

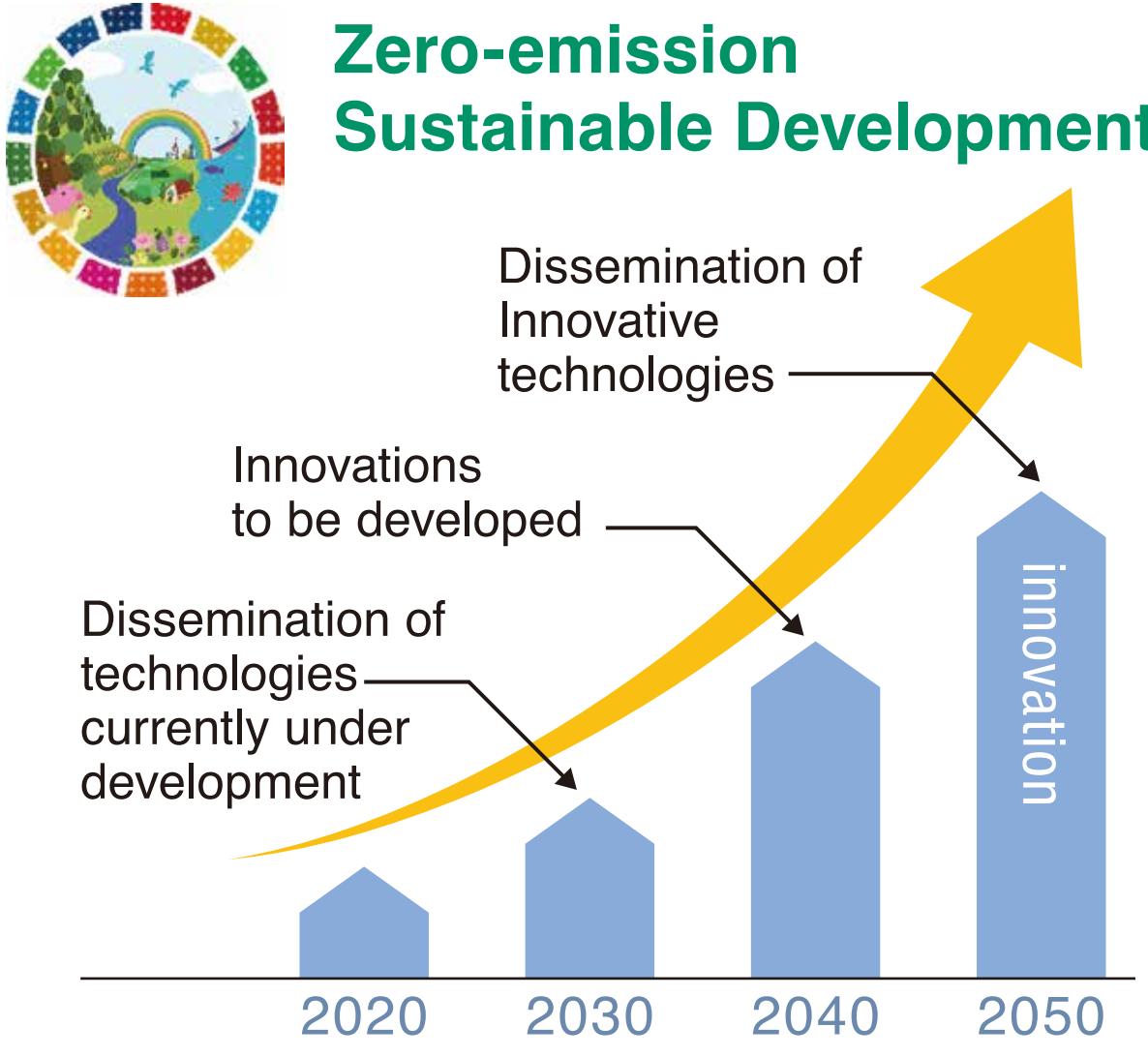
# MeaDRI ~ the Strategy for a sustainable food system ~

## Measures for achievement of Decarbonization and Resilience with Innovation (MeaDRI)

~ Innovation will enhance productivity potentials and ensure sustainability in a compatible manner~

“MeaDRI,” the medium-long term strategy will pave the way for the future.

- Enhancing engagement of stakeholders at each stage of food supply chains
- Promoting innovation to reduce environmental load

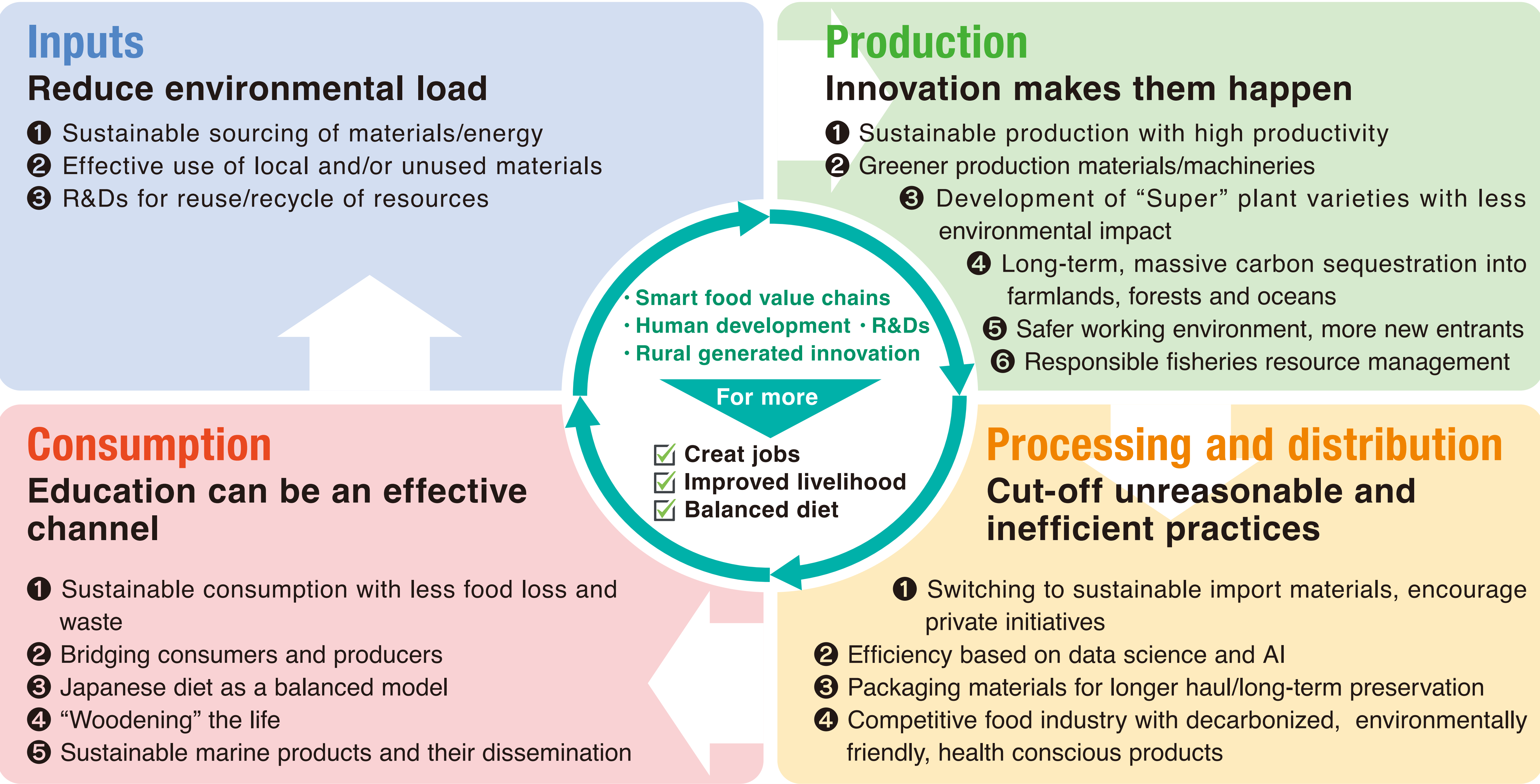
Challenges	By 2050, MAFF aims to achieve;
<ul style="list-style-type: none"><li>• Depopulation and aging of producers</li><li>• Stagnant rural communities</li><li>• Climate change and increasing natural disasters</li><li>• Disrupted supply chains due to the COVID-19</li><li>• Achievement of SDGs</li></ul>	<div><div><div><div>→ Zero CO2 emission from the agriculture, forestry and fisheries sectors</div><div>→ 50% reduction in risk-weighted use of chemical pesticides by dissemination of the Integrated Pest Management and newly-developed alternatives</div><div>→ 30% reduction in chemical fertilizer use</div><div>→ Increase in organic farming to 1Mha (equivalent to 25% of farmland)</div><div>→ At least 30% enhancement in productivity of food manufacturers (by 2030)</div><div>→ Sustainable sourcing for import materials (by2030)</div><div>→ 90% and more superior varieties and F1 plus trees in forestry seedling</div><div>→ 100% of artificial seedling rates in aquaculture of Japanese eel, Pacific bluefin tuna,etc.</div></div></div><div><div><div>Zero-emission Sustainable Development</div></div></div><div><div>which will be enabled through:</div><div><div>- development and dissemination of innovative technologies</div><div>- greening of MAFF’s policy tools</div></div></div></div>

