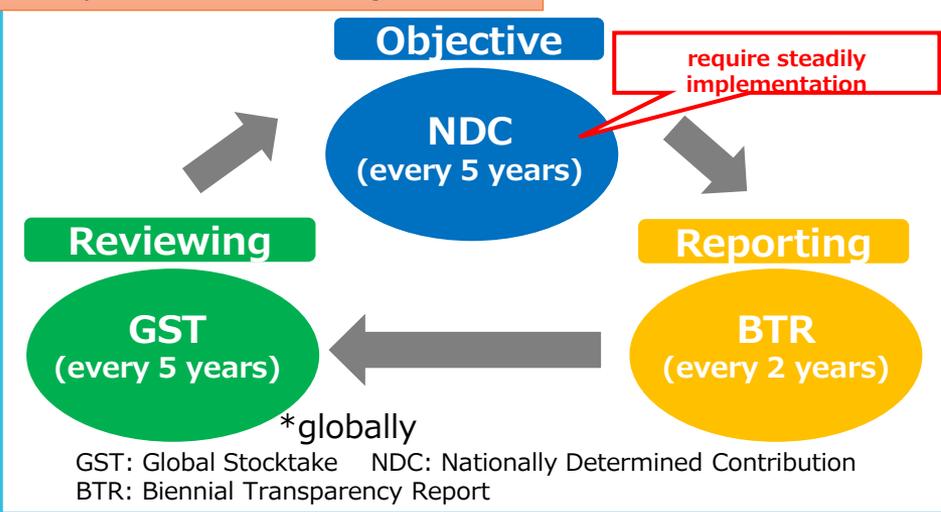


Cooperative Actions for NDC Implementation and Transparency Enhancement

(18th Nov 2024, Government of Japan)

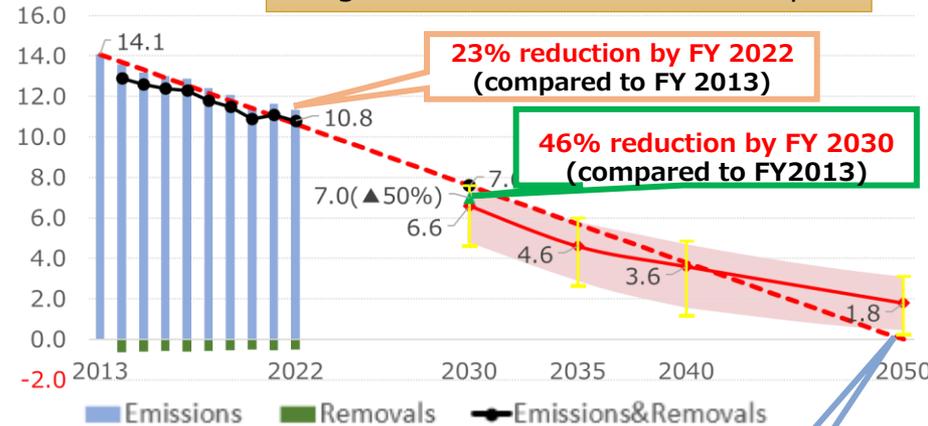
- Parties need to submit **1.5°C aligned ambitious NDCs**, considering the outcomes of the Global Stocktake, by February 2025.
- Mitigation is not just about setting ambitious targets in NDCs. It is a **continuous activity that only has an effect if it is implemented steadily, and targets are achieved**.
- Japan will promote **cooperative actions** internationally, in line with this initiative, so that parties can steadily implement mitigation measures based on their NDCs, ensure transparency, and share their progress globally.

Components of Paris Agreement



(unit: 100 million tons CO₂)

