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Spreading Implementation of SDGs in Japan

Cover: Energy self-sufficiency through the use of woody biomass in Shimokawa Town

GLOBAL ENVIRONMENT

Spreading Implementation of SDGs in Japan

Happiness for All through the Sustainable Development Goals

Japan established the Sustainable Development Goals (SDGs) Promotion Headquarters in May 2016 to promote the comprehensive and effective implementation of the SDGs across all ministries and agencies. Prime Minister Abe leads the Headquarters and all cabinet ministers are members. Japan Environment Quarterly interviewed Mr. Satoru Morishita, Director General of the Global Environment Bureau of the Ministry of the Environment (MOE), about the MOE's efforts to achieve the SDGs.

12 of the 17 SDGs, if not more, are related to the environment and the MOE is expected to lead the efforts towards achieving the SDGs in Japan. Director General Morishita explains the various initiatives being implemented by the MOE as follows. "The MOE has long been working towards simultaneously achieving environmental, economic, and social progress, as set out in its Third Basic Environment Plan, established in 2006. Such activities are aligned with the principles of the SDGs. We are now in the process of formulating the Fifth Basic Environment Plan. This new plan will incorporate the SDGs approach even more actively. Specifically, it will advance six priority strategies related to the SDGs, including 'building a sustainable socio-economy' and 'community development through the formation of diverse local recycling coexistence zones.'"

Through these priority strategies, the MOE will create new socio-economic systems, lifestyles, and technological innovation, and also resolve both economic and social issues using environmental measures. "Around the world, we are seeing new development models in various fields. Take energy for example. Until now, countries and regions have needed an ample supply of fossil fuels to achieve progress. Now, however, with the spread of renewable energy, they can all enjoy the benefits of electricity. As more people gain access to electricity, they will also be able to lead more enhanced lifestyles, resulting in greater consumption, new markets and economic development. Achieving the sound development of the world, and creating a healthy society and market are now interlinked."

Director General Morishita also explains how environmental policy can resolve both economic and social issues, using climate change adaptation as an example. "Adaptation measures are normally taken to prepare for the potential impacts of climate change and reduce the damage they cause. Although the original aim of these measures is to ready society for an emergency, they can also offer an opportunity. For example, we can develop resilient communities by predicting how they might be affected by disasters caused by the impacts of climate change. In this way, we can limit the economic losses, while also helping members of these communities lead comfortable lives. Similarly, by improving crop varieties and shifting cultivation areas in preparation for the future impacts of climate change, we can also develop new markets and revitalize communities. Many of the problems faced by society are interrelated. A single solution can often result in improvements in multiple priority areas. The MOE holds the Stakeholders' Meetings to share and disseminate such information in order to raise awareness of the ripple effects."

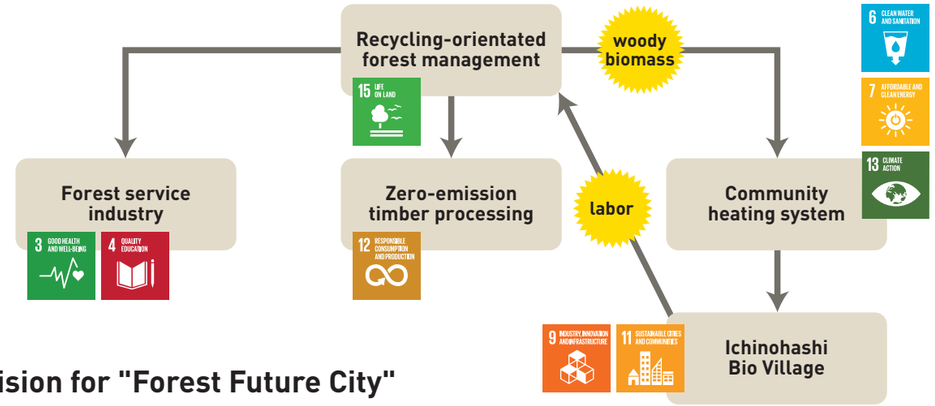
Last year, the MOE formulated Japan's Assistance Initiatives to Address Climate Change 2017 and communicated the details of these initiatives to the international community at COP23, in Bonn, Germany in November. These initiatives are a crystallization of Japan's vision and specific programs, and are based on the keyword of "co-innovation," meaning innovation achieved in collaboration with developing countries utilizing Japanese technology and know-how. "Our country was once disadvantaged by our limited natural resources. However, we have since overcome this, while also enhancing our environmental technologies, such as by improving energy efficiency, to increase our international competitiveness. We have also developed disaster prevention technology to recover from the various adverse impacts of the Great East Japan Earthquake. Japan is a frontrunner in the world in tackling a variety of issues, and there are many domains where we can contribute to the achievement of the SDGs. The MOE intends to lead those endeavors."

