TEPCO

TEPCO BIODIVERSITY REPORT 2024

Introduction

The global trend to evaluate business activities from the perspective of biodiversity has intensified more than ever before.

The business activities of the TEPCO Group, which is an energy provider, include the installation and operation of facilities over a wide area and, therefore, are deeply dependent upon natural capital and have a great impact on the environment.

Since its founding, the TEPCO Group has given great consideration to the natural environment and biodiversity when engaging in business activities, and now that the Taskforce on Nature-related Financial Disclosures (TNFD) has announced a framework for disclosing information pertaining to nature-related risks, the TEPCO Group shall reassess its initiatives and strive to further disclose information based upon the methods recommended by this framework.

The TEPCO Group release this Biodiversity Report in order to compile and disclose information pertaining to current initiatives as part of the process of disclosing information in accordance with the TNFD framework.

May, 2024

Taskforce on Nature-related Financial Disclosures

TNFD stands for the Task Force on Nature-related Financial Disclosures. This private sector-led task force urges corporations to disclose their risks and opportunities pertaining to the natural environment and biodiversity so that financial institutions and investors can make suitable investment decisions.

In addition to the recommended disclosures structured around the four recommendation pillars (governance, strategy, risk and impact management, metrics and targets) and metrics, the final recommendations announced by the TNFD in September 2023 include the LEAP approach, which provides guidance on the integrated approach for the identification and assessment of nature-related issues, and also multiple frameworks that consist of sector and biome-based guidance, and individual guidance for scenario analysis and target setting.

TEPCO Group At a Glance

TEPCO
Tokyo Electric Power Company Holdings

Holding Company

Nuclear Fukushima

TEPCO
TEPCO Fuel & Power

Fuel & Thermal Power Generation Company

Business support and management of our fuel and power generation company, JERA

TEPCO Power Grid

General Power Transmission and Distribution Company

TEPCO
TEPCO Energy Partner

Electricity Retail Company

Electricity and gas retail

TEPCO
TEPCO Renewable Power

Renewable Energy Power Generation Company

Operating revenue
Approx. **¥7.7** trillion

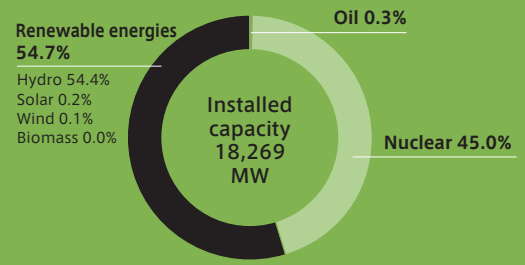
Operating income (loss)
Approx. **¥-228.9** billion

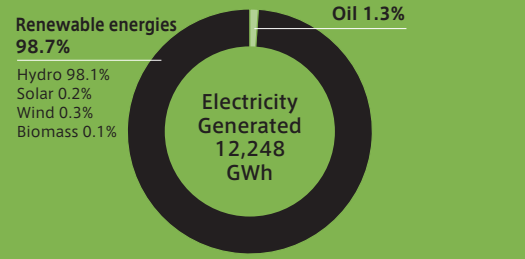
Gross power sales
242.8 TWh

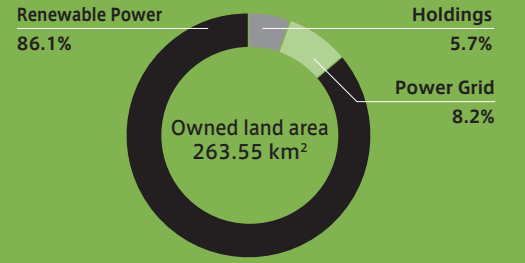
Employees
38,027 people

Consolidated Subsidiary
71 companies

as of March, 2023
TEPCO Holdings and all of consolidated subsidiary companies





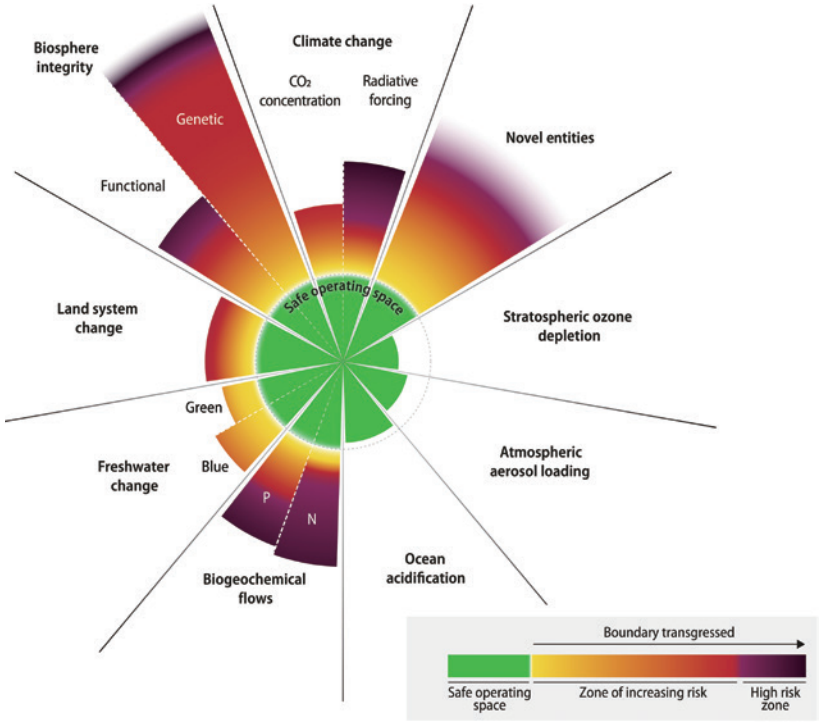


Planetary Boundaries

The planetary boundaries concept announced in 2009 by the Stockholm Resilience Center, a research group in Sweden, presents a set of planetary boundaries within which humanity can continue to develop and thrive for generations to come. The group identified nine processes that regulate the stability and resilience (ability of nature to recover) of the Earth system, established boundaries for these processes, and continues to assess and examine the status of each boundary. The framework has been updated several times in 2015, 2017, and 2022, and a final assessment of all boundaries was published in the third major update in 2023.

The green area in the center of the diagram is the safe area and the orange and red areas indicate that a global boundary has been transgressed. The 2023 assessment results show that six of the nine boundaries (Climate Change, Biosphere Integrity, Land-System Change, Freshwater Change, Biogeochemical Flows, Novel Entities) have been transgressed.

This indicates that the resilience of the climate, ecosystems, and water/forest environments, etc., have been pushed beyond their thresholds and are in danger of reaching a catastrophic state. Furthermore, these boundaries are not independent, but rather interrelated, and we must be aware of this relationship, such as how climate change greatly impacts biodiversity, and restrict human activities to safe boundaries.



Source: Richardson, Katherine, Will Steffen, Wolfgang Lucht, et al. "Earth Beyond Six of Nine Planetary Boundaries." Science Advances 9 (September, 2023)

Topics

Nature Positive

Nature-positive is a global societal goal to halt and reverse the loss of nature and biodiversity and create a positive effect on the environment.

In 2020, businesses and conservation organizations came together to publish a document entitled, "A Nature-Positive World: of the Global Goal for Nature" which puts forth the scientific basis for the goal of halting and reversing nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050.

At the UN Biodiversity Conference (COP15) held in 2021, the Kunming Declaration, which incorporates the idea of nature-positive, or rather, to "reverse biodiversity loss by 2030 at the latest and help it to fully recover," was released, and the G7 Cornwall Summit also agreed on the "2030 Nature Pact", and in 2022, the Kunming-Montreal Global Biodiversity Framework, which is a new global goal to be achieved by 2030, was adopted thereby making the achievement of nature-positive a common global initiative.

This initiative puts forth the goal of "30 by 30," or rather, to ensure and enable that by 2030 at least 30% of land and coastal and marine areas are effectively conserved thereby setting clear goals for the recovery of biodiversity.

Source: The Nature Positive Initiative

Electric power facilities of TEPCO Group

Generation

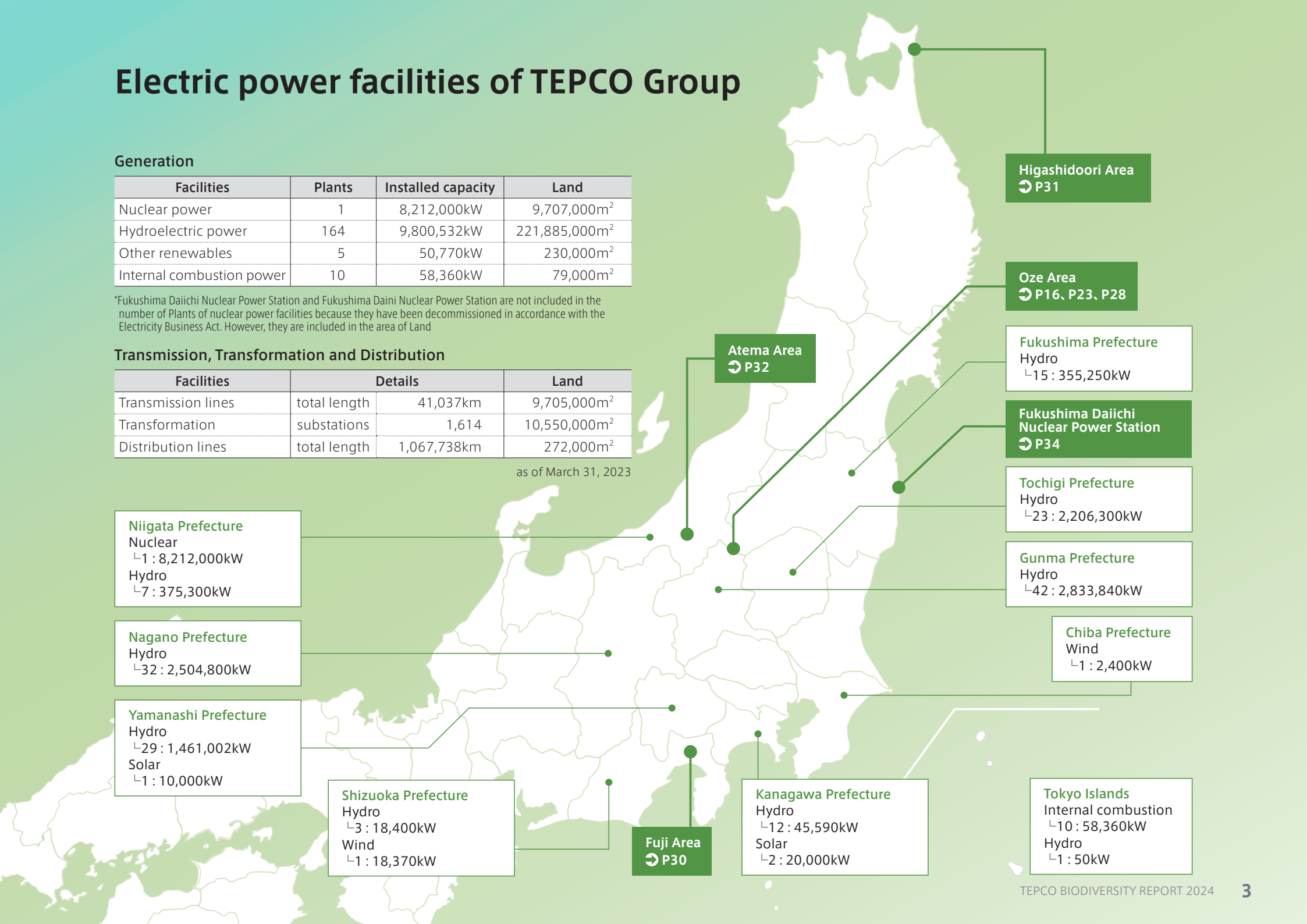
Facilities	Plants	Installed capacity	Land
Nuclear power	1	8,212,000kW	9,707,000m^2
Hydroelectric power	164	9,800,532kW	221,885,000m^2
Other renewables	5	50,770kW	230,000m^2
Internal combustion power	10	58,360kW	79,000m^2

*Fukushima Daiichi Nuclear Power Station and Fukushima Daini Nuclear Power Station are not included in the number of Plants of nuclear power facilities because they have been decommissioned in accordance with the Electricity Business Act. However, they are included in the area of Land

Transmission, Transformation and Distribution

Facilities	Details		Land
Transmission lines	total length	41,037km	9,705,000m^2
Transformation	substations	1,614	10,550,000m^2
Distribution lines	total length	1,067,738km	272,000m^2

as of March 31, 2023



Higashidoori Area
➲ P31

Oze Area
➲ P16、P23、P28

Atema Area
➲ P32

Fukushima Daiichi Nuclear Power Station
➲ P34

Fukushima Prefecture
Hydro
└15 : 355,250kW

Tochigi Prefecture
Hydro
└23 : 2,206,300kW

Gunma Prefecture
Hydro
└42 : 2,833,840kW

Chiba Prefecture
Wind
└1 : 2,400kW

Niigata Prefecture
Nuclear
└1 : 8,212,000kW
Hydro
└7 : 375,300kW

Nagano Prefecture
Hydro
└32 : 2,504,800kW

Yamanashi Prefecture
Hydro
└29 : 1,461,002kW
Solar
└1 : 10,000kW

Shizuoka Prefecture
Hydro
└3 : 18,400kW
Wind
└1 : 18,370kW

Fuji Area
➲ P30

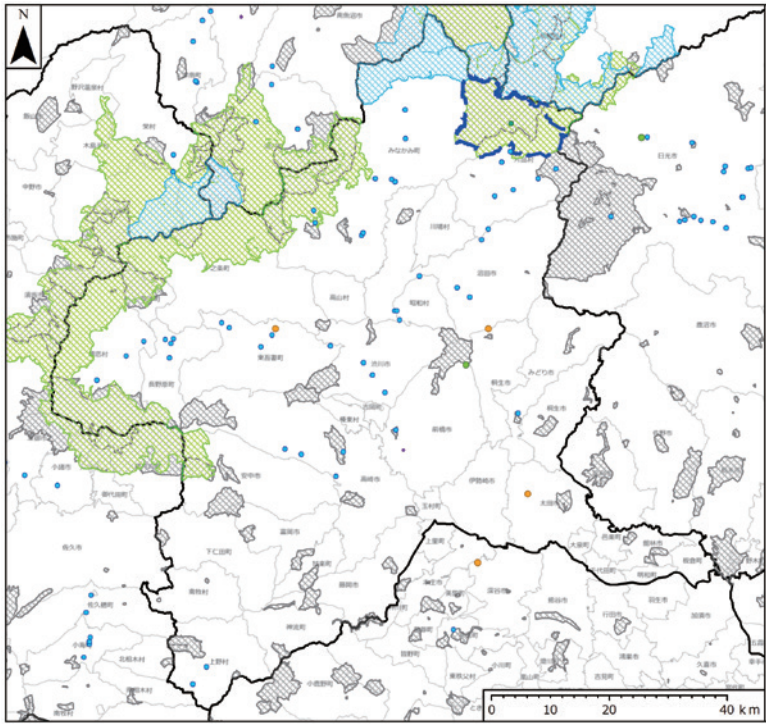
Kanagawa Prefecture
Hydro
└12 : 45,590kW
Solar
└2 : 20,000kW

Tokyo Islands
Internal combustion
└10 : 58,360kW
Hydro
└1 : 50kW

Important areas for biodiversity conservation

The TEPCO Group is surveying its power station, etc., facilities to see if any of them meet the requirements for key biodiversity areas. When conducting this survey, we referred to the protected area categories designated by the International Union for Conservation of Nature (IUCN), as well as protected areas in Japan, and leveraged this basic information when examining the dependency/impact relationship that the siting of power facilities has on biodiversity.

