

ICETT

NEWSLETTER

For the Earth
For the future of the Earth



Purpose of establishment

The International Center for Environmental Technology Transfer (ICETT) was established through industry-government-university cooperation for the purpose of transferring technologies for environmental conservation owned by our country and various foreign countries to other regions, and alleviating environmental problems on a global scale.

ICETT aims at conservation of the global environment and sustainable development of the global economy by implementing various projects according to the characteristics of various foreign countries, and by promoting smooth technology transfer.

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JICA Partnership Program “The Project on working together with the government and citizens for zero waste society promotion in Ibobang, Ngatpang and Mongami, Aimeliik, Republic of Palau”

Outline

Mie Prefecture and ICETT implemented this JICA Partnership Program from August 2018 to February 2022 together with the Bureau of Public Works, Ministry of Public Infrastructure, Industries and Commerce (hereinafter “BPW”) of the Republic of Palau (hereinafter “Palau”).

Background and purpose

Surrounded by beautiful sea, Palau is a small island country with a land area of about 488 km² and a population of about 20,000 people. With an increase in the number of tourists, the problem of waste has become the country’s major issue. In addition, household wastes in Palau are generally disposed of by being placed into drums that are installed at each house without being sorted, and buried in landfill sites together with many recyclable resources. In such a situation, since a new landfill site went into operation in the state of Aimeliik in 2021, we conducted an activity to promote the separation of waste before disposal by targeting residents in Ibobang, the state of Ngatpang, and Mongami, the state of Aimeliik on Babeldaob Island, so as to contribute to the reduction of waste brought into the landfill site.



Areas of activity

Details

We conducted repeated discussions in town meetings with the residents of the two target areas, based on an interview survey for residents, analytical results of a waste composition survey, and training in Japan. After reaching agreement with the involved people, the six items to be sorted (food cans, butane canisters, plastic containers, plastic packaging materials, food bottles, and papers), and the structure and installation location of the resource collection stations were decided.

We established four resource collection stations in each area, starting to sort waste from January 2020 in Ibobang, and from March of the same year in Mongami. The sorted and disposed resources, after being periodically collected



Resource collection station

and measured by the BPW once a week, are treated at a designated facility and transported. The activity plans described above were summarized into “Regional Sorting and Recycling Promotion Plan”

Furthermore, we raised the awareness of local high school students regarding the 3Rs through lectures and study tours. In addition, we had the high school students participate in a contest to choose a poster appearing in the Waste Collection Calendar.



Waste Collection Calendar

Results and prospects

Just after the installation of the stations, there were some cases of disposal of non-target waste, as well as waste being thrown into the wrong separation container, but residents’ behavior has improved because of awareness-raising activities conducted by the BPW.

As a result of the interview survey for residents of the two target areas in November 2021, we learned that 100% of residents of Ibobang and about 80% of residents of Mongami are engaging in separation disposal of waste using the stations. Regarding separation disposal, butane canisters, which are especially numerous in Palau, are adequately separated and disposed of in both areas, but with some cases where food cans were improperly separated and dumped into drums, we learned that there is room for improvement in terms of the thoroughness of the separation method, by making sure to rinse and wipe them before disposal.

There has been a significant change in residents’ behavior. They were used to the house-to-house collection system that used drums in their garden with a sense that waste was something with no connection to themselves. However, they have come to understand themselves that many types of waste can become resources if separated, and the amount of waste for landfill disposal can be reduced, and the cleanliness of the environment will improve if waste is separated, and they have engaged in the activity with enthusiasm. We are confident that if residents raise their awareness together, and if the separation and disposal activity spreads into other areas and to the entire area of Palau, it should lead to the environmental preservation of the rich beautiful nature of their country.



JICA Knowledge-Co-Creation Program (ASEAN Focus) “Waste Management Towards Marine Litter” (2nd Online Training course)

Outline

Commissioned by JICA, ICETT provided online remote training for government administrators from Malaysia, Myanmar, Philippines, and Thailand working in the field of waste management, and an ASEAN Secretariat officer in Indonesia, in order to contribute to measures against marine plastic waste in the ASEAN region.

Background and purpose

Nowadays, the marine plastic waste is recognized as one of the most important problems of global environment, and it is tackled in each country through cooperative efforts among industry, government, academia and private sectors. In Southeast Asia especially, a positive and substantial effort is expected as it is considered as a major marine plastic waste generating area in the world.