Satoru Morishita
Director General,
Global Environment Bureau
Ministry of the Environment,
Japan

Stakeholders' Meetings

In order to promote the implementation of SDGs from an environmental standpoint, the MOE regularly organizes the Stakeholders' Meetings in cooperation with the Institute for Global Environmental Strategy (IGES). In these meetings, different stakeholders from private companies, local governments, and NGOs share and acknowledge various best practices. The 4th meeting, held in October 2017, started with a presentation by the Ministry of Foreign Affairs and Cabinet Office about the latest trends in Japan and the world, followed by presentations on best practices by advanced companies and local governments. The participants engaged in vigorous discussions and questioned the presenters, including how to make progress towards achieving the SDGs and the types of frameworks being used to do so.

Energy Self-Sufficiency and Independent Local Community-Building – The Keys to Sustainable Town Planning



Vision for "Forest Future City"

Shimokawa Town in Hokkaido is engaged in sustainable town planning based on a recycling-oriented forest management system. The local economy is supported by Shimokawa's ample forestry resources. When using these resources, the town makes sure that nothing goes to waste. For example, it has achieved energy self-sufficiency using woody biomass. Through such activities, the town is able to conserve the surrounding environment. Additionally, Shimokawa has revitalized one of its villages, where most of the local population is at least 65 years old, and is tackling the issue of the rapid aging of society.

Shimokawa Town is located in northern Hokkaido, approximately 100km north of Asahikawa City. It is 20km from east to west and 30km from north to south, and covers an extensive area measuring 64,420ha. Around 90% of the area is forested, and the town is blessed with plentiful timber resources and a rich natural environment. However, the population is aging, with 38% of residents aged 65 and over.

Shimokawa is currently implementing initiatives to become a "Forest Future City" as part of its vision for developing and improving the town. These initiatives are aimed at creating a virtuous cycle between the economy, the environment, and society, with a focus on the timber, forestry product, and woody biomass industries. They also contribute to all 17 Sustainable Development Goals (SDGs). Mr. Takeshi Minoshima, the leader of the Future City Initiative Division, Shimokawa Town Office, explains the significance of this, "The problems that beset society are deeply interconnected and the SDGs offer integrated solutions to them by linking the economy, the environment and society. The mindset of the SDGs is also extremely useful when setting out the future vision of our town."

For example, Shimokawa employs a recycling-oriented forest management approach, utilizing the national forest land it purchased in 1953. This approach contributes to the SDG of "Life on Land" (Goal 15). Each year over 50ha in timber is felled, and trees are planted in the deforested area. These trees are cultivated for 60 years, and then felled once again. By continually using the forest in this way, the town is able to sustainably maintain employment and a stable supply of timber.

Shimokawa's forestry management creates abundant forestry resources that are completely down-cycled. "The virgin wood of each tree is first processed into supports, laminated wood or charcoal. We make full use of our forestry resources, without waste. We even commercialize the pyroligneous acid (wood vinegar) created during charcoal production and essential oils extracted from the unused branches and leaves," says Mr. Minoshima. Such timber processing with zero emissions contributes to the SDG of "Responsible Consumption and Production" (Goal 12).

