# INTERNATIONAL CENTER FOR ENVIRONMENTAL TECHNOLOGY TRANSFER



# NEWSLETTER



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### Purpose of Establishment

The International Center for Environmental Technology Transfer (ICETT) was established through industry-government-academia cooperation for the purpose of transferring environmental conservation technology possessed by Japan and other countries to other regions in order to alleviate environmental problems on a global scale.

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By implementing various projects in different countries with consideration given to their characteristics and proceeding with smooth technology transfer, ICETT strives to achieve conservation of the global environment and sustainable development of the global economy.

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The SDGs icons associated with each project featured in this newsletter are displayed above the related project articles.

### **Mie Prefecture**



# The Global Environmental Seminar

### Overview

Intended for high school and university students in Mie Prefecture, this seminar was held online, consisting of lectures on the theme of "International Environmental Issues with a Focus on Pacific Island Countries", interaction with participants from the Republic of Palau, group discussions and presentations.

### Background and Purposes

Following the Ise-Shima Summit and Junior Summit in Mie (2016), it was decided the Pacific Islands Leaders Meeting shall be held in Mie Prefecture (2021)<sup>1)</sup>, giving momentum for the youth in the prefecture to be active on the global stage. Taking this as a perfect opportunity to nurture leaders of the next generation and with a view to developing globally-minded talent, we organized an online seminar targeting the youth, including high school and university students, who will shape the age to come so that they can learn about international environmental issues in English. Due to the spread of coronavirus infections, the participants met online, instead of in person at a meeting venue as initially planned.



Online Interaction at the Global Environmental Seminar

<sup>1)</sup> As announced later on April 1, 2021, the form of the meeting changed to videoconferencing.

# Contents

The seminar was held on February 20, 2021 with 76 participants: from Mie Prefecture, 33 high school students, two university students, eight ALTs (Assistant Language Teachers), and six international students at Mie University; and from the Republic of Palau ("Palau"), 27 high school students and school officials.

During the seminar, international students at Mie University provided lectures on environmental issues in Papua New Guinea and the Solomon Islands; ICETT staff presented the Center's waste reduction initiatives in Palau and the history of pollution in Yokkaichi; and high school students from Palau and their counterparts in Mie Prefecture introduced their respective schools and spoke about waste treatment in their respective countries, followed by group discussions.

### **Results and Outlook**

Lectures on environmental issues faced by the world, group discussions and presentations were all conducted in English. We hope that this seminar encouraged greater interest of the participants in mastering foreign languages and in environmental issues and will prove helpful to their further learning.



### Yokkaichi City

# Planning and Operation of the Tianjin Environmental Interaction Program

### Overview

Commissioned by Yokkaichi City since 1993, ICETT has continuously conducted training sessions, aiming to help Tianjin City alleviate its environmental problems. In FY2020, due to the coronavirus pandemic, preventing face-to-face interaction between the two cities, a seminar was held in Tianjin City based on lecture videos produced and provided by Yokkaichi City focusing on the themes of offensive odor and noise controls.

### Background and Purposes

While achieving remarkable economic progress, Tianjin City is experiencing many environmental problems, requiring the city to alleviate them immediately. To this end, ICETT implemented this program to help the city improve its environment by enabling officials of the city's Ecology and Environment Bureau to learn Japanese environmental technology and management methods. As requested by Tianjin, this year's seminar featured the themes of offensive odor and noise controls.

# Contents

Using lecture videos produced by Yokkaichi City, a seminar was held in Tianjin as follows.

# (1) March 5, 2021 regarding offensive odor control and Yokkaichi pollution

Participants: 26 (including six who participated in person at the venue)

(2) March 12, 2021 regarding noise control and Yokkaichi pollution Participants: 38 (including 18 who participated in person at the venue) The seminar allowed online participation as well.



A seminar in Tianjin based on lecture videos

# **Results and Outlook**

We have received the following feedback from the seminar participants.