Power facility siting status and the state of key biodiversity areas (examples in Gunma Prefecture)



Back ground map source; Geospatial Information Authority of Japan

Facility location
- Hydroelectric
- Renewables
- Substations
- Offices

Oze region owned by the TEPCO Group

IUCN Categories I b II IV

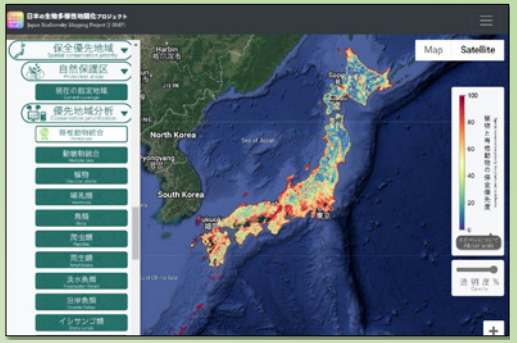
Prefectural borders

IUCN Categories		Designated areas in Japan	
I	a	Wilderness Conservation Area	
	b	Offshore Seabed Nature Conservation Area	
		Nature Conservation Area	
		Forest Ecology Conservation Area	
II		Semi-National Parks	Areas for which the primary objective is to protect ecosystems
		National Parks	
III		—	
IV		Rare Population Protection Forests	
		National Wildlife Sanctuary	
		Habitat Conservation Area	
		Biological Community Conservation Forest Area	
		Prefectural Wildlife Sanctuary	
		Protected Water Surface	

Topics

Biodiversity in Japan

A Japanese university startup, Think Nature Inc., uses Japan's largest biodiversity big data to provide various data infrastructures via its website. Its Japan Biodiversity Mapping Project (J-BMP) shows to visualize native/endangered/endemic species in each region of Japan and the world, and also shows the conservation priorities of areas in particular importance for natural conservation.



Source: Think Nature Inc.

TEPCO Group Biodiversity Policy

Enacted on April 1, 2024

The TEPCO Group's action guideline for preserving biodiversity ("TEPCO Group Biodiversity Policy") is a policy for "preserving biodiversity" as put forth in the TEPCO Group Environmental Policy. Our objective is to work with stakeholders, such as our customers and business partners, etc., to preserve biodiversity throughout all of society.

1. Ascertaining the relationship between our business and regional biodiversity, and striving to preserve it

- While ensuring a stable supply of power, we shall ascertain the relationship that our electricity business has to biodiversity and strive to reduce any detrimental impact.
- Through environmental impact assessment (EIA), etc., we shall consider the impact that the construction of power facilities has on biodiversity and implement appropriate measures to preserve biodiversity during and after construction.
- We shall assess the environmental load caused by business facility emissions and strive to mitigate environmental impact in light of the actual conditions in the region.
- We shall strive to maintain/improve the multifunctionality of forests, such as how they help to preserve biodiversity, prevent landslides, and cultivate water sources

2. Complying with laws and rules pertaining to biodiversity and contribute to international society

- We shall comply with related laws and strive to preserve biodiversity.
- We shall comply with the Convention on Biological Diversity (CBD) and the Convention Concerning the Protection of the World Cultural and Natural Heritage, and contribute to achieving Japan's objectives as put forth in its National Biodiversity Strategy.

3. Aiming to simultaneously achieve carbon neutrality while preserving biodiversity

- Through initiatives that aim to create a carbon neutral society, we shall strive to mitigate the impact of climate change on ecosystems.
- Through the sustainable use of bioresources we shall contribute to the preservation of biodiversity as we aim to create a circular economy.

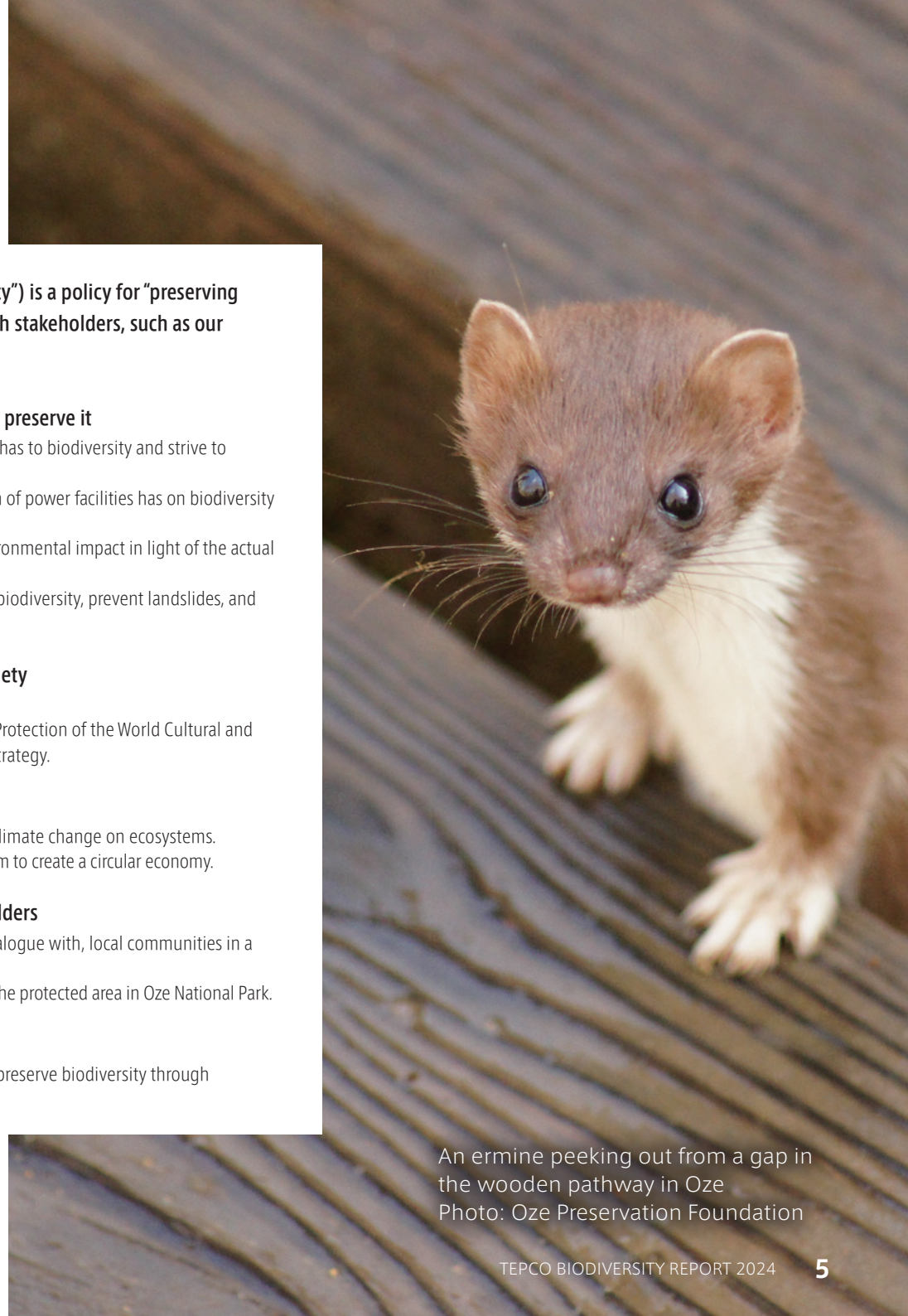
4. Striving to convey easy-to-understand information to, and engage in dialogue with, stakeholders

- Through environmental impact assessment (EIA), etc., we shall convey information to, and engage in dialogue with, local communities in a suitable manner and at suitable times as we strive to form consensus.
- We shall proactively convey information on important natural capital owned by the TEPCO Group, such as the protected area in Oze National Park.

5. Educating employees and strengthening partnerships with external stakeholders

- We shall deepen the understanding of biodiversity amongst all TEPCO Group employees as we strive to preserve biodiversity through partnerships with local communities.

The aforementioned initiatives shall be promoted under the TEPCO Group environmental management system and governance structure.



An ermine peeking out from a gap in the wooden pathway in Oze
Photo: Oze Preservation Foundation

CONTENTS

Preparations to TNFD

The TNFD's framework for the disclosure of information pertaining to nature-related risks was announced in September 2023. The aim is to achieve "nature-positive," or rather, shift the flow of capital so that it has a positive, rather than a negative, impact on the environment.

The TEPCO Group's business activities have an impact on climate change as well as on the natural capital on which it is suitably dependent. Therefore, going forward, we shall disclose information pertaining to biodiversity based on the TNFD framework much like we disclose information pertaining to climate change based on the TCFD framework.

Reference:
Recommendations of the Taskforce on Nature-related Financial Disclosures [September, 2023]

Towards adoption of the TNFD recommendations

The TNFD framework includes a set of recommended disclosures structured around the four pillars of governance, strategy, risk and impact management, and metrics and targets, as well as the LEAP Approach, which serves as practical guidance for identifying and assessing nature-related issues for each location at which business activities occur.

Going forward, the TEPCO Group shall visualize its dependency and impact on nature and disclose information pertaining to the relationship that this has to our financial activities based on the TNFD framework.

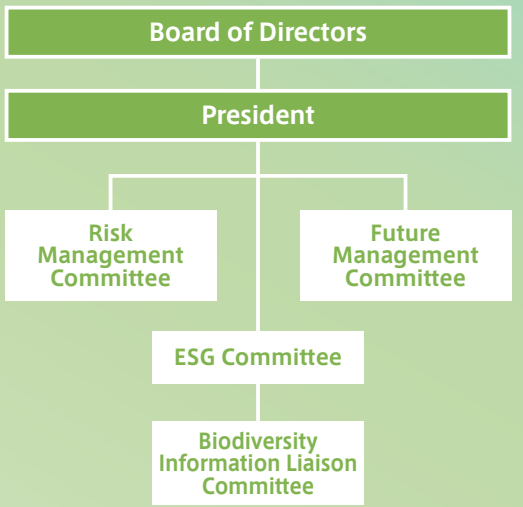
Reference:
Getting started with adoption of the TNFD Recommendations

TNFD recommended disclosures

Governance	Strategy	Risk & impact management	Metrics & targets
Disclose the organisation's governance of nature-related dependencies, impacts, risks and opportunities.	Disclose the effects of nature-related dependencies, impacts, risks and opportunities on the organisation's business model, strategy and financial planning where such information is material.	Describe the processes used by the organisation to identify, assess, prioritise and monitor nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage material nature-related dependencies, impacts, risks and opportunities.
Preserving biodiversity is important ESG management topic that is supervised by the Board of Director	Based on TEPCO Group Biodiversity Policy, risk and opportunity assessments and strategies are being developed	Identify priority locations based on risk and impact assessment and promote analysis and evaluation using the LEAP Approach	Along with assessing risks and opportunities, we will set metrics/ targets based on the strategies that match our financial strategies and promote initiatives pertaining to them

Progress in TEPCO Group

Governance Structure



A Biodiversity Information Liaison Group comprised of people from mainly the departments in charge of facilities that are highly dependent, and have a large impact on, natural capital has been established as a subcommittee of the ESG Committee.

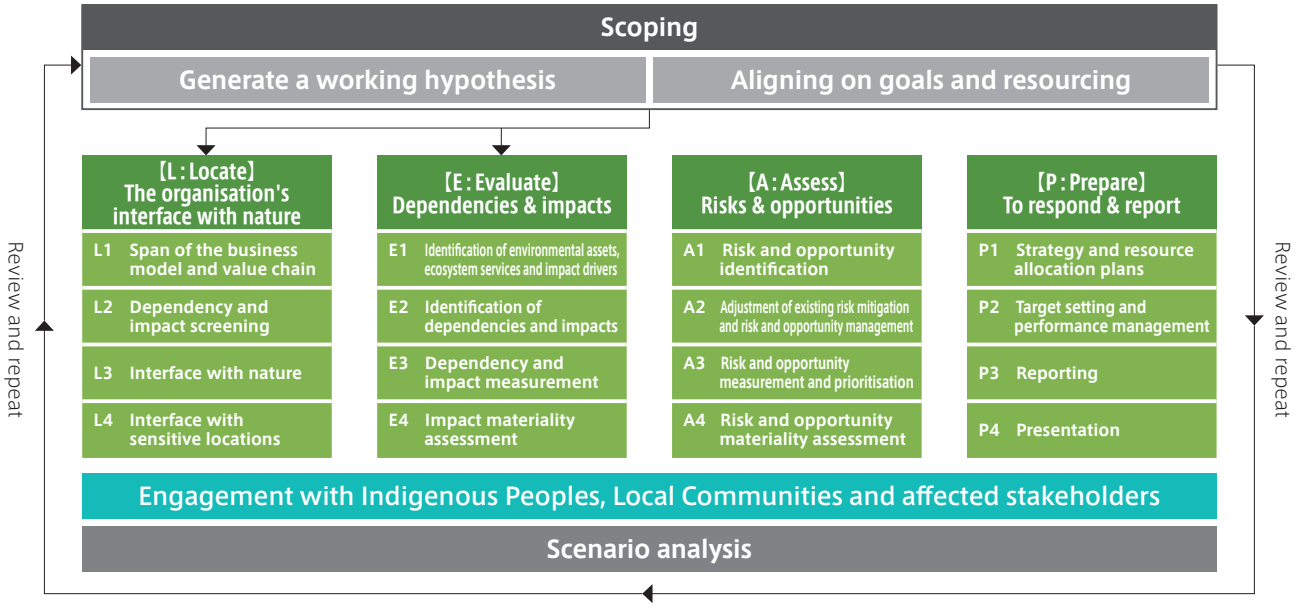
Topics pertaining to the operation of the entire TEPCO Group are discussed as ESG issues by the ESG Committee which then reports to the Board of Directors.

