

Contributions to the Global Environment

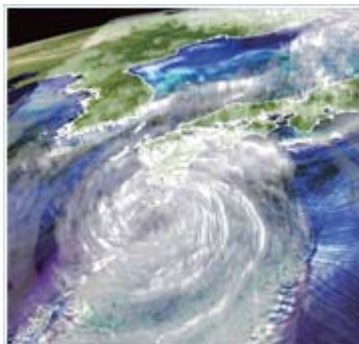
- Response to Climate Change
- Preservation of Biodiversity

This e-CSR Report 2011 was produced based on information posted on the Company's website.



Contributions to the Global Environment

Response to Climate Change



We recognize that climate change and global warming are risks common to all humankind, which may have a significant impact on future generations, and are also risks that greatly affect our business activities in the fields of non-life insurance, life insurance and reinsurance. We seek ways to mitigate or adapt to climate change and measures to prevent global warming from every possible angle and accordingly fulfill our roles and responsibilities in society.

[Click here for details](#)



*Refer to following links for the Group's main CSR issues related to "Response to climate change."

- [▶ Risk Research](#)
- [▶ Provision of Insurance Products and Services](#)
- [▶ Environmental Consulting](#)
- [▶ Environmental Investment](#)
- [▶ Reduction of Environmental Impact](#)
- [▶ Environmental Enlightenment and Social Contribution](#)

▶ Preservation of Biodiversity

The Tokio Marine Group is promoting initiatives for the preservation and sustainable use of biodiversity.

Contributions to the Global Environment

Preservation of Biodiversity

The Tokio Marine Group is promoting initiatives for the preservation and sustainable use of biodiversity.

Relationship with Biodiversity

The Tokio Marine Group engages in global business, using paper, energy and other resources around the world. Our business therefore imposes a burden on the global environment. The insurance industry consumes large amounts of paper resources in particular, and we pay attention to the impact that we have on forest ecosystems.

The Tokio Marine Group is conducting the following programs in coordination with its stakeholders to reduce our burden on the global environment and biodiversity and help preserve biodiversity.

1. We endeavor to understand our relationship with biodiversity (benefits and impact) in our business activities, to reduce our impact on biodiversity and to preserve biodiversity.
2. We engage in educational activities on the preservation of biodiversity for the general public and work with our stakeholders to contribute to the development of a sustainable society.

Participation in the "Promotion Partners" Program under "The Declaration of Biodiversity by Nippon Keidanren"

Tokio Marine & Nichido supports The Declaration of Biodiversity by Nippon Keidanren and in January 2010 joined the Promotion Partners program under the declaration. Our business activities comply with the declaration and its behavioral guidelines.

▶ [The Declaration of Biodiversity by Nippon Keidanren \(Japanese only\)](#)

Contributing to the Preservation of Biodiversity through Our Businesses

"Green Gift" Project

(Summary of program)

Our Eco-friendly products and services enable us to contribute to protection of the global environment in partnership with our customers and agents.

Tokio Marine & Nichido encourages its customers to opt for Web-based insurance contracts (clauses), which are available for viewing on the Web instead of in paper form, for auto, fire and other insurance. In the Green Gift Project, every time a policyholder chooses this option, we donate funds for the planting of two mangrove saplings to a mangrove planting project.

(Program impact)

By choosing Web contracts, our customers help us to save paper resources. At the same time, they also help to reduce environmental impacts from paper production, transportation to the company, delivery to the customer and disposal as waste. In addition, Tokio Marine's contribution to a mangrove planting project provides various benefits to the Earth, because of the effectiveness of mangroves in preventing global warming and preserving ecosystems. We look forward to continuing this project in the future and to contributing to the conservation of paper resources, prevention of global warming and preservation of biodiversity.



▶ [Tokio Marine & Nichido "Green Gift" Project \(Japanese only\)](#)



Contributing to the Preservation of Biodiversity through Social Contribution Activities

Mangrove Planting Project

(Summary of program)

Since 1999, the Tokio Marine Group has been conducting a mangrove planting [plantation] project primarily in Southeast Asia, recognizing that mangroves are the "forests in the sea," an important component in protection of the global environment and conservation of ecosystems whose numbers have been depleted through large-scale deforestation. During the 11-year period to fiscal 2010, we planted 6,824 hectares in seven countries covering Southeast Asia, Fiji and India.