## MAFF endeavors to accomplish the triple win of;

Economic sustainability	Social sustainability	Environmental sustainability
 <div>Ensure robust and resilient food industry</div>	 <div>Improve livelihood, promote balanced diet</div>	 <div>Save global environment for the future generation</div>

## MeaDRI’s Conceptual Approach

Following viewpoints are required to transform our food systems. Awareness, efforts and behavioral changes of stakeholders as well as promising technologies are the keys to success.



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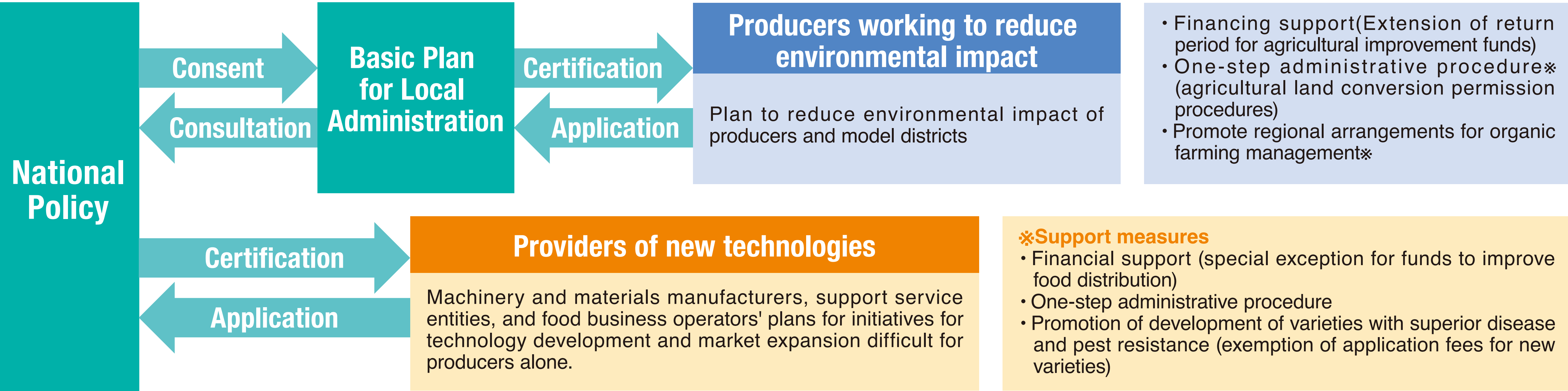
# What the MeaDRI is about?

## The MeaDRI related law

The "MeaDRI related law" was enacted in order to share the basic principles with all stakeholders in the food system and to promote efforts to reduce environmental impacts through the united efforts of all stakeholders.

The law was enacted on April 22, 2022, promulgated on May 2, and came into effect on July 1.

Purpose	Implementation of MeaDRI. ▶ Sustainable development of agriculture, forestry, fisheries, and food industry, ensuring stable food supply	
Basic Principles	• Cooperation among producers, businesses, consumers	• Development and use of technology • Ensuring Food Distribution systems etc
Clarify roles of stakeholders	• Responsibilities of National and Local Governments (policy development and implementation)	• Efforts by producers, businesses, and consumers
Measures to be taken by the government	• Promoting understanding among stakeholders • Promote procurement, production, distribution, and consumption that contribute to reducing	environmental impact • Technology development and promotion • Visualization of environmental impact reduction etc

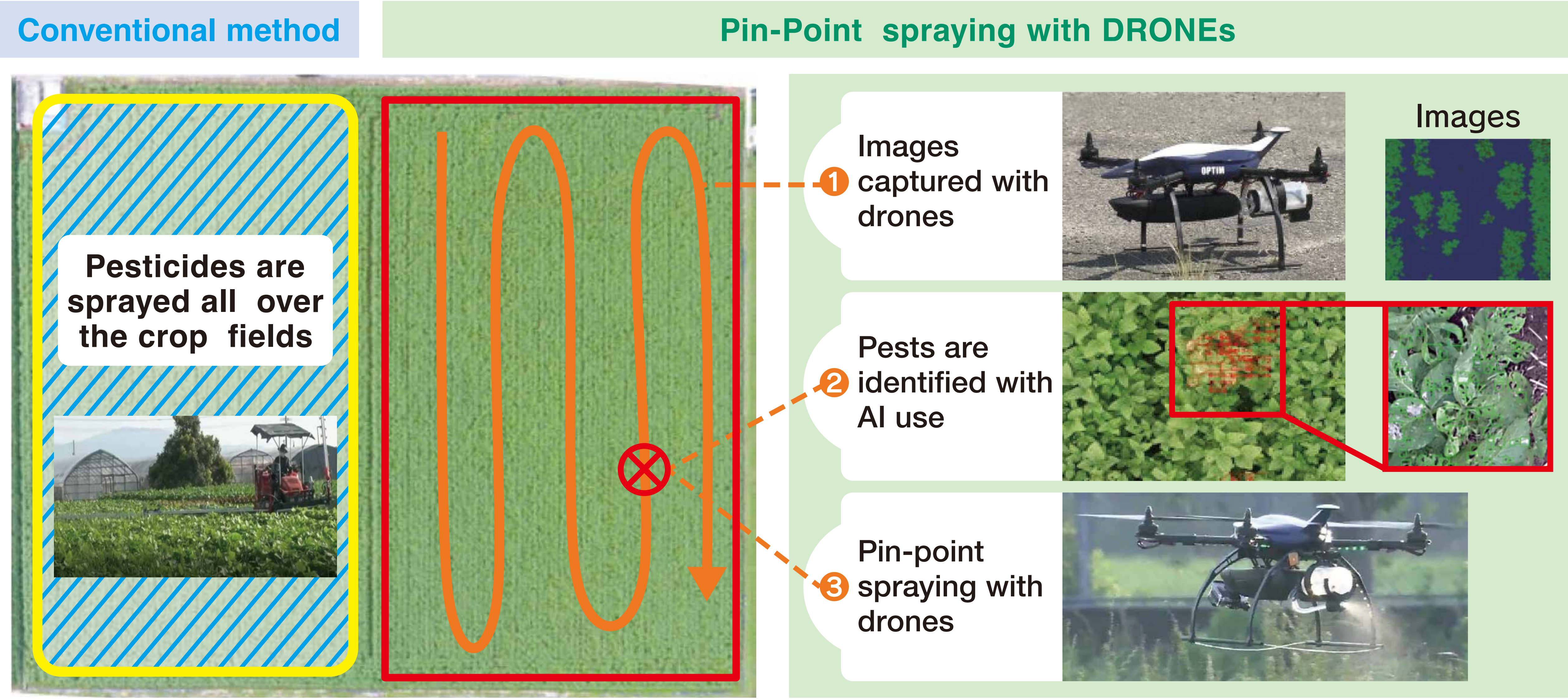


• In addition to the planning system, a new tax incentive for investment in necessary machinery and facilities, and a new JFC fund for machinery and materials.

