# Inheriting the Bounty of Nature to the Future Generations

Pursuing the harmony between human and nature,

preventing ecosystem loss or degradation,

for the society being able to enjoy

the blessings of the nature

in years to come

JICA will conserve the natural environment, which is important for local communities and for the sustainability of our planet.

To this end, JICA takes scientific approach to understand the value and current status of natural environment that should be protected, utilizes traditional knowledge and creates models of conservation to be reflected in policies. JICA will promote our efforts through collaboration with various partners.











## What are the "Natural Environment" challenges facing the world?

### The Natural Environment is Experiencing Ecological **Degradation at an Unprecedented Rate**

Forests, the habitats and nurturing grounds for many living creatures, have declined by about 178 million hectares (about five times the land area of Japan) over the past 30 years due to the conversion of land use to agricultural land and urban settlement. Over a longer time frame, about 90% of the world's wetlands have been lost since 1700.

The loss of forests and wetlands leads to the emission of CO<sub>2</sub> and other greenhouse gases. From a climate change perspective, there is an urgent need to address this issue.

Meanwhile, ecosystems are rapidly being lost and degraded due to the release of pollutants, the excessive use of forests, fish, and other biological resources.

A forest area equivalent to about **5 times** the land area of Japan has disappeared in the past 30 years

About 90% of the world's wetlands

An estimated 1 million

An estimated one million species are already threatened with extinction. If no appropriate measures are taken, these species could be lost within the next several decades.

**Deforestation and Forest Degradation** 

Shortage of food, fuel, and materials

> Increase in flooding Loss in biodiversity

Increase in landslides

Loss of production base

Increase in CO<sub>2</sub> emission

Decline in water source recharge function

Decrease and Degradation of Wetlands

Decrease in biodiversity Decline in the ability to regulate the quantity and quality of water

**Impacts** of the decrease and degradation of the natural environment

For people in developing countries, whose livelihoods depend on the natural environment, the various impacts caused by the decrease and degradation of the natural environment are major threats to their lives and property.

have **disappeared** since 1700

species are threatened with extinction

Decrease and **Degradation** of Coral Reefs

Decrease and Degradation of

**Mangrove Forests** 

ncrease in Storm Surge Damage

Loss in biodiversity

#### REASONS

## Why do Japan and JICA work on the issue?

Making use of Japan's experience in balancing economic development and conservation of the natural environment



Ukiyoe prints are said to reflect the vegetation of the time. Mountains in the prints are often depicted as bald hills or with only sparse constellations of pine trees. Hiroshige Utagawa, "Hakone Lakes, Tokaido Gojyosantsugi" (1834) Conservation of the natural environment is essential for maintaining our way of life, which relies on various natural blessings. It is also one of the important means for reducing greenhouse gas emissions.

The excessive use of forests led to a drop in Japan's forest coverage to about 50% in the 18th century, which resulted in frequent natural disasters. With the formulation of systems and technological developments since the 19th century, however, the rate has recovered to about 70% today. Despite Japan's high population density and limited land area, excellent practices have been implemented to preserve and promote the use of the natural environment, including the designation of approximately 400 Natural Parks. In this way, JICA is able to contribute to the conservation of the world's natural environment by combining our experience in balancing economic development with the conservation of the natural environment using recent forefront technologies from Japan such as satellites.

## How to address challenges?

#### Approach 1

#### Protecting the Richness of Nature on Land

By preventing the decline and degradation of tropical forests and other forests and wetlands, JICA will promote their recovery. This will reduce greenhouse gas emissions, absorb and fix greenhouse gases, maintain biodiversity, protect the foundation for local fuel and food production, and mitigate landslides and flood damage.

#### Approach 2

# **Protecting the Richness of Nature in Marine (Coastal) Areas**

By protecting habitats for marine life such as mangrove forests, coral reefs, and seagrass beds in coastal areas, JICA will contribute to maintaining biodiversity, protecting the foundation of coastal fisheries, as well as curb greenhouse gas emissions, and help reduce damage from tsunamis and storm surges.

#### Four Common Actions

# Developing a Scientific-based Information Infrastructure

It is essential to scientifically understand the value and status of nature and how nature is to be protected, and to appropriately reflect that understanding in policies. To this end, a system will be established to collect reliable information, monitor the natural environment and activities such as illegal logging, promptly detect forest fires, etc., with added support from technologies such as satellite imaging and drones.