Progress in GHG Emissions in Japan



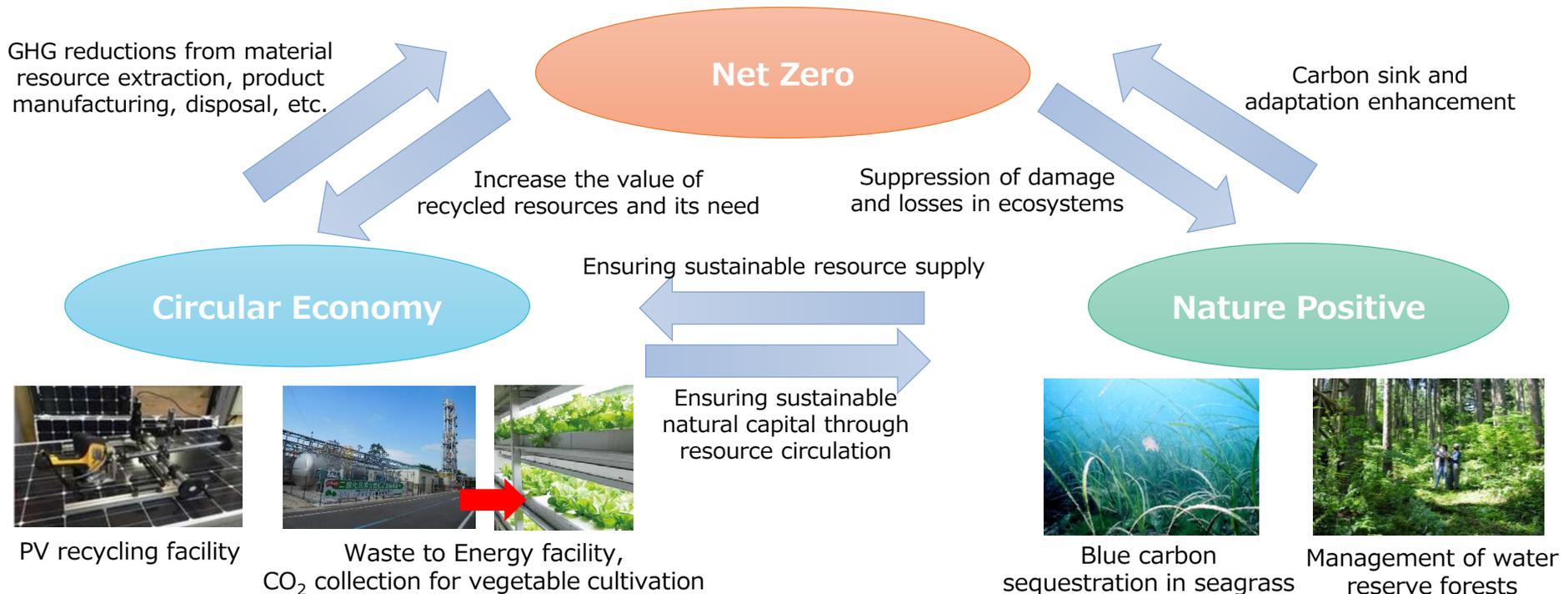
facilitate NDC implementation and transparency enhancement

- Synergy Approach for Mitigation Purposes
- Expanding Mitigation through Market Mechanisms
- Enhancing Global Transparency on Mitigation

Japan set its NDC consistent with the 1.5°C goal of the Paris Agreement and is "on track" toward its NDC and 2050 net zero goal. Japan clarified its mitigation efforts through its BTR, submitted well ahead of COP29.

Cooperative Action 1: Synergy Approach for Mitigation Purposes

- Parties need to reduce GHG emissions in all areas towards the net-zero goal. **A synergy approach that contributes to net zero through circular economy and nature positive**, under the three COPs (UNFCCC, UNCBD, UNCCD), will promote mitigation in a cost-effective manner. This approach will also contribute to adaptation and economic security.
- Japan will facilitate in-depth mitigation efforts through a synergy approach, considering the **“Resolution on Promoting Synergies” at UNEA6**, and work with international organizations to summarize and share the best practices of synergies globally.



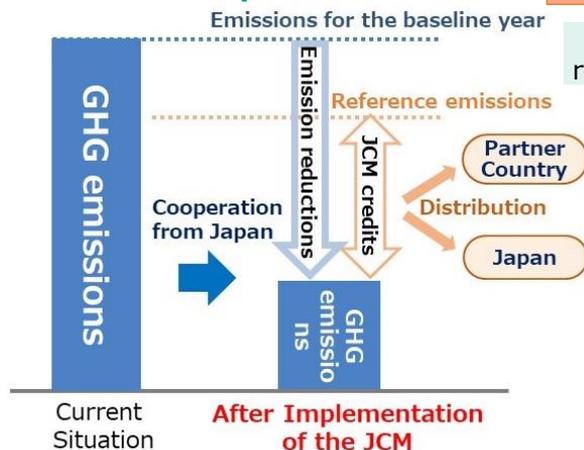
- Japan is promoting an integrated approach that simultaneously achieves net zero, circular economy and nature positive goals across the country through the establishment of Regional Circular and Ecological Spheres.
- As part of this, at least 100 net zero Decarbonization Leading Areas will be established that achieve net zero by 2030.

