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Kirishima-Kinkowan National Park [Miyazaki/ Kagoshima]

Photo by TAKEYOSHI KAMAMIYA

Revision of the Fluorocarbons Law

In order to further strengthen the emission control of fluorocarbons that cause ozone depletion and global warming, the Fluorocarbons Recovery and Destruction Law was revised in June 2013 and will be put in force from April 1, 2015.

This revision is intended to provide measures to promote efforts towards emission control over the entire life cycle of fluorocarbons by significantly expanding the scope of regulation from the existing framework that ensures proper treatment of used fluorocarbons through their recovery and destruction. Therefore the name of the law has also been changed to "the Act on Rational Use and Proper Management of Fluorocarbons."

Background to the Revision of the Fluorocarbons Law - Fluorocarbons Control as a Central Issue in Tackling Global Warming -

Fluorocarbons are substances that are utilized for various operations such as refrigerants in air conditioners and refrigerators or foaming agents for heat insulators because they are chemically very stable, easy to handle, and less toxic and thus deeply-rooted in our everyday lives.

The production and import of ozone-depleting

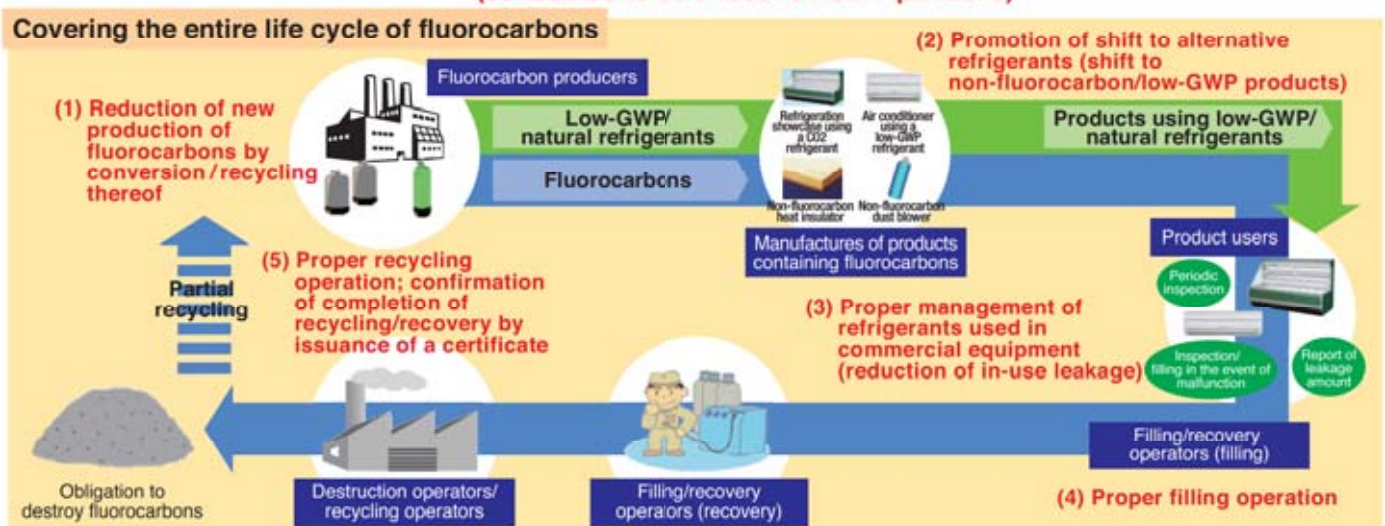


An advanced usage example of a natural refrigerant: refrigeration showcase in Shibuya Hikarie ShinQs. Natural refrigerants are refrigerants that use naturally occurring substances, mainly ammonia, CO₂, water, air, hydrocarbons, etc., instead of fluorocarbons that have a high greenhouse effect.

chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) are restricted under the Montreal Protocol on Substances that Deplete the Ozone Layer, and their production in the developed countries is scheduled to be completely abolished in 2020.

On the other hand, the emissions of hydrofluorocarbons (HFCs), non-ozone-depleting substances, have been on the increase as a result of rapid shift from ozone-depleting CFCs and HCFCs to HFCs. Moreover, it has been revealed that the amount

Figure 1 Outline of the Act on Rational Use and Proper Management of Fluorocarbons (scheduled to be effective from April 2015)



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of HFCs emissions is expected to be more than double the current amount in 2020 unless additional measures are taken.

