

JEQ

JAPAN Environment Quarterly

FEATURE :

Initiatives of the Ministry of the Environment to Achieve Carbon Neutrality by 2050

CURRENT TOPICS :

- Efforts to Achieve the “Ministry of the Environment RE100” Initiative
- International Contributions in Preventing Environmental Pollution by Chemical Substances
- Japan's Contributions to Address Marine Plastic Pollution
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NATIONAL PARKS of JAPAN :

Rishiri-Rebun-Sarobetsu National Park

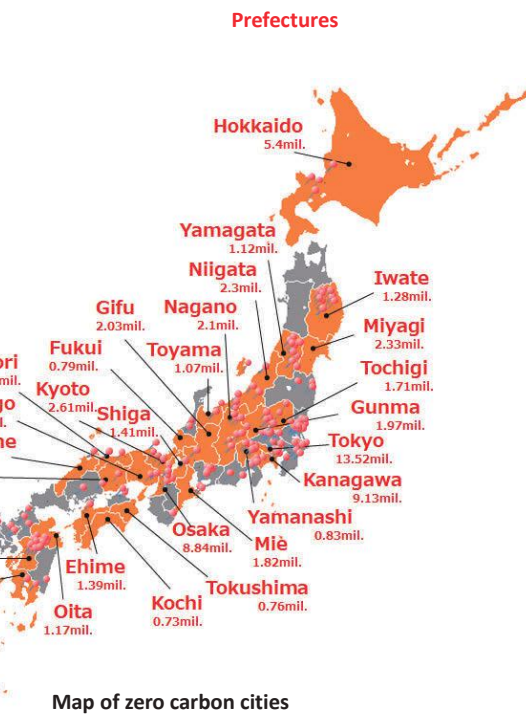
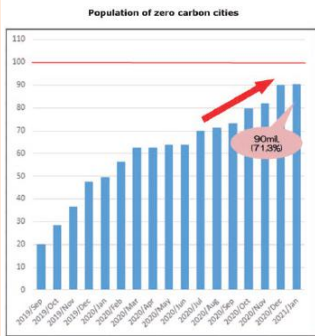


Initiatives of the Ministry of the Environment to Achieve Carbon Neutrality by 2050

Innovations for Decarbonization

2050 Zero Carbon Cities in Japan

- 206 local governments including Tokyo, Kyoto, and Yokohama announced their commitment to net zero carbon emissions by 2050.
- These local governments represent **90 million people (71.3% of Japan's population)**, and **4.0 trillion USD in GDP**.



Prefectures		Cities/wards/towns/villages	
Hokkaido	Tochigi	Yamanashi	Shimane
Sapporo 1.95	Kanuma 0.89	Minami-alps 0.87	Matsue 0.21
Ishikari 0.85	Ohtawara 0.78	Hakuto 0.44	Okayama 0.44
Niseko 0.80	Nasu-Shibara 0.52	Kai 0.25	Maniwa 0.44
Furubira 0.80	Nasu-Karasuyama 0.85	Fuefuki 0.88	Hiroshima 1.10
Iwate	Nasu 0.24	Ueno-hara 0.82	Hiroshima 0.14
Myoko 0.51	Nakagawa 0.87	Chuo 0.81	Onomichi 0.14
Kuji 0.89	Gunma	Ichikawamitsuo 0.18	Kagawa
Ninohe 0.23	Ota 0.22	Fujikawa 0.15	Takamatsu 0.42
Hachimantai 0.25	Tatebayashi 0.87	Shewa 0.21	Zentsuji 0.82
Kuzumaki 0.88	Fujioka 0.88	Nagano	Matsuyama 0.81
Fudai 0.88	Karina 0.82	Matsumoto 0.28	Kitakyushu 0.88
Karumai 0.89	Mirakami 0.87	Komoro 0.42	Fukuoka 1.84
Noda 0.89	Ozumi 0.81	Saku 0.89	Obi 0.81
Kurohe 0.89	Saitama	Tomi 0.89	Fukuoka 0.81
Hiroo 0.11	Saitama	Kanzawa 0.18	Saga
Ichinoha 0.13	Chichibu 0.84	Tateshina 0.87	Saga 0.23
Yamagata	Taburazawa 0.94	Minamimino 0.16	Hirado 0.48
Yonezawa 0.81	Chiba	Haeda 0.01	Nagasaki 0.48
Higashine 0.88	Chiba	Hakuba 0.97	Hirado 0.12
Nanyo 0.83	Narita 0.18	Obari 0.88	Oto 0.82
Asahi 0.81	Yachiyo 0.19	Gifu	Dgaki 0.16
Takahata 0.24	Abiko 0.12	Shizuoka	Kumamoto 0.74
Kawanishi 0.15	Uraysu 0.17	Shizuoka 0.7	Kikuchi 0.48
Ide 0.80	Yotsukaido 0.09	Hamamatsu 0.8	Uto 0.82
Shirai 0.82	Sammu 0.85	Fujinomiya 0.18	Utsunomiya 0.86
Fukushima	Tokyo	Gotemba 0.88	Aso 0.82
Kuriyama 0.84	Setagaya 0.82	Makinohara 0.84	Koshi 0.88
Okuma 0.81	Katsushika 0.84	Aichi	Misato 0.81
Namie 0.11	Tama 0.15	Okazaki 0.88	Gyokuto 0.88
Ibaraki	Kanagawa	Handa 0.2	Oru 0.82
Mito 0.21	Yokohama 0.73	Toyota 0.42	Kikyo 0.41
Tsuchiura 0.14	Kawasaki 1.48	Ofu 0.89	Takamori 0.88
Koga 0.14	Sagamihara 0.73	Miyoshi 0.82	Nishihara 0.87
Yuki 0.85	Kamakura 0.17	Mie	Minamiso 0.82
Joso 0.83	Odawara 0.18	Shima 0.85	Mifune 0.87
Takahagi 0.82	Miura 0.84	Mitsushima 0.13	Kashima 0.89
Kitaibaraki 0.44	Kanagawa	Kanagawa	Manichi 0.84
Toride 0.11	Niigata	Koran 0.84	Koya 0.81
Utsunomiya 0.88	Niigata	Kyoto	Yamato 0.81
Kashima 0.89	Kashiwazaki 0.89	Kyoto 1.48	Myazaki 0.81
Itako 0.82	Tokamachi 0.85	Miyadu 0.18	Kushima 0.81
Moriya 0.85	Myoko 0.83	Kyotango 0.84	Kagoshima 0.81
Hirachimiyu 0.84	Sado 0.85	Oyamazaki 0.16	Kagoshima 0.81
Naka 0.85	Awajishima 0.84	Yosano 0.82	Chizu 0.88
Chikusei 0.14	Tochigi	Osaka	
Bandou 0.85	Utsunomiya	Osaka 0.84	
Sakuragawa 0.84	Nanto 0.85	Izumiotou 0.84	
Tsukubamirai 0.84	Tateyama 0.85	Hirakata 0.84	
Omitama 0.85	Tateyama 0.85	Higashinaka 0.85	
Ibaraki 0.83	Kanagawa	Kobe 1.82	
Shirosato 0.83	Kaga 0.87	Shoshi 0.82	
Tokai 0.88		Nara	
Goka 0.88		Izumi 0.15	
Sabai 0.82		Wakayama	
		Nachikatsuru 0.16	
		Tottori	
		Hokuei 0.15	
		Nambu 0.11	