In such a situation, ICETT implemented the training program called above in Outline. This training was conducted as part of a series, with the first remote training sessions being provided in fiscal 2020. The aim was for participants to learn about Japan’s measures against the problem of marine waste especially from the perspective of plastic resource circulation based on their learning during the first training, and to deepen their consideration of solutions to the problem in the ASEAN region as a whole and in each country.

Training period November 1–26, 2021

Participants Seven participants in total along with executive directors of ASEAN countries: One director each from Malaysia and Myanmar, two directors each from the Philippines and Thailand, and one official of the ASEAN Secretariat

Training details

Since land areas are the source of about 80% of marine waste, and as there is an urgent need to take measures against plastic waste in particular, in this training we focused on measures against marine waste based on the promotion of plastic resource circulation in land areas.

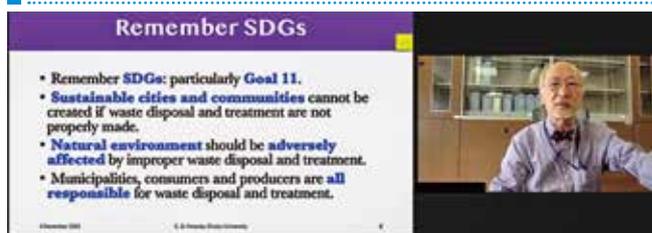
In the lectures, participants learned Japan’s law enforcement on plastic resource circulation, strategies and measures of the central and local governments for the promotion of resource circulation, and public-private collaborative efforts for plastic resource circulation in the region.

They also learned practices of recycling plastic waste into resources on online plant study tour, and experienced environmental education, with the use of environmental education tools in a practical exercise.

On the final day of the training, each participant made presentations about what they learned in this training and the possible future application of their learning, and deepened their consideration while receiving reviews and advice from specialists.

The Participants worked hard during this training program, while enthusiastically exchanged information and views with resource persons with rich knowledge and experience.

Results and prospects



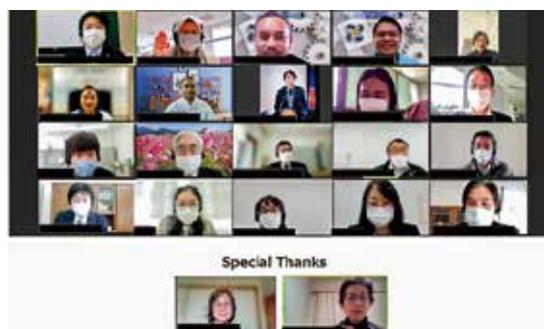
Resource person

Through the two remote training sessions, the participants were able to review their own countries’ policies and measures, and deepen their consideration of efforts to be practiced throughout the entire ASEAN region, in each country, and by each participant at their respective workplace.

Due to the impact of COVID-19, we provided the second training session online as we did for the first one. However, we believe that we were still able to provide face-to-face training similar to the kind of training that can be experienced in Japan, by actively incorporating live lectures, study tours, and practical exercises, and by introducing Japanese culture.

Through this experience, we were able to actually feel the advantage of remote training, but we hope to resume training in Japan as soon as possible, and to provide better training by combining remote training and training in Japan.

We would like to take this opportunity to express our sincere appreciation to resource persons from the industrial, governmental, and academic fields who cooperated with this training, and all people from related organizations, such as JICA Chubu, JICA Headquarters, and the ASEAN Secretariat, who provided us with support and cooperation.



Participants



Review by a specialist in presentation



Introduction to Japanese culture

Tianjin Environmental Exchange Project Planning and Management Work

Outline

Commissioned by Yokkaichi City since 1993, ICETT has continuously provided training seminars with an aim of addressing the environmental issues in Tianjin City. In fiscal 2021, under the theme of "Air Pollution Control", we held a seminar in Tianjin City using a video produced in Yokkaichi City, and providing lectures and introducing an environmental museum.

Background and purpose

In Tianjin City, while the city has achieved remarkable economic development, many environmental problems have occurred, and as such the improvement of the situation has become a pressing issue. Therefore, we implemented this project with an aim of enabling officials of Tianjin City and other related persons to understand Japan's environmental technologies and management methods, and to use this understanding for the improvement of Tianjin City's environment.

Details

We held the Seminar in Tianjin City on February 25, 2022 with 25 participants. The lecture video covered measures to control PM 2.5 and ozone, efforts related to air pollution control, and introduction to the Yokkaichi Pollution and Environmental Museum for Future Awareness.