Trial use of the LEAP Approach

The TNFD recommends using the LEAP approach to identify and assess nature-related issues. LEAP refers to Locating, Evaluating, Assessing, and Preparing; the steps taken when preparing to disclose TNFD information.

Reference:
Guidance on the identification and assessment of nature-related issues:
The LEAP approach
Ver.1.1 (October, 2023)

The LEAP approach



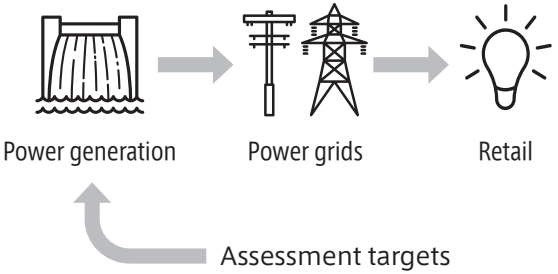
*Edited based on "Recommendations of the Taskforce on Nature-related Financial Disclosures (September 2023)"

Selecting assessment targets

The TEPCO Group's value chain is comprised primarily of power generation, grids, and retail sales, and we are dependent upon, and have an impact on, the natural capital at each facility location. And, since new development projects are also subject to assessment, all segments of our business are subject to assessment using the LEAP approach. During trial use of the LEAP approach in FY2023, we focused on existing facilities and assessed our hydroelectric power stations. Hydroelectric power stations have a huge impact on, and are greatly dependent upon, nature when they are in operation, and they account for a large proportion of the power generated by the TEPCO Group. We chose pumped-storage hydroelectric power stations, which circulate water between the upper and lower regulating reservoirs (dams) above and below the power stations to produce hydroelectric power in accordance with power demand, as the targets for assessment.

We focused on the L and E steps of the LEAP approach during this assessment, and will move forward with further analysis/assessment that will bring us to the A and P steps using the knowledge gained through the trial operation of this approach after we have formulated a biodiversity strategy and newly identified assessment targets based upon operating materiality.

Value Chain



L: Locate

Of a total of 17 upstream and downstream dams at nine pumped storage hydroelectric power stations owned by TEPCO Renewable Power Inc., 15 were selected. The scope of the investigation covered the areas downstream of the dams as shown in each map.

Power station	River system	River	Upstream dam	Downstream dam
Shiobara	Naka River	Nabearisawa River	Yashio Dam	Sabi River Dam
Imaichi	Tone River	To River	Kuriyama Dam	Imaichi Dam
Yagisawa	Tone River	Tone River	Yagisawa Dam	Sudagai Dam
Tanbara	Tone River	Hocchi River and Tone River	Tanbara Dam	Fujiwara Dam
Kanna River	Tone River and Sinano River	Kannna River and Minamiaiki River	Minamiaiki Dam	Ueno Dam
Kazuno River	Fuji River and Sagami River	Hi River and Tuchimuro River	Kamihi River Dam	Kazuno River Dam
Azumi	Sinano River	Azusa River and Midono River	Nagawado Dam	Midono Dam
Midono	Sinano River	Azusa River	Midono Dam	Inekoki Dam
Sin-Takase River	Sinano River	Takase River	Takase Dam	Nanakura Dam

*Yagisawa Dam is under the jurisdiction of the Japan Water Agency, and Fujiwara Dam is under the jurisdiction of the Ministry of Land, Infrastructure, Transport and Tourism, and therefore were excluded from the investigation.


Shiobara Power Station
Yashio Dam


Shiobara Power Station
Sabi River Dam


Imaichi Power Station
Kuriyama Dam


Imaichi Power Station
Imaichi Dam


Yagisawa Power Station
Sudagai Dam


Tanbara Power Station
Tanbara Dam


Kanna River Power Station
Minamiaiki Dam


Kanna River Power Station
Ueno Dam

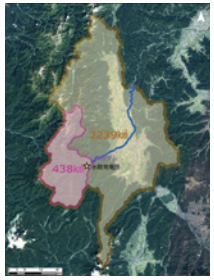

Kazuno River Power Station
Kamihi River Dam

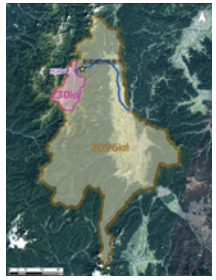

Kazuno River Power Station
Kazuno River Dam


Azumi Power Station
Nagawado Dam


Azumi Power Station
Midono Dam


Midono Power Station
Midono Dam


Midono Power Station
Inekoki Dam


Sin-Takase River Power Station
Takase Dam


Sin-Takase River Power Station
Nanakura Dam

L: Locate

We conducted a document investigation using IBAT* to look for duplicate key biodiversity areas (KBA (Key biodiversity areas and preserves)) and any protected species (trigger species) in nine hydroelectric power stations and the areas downstream of 15 dams.

*IBAT: Tool that enables maps to be used for identifying important ecosystems within protected lands open to the public (World Heritage sites, Ramsar Convention wetlands, IUCN management categories, KBA, etc.) that are important.

Results

- The table on the right shows areas within the scope of the investigation that fall under KBA*1 and IUCN management categories*2.
- We identified bird, amphibian, and mammal, etc. trigger species that live in the identified protected areas.
- Amphibians are greatly impacted by water current conditions downstream of the dams and changes in sediment dynamics caused by the operation of pumped-storage hydrologic power stations.
- Amphibian trigger species that have been found in areas downstream of Takase Dam and Nanakura Dam.

*1 KBA (Key Biodiversity Area): Assessed by the level of crisis and non-substitutability. Refers to areas inhabited by endangered species on the verge of extinction (crisis), or species that live in limited areas for which there is no substitute (non-substitutability). Important Bird Area (IBA) is in KBA.

*2 IUCN management categories: Categories used for classifying various protected area management types. For example, national parks and semi-national parks.

Power stations	Dams	Key biodiversity areas		Trigger species (KBA)	
		Categories	Name	Name	Rarity
Shiobara	**Yashio Dam**	KBA(Other)	Okutadami-Okunikko-Mt. Ohsabi	Myotis pruinosus	EN
				Pipistrellus endoi	EN
				Dymecodon pilirostris	LC
Shiobara	**Sabi River Dam**	KBA(Other)	Okutadami-Okunikko-Mt. Ohsabi	Myotis pruinosus	EN
				Pipistrellus endoi	EN
				Dymecodon pilirostris	LC
Tanbara	**Tanbara Dam**	KBA(IBA)	Okutadami, Okunikko and Okutone mountains	Emberiza variabilis	LC
				Gallinago hardwickii	LC
				Parus varius	LC
				Pericrocotus divaricatus	LC
				Picus awokera	LC
				Prunella rubida	LC
				Syrmaticus soemmerringii	NT
				Turdus chrysolaus	LC
		KBA(Other)	Okutadami-Okunikko-Mt. Ohsabi	Myotis pruinosus	EN
				Pipistrellus endoi	EN
				Dymecodon pilirostris	LC
		IUCN Management IV	Kashouzan Wildlife Sanctuary (Gunma Prefecture)	—	—
Kazuno River	**Kamihi River Dam**	IUCN Management IV	Daibosatsu Wildlife Sanctuary (Yamanashi Prefecture)	—	—
Sin-Takase River	**Takase Dam**	KBA(IBA)	Northern Japan Alps	**Bufo torrenticola**	LC
				Rana sakuraii	LC
				Dymecodon pilirostris	LC
				Eptesicus japonensis	EN
				Euroscaptor mizura	LC
				Pipistrellus endoi	EN
				Sorex hosonoi	LC
		IUCN Management II	Chubu Mountain National Park	—	—
		IUCN Management IV	Northern Alps Wildlife Sanctuary	—	—
Sin-Takase River	**Nanakura Dam**	KBA(IBA)	Northern Japan Alps	**Bufo torrenticola**	LC
				Rana sakuraii	LC
				Dymecodon pilirostris	LC
				Eptesicus japonensis	EN
				Euroscaptor mizura	LC
				Pipistrellus endoi	EN
				Sorex hosonoi	LC
		IUCN Management II	Chubu Mountain National Park	—	—
		IUCN Management IV	Northern Alps Wildlife Sanctuary	—	—

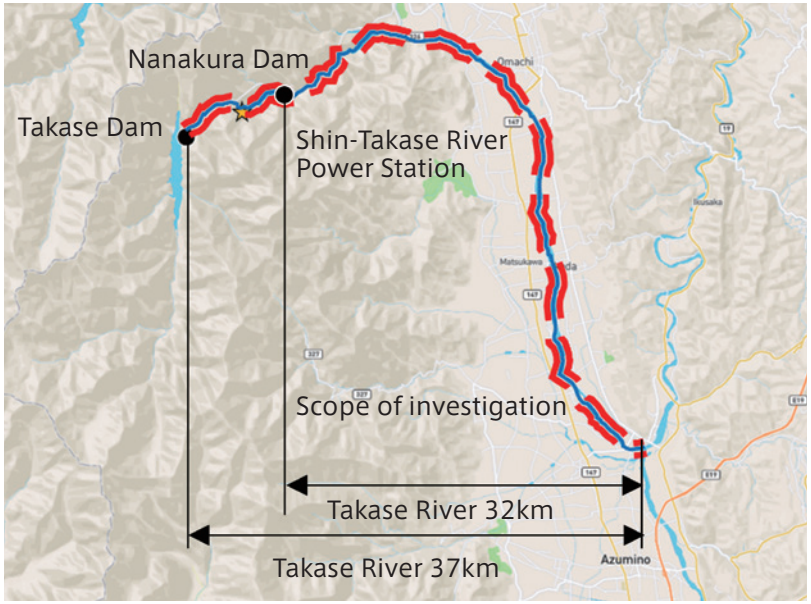
Red letters : **Amphibians (relevant to fresh water)**

*EX : Extinct EW : Extinct in the Wild CR : Critically Endangered EN : Endangered VU : Vulnerable NT : Near Threatened LC : Least Concern

L: Locate

The Shin-Takase River Power Station's Takase Dam (upstream dam) and Nanakura Dam (downstream dam) located in the Takase River basin in Nagano Prefecture fall under the designations for KBA, as well as IUCN Management Category II (National Park (Chubu-Sangaku National Park)) and IUCN Management Category IV (Designated Protected Area (National Northern Alps Bird and Animal Conservation Area)). They are KBAs because two protected species of amphibians (Bufo torrenticola and Rana sakuraii) inhabit the area.

Location



Amphibians of relevance

Japanese Stream Toad

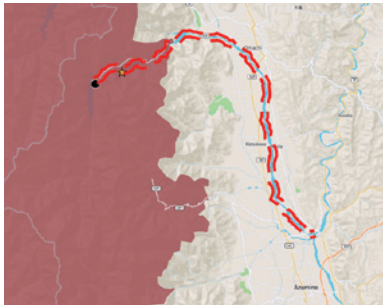
Family Bufonidae, Genus Bufo
Bufo torrenticola Matsui, 1976

Stream Brown Frog

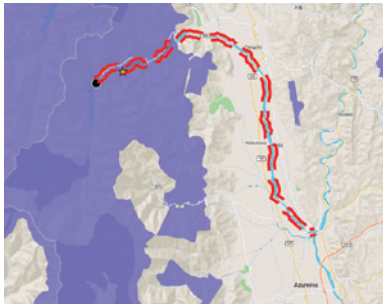
Family Ranidae, Genus Rania
Rana sakuraii Matsui at Matsui, 1990

KBA(IBA): applicable

IUCN Management Category II: applicable



IUCN Management Category IV: applicable



E: Evaluate

ENCORE is used to assess the identified dependency/impact relationships between our business activities and nature, which are important prerequisites for understanding risks and opportunities.

In ENCORE, some of the factors on which the hydroelectric power business has the largest degree of dependency are "Surface water," "Water flow maintenance," and "Climate regulation."

*ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure): The tool allows financial institutions to ascertain to what degree a business depends on, and impacts, the environment.