Map of zero carbon cities

As of Jan 13, 2021

2050 Carbon Neutrality Declaration

In October 2020, Prime Minister SUGA declared that Japan will aim to realize a decarbonized society by 2050, in other words to reduce greenhouse gas emissions to net zero. Moreover, Prime Minister SUGA instructed within the Global Warming Prevention Headquarters to accelerate the reviews on

the “Plan for Global Warming Countermeasures,” the “Strategic Energy Plan,” and the “Long-term Strategy under the Paris Agreement,” and to tackle as a whole cabinet. In view to coordinate overall climate change measures, the Ministry of the Environment (MOE) will work on the transition of the economy and society by engaging in new ways of developing regions to consume locally generated renewable

energy which is disaster-resilient and CO2 free, along with encouraging changes in people’s lifestyles, and shifting to a circular economy. **Regional Development Based on Decarbonization by Local Governments** Non-governmental actors’ efforts, including local governments, businesses, and non-profits/non-governmental organizations, are

essential to Japan's aim to realize a decarbonized society.

Local governments in Japan are currently promoting the initiative to achieve net-zero carbon or greenhouse gas emissions by 2050 (Zero Carbon Cities). As of January 13, 2021, 206 local governments have declared their commitments, representing a total population of over 90 million people.

Meanwhile, best practices and tools must be disseminated at a large-scale, as many local governments face difficulties in formulating long-term plans and objectives aimed at achieving net-zero carbon emissions, identifying emissions monitoring methods, and analyzing data. The implementation of renewable energy particularly depends on community acceptance, as shown by delays in increasing number of past project implementations. It is therefore crucial to establish community acceptance building processes and to promote renewable energy projects maximizing benefits for communities.

Additionally, it is extremely important that actions jointly address intensifying disasters caused by large earthquakes or floods, and the COVID-19 pandemic. The introduction of renewable energy at evacuation facilities which provide

electricity in disaster situations and equip communities with infection control measures are essential to coordinate climate change and disaster prevention.

Support by the National Government

1. Support for the formulation of implementation plans

The national government encourages community building toward local governments' decarbonization to support local governments in the formulation of their long-term plans and objectives toward realizing net-zero carbon cities taking into account their regional characteristics. This support includes improving local governments' greenhouse gas emissions visualization systems, tools, and methods to calculate and analyze emission sources and basic data, as well as providing the most up-to-date information.

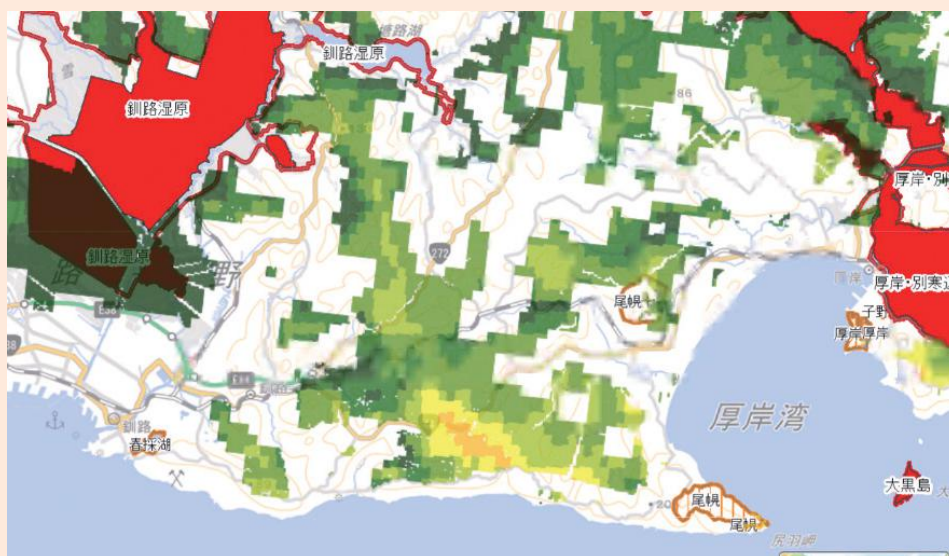
Furthermore, the national government is committed to accelerate the adoption of renewable energies in ways that benefit communities by providing support for planning the local government-led introduction of renewable energies in communities by identifying communities' degree of acceptance