Furthermore, while fluorocarbon emissions have increased, the government's existing framework and efforts for fluorocarbons control have turned out to be insufficient.

Under such circumstances, the Central Environment Council made recommendations to the Minister of the Environment that a comprehensive review of fluorocarbons control measures was needed. The Ministry of the Environment and the Ministry of Economy, Trade and Industry jointly submitted a bill for the revision of the Fluorocarbons

Law to the Cabinet in 2013, which was enacted and promulgated in June of the same year (See Figure 1).

Outline of the Revised Law - Emission Control over the Entire Life Cycle of Fluorocarbons

The revised Fluorocarbons Law intends to strengthen the measures for emission reduction by promoting fluorocarbon-free in designated products and fluorocarbon substitutes which have lower greenhouse effect. This approach to focus on manufacturing process is very significant as a long-term and fundamental measure which aims for a fluorocarbon-free society.

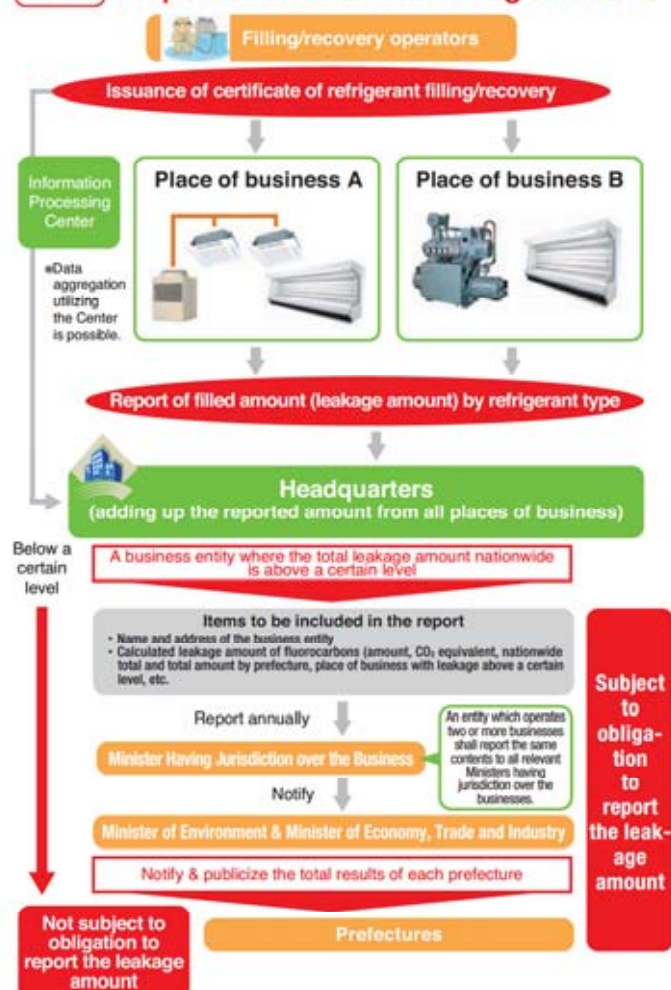
Also, other big features in the Revised Law are the short- and mid-term measures as described in the following two new efforts aimed at promoting proper management of fluorocarbons refrigerants for commercial refrigerating/air conditioning equipment that are already commonly-used, and at preventing in-use leakage.

1. Formulation and publication of criteria for judgment concerning measures that should be taken by users of commercial refrigerating and air conditioning equipment
2. The publication system for reporting on calculated fluorocarbon leakage amount (see Figure 2)

Conclusion

Global warming is a threat that has a serious impact on the global environment, and fluorocarbons control is a very crucial part of global warming mitigation measures. We will therefore continue our efforts to ensure that the new obligations under the Revised Law are performed properly.