ENCORE assessment of the hydroelectric power business's degree of dependency

(Key) VH : Very High H : High M : Medium L : Low VL : Very Low ND : No data

No.	Ecosystem services	Evaluation
1	Animal-based energy	ND
2	Fibres and other materials	ND
3	Genetic materials	ND
4	Ground water	M
5	Surface water	VH
6	Maintain nursery habitats	ND
7	Pollination	ND
8	Soil quality	ND
9	Ventilation	ND
10	Water flow maintenance	VH
11	Water quality	L
12	Bio-remediation	VL
13	Dilution by atmosphere and ecosystems	ND
14	Filtration	VL
15	Mediation of sensory impacts	ND
16	Buffering and attenuation of mass flows	ND
17	Climate regulation	VH
18	Disease control	ND
19	Flood and storm protection	H
20	Mass stabilisation and erosion control	H
21	Pest control	ND

No.	Ecosystem services	Evaluation	Explanation based on ENCORE	Relativity to TEPCO's pumped storage hydroelectric power business
5	Surface water	VH	Surface water is provided through freshwater resources from collected precipitation and water flow from natural sources.	For the hydroelectric power business, water is indispensable capital
10	Water flow maintenance	VH	Forests have a significant impact on the water circulating within a watershed. Evapotranspiration (evaporation from the canopy and soil and transpiration from plant leaves) in forested areas is thought to increase the probability of cloud formation and rainfall. Although the relationship between biodiversity and water regulation/purification is not yet understood, forest and wetland ecosystems are said to regulate water flow through vegetation, microorganisms, and soil.	A stable water cycle is indispensable for stable power generation within a water basin
17	Climate regulation	VH	CO_2, the main greenhouse gas, is absorbed directly by water and indirectly by plants through photosynthesis, and is fixed as organic matter in biomass and soil. Peat soils are particularly rich in carbon fixation. Through these absorption and fixation processes, the temperature of the earth's surface is regulated and maintained at a level that can sustain life.	A stable climate is a necessary condition for maintaining a healthy water cycle and surface water, and is a large factor that impacts future business
19	Flood and storm protection	H	Ecosystems such as forests, coral reefs, seagrasses, underwater forests, wetlands, and sand dunes can act as natural barriers or buffer zones to reduce the effects of natural disasters such as wind storms, typhoons, floods, tsunamis, avalanches, wild fires, and landslides. While this function cannot completely prevent natural disasters, biodiversity can play a role in mitigating and reducing damage and facilitating recovery.	Natural disaster impact mitigation can be thought of as mitigating the impact of disasters on the stable supply of surface water as well as reservoirs and facilities, etc.
20	Mass stabilisation and erosion control	H	Plant cover on the ground has a significant effect on soil erosion prevention. On steep slopes, forests prevent landslides by establishing root systems and by regulating soil moisture conditions. In recent years, the frequency of landslides has been increasing, which may be due to deforestation and other land use changes.	Mass stabilisation and erosion control has the benefit of reducing the impact on reservoirs.

In ENCORE, some of the factors on which the hydroelectric power business has the greatest degree of impact are the "Terrestrial ecosystem use," the "Freshwater ecosystem use," and the "Water use," etc.

However, as shown in the table below that indicates the level of relativity to TEPCO's pumped storage hydroelectric power business (during the facility operation stage), the impact that our "Terrestrial ecosystem use" and "Water use" has are both quite small.

ENCORE assessment of the hydroelectric power business's degree of impact

(Key) VH : Very High　H : High　M : Medium　L : Low　VL : Very Low　ND : No data

No.	Ecosystem services	Evaluation
1	Terrestrial ecosystem use	VH
2	Freshwater ecosystem use	VH
3	Marine ecosystem use	ND
4	Water use	VH
5	Other resource use	ND
6	GHG emissions	H
7	Non-GHG air pollutants	ND
8	Water pollutants	H
9	Soil pollutants	H
10	Solid waste	ND
11	Disturbances	ND

No.	Ecosystem services	Evaluation	Explanation based on ENCORE	Relativity to TEPCO's pumped storage hydroelectric power business
1	Terrestrial ecosystem use	VH	May have impacts on terrestrial plants and animals, including habitat displacement and mortality	There is little use of the terrestrial ecosystem during the facility operation phase, which is why the impact is small.
2	Freshwater ecosystem use	VH	May have impacts on nearby freshwater and terrestrial habitats vary with scale. Large power plants can lead to significant increases in freshwater habitat and loss of terrestrial habitat upstream and decreases in freshwater habitat downstream. In addition, changes in sediment and water flows increase the potential for erosion	It is assumed that temporarily storing surface water with dams, etc., causes changes in sedimentation and water flow.
4	Water use	VH	Some hydroelectric power stations lead to water diversions, which can lead to unsustainable water withdrawals. Large power plants can affect the amount of water available in a watershed. They can also significantly reduce water flows, which may result in increased susceptibility to regional drought	Generally, pumped storage hydroelectric power plants do not take in water, so there is little impact on water resources.
6	GHG emissions	H	Greenhouse gas emissions from reservoirs contribute to climate change	If a reservoir becomes anaerobic, it may start to emit methane, etc.
8	Water pollutants	H	May lead to water pollution by altering water temperature balance and increasing flooding	Temporarily storing water may change the water temperature balance, impact water quality, and/or change sediment dynamics downstream.
9	Soil pollutants	H	Alter sediment flow in the watershed, which can lead to increased sedimentation and sediment depletion as well as eutrophication	

Future plans

As with TCFD*1 and ISSB*2, disclosing information based on the TNFD framework is significant because, "the company discloses material information useful for decision-making to investors and other capital providers, and enables strengthening of the organization's resilience to climate and other nature-related risks."

The TEPCO Group has been disclosing climate-related information in accordance with the TCFD framework since 2019, and in 2023 we published a TCFD Report. In regards to nature-related risks, we intend to disclose a plethora of information through engagement with our stakeholders while referring to the TNFD framework and also closely watching steps taken to formulate IFRS information disclosure standards by the ISSB.

*1 TCFD (Task Force on Climate-related Financial Disclosures): Private-sector task force that urges companies to disclose climate-related financial information in order to help investors make appropriate investment decisions.

*2 ISSB (International Sustainability Standards Board): It was formed in 2021 under the oversight of the IFRS as an independent, private-sector body that develops international standards for the disclosure of non-financial information by companies. In June 2023 the International Sustainability Standards Board (ISSB) issued its first two IFRS Sustainability Disclosure Standards; IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information, and IFRS S2 Climate-related Disclosures.

Materiality Approach

When disclosing information in accordance with the four pillars of the TNFD disclosure recommendations (governance, strategy, risk & impact management, metrics & targets) (Refer to pg. 8), it is extremely important to identify materiality that serves as the basis for such disclosures. However, this differs from climate-related topics for which the sources of greenhouse gases can be identified in that there are many issues to address when identifying and quantifying all the risks and opportunities that accompany the dependency and impact that general business activities have on the natural environment.

In order to, "provide information to capital providers that is useful for decision-making," the TEPCO Group's nature-related disclosures are based upon disclosure standards stipulated in ISSB:IFRS S1, and we strive to identify natural capital materiality by prioritizing and incorporating "reports on issues that reflect the most remarkable impact (" GRI 1: Foundation 2021")" while referring to the definition of the "Impact Materiality Approach" recommended by the TNFD.

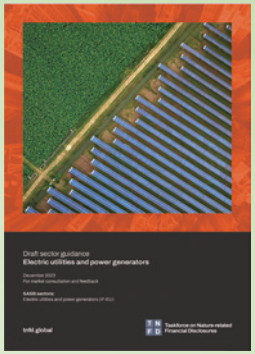
One of the TEPCO Group's key management issues is, "contributing to a comfortable and safe carbon neutral society," and as such we aim to grow our business and solve social issues. In order to achieve these goals, we have set the goals of developing 6~7 million kW of power and generating net profits on the order of ¥100 billion by FY2030 as energy supply countermeasures aimed at "using renewable energies as main power sources." In order to comply with TNFD disclosure recommendations, we are leveraging the knowledge gained through the trial use of the LEAP approach to assess and analyze the impact of promoting business strategies based on this double materiality, and we will disclose any useful information that we obtain.

Ensuring comparability

Comparability is very important to investors and other capital providers that are referring to information from multiple companies, but the importance and degree of impact of non-financial information varies greatly depending on the industrial sector.

In light of the large differences in business models and value chains across sectors, the TNFD is creating sector-based guidance that will enable the measurement of comparable data on the sector level in order to provide information to capital providers that is useful for making decisions about capital distribution.

As an energy provider (electric utility sector), we will closely watch the creation of this guidance to learn what type of disclosures are expected from the TEPCO Group.



Reference: Draft sector guidance – Electric utilities and power generators

Oze and TEPCO

TEPCO Renewable Power owns approximately 40% of the entire Oze National Park, and approximately 70% of the special protected zone within the park, and uses it to cultivate water sources (function for storing water) for hydroelectric power stations. As the landowner of these areas, over the last approximately 60 years TEPCO has worked together with regional residents to maintain the wooden pathway that runs through the protected wetlands, and has engaged in various activities to preserve the natural environment, such as efforts to restore devastated wetlands.

Ecosystem preservation areas (approx. 15,100ha)
These areas have been demarcated to protect mainly precious natural areas. They include wetlands, such as Ozegahara and Ayamedaira, etc., as well as Mt. Shibutsu alpine vegetation and natural forests.

Forestry areas (approx. 1,200ha)
These areas are used to produce mainly lumber. They include cultivated forests of larch trees, etc.

The Oze Tokura Forest that is owned by the TEPCO Group includes not only natural forest, but also cultivated forests comprised of larch trees planted to replace trees that were cut down during post-World War II recovery efforts. The Oze Tokura Forest is a plentiful resource for producing lumber that also has precious water cultivation functions, which makes it a "water jar" that supports hydroelectric power generation, industry, and our daily lives. The TEPCO Group preserves and manages the Oze Tokura Forest while continuously balancing the preservation of forest multifunctionality with the use of it.

The Oze Tokura Forest acquired forest management certification (FSC-FM certification) in 2010 (Certified area: 16,334ha) Larch tree lumber produced from the Oze Tokura Forest is used to maintain the wooden pathway within the Oze National Park, which is branded with the FSC® certification mark.

History

The demand for electricity grew sharply during the end of the Meiji Era and into the Taisho Era as electricity became part of everyday life. As such, moving forward with the construction of hydroelectric power stations, which was the primary source of power generation at the time, was a huge issue for the Japanese Government.

So, in 1916, the power company at the time (Tone Power) acquired the Oze lands in Gunma Prefecture (At the time, only the lands on the Gunma Prefecture side were privately owned. The lands on the Fukushima and Niigata Prefecture sides were national forests) in order to leverage the plethora of water in Oze for power generation, and in 1922, Kanto Hydroelectric acquired the water rights (the right to use water from rivers and lakes/marshes).

After that, due to the effects of repeated wars and earthquakes, as well as the strong call from the people to protect the natural environment in Oze, no development took place and Oze was taken over from its predecessor (Tokyo Dento) when Tokyo Electric Power Company was established in 1951, leaving the nature preserved. This was the beginning of the relationship between Oze and TEPCO.

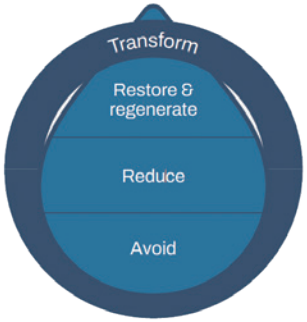
Devastated Ayamedaira (late 1950s)

Ayamedaira today (August 2019)

The end of the 1950s saw a great increase in the number of hikers that were drawn to Oze by its beauty. However, the absence of facilities, such as public toilets and the wooden pathway, resulted in the devastation of the nature in Oze in the blink of an eye. It was at this time that TEPCO started to focus on the natural conservation of Oze in order to protect the nature that had been lost. TEPCO built approximately 20km of a 65km wooden pathway constructed to allow people to interact with the environment without trampling the wetlands, and also engaged in activities to help the Ayamedaira wetlands recover.

The TNFD recommendations suggest the concept of the mitigation hierarchy as a guideline for measures to deal with identified nature-related issues, and recommend that measures be taken in the order of "avoide, reduce, restore and regenerate, and transform". The mitigation hierarchy is reflected in the Oze nature conservation actions, which includes the construction of wooden paths, and the TEPCO Group will continue to adhere to this concept in all of its business activities.

The TEPCO Lodge
The TEPCO Lodge is popular amongst hikers because it offers a scenic view of Ozegahara. The lodge was originally built by Kanto Hydroelectric, the power company at the time, in the 1930s to measure precipitation, so at the time it was called the "hydroelectric lodge." Thereafter, it was inherited by Tokyo Dento, the predecessor to TEPCO, and became known as the "TEPCO Lodge."



Transform	**Create systemic change**
Restore & regenerate	**Correcting impacts by restoring and regenerating the affected environmen**
Reduce	**Minimise negative impacts that cannot be fully eliminated**
Avoid	**Prevent negative impacts from happening in the first place**

Mitigation hierarchy mentioned in the TNFD recommendations

Biodiversity in Oze

With Ozegahara and Oze marsh at its center, and straddling four prefectures (Gunma, Fukushima, Niigata, Tochigi), Oze is Japan's largest expanse of wetlands comprised of mainly highland marsh. Home to over 1,000 species of plants, 160 species of birds, 40 species of dragonfly and 35 species of mammals, etc., the wetlands are comprised of academically precious ecosystems. There are approximately 20 different plants and also approximately 20 different animals that were discovered in Oze and therefore include "Oze" in their name. In 2005, Oze was registered as a Ramsar Convention wetland. (registered area: 8,771 ha (of which we own 6,185 ha))

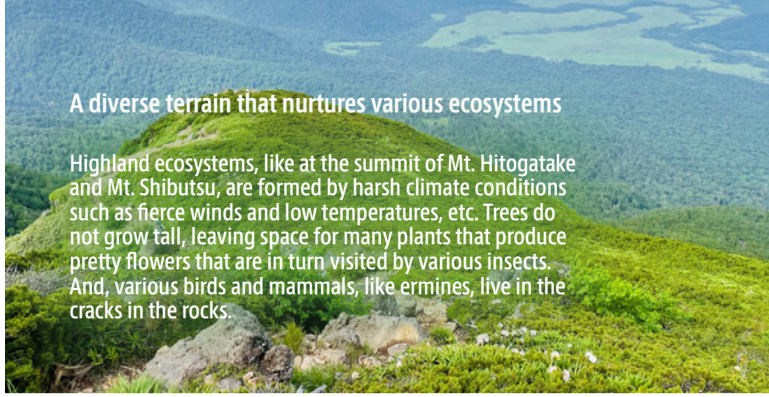
Rare species in Oze (GRI 304-4)