toward renewable energy.

2. Support project implementation

Based on the aforementioned issues and context, Japan aims to achieve the expansion of renewable energy supply by supporting plans to implement renewable energy production facilities adapted to regional needs. The implementation of this project will facilitate consensus building among community members, secure the production of renewable energy, and ensure local businesses' access to renewable energy in their move toward decarbonization and sustainability. Further, it will contribute to revitalizing regions, decentralizing society, and strengthening communities' resilience by providing power in disaster situations.

In addition to the introduction of renewable energy in evacuation centers to provide power in disaster situations, MOE will equip regional disaster prevention systems with high-performance ventilators and infection control measures, in order to simultaneously improve regional resilience and achieve decarbonization.

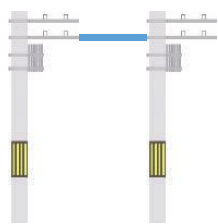


Renewable Energy Potential System (REPOS)
Mapping data on renewable energy resource potential. The map shows regional wind conditions.

Power supply during a disaster (power outage) at an evacuation facility



Electricity supply



Enables heating and cooling of the evacuation facility

Highly efficient air-conditioning

In addition to existing solar power generation equipment, new solar power generation equipment, storage batteries and highly-efficient air-conditioning were installed. These upgrades will contribute to reducing the CO2 emissions of the facility and also enhance its functioning by supplying electricity from storage batteries to the air-conditioning system during a disaster. (Tateyama Town, Toyama Prefecture)

Biomass heat equipment at an evacuation facility



Heat (hot water) provision



Enables use of heat (floor heating) in the event of a disaster



Fuel provision

Cooperative within the region

A woody biomass boiler fueled by wood pellets has been introduced at the Children's Center, which provides support for balancing work and child-rearing, as well as comprehensive consultation and support for certified childcare centers and rehabilitation and support for children with disabilities. This will reduce CO2 emissions from the facility and enable the use of heating (floor heating) in the event of a disaster, thereby reducing the physical burden on evacuees in the event of a disaster. (Ashoro Town, Hokkaido)

Introducing Innovations in Society

1. Renewable energy

MOE supports the supply of renewable energy and encourages the switch to renewable energy.

For example, MOE provides incentives for houses and office buildings equipped with solar power generation and supports companies and local governments providing evacuation centers with combined solar power generation and storage batteries.

Among renewable energy generation options, floating offshore wind power generation is particularly promising in Japan, with its many areas of deep water offering the potential to supply a large volume of renewable energy at a low cost in the future.

Accordingly, MOE has been working on the development of floating offshore wind power generation technology since FY2010 and has developed Japan's first commercial-scale offshore wind power system off the coast of Goto City, Nagasaki Prefecture. This facility has been confirmed to be disaster-resistant, even in the event of a typhoon with a wind speed of 55 meters per second. Similarly, the project was implemented smoothly following consensus building with the fisheries union and other local stakeholders and revitalizing the region by bringing visitors.

In addition, MOE has developed a work vessel (semi-submersible ship) to improve the efficiency of offshore installations and is planning to use this ship to facilitate the construction of offshore wind turbines off the coast of Goto City, Nagasaki Prefecture.

Going forward and depending on upcoming results on demonstration projects and the development of the semi-submersible work ship, MOE will promote the commercial deployment of floating offshore wind power throughout Japan, in accordance with the Act

on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities.

2. Hydrogen

Hydrogen combustion does not emit CO₂, but sourcing hydrogen from fossil fuels emits CO₂. On the other hand, the production of hydrogen from renewable energy does not emit CO₂ from its production to its combustion. For this reason, hydrogen, especially hydrogen sourced from renewable energy, has an extremely important role to play in achieving carbon neutrality by 2050.

Accordingly, MOE has been working to develop a decarbonized hydrogen supply chain in 10 regions across Japan sourced from local renewable energy. As such, it is taking the lead in efforts to realize a "decarbonized hydrogen lifestyle" that incorporates the use of hydrogen in daily lives and delivers hydrogen in existing distribution networks. In parallel, MOE is supporting the introduction of fuel cell buses.

Additionally, work has already begun on a project to build a model for the utilization of hydrogen sourced from renewable energy, supplied in large quantities from the Fukushima Hydrogen Energy Research Field (FH2R) in Namie Town, Fukushima Prefecture, as efforts to coordinate decarbonization and reconstruction move forward.

