

**Ocean and Climate Change Dialogue 2026**

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**Blue carbon ecosystems in Japan's NDC  
and its implementation**

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10 June 2026

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# Blue carbon and Japan

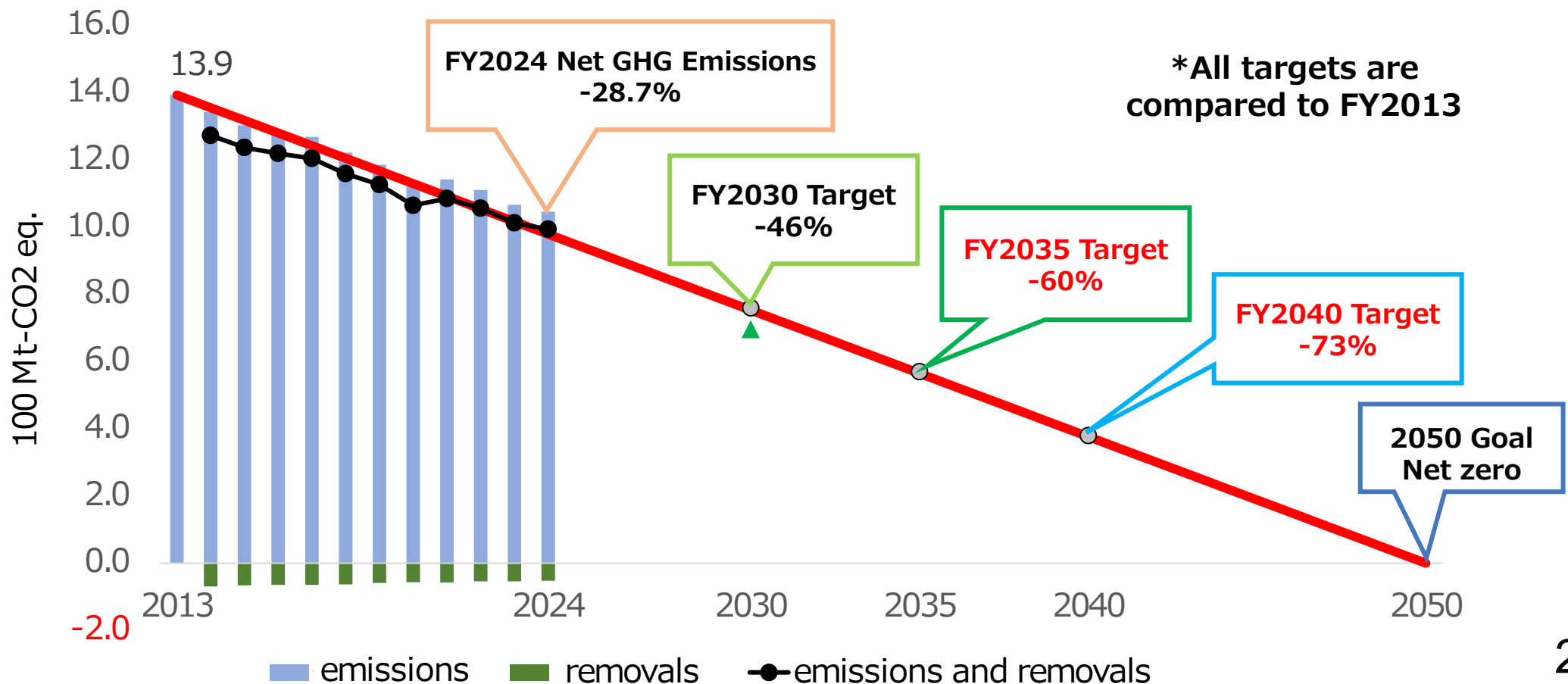
- Seaweed has been consumed as food for a long time.
  - Used for paying national taxes (8th century).
  - Dried seaweed, Nori, became popular among people (17th century).



# Japan's GHG Emission Reduction Targets



- Japan will pursue efforts to steadily reduce its GHG emissions on a **linear pathway from FY2030 target towards the achievement of net zero by 2050.**
- As for the new NDC, Japan sets ambitious targets to reduce its GHG emissions **by 60% in FY2035 and by 73% in FY2040**, from its FY2013 levels, **aligned with the global 1.5°C goal.**
- These targets will **increase** medium and long-term predictability and **accelerate Green Transformation (GX) investments, towards simultaneous achievement of net zero and economic growth.**



# Blue carbon in Japan's NDC 3.0



## 3. Scope and coverage:

(a)	General description of the target;	...
(b)	Sectors, gases, categories, and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;	<p>&lt;Sectors of Coverage&gt;            All sectors and categories encompassing the following:</p> <p>(a) Energy            ...</p> <p>(f) Others included in the GHG inventory            - Activities related to contributions from the LULUCF sector: (afforestation and reforestation (AR), deforestation (D), forest management (FM), cropland management (CM), grazing land management (GM), urban greening (UG), and <b>coastal wetlands (BC)</b>)</p>