- The seminar helped me gain a good understanding of the environmental conservation policies and measures implemented in Japan.
- A seminar in the form of lecture videos is helpful in that it allows repeated learning.
- We will continue addressing themes in line with Tianjin City's problems and strive to help the city improve its environment.





# The Project on Working Together with the Government and Citizens for Zero Waste Society Promotion in Ibobang, Ngatpang and Mongami, Aimeliik, Republic of Palau, under JICA Partnership Program (Local Government Type)

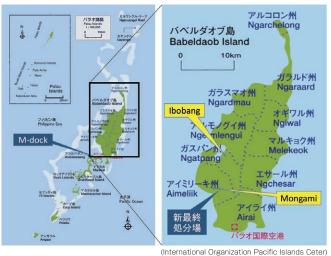
### Overview

Together with the Republic of Palau ("Palau"), Bureau of Public Works (BPW) of the Ministry of Public Infrastructure, Industries and Commerce, high schools, and other cooperating organizations, Mie Prefecture and ICETT have been implementing "The Project on Working Together with the Government and Citizens for Zero Waste Society Promotion. (Local Government Type)" as a JICA Partnership Program for three years from August 2018 to August 2021.

### Background and Purposes

Palau is a small island country with an area of approximately 488 km<sup>2</sup> and with a population of approximately 20,000. Surrounded by beautiful seas, the country attracts many tourists, reaching up to 85,000 visitors annually, making waste reduction a consequential issue.

For this project, ICETT together with the BPW have selected the two regions of Ibobang in Ngatpang and Mongami in Aimeliik, and have been encouraging local residents to engage in recycling efforts. We are striving to reduce the amount of waste ending up in the landfill site that was newly constructed in Aimeliik and started its operation in February 2021.



(International Organization Pacific Islands C Project implementation sites in Palau

# Contents

In March 2020, a survey mission, including Ms. Maika Utsugi, a JICA-Chubu official supporter, was dispatched to Palau to observe various ongoing JICA projects. Around the same time, ICETT staff visited Palau together with officials of Mie Prefecture, the joint proponent of this project, to conduct on-site project activities in Ibobang and Mongami, where we provided residents and students with guidance for their waste separation activities in communities and schools. The activities were compiled into a JICA PR video, which can be viewed at the following URL: https://www.youtube.com/watch?v=x9knYtDGu-Y



\*Available only in Japanese

JICA PR video "In a heaven on earth now – Environmental conservation activities in Palau [The bond between Japan and Palau]

Under this project, we organize poster contests, aiming to promote the 3Rs (Reducing, Reusing and Recycling), as part of awareness-raising activities for elementary and high school students in the targeted regions. Selected posters are published in waste separation calendars for distribution to residents in the regions. The year 2020 marked the second contest, for which a commendation ceremony was held for the award winners at the newly opened landfill site with the presence of H. E. Mr. Charles Obichang, Minister of Public Infrastructure, Industries and Commerce of Palau, the Chief Representative of the JICA Palau office, the BPW Director, and the Governor of Aimeliik State.

# **Results and Outlook**

Since January 2019, following the establishment of eight recycling stations in the two regions, local residents have been engaged in separation of different types of waste, food cans, butane cans, glass, plastics, and paper, so that the collected resources can be properly recycled, leading to the reduction of waste to be dumped into the landfill site. Every week, the BPW collects and weighs recyclables, and records the data. By properly recycling collected resources, it is estimated the reduction of waste will be somewhere between 25 and 50 percent, and the sustained reduction of the waste dumped to the landfill through this initiative will extend the usable life of the landfill. In Palau, which is still in the initial stage of separate collection efforts, continued cooperation of residents in the future will play a vital part in reducing waste. Accordingly, it must be ensured that waste will be thoroughly separated at each household.