This project is conducted in partnership with the NGOs Action for Mangrove Reforestation (ACTMANG), The Organization for Industrial, Spiritual and Cultural Advancement-International (OISCA) and International Society for Mangrove Ecosystems (ISME).

(Relationship between mangrove planting and biodiversity)

Mangroves help to prevent global warming by absorbing and stabilizing large volumes of CO₂. They also play the role of a levee, protecting people and the ecosystem from tsunamis and other natural disasters.

In addition, mangroves are known as the "cradle of life" for the key role that they play in nurturing rich ecosystems and serving as the source of the coastal food chain.

(Program impact)

"Mangrove" is a generic term for flora that thrives along tropical and subtropical coastlines and river mouths.

Mangroves are sometimes referred to as the "forests in the sea." They have many benefits for human beings and the Earth.

Mangroves absorb and stabilize large volumes of CO₂, one of the factors in global warming, thus contributing to the prevention of global warming.

They also serve as natural levees to protect people from tsunamis and other disasters. Mangroves protected and saved the lives of many people from the tsunami that occurred in the Indian Ocean as a result of the earthquake off the island of Sumatra in December 2004.

The roots of mangrove trees also serve as a "cradle of life," providing a safe space where fish can spawn and small fish, crabs, shrimp and other animals thrive in a rich ecosystem.

Mangroves provide fishery and forest resources that are essential to the lives of local communities. The stability and improvement that they bring to living standards contribute to sustainable development of the area in which they are planted.

Indian Ocean tsunami from the earthquake off the island of Sumatra in December 2004



Mangrove planting area in Ranong, Thailand, in which the area behind the mangroves was protected from tsunami damage



Tale Nok near Ranong, Thailand, which did not have mangroves, was damaged by the tsunami.

Ecosystem surrounding mangroves



"100-Year Mangrove Plantation" Declaration

The Tokio Marine Group considers mangroves as "insurance for the future of the Earth" because they protect the planet and people's lives and bring benefits. We are committed to being involved in the mangrove planting project for 100 years.



▶ [Mangrove Planting Project](#)

Green Lessons: The Mangrove Story

The Tokio Marine Group, together with its employees and agents, conducts environmental education via planting mangroves in addition to activities to enhance environmental awareness.

Since 2005, group employees and agents have served as lecturers, sent to elementary schools and schools for students with special needs throughout Japan under the environmental education program "Green Lessons: The Mangrove Story." By the end of March 2011, the program had taught approximately 30,600 children and students at approximately 440 schools about the prevention of global warming and preservation of biodiversity and ecosystems. Classes describe the impact that mangrove planting has on the preservation of ecosystems and teach the importance of preserving biodiversity.



- ▶ [Environmental education program "Green Lessons: The Mangrove Story"](#)

Economic Benefits of Biodiversity and Ecosystems through Mangrove Planting (Thailand)

Research related to the economic impact of mangrove forests on biodiversity was reported in The Economics of Ecosystems and Biodiversity (TEEB) study, which was launched at the 10th Conference of the Parties to the Convention on Biological Diversity (COP10) in 2010. Based on the study results, Tokio Marine & Nichido conducted a preliminary calculation of the economic benefits of mangrove planting project in Thailand in cooperation with Ernst & Young ShinNihon Sustainability Institute Co., Ltd.



Tokio Marine & Nichido began planting trees in Thailand in 2000 and planted mangroves in a total area encompassing 1,016 hectares over a 11-year period up until fiscal 2010. During this period, we used details outlined in the TEEB study and relevant papers to estimate and compile the benefits effects by the respective items of "self-sufficiency in food and gathering of timber and biomass fuels by local residents," "increase in commercial fish catches," "mitigation of damages caused by storms," "corrosion control along coastlines" and "absorption of greenhouse gases."

As a result, the economic benefits amounted to a cumulative total of approximately 4.46 billion yen by 2030 (approximately 4.40 million yen per hectare over a total of 30 years from the commencement of mangrove planting). Additionally, the economic benefits for a single year will be increased to more than approximately 250 million yen in 2022, and although it will subsequently trend downward, the amount is expected to remain at a base level of approximately 240 million yen from 2030 onwards per year.

A report of the United Nations Environment Programme (UNEP) stated that the costs of mangrove planting amount to approximately 95,000 yen per hectare, which in turn, indicates that plantation can achieve various benefits on biodiversity in the long term.

**Total in Economic Benefit
by Fiscal Year for Mangrove Planting
from 2000 to 2010 in Thailand
(Millions of yen)**

