

# JEO

## JAPAN Environment Quarterly

Vol.17

March 2017

Japanese "Tokkuri" & "Ocyoko"  
(Japanese "sake bottle" & "sake cup")  
of cherry blossoms pattern



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# Aiming for the Fifth World Natural Heritage Site in Japan

Ministry of the Environment (MOE) has recently submitted to UNESCO a document to nominate Amami-Oshima Island, Tokunoshima Island, the northern part of Okinawa Island and Iriomote Island, collectively, for the World Heritage List, so that the area may be inscribed as the fifth World Natural Heritage site in Japan.

The area was selected as one of the candidates for nomination in Japan in 2003 after scientific consideration. Although it was well appreciated that the area was worthy of inscription, a lack of domestic protected area has been a major challenge for the nomination. Over a decade later, the area was finally nominated for the World Heritage List as measures to secure domestic protected areas, such as designation of Yambaru National Park and Amami Gunto National Park, were put in place, which was a prerequisite for the nomination.

## What is World Natural Heritage?

Natural and cultural properties such as archaeological remains and natural areas have been inscribed on the World Heritage List based on the World Heritage Convention to protect such properties as the legacy of the world and all humankind. The sites are divided into three categories: cultural, natural and mixed, in accordance with the characteristics of the proper-

ties. Currently, Japan has four World Natural Heritage sites: Yakushima, Shirakami-Sanchi, Shiretoko and Ogasawara Islands. In order for a property to be inscribed on the World Heritage List, the property must have not only precious nature but also an outstanding universal value that meets the World Heritage registration criteria, and such value must be adequately protected.

## Value as a World Heritage Site

The outstanding universal value of the site nominated this time, "Amami-Oshima Island, Tokunoshima Island, the northern part of Okinawa Island and Iriomote Island," can be described briefly as "unique biological evolution which reflects the geohistory of the islands in subtropical regions."

The nominated site used to be a part of the continent and had common terrestrial organisms with the continent. Afterwards, the area was separated from the continent and formed small islands, in which process various speciations and endemisms occurred. Amami rabbit (*Pentalagus furnessi*), Tip-nosed frogs (*Odorrana*), Okinawa rail (*Gallirallus okinawae*) and Iriomote cat (*Prionailurus bengalensis iriomotensis*) are typical examples. The nominated site consists of four areas representing different distances and times of separations from the continent, and nominating all those areas collectively has been recognized as a good way to demonstrate the process of speciation and systematic diversification reflecting the geohistory of the islands.

## For the Future

If the nomination process goes smoothly, UNESCO's World Heritage Committee will discuss whether to inscribe the property on the List in the summer of 2018. MOE will, in cooperation with concerned parties, work towards the inscription on the World Heritage List while promoting appropriate management



Amami rabbit (*Pentalagus furnessi*)

Ministry of the Environment has submitted to UNESCO a document of nomination of Amami-Oshima Island, Tokunoshima Island, the northern part of Okinawa Island and Iriomote Island for Inscription the World Heritage List. The nominated property is characterized by many examples of unique biological evolution which reflects the geohistory of the islands such as Amami rabbit (*Pentalagus furnessi*) and Okinawa rail (*Gallirallus okinawae*). If the nomination process goes smoothly, UNESCO's World Heritage Committee will discuss whether to inscribe the property on the List in the summer of 2018.



## Nominated property

of the national parks in which the four areas are located, conservation of rare species, measures against alien species affecting the rare species, etc. to properly protect the nominated site.

We hope that our efforts to have the site inscribed on the World Heritage List in cooperation with local residents and other stakeholders will give many people an opportunity to look at the existence of endemic organisms on the four islands, think of how the area looked like several million years ago and how the islands were formed, become aware of the preciousness of the natural environment that

remains only on these islands and start or continue actions to preserve it.