Results and prospects

We received the following comments from the participants in the seminar.

- Lectures by specialists and information on Yokkaichi City's past experiences and methods in this field were very helpful.
- To learn about the experiences and lessons, and to hand them down to the next generation, Yokkaichi City established the "Yokkaichi Pollution and Environmental Museum for Future Awareness," which introduces its advocacy for environmental improvement and concern for environmental conservation. This is important, and the very thing in which we are interested.

We will continue taking up themes in line with Tianjin City's problems, and aim for a project that can help Tianjin City improve its environment.



Scenery of Tianjin City's Fifth Avenue



Subsidized by the Japan Science and Technology Agency (JST)

Sakura Science Exchange Program

Outline

As part of the International Youth Exchange Program "Sakura Science Exchange Program, Science and Technology Experience Course", subsidized by the Japan Science and Technology Agency, we provided online training course to learn about and experience science & technology, and waste disposal in Japan, targeting students at Palau High School and Belau Modeknegei School in Palau.

Background and purpose

Palau, with many tourist attractions, has serious waste and discarded automobile disposal problems due to increasing number of tourists. We implemented this training course to drive home for the participants the importance of environmental conservation activities, for example, by introducing waste management and disposal practices in Japan.

Details

The participants had a taste of Japan's science & technology through learning about waste disposal efforts and the history of Yokkaichi Pollution and the recovery thereof. Other sessions introduced Mie Prefecture's efforts to form a sound material-cycle society, Virtual Recycling Study Tour, a proper automobile waste disposal

method by Automobile Recycling Cooperative (NGP), and Zero Waste effort by Kamikatsu Town, Tokushima Prefecture. In cooperation with Mie University, we also provided an opportunity for the participants to learn about the mechanics of wind power generation, and experiment remotely harnessing wind power into energy. Furthermore, the participants enjoyed the virtual study tour and learned about environmental conservation activities at Toba Aquarium.

Results and prospects

Despite the fact all the sessions were conducted online, the participants were engaged and the interactions were stimulating. We are hopeful that this training course provided high school students in Palau useful guidance in navigating their future learning.



Seminar on Global Environmental Issues

Outline

Commissioned by Mie Prefecture, we held this Seminar online for high school and university students in Mie Prefecture, on the theme of "International environmental issues and SDGs" on February 13 and 20, 2022.

Background and purpose

As the movement to achieve "SDGs" and "decarbonization" gains momentum across the globe, Mie Prefecture keeps pace with the international community by declaring "decarbonization" in 2019. The awareness level for global environmental issues is higher than ever and young people are taking the issues seriously as future risks. Against this background, we held this Seminar targeting high school and university students in Mie, who will be the driving force for the future of the prefecture.

Details

Thirty-one students participated in the Seminar, including 11 high school students, 12 university students, 6 ALTs (Assistant Language Teachers), one CIR (Coordinator for International Relations), and one international student at Mie University. During the first day of the Seminar, Taiki Kuroda of ICETT discussed "Efforts to address environmental issues and technology transfer" with the participants, and Mr. Choudhury R.C. Mohanty of United Nations Centre for Regional

Development presented on "SDGs and International Environmental Issues". On the second day, all the participants engaged in group discussions and presented their ideas.

Results and prospects

The Seminar proceedings were conducted all in English in the interest of encouraging the participants to use English while learning about global environmental issues of our time. We trust that what they experienced and learned at this Seminar would have positive impacts on their future learning.



Participants



Survey & Research

Independent project

Recycled Carbon Fiber (rCF) Supply Chain Formation Project

Outline

Taking over "Project to Support Innovation of Local Companies" commissioned by the Chubu Bureau of Economy, Trade and Industry until fiscal 2020, we provided support toward the formation of a recycled carbon fiber (hereinafter "rCF") supply chain by exchanging opinions and conducting business matching, mainly with final product manufacturers.

Background and purpose

We conducted a support activity that aimed to create Japan's first supply chain for manufacturers of products that utilize rCF.

Details

Under the support provided by Moritomi Environmental Engineering Laboratory (MEEL) and the National Institute of Advanced Industrial Science and Technology (AIST), we visited and had interviews with companies on the downstream side, in other words, end product manufacturers, including automakers that are interested in the utilization of rCF. Also, we held individual business matching sessions that aimed to give feedback to companies

on the upstream side and to build new relationships between business operators located upstream and downstream.

