

The background is a vibrant, stylized illustration of a sustainable city. It features a winding river, green buildings with solar panels, a large white swan in the upper left, and various green spaces and trees. The overall theme is environmental friendliness and biodiversity.

The Biodiversity Strategy of the Ministry of Agriculture, Forestry and Fisheries

March 2023

MAFF

Ministry of Agriculture, Forestry and Fisheries

Background of the revision

[Background]

- Adoption of the **Sustainable Development Goals (SDGs)**
- Widespread recognition of the value of biodiversity in generating natural capital. It is pointed out that food systems contribute up to 80% to biodiversity loss
- The relationship between **business and biodiversity** is growing (G7 “2030 Nature Compact,” establishment of TNFD, etc.)

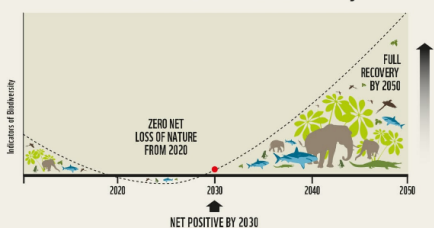
[New Goals Surrounding Biodiversity]

- Formulating the **MIDORI Strategy** (May 2021) and setting the targets for 2050 and mid-term targets for 2030 to enhance both productivity potential and sustainability in food, agriculture, forestry, and fisheries industries.
- Adoption of a new global target toward 2030 **"Kunming-Montreal Global Biodiversity Framework"** in the CBD/COP 15 (December 2022)



Need to indicate **the biodiversity issues in agriculture, forestry, and fisheries over the next 10 years and the direction of the measures for them to be taken across the supply chain**

Global Goal for Nature: Nature Positive by 2030



Nature Positive Conceptual Diagram

Vision for 2030 and Basic Policies

Vision for 2030

A society in which the environment and economy circulate and improve, taking advantage of the natural blessings nurtured in rural areas

Basic Policy

- (1) **Conserve biodiversity and ecosystem services in rural areas**
- (2) **Reduce the impacts of agriculture, forestry, and fisheries on the global environment, contributing to its conservation**
- (3) **Make efforts throughout the supply chain**
- (4) **Promote understanding of biodiversity and behavioral change**
- (5) **Pursue the greening of policy approaches**
- (6) **Strengthen the implementation system**

Direction of policies

(Global environment)

Understand environmental issues such as biodiversity and climate change **in an integrated manner, and work together with diverse** domestic and international actors

(Supply chain)

Mainstreaming biodiversity through understanding, action, and cost sharing **throughout the supply chain**

(Agriculture)

Agriculture and livestock industries, and productive technology with more emphasis on biodiversity conservation

(Forests and forestry)

Appropriate management, conservation, and sustainable use of forests to fulfill their multiple functions

(Fisheries)

Conservation and restoration of the marine environment, promotion of resource management, and fisheries and cultural fisheries with consideration for biodiversity

(Wildlife)

Measures to prevent bird and animal damage to agricultural, forestry, and fishery industries and ecosystems, and **alien species management**

(Resource circulation)

Establishing the system of **procurement, distribution, consumption, and resource circulation, considering biodiversity**

(Understanding and behavioral change)

Fostering understanding through “shokuiku”(food and nutrition education) and agriculture, forestry, and fishery experience, and promoting **sustainable production and consumption**

(Agriculture, forestry, and fisheries space)

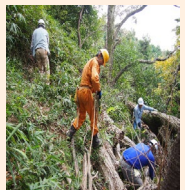
Revitalization of rural areas, conservation through the countryside and “satochi, satoyama, satoumi” (rural landscapes), and **fulfillment of public interest functions** such as landscape and disaster prevention

(Genetic resources)

Conservation and sustainable use of useful genetic resources, ensuring their diversity

(Research and visualization)

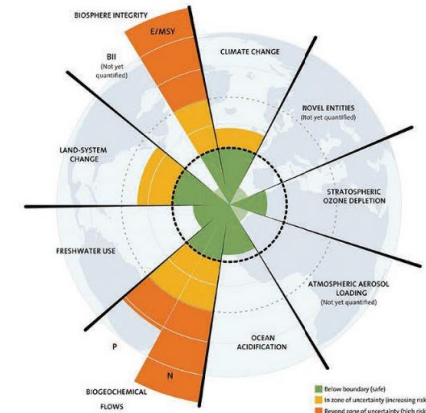
Biodiversity **assessment methods, visualization** of conservation efforts, use in **ESG finance and corporate evaluation**