### MORE INFORMATION

World Natural Heritage in Japan  
<http://www.env.go.jp/nature/isan/worldheritage/en/index.html>



### Akimichi Matsunaga

Assistant director for  
 World natural heritage

Biodiversity Policy Division  
 Nature Conservation Bureau

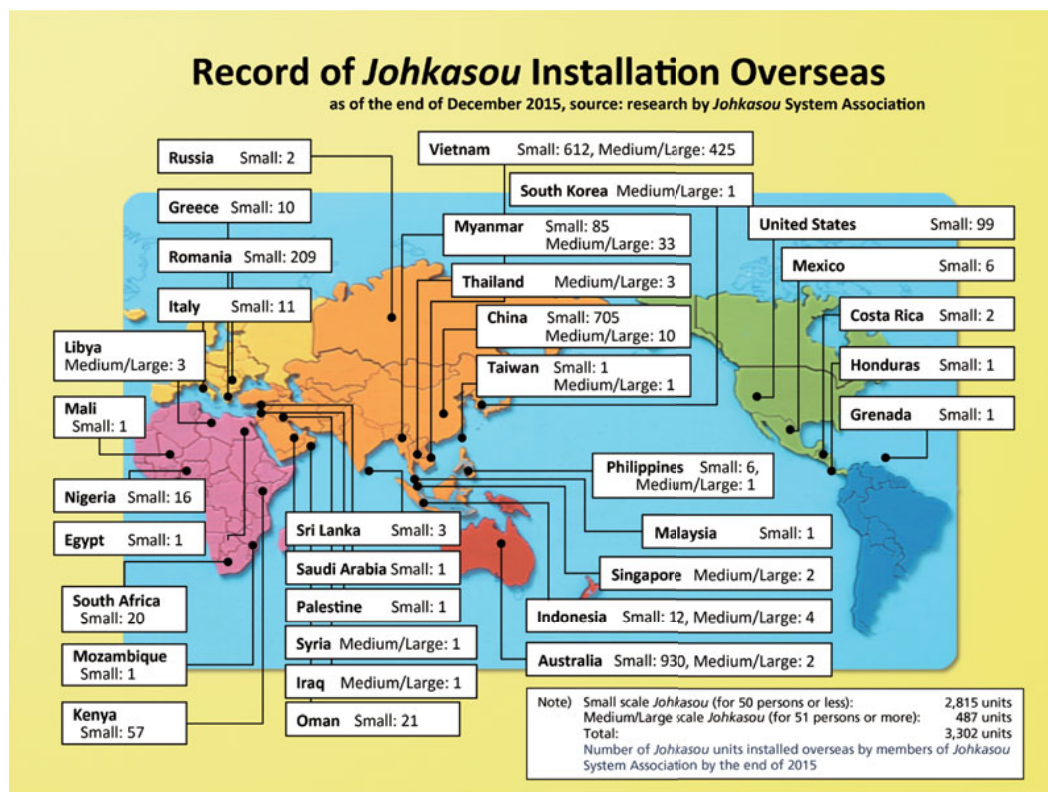


# The 4th International Workshop on Decentralized Domestic Wastewater Treatment in Asia

JAKARTA, INDONESIA, 27th-28th SEPTEMBER, 2016

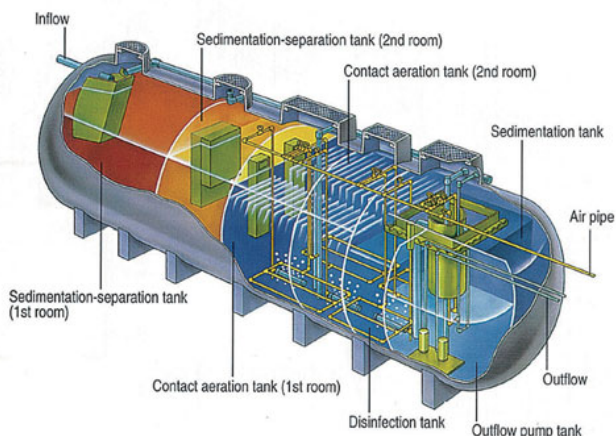
Ministry of the Environment (MOE) organized the "4th International Workshop on Decentralized Wastewater Treatment in Asia" in the Special Capital Region of Jakarta, Republic of Indonesia, on 27 and 28 September, 2016. This workshop has been held since 2013 to share information and experience of participating countries with regard to decentralized wastewater treatment systems such as the Johkasou (on-site wastewater treatment) system and septic tanks, as well as to build a network of stakeholders of each country and obtain a common view about issues to be addressed and directions for the future. A total of 34 persons participated in this workshop: 13 Indonesian officials in charge of environmental administration, 6 from local companies, etc., 3 administrators from Thailand, Malaysia and Vietnam, and 12 from Japan including officials of MOE as well as JICA and other concerned institutions.

In the session, the participants discussed the framework of regulation, management and supervision concerning decentralized wastewater treatment and successful cases of sludge management, etc., and MOE introduced Japan's experience on the importance of a comprehensive framework



such as the Johkasou Act.