Furthermore, hydrogen may be able to contribute to the realization of a circular economy in a carbon neutral society achieved by 2050. MOE, for example, is promoting a project to produce hydrogen from used plastics. Another project aims to produce fuels such as methane and ethanol, as well as raw materials for plastics out of CO₂ and hydrogen separated and recovered from waste treatment facilities.

3. CCUS

It is essential to implement CCUS (Carbon dioxide Capture, Utilization and Storage) technologies to go beyond carbon neutrality and be carbon negative, by capturing and effectively utilizing and storing CO₂ emissions, even after the development of renewable energy and energy conservation measures.

An example of MOE's efforts is recovering CO₂ from the exhaust gas from waste treatment facilities for fuels and raw materials to manufacture high value-added products such as cosmetics and supplements containing microalgae, methane, and ethanol.

In addition, MOE is working on Japan's first commercial-scale CCS (Carbon dioxide Capture and Storage) demonstration project in Omuta City, Fukuoka Prefecture, started in 2020. This is expected to be the world's first commercial-scale BECCS (Bio-energy CCS) project to capture, separate and store biomass-derived CO₂.

In addition, MOE has just started a demonstration project for Direct Air Capture (DAC), a CCUS technology which captures CO₂ from the atmosphere for direct use.

URL: Zero Carbon City
http://www.env.go.jp/en/earth/cc/2050_zero_carbon_cities_in_japan.html

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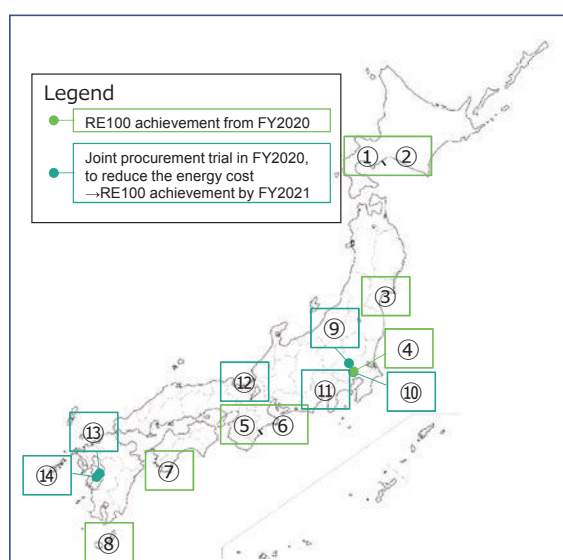


Efforts to Achieve the “Ministry of the Environment RE100” Initiative



Action Plan to Achieve the Ministry of the Environment RE100

- MOE will take 3 actions below in FY2020, in order to achieve RE100 by 2030. (Action Plans)
- 1. Procure 100% renewable energy (RE) in Shinjuku Gyoen National Garden, which already procures 30% RE electricity.
- 2. Commence measures for procuring 100% electricity in jurisdiction of all regional environmental offices (Hokkaido, Tohoku, Kanto, Chubu, Kinki, Chugoku-Shikoku, Kyushu)
- 3. Test a joint procurement of cheaper electricity in facilities under the MOE direct control with large electricity consumption, including National Institute for Minamata Disease, and assess possibility of procuring 100% RE electricity in FY2021.



Milestone for achieving MOE RE100		
Fiscal Year	Facilities achieving RE100	RE Achievement (Estimate)
2020	① Shikotsu-Toya National Park Lake Shikotsu Visitor Center ② Shikotsu-Toya National Park Office ③ Michinoku Coastal Trail, Natori Trail Center. ④ Shinjuku Gyoen National Garden ⑤ Yoshino Ranger Station ⑥ Ise-Shima National Park Yokoyama Visitor Center ⑦ Tosashimizu Ranger Office ⑧ Yakushima Ranger Office (incl. World Heritage Conservation Center)	10~15%
2021	⑨ National Environmental Research and Training Institute ⑩ Kokyo Gaien National Garden ⑪ Biodiversity Center of Japan ⑫ Kyoto Gyoen National Garden ⑬ National Institute for Minamata Disease ⑭ Minamata Disease Archives	35~40%
~2025 (Estimate)	Main building of MOE, Nuclear Regulation Authority Other Facilities under the MOE direct control *Considering joint procurement by each block	85~90%
~2030 (Estimate)	Facilities outside the MOE direct control	100%

* Excludes temporary facilities

The Ministry of the Environment (MOE) is committed to achieving the “Ministry of the Environment RE100” Initiative to meet 100% of its own power supply with renewable energy by the year 2030.

Introduction

In recent years, climate disasters such as torrential rains, typhoons and heat waves have intensified, and the risks of disastrous heavy rains and heat waves are expected to increase even further in the future along with the changing climate. Moreover, as post-coronavirus socio-economic activities resume, we must not return to past economic systems, but rather maintain a balance

between initiatives that address the COVID-19 crisis and the climate crisis. To do so, we must reform our socio-economic system to be more resilient by actively promoting the transition to a decarbonized society, the achievement of SDGs and the expansion of ESG finance. In other words, the redesign of our socio-economic system is essential.

Switching to renewable energies is crucial to achieve a decarbonized society, and the utilization of regional resources is also connected to the redesign of Japan’s socio-economic system.

MOE will encourage demand-side initiatives led by

local governments and businesses, along with continuing to work with other relevant ministries toward implementing renewable energy as Japan’s main source of power.