Cooperative Action 2: Expanding Mitigation through Market Mechanisms

- Worldwide expansion of superior decarbonization technologies will accelerate GHG emission reductions where marginal abatement costs are low. **Article 6 of the Paris Agreement**, which creates a high-integrity carbon market and encourages the mobilization of private funds for decarbonization technologies, expands mitigation globally through cooperation between countries.
- Japan will accelerate mitigation projects in **JCM (Joint Crediting Mechanism)** partner countries, utilizing **AZEC (Asia Zero Emission Community)**, while expecting further progress in the development of operational rules for Article 6 at COP29. Japan will also promote the **measurement and reduction of GHG emissions in global supply-chains**, strengthen collaboration with international organizations, and promote the expansion of mitigation globally.

Basic Concept of JCM

Over 250 JCM projects are conducted with 29 partner countries



Energy recovery and methane reduction by waste to energy facility



Recovery and destruction of fluorocarbons from refrigerators



GHG reductions including methane and fluorocarbons

Capacity building in Article 6



Capacity building in GHG measurements



GHG reductions in global supply-chains

- Through the appropriate implementation of Article 6 of the Paris Agreement, an additional reduction of up to 4 to 12 billion tons of CO₂ per year will be achieved globally by 2030*1
- The global decarbonization market and private investment will be revitalized, and the market size is expected to be about 50 trillion yen (300 to 400 billion US dollars) by 2030*2

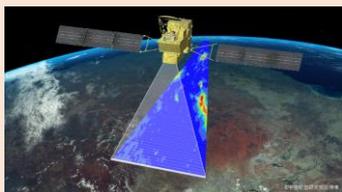
*1 J. Edmonds et al. 2021. How much could article 6 enhance nationally determined contribution ambition toward Paris Agreement goals through economic efficiency? (P.18), Climate Change Economics, UNEP and UNEP DTU. 2021. Emissions Gap Report 2021. (P.59), TSVCM. 2021. TASKFORCE ON SCALING VOLUNTARY CARBON MARKETS Final Report (P.13)
 *2 UNEP and UNEP DTU. 2021. Emissions Gap Report 2021 (P.60), IETA (2021) The Carbon Markets Role of Article 6 Compatible Carbon Markets in Reaching Net-Zero (P.13)

Cooperative Action 3: Enhancing Global Transparency on Mitigation

- For tracking mitigation progress on NDCs, it is essential to ensure the quality of transparency. The BTR is an important document that guarantees transparency, and it is important to improve its quality, including the GHG inventory, and ensure comparability. **Japan's promptly submitted BTR**, as a model, will help developing countries to create their own BTRs.
- Japan will **support BTR preparation for developing countries**, among other things the improvement of GHG inventories, utilizing **GOSAT satellite technology**, and collaborate with Azerbaijan's initiative, **Baku Global Climate Transparency Platform (BTP)**.

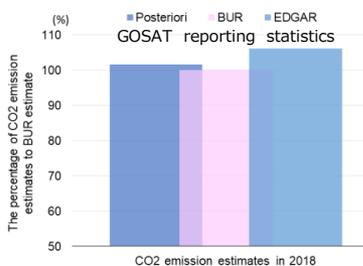
Verification of GHG inventories using satellite technology

- Currently, **GOSAT** and **GOSAT-2** are observing the entire globe
- **GOSAT-GW**, the third satellite, will be launched in due course

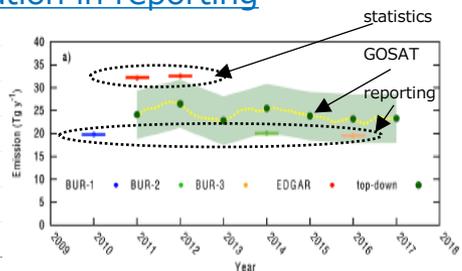


- 10 to 100 times higher resolution
- observe every 160km seamless surface observation
- allows for more accurate emission analysis

GOSAT utilization in reporting



Source Mongolia BUR2 (2023)



Source: India NC3 (2023)

Support for GHG inventories and transparency improvement



Japan submitted BTR well ahead of COP29

WGIA member countries: Bhutan, Brunei, Cambodia, China, India, Indonesia, Japan, Korea, Laos, Malaysia, Mongolia, Myanmar, Philippines, Singapore, Thailand, Vietnam

- Japan has been supporting preparations of GHG inventories and BTRs in the Asian region for many years through detailed hands-on training under the WGIA and capacity-building activities by JICA.
- Japan also provides support for verification of GHG inventories using GOSAT technology. Currently, this support is conducted in the Central Asian region. Japan will contribute to improving transparency by international standardization of emission estimation methods using satellite technology.