As in Ibobang, waste separation and recycling efforts are progressing in Mongami which is located in the state where the Aimeliik landfill is located. While continuing the coopearation with the BPW and also finding better methods together with schoolchildren and community residents, we will strive to ensure that this initiative will firmly take root in Palau. Japan International Cooperation Agency (JICA)



# JICA Online Knowledge Co-Creation Program (ASEAN Focus) Waste Management towards Marine Litter

### **Overview**

We organized an online JICA training course focusing on improvements in measures to control marine plastic litter in ASEAN region. The representative government officials in the field of waste management participated from Cambodia, Laos, Malaysia, Myanmar, Thailand and Vietnam, as well as a staff member of the ASEAN Secretariat based in Indonesia, and deepened their insights into effective policy measures and practices to combat marine litter.

### Background and Purposes

In recent years, marine plastic litter has become one of the environmental problems attracting global attention, and various efforts are being made to facilitate solutions to the problem. In ASEAN countries, controlling plastic waste that flows into the sea from their land areas and strengthening waste management capacity that they have conventionally worked on are regarded as important initiatives in proceeding with resource recycling.

Considering this situation, we organized an online training course so that the participants can comprehensively learn about the lifecycle of plastic products and Japan's practices and efforts toward building a recycling-based society, including plastic recycling, as well as efforts to control marine plastic litter. It also aimed to support the participants to propose actions for solution that could be adopted in their respective countries.

### Overview

### (Training course period) February 1 - 8, 2021

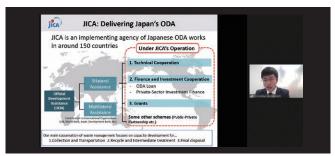
### (Participants)

Eight participants including; Government officials from ASEAN countries: one each from Cambodia, Laos, Malaysia, Myanmar, and Vietnam, and two from Thailand ASEAN Secretariat staff:one

### Contents

The training course provided lectures and discussions with a focus on plastic resource recycling on lands as a priority issue for controlling marine plastic litter in ASEAN countries.

Wide range of topics were raised during the training course, including but not limited to the global trends in the marine plastic litter issue and Japan's measures to control the issue, strategies and policies for the promotion of plastic resource recycling, voluntary efforts and technological development by businesses, and practical examples of environmental education.



Mr. Shunsuke Nakamaru from JICA's Global Environment Department delivering an online lecture on JICA's international cooperation activities

Extensive and practical lectures were delivered by resource persons from a United Nations agency, council members of the Ministry of the Environment and Ministry of Economy, Trade and Industry, companies and entities engaged in trailblazing work in Japan's field of plastic resource recycling, and universities.



Professor Dr. Eiji Hosoda, Vice-President / Dean of the College of Business Administration and Information Science, Chubu University, delivering the online lecture "Introduction to Resource Recycling.

### Results and Outlook

The participants gained new knowledge through the lectures and actively exchanged information and opinions with the resource persons, which helped them to look back at the policies and measures of their respective countries. Through their learning at this training, they also gained more insight into potential policies and measures for application to their respective kinds of work, which were then summarized in their mid-term report (confidential).

We hope to conduct a training course in Japan once the coronavirus pandemic ends, under the appropriate situation to allow the participants to travel from the ASEAN countries. To that end, we are pressing forward with our preparations in discussion with the JICA Chubu Center.

Through this online training course and the planned training course in Japan, the participants are expected to (1) take a bird's-eve view of domestic and overseas trends in the marine plastic litter issue and learn Japan's plastic resource recycling systems and its efforts on waste management; (2) understand Japan's resource-recycling-related policies, legal system, technology and experience conducive to controlling marine plastic litter, and sort out challenges in establishing plastic resource recycling systems in their respective countries; and (3) better understand roles of stakeholders in the public and private sectors and examples of their collaboration in recycling plastic resources.



All participants and others involved in the online training course



### **Business sector**

# MOE-funded FY2020 Model Project for Improvement of Water Environment in Asia

### Overview

We conducted a feasibility study jointly with Kassui Plant Co., Ltd., based in Yokkaichi City, Mie Prefecture, on the application of HARNET water treatment equipment (effective microbial treatment equipment) to help alleviate water pollution in Thailand and enhance water treatment capacity of small to medium-sized enterprises in the country.