• Inclusion of initiatives under the Sustainable Agriculture Law (the Law will be repealed and transitional measures will be taken to phase in the new system).

## Example of innovation

Pest diagnosis and pin-point spraying can also reduce pesticide use.



Reduce pesticide use (90% reduction)

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# Biodiversity Strategy on Agriculture, Forestry and Fisheries



Biwa Lake to Land Integrated System



Fruit Cultivation System in Kyoutou Region

Recognized as Globally Important Agricultural Heritage Systems (GIAHS) in 2022

## Draft Revision of MAFF Strategy

Mainstreaming biodiversity in production

Stimulating activities by working throughout the supply chain



Agriculture



Forestry

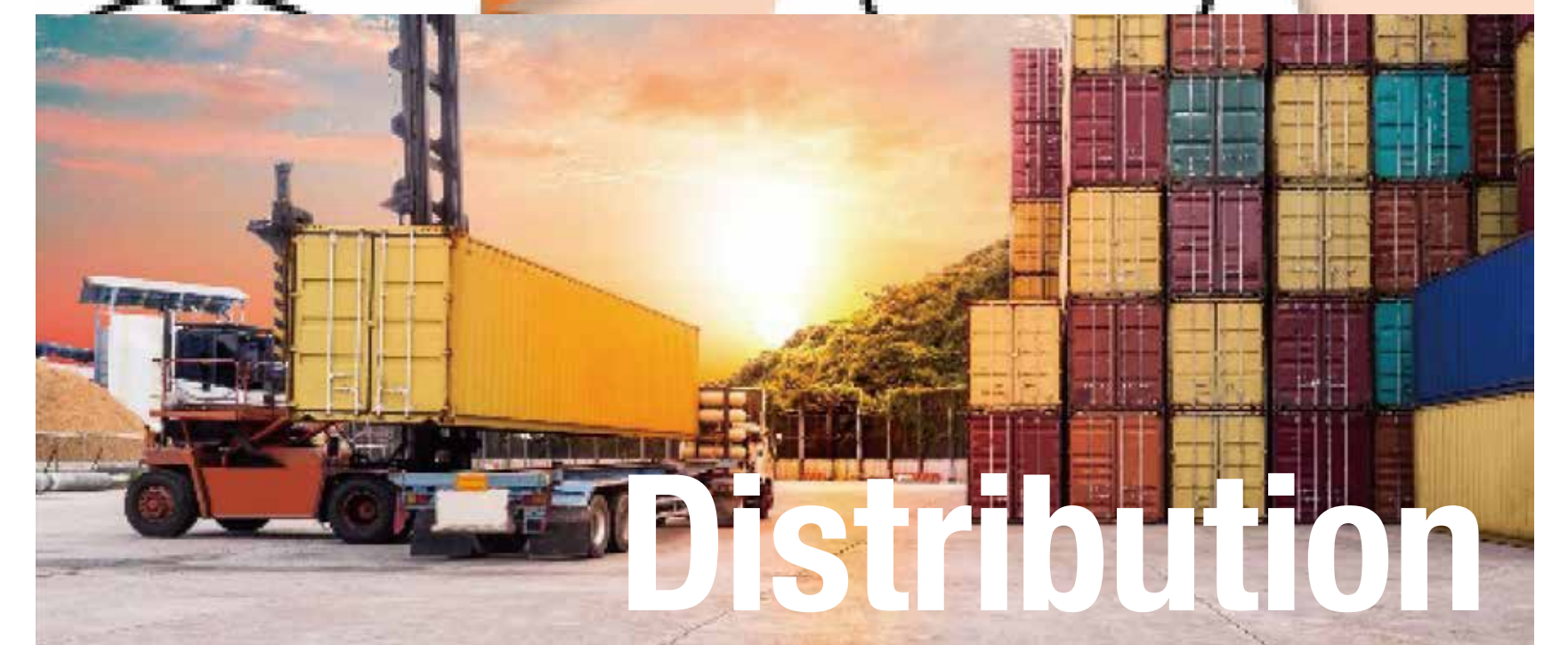


Fishery

Mainstreaming biodiversity throughout the supply chain



Procurement



Distribution



Consumption



Recycling

## Labelling to Encourage Sustainable Consumption



Label Image

The rice paddy field has an important role to nurture biodiversity. MAFF is developing a label on rice package indicating the biodiversity conservation and GHG emission reduction to encourage sustainable consumption.

Pilot project on GHG emission reduction



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# Sustainable and environmentally friendly agriculture

## Measures to encourage environmentally friendly agriculture

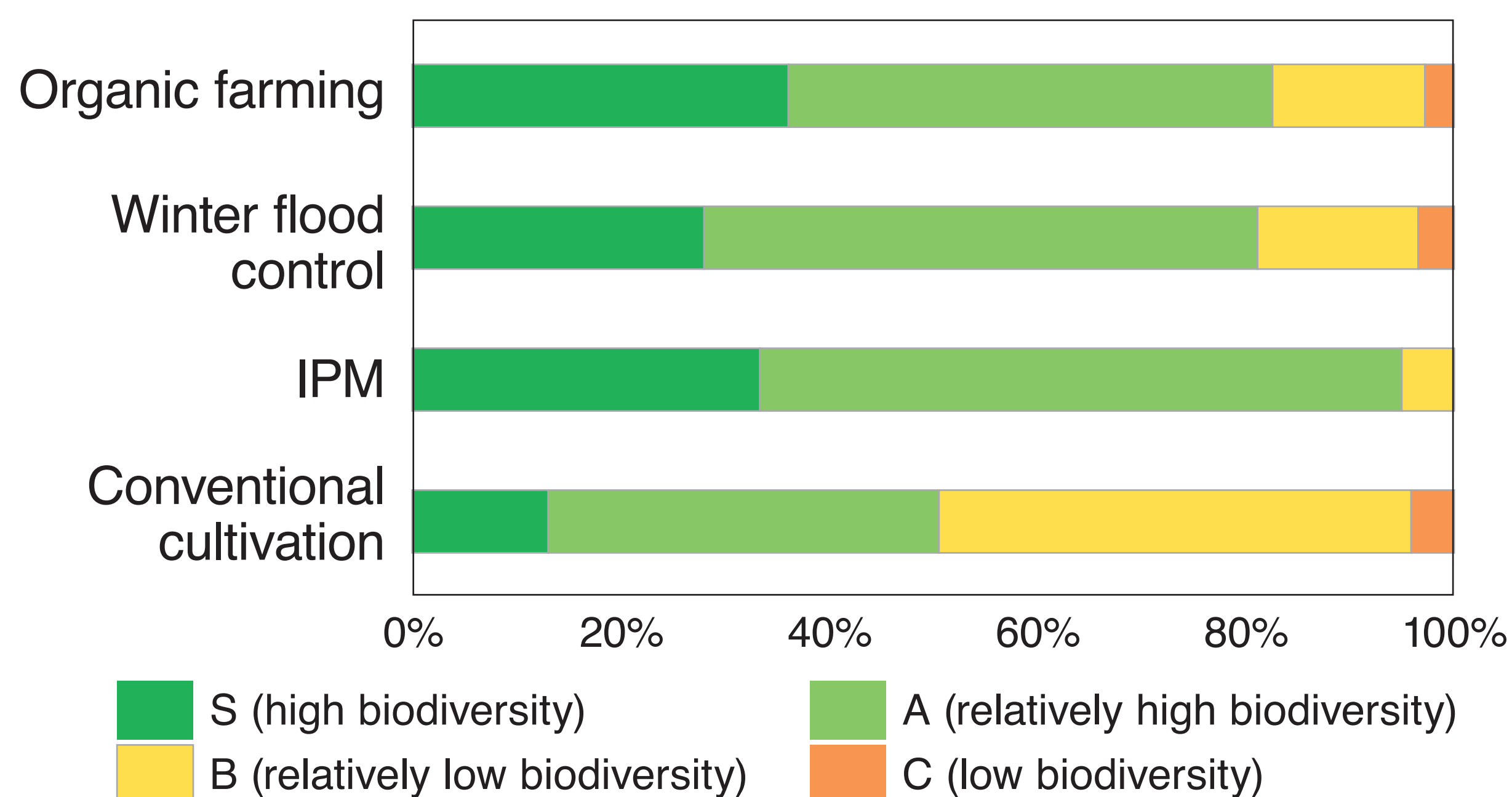
- More and more farmers engage in agricultural activities effective for preventing global warming and preserving biodiversity. Groups of farmers, who carry out such activities combined with reduction of chemical fertilizer and synthetic pesticide by 50% or more, are eligible for a government grant.
- A survey on paddy fields shows that substantially high biodiversity can be achieved by introducing organic farming, winter flood control or integrated pest management (IPM), compared with conventional farming.