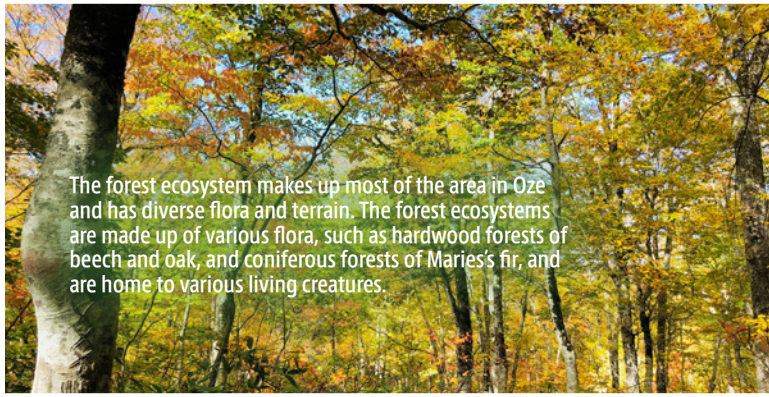
Name	Red List by Ministry of the Environment	
	November 2005*	August 2021
Flora		
Nuphar pumilum	VU	VU
Chara globularis	CR+EN	CR+EN
Amitostigma kinoshitae	VU	VU
Iris laevigata	VU	NT
Cirsium homolepis	VU	VU
Pogonia japonica	VU	NT
Habenaria sagittifera	VU	VU
Drosera anglica	VU	VU
Viola kamtschadalorum	VU	NT
Carex nemurensis	VU	NT
Utricularia uliginosa	VU	NT

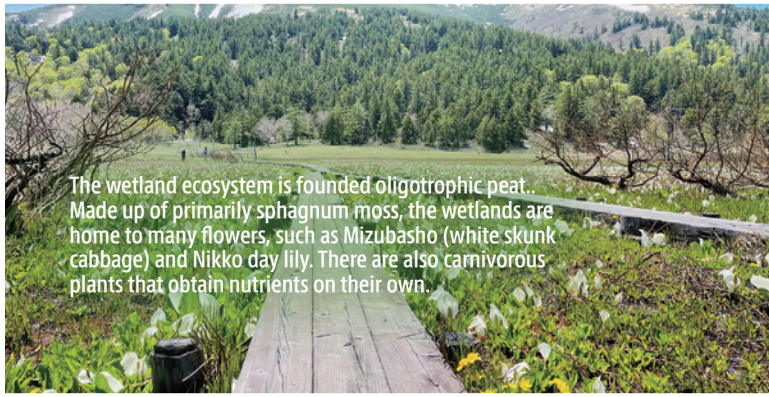
Name	Red List by Ministry of the Environment	
	November 2005*	August 2021
Birds		
Aquila chrysaetos japonica	EN	EN
Spizaetus nipalensis orientalis	EN	EN
Accipiter gentilis	NT	VU
Falco pergrinus japonensis	VU	VU
Pericrocotus divaricatus	VU	VU
Lanius tigrinus Drapiez	VU	CR
Emberiza yessoensis	VU	VU
Gorsachius goisagi	NT	VU
Pandion haliaetus	NT	NT
Pernis apivorus	NT	NT
Accipiter nisus	NT	NT
Lanius cristatus	NT	EN
Insects		
Nehalennia speciosa	NT	Not designated

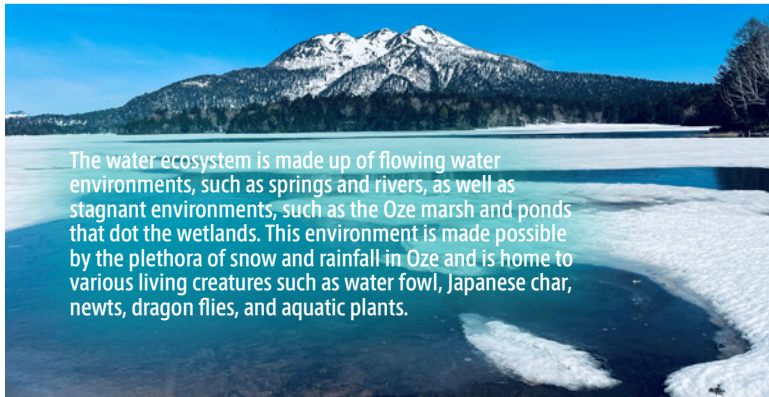
CR+EN: Critically Endangered + Endangered
CR: Critically Endangered
EN: Endangered
VU: Vulnerable
NT: Near Threatened

*As of registration as a Ramsar Convention wetland









30by30

Aiming to preserve more than 30% of Japan's natural environment by the year 2030

The objective of "30 by 30" goal is to effectively preserve more than 30% of land and ocean areas as robust ecosystems by 2030 in order to achieve our goal of "nature-positive" by which we halt the loss of biodiversity and help it to recover by the year 2030. Each member nation of the G7 made this promise by signing the G7 2030 Nature Compact during the 2021 G7 summit.

In Japan, a 30 by 30 Alliance for biodiversity comprised of willing corporations, local governments and organizations has been formed to expand the areas currently protected in Japan (approximately 20% of land areas and approximately 13% of ocean areas) in order to achieve the objective of 30 by 30, and promote initiatives to register areas conserved by the public sector, etc., as OECM* areas. The 30 by 30 Alliance seeks to register at least 100 regions as OECM areas by 2023.

*OECM (Other Effective area based Conservation Measures) : A mechanism for not only expanding national parks, etc., but promoting conservation by registering areas in which biodiversity is preserved by regions, corporations, and organizations in an international database in order to achieve "30 by 30."

The TEPCO Group joined the 30 by 30 Alliance in 2022, and in October 2023, the Minister of the Environment certified Oze (Ozegahara, Oze marsh, Oze Tokura Forest), which is owned by TEPCO, as a Natural Symbiotic Sites.

Certification as a Natural Symbiotic Sites means that the TEPCO Group's conservation initiatives have been formally recognized as having contributed to preserving biodiversity, and through this certification, the TEPCO Group is contributing to achieving biodiversity goals in Japan and throughout the world.

Natural Symbiotic Sites

The Minister of the Environment certifies "areas in which biodiversity is being preserved through private sector initiatives, etc." as Natural Symbiotic Sites regardless of whether they are within or outside protected areas. Certified areas that have not also been designated as protected regions are registered as OECM.

Certification status (as of March 2024)

184 sites

Approx. 85,000 ha

(Approx. 0.2% of Japan's land)

Area of the TEPCO Group's land that has been certified (Oze)

Approx. 16,334 ha

Approx. 20% of Natural Symbiotic Sites

(**478 ha** of which will be registered as OECM)

Released a cover song of *"Natsu no Omoide (Memories of Summer),"* which has been used to convey the beauty of the natural environment in Oze through the generations (2018)

The rich ecosystems and beautiful scenery of Oze are vibrantly expressed in the song, "Memories of Summer," which has been loved by the Japanese for decades. In order to pass down the natural value of Oze, which is a treasure of Japan, to the next generation, and ensure that this song continues to be sung, in 2018 we selected a young artist Miyuu, a singer-songwriter affiliated with Avex Inc., to be Oze Music Ambassador and released a remake of the song "Memories of Summer."

"Natsu no Omoide (Memories of Summer)"/ Miyuu cover edition

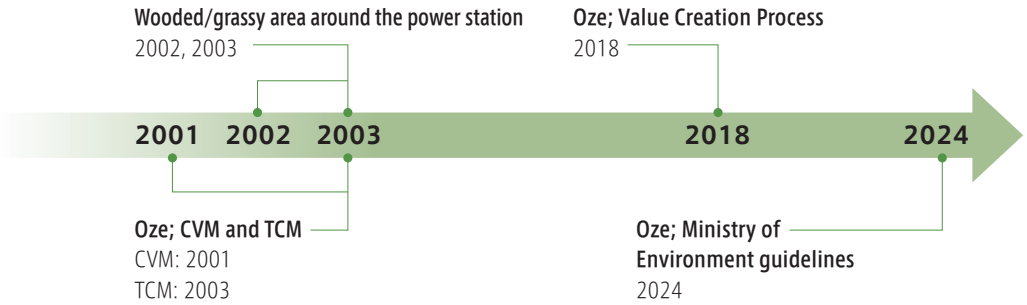
Economic value assessment of natural capital

Through the operation of environment management systems, TEPCO has assessed the balance between "environmental conservation and economic efficiency."

In the 2000's, we incorporated environmental accounting methods and began calculating the internal economic effect of environmental countermeasure costs and environmental countermeasures using the correlation between the amount of fossil fuels consumed by power operators and reductions in environmentally hazardous substances, and used this information to measure the economic efficiency of all business activities and assess the monetary value of environmental improvements. Furthermore, we have also engaged in initiatives to conduct quantitative assessments of the value of nature conservation activities that accompany our electricity business.

Going forward, as we examine financial indicators based on TNFD, we will reevaluate past initiatives while incorporating new methods and working to disclose information more effectively.

History in economic value assessment



Wooded/grassy area around the power station (2002 and 2003)

In the early 2000's we assessed the economic value of green land that was the site of 14 thermal power stations and three nuclear power stations owned by TEPCO Inc. In 2019, our thermal power stations and related assets were transferred to JERA leaving the TEPCO Group ownership of only one nuclear power station. The value of the natural environment calculated using the contingent valuation method (CVM)* and estimation methods used at the time for converting the environmental impact of environmental countermeasures into a monetary value will be used going forward as reference as the TEPCO Group assesses its nature conservation activities.

Assessed value of wooded/grassy area around the power station (estimate)

	Estimates based on the contingent valuation method (CVM)	Estimates based on Eco-Indicator 99
Total power station wooded/grassy area [8,510m^2]	**approx. ¥41-63 billion/year**	**approx. ¥0.33-8.24 billion/year**

*CVM (Contingent Valuation Method): Method for converting environmental value into a monetary figure by presenting the current environment and a virtual worse/better environment to average citizens to asking them how much they would be willing to pay to implement countermeasures to prevent/enable such changes.

Assessment of environmental impact avoided thanks to environmental countermeasures implemented for wooded/grassy area around the power station (2003)

*Taken from the TEPCO Environmental Action Report 2003

- "Environmental impact" was estimated using weighted coefficients pertaining to changes in how land is used as noted in Eco-Indicator 99 (Netherlands: PRe Consultants BV), and the monetary conversion was calculated using weighted CO_2 coefficients (5.45P/t-CO_2) and IPCC report greenhouse gas damage costs (US$5~$125 (¥600~¥15,000)/t-C).
- Compares the environmental impact of current case [A] in which power station land is managed through environmental countermeasures, such as protected land conservation and tree planting, etc., and virtual case [B] in which power stations were never constructed and the land became part of the city as urban development progressed.

Wooded/grassy area around the power station		【A】Current case: Environmental countermeasures implemented				【B】Virtual case: Environmental countermeasures not implemented				【A】−【B】 Environmental impact avoided through countermeasures	
		Area (m^2)	Coefficient* (P/m^2 · Year)	Environmental impact		Area (m^2)	Coefficient* (P/m^2 · Year)	Environmental impact			
Thermal power stations on the coast of Tokyo Bay (12 locations)	Conserved forest, etc.	954	0	0P	¥0	1,632	1.96	3.20×10^{6}P	¥0.96- 2.4 billion	1.87×10^{6}P	¥0.0561- 1.4 billion
	Lawns, scenic landscaping	678	1.96	1.33×10^{6}P	¥0.0399-0.997 billion						
Power stations with existing forest (Thermal power stations: Two locations; Nuclear power stations: Three locations)	Conserved forest, etc.	4,658	0	0P	¥0	6,878	1.96	1.35×10^{7}P	¥0.405 - 10.1 billion	9.2×10^{6}P	¥0.274 - 6.84 billion
	Lawns, scenic landscaping	2,219	1.96	4.35×10^{6}P	¥0.131-3.26 billion						
Total		**8,510**			**¥0.171- 4.26 billion**	**8,510**			**¥0.501- 12.5 billion**		**¥0.33 - 8.24 billion**

*Weighted coefficients pertaining to changes in land usage: No change to "conserved forests" assigned a value of "0" based on Eco-indicator 99, and "lawns, scenic landscape" assigned a value of "1.96," which is the same as "urban land."

Oze; CVM and TCM (2001 and 2003)

In 2001 and 2003, TEPCO assessed/analyzed the economic value of the natural environment of Oze, which it has conserved for decades. In 2001, the contingent valuation method (CVM)*1 was used to calculate what the people would be willing to pay to conserve the environment in Oze, and in 2003, the travel cost method (TCM)*2 was used to estimate the economic impact of tourism.

*1 CVM (Contingent Valuation Method): Method for converting environmental value into a monetary figure by presenting the current environment and a virtual worse/better environment to average citizens to asking them how much they would be willing to pay to implement countermeasures to prevent/enable such changes.

*2 TCM (Travel Cost Method): Method for indirectly assessing the usage value of a visited area based on the relationship between the travel costs to the visited area and the number of times it was visited.

Survey summary

	Survey in March, 2001 Published in the TEPCO Environmental Action Report 2001	**Survey in September and October, 2003** Published in the TEPCO Environmental Action Report 2004
Objective	Assessed value of the natural environment in Oze by people residing in the Kanto region (total amount they would be willing to pay)	Economic impact of Oze tourism (direct effect, ripple effect)
Methodology	Contingent Valuation Method (CVM)	Travel Cost Method (TCM)
Target	Tokyo residents (1,920 residential locations selected at random)	Hikers that went to the five trail heads of Oze mountains (Gunma prefecture, Fukushima Prefecture) (4 days over weekdays/holidays)
Method	Personal interviews (People from those selected who agreed to be interviewed)	Interview style
Number of valid answers	320	400
Survey results	(A) Per capita annual amount willing to pay (median): **¥1,072** (B) Target population (number of adults in the Kanto region): **Approx. 25.94 million**	**Direct effect** (Consumption amount from Oze tourism) • Gunma, Fukushima and Niigata prefectures: **Approx. ¥5.1 billion/year** • Areas around Oze: **Approx. ¥3.6 billion/year**
	Assessment amount (A) x (B) **Approx. ¥28 billion/year**	**Ripple effect** (Economic ripple effect calculated from industry-related analysis) • Gunma, Fukushima and Niigata prefectures: **Approx. ¥7.9 billion/year** • Areas around Oze: **Approximately the same as the direct effect**

Oze basic data (as of March 2024)

Area of land owned by TEPCO Renewable Power, Inc.