Circumstances surrounding agriculture, forestry, and fisheries and biodiversity

Background

- Biodiversity is the foundation for a sustainable society and the foundation of food, agriculture, forestry, and fisheries. With the adoption of the Sustainable Development Goals (SDGs) in 2015, the value of biodiversity in generating natural capital, and the idea of "nature positive" have been widely accepted.
- On the other hand, it is pointed out that global biodiversity loss is progressing, and food systems contribute up to 80% to biodiversity loss. In Japan, there is also concern about maintaining biodiversity that has been nurtured through the agriculture, forestry, and fisheries industries
- To realize sustainable agriculture, forestry, and fisheries industries, it is necessary to increase the positive impacts of the industries and reduce the negative impacts. These need to be addressed throughout the supply chain.



Source: Stockholm Resilience Centre HP(illustrated by Johan Rockström and Pavan Sukhdev, 2016).

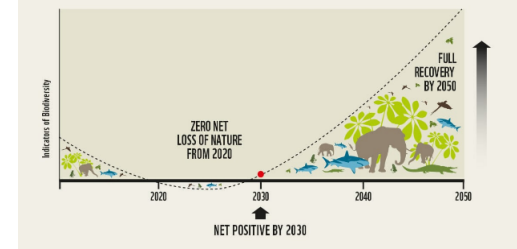
Planetary Boundary

The rate of extinction (biodiversity loss) is said to exceed the critical point of planetary boundary.

[Trends Surrounding Biodiversity]

- The UN Summit adopted the SDGs (2015)
- MAFF Formulated of **the MIDORI Strategy** to enhance both productivity potential and sustainability in the food, agriculture, forestry, and fisheries industries (May 2021)
- Adoption of a new global target toward 2030 "**Kunming-Montreal Global Biodiversity Framework**" in the CBD/COP 15 (December 2022)

Global Goal for Nature: Nature Positive by 2030



Nature positive

The idea is to halt the declining trend in biodiversity and move it toward recovery.

- MAFF formulated a new strategy to map out issues and the direction of measures on biodiversity in the agriculture, forestry, and fisheries over the next 10 years, and reflected this in the new National Biodiversity Strategy formulated by the government (Cabinet decision).

New global goals and targets for biodiversity

- The Kunming-Montreal Global Biodiversity Framework, a new global biodiversity goal with a target year of 2030 as a successor to the Aichi Biodiversity Targets, was adopted at the Fifteenth meeting of the Conference of the Parties (COP 15) to the Convention on Biological Diversity (CBD) in December 2022.

2050 Vision A world of living in harmony with nature

Goals for 2050

- A**
- The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, increasing the area of natural ecosystems
 - Human induced extinction of known threatened species is halted, the extinction rate and risk are reduced and the abundance of native wild species is increased
 - The genetic diversity is maintained, safeguarding their adaptive potential

- B**
- Biodiversity is sustainably used and nature's contributions to people (NCP) are valued, maintained and enhanced

- C**
- The benefits from the utilization of genetic resources and digital sequence information (DSI) on genetic resources, and of traditional knowledge associated with genetic resources are shared fairly and equitably, and substantially increased by 2050, thereby contributing to the conservation and sustainable use of biodiversity

- D**
- Adequate means of implementation to fully implement the Framework are secured, progressively closing the biodiversity finance gap of \$700 billion per year

2030 Mission **Take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery**

Targets for 2030

(1) Reducing threats to biodiversity

1. Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes
2. Ensure that at least 30 per cent of areas of degraded ecosystems are under effective restoration
3. Ensure that at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, are effectively conserved and managed through protected areas and other effective area-based conservation measures (OECM) (30 by 30)
4. Ensure urgent management actions to significantly reduce extinction risk, to minimize human-wildlife conflict
5. Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation
6. Reduce the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent
7. Reduce pollution risks from all sources, including by reducing excess nutrients lost to the environment by at least half, by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, by preventing, reducing, and working towards eliminating plastic pollution.
8. Minimize the impact of climate change through nature-based solution and/or ecosystem-based approaches

(2) Meeting people's needs

9. Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people
10. Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security
11. Restore, maintain and enhance nature's contributions to people (NCP) through nature-based solutions and/or ecosystem-based approaches
12. Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban areas and ensure biodiversity-inclusive urban planning
13. Take measures to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information (DSI) on genetic resources, facilitating a significant increase of the benefits shared, in accordance with Access and Benefit-Sharing instruments (ABS)