### Assessment of Biodiversity Conservation

The "Biodiversity Survey and Evaluation Manual for Identifying Bird-friendly Rice Paddies" (National Agriculture and Food Research Organization) is used to conduct on-site surveys of indicator organisms.



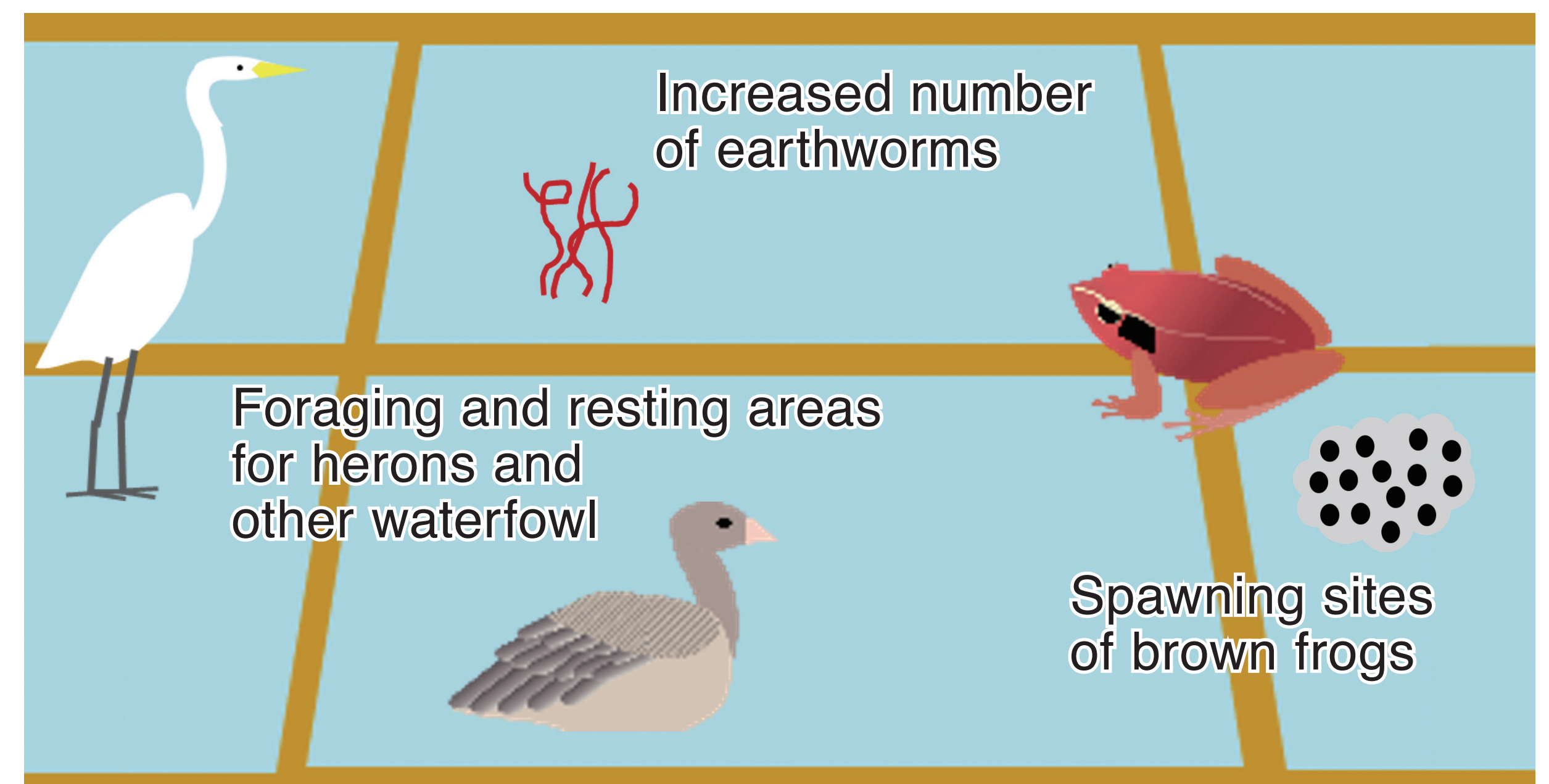
### Comprehensive evaluation of biodiversity



[https://www.maff.go.jp/j/seisan/kankyo/kakyou\\_chokubarai/attach/pdf/sansya\\_2\\_4-9.pdf](https://www.maff.go.jp/j/seisan/kankyo/kakyou_chokubarai/attach/pdf/sansya_2_4-9.pdf)

### Winter flood control

#### Filling a paddy field with water in winter



[https://www.maff.go.jp/j/seisan/kankyo/kakyou\\_chokubarai/attach/pdf/mainp-14.pdf](https://www.maff.go.jp/j/seisan/kankyo/kakyou_chokubarai/attach/pdf/mainp-14.pdf)

## “Organic Village” initiative

- The Japanese government is aiming to create one hundred “Organic Villages”, where the communities commit to region-wide activities regarding organic farming from production to consumption, in order to expand organic farming across Japan.
- To date, 54 communities (55 municipalities) across Japan started their activities in 2022.



Usuki, Oita



Toyooka, Hyogo



Aya, Miyazaki



Minamitane, Kagoshima



Uda, Nara

#### Taking advantage of unique characteristics of each region, communities promote activities including:

- Conservation of the environment to coexist with wild birds
- Fostering understanding of organic farming through agricultural experience
- Utilization organic products of plant origin in school lunches, etc.

