Case study on Climate-biodiversity Synergy in Japan

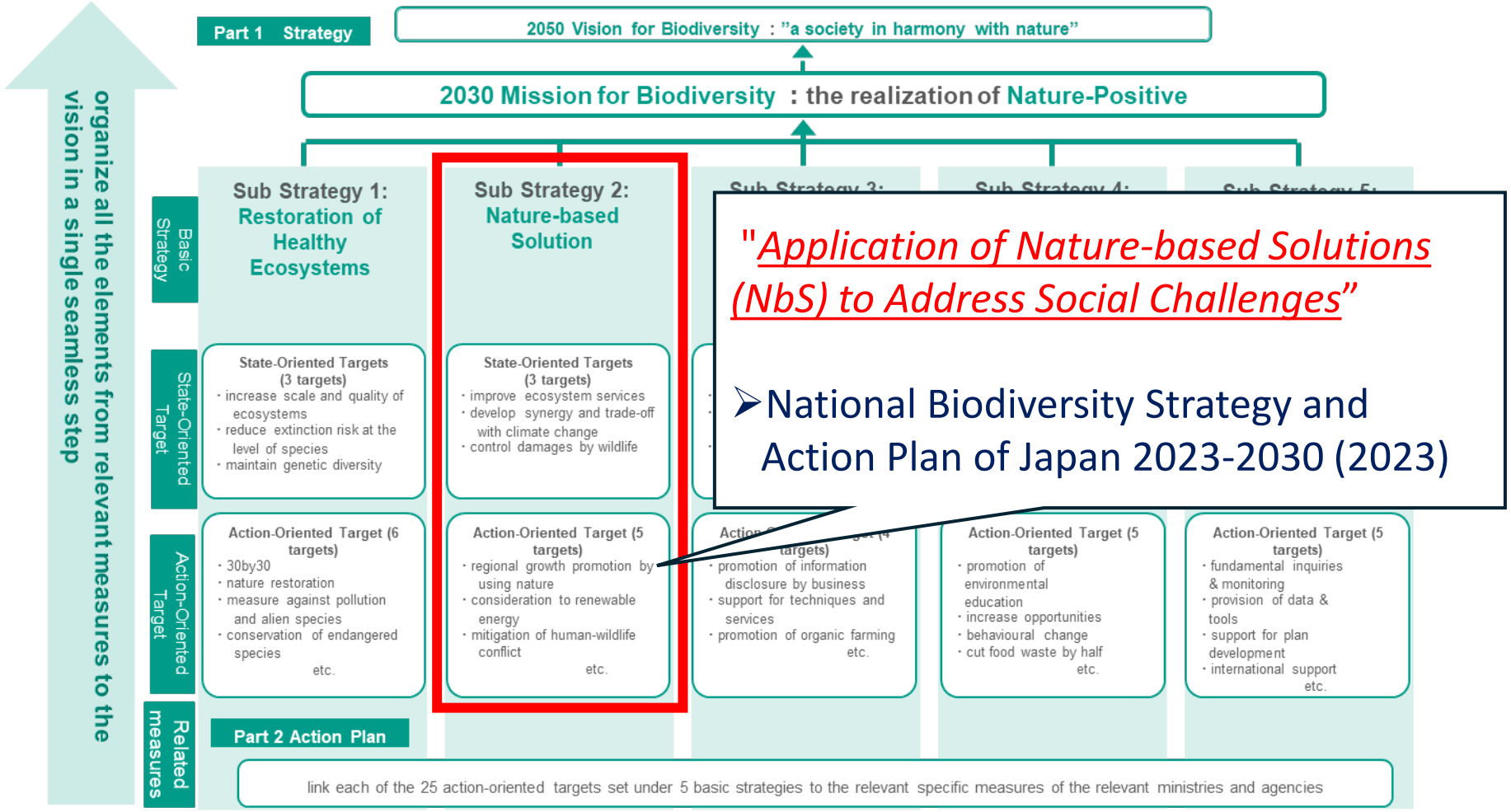
13 November 2025

Ministry of the Environment, Japan

NbS in the National Strategies and Plans

"Incorporating/Promoting NbS initiatives to create business and job opportunities"

- Climate Change Adaptation Plan (2021, 2023) /Plan for Global Warming Countermeasures (2021)



"*Application of Nature-based Solutions (NbS) to Address Social Challenges*"

- National Biodiversity Strategy and Action Plan of Japan 2023-2030 (2023)

Handbook and Guide for Eco-DRR

- In order to promote Ecosystem-based Disaster Risk Reduction (Eco-DRR), which is a part of NbS, Ministry of the Environment published Handbook and guide for Eco-DRR.