Approx. 16,334ha (FSC certified area)

- Approximately 40% of Oze National Park
- Approximately 70% of Special Protection Zone

Wetlands registered under the Ramsar Convention

6,185ha

Example of quantitative assessment of ecological services (regulated in 2018)

Amount of fixed carbon in forests

Approx. 10,000t-CO_2/ year

Amount of fixed carbon in wetlands

Approx. 1,000t-CO_2/ year

Underground water cultivation

Approx. 120millon m^3/year

(Average for 2006-2010)

Soil erosion prevention function

Reduced to approximately 1/144

Amount of soil erosion if there is no vegetation

Oze; Value Creation Process (2018)

In the TEPCO Integrated Report that we have published since 2017, we have made efforts to present/visualize the output and outcome of our business activities based on the value creation process put forth by the International Integrated Reporting Council (IIRC), and in the 2019 Integrated Report we presented the results of the quantitative assessment of ecological services in Oze that we conducted in 2018.

Inputs

Financial
Environmental conservation costs:
Approx. ¥300 million/year

Manufactured
- Total length of wooden pathway maintained by TEPCO: Approx. 20km (boards replaced every 10 years)
- Operated lodges: 5

Intellectual
Oze guides, natural observation instructors, community outreach

Human
TEPCO Power Technology Ltd. Oze Forestry Office
Number of employees: 70 (including part-timers)

Social and relationship
History of nature conservation activities by the region, administration, and related organizations: Approx. 60 years
Corporate reputation of proactively conserving the natural environment

Natural
Biodiversity in our owned area

Activities and Outputs




- Wooden path maintenance/construction
- Measures to prevent intrusion by non-native species
- Construction of public toilets with septic tanks
- Installation of solar power generation facilities
- Activities to support environmental education

Outcomes

Financial impact

Examples of assessing economic value based upon the quantitative assessment of ecological services in Oze

Amount of fixed carbon

Equal to ¥100 million~¥150 million/year

(Estimated using the average value for forest absorption J credit 2017 exchange prices)

Soil erosion prevention function

Equal to ¥15.9 billion/year

(Estimated using erosion control dam construction cost of ¥5,780/m³)

Economic impact of tourism

Equal to ¥9.8 billion/year

(Estimated based on the number of people that hiked the mountains in Oze in 2015 (326,100 people))

Summary of the quantitative assessment of ecological services in Oze

Geographical and statistical data, etc. will be used to assess the physical quantity and economic value of those ecological services made possible by the environments within the Oze National Park region, which TEPCO Holdings owns and conserves, that can be assessed in this manner.

■ **Implementation period:**
August 2017 ~March 2018
■ **Assessment scope:**
The area managed by TEPCO holdings (approximately 16,000ha)

■ **Primary assessment targets**
- **The amount of fixed carbon in forests:**
Generally speaking, it is believed that in mature forests the amount of carbon fixed from the atmosphere as a result of photosynthesis reaches equilibrium with the amount of carbon expelled into the air through metabolic processes, such as respiration and decomposition, so this analysis was performed to assess fixed carbon in only trees subject to forest management under the assumption that there is no net carbon absorption affect from natural forests.
- **The amount of fixed carbon in wetlands:**
As with forests, wetlands also fix carbon, and generally speaking, since the decomposition of plants in wetlands occurs slowly, there is more potential for wetlands to fix carbon. The amount of fixed carbon dioxide per unit area was calculated for each type of wetland (highland wetlands, mid-level wetlands/low-lying wetlands)
- **The amount of groundwater cultivation:**
Lakes and marshes gently cause rain water to flow into groundwater and downstream. In this analysis, we assessed the cultivation of groundwater, which is part of these water sources. This is calculated by subtracting the amount of evaporation, surface runoff, and subsurface runoff from annual precipitation.
- **Soil erosion prevention functions:**
The root systems of trees and plants hold the soil in place, so the amount of soil erosion prevention that the forests and agricultural land provide was evaluated. The difference in the amount of soil erosion when there is vegetation as opposed to when there is no vegetation, was calculated as the amount of soil erosion prevention provided by vegetation.
- **Economic impact of tourism:**
Data on guests that have stayed at the lodges was used to examine the number of visitors from all over the country with a focus on Tokyo. In order to make the calculation simpler, an average of ¥30,000/person was used as the basic unit for travel expenses/lodging expenses.

Oze; Ministry of the Environment guidelines (2023)

While leveraging existing knowledge, we performed an economic assessment of nature conservation activities in Oze based on the enforcement version of the Instructions for Assessing/Calculating the Value of Ecological Services pertaining to Corporate Biodiversity Conservation Activities announced in 2019 by the Ministry of the Environment.

These instructions provide a methodology for ascertaining what type of ecological services are related to TEPCO's biodiversity conservation activities, as well as whoreceives the benefits of the services, and to what extent they are received. An "ecological service economic value valuation calculation sheet" is used when calculating the economic value assessment and the ecological services to be assessed are broken down into three categories: supply services, adjustment services, and cultural services. These categories are broken down further into subcategories for which information about pertinent stakeholders, etc. is entered and the calculations are made.

By performing an analysis using the standardized calculation logic and basic units that are provided by these instructions, we've been able to expand our examination/assessment of TEPCO Group initiatives by further enabling these initiatives to be compared.

Activities to be assessed

Company name	TEPCO Renewable Power Inc. and Tokyo Electric Power Company Holdings, Inc.					
Activity name	Oze (management of owned lands, nature conservation activities)					
Target period	Length of activity period to date: 60 years, Future period of activity: 100 years					
Activity details	Planned forest management of Oze Tokura, Conservation of wetlands by using wood from forest thinning for the wooden path, Installation of septic tanks for public toilets, First ever movement in Japan to get people to take their garbage home, Local guides spread awareness about nature conservation, Collaboration between the Ministry of the Environment and local governments					
Location	Forest	Grassland	Paddy field	Field	Lagoon	Wetland
Benefits	Lumber and other supplies Watershed storage Carbon fixation Soil erosion prevention Water purification Landslide prevention Flood prevention Biodiversity conservation Recreation	Biodiversity conservation Recreation	Watershed storage Climate mitigation Air quality purification Soil erosion prevention Water purification Landslide prevention Flood prevention Recreation	Air quality purification Landslide prevention Flood prevention Recreation	Water purification Biodiversity conservation Recreation	Carbon fixation Water purification Water volume adjustment Biodiversity Conservation Recreation
Stakeholders	Local residents, Employees, Unspecified number of people, Misc. (tourists, event participants)					

Working Instructions for Valuation and Calculation of Ecosystem Services Related to Corporate Biodiversity Conservation (Trial Version) (Ministry of the Environment, (March, 2019))

Assessment calculation process

①Determine assessment objectives

②Ascertain activity details and select activities that will be the targets of the assessment

③Compile the ecological services that are impacted by these activities

④Obtain/input the data to be used

⑤Assess economic value

⑥Examine the validity of the assessment results

⑦Improve/develop activities to make them better

Reference: Working Instructions for Valuation and Calculation of Ecosystem Services Related to Corporate Biodiversity Conservation (Trial Version) *Japanese only

Economic value assessment of natural capital

Estimates based on the Ministry of the Environment's Ecological Service Economic Value Valuation Calculation Sheet

The impact/effect on forests, grasslands, rice paddies, farmland, tidal flats, and wetlands in Oze by the activities carried out by the TEPCO Group in the aforementioned area (management of owned lands, nature conservation activities) that are subject to this assessment was calculated after entering the information required on each of the calculation sheets.

The benefits derived from these calculations based on given coefficients and calculation logic were converted into a monetary value while also ascertaining what stakeholders receive these benefits and what type of outcome they create.

Conservation activity points

- **Planned forest management of Oze Tokura**
- **Conservation of wetlands by using wood from forest thinning for the wooden path**
- **Installation of septic tanks for public toilets**
- **First ever movement in Japan to get people to take their garbage home**
- **Local guides spread awareness about nature conservation**
- **Collaboration between the Ministry of the Environment and local governments**

Example of the calculation sheet for Forests

No.	便益	経済評価額原単位				成果量			インパクト	アウトカム	
		分類	ステークホルダー	数値	単位	数値	単位	寄与率（%）	（円）	初期アウトカム	長期アウトカム
1	食糧供給（林産物、飲用水）				円/kg		kg/年	100%	0	食糧資源の確保	食糧資源の供給
					円/kg		kg/年	100%	0		
2	木材等供給	間伐材：一般販売	地域住民	1,000	円/m^3	146	m^3/年	100%	146,000	資材・資源の確保	資材・資源の供給
		間伐材：木道材へ活用	その他(ｲﾍﾞﾝﾄ参加者)	1,000	円/m^3	203	m^3/年	100%	203,000		
☑					円/m^3		m^3/年	100%	0		
☑ 3	流域貯水	–	地域住民	391,014	円/ha/年	9100	ha	100%	3,558,227,400	降水の貯水能力の向上	水源涵養機能の向上
4	気候緩和	ヒートアイランド緩和	地域住民	2,168	円/世帯/年		世帯	100%	0	周辺地域の冷房コスト低下	気候変動の緩和
5	大気質浄化	針葉樹林（人工林）	地域住民	3,034	円/ha/年		ha	100%	0	NOx、SOxの吸収	大気の浄化
6		針葉樹林（天然林）	地域住民	2,388	円/ha/年		ha	100%	0		
7		常緑広葉樹林	地域住民	4,325	円/ha/年		ha	100%	0		
8		落葉広葉樹林	地域住民	1,162	円/ha/年		ha	100%	0		
☑ 9	炭素固定	針葉樹（スギ）	不特定多数	9,472	円/ha/年	1300	ha	100%	12,313,600	CO_2の吸収	気候変動の緩和
☑ 10		広葉樹（コナラ）	不特定多数	16,919	円/ha/年	7800	ha	100%	131,968,200		

Example of the calculation sheet for Wetlands

No.	便益	経済評価額原単位					成果量			インパクト	アウトカム	
		分類		ステークホルダー	数値	単位	数値	単位	寄与率（%）	（円）	初期アウトカム	長期アウトカム
☑ 1	炭素固定	高層湿原	CO_2吸収	不特定多数	5,046	円/ha/年	849	ha	100%	4,284,054	CO_2の吸収	気候変動の緩和
☑ 2			CO_2固定	不特定多数	917,603	円/ha/年	849	ha	100%	779,044,947		
3		中層湿原	CO_2吸収	不特定多数	8,198	円/ha/年		ha	100%	0		
4			CO_2固定	不特定多数	566,058	円/ha/年		ha	100%	0		
5		低層湿原	CO_2吸収	不特定多数	11,350	円/ha/年		ha	100%	0		
6			CO_2固定	不特定多数	214,512	円/ha/年		ha	100%	0		
☑ 7	水質浄化	–		地域住民	3,424,900	円/ha/年	849	ha	100%	2,907,740,100	微生物の活性化	水質浄化機能の向上
☑ 8	水量調節	–		地域住民	584,797	円/ha/年	849	ha	100%	496,492,653	局所災害の緩和	洪水防止機能の向上
☑ 9	ﾚｸﾘｴｰｼｮﾝ便益	尾瀬ヶ原		その他（観光客等）	3,287,657	円/ha/年	849	ha	100%	2,791,220,793	個人のストレス軽減	来訪者の健康増進

Oze activity benefit assessment results

Total

¥46.78billion/year

Value of the fruits of nature (ecological services)

Lumber, etc. supply function	Watershed/water storage function	Carbon fixing function
Water purification function	Soil erosion prevention function	Water volume adjustment function
Landslide prevention function	Flood prevention function	Recreational functions

- **Nationally: ¥3.81 billion/year**
- **Local residents: ¥39.21 billion/year**
- **Event participants: ¥203,000/year**

Value of other activities

Biodiversity conservation function	Nature experience events
Environmental conservation events	Environmental education events

- **Nationally: ¥3.75 billion/year**
- **Local residents: ¥9.29 million/year**
- **Event participants: ¥294,000/year**

Total activity benefit of the same scale of activities

- Past 60 years: **¥11.6 trillion**
- Future 100 years: **¥1.1 trillion**

Estimate using the social discount rate (4%) for public works evaluation in the Ministry of the Environment guidelines

Natural capital usage examples

In addition to the Oze region, the TEPCO Group owns many other forests, etc., throughout the nation that are adjacent to power facilities. While promoting conservation of these natural areas, the natural capital born from the attributes of each of these regions are used for educational purposes and to promote regional symbiosis.

We believe that this natural capital can be used to improve the corporate value of the TEPCO Group and also for initiatives that can lead to the creation of social benefits, and for this reason we are examining how to quantitatively analyze/assess the value that is created.

In this chapter we will give you some examples of how the newest natural capital in various regions is being leveraged.

Area of forests, etc., owned by the TEPCO Group

Oze area	**16,334 ha**
Water cultivation forests surrounding hydroelectric power stations	**68 ha**
Forests surrounding transmission/substation facilities	**338 ha**
Forests of the Atema Kogen Resort in Niigata Prefecture	**369 ha**

Oze SDGs Inquiry-Based Learning Tour (2022-)

Tokyo Power Technology Ltd. has been the focal point of the TEPCO Group's decades-long environmental education activities that focus on the biodiversity of Oze as well as local nature observation trips, etc. led by expert instructors.

Since FY2022, we have been promoting an interdisciplinary learning program called STEAM Education* while also implementing Oze SDGs Inquiry-based Learning Tours that aim to provide education that will help to achieve SDGs. Under the supervision of Shogo Sugiura, a specially appointed professor at Tokyo City University, we've created a unique program through which the next generation and adults go into the natural environment of Oze and the surrounding regional societies to learn about the environment by solving problems that are presented to them.

*STEAM Education: Education concept for which the abbreviation is derived from the words Science, Technology, Engineering, Art, Mathematics

Children presenting their ideas on how to solve regional problems

Example of a leaning tour (August, 2023)

We organized a practical field learning tour for elementary school and junior high school students to promote real SDGs action. After learning about the natural and social environments and Oze and the region, the students stayed in a lodge to experience the natural environment of Oze. Problems were given to the students in advance by the local government to think about in order to learn about the 17 goals and 169 targets of SDGs while local guides took the students into the field in groups to "learn by inquiring." Solutions were presented during workshops thereafter and on the final day the students gave presentations to the village mayor. Some of the ideas were actually adopted and implemented by the village.