Figure2 Report of Calculated Leakage Amount



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The 8th Meeting of the Regional Environmental Sustainable Transport (EST) Forum in Asia

Next Generation Solutions for Sustainable Transport



Group photo of the Conference

The Ministry of the Environment (MOE), in cooperation with the United Nations Centre for Regional Development (UNCRD), the Ministry of Environment & Renewable Energy and the Ministry of Transport of Democratic Socialist Republic of Sri Lanka, and Clean Air Asia co-organized the 8th Regional EST Forum in Asia in Colombo, Sri Lanka from November 19 to 21, 2014. This time, the meeting was integrated with the International Conference on Better Air Quality 2014 (BAQ2014) and attended by approximately 1,000 participants.

The Regional EST Forum in Asia was established by MOE and UNCRD in 2005, which has been successfully promoting cooperation towards the realization of Environmentally Sustainable Transport (EST) in Asia through policy dialogues with Asian countries.

The 8th Forum adopted the Colombo Declaration for the promotion of next generation low-carbon transport solutions in Asia, with the participation of about 230 individuals including senior government officials (e.g. from environmental and transport related Ministries) of 21 Asian countries, academic experts in the fields of transport and the environment, and those involved in intergovernmental organizations. In the forum, the Special Event of Asian Mayors was held which the mayors and city representatives

adopted the Addendum to Kyoto Declaration towards Realizing Resilient, Smart, and Livable cities in Asia.

MOE will, in close cooperation also with relevant organizations such as the Ministry of Land, Infrastructure, Transport and Tourism, actively continue to work on the realization of EST with the focus on Asia.



Government representatives in the meeting

More Information:

Regional EST Forum (UNCRD)

<http://www.uncrd.or.jp/index.php?menu=384>



The Signing Ceremony of the Addendum to Kyoto Declaration



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The Leading Low-carbon Technology (L2-Tech) List (Draft) in Fiscal 2014

The L2-Tech List for Initiating of "the Best Standards"



The Cogeneration system – producing electricity and heat from gas

By 2050 we need to reduce 80% of GHG emissions within the ecological constraints of "Only One Earth." For this purpose, it is essential to promote drastic implementation and deployment of low carbon technologies. This time, we have conducted surveys on, and made a list of, the levels of the most leading and efficient facilities and equipment (L2-Tech) among technologies that can be the key to the realization of a low-carbon society.

For example, a heat pump that collects and utilizes heat from the ambient air is a technology used in various situations in Japan (e.g. heat sources and air conditioners at factories and offices, and home air conditioners and washing machines). The cogeneration system produces electricity and heat through the highly efficient utilization of the energy that is originally contained in fuels, which is also used at home by downsizing the

system for industrial use. Plug-in hybrid cars that can charge batteries directly from domestic power sources can increase the proportion of electrical driving.

Such information will be utilized mainly for the MOE's measures for technology implementation assistance, technology development and demonstration projects. We will promote drastic reduction in energy-originated CO₂ emissions, aiming to build a low-carbon society through the domestic and international transmission of the "best" information that can be widely utilized as references for technology implementation by various entities such as businesses, local governments, NPOs and citizens.

Technology advances daily. We will continue to work on organizing basic L2-Tech information and establishing and enhancing effective methods for updating the list.

More Information:

Announcement of the L2-Tech List (Draft) in Fiscal 2014 (Press Release)
<http://www.env.go.jp/en/headline/2133.html>

Ritsuko MINEGISHI

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Table: Contents of the L2-Tech List (Draft) (As of December 2014)

Field	Classification and Industry Sector, etc.	Image of L2-Tech Standard Level
A: Industry and commercial (common to sectors)	Air conditioning, Heat sources, etc.	
B: Industry (sector-specific manufacturing equipment, etc.)	Iron and steel, Chemical, Paper and pulp manufacturing, Petrochemical, Glass-making, Automobile manufacturing, Construction machinery, Agricultural instruments (for cultivating), Agriculture (horticulture facility), etc.	
C: Transportation	Automobiles (passenger cars), Automobiles (commercial vehicles, heavy vehicles), Two-wheeled vehicles, Railways, Shipping, Aircraft	
D: Residential	Household electric appliances, Water heaters, Window glass, etc.	
E: Energy conversion	Renewable energy, Thermal power generation, etc.	
F: Waste treatment and recycling	General waste treatment, Industrial waste treatment, Material recycling, Sewage treatment, Sewage sludge treatment, etc.	