Furthermore, any other surplus wood, and wood waste from processing is used as fuel for 11 woody biomass boilers installed throughout the town. In addition, the public facilities around the town hall utilize a community heating system that is fueled by a woody biomass boiler. Until now, the town's various facilities used heavy oil boilers but Shimokawa plans to switch to woody biomass boilers to reduce CO_2 emissions. The town has already achieved a community heat self-sufficiency rate of 45%.

Ichinohashi Bio Village in the western part of the town is a symbol of Shimokawa Town's initiatives. In 2013, Ichinohashi was reconstructed by the residents as a compact town where everyone supports each other in their daily lives while sharing space and energy. Until then, the village had been experiencing striking depopulation and societal aging, with the population aging rate exceeding 50%. Now, however, young people have started moving to the area.

Shimokawa's vision is to create a town that is attractive to everyone. A wide range of people who shared these ideals moved to the town, further accelerating the town's initiatives towards living in coexistence with the forest and making the most of people and resources. Mr. Minoshima describes plans for the development of the town as follows, "To continue our current progress, it will be important to forge partnerships with corporations and organizations. Lately, the SDGs concept has led to ever more opportunities for new collaborations. We want to use SDGs as tools for the revitalization of communities in a way that connects people."

Takeshi MINOSHIMA
Shimokawa Town office
Senior Manager
Future City Initiative Division

1 Ichinohashi Bio Village residential buildings. They are connected by shared indoor corridors, making it easy to start up a conversation with neighbors. 2 The biomass boilers installed in Ichinohashi Bio Village. The two 550kW boilers provide heating and hot water for the community. 3 In this plastic greenhouse that uses the heat from the boiler, shiitake mushrooms are cultivated in beds that use sawdust from the trees, creating employment for local residents.

A Food Recycling Loop Centered on Food Waste and Quality Animal Feed

According to the Food and Agriculture Organization of the United Nations (FAO), 1.5 billion tons of food, roughly one third of all food produced in the world, is wasted each year. Despite this, one in nine people suffers from food deficiency. In response to this issue, the Japan Food Ecology Center in Sagamihara City, Kanagawa Prefecture, has developed a food recycling loop that makes use of food waste.

Each year in Japan, 6.21 million tons of edible food is wasted. Such waste is disposed of through incineration. However, burning just one ton of waste costs between 40,000 and 50,000 yen (between 400 USD and 500 USD), not to mention the CO_2 emissions that are produced. Another issue in Japan is the financial pressure faced by stockbreeders because of their heavy dependence on imports for animal feed and the growing cost of such feed due to rising grain prices. As a result, many stockbreeders are being forced out of business in rapid succession.

To tackle these two problems, one Japanese company is now collecting and processing food waste produced by food resellers and restaurants, and using it to manufacture pig feed. Its name is Japan Food Ecology Center, Inc. and it is located in Sagamihara City, Kanagawa Prefecture.

The feed is made from food waste such as bread or noodles discarded by food manufacturers, rice or milk thrown away by restaurants, and vegetable waste from supermarkets and other retailers. The company collects the waste from approximately 180 factories and stores in the surrounding area using a special refrigerated truck and transports it to the recycling plant. The recovered food waste is mixed with water, sterilized, and subjected to lactic fermentation. It is then shipped to pig farms as liquid fermented feed. Currently, the company collects 33 tons of food waste each day and uses it to manufacture 40 tons of liquid feed for 15 stockyards.

Mr. Koichi Takahashi, President of Japan Food Ecology Center, Inc., explains the merits of liquid fermented feed compared to dry feed. "First of all, liquid feed is cheaper. Because we use the liquids already present in the food waste, such as in milk or yogurt, we can greatly reduce the energy needed for production. As a result, we can sell the liquid feed at roughly half the price of dry feed. Liquid feed also reduces the disease incidence rate of the pigs. The lactic acid bacteria in the feed increases the beneficial bacteria in pigs' intestinal tracts, thereby strengthening immunity and improving intestinal function. This decreases the morbidity of the pigs and reduces the amount of antibiotics they need, allowing farmers to provide consumers with safe and healthy pork."