Workshop topics

Social issues faced by the Oze National Park and surrounding municipalities

- **Major changes to the natural and social environments**
  Low birth rate/aging society, impact of a dwindling population, lifestyle changes and recreational diversity, increase in foreign travelers ("Living with Covid"), impact of Sika deer, worsening of financial conditions
- **Miscellaneous**
  Decrease in the number of people hiking in Oze, decrease in the number of large guests, aging village population and population in the near future

Katashina Village group work problem

Employ the "I-turn" idea that enables young people and the next generation to reside in Katashina Village

Hinoemata Village group work problem

Leverage the appeal of Hinoemata to get young people to come to the village

FY2023

Implementation period	:	from August 2023 to March 2024
Number of times implemented	:	11 times
Implementation location	:	Katashina Village (Gunma Prefecture) Hinoemata Village (Fukushima Prefecture) Oku-Nikko (Tochigi Prefecture)

Participants	:		
		University students	46
		High school students	4
		Junior high school students	16
		Parents and children	40
		Cram school instructors/operators	4
		Working adults	16
		Local residents	6
		Total	132

Japanese Dormouse habitat observation survey (Oze Tokura Forest)

Oze Katashina Zero-Carbon Park (2022-)

In order to make the Oze National Park and Oze Katashina area into a zero-carbon park, Katashina Village in Gunma Prefecture is promoting sustainable tourism × zero-carbon tourism, promoting energy conservation and the use of renewables in order to achieve decarbonization, and ensuring the amount of CO_2 fixed absorption through, for example, suitable forest management, etc.

The TEPCO Group is proactively promoting various initiatives in collaboration with Katashina Village and the Ministry of the Environment, such as decarbonizing facilities at the Hatomachi Lodge, which is one of the trail heads for the Oze mountains, and renovating it to accommodate various types of visitors, regularly engaging in forest management and leveraging trees acquired through forest thinning to repair the wooden pathway, and also developing SDGs environmental education, etc. As we continue these activities it is important that we increase the number of users that decreased during the Covid pandemic, and entice visitors to the area.

In the future, we plan to expand these initiatives to other areas as an added value service for non-energy industries linked to carbon neutral policies.

Attempting to decarbonize the "origin of Japan's nature conservation activities"

Foreign countries praise the Japanese for their manners and how domestic hikers, sports event spectators and music festival participants, etc. take their garbage home when they leave, and it is said that Oze is the birthplace of these manners.

The TEPCO Group is contributing to new attempts to decarbonize Oze, which is the origin of Japan's nature conservation activities.

1. Promoting sustainable tourism × zero-carbon tourism

Snow CAT tours during the snowy season (Oze Ayamedaira)
Incorporating SDGs tours into the program

2. Promoting energy conservation and using renewables to achieve decarbonization

Hatomachi Lodge: Tokyo Power Technology Ltd.
Renovations include electrification as well as equipment countermeasures for energy conservation/decarbonization

3. Ensuring the amount of CO_2 fixed absorption through suitable forest management, etc.

Leveraging the Oze Tokura Forest (FSC certification)
By using lumber to repair the wooden path, we are fixing CO_2, and promoting transport cost reductions through local-production/local-consumption.

Zero-carbon parks website *Japanese only

Areas in which we are decarbonizing the national park and creating sustainable tourist locations have been registered as "zero-carbon parks" by the Ministry of the Environment as a way of providing support.

These areas are meant to showcase the national park as a decarbonized and sustainable lifestyle to domestic and overseas tourists, and as such local governments seeking for registration must declare themselves as a "zero-carbon city" and engage in initiatives that contribute to creating decarbonized and sustainable tourist locations.

Katashina Village, Gunma Prefecture applied to have the Oze National Park and Oze Katashina areas registered in April 2022, thereby resulting in the seventh such registration in the nation (and the first village ever to be registered in the nation).

Fujiyama Power-line Trail (2020-)

A portion of the fixed capital of TEPCO Power Grid Inc., which manages and maintains TEPCO's power transmission and distribution network, includes a total of 41,037km worth of power transmission lines. That's enough to circle the entire globe. Trees in forests directly below these transmission lines and in the surrounding areas are periodically cut down/trimmed as part of facility maintenance to ensure that they don't come in contact with the transmission lines.

In 2020, TEPCO Power Grid Inc.'s Shizuoka Branch joined with local communities to open the Fujiyama Power-line Trail, a mountain bike trail that runs for approximately 7km in the east-west direction through the Mt. Fuji foothills. The bike trail was created as part of efforts to utilize patrol paths used by TEPCO Power Grid Inc. to maintain and manage power transmission facilities. Through these types of joint-initiatives with the community we believe we can create new value, such as vitalizing the regional economy.

Fujiyama Power-line Trail®

The Fujiyama Power-line Trail is a new type of hybrid trail that combines several different types of terrain, such as rocky outcrops, gravel, and dirt, as well as climbs and downhills, which are all part of the natural topography of the Mt. Fuji foothills.

There are beginner courses as well as intermediate/expert courses that allow everyone, from kids to adults, and beginners to experts, to enjoy the trail.

Even though the trail is on a semi-highland, the warm weather of Shizuoka Prefecture allows it to be used to year-round.

See here for details

Topics

Biodiversity preservation projects in Saitama City

The TEPCO Group is a member of the Minuma Rice Paddy Regional Biodiversity Promotion Council in Saitama City that engages in biodiversity preservation projects.

In FY2023, a demonstration experiment was performed with a grant from the Ministry of the Environment to create a temporary pond to see how living creatures in the region react and how biodiversity recovers and improves.

The project will be continued in FY2024 to examine low-cost methods for managing grassland/wetlands in an effort to preserve biodiversity in the aforementioned region.

Regional attributes

While serving as a bed down for central Tokyo, the area is home to irrigation water sources, sloping forests, and agricultural land thereby giving it great potential as a habitat for biodiversity, such as the Northern Goshawk and hygrophytes.

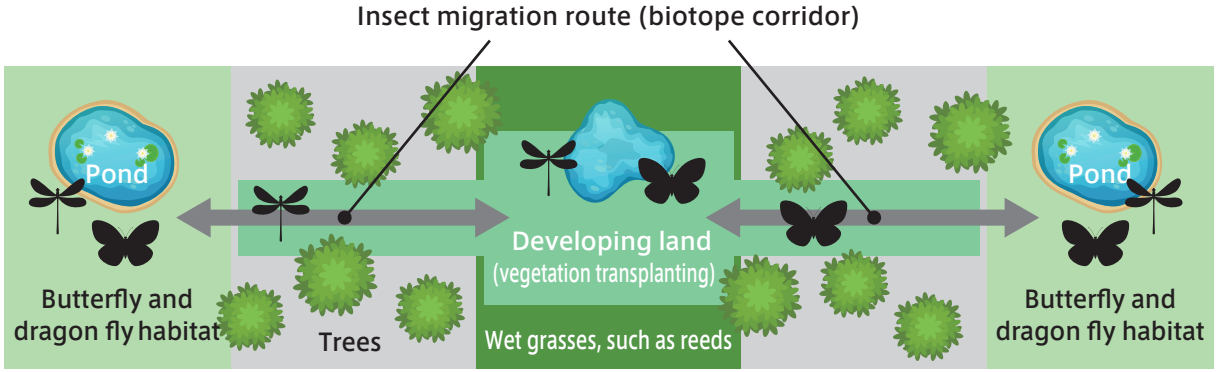
Golden flangetail dragon fly living in the Minuma rice paddies

Biotope corridor

When determining where to position facilities under construction at the Higashidori Nuclear Power Station, we are taking great pains to avoid or minimize any modification to the valuable wetlands, etc.

In this region, the wetlands run parallel to the coastline and serve as a habitat for much flora and fauna. Since vegetation and small animals in the region with the less ability to migrate, such as butterflies and dragonflies, are easily impacted by development, we are creating a biotope corridor to preserve the flora and fauna. A biotope corridor is used to link different habitats used by insects such as butterflies and dragonflies thereby creating an environment in which they can travel freely between these habitats. For example, in areas where trees such as the alder have infiltrated and divided important insect habitats, we have cut down the trees to create a pathway for the insects. And, in areas with high water levels where tall vegetation, such as reeds, flourish, we have transplanted shorter vegetation from modified areas to create tame pastures as part of measures to preserve the biodiversity.

Concept drawing of the biotope corridor



Higashidori Nuclear Power Station Construction Plan

Site area	Approximately 4,500,000m²
Output	Unit 1:1.385 million kW Unit 2:1.385 million kW
Commencement of construction	Unit 1: January 2011* Unit 2: TBD
Commencement of operation	Unit 1: TBD Unit 2: TBD

*Full scale construction has been postponed

Concept drawing of completed power station

Group company initiatives

The grounds of the Hotel Belnatio in Tokamachi City, Niigata Prefecture, which is part of the TEPCO Group's Atema Kogen Resort, has a beech tree forest, a bird sanctuary, and a biotope paddy field. In the rich natural environment of these semi-urban woodlands, hotel guests can get "closer" to nature, "learn" about biodiversity, and "act" to live in symbiosis with nature through nature experience programs. This area is also used in cooperation with the local community to engage in ecosystem conservation and instill the next generation of human resources with a greater awareness of the environment.

Nature experience program

Snowshoe experience for getting "closer" to nature

Nature observation experience for "learning" about nature

Rice planting experience for "acting" to preserve nature

Ecosystem preservation activities

Japanese squirrel (building a bridge that squirrels can use to get over roads)

Forest green tree frogs (egg transplanting, etc.)

Cultivating the next generation

Tree planting with elementary school students

Atema Kogen Resort field and activity history

Atema Kogen Resort commercial site: 369ha
(Site area noted in Resort Act application: Approx. 510ha)

Forest Hall: 1.3ha
(site area)

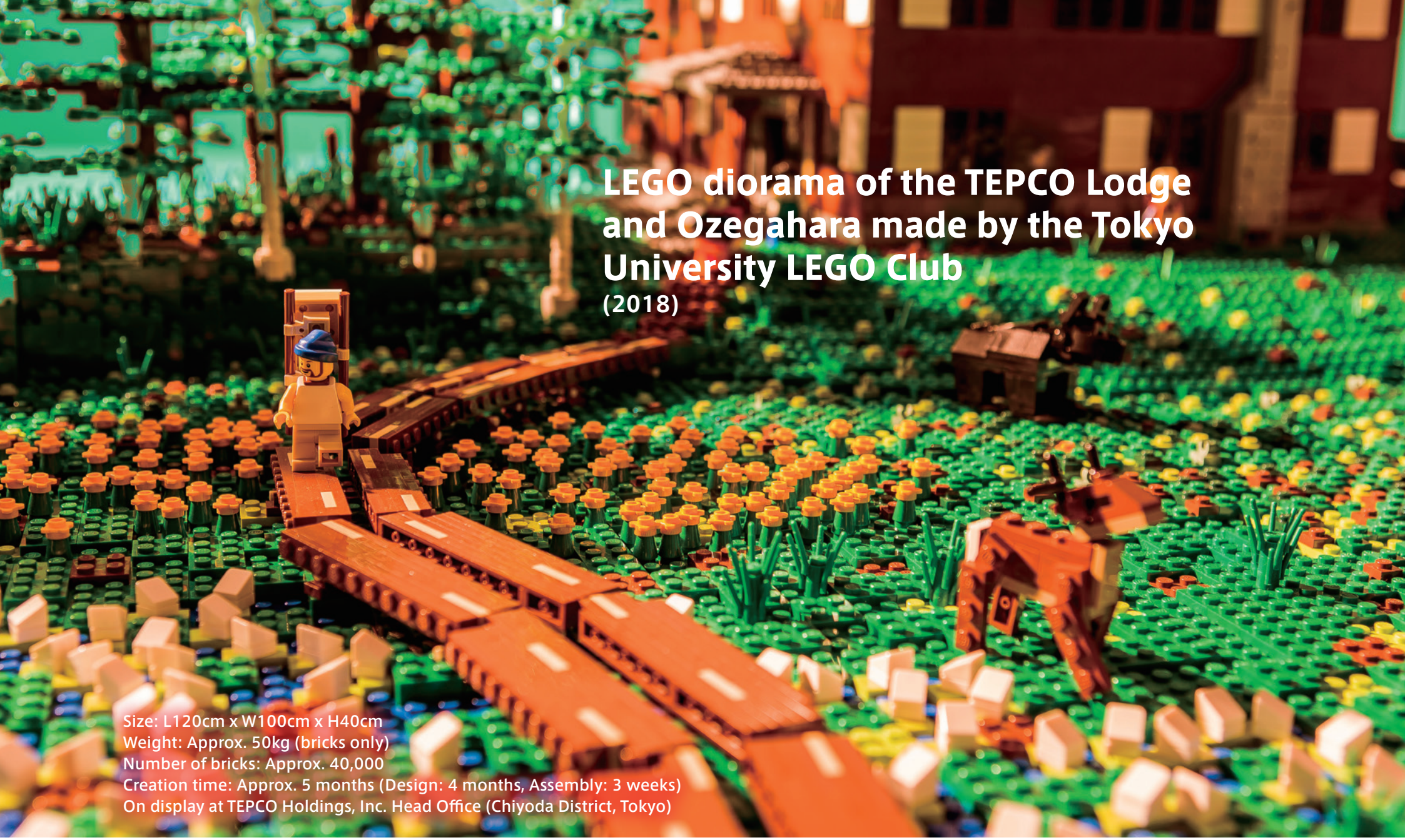
Waterside Hall: 0.8ha
(site area)

- **Beech trees : 8ha**
- **Bird sanctuary : 5ha**
- **Biotope paddy field : 0.17ha**

Nature experience program participants

FY2020	11,037
FY2021	22,903
FY2022	30,408
FY2023	36,580

Nature observation instructors: 16
(as of March 2024)



LEGO diorama of the TEPCO Lodge and Ozegahara made by the Tokyo University LEGO Club (2018)

Size: L120cm x W100cm x H40cm
Weight: Approx. 50kg (bricks only)
Number of bricks: Approx. 40,000
Creation time: Approx. 5 months (Design: 4 months, Assembly: 3 weeks)
On display at TEPCO Holdings, Inc. Head Office (Chiyoda District, Tokyo)

In order to get people that have been to Oze, and those that have not, to feel like they want to go, we collaborated with the Tokyo University LEGO Club, which is one of the few pro LEGO builder clubs in Japan, to create a diorama of the Oze wetlands and mountain lodge (1/40 scale). This diorama of a scenic area was a unique project for the Tokyo University LEGO Club. The diorama is on display, and pictures can be viewed via SNS platforms.