In recent years, the number of Johkasous exported from Japan to overseas including Asia has been rapidly increasing, while prevention of the spread of inferior products, training of maintenance and management technicians and construction of a sludge treatment system have become great challenges. We will continue our efforts to disseminate information so that we can contribute to sanitation improvements and conservation of the water environment in Asia, as well as create new business opportunities for the domestic industry.



## MORE INFORMATION

### About Johkasou

<http://www.env.go.jp/recycle/jokaso/en/index.html>



## Kosuke Inoue

### Section Head

Office for promotion of Johkasou  
Waste management and recycling department



# Workshop under G7 Alliance on Resource Efficiency, "Resource Efficiency and Low-Carbon Society: Identifying Opportunities and Implications"

Participants from governments of G7 members, India and Indonesia, business and research institutes reaffirmed the need for further work for resource efficiency and low-carbon society.



Delegations discussing in the workshop

Resource efficiency was featured prominently in the Leader's Declaration of G7 Elmau Summit in June 2015, leading to the establishment of G7 Alliance on Resource Efficiency, which aims at sharing best practices among stakeholders.

Under Japan's G7 presidency, Ministry of the Environment co-organized the workshop "Resource Efficiency and Low-Carbon Society: Identifying Opportunities and Implications" under G7 Alliance on Resource Efficiency, with UNU-IAS and IGES on 12 and 13 December in 2016.

At the global level, the consumption of natural resources and production of waste have increased to a greater scale than ever before, and it is even expected to grow significantly while our international community adopted Sustainable Development Goals (SDGs) and the Paris Agreement. The urgent challenge for us is to assess whether the current measures on resource efficiency satisfy the consistency with SDGs and a decarbonized society. "Toyama Framework on Material Cycles", which was adopted at G7 Toyama Environmental Ministers' Meeting in May 2016, also calls for integrating resource effi-

ciency and the 3Rs, and climate change.

- The workshop identified the areas to be discussed further as
- Evaluating greenhouse gas (GHG) reduction and its potential by enhancing resource efficiency (including demand reduction, weight saving, substitution, lifetime extension, and recycling) over the lifecycle of materials, including extraction, production, transport, use, and disposal
  - Specifying impacts of deployment of major low-carbon technologies (e.g. solar power, wind turbines, and electric vehicle) in resource use (e.g. steel and copper) and waste management, and countermeasures to mitigate negative impacts
  - Implementation of a waste management hierarchy and promotion of renewable materials (e.g. bioplastic and timber) that integrate resource efficiency and low-carbonization

Co-chairs' summary of the workshop and presentations in the public symposium that was held subsequently can be downloaded in the IGES website (<http://www.iges.or.jp/en/scp/20161213.html>).



Janez Potočnik, IRP co-chair and former EU commissioner

## MORE INFORMATION

Results of Workshop and Symposium under G7 Alliance on Resource Efficiency Resource Efficiency and Low-Carbon Society: Identifying Opportunities and Implications  
<https://www.env.go.jp/en/headline/2294.html>