Development of a Food Recycle Loop

Sold as branded meats

Food related businesses

Department stores | Restaurants | Major supermarkets | Food makers

Food waste produced throughbusiness operations

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

17 PARTNERSHIPS FOR THE GOALS

2 ZERO HUNGER

Pig farmers

Pigs raised on liquid feed

Conversion of food wasteto liquid feed

8 DECENT WORK AND ECONOMIC GROWTH

J.FEC

company's liquid feed are slaughtered and processed for sale as branded meats at department stores and supermarkets. "What makes our company special is the recycling loop we have developed through the use of food waste. Rather than simply converting food waste into feed, we have developed a complete cycle where farmers use our liquid feed, and retailers sell the meat produced to consumers with value added in terms of quality and safety."

Mr. Takahashi is widely promoting the use of recycling loops for reducing food waste. In fact, he recently presented his company's activities at the UN headquarters in New York in July 2017 on Asia-Pacific initiatives toward a sustainable future. "Since Japan established a food recycling law before much of the rest of the world, I felt that food loss is one area in particular where we can contribute to the world. We can lead the way by proactively sharing information and spreading knowledge about methods and technologies for reducing food waste. I also think that it is important for companies to contribute to social issues, such as the Sustainable Development Goals, as part of their main business. We hope that our technology and system is used by businesses throughout Japan and the world to further expand the scope of our recycling loop."

Koichi Takahashi
President of Japan Food Ecology Center, Inc.

1 Collected food waste

2 Barcodes are used in measurement.

3 A high-pressure cleaner is used to clean and shred the waste.

4 Foreign object removal

5 The liquefied state after the waste is shredded

6 Sterilization and fermentation. The nutrition is adjusted here.

7 The finished liquid feed. The content is adjusted for each customer.

The company actively accepts study tours for companies, organizations, consumers, and students.

HEALTH & CHEMICALS

Minamata Convention on Mercury

First Meeting of the Conference of the Parties Held

The first meeting of the Conference of the Parties (COP1) to the Minamata Convention on Mercury was held on September 24 to 29, 2017 in Geneva, Switzerland. The Minamata Convention on Mercury is aimed at preventing health damage and environmental pollution from mercury and mercury compounds, and was adopted at a diplomatic conference in Japan in October 2013. Japan ratified the Convention in February 2016. As of May 18, 2017, 52 signatory countries had ratified the Convention, fulfilling the 50-ratification milestone required for its entry into force. As a consequence, on August 16 of the same year, the Convention became legally binding for all its Parties.
Approximately 1,200 people from 150 countries and regions participated in COP1. The Japanese delegation was led by the Minister of the Environment, and consisted of officials from the Ministry of the Environment (MOE), the Ministry of Foreign Affairs, and the Ministry of Economy, Trade and Industry.

The major outcomes of COP1 were as follows:

1. Technical Issues
- Adopted formally the technical guidelines on mercury emissions to the atmosphere, and the national action plan for small-scale gold mining.
- Decided future works in regard to the release of mercury to water/soil, guidance on interim storage, mercury waste thresholds, and guidance on contaminated sites.
- Decided the reporting frequency (in principle once every four years) and format.
- Established an expert group on global mercury monitoring and effectiveness evaluation.

2. Management Issues
- Decided the details of the arrangement of the Specific International Programme (SIP), a convention-specific financial mechanism.
- Adopted the guidance on implementing the support by the Global Environmental Facilities(GEF).
- Decided to collect information on existing activities regarding capacity building and technical assistance in implementing the Convention, and to report this to COP2.
- Decided to initially locate the Convention Secretariat in Geneva, Switzerland.

At the High-Level Segment on September 28 and 29, 2017, ministers and high-level officials gave statements for the steady implementation of the Minamata Convention. Furthermore, Mr. Marc Chardonnens, the President of COP1 and Director of the Swiss Federal Office for the Environment, emphasized the importance of cooperation by all stakeholders to reduce mercury emissions throughout its life-cycle as the key take-home message. Mr. Masaharu Nakagawa, Minister of the Environment of Japan, delivered a statement expressing Japan's determination to take a leading role in promoting global mercury management by utilizing various knowledge from Minamata.