• Information collected from industry groups and other sources was organized from scientific and objective viewpoints while getting input from relevant experts for respective technologies.

• This draft was compiled based on the information collected between April and July 2014. The "L2-Tech List in Fiscal 2014" is scheduled to be published in March 2015.

The Invasive Alien Species List of Japan and The Invasive Alien Species Control Action Plan Towards Biodiversity Conservation in Japan



A trapped green anole (at the Ogasawara Islands)

The Tenth meeting of the Conference of the Parties to the Convention on Biological Diversity adopted the Aichi Targets that includes a statement as follows: "By 2020, invasive alien species and pathways are identified and prioritized; priority species are controlled or eradicated."

In this regard, in March 2015, the Ministry of the Environment (MOE) and the Ministry of Agriculture, Forestry and Fisheries (MAFF) made the "Invasive Alien Species List of Japan" selecting alien species regardless of the legal regulation, harmful to the Japanese ecosystems, human safety, or agriculture and fisheries. Based on scientific findings, we have selected a wide range of species that include those non-established in Japan, those utilized as household pets and those useful for industry. We categorized them according to the measures to be taken and organized the species-specific information on the establishment status,

considerations for their handling, etc. Currently, there are about 400 species listed, which is to be regularly revised.

Also, MOE, MAFF and Ministry of Land, Infrastructure, Transport and Tourism formulated the "The Invasive Alien Species Control Action Plan" that sets out eight basic concepts and numerical targets for each to promote alien species management including priority for control, and presents the action plan of government that should be implemented towards achieving the targets. In addition to above, the action plan has summarized the current statuses of alien species issues in Japan, and organized roles and action guidelines for each entity.

In their formulation, we collected opinions from academic experts, business organizations and various citizens, which generated a very high level of interest.

Towards biodiversity conservation, we will promote measures against alien species, utilizing the List and the Action Plan.

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Categories of the Invasive Alien Species List of Japan

Alien species subject to establishment prevention

Non-established species in Japan. They need to be prevented from introduction, monitored at the border, prevented from escaping to and being established in outdoor settings, and removed at early stages once identified.

Alien species subject to invasion prevention: Uninvaded species in Japan
Invasion into Japan needs to be prevented, in particular, by introduction prevention, border monitoring and ballast water management.

Other alien species subject to establishment prevention:
Species with reported information on invasion, but with no confirmation of their establishment

Alien species requiring comprehensive measures

Species with confirmation of their establishment. Alien species that require comprehensive measures such as dissemination and awareness raising of removal (e.g. removal in the field and expansion prevention) and prevention of abandonment, introduction and escape under the respective roles of the central government, local governments and citizens.

Alien species requiring urgent action:
Urgent action is required to actively remove the species, in particular, under the respective roles of each entity.

Alien species requiring priority measures:
Because significant damage is expected, there is a strong need for countermeasures to be taken, in particular, under the respective roles of each entity.

Other alien species requiring comprehensive measures

Alien species subject to industrial management

Alien species of industrial or public significance, and of non-substitutability, which thus require appropriate management in their use. Appropriate management is called for, indicating species-specific considerations for their use.

JCM Project Underway in Mongolia

Suuri-Keikaku Co., Ltd. has been implementing the project regarding "Replacement and Installation of High Efficiency Heat Only Boiler (HOB) for Hot Water Supply Systems" in Mongolia, the first signatory country to the Joint Crediting Mechanism (JCM) as the Ministry of Environment of Japan's advanced technologies promotion subsidy scheme.

Since many coal-fired HOBs with boiler efficiency of approximately 40- 50% used for hot water supply systems in



The high-efficiency HOBs installed in 118th School in Ulaanbaatar City

Mongolia, increasing CO₂ emissions and air pollution from coal combustion have been in serious situation.

In this project, we implemented the hot water supply systems by replacing and also newly installing the latest high-efficiency HOBs instead of the inefficient old-type ones in 118th School in Ulaanbaatar City and Bornuur-sum.

Our project started operations in October 2014. It is scheduled to be officially registered as a JCM project in March 2015 on approval of its JCM methodology as "MN AM002" in January.

Promotion of the project will bring about a reduction in coal consumptions and CO₂ emissions in Mongolia. At the same time, producing co-benefits such as a reduction of air pollutants and improvement of the work environment at boiler houses are expected.