MOE began the “Ministry of the Environment RE100” Initiative aimed at achieving 100% of the MOE’s electricity supply with renewable energy by 2030. As part of this Initiative, the “Action Plan to Achieve the Ministry of the Environment RE100” (the Action Plan) was formulated in 2019. The Action Plan set milestones for MOE to achieve RE100 and three fundamental actions for FY2020.

●Three fundamental actions for FY2020

- ① Procure 100% renewable energy for the Shinjuku Gyoen National Garden (Shinjuku Gyoen)
- ② Launch initiatives aimed at procuring 100% renewable energy for MOE's all regional environmental offices.
- ③ Test a joint procurement of cheaper electricity in the facilities* under MOE's direct control with large electricity consumption, including National Institute for Minamata Disease
(*Facilities which can make contract for electricity on their own.)

Based on the Action Plan, multiple facilities under the MOE jurisdiction switched to 100% renewable energy in April 2020. As of December 2020, nine facilities are powered by 100% renewable energy. Furthermore, in addition to these nine facilities, six energy-intensive facilities are powered by joint procurement of 30% renewable energy.

Main Procurement Methods Implemented by MOE in 2020

The following is an explanation of the main procurement methods adopted by MOE during FY2020.

Regarding the procurement of renewable energy, especially for public institutions, it is important to increase the ratio of renewable energy while keeping the costs as low as possible. Accordingly, MOE is working to lower the cost of renewable energy and to put forward innovative contracting methods.

To start, as part of a trial in FY2019, Shinjuku Gyoen switched 30% of its energy supply to renewable energy and raised this ratio to 100% in FY2020. As a result of a general public bidding, Shinjuku Gyoen was able to switch to 100% renewable energy without any additional cost per unit of power compared to the previous fiscal year.

Furthermore, to procure



Shinjuku Gyoen National Garden

renewable energy at a low cost, six large-scale energy-intensive facilities, including the National Institute for Minamata Disease, were selected to trial to switch 30% of their energy supply to renewable energy. Joint procurement differs from conventional procurement (where bidding and contracts are conducted separately for each facility) as it involves the consolidation of multiple facilities in one contract. Thus, a cost advantage is made possible by increasing the scale of the power contract.

Additionally, the switch to renewable energy was implemented in four small-scale facilities (Yoshino Ranger Station, Tosashimizu Ranger Office, Ise-Shima National Park Yokoyama Visitor Center, and Ise-Shima National Park Office) through a reverse auction service which lowers procurement costs. The lowest cost was obtained by contracting the lowest offer out of multiple electricity suppliers bidding through this reverse auction format.

As such, MOE has been able to achieve the procurement of renewable energy while cutting costs as much as possible.

In June 2020, MOE released the

“What Public Institutions Can Do in the Age of Climate Change: the 100% Renewable Energy Challenge,” a practical guide for public institutions on renewable energy procurement sharing best practices acquired by MOE including efforts described above. This guide has been made available to other ministries and local governments.

Future Initiatives

In FY2021, MOE plans to take on the challenge of switching to 100% renewable energy at its six energy-intensive facilities, where trials were conducted on jointly procuring 30% of renewable energy in FY2020.

Moreover, in addition to the procurement of renewable energy for itself, MOE aims to stimulate demand for renewable energy and facilitate its mainstreaming by sharing best practices gained through its initiatives with other ministries and local governments.

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International Contributions in Preventing Environmental Pollution by Chemical Substances

Challenges in Assessing the Unknown Toxicity of Chemical Substances

In the aim to prevent environmental pollution due to the large volume of chemical substances being produced daily, the Ministry of the Environment (MOE) and the National Institute for Environmental Studies (NIES) are working together to assess the toxicity of chemical substances for aquatic organisms and communicate findings internationally. This article introduces the latest trends in technological development taking place in Japan on new methods of toxicity assessment.

Contributions to the OECD Test Guidelines Program

The OECD Guidelines for the Testing of Chemicals are broadly utilized in OECD member countries as an internationally standardized testing method to assess the safety of chemical substances.

The importance of identifying the impacts of chemical substances over the long term and across generations, including endocrine disruptors, is recognized as a key factor of preserving human health and conserving wildlife. Accordingly, the US and Japan has proposed the Medaka Extended One Generation Test (MEOGRT), which makes it possible to assess the toxicity of chemical substances for the next generation in a short time period. This new technology was approved in 2015 as Test Guideline (TG) No. 240.

Furthermore, despite concerns over the risks presented by chemical substances with low water solubility, including persistent organic pollutants (POPs), to a wide range of species including benthic organisms, compared to other aquatic organisms, there are astonishingly few testing methods to

assess this risk. In an effort to address this issue, Japan is developing a new testing method using a gammaridean amphipod. In doing so, Japan is serving as a global leader in this field's discussions and collaborating with countries in Europe and North America on proposals for new guidelines.



Gammaridean amphipod used in new toxicity assessment

Development of the KAshinho Tool for Ecotoxicity (KATE)

In recent years, methods of in silico analysis have been developed for predictive calculation of ecological impacts using computers from the viewpoint of reducing the number of animals used in animal experiments. To date, the most widely used ecotoxicity predictive system globally is the ECOSAR (Ecological Structure Activity Relationships) of the United States Environmental Protection Agency (USEPA), which uses Quantitative Structure Activity Relationship (QSAR) based on substructure classification. Several obstacles were encountered by ECOSAR, such as inadequate statistical values to show fit, lack of transparency due to the use of confidential corporate data and reliability of reference material data due to the combined use of research paper data.