Video from the making of the diorama and interviews with Tokyo University LEGO Club members *Japanese only

Conditions at the Fukushima Daiichi Nuclear Power Station

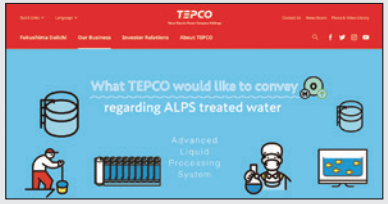
The TEPCO Group is engaged in various initiatives in order to fulfill its responsibilities to Fukushima.

At the Fukushima Daiichi Nuclear Power Station, which is currently in the process of being decommissioned, we completed the construction of ALPS-treated water discharge facilities in June 2023 and passed all pre-use inspections conducted by the Nuclear Regulation Authority in July of the same year. The facilities have also been subject to safety inspections by the International Atomic Energy Agency (IAEA) which reached the conclusion that the ocean discharge of ALPS-treated water conforms to international safety standards in its comprehensive report issued July 2023. A radiological impact assessment conducted by TEPCO found that radiation levels fall well below dose limits (1mSv/person/year) and International Commission on Radiological Protection (ICRP) recommendations for living creature, thereby showing that the discharge of ALPS-treated water will have a minuscule impact on people and environment. Through marine life rearing tests using flounder, etc., TEPCO has examined the behavior of tritium within the body of living organisms in an effort to cultivate understanding about the discharge of ALPS-treated water. TEPCO has also signed a technical cooperation agreement with IAEA research agencies pertaining to the rearing tests which it continues to this day while exchanging opinions with these agencies.

ALPS-treated water information portal site

Localized into different languages (English, Chinese [simplified/Taiwan traditional/Hong Kong traditional], Korean) for all the world to see.

TREATED WATER PORTAL SITE



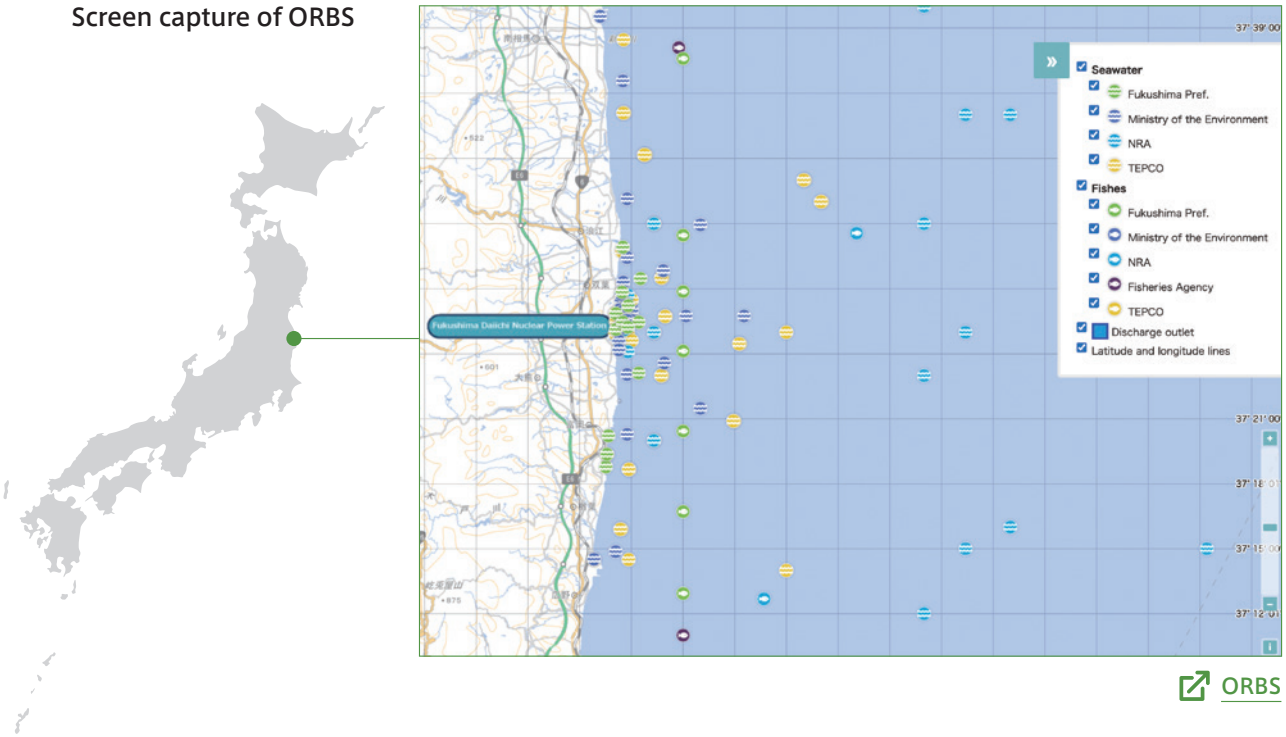
What TEPCO would like to convey regarding ALPS treated water

Overarching Radiation-Monitoring Data Browsing System (ORBS)

The ocean discharge of ALPS-treated water commenced in August 2023. In order to objectively and comprehensively disclose data pertaining to the conditions of ocean areas, TEPCO, related ministries, and local governments all collect ocean monitoring data from various locations and post it on the Overarching Radiation-monitoring data Browsing System (ORBS) website that enables all data to be viewed on a map format. Cesium and tritium monitoring data for seawater and fish samples taken by Fukushima Prefecture, the Nuclear Regulation Authority, the Ministry of Environment, and TEPCO are disclosed via this website, and preparations are underway to make monitoring data for other nuclides in seawater and fish, and other types of fish and seaweed, available in the future.

Tritium measurement results obtained during ocean monitoring throughout the ALPS-treated water discharge period show concentrations to be approximately 10Bq/liter, which is about the same as the concentration when discharge is suspended. This level of tritium concentration also falls well below the WHO's guidelines for drinking water (10,000Bq/liter) and TEPCO's discharge suspension determination level (700Bq/liter).

Screen capture of ORBS



ORBS

ALPS-treated water discharge plan

- In principle, ALPS-treated water is discharged from the lowest tritium concentration.
- At the end of each fiscal year, a discharge plan for the following year is formulated and announced.

Fiscal year	Amount of water	Amount of tritium
2023	Approx. 30,000 m^3	Approx. 5 trillion Bq
2024	Approx. 50,000 m^3	Approx. 14 trillion Bq

Storage volume of ALPS-treated water, etc.

1.33 million m^3

(as of March 2024)

Initiatives to deepen understanding amongst the people of Japan and the international community

When handling ALPS-treated water, TEPCO is prioritizing safety and thoroughly implementing measures based on the Government's Basic Policy.

We will continue initiatives to convey scientifically-based information, including monitoring data, to stakeholders in Japan and overseas, and society as a whole, in an easy-to-understand manner. And, we will seize various opportunities to address the concerns of the people and listen to their opinions while also giving thorough explanations of TEPCO's approach to this matter and how it is handling it thereby deepening understanding of the handling of ALPS-treated water, which is part of the decommissioning process.

Third-party reviews

The First Step with Elevated Expectations

This report constitutes TEPCO's first detailed biodiversity data disclosure. The content of this report sufficiently considered topics of interest to investors and also serves as preparations to comply with TNFD recommendations. In reading it I feel a sense of pride of TEPCO in helping to further evolve this report in the future.

Damage caused to biodiversity by business activities will lead to a degradation of ecological services. If a company ignores these "negative externalities," investors will see potential future mitigation (biodiversity recovery) costs as shadow costs that could cause corporate value to depreciate. This report addresses these risks and explains what TEPCO is doing to reduce them.

The importance of biodiversity was touched upon in the foreword, and the report presents the results of an IBAT-based importance survey conducted through the trial use of the LEAP approach with a focus on hydroelectric power generation. ENCORE was then used to identify dependency/impact on nature. This report provides basic and important data based upon the TNFD's recommended disclosure framework.

This disclosure is also ambitious. The report details economic assessments that go back over 20 years and provides a new value assessment based on Ministry of the Environment guidelines for Oze, which has been designated as a Nature Symbiosis Site by the Ministry, upon citing the mitigation hierarchy employed by the TNFD to explain the historical background of Oze. This attempt to visualize "positive externalities" of natural capital owned or managed by the TEPCO Group is worthy of mention. Mention of initiatives conducted in nuclear power station siting communities also improve sincerity and reliability.

The preparations made for this report are a premonition of disclosure advancements of the future. The governance, strategies, risk and impact management, metrics and targets details, and, in particular, the location of risk and positioning of priority regions and project plan regions in the value chain, and the scope covered by TNFD recommended qualitative indicators, which are all planned by the TNFD, will be areas of interest to investors. It is my hope that TEPCO's proactive steps to solve biodiversity issues and disclosure of such initiatives will contribute to both improving corporate value and solving social issues that aim to achieve nature positive.

ESG Investment Group
Investment Strategy Department
Tokio Marine Asset Management Company Limited
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TNFD Core Global Disclosure Metrics

TNFD core global disclosure indicators and metrics for nature-related dependencies and impacts

No.	Driver of nature change	Indicator	Metric			Unit	FY2022	
	Climate change	GHG emissions	Scope 1			1,000 tCO_2-eq	205	*1
			Scope 2 (location based)			1,000 tCO_2-eq	4,913	*1
			Scope 3			1,000 tCO_2-eq	106,401	*1
C1.0	Land/freshwater/ ocean-use change	Total spatial footprint	Total surface area controlled/managed by the organisation, where the organisation has control			1,000 m^2	263,550	*1
			Total rehabilitated/restored area			1,000 m^2	163,340	*2
C2.0	Pollution/pollution removal	Pollutants released to soil split by type				t	0	*3
C2.1	Pollution/pollution removal	Wastewater discharged	Volume of water discharged	Total		1,000 m^3	47,263,796	
				Freshwater		1,000 m^3	47,263,128	
				Other		1,000 m^3	668	
			Temperature of water discharged (nuclear power)			℃	Not applicable	*4
C2.2	Pollution/pollution removal	Waste generation and disposal	Weight of waste generated	hazardous waste		1,000 t	18	
				nonhazardous waste		1,000 t	122	*5
			Weight of waste disposed	hazardous waste	Incinerated	1,000 t	—	*6
					Landfill	1,000 t	0	*7
					Other disposal methods	1,000 t	18	*6
				non-hazardous waste	Incinerated	1,000 t	—	*6
					Landfill	1,000 t	<1	
					Other disposal methods	1,000 t	122	*6
			Weight of waste diverted from landfill	hazardous waste	Reused	1,000 t	0	
					Recycled	1,000 t	18	
					Other recovery operations	1,000 t	0	
				non-hazardous waste	Reused	1,000 t	<1	
					Recycled	1,000 t	122	*5
					Other recovery operations	1,000 t	0	
C2.4	Pollution/pollution removal	Non-GHG air pollutants	Non-GHG air pollutants by type	Particulate matter (PM2.5 and/or PM10)		1,000 t	<0.1	*8
				Nitrogen oxides (NO_2 , NO and NO_3)		1,000 t	2	
				Volatile organic compounds (VOC or NMVOC);		1,000 t	0	*9
				Sulphur oxides(SO_2 , SO , SO_3 and SOx)		1,000 t	<1	
				Ammonia (NH_3)		1,000 t	0	
C3.0	Resource use/ replenishment	Water withdrawal and consumption from areas of water scarcity	Water withdrawal (including identification of water source)			m^3	Not applicable	*10
			Water consumption (including identification of water source)			m^3	Not applicable	*10
			Nuclear	Water usage for processing, cooling and consumption in powerplants, including use of water in ash handling		m^3	Not applicable	*10
		Quantity of high-risk natural commodities sourced from land/ocean/freshwater		Coal		1,000 t	<1	
				Oil		ML	44	
				LNG and LPG		1,000 t	<1	
				City gas		mil m^3	<1	
A3.0		Water withdrawal and consumption	Water withdrawal			1,000 m^3	47,263,796	
			Water consumption			1,000 m^3	<1	

Unless otherwise noted the data in the table are the values for the five companies of the TEPCO Group
(Tokyo Electric Power Holdings, Inc., TEPCO Fuel & Power, Inc., TEPCO Power Grid, Inc., TEPCO Energy Partner, Inc., TEPCO Renewable Power, Inc.)

*1 TEPCO Group (consolidated) data
*2 Notes the area of Oze that is owned by the TEPCO Group
*3 The TEPCO Group is primarily engaged in the electricity business and businesses that it is directly engaged in have low correlation to pesticides or plastic contamination which are indicated as pollutants by this indicator.
*4 "Not applicable" since nuclear power stations were not in operation during FY2022
*5 Includes amount treated as valuables
*6 The data in the " Other disposal methods " row shows the amount recycled including thermal recyclables
*7 "0" is noted for harmful waste because it is not buried without being subjected to interim treatment, such as incineration, due to the nature of the substances.
*8 Soot and dust present in the exhaust from power stations in island regions have been noted (calculated value)
*9 VOC as noted in Atmospheric Pollution Prevention Act emission standards are not emitted
*10 "Not applicable" since power station, etc. facilities are not being constructed in areas of water scarcity

Reference:
Recommendations of the Taskforce on Nature-related Financial Disclosures [September, 2023]

www.tepco.co.jp

TEPCO Integrated Report 2023

Through the publication of the Integrated Report and the further disclosure of ESG-related information, the TEPCO Group aims to promote and strengthen engagement with stakeholders while also further improving corporate value and creating social value.

TEPCO Integrated Report

TEPCO TCFD REPORT TRANSITION PLAN

Data disclosed in accordance with TCFD recommendations has been disclosed in TEPCO's "Transition Plan" that addresses climate change.

TEPCO TCFD REPORT

May, 2024
ESG Office, Corporate Management & Planning Unit
Tokyo Electric Power Company Holdings, Inc.