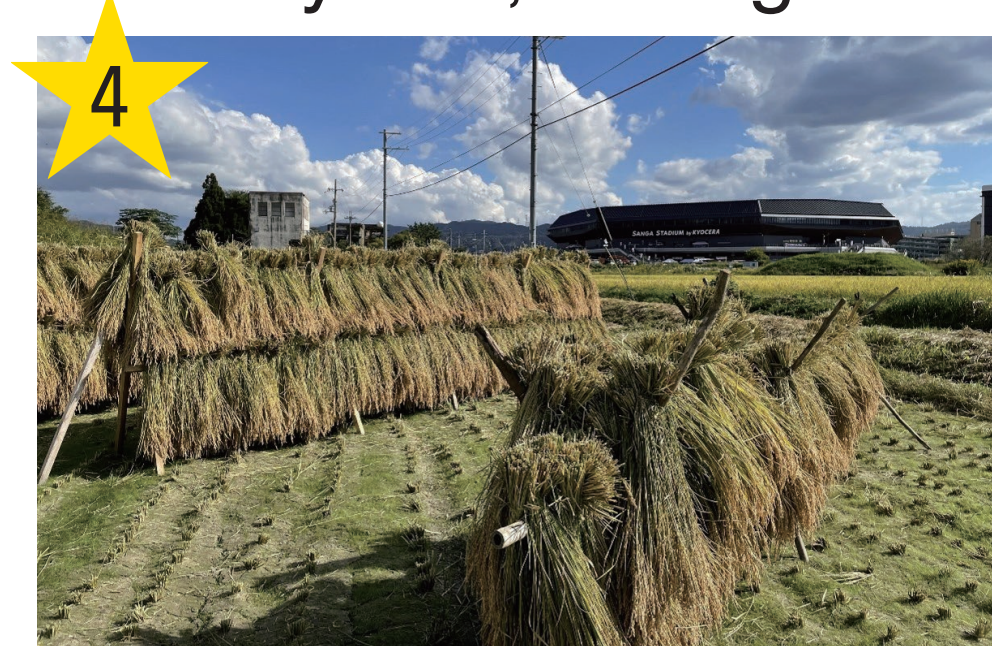
[https://www.maff.go.jp/j/seisan/kankyo/yuuki/organic\\_village.html](https://www.maff.go.jp/j/seisan/kankyo/yuuki/organic_village.html)



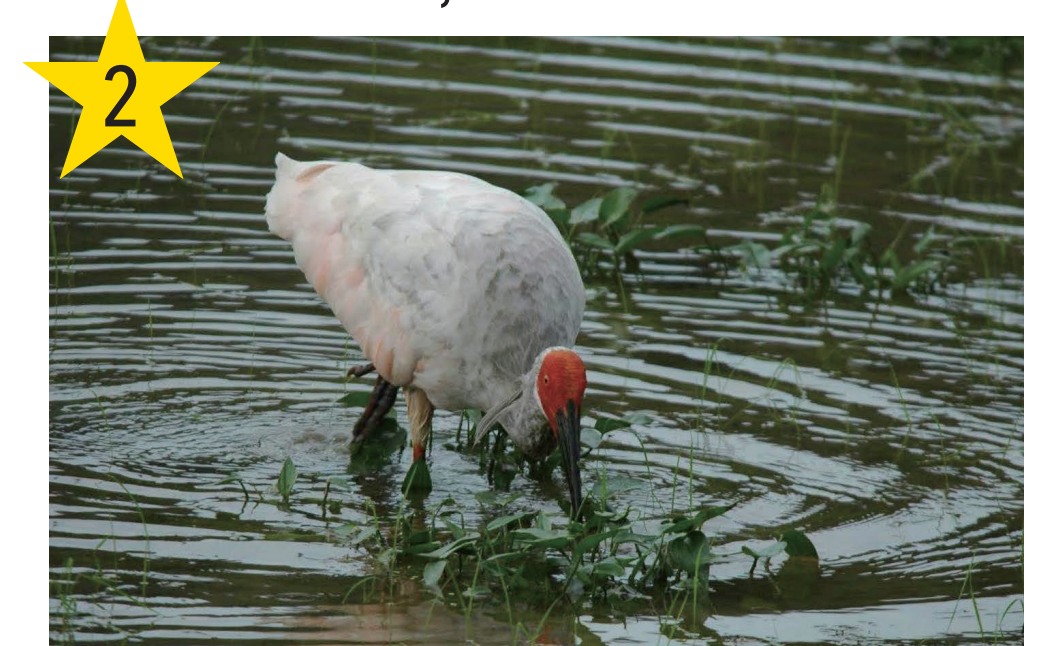
Oyama, Tochigi



Abira, Hokkaido



Kameoka, Kyoto



Sado, Niigata

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# Efforts for Conservation of Significant Forest Ecosystem by the Forestry Agency of Japan

Forestry Agency



National Forests

Japan is one of the most forested countries in the world, having around 70% of the total land area. National Forests directly managed by Forestry Agency represent approximately 30% of the total forest area in Japan.

Forestry Agency designates National Forests with significant forest ecosystems as “Protected Forest” to protect primeval forest ecosystem, precious flora and fauna and genetic resources. Protected Forests cover 13% of National Forests and are classified into three categories, Forest Ecosystem Reserve, Biotic Community Protected Forest and Rare Population Protected Forest.



Most areas of the World Natural Heritage sites in Japan are designated and protected as Forest Ecosystem Reserves. These Protected Forests are interconnected by “Green Corridors” which are designed to secure migratory pathways for wild animals and plants.

## World National Heritage and National Forest



The beech tree  
Forest (summer)

Budding  
of beech

Black  
Woodpecker



Wilson stump

'Jomonsugi'  
old cedar tree

*Rhododendron  
yakusimanum*



Iriomote cat



Mangrove forest (Iriomote Island)