### Background and Purposes

With the water pollution issue becoming apparent in Thailand, Kassui Plant Co., Ltd. in Yokkaichi City, Mie Prefecture, aimed to introduce its HARNET water treatment equipment to the country, by utilizing the Ministry of the Environment (MOE)'s program for supporting environmental businesses, as a solution for wastewater treatment that is easy in terms of maintenance and generates less excess sludge. This study was launched for the purpose of improving the wastewater treatment capacity of factories in Thailand through the installation of the HARNET system, thereby eventually improving water quality of rivers and other water sources in the country.

### Contents

Targeting Samut Prakarn Province on the outskirts of Bangkok, document research was conducted by ICETT on



water quality regulations, etc. and for preparations of the introduction of the wastewater treatment equipment. Kassui Plant also conducted a survey of candidate factories for a demonstration experiment, and based on the results of this research, the company prepared a demonstration experiment plan and business model for HARNET water treatment equipment.

### **Results and Outlook**

While the local demand for wastewater treatment was confirmed to remain high, we were unable to find an ideal factory for the demonstration experiment, causing this project to discontinue. COVID-19 pandemic has been making it difficult for a company to expand its environmental business operations overseas. However, we will continue our positive involvement in such an endeavor.

Chubu Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry

# Regional Enterprise Innovation Support Project (Providing Support for Establishment of a New Supply Chain toward Promoting CFRP Recycling)

### Overview

Carbon fiber reinforced plastics (CFRP) process scrap and waste are mostly disposed of by landfill, with a system for turning them to good use by recycling not being adequately in place. In addition, waste materials from used aircraft, etc. are expected to be discharged in large quantities in future years. With this as a backdrop, we implemented this project, designed to support companies with excellent recycling technology in cultivating a market, for the purpose of building a CFRP recycling business in the Chubu region ahead of the rest of the world.

### Background and Purposes

In May 2020, the Ministry of Economy, Trade and Industry (METI) formulated Circular Economy Vision 2020, in which CFRP is positioned as one of the areas where the development of resource circulation systems is urgently needed. Given that the Chubu region is home to excellent companies possessing technology for recovering recycled carbon fiber (rCF) from used CFRP (upstream sector), the Project aims to support the development of a CFRP recycling market so as to facilitate a smooth recycling flow from the upstream sector to the midstream sector (intermediate material manufacturer) and then to the downstream sector (final product manufacturer). In implementing this project, this fiscal year we focused efforts on strengthening collaboration between businesses from these sectors.

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 Building a network between companies from the upstream, midstream, and downstream sectors related to CFRP recycling On January 21, 2021, we organized the

On January 21, 2021, we organized the CFRP Recycling Online Expo on the theme of carbon fiber recycling. The Expo consists of some lectures by experts and a panel discussion for information sharing, technology exhibitions by participating businesses in the form of a video presentation, etc., and online business matching meetings. The event announcement was disseminated to other relevant committee



Event guide of the CFRP Recycling Online Expo

members such as domestic researchers involved in survey projects separately implemented by METI, aiming to facilitate information sharing among those concerned. In addition, individual hearing and online business matching meetings were held mainly for business operators in the midstream sector.

# 2) Conducting a survey on domestic and overseas trends conducive to capturing a CFRP recycling market

We conducted a survey on the situation involving the use of rCF in Europe that could serve as a reference for popularizing and establishing rCF products in Japan. In addition, we worked to forge relationships with research institutions in Europe by exchanging opinions with a view to conducting joint research or strengthening partnerships with them in the future.

### 3) Working with Global Network Council Japan (GNCJ)

In organizing online meetings with major general contractors as potential users of rCF, we used the service of the one-stop consultation desk at GNCJ.