Japan also organized a special event entitled "A Moment to Minamata" before the High-Level Segment. The speakers included Mr. Hiroshi Nishida, Mayor of Minamata City, Ms. Shinobu Sakamoto, a fetal Minamata disease patient, and Ms. Sena Sawai, a goodwill ambassador to the Convention (MOYAI Ambassador) appointed by the MOE. They pointed out the importance of learning lessons from Minamata disease and of promoting mercury management.

COP2 is scheduled to be held in November 2018 in Geneva, Switzerland.

Office of Mercury Management,
Environmental Health Department,
Ministry of the Environment, Japan

GLOBAL ENVIRONMENT

Regional Workshop on preparation for COP23 in the Asia-Pacific

(26th Asia-Pacific Seminar on Climate Change)

The Ministry of the Environment of Japan held the Regional Workshop on preparation for COP23 in the Asia-Pacific in Suva, Fiji on September 26 and 27, with the cooperation of the Ministry of Foreign Affairs of Japan, and cohosted by the Ministry of Foreign Affairs and Ministry of Trade of Australia. This was the 26th meeting of the Asia-Pacific Seminar on Climate Change since its launch in 1991 and was held to support Fiji in preparing to assume the presidency of COP23 to be held in Bonn, Germany in November 2017.

Opening session

The primary aims of the seminar were to contribute to promoting actions to tackle climate change, raising awareness, sharing experiences on measures, and facilitating international cooperation in the Asia-Pacific region. This year, a concerted effort was made to invite government officials from small island states. Topics of particular interest to those states, such as adaptation to climate change, were also selected for discussion. In addition, the development of a transparency framework, which is important for ensuring the effectiveness of the Paris Agreement, was another major theme of the meeting.

The participants engaged enthusiastically in open exchanges of opinions, knowledge sharing and the promotion of mutual understanding on challenges and issues related to climate change. At the closing ceremony, which also coincided with Fiji's Climate Change Week, Mr. Frank Bainimarama, Prime Minister of the Republic of Fiji, expressed his gratitude to Japan and the many other nations providing Fiji with support.

Yusuke TERAOKA
Section Chief
Office of Director for International Strategy on Climate Change/
International Strategy Division,
Global Environment Bureau,
Ministry of the Environment, Japan

Group discussions

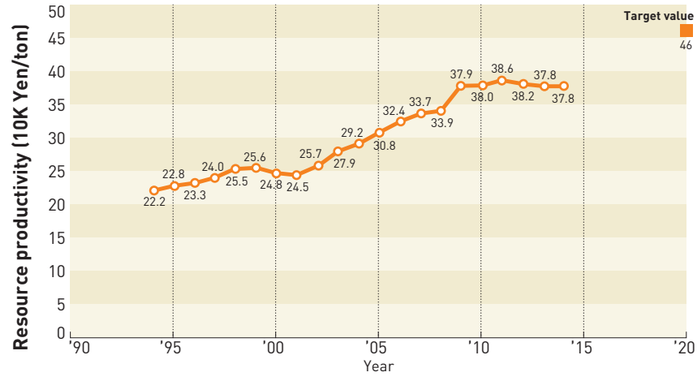
WASTE & RECYCLING

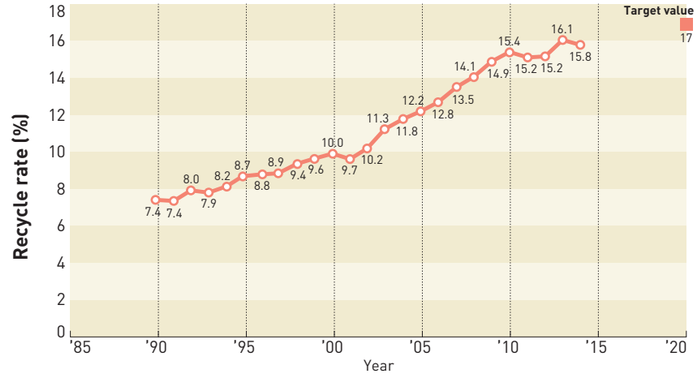
Japanese Initiatives for Establishing a Sound Material-Cycle Society