Accordingly, MOE jointly with NIES developed the KATE that further categorizes the same substructure classification as ECOSAR. The trial version was released in 2008.

Subsequently, models were updated especially in terms of the addition of chronic toxicity in addition to acute toxicity and reference material data added as the tool was revised. It has now been released as the KATE 2020, and a technical guidance document is now being prepared to ensure the transparency of the internal QSAR model. The KATE has been well received internationally for having highly reliable data as reference material and as a model with highly reliable predictive assessment results. It was included in the OECD QSAR Toolbox in 2019, and is being widely used.

Toward further international contributions

In the backdrop of both increasingly diversifying chemical substances and attitudes toward animal welfare, global trends in toxicity assessment have become increasingly dynamic in recent years. MOE and NIES intend to utilize their best practices on the toxicity assessment methods which have been fostered in Japan for many years, as well as the latest predictive methods using computers, to further our efforts to disseminate results to the international community in order to actively develop technologies protecting humans and the environment from pollution due to chemical substances.

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Japan's Contributions to Address Marine Plastic Pollution

Marine plastic pollution has become increasingly serious and demands actions on a global-scale. Japan has led the world in contributing to international responses within frameworks such as UNEA and G20 and through compilation of scientific knowledge.

Overview of Marine Plastic Pollution

Marine plastic litter discharged into the oceans causes a range of problems such as the deterioration of marine environments including impacts on ecosystems, harmful effects on seascapes, obstacles to marine traffic, and impacts on fisheries and tourism. Further, concerns have risen over the impacts of microplastics of less than five millimeters on ecosystems due to their accidental ingestion by marine organisms and the absorption of chemical substances contained in microplastics into the food chain.



Plastic litter washed ashore

To tackle marine plastic pollution, the world must come together with shared objectives to steadily implement effective actions, particularly including South-East Asian nations, where the volume of plastic waste discharged into the oceans is estimated to be comparatively larger. Moreover, it is crucial to compile global scientific knowledge on marine plastic litter.

International Trends

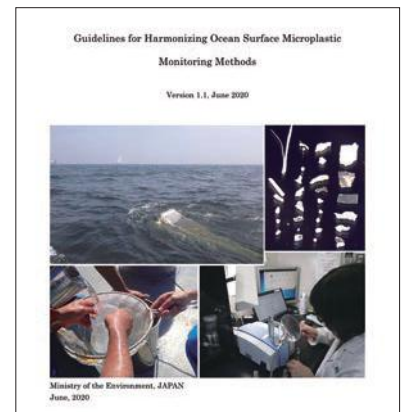
At the G20 Osaka Summit in June 2019, Japan put forward the Osaka Blue Ocean Vision (the Vision) aiming to reduce additional pollution by marine plastic litter to zero by 2050.

The number of countries and regions sharing the Vision has now expanded to 86 (as of December 4, 2020). In relevant ministerial meetings, Japan also took the lead in the formulation of the G20 Implementation Framework for Actions on Marine Plastic Litter to realize the Vision. Based on this implementation framework, Japan provided support for an initiative led by Saudi Arabia, the G20 host country for 2020, to compile the second “G20 Report on Actions against Marine Plastic Litter” based on best practices reported by each country (<https://g20mpl.org/>).

In November 2020, the fourth meeting of UNEP’s ad hoc open-ended expert group on marine litter and microplastics (AHEG4) was held virtually, chaired by Mr. IINO Satoru, Deputy Director of Environmental Management Bureau of the Ministry of the Environment (MOE). Discussions at AHEG4 included improvements to the existing framework and analysis of the effectiveness of response options. The meeting outcomes were compiled into a report and Chair’s Summary. Going forward, these outcomes will be reported to the 5th Session of the UN Environment Assembly (UNEA5) and serve as a reference in future international discussions (<https://environmentassembly.unenvironment.org/expert-group-on-marine-litter>).

Compilation of scientific knowledge

Comparing data on microplastics in the ocean was previously hindered by the variety of survey methods adopted according to differing survey objectives. Japan has declared its intention to lead the world in harmonizing data collection in the G7 and G20 frameworks. Accordingly, MOE released the first version of the “Guidelines for



Cover page of the guidelines

Harmonizing Ocean Surface Microplastic Monitoring Methods” in May 2019, and subsequently revised the guidelines in June 2020 to be applied in areas of the ocean with large amounts of floating plastics such as small boats, fish eggs and plankton-sized plastic particles, with particular consideration given to developing countries. These guidelines now enable the comparison of monitoring data (http://www.env.go.jp/en/water/marine_litter/guidelines/guidelines.pdf).

In addition, MOE organized the G20 Workshop on harmonized monitoring and data compilation of marine plastic litter in September 2020, and proposed the development of a global monitoring data sharing system for marine litter.

Conclusion

As described in JEQ23, MOE is also working on domestic measures. As a country that advocates the Vision, we will further promote measures to tackle marine plastic pollution in Japan and abroad.



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Recent Developments related to the SDGs

–Initiatives of the Ministry of the Environment–

Five years have passed since the adoption of the 2030 Agenda at the United Nations General Assembly in 2015. UN Secretary-General Guterres has designated the ten-year period leading up to 2030 as the "Decade of Action," and has called upon all countries to take action. The article introduces recent initiatives led by the Government of Japan and the Ministry of the Environment (MOE) in this context.