### **Results and Outlook**

The CFRP Recycling Online Expo provided a business matching opportunities for business operators, where some potential business opportunities were generated from individual business negotiations. Fulfilling such potential and building a supply chain in the future show great promise. Furthermore, our exchange of opinions with research institutions in Europe helped clarify the present situations and challenges commonly faced by Japan and Europe, which we will reflect in our future efforts.





### Independent Project

# Providing Support for Plastic-Recycling SMEs to Operate Abroad

### Overview

As part of our efforts to promote the recycling of plastic resources, we work to support companies with excellent environmental conservation technology to develop their businesses in Pacific Island countries. To this end, we are striving to ensure that our proposal will be actualized in the framework of JICA's "SDGs Business Supporting Surveys" In FY2020, we organized a workshop in Nagoya City to report on the results of the preliminary research conducted in the Republic of Fiji in the preceding fiscal year.

### Background and Purposes

In May 2019, the Japanese government formulated the Plastic Resource Recycling Strategy. Based on this strategy, we positioned initiatives for the promotion of plastic resource recycling as the new core of our activities. Thus we are committed to contributing to solving these challenges related to the global environment and waste through transfer of environmental technology.

In particular, Pacific Island countries have problems with processing waste, including waste plastic, because of their small areas and isolated, remote, and oceanic locations. To solve the problems, much expectation is placed on technological capabilities of Japanese companies by JICA, which has been engaged in the technology cooperation projects for Pacific Island countries regarding waste management for years.



Workshop at Nagoya Innovator's Garage

### International Exchange and Partnership

### Yokkaichi City

### Contents

On August 4, 2020, we held the second workshop for considering potentials of environment businesses in Pacific Island countries in Nagoya City. Session 1 featured a report on the results of our research conducted in Fiji, followed by locally based information shared by Ms. Masumi Oi, a Japan Overseas Cooperation Volunteer of JICA, regarding the waste management situation and environmental education in Palau. In Session 2, we presented a plan for the second research plan in Fiji and a call for participating companies. For the prevention of the spread of COVID-19, the workshop also accommodated online participation via web delivery.

### **Results and Outlook**

This time, we were able to provide participants with more detailed and specific local information regarding waste management in Pacific Island countries. We will proceed with preparations, aiming to ensure that our proposal will be actualized in the framework of JICA's "SDGs Business Supporting Surveys".



# Planning and Operation of Global Environmental Summit for High School Students-Online interaction Workshop

### Overview

Commissioned by Yokkaichi City, we held Global Environmental Summit for High School Students – Online interaction Workshop.

### Background and Purposes

Every summer vacation season, we invite to Japan high school students from Yokkaichi City's friendship city Tianjin, China, and Yokkaichi City's sister city Long Beach, the U.S., to organize Global Environmental Summit for High School Students, where they can participate in training sessions and exchange opinions regarding environmental issues with their counterparts in Yokkaichi City. This fiscal year, however, we were unable to do so in the usual manner due to the coronavirus pandemic. Accordingly, we hosted an online interaction workshop intended for alumni who have participated in this program in the past with the aim of providing them with an opportunity to consider environmental issues from a global perspective and to look back on their learning at the Global Environmental Summit.

### Contents

On November 15, 2020, the online interaction workshop was held in two separate sessions: (1) interaction between the Yokkaichi team and Long Beach team; and (2) interaction between the Yokkaichi team and Tianjin team. The participants exchanged views on solutions to pre-set environmental problems faced by a fictitious country (city), followed by a session where they looked back on their learning at the Global Environmental Summit that they had participated.



Global Environmental Summit for High School Students – Online interaction Workshop

### **Results and Outlook**

Although the coronavirus pandemic forced the Summit to be held in the form of an online interaction, it still allowed participants to actively discuss solutions to environmental problems. Above all, we realized again that what they had experienced at the Summit have had a significant influence, even extending to their respective career courses and how they view the world.