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Suuri-Keikaku Co., Ltd. (OECC Member)



Tackling Marine Litter through International Network

Japan Environmental Action Network (JEAN) is an environmental NGO, having engaged in resolving the marine litter problem.

For the last 25 years, we have been actively involved in International Coastal Cleanup (ICC) efforts which began in the United States and we conduct the Cleanup Activity on approximately 250 beaches across Japan every year.

ICC is a global event initiated by citizens. At the same period of each year, participants remove litter from beaches and waterways, record the content of the collected litter on the survey sheet in internationally unified form and collect data on marine litter.



On-site investigation of ocean driftage from Japan's 2011 earthquake/tsunami in Vancouver Island, Canada in October 7, 2013

With this survey, each participant becomes aware of the present situation and issues of marine litter, considers countermeasures based on the study results and reduces garbage by making further efforts not to generate it.

We have established cooperative relationships with East Asian countries such as Korea and Taiwan through ICC network.

Regarding the ocean driftage issue originated from tsunami associated with the Great East Japan Earthquake of 2011, we have carried out on-site investigations and been continuing dialogues in North America and Hawaii with the local ICC coordinators' support.

The marine litter problem is the ocean contamination caused by plastic wastes which are closely related to our daily lives.

We will continue to tackle the marine litter problem by taking advantage of the relationships with ICC coordinators from all over the world.

More Information:

www.jean.jp/en/
www.jean.jp



Azusa KOJIMA

Secretary-general and Director
Japan Environmental Action Network



Harmonious Coexistence of People and Nature, Aso-Kuju National Park, Aso Area



Eruption of Mt. Aso in 2014 seen from the somma

Aso-Kuju National Park which lies in the central part of Kyushu is one of the first Japanese national parks designated in 1934.

In the Aso area, there is a caldera with the outer rim of the circumferential length of about 100 km, one of the largest in the world, surrounded by the vast grasslands which have been artificially controlled by the open burning and other means for over 1,000 years and Mt. Aso located in its center.

There are approximately 50,000 people living inside the caldera, and they have a history of harmony between human beings and the active volcano.

In November 2014, Mt. Aso had its magmatic explosion for the first time in 20 years or so and its volcanic activity has continued even today.

While the Aso Volcano is unique in that visitors can



Aso-Kuju National Park

stand at the edge of the crater to peer in, the Japan Meteorological Agency and university institutions conduct round-the-clock monitoring of its volcanic activity. Depending upon levels of volcanic activity, volcano disaster prevention-related authorities place restrictions upon visitors' access to the volcano to ensure their safety.

In September 2014, the Aso area was added to the Global Geoparks Network on winning favorable assessment of its geological and terrestrial formations as well as the harmonious culture of man with the volcano.

We would like you to visit the Aso area. You can feel the heartbeat of this globe today.

More Information:

National Parks of Japan

<http://www.env.go.jp/en/nature/nps/park/parks/aso.html>



Nami KUSAJIMA

Ranger
Kyushu Regional Environment Office
Nature Conservation Bureau
Aso Nature Conservation Office



Voice of MOE Family in the World

Bonn – Evolving International City

Nestled along the beautiful Rhine, Bonn, the capital of former West Germany, has become a center of negotiations regarding issues of sustainable environment.

In particular, 2015 would be a year engraved in the history of climate change. Parties to the UN Framework Convention on Climate Change (UNFCCC) whose

secretariat is in Bonn have continued heated discussions on a new international regime that will come into effect in 2020. This regime is to be agreed on at COP 21 in Paris at the end of the year. In addition, there are many other UN agencies in Bonn, which aim at promotion of global environmental benefits in the areas of preventing desertification and developing intergovernmental platform on biodiversity



Haus Carstanjen with snow – one of the UNFCCC secretariat offices

and ecosystem services.

Bonn has another unique feature – a good mixture of nature and culture as well as business. Residents enjoy their time in Rheinaue park and tourists remember Beethoven at his birthplace while some large companies have their headquarters here. Such harmonization will enable this city to provide a new model of integration with people from around the world.

More Information:

United Nations Framework Convention on Climate Change (UNFCCC)
<http://unfccc.int/2860.php>



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