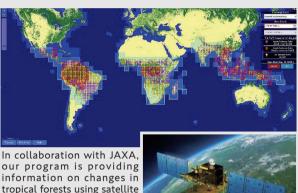
#### **Effective Policy and Planning**

To realize a sustainable society, it will be necessary to balance environmental conservation with economic development. To this end, JICA will improve the capacity to develop policies and plans that promote conservation of the natural environment, by drawing from reliable scientific information and coordinating and collaborating with allied sectors. Policies and plans will be supported and made more appropriate based on local demonstrations.



#### Demonstration and Modeling Based on Local Conditions

Work with local residents to manage natural resources. The results will be reflected in policies and modeled. In doing so, JICA also makes use of the traditional knowledge of local residents to create alternative means of livelihood, such as agroforestry and ecotourism, in order to improve the effectiveness of the project.



tropical forests using satellite images on the Web to help monitor illegal logging and other activities.

https://www.eorc.jaxa.jp/

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# Securing Resources and Innovation for Scaling-up Programs

In order to continue the project and expand the project model nationwide, JICA will secure international funding from sources such as the Green Climate Fund (GCF), promote regional cooperation, and collaborate with other donors, private companies, NGOs, and other partners.



Aerial photo of a forest conservation plan being discussed with the participation of local residents, Timor-Leste.

# What has JICA done?

#### **Helping Kenya Increase its Forest Coverage** by Improving Local Tree varieties

About 80% of Kenva is arid and semi-arid land. The current policy goal is to increase the forest coverage. which now stands at about 6%, to 10% by 2030. To contribute towards this goal, JICA is applying Japanese forest tree breeding practices in a technical cooperation project to establish forest tree varieties that can grow strong and vigorous even in arid lands. The project is also working with the private sector to demonstrate a forestry promotion model that will lead to the dissemination of superior seeds and local residents' benefit, while also providing support to scale up the results.



Photo : Forest Tree Breeding Center FFPRI



Photo: Kaku Suzuki / JICA

#### **Contributing to the Conservation of Biodiversity in the Coastal Areas of Palau**

Palau is home to coral reefs, mangrove forests, and other valuable ecosystems inhabited by a diverse range of organisms, including endangered species such as dugongs. Japan cooperated in the construction of the Palau International Coral Reef Center in 2000 and has continued to cooperate with local counterparts since. In recent years, however, the effects of the influx of sediment from land due to land development and other factors, as well as rising sea levels and water temperatures due to climate change, have become apparent. In response to these issues, JICA and the counterpart will create a system for the integrated management of terrestrial and marine ecosystems by developing a scientific information infrastructure for ecosystem monitoring and other activities, and reflecting the results in policies.

#### Working with Partners

#### Establishment of the "Japan Public-Private Platform for Forest-based Solutions" to Bring Together Technology and Knowledge

In June 2021, JICA and FFPRI\* established the "Japan Public-Private Platform for Forest-based Solutions". The Platform will help promote and facilitate the efforts taken by diverse stakeholders in Japan, such private companies and organizations, government agencies, and individuals, to support the conservation, restoration, and sustainable management of forests and other natural environments in

developing countries. We will also work on other projects in collaboration with other donors, international organizations, NGOs, private companies, and other partners in Japan and abroad.

\*FFPRI: Forestry and Forest Products Research Institute of the Forestry Research and Management Organization



1-6th floor, Nibancho Center Building, 5-25 Niban-cho, Chiyoda-ku, Tokyo 102-8012, Japan Email: gegdn@jica.go.jp



Japan International Cooperation Agency (JICA) is an international cooperation organization that is centrally responsible for the implementation of bilateral assistance among Japan's Official Development Assistance. JICA cooperates with about 150 countries and regions around the world.

What is Global Agenda?

JICA's cooperation strategies for global issues. JICA, with its partners, aims to show global impacts realizing the goals set under JICA Global Agenda. JICA Global Agenda and its goals will be shared among partner countries and various actors, enhancing dialogue and collaboration, therefore, maximizing the development impacts. Through these efforts, JICA will comprehensively contribute to the achievement of the SDGs by 2030 as well as realize Japan's Development Cooperation Charter which focus on "human security," "quality growth," and "addressing global challenges".

Cover Photo — Northern Thailand, mountainous landscape photo; primeimages/Getty Images Illustration (ISSUES): Yutaka Kato

https://www.jica.go.jp/english/our\_work/thematic\_issues/index.html

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