Results and prospects

To investigate the possibility of utilizing rCF for electric motor vehicles, electric appliances, civil engineering and construction, and small items (tools, etc.), we exchanged opinions with 12 companies mainly on the downstream side either by visiting them or in online meetings.

As a result, we helped facilitate a total of 10 matches, including cases of adopting rCF bolts for drones and adopting rCF wrenches for in-plant use by an auto manufacturer.

Small- and medium-sized enterprise practical seminar: What Should We Do to Survive in the Decarbonized Society?—From calculation / understanding to reduction target-setting, and reduction method of greenhouse gas emissions (Scope 1, 2, and 3)

Outline

Targeting small- and medium-sized enterprises (hereinafter “SMEs”) that have been making efforts or are planning to make efforts for decarbonization, we held an online seminar on two days, January 28 and February 3, 2022 under different themes, to provide explanations and to introduce case studies regarding the calculation/understanding, setting of reduction goals, and reduction methods of greenhouse gas (hereinafter “GHG”) emissions in collaboration with special consultants.

Background and purpose

Amid a rapid acceleration of global efforts toward the realization of a decarbonized society, Japan announced its “2050 Carbon Neutral Declaration” in 2020 with the aim of reducing GHG emissions by 46% from fiscal 2013 by 2030, realizing a decarbonized society by 2050, and reducing GHG emissions to substantially zero. Companies are now further expected to realize “emissions reduction in each organization’s entire supply chain” starting from “GHG emissions reduction for each company”, so it is the urgent need of the hour to make efforts toward decarbonization not only within large enterprises but also SMEs.

In response to this, ICETT held a practical seminar aimed at SMEs that have already been making efforts or are planning to make efforts for decarbonization so that they can calculate/understand their “own company’s GHG emissions (Scope 1, 2, and 3)” and to examine the goal setting for in-house GHG emissions reduction and concrete reduction methods after that.

Details

On the first day of the seminar, for participants to understand the background related to the calculation of GHG emissions and basic emissions calculation method, under the major themes, “Background and purpose of the calculation of GHG emissions”, “Basics related to emissions calculation”, “Emissions calculation by companies”, and “Calculation methods of Scope 1, 2, and 3”, President Yasuki Shirakawa of Japan Climate Consulting, LLC presented a thorough explanation in a lecture. In the latter half of the seminar, we asked participants to do a series of GHG emissions calculation exercises.

On the second day of the seminar, under the themes “Setting of GHG emissions reduction goal: putting our focus on international initiative”, and “Concrete reduction effort”, we asked CEO Masao Tomizawa of KOE Kankyo Business Co., Ltd. to give an explanation as a lecturer, including the introduction of examples of companies’ efforts.

Since the lecturers at this seminar have been involved in consulting work regarding climate change for nearly 30 years, the participants were able to receive specific answers to each of their many questions during the seminar. In addition, regarding the many questions asked during the seminar, we asked the lecturers to prepare answers to all questions, including ones they were not able to answer at the time, and shared the answers with all participants later in the form of a “Q&A collection.”

Results and prospects

This seminar attracted many participants: 216 participants on the first day and 193 on the second. Even though the content of the seminar targeted SMEs, we had many participants from large enterprises in addition to the targeted group. As the seminar was highly praised in the questionnaire survey conducted at the end of the seminar, we were able to confirm that regardless of the size of enterprises, there is a great deal of interest in the theme of this seminar.

We are planning to hold a seminar in the next fiscal year to further reflect the needs of companies according to the results of interviews we had with them, the questionnaire, etc. Also, we are considering choosing model companies from among the targeted group and helping them calculate their GHG emissions. We hope to help SMEs solve any anxieties or problems they may have in making efforts toward decarbonization from the next fiscal year through seminars and individual support, etc.



Online lecture in the small- and medium-sized enterprise practical seminar

Global Environment Workshop for High School Students

Outline

As a project commissioned by Yokkaichi City, ICETT held this Workshop online with participation from high school students in Yokkaichi City, Tianjin City in China, Yokkaichi's friendship city, and Long Beach in the U.S., Yokkaichi's sister city.

Background and purpose

Every year during summer vacation, we provide training and opportunities for exchange of ideas at this Workshop focusing on environmental issues, inviting high school students from Yokkaichi City, Tianjin City in China, and Long Beach in the U.S. However, the impact of COVID-19 still being felt this fiscal year, it was difficult to invite high school students from abroad, but we held the Workshop online with the aim of ① providing an opportunity to think about environmental issues from international perspectives, and ② promoting international sensibility and building a momentum for practicing environmental conservation activities through exchange of ideas among participants.