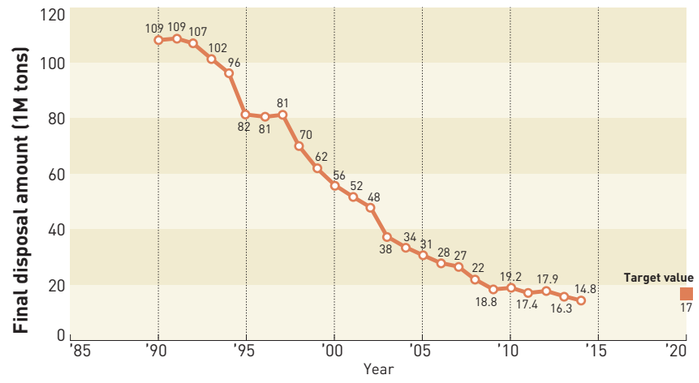
Japan formulated the Basic Act on Establishing a Sound Material-Cycle Society in 2000, and for nearly 20 years it has implemented initiatives towards establishing a society that manages the consumption of natural resources and reduces environmental impact as much as possible. Since launching these initiatives, material flow indicators to capture Japan's resource productivities have improved significantly; resource productivity has increased approximately 1.5 times, cyclical use rate has increased approximately 60%, and final disposal amount has been reduced by approximately 70%.

Based on the above Basic Act, Japan developed the Fundamental Plan for Establishing a Sound Material-Cycle Society in 2003, and has since been comprehensively and systematically implementing specific measures in accordance with the plan. It is currently revising the plan for the third while inviting and incorporating the opinions of a diverse array of non-governmental stakeholders. The 4th plan will be published in spring 2018. One of the pillars of the new plan will be the life-cycle 3Rs (reduce, reuse and recycle). This initiative will enhance upstream processes, such as Design for the Environment (DfE) and sustainable procurement, which tend to be less focused than downstream processes. It will also contribute to Goal 12 of the Sustainable Development Goals (SDGs), ensuring sustainable consumption and production patterns, including the substantial reduction of waste generation and the efficient use of natural resources.

In addition, the new plan will contribute to various other SDGs as well, through the implementation of material-specific initiatives such as reducing food loss, developing a sound international trade for second resources, and promoting deployment of the waste management facilities. Japan is determined to accelerate initiatives for achieving SDG 12.







Toru TERAI
Deputy Director, Office for Recycling Promotion,
Environmental Regeneration and Material Cycles Bureau,
Ministry of the Environment, Japan

Project to "Fully Enjoy National Parks" at Akan-Mashu

Here in this land of numerous serene lakes, beautiful pine forests, active volcanoes, and diverse wildlife, the indigenous Ainu people have long coexisted with nature, which they worshiped as "kamuy" (gods).

Akan-Mashu National Park, located in Hokkaido in northernmost Japan, initiated a project to encourage more foreign tourists to visit the area and witness its beauty. The National Park is implementing public-private initiatives to help visitors enjoy its nature and culture more deeply and comfortably by improving park facilities, developing new programs for adventure tourism and experiencing Ainu culture, and training guides.

The key concepts behind this project are "novel uses for resources predicated on preserving the natural environment" and "quality time spent in primordial nature." We are all looking forward to your visit to Akan-Mashu National Park, where you are sure to be captivated by the unique experiences available.

The "Project to Fully Enjoy National Parks" is aimed at developing novel attractions in and adding new facilities to each of Japan's national parks, so as to enhance their appeal to travelers from around the world and to encourage lengthy visits.
http://www.env.go.jp/en/nature/enjoy-project/index.html

The Ezo red fox is found widely throughout Hokkaido

Marimo is a type of moss that grows into beautiful spheres.

DATA

Akan-Mashu National Park
Established: December 4, 1934
Area: 91,413 ha

Yuki ANDO

Ranger
Lake Akan Ranger Office
Kushiro Nature Conservation Office,
Ministry of the Environment, Japan

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