Government Initiatives toward SDGs

Since the adoption of the 2030 Agenda in September 2015, the Japanese government has been working collectively to achieve the SDGs. In May 2016, the "SDGs Promotion Headquarters" was set up based on a Cabinet decision, chaired by the Prime Minister and made up of all cabinet members. In December 2019, the "SDGs Implementation Guiding Principles" were revised for the first time. The "SDGs Action Plan 2021" was finalized in December 2020. The four main elements of this action plan are as follows:

I. Infection control measures and preparation for the next crisis, II. Growth strategy based on business and innovation to build back better, III. SDGs-driven regional revitalization and creation of a virtuous cycle for the economy and environment, and IV. Acceleration of actions by showing each person's potential and strengthening ties.

Furthermore, the main initiatives related to the eight priority areas of the "SDGs Implementation Guiding Principles" are as follows:

1. Realization of gender equality and a society where every person can play an active role, 2. Achievement of good health and longevity, 3. Creating

growth markets, revitalization of rural areas, and promoting science technology and innovation, 4. Sustainable and resilient land use, promoting quality infrastructure, 5. Energy conservation and renewable energy, disaster risk reduction and climate change countermeasures, sound material-cycle society, 6. Conservation of biodiversity, forests, and oceans, and other environments, 7. Achieving peaceful, safe and secure societies, and 8. Strengthening the means and frameworks for the implementation of the SDGs.

With a particular focus on implementing the above III and 5 initiatives, the Government of Japan will serve as a driving force for the world's green industries and create a virtuous cycle of economic growth and environmental protection to achieve carbon neutrality, ensuring the reduction of greenhouse gas emissions to net zero by 2050. In line with this, MOE will implement further initiatives to promote disaster risk reduction, more resilient land and high quality infrastructure.

The following is an example of MOE's recent activities held in September 2020, globally disseminating Japan's contribution to achieving the SDGs as part of its decarbonization efforts.

UN High-level Political Forum Outreach Event

The implementation of the SDGs in Japan is led by various stakeholders' efforts including the national government, local governments, and the private industry. However, the Japanese public's awareness on international debates held at meetings such as the



Mr. SASAGAWA Hiroyoshi, State Minister of the Environment

United Nations High-Level Political Forum (HLPF) and the UN General Assembly, remains significantly hindered by language barriers, as well as time and geographic differences. Conversely, while the numerous successfully implemented initiatives in Japan could serve as references to other countries, these are not sufficiently communicated to the world for similar reasons. Accordingly, MOE held an online event entitled, "The High-Level Political Forum 2020: Japan's Role in Recovery from the COVID-19 Pandemic and Achievement of the SDGs" on September 30, 2020. This event was aimed at sharing messages from HLPF2020, held online in July, with a broad range of domestic stakeholders. It aimed to promote the understanding of interrelated issues involved in the recovery from the COVID-19 crisis and achievement of the SDGs, to promote discussions on ways to maximize synergies between policies and initiatives, and to communicate Japan's best practices to the world.

Following opening remarks by Mr. SASAGAWA Hiroyoshi (State Minister of the Environment) and video messages from Ms. Maria-Francesca Spatolisano (the United Nations Department of Economic and Social Affairs (UNDESA)) and Mr. Ovais Sarmad (UNFCCC Secretariat), the first part of the meeting contained speeches and the second part was a panel discussion. Below is a summary of each speaker's remarks and discussions.

<Speeches> *Titles are omitted below

- Building back better from COVID-19 for the achievement of the SDGs - Outcomes of HLPF2020 and future prospects: TAKADA Minoru, Team Leader (Energy), UNDESA

Key points of HLPF2020 are: 1) SDGs: Progress has been made on the SDGs, yet this is insufficient in many areas. There are concerns about growing inequalities caused by COVID-19, 2) The SDGs should be at the heart of COVID-19 recovery efforts, and 3) Multilateral cooperation is essential.

- Climate Crisis and “Building Back Better” from the COVID-19 Crisis: A Message from the UN Secretary-General: NEMOTO Kaoru, Director, United Nations Information Centre (UNIC)

The UN Secretary General has stressed the importance of building back better, including a green recovery, and pointed out the importance of six climate actions: 1) Investing in green jobs, 2) No to bail out polluting industries, 3) End fossil fuel subsidies, 4) Consider climate risks in financial policy decisions, 5) Work together, and 6) Leave no one behind.

- Initiatives by MOE as part of the Recovery from COVID-19: KONDO Tomohiro, Vice-Minister for Global Environmental Affairs, MOE

MOE and the Keidanren signed an MOA in September aiming to realize a virtuous cycle of economic growth and environmental protection. Expectations are high for business-led decarbonization initiatives.

- Media Coverage of COVID-19 from an SDG Perspective: Lynn Wagner, Senior Director, International Institute for Sustainable Development (IISD)

The media reported on the COVID-19 pandemic including aspects of public health, the economy, inequalities and the environment. As the issue bridges multiple areas, it is important to understand these synergies and to address issues in an integrated manner.

<Panel discussion> Exploring synergies between actions on SDGs and efforts to address climate change, biodiversity and disaster prevention, with advanced efforts from Japan

- Moderator: TAKEUCHI Kazuhiko, President, Institute for Global Environmental Strategies (IGES)

Integrated approaches are essential to a resilient and sustainable recovery from the COVID-19 crisis. This is emphasized in the concept of the “Regional Circular and Ecological Sphere.” It is essential to integrate the diverse efforts, connections and partnerships of people supporting a decentralized society and to ensure that global discussions are reflected at the local level and that discussions at the local level are reflected at a global level.