Details

In consideration of the time differences among participants, the Workshop was organized in two parts: the session between Long Beach and Yokkaichi City in the morning, and the session between Tianjin City and Yokkaichi City in the afternoon on August 4-6, 2021. On

this year's theme "biodiversity", Associate Professor Motohiro Kawase of the Department of Human Sciences, Aichi Mizuho College was invited to give a lecture with an ensuing discussion. The students learned about and discussed a broad range of issues regarding "Land snails and biodiversity" and why biodiversity is important citing the issue of pervasive nonnative species across the globe.

Results and prospects

We received feedback from the participants noting the importance of being aware of other animals and plants rather than thinking about human beings first, and expanding activities to address environmental issues beyond biodiversity. We believe this Workshop provided the students an opportunity to consider and take action to address environmental issues.

We hope that the participants will leverage this experience to implement measures against environmental issues and play an active role in their daily lives with an international outlook.



Online interactions between students in Long Beach and Yokkaichi City



Online interactions between students in Tianjin City and Yokkaichi City

Second ICETT environmental seminar “Promotion of Plastic Resource Circulation through Industry-government-academia Collaboration—Think about further materialization along with advanced examples in the Chubu region”

Outline

ICETT held an online seminar on September 3, 2021, intended to think about further practices for plastic resource circulation by industries, governments, and academia, and collaboration among those sectors. The seminar attracted participants from companies, research institutes, and administrative organizations that are interested in plastic consumption reduction, resource circulation and recycling.

Background and purpose

To share information about Japan's latest policies and the situation of cutting-edge technological development related to plastic resource circulation, ICETT held an Environmental seminar “Promotion of Plastic Resource Circulation through Industry-government-academia Collaboration” sequentially with fiscal 2020.

The first seminar focused on the development and dissemination of petroleum-derived plastic alternative materials, which are the mainstream of plastic resource circulation. This second seminar puts special focus on closing the loop of resource circulation, and highlighted technology and mechanism for proper use, recovery, and recycling of plastic products, while keeping the issue of the proper use and reduction of the amount of plastic in mind.

Details

In the first half of the seminar, the Ministry of Economy, Trade and Industry explained the latest information on the contents and future policy of the “Act on Promotion of Resource Circulation for Plastics” which was established and promulgated in June 2021 (and took effect in April 2022) as a concrete measure for plastic resource circulation. Furthermore, Dr. Shinichi Sakai, vice president of the Advanced Science, Technology & Management, who is one of the members of the Deliberative Council for this Act, talked about the fundamental idea of realizing plastic resource circulation and its background.

The second half of the seminar focused on recycling, including the spread of voluntary collection, and technological development toward recycling. Mie Prefectural government, as an administrative organization, explained the “Mie Prefecture Promotion Plan to Form a Sound Material-cycle Society” which was formulated in March 2021 by reflecting the socio-economic circumstances related to the recent administration of waste, as well as the current state of concrete efforts toward the promotion of plastic resource circulation. Then, Kyoei J&T Recycling Corporation introduced strategies to broaden the circle of recycling to the Chubu region, such as joint technology development with other companies, and a recycling plant for horizontal recycling from PET bottle to PET bottle, which was under construction in Tsu City in Mie Prefecture (starts commercial operation after its completion in April 2022). Lastly, FP Corporation

introduced a mechanism to create trays from used trays and PET bottles with the latest information from various perspectives, such as the results of its effort to collect the resources and the challenge of dealing with new issues over about 30 years, as well as the promotion of resource recycling in consideration of the effect of reducing GHG emissions.

Results and prospects

This seminar was distributed online, with the participation of 417 people from all over Japan mainly from Mie Prefecture, Aichi Prefecture, and Gifu Prefecture. Receiving comments with high acclaim such as “With a rich content, the seminar was easy to understand,” and confirming some requests for continuing the seminar, we were able to feel that more attention being paid to the execution of the “Act on Promotion of Resource Circulation for Plastics” in April 2022 was increasing.

We would like to take this opportunity to express our sincere appreciation to all of the participants of this seminar and the relevant organizations that supported the seminar, including the Ministry of Economy, Trade and Industry, Chubu Bureau of Economy, Trade and Industry, Mie Prefecture, Yokkaichi City, Aichi Prefecture, Nagoya City, Gifu Prefecture, and Central Japan Economic Federation.