(3) Tools and solutions

14. Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting
15. Take measures to enable business, and in particular to ensure that large and transnational companies and financial institutions regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity and promote actions to ensure sustainable patterns of production.
16. Ensure that people are enabled to make sustainable consumption choices to reduce the global footprint of consumption, including through halving global food waste, significantly reducing overconsumption
17. Establish biosafety measures and measures for the handling of biotechnology and distribution of its benefits
18. Identify and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, reducing them by at least \$500 billion per year and scale up positive incentives
19. Increase the level of financial resources from all sources, mobilizing at least \$200 billion per year, including by increasing international financial resources from developed countries, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030
20. Strengthen capacity-building and development, access to and transfer of technology
21. Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public
22. Ensure participation in decision-making by indigenous peoples and local communities, women and girls, children and youth, and persons with disabilities
23. Ensure gender equality through a gender-responsive approach, where all women and girls have equal opportunity and capacity, including by recognizing their equal rights and access to land and natural resources

Vision for 2030 and Basic Policies for the New Biodiversity Strategy of the Ministry of Agriculture, Forestry and Fisheries

Vision for 2030:

A society in which the environment and economy circulate and improve, taking advantage of the natural blessings nurtured in rural areas

- <Basic Policy (i)> Conserve biodiversity and ecosystem services in rural areas**
 - Promote agriculture, forestry, and fisheries in harmony with the environment, in order to protect rich biodiversity and sustainably use ecosystem services
- <Basic Policy (ii)> Reduce the impacts of agriculture, forestry, and fisheries on the global environment, contributing to its conservation**
 - Encourage not only national and local governments, but also supply chain actors to make concerted efforts to address global environmental issues.
- <Basic Policy (iii)> Make efforts throughout the supply chain**
 - Encourage all actors in the supply chain, from upstream to downstream, to work together.
- <Basic Policy (iv)> Promote understanding of biodiversity and behavioral change**
 - Promote the use of environmentally friendly raw materials by each entity in the supply chain and the dissemination of information to consumers.
- <Basic Policy (v)> Pursue the greening of policy approaches**
 - In order for the food, agriculture, forestry, and fisheries industries to be in harmony with the environment, as well as achieving both productivity growth and sustainability, promote the greening of the policy approaches of the Ministry of Agriculture, Forestry and Fisheries.
- <Basic Policy (vi)> Strengthen the implementation system**
 - Promote the use of the “Ministry of Agriculture, Forestry, and Fisheries Biodiversity Strategy” in the core businesses of each actor to achieve balance between environment and economy.

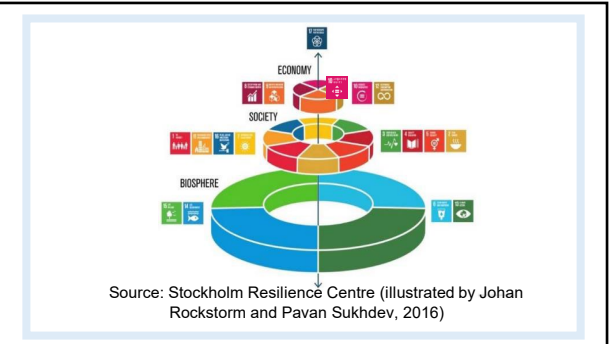
In addition to the **MIDORI Strategy**, implement related measures in an integrated manner, consistent with the **Basic Plan for Food, Agriculture, and Rural Areas**, the **Basic Plan for Forest and Forestry**, the **Basic Plan for Fisheries**, etc.

Contribution of the agriculture, forestry, and fisheries sectors to global environmental conservation

- Work to solve environmental problems, including biodiversity conservation and climate change, in cooperation with a diverse range of domestic and international actors, in an integrated manner.

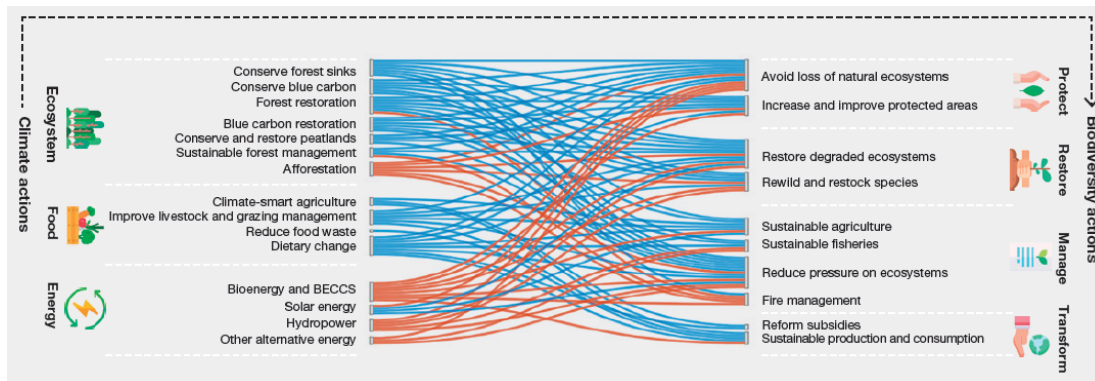
(i) Aim to solve a set of global environment problems at once