- YAMAGUCHI Shinobu, Director, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)

Based on the results of the HLPF, UNU-IAS will focus on: 1) Enhancing synergies and scaling up multi-stakeholder collaborations across all UNU-IAS programs, 2) Developing a mechanism to incorporate impact assessments relevant to SDGs into governmental projects' PDCA cycle, 3) Inputting the results of impact assessment activities into systems for climate change and biodiversity, 4) Contributing to the development of domestic policy frameworks to strengthen synergies among SDGs, and 5) Strengthening the collaboration of Japanese universities around SDGs via the United Nations University SDG-Universities Platform (SDG-UP).

- HASEGAWA Tomoko, Managing Director and Director of SDGs Promotion Bureau, Japan Business Federation

A survey on Keidanren corporations' initiatives toward Society 5.0 for SDGs, aimed at building back better after the COVID-19 crisis found a large number of initiatives aiming at “reforming work practices and enhancing workplace environments,” “sustainable economic growth and the resolution of social issues,” and “establishing sustainable and resilient supply chains.” Little progress was seen on addressing the remaining issue of “business and human rights.”


- KURAIISHI Haruna, Secretary General, Japan Youth Platform for Sustainability (JYPS)

Tradeoffs arise when differences in benefits among actors and opportunities hinder smooth exchanges of views. Discussions must be inclusive to ensure multi-stakeholders engagement. Japan should use international frameworks including the SDGs, Human security, and the Paris Agreement as a compass.

- ODA Shinya, Section Chief, Karatsu City

Karatsu City, Saga Prefecture formulated 12 measures to address issues faced by the City, including vulnerability to disasters, dependency on fossil fuel energy, surcharge of energy costs, and inadequate human resources with multi-disciplinary expertise, to establish the Karatsu version of the regional Circulating and Ecological Economy. The City is advancing local sustainable development by bringing together the creation of a decarbonized society and local economic revitalization.

For more information about the event, visit the website at <https://www.iges.or.jp/en/events/20200930>.

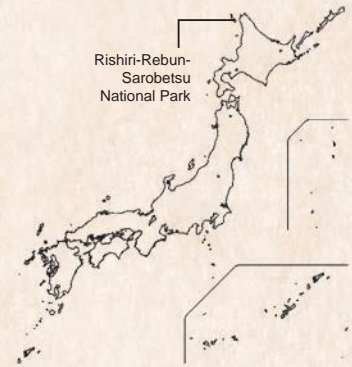


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Rishiri-Rebun-Sarobetsu National Park

Japan's Northernmost Park Offers a Myriad of Scenic Views, Flowers and Landscapes



As Japan's northernmost national park, Rishiri-Rebun-Sarobetsu National Park boasts a range of scenic views, including the beautiful stratovolcano of Mt. Rishiri, the roughly 300 varieties of alpine plants on Rebun-to Island, and the wetlands of the Sarobetsu Plain, a Ramsar site. In the middle of winter, visitors can brave the bitter cold to enjoy skiing on slopes of Mt. Rishiri overlooking the sea.

Overview of Rishiri-Rebun-Sarobetsu National Park

The Rishiri-Rebun-Sarobetsu National Park lies on the northwest side of Hokkaido and is Japan's northernmost national park. Dubbed "Rishiri Fuji," the stunning pyramid-shaped peak of Rishiri-to Island, Mt. Rishiri (1,721 m) is the highlight and symbol of the park. Among the park's spectacular scenic attractions are roughly 300 species of alpine plants that flower on Rebun-to Island, including a rare species of orchid, as well as the Sarobetsu Plain, an important stopping point for migrating birds like geese and ducks, where a myriad of marsh plants vie to dazzle visitors.

The most distinctive feature of the park is the stratovolcano, Mt. Rishiri. Unobstructed views of Mt. Rishiri can be enjoyed from along the Sarobetsu coast or from Rebun-to Island, where one can gaze at the mountain's towering peak that appears to float on the water several tens of kilometers offshore. There are very few places in Japan offering views and natural landscapes of such a magnificent scale. Rebun-to Island is home to spectacular scenic views of seasonal alpine plants, spreading from the lowlands to the higher windswept areas, as well as dynamic sea cliffs and crystal clear blue seawater.

Trekking on Rebun-to Island and mountain climbing on Mt. Rishiri are popular ways to explore the area.



View of Mt. Rishiri from Rebun-to Island

Winter adventures

Mt. Rishiri is especially majestic when covered in snow, and draws ski aficionados from around the world looking for the best slope. They look out over the fresh slope in the clear mountain air and gaze at the blue sea as they kick up snow and glide down towards the sea. There is no substitute for the extraordinary experience one can have on Rishiri-to Island.

Because Mt. Rishiri has no lift, visitors need physical strength and skills in backcountry skiing to enjoy winter sports on this mountain. The key to safely enjoy backcountry skiing is to go around March, when the weather stabilizes, and to bring along a knowledgeable and experienced local guide.



Skiing towards the sea

Rishiri-Rebun-Sarobetsu National Park

URL <http://www.env.go.jp/en/nature/nps/park/rishiri/index.html>

MUROTA Yuhi

Active Ranger
Rishiri-Rebun-Sarobetsu National Park Office,
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