## Yoshinori Suga

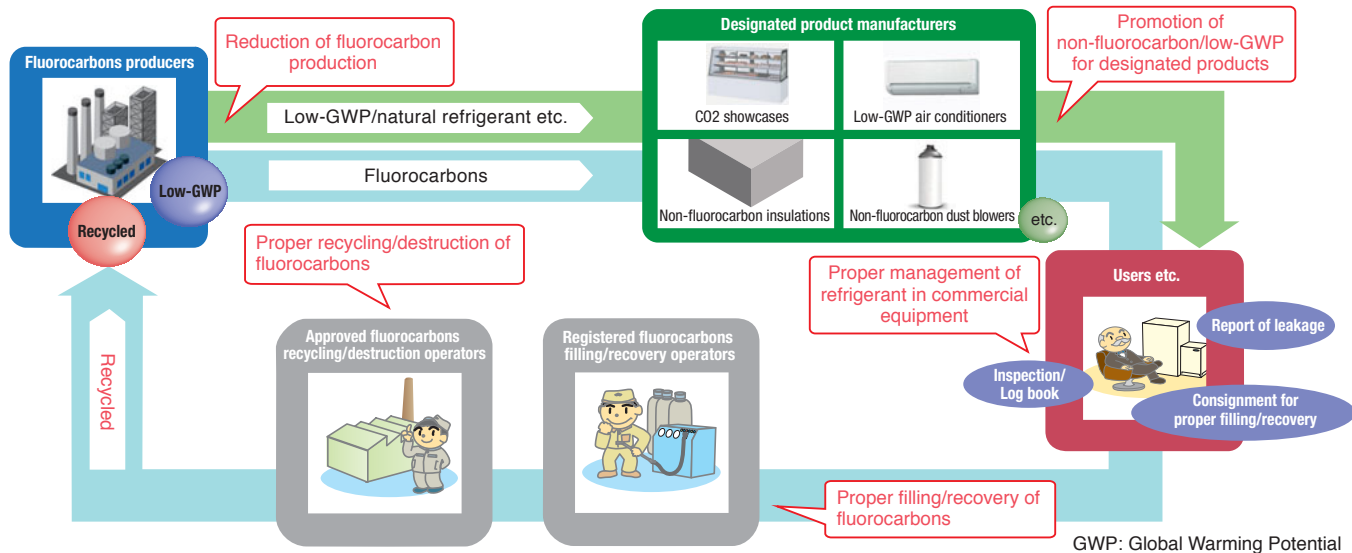
### Deputy Director

Office of Sound Material-Cycle Society  
Waste Management and Recycling Department



# Amendment to Montreal Protocol to phase down HFCs (Kigali Amendment) and Japan's Response

## Outline of the Act on Rational Use and Proper Management of Fluorocarbons



Fluorocarbons are artificial substances that have characteristics such as high chemical stability and low toxicity. Invented in the 1920s, they were used in a wide range of applications including refrigerants for refrigerators and air conditioners, foaming agents for thermal insulation materials for construction materials and spray propellants. However, it turned out in the 1970s that they destroy the ozone layer.

Therefore, the Montreal Protocol on substances that deplete the ozone layer was adopted in 1987, and a stepwise reduction in the production and consumption of ozone layer depleting substances such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) was promoted internationally by converting those substances mainly to hydrofluorocarbons (HFCs). As a result, although the ozone hole over the Antarctic was rapidly expanding from the 1980s to

the 1990s, the long-term trend of expansion has not been seen recently.

On the other hand, HFCs are greenhouse gases with high greenhouse effect. Due to the rapid increase in their emission in recent years, HFCs were added to the substances subject to the Protocol at the meeting of the parties to the Protocol, held in Kigali, Rwanda in October 2016, and the parties agreed that developed countries shall phase down HFCs by 85% by 2036, and developing countries shall phase down by 80% or more by around 2045.

Japan is promoting advanced efforts to minimize emissions throughout the lifecycle of fluorocarbons ahead of the rest of the world, yet new restrictions on the production of HFCs are needed based on the Kigali Amendment. In addition, there are also issues such as the recovery rate of fluorocarbons at disposal remains at around 30% for more than 10 years. In order to find solutions to deal with these issues, expert meetings have been held since the end of 2016. We are planning to take necessary measures as soon as possible before 1 January, 2019 when the Amendment to the Protocol will enter into force.



Recovery of fluorocarbons from air conditioners

**Hiroshi Fujita**

**Deputy Director**

Office of Fluorocarbons Control Policy  
Global Environment Bureau



## Endangered Species Conservation Support by Utilizing ICT

Fujitsu contributes to society in the field of biodiversity through Information and Communication Technology (ICT). Blakiston's fish owl (*Ketupa blakistoni*) inhabiting Hokkaido is one of the designated endangered species in the Red List of Ministry of the Environment. Wild Bird Society of Japan (WBSJ) has been conducting habitat survey for the protection of Blakiston's fish owls since 2011. Previously they were checking the presence of Blakiston's fish owls by analyzing the recorded audio spectra with human ears and eyes. However, it took as long as an hour to analyze the 3-hour-long recorded data.

Then, Fujitsu developed and provided a voice recognition pro-

gram that extracts only songs of Blakiston's fish owls from recorded data with high accuracy by applying its voice recognition technology cultivated in the development of mobile phones. As a result, it became possible to analyze 3-hour-long data in a matter of a few minutes, and thus, to expand the research area, which led to the identification of new habitats. In addition, it also became possible to grasp the scope and frequency of use of habitat in detail, and WBSJ and one paper manufacturing company concluded a memorandum for conservation of Blakiston's fish owls in the survey within the forest owned by that company.

