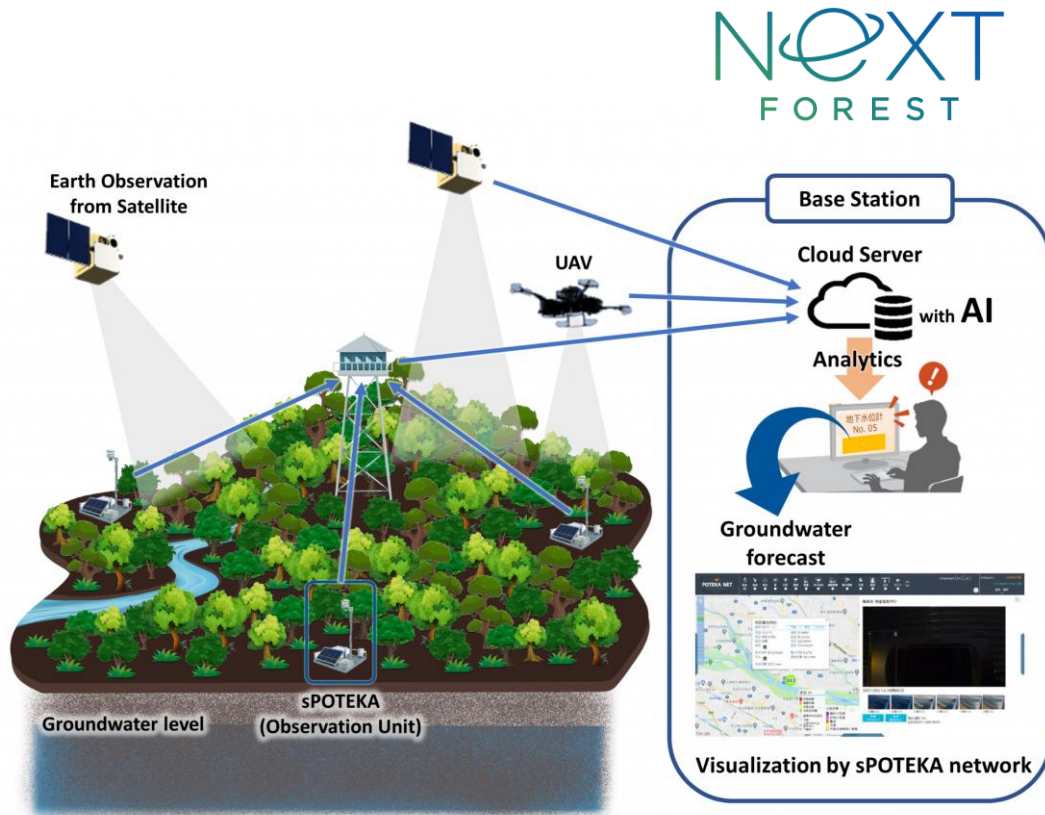
■ **NeXT FOREST**

A product of IHI's satellite and meteorological observation technologies and Sumitomo Forestry's forest management expertise, this system will be deployed around the world to help us monitor and conserve our forests.

Satellite observation × Unmanned drone observation × Meteorological observation × Forest management

IHI | **Sumitomo Forestry**

Numerical goals by 2030

Assets

10 billion **JPY**

Acreage of owned / managed forests

500,000 **ha**

WOOD CYCLE — Sumitomo Forestry

- Forests — Cultivation, Tree planting, Harvesting
- Processing → Wood
- Use → Construction
- Recycle
- Renewable energy
- Tree Planting

Legend:
- Carbon storage
- CO2 absorption
- CO2 emissions