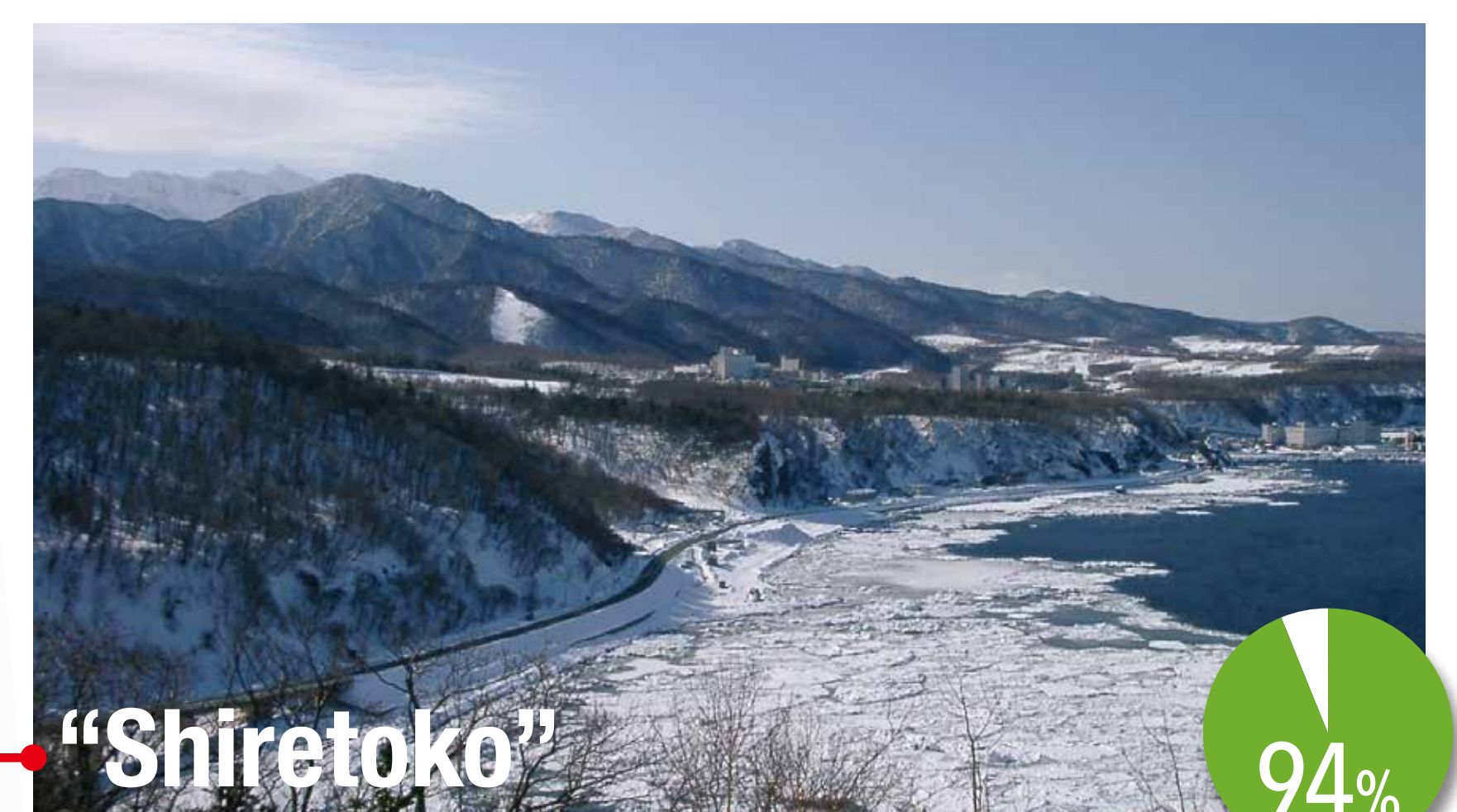
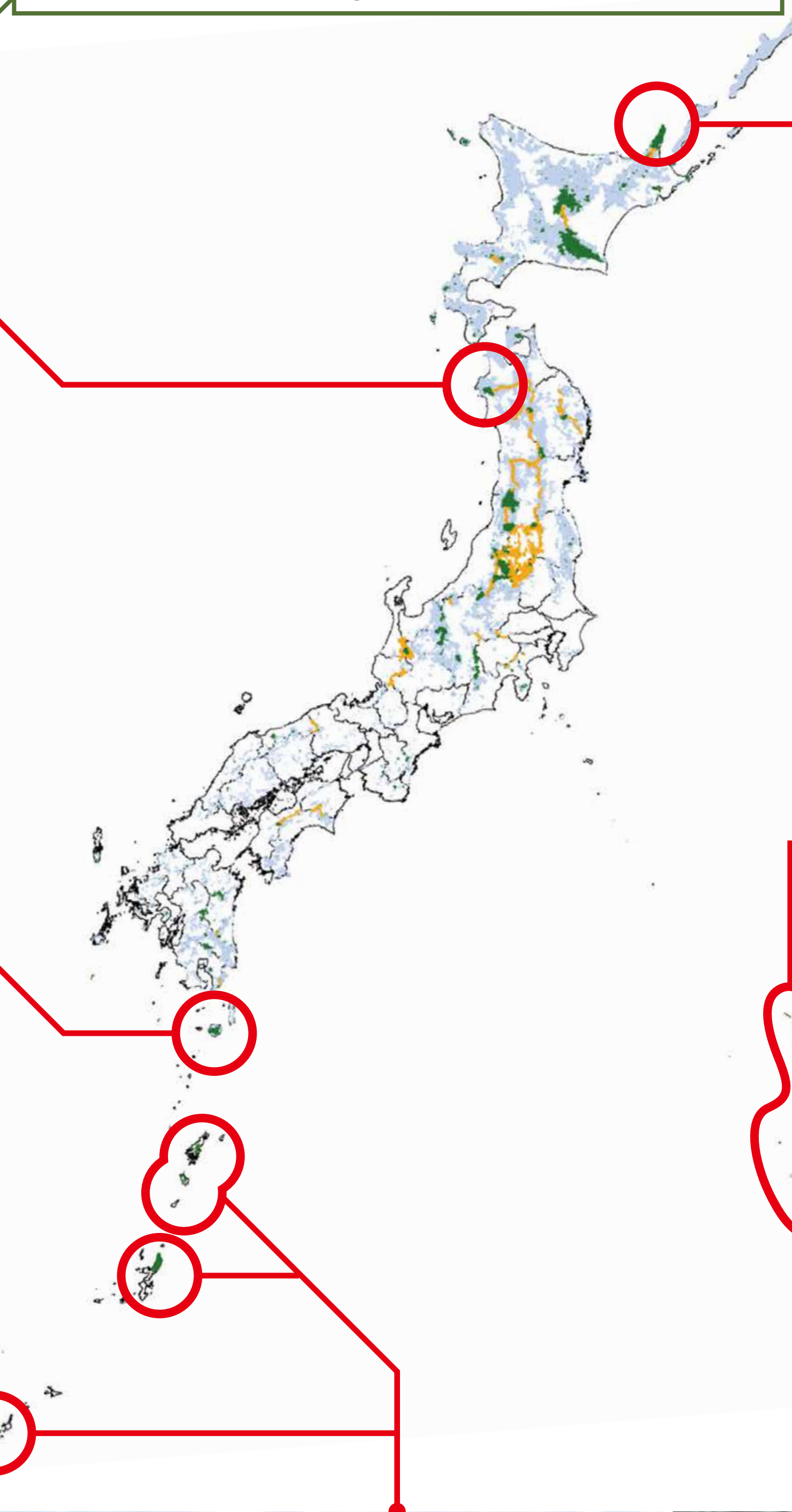


Okinawa rail



Amami rabbit

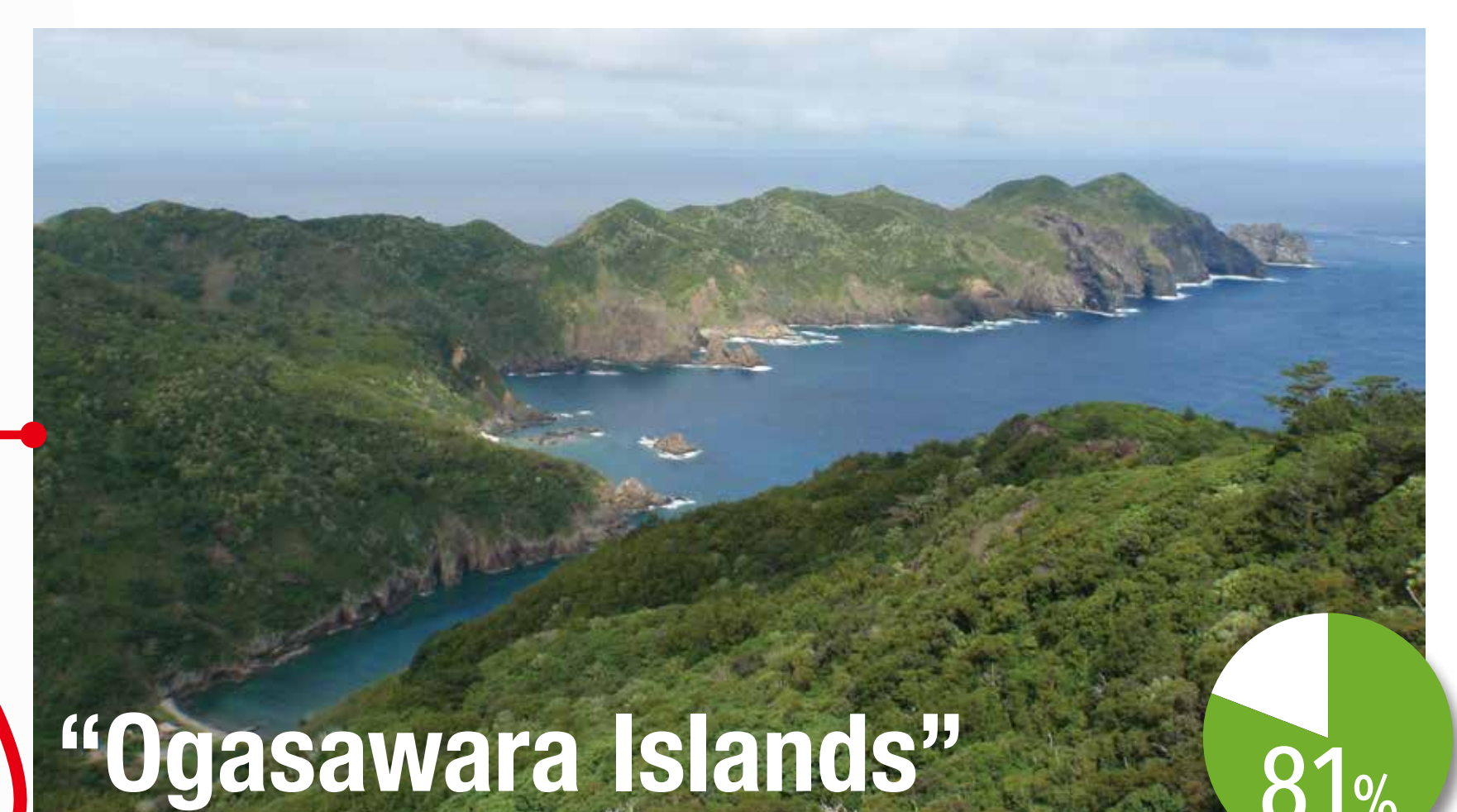
- : National Forest
- : Protected Forests
- : Green Corridors
- : World Natural Heritage Sites
- The percentage of National Forest