Fujitsu will continue to promote the utilization of ICT for biodiversity conservation.

### MORE INFORMATION

#### Blakiston's Fish Owl Call Recognition Project

<http://www.fujitsu.com/global/about/environment/society/activities/casestudy/technology/owl/index.html>



Blakiston's fish owl (*Ketupa blakistoni*, photo courtesy of Wild Bird Society of Japan)



### Yoshihiko Hatakeyama

Professional Engineer (Environment)

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## Conserving Japanese Forests

JUON NETWORK was established in 1998 supported by the National Federation of University Co-operative Associations to work on conserving and improving the environment, discovering and disseminating local cultures, and solving depopulation/ overpopulation problems by building ties between people in urban areas and depopulating rural villages through the network.

The NETWORK mainly tackles various issues caused by depopulation through activities such as helping farmers with their works and, most notably, the conservation of forests in underpopulated areas. The NETWORK carries out forest volunteer activities at 16

sites nationwide to conserve the forests which have been devastated due to a lack of thinning and other treatments as a result of the decreasing number of forestry operators caused by depopulation and aging of the community.

JUON NETWORK also promotes the production of chopsticks made from the thinned timber from domestic forests. In order for Japanese forests to be properly maintained, it is important to sell timber at an appropriate price. Proper maintenance would be possible if the wood from Japanese forests is used and the profit is ensured. In terms of energy consumption, too, it would be better to use domestic timber rather than imported timber. Current-

ly, Japan's self-sufficiency ratio of wood is approximately 30%. It is important to raise the self-sufficiency ratio of wood as a sustainable resource and use it wisely, and the NETWORK's disposable chopsticks campaign is intended to convey this very message.



JUON NETWORK

### Takayuki Kasumi

Director, Head of the secretariat

Secretariat  
JUON NETWORK



Weeding to help trees grow

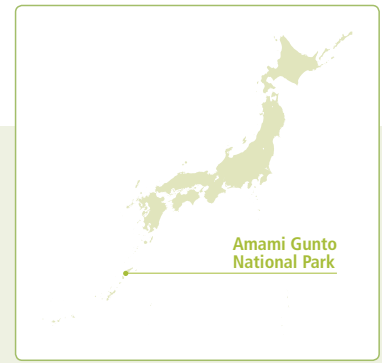
## Designation of the Amami Gunto National Park

Japan's 34th national park, Amami Gunto National Park, has been established. The Amami Gunto (Amami Islands) is located in the southern part of Kagoshima Prefecture and consists of eight islands with different characteristics, namely, Amami-Oshima Island, Kakeroma Island, Ukejima Island, Yorojima Island, Kikaijima Island, Tokunoshima Island, Okinoerabu Island and Yoron Island. The Amami Gunto National Park has a variety of natural environments such as Japan's



Looking up the sky through Amami's forest

largest subtropical evergreen broadleaf forests (laurilignosa trees), unique or rare fauna and flora including Amami rabbit (*Pentalagus furnessi*), sea cliffs of Ryukyu limestone, coral reefs located at the northern limit of the world coral reef distribution, mangroves and tidal flats. You can enjoy a variety of experiences here, such as visiting scenic spots, taking a walk in the subtropical evergreen broadleaf forest, canoeing, diving, exploring underwater landscapes on a glass bottom boat, swimming in the sea and observing wild animals. Please do come visit the new national park.



### Makoto Kobayashi

#### National Park Division

Nature Conservation Bureau  
Ministry of the Environment



### Voice of MOE Family in the World

## Toward Japan's Contribution to Indonesia

The amount of solid waste generation has increased rapidly along with economic growth and population increase in Indonesia, and existing landfill sites are approaching their capacities while securing new sites is getting difficult. Eradica-



Bantar Gebang Landfill Site in Bekasi City

tion of inappropriate solid waste management such as illegal dumping is also a big challenge in this country. Therefore, improvement of solid waste management and promotion of 3Rs are vital, based on the Act of Solid Waste Management which was inaugurated in 2008.

Under such circumstances, acceleration of development of solid waste incineration facilities has been discussed by national government's initiative in recent years. Since Japan has sufficient experiences and environmentally-friendly technology in this field and can contribute to improvement of solid waste management in Indonesia, I have focused on this theme in collaboration with Ministry of Environment and Forestry Indonesia, JICA, MOE Japan and Japanese enterprises.

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March 2017

Japan Environment Quarterly Vol.17

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