Ecosystem-based Disaster Risk Reduction in Japan - a handbook for practitioners- (2016)

A Guide to Eco-DRR Practices for Sustainable Community Development (2023)

Eco-DRR: Potential Map of Japan

- Japan is vulnerable to natural disasters, including earthquakes and tsunamis, landslides, floods and tropical cyclones. In this context, **Eco-DRR is also considered as one of the most important applications of NbS approaches**.
- This potential map has been developed as a tool for **visualising areas where conservation and restoration of ecosystems could contribute to disaster risk reduction (areas with "Eco-DRR potentials") as well as enhancing other ecosystem services**.

  In March 2023, a guide outlining how to create and utilise an 'Potential Map of Ecosystem Conservation/Restoration for Eco-DRR', as well as a national scale base map, were published.

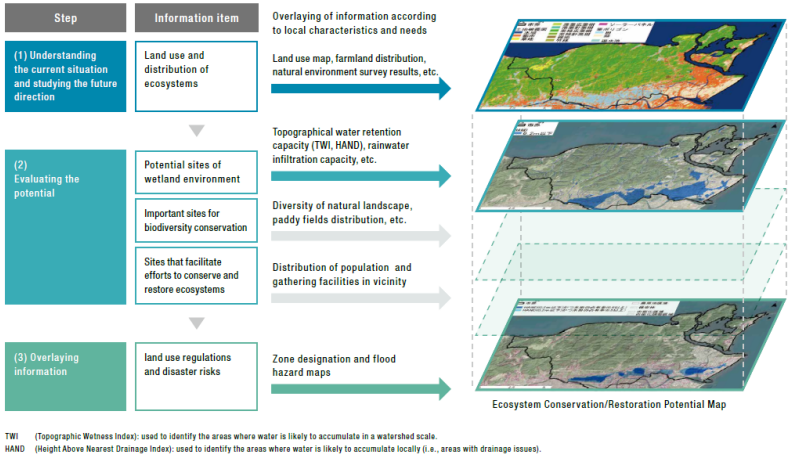
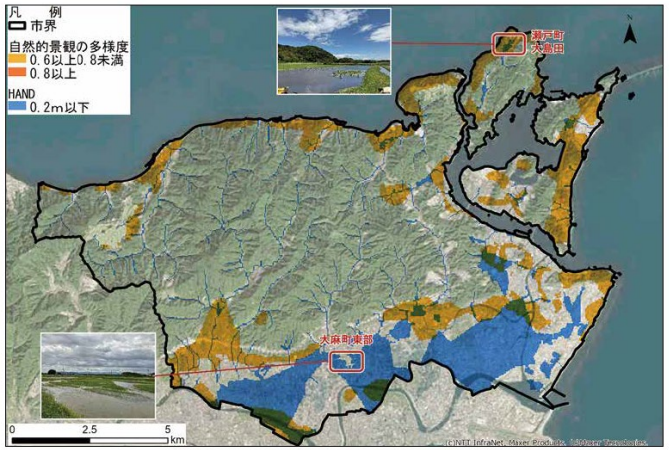


Image of Potential Map



Ex) To evaluate activities in areas where temporary retention of rainwater can be expected:

A case of the Potential Map

Case Study on Blue Carbon Initiatives in Japan

https://www.env.go.jp/en/earth/ondanka/blue-carbon-en.html#index

45 local initiatives

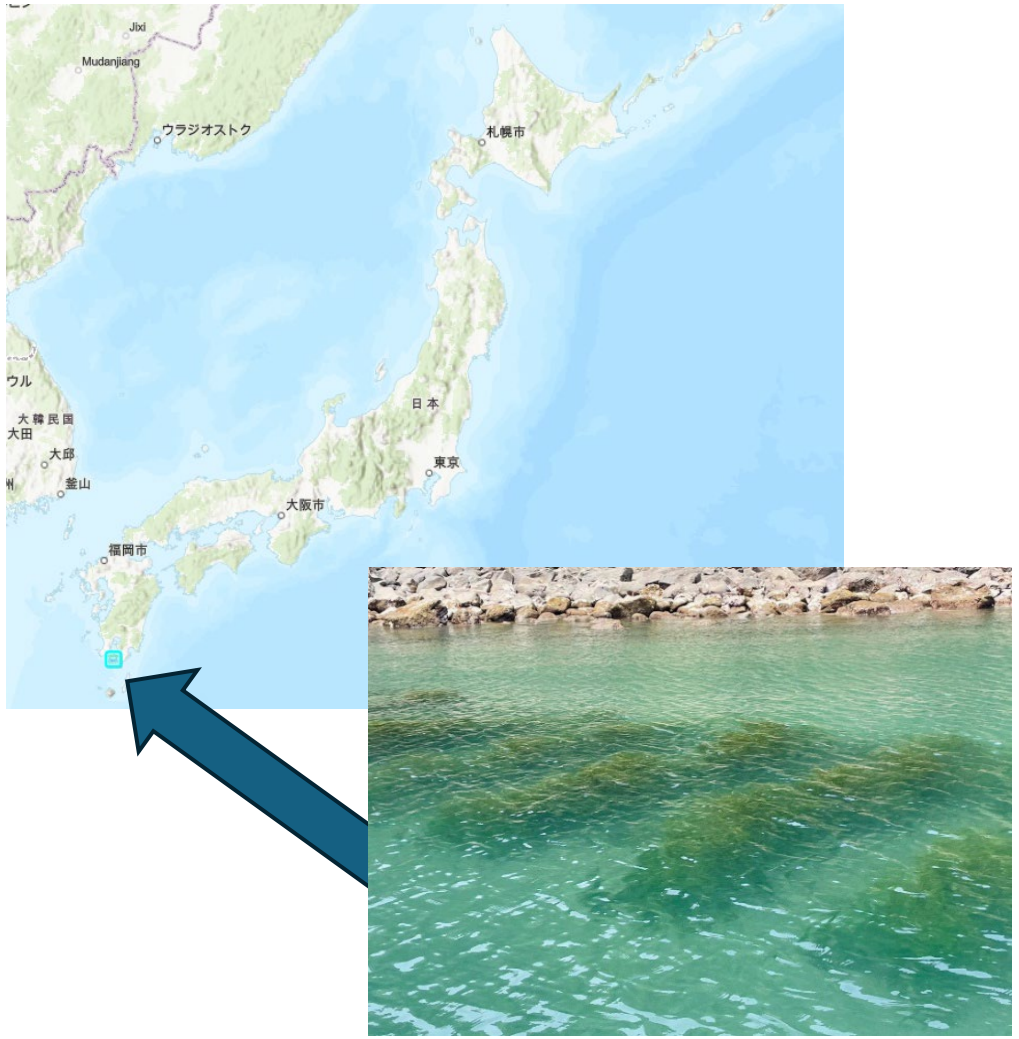
- Improvement of water bottom quality
- Cultivation of seagrass vegetation
- Seagrass bed creation
- Environmental education
- Restoration of fish habitat & fishing grounds, maintaining fish stocks etc.

Sharing knowledge and experience on local initiatives

-Activities, results, challenges, opportunities, actors and participants, sustainability, economic effects/incentives

Yamagawa "sea cradle" blue carbon project

- Location: Coastal shore of Kagoshima Prefecture, Japan
- Beneficiaries: Local fisheries cooperatives & Yamagawa Blue Carbon Project Council
- Challenge: Decline of seagrass beds (Zostera marina) — only 11.6% of 2006 levels remain
- Goal: Restore eelgrass beds as fish nurseries to revive local fisheries



eelgrass bed

Actions and Impacts

Key Actions:

- Installation of 200m anti-predator nets (5,000 m^2 restored)
- Marine debris removal & sea urchin control
- Continuous monitoring of seagrass recovery
- Recognised as Japanese OECM site

Eelgrass beds recovering through conservation activities

Main Outcomes and Impacts:

- Fisheries and local economy: +200 million JPY/ha/year value
- Climate change mitigation: 0.4 tC fixed annually
- Biodiversity recovery: Return of sea turtles, bigfin reef squid
- Water Quality: Nutrient absorption worth 40 million JPY/ha/year
- Social and Educational value

Loggerhead turtle laying eggs

Thank you for your attention.