*Viola  
kitamiana*

Steller's  
sea eagle

Brown Bear



*Elaeocarpus  
photiniifolius*

"Maruhachi"  
tree fern

Red-Headed  
Wood Pigeon

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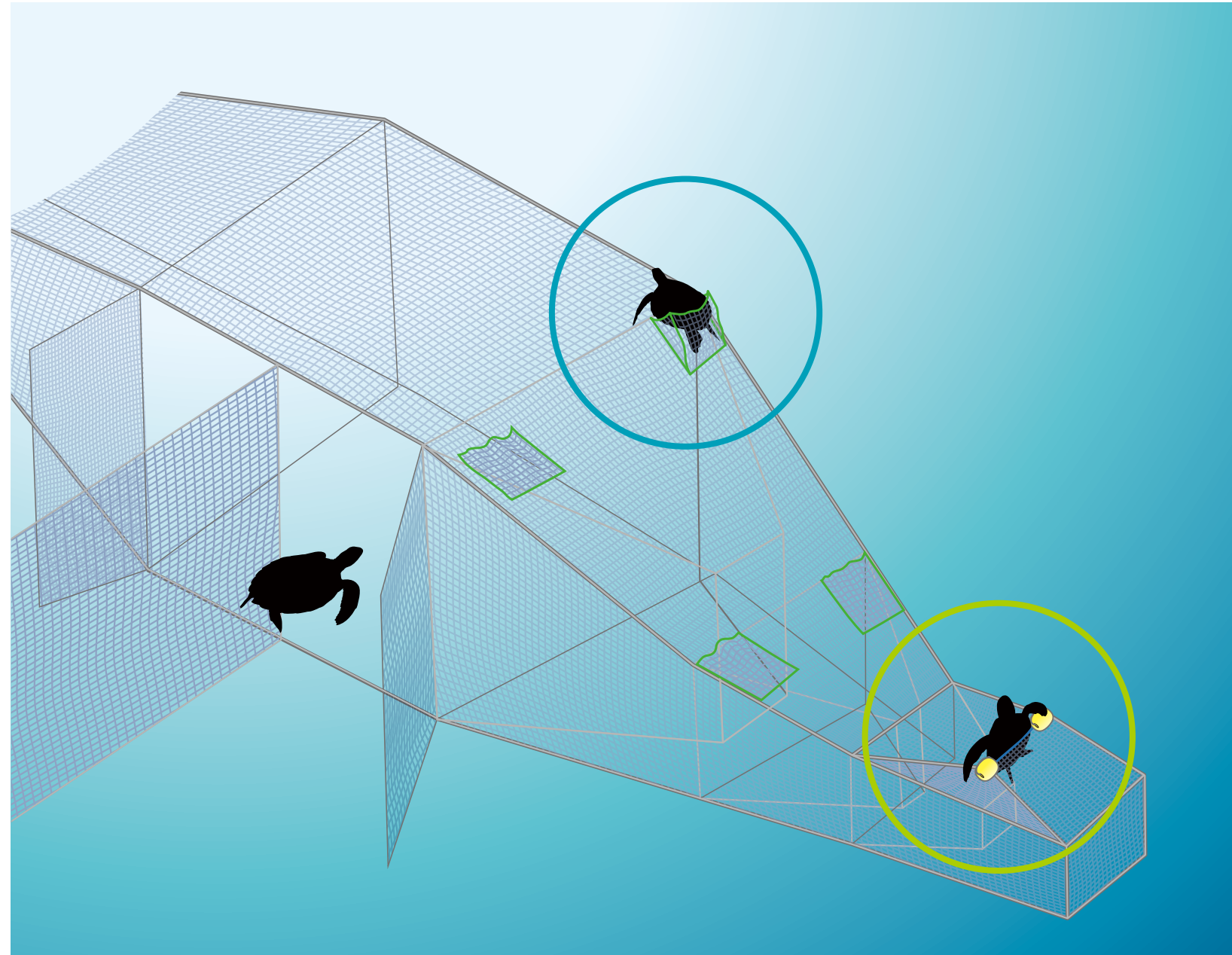
# Sustainable Use of Fishery Resources

In Japan, fishermen, researchers, and government agencies are working together to implement various initiatives for sustainable fisheries.