- For sustainable development of food, agriculture, forestry, and fisheries, it is essential to simultaneously conserve and regenerate natural capital and use it sustainably.
- Need to consider food security in light of stable supply and sustainable procurement of agricultural products worldwide.
- Encourage each actor in the supply chain to promote integrated efforts, aiming to simultaneously solve multiple global environmental issues.



(ii) Climate change and biodiversity

- Since climate change and biodiversity influence each other, promote integrated efforts to address climate change adaptation and mitigation and biodiversity conservation measures, with attention to synergies and trade-offs.



Synergies (blue) and trade-offs (orange)

Source: IPBES and IPCC (2021). The Scientific Outcomes of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, Figure 7 -2 (p 152)

(iii) Contributions to global conservation and recovery of forest ecosystems

- Promote cooperation in the forest conservation and restoration-in developing regions where deforestation and forest degradation occur due to agricultural land development and exploitative farming.
- Active participation in international dialogues, multilateral assistance through international organizations, and support for technology and human resource development.
- Consider sustainable procurement compatible with global forest ecosystem conservation.

Promoting initiatives to conserve biodiversity in agriculture

- Promote agriculture that preserves biodiversity in rural areas and satochi-satoyama areas, provides a stable food supply, and provides a rich natural environment to the people.

(i) Promotion of agricultural production focusing more on biodiversity conservation

- Reduce the risk of chemical pesticides and reduce the use of chemical fertilizers by recycling organic matter.
- Systematization and dissemination of practical organic farming techniques.

By 2050, MAFF aims to

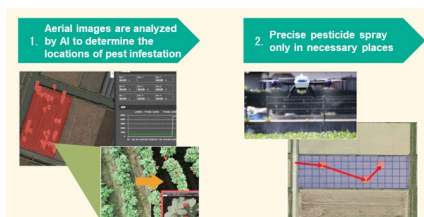
- Reduce the risk-weighted use of chemical pesticides by 50%
- Reduce the use of chemical fertilizers by 30%
- Increase the ratio of organic farming to farmland area to 25% (1 Mha)



Use of idle wastelands to restore biodiversity (Kirin Holdings Mercian Corporation)

(ii) Development and dissemination of agricultural production technologies focusing more on biodiversity conservation

- Support the establishment and spread of cultivation techniques and soil preparation from the perspective of biodiversity conservation, including the demonstration of integrated pest management and the development of smart agriculture technologies focused on environmental conservation.



Reduction of costs and environmental load through pinpoint pesticide spraying with drones

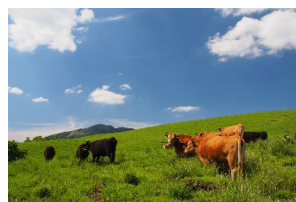
(iii) Promotion of conservation of ecological networks consisting of paddy fields, etc.

- In order to conserve the ecological network consisting of rice paddies, waterways and reservoirs, etc., systematically promote the development of an ecosystem friendly infrastructure.
- Support for efforts to secure water that contribute to ecosystem conservation, including water for the winter flooding.



"Lower Maruyama River and the surrounding rice paddies," registered wetlands under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat

(iv) Promotion of livestock farming focusing more on biodiversity conservation



Globally Important Agricultural Heritage Systems, "Managing Aso Grasslands for Sustainable Agriculture"

- Improve the system to further increase production and use of domestic feed, promote the use of livestock excrement as manure, etc., and produce high-quality manure that meets the needs of crop farmers.
- Support for grassland maintenance and grazing to establish valuable ecosystems and cyclical livestock farming.

(v) Promotion of urban agriculture

- In addition to supplying agricultural products to urban residents, promote urban agriculture in such a way that its diverse functions, such as providing natural space, recharging groundwater, and preserving biodiversity, will be properly and fully realized in the future.

Promoting initiatives to conserve biodiversity in forests and forestry

- Japan is a lush forest country where two-thirds of the country's land is covered with forests. In order to fulfill the multiple functions of forests, including biodiversity, promote the management and conservation of forests and the sustainable use of forest resources.