# Blue carbon in the Plan for Global Warming Countermeasures



	FY2013	FY2030	FY2035	FY2040
<b>Expected LULUCF contribution to NDC</b> [kt-CO <sub>2</sub> ]	—	-47,740	-90,990	-84,240
Forest carbon sinks	—	-38,000	-80,000	-72,000
Carbon removals in agricultural soils and etc.	—	-8,500	-8,750	-9,000
Urban greening	—	-1,240	-1,240	-1,240
<b>Blue Carbon</b>	—	—	<b>-1,000</b>	<b>-2,000</b>

. . . The estimation methodologies for the carbon removals/sequestration of blue carbon ecosystems in Japan have been developed for some ecosystems but not for all. **Japan continues to efforts developing the estimation methodologies** for other blue carbon ecosystems to reflect them in GHG inventory and will lead international rule making in this area. . . . In addition, with regard to **offshore blue carbon**, which has great interest as an sinks of removal, **Japan will examine the possibility of initiatives to sequester carbon** by producing and cultivating seaweed, sequestering them in the deep sea, and estimating and assessing the carbon sequestration amount and also considering their use as bio-resources.

# New Estimation of Blue Carbon Ecosystems in Japan (Seagrass Meadows and Seaweed Beds)



- For the first time in the world, **Japan estimated and reported removals in seagrass meadows and seaweed beds in April 2024** (approximately 0.35 Mt-CO<sub>2</sub> in FY2022), as an initial comprehensive estimate at the national scale.
- From FY2025, Japan has initiated studies to **develop methodologies for the quantification and assessment of blue carbon in offshore areas**, which are expected to function as significant carbon sinks.
- The **ongoing IPCC methodological report on CDR and CCUS** is expected to provide methodological guidance, potentially including approaches for seaweed.



# Institutional arrangement for including blue carbon in Japan's GHG inventory



**United Nations**  
Framework Convention on  
Climate Change



**GHG inventory preparation**

## Committee for the Greenhouse Gas Emission Estimation Methods conducted by MOE

- Authorizing the methodology of blue carbon sequestration for Japanese GHG inventory to be submitted to UNFCCC

**Estimation of seagrass and seaweed area**

**Development of removal factors**

## Committee for role of blue carbon contributing global warming prevention conducted by MLIT

- Considering technical issues such as methodology of blue carbon sequestration and system for data collection

## Agriculture, Forestry and Fisheries Research Council conducted by FA

- Developing methodology, parameter and collecting data for carbon sequestration through seagrass and seaweeds beds
- Published a guidebook in 2023

# Multiple benefits and multiple stakeholders



## Multiple benefits

### Environment

#### Climate Change mitigation

- carbon storage
- carbon cycle

#### Biodiversity Conservation

- marine environment
- fisheries environment

### Economy

#### Regional Development

- maintaining local industry
- community revitalization

### Society

#### Fostering Environmental Awareness

- environmental education
- Environmental Training

## Multiple stakeholders

#### Governments

- Local
- Environment
- Land, Infrastructure, Transport, Tourism
- Fisheries

#### NGOs

#### Fishery Cooperative Association

#### Companies

#### Community

#### Education/ Research Institutes

# Enablers to promote blue carbon activities

- Local actions are supported by various stakeholders because blue carbon has multiple benefits.
- GHG Inventory provides scientific basis to these actions.

## Financial/Tech Support

- "Creating Satoumi\* Model Project": MOE has selected **41 projects** and financially supported since 2022.
- \*Marine and coastal environment along with human settlements
- MAFF supports local actions. In FY2021, **>400 organizations, >58 kha** seaweed beds or tidal flats.

## Law/Vision

- **Law** for the Promotion of Activities to Enhance Biodiversity in Local Communities.(in 2024)
- **Future Vision** of Seaweed Beds and Tidal Flats (**FA**, revised in 2023)

## Carbon Credit

- **J Blue Credit®**: operated by Japan Blue Economy association (**JBE**), which was authorized by **MLIT**.

## GHG Inventory

- **Mangroves** are Reported in April 2023
- **Seagrasses/Seaweeds** are Reported in April 2024

## Inter-Ministry / International Cooperation

- **Blue Carbon Liaison Council** with relevant ministries to share information on initiatives by private sector and ministries.
- MOE became a member of **International Partnership for Blue Carbon (IPBC)**.

## Local Action

- **Conservation** activities
- **Creating** seaweed
- **Environmental education**

## Multiple Benefits

- Biodiversity ■ Water Quality ■ Tourism ■ Landscape ■ Fisheries
- Education ■ Food ■ Biofuel and ■ Climate Change Mitigation...etc. 8

# Case Study on Blue Carbon Initiatives in Japan



Sharing knowledge and experience on 45 local initiatives on:

- Improvement of water bottom quality
- Cultivation
- Seaweed bed creation
- Environmental education
- Restoration of fishing grounds etc.