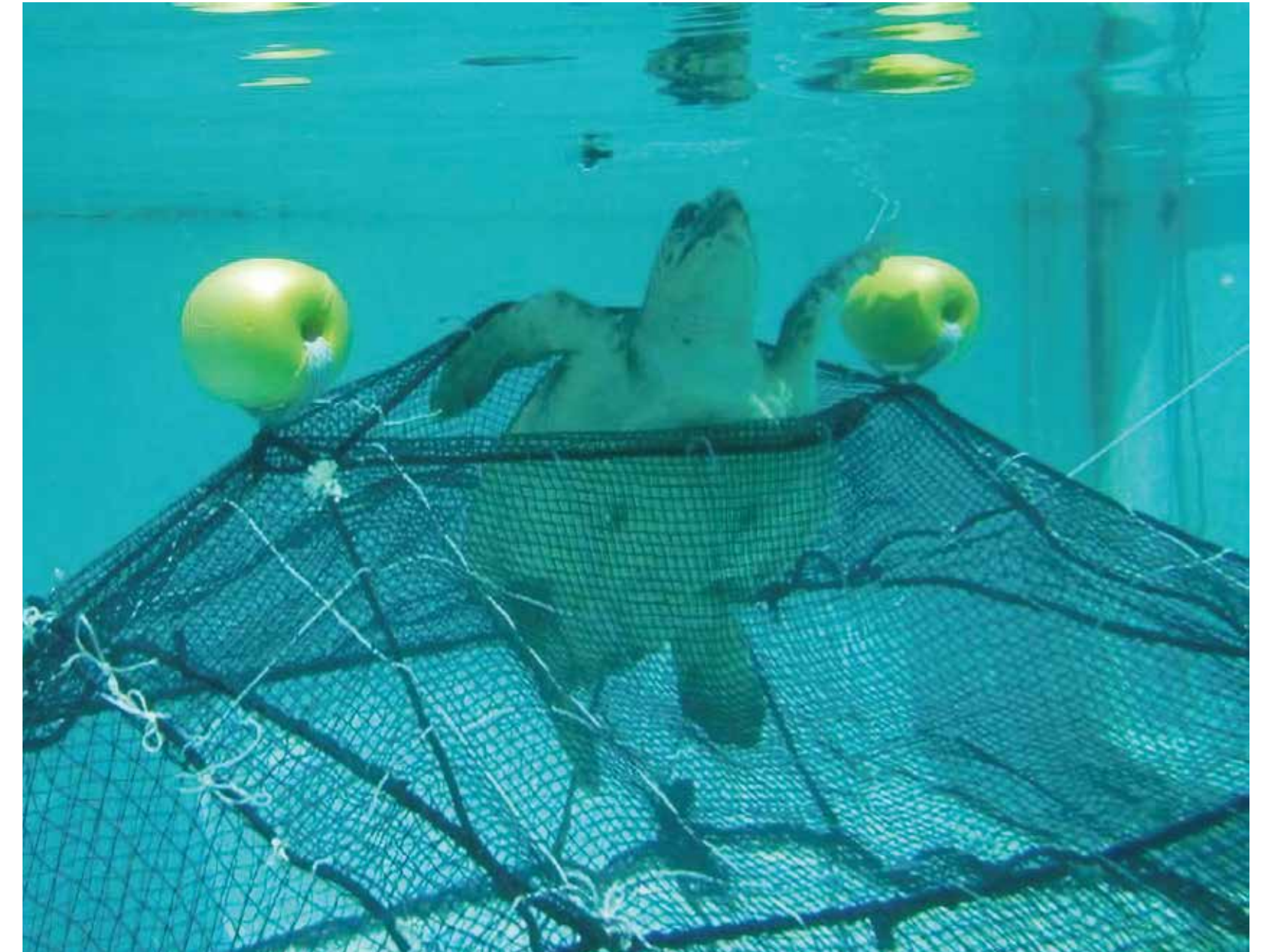
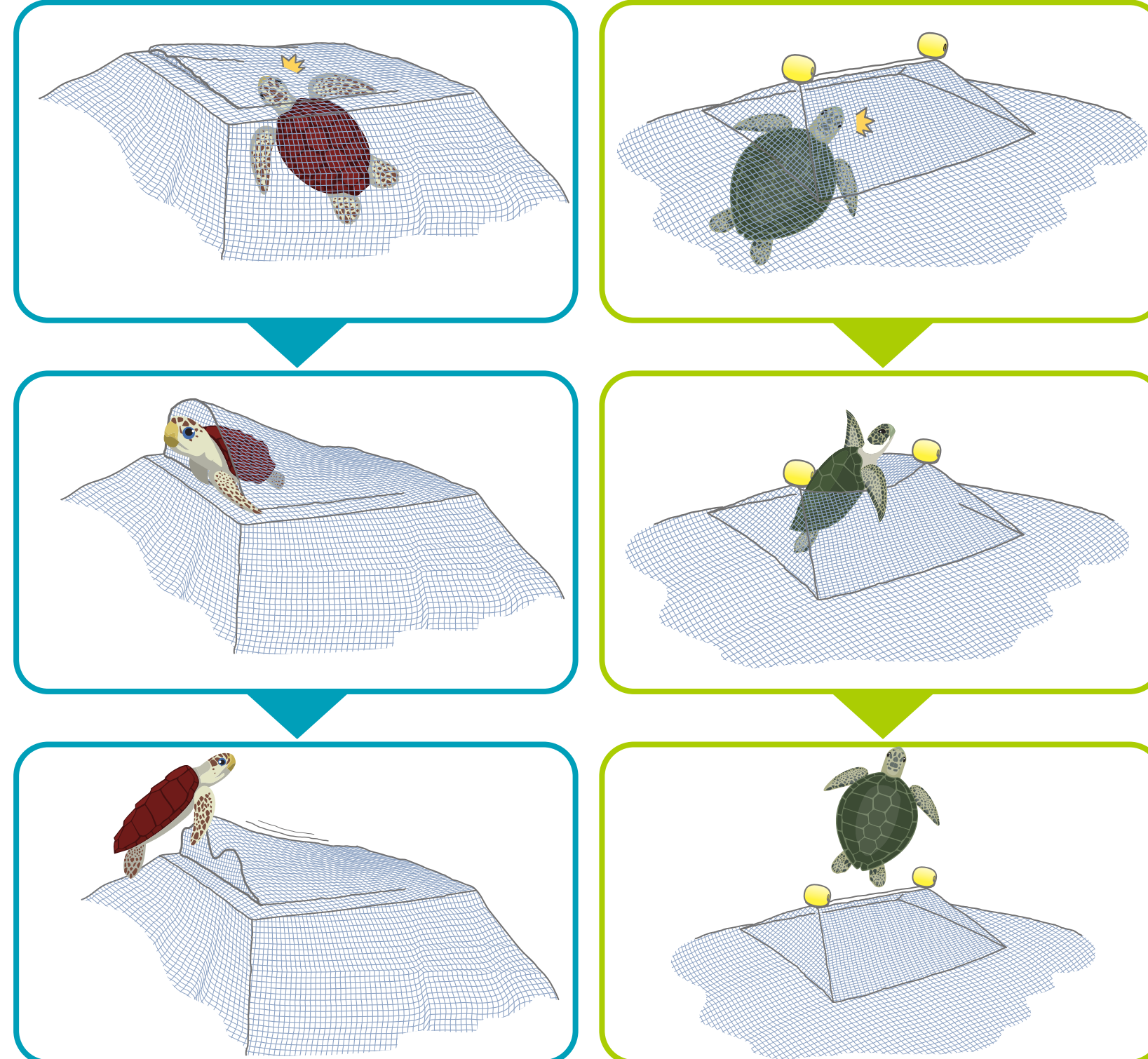
Through these efforts, we are promoting the mainstreaming of biodiversity into fisheries.

## Development and dissemination of sea turtle bycatch prevention technology

In order to reduce bycatch the sea turtle by fishery, we have developed a bycatch avoidance system and are working to promote its use among fishery community. The system shown in the figure below requires only an escape device to be attached to the top of the set net, allowing only the sea turtles to escape without letting the fish in the set net escape.



Schematic diagram of a fixed net with a sea turtle bycatch avoidance device



Sea turtles actually escape from the net in the experiment (Shiode et al., 2019)

## Conservation and restoration of seaweed beds and tidal flats by fishermen and local

It is important to raise the productivity of the entire ecosystem by conserving seaweed beds and tidal flats and restoring their functions. Local governments create seaweed beds and tidal flats, and fishermen and local residents carry out conservation activities such as extermination of harmful organisms and tilling of tidal flats in an integrated manner to implement measures on a wide scale



### Removal sea archin

Efforts to remove sea urchins that hinder the formation of seaweed beds

Image : Nagasaki City, Nagasaki Prefecture



### Removal of Bladder moon shell

Efforts to remove predatory organisms that prey on bivalves that are important for the performance of functions such as water purification of tidal flats

Image : Onomichi City, Hiroshima Prefecture



### Installation of mother algae

Efforts to install mother algae (mature and seeded seaweed) and promote the regeneration of seaweed beds

Image : Ootsuchi Town, Iwate Prefecture



### Removal of predator (Gastropod)

Efforts to cultivate tidal flats and improve sediment quality in an aerobic environment where tidal flat organisms can easily inhabit

Image : Kisarazu City, Chiba Prefecture



### transplantation and sowing eelgrass

maintain and restore eelgrass beds by Transplantation and sowing

Image : Ashikita Town, Kumamoto Prefecture

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