(i) Conservation of biodiversity through management and conservation of forests

- Promote variety of forest management such as transformation to broad-leaved forest and mixed forests of conifers and broadleaf trees and long-term management, and promote reforestation after harvesting.



Long rotation stand



Mixed forests of conifers and broadleaf trees

- Conservation and restoration of forest ecosystems and protection and management of rare forest ecosystems.
- Protection and management of forest ecological networks by designation of “Protected forests” and “Green corridors” in national forests.
- Designate as protection forests that are particularly expected to fulfill public interest functions.
- While the Government supports the management of forests by forest owners, local municipalities conduct the management of forests whose owners are unable to manage appropriately though the Private Forest Management Entrustment System.

(ii) Contribution through forestry and utilization of domestic forest resources taking biodiversity into consideration

- Promoting forest operations that give consideration to biodiversity through guidelines for forest operations prepared by local governments.
- Further promote consideration of biodiversity in the forestry field by introducing examples of sustainable forest management certification schemes, etc.
- Work for the sustainable and effective use of domestic forest resources by reducing costs, increased use of domestic timber, and development of new materials.



Reserve tall, natural trees during clear-cutting



CLT (Cross Laminated Timber)



Cellulose nanofiber (CNF)



Glycol lignin



Prolonged aesthetic appearance by CNF-containing paint



Use glycol lignin on the hood, etc.

Image of use of wood material

Promoting initiatives to conserve biodiversity in fisheries industry

- Our country has highly biodiverse marine areas. Through the conservation of the satoumi and oceans, Japan will provide a stable supply of marine products in future years, and promote the establishment of a strong fishery industry and rich and vibrant fishing villages.

(i) Promotion of the conservation and restoration of the marine environment

- Conservation and restoration of the fishing ground environment by promoting the maintenance and management of seaweed beds and tidal flats, by developing technologies for areal conservation and restoration of coral reefs, and by developing technologies to reduce damage in fisheries caused by red tide, etc.
- Promote measures against marine plastic litter by developing environmentally friendly fishing gear and establishing a system for collecting and disposing of marine debris.



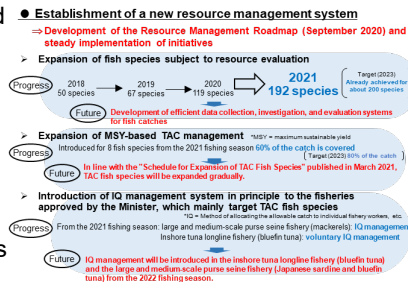
Conservation of seaweed beds (extermination of sea urchins)

(ii) Promotion of development or maintenance of coastal environment/fishing ports and fishing grounds taking biodiversity into consideration

- Promotion of development of fishing ports and fishing grounds with consideration for the natural environment.
- Promote water quality preservation measures around fishing ports by improving fisheries community sewerage systems in fishing communities.
- Promotion of fishing ground development to restore and increase fishery resources and to maintain and restore ecosystems.

(iii) Further promotion of fishery resource management

- To ensure a stable supply of marine products, establish a resource management system based on Total Allowable Catch (TAC) and Individual Quota (IQ) with the goal of achieving Maximum Sustainable Yield (MSY).
- Establish science-based conservation and management measures through Regional Fisheries Management Organization.
- Strengthen penalties for poaching and measures against IUU fishing.



(iv) Promotion of biodiversity-friendly fisheries

- Implementation of bycatch mitigation measures for sharks, seabirds, and sea turtles, and reduction of bycatch through developing and improving effective bycatch mitigation techniques.
- Promote conservation by prohibiting the catch of endangered aquatic species.
- Implementation of appropriate protective measures based on an assessment of the ecological impacts of bottom fish fisheries.

(v) Establishment and operation of marine protected areas

- Establish and conserve marine areas which are counted as OECM to achieve the 30 by 30 target.
- Raise awareness of "Japanese-style marine protected areas," in which marine areas that are co-managed voluntarily and sustainably by fishermen could be recognized as being effectively protected.

(vi) Promotion of the release of juvenile fishes, sustainable aquaculture production, and conservation of inland water fisheries taking biodiversity into consideration

- Maintain and increase resources by releasing seeds and seedlings with consideration for biodiversity.
- Promote sustainable aquaculture production by developing and disseminating alternative raw materials for fish meal and artificial seedling production technology for cultured fish species.
- Promote the conservation of inland waters by developing breeding methods that take the fishing ground environment into consideration, and by improving facilities.