Best Practices of Synergy Approach in Japan (1)

Net Zero x Waste Management and Vegetable Cultivation (Saga City)

- In Saga City, household waste is collected, reduced in volume and used **to generate electricity at a waste-to-energy facility**.
- At the facility, after the exhaust gas is purified, the **carbon dioxide gas is separated, collected and transferred to the plant factory** next door.
- At the factory, focusing on the growth-promoting effects of carbon dioxide, it is **used for vegetable cultivation** or algae cultivation that are used as raw materials for cosmetics.



Waste to Energy facility in Saga City



CO₂ collection for vegetable cultivation use

Net Zero x Biodiversity Conservation and Environmental Education (Hannan City)

- The Seven-Eleven Memorial Foundation is promoting **environmental education** for local primary school students at the Hannan Seven Marine Forest.
- The project began in 2006, and various entities including the local government, fishing cooperatives, NPOs and citizens have been working together to support students, who have successfully **preserved more than 1 hectare of eelgrass beds**.
- The project aims to improve students' motivation by **calculating the amount of CO₂ reduction as blue carbon** through their activities.



Conservation activities of eelgrass beds by local primary school students

Best Practices of Synergy Approach in Japan (2)

Net Zero x Data Center (Ishikari City)

- In the Ishikari Bay New Port area, **renewable energy is supplied to the data center** located there, which has high power consumption, supplied from solar, woody biomass, and offshore wind power generation facilities.
- Ishikari City has recognized **the high renewable energy potential** of the area as a local advantage and is aiming to further establish industrial facilities.
- Now, a council consisting of forestry cooperatives and businesses was established to promote **local production and consumption of renewable energy**, especially for woody biomass fuel for power generation.



Offshore wind power generation
at Ishikari New Port



Kyocera Zero
Emission Data Center

Net Zero x Local Public Transportation (Ueda City)

- Ueda Electric Railway Bessho Line has constructed a **self-operated microgrid** that utilizes railway power transmission facilities, which provide renewable energy for train operation.
- A local energy company has introduced **solar power generation, supplying renewable energy to residents living along the line**, and giving them points that can be used to ride the train.
- For local lines that are running at a loss, which is a nationwide issue, the company **aims to reduce electricity costs and promote its use** by residents.



Ueda Electric Railway
Bessho Line

Best Practices of Synergy Approach in Japan (3)

Net Zero x Agricultural Land Regeneration (Sosa City)

- Sosa City established an **agricultural management model** that generates income from the sale of **solar power on farmland**, is promoting high profitability and securing new farmers.
- The electricity from the solar power generation system is supplied to customers by the **local power company** "Shiosai Denryoku"
- Their know-how is shared within and outside the city through the **Solar Sharing Academy**, which is organized by "Citizen Energy Chiba".



Solar sharing facility



Demonstration of perovskite solar cells for agricultural use



Net Zero x Forestry and Recycling Organic Waste (Maniwa City)

- Maniwa City established an additional **woody biomass power plant**, which ensures stable demand for a certain scale of wood and revitalizes the wood-related industry.
- In addition, a new **organic waste recycling facility** was built, which provides **biogas electricity** generated by methane fermentation, and **liquid fertilizer**, produced from the digested liquid, with local farmlands.
- By recycling organic waste, **40% of waste will be reduced**, and the cost of waste disposal and CO₂ emissions will also be reduced.



Woody biomass power plant



Organic waste recycling facility

Best Practices of Synergy Approach in Japan (4)

Net Zero x Abandoned Land Use and Resilience (Yonago and Sakaiminato City)

- Gogin Energy Corporation, a PPA operator newly established by a local power company and local bank, is **introducing solar power generation systems to public facilities and abandoned farmland**.
- By making effective use of abandoned farmland, they are working to **resolve local issues** such as the deterioration of the landscape due to increased weeds and the occurrence of harmful insects.
- In addition, they have installed solar power generation and storage batteries to a water supply facility, which enables electricity supply even in the event of disaster and **enhances resilience**.



Abandoned farmland



Harmful insect



PV cells facility on abandoned land

Net Zero x Tourism and Resilience (Matsue City)

- Matsue City is working to **improve resilience to natural disasters** and its **brand power as a tourist destination**, while also preserving its historic landscape and reducing CO₂ emissions.
- In addition, **high-efficiency heat pump** hot water supply systems and **solar carports** have been introduced at hot spring and accommodation facilities.
- The city is working to **electrify boats** at Horikawa, adjacent to Matsue Castle, introduce **green slow mobility** at tourist spots, and provide personalized travel products using J-Blue Credit.



Matsue Castle



Electric motor boat at Horikawa