We hope that the friendships forged through the Global Environmental Summit for High School Students will lead to continued interaction among the students, who will play central roles in the future of their respective cities. We look forward to seeing them prosper and serve the communities addressing the environmental problems in Yokkaichi City's friendship city Tianjin, sister city Long Beach, and Yokkaichi in the near future, and act as bridges of friendship among the three cities.





### Independent Project

# ICETT Online Seminar: Promotion of Plastic Resource Recycling through Industry-Government-Academia Collaboration

### Overview

In recent years, plastic resource recycling has been attracting more attention as an global issue which requires urgent actions. Under these circumstances, we organized an environment online seminar featuring plastic resource recycling with the aim of providing the latest information on Japan's relevant policies and progress in the development of materials alternative to petroleum-based plastics.

### Background and Purposes

Recent years have witnessed active efforts being deployed on a global scale in promoting less plastic society and establishing plastic resource recycling. Along with this trend, Japan has established the Plastic Resource Recycling Strategy and various sectors are working together or independently to create new value. The Chubu region is home to companies manufacturing high-quality materials and those with excellent plastic processing and recycling technology, and those companies are expected to play a more active role in the future in reducing plastic consumption and resource recycling.

In the context of these circumstances, we planned and conducted a seminar to deepen insight from various angles into promotion of plastic resource recycling and development and spread of alternative materials to plastics, with invited resource persons from industry, government and academia.

### Contents

On November 27, 2020, we organized ICETT Online Seminar: Promotion of Plastic Resource Recycling through Industry-Government-Academia Collaboration. Although originally planned in May of the same year at a hall in Nagoya, the seminar was changed to online delivery in consideration of the prevention of the spread of coronavirus infections.

The seminar started with an honorable guest address by the Chubu Bureau of Economy, Trade and Industry of the Ministry of Economy, Trade and Industry (METI), introducing efforts implemented in the Chubu region for plastic resource recycling and also expressing its expectations of ICETT in this area. An expert from METI explained, in relation to the Circular Economy Vision and Plastic Resource Recycling Strategy promoted by the Japanese government, about the government' s policies and specific initiatives while taking the global trends into account. An expert from the National Institute of Advanced Industrial Science and Technology spoke about international standards that are important in developing and disseminating biomass plastics and biodegradable plastics, highlighting the basic concept of formulating the standards and progress of establishing the system for standardization. Representing the private sector, Mitsubishi Chemical Corporation and Oji F-Tex Co., Ltd. each presented the progress of their development of materials alternative to petroleum-based plastics and their efforts on the promotion of plastic resource recycling.

### **Results and Outlook**

The seminar attracted 137 online participants from various fields of industry, government and academia. After each presentation, participants actively asked questions, to which the responsible resource person answered sincerely. Though held online, the seminar engaged participants interactively. Much favorable feedback was also received from the participants via a questionnaire, such as one comment saying that the seminar was very informative with presentations from many different fields and another saying that presentations were very technical and helpful in their formulating policies in the future. The feedback also included requests and suggestions for future ICETT seminars.

We would like to take this opportunity to express our appreciation to all the participants from industry, government, and academia, as well as our gratitude to the Central Japan Economic Federation, the Chubu Bureau of Economy, Trade and Industry of METI, Mie Prefecture, Yokkaichi City, Aichi Prefecture, Nagoya City, Gifu Prefecture, and all the other relevant organizations who supported and cooperated with us.

Resource person and Presentation title	
Honorable guest address (Job Title at that time) Mr. Kimito Shindo, Director, Natural Resources, Energy and Environment Department, Chubu Bureau of Economy, Trade and Industry of METI	
The present situation and outloo Mr. Tomokazu Mori, Specialist, Resourc Industrial Science and Technology Polic	e Efficiency and Circular Economy Division,
environmental problems- bio- and international standards rela Dr. Masao Kunioka, Standardization (	Officer, Standardization Promotion Center, on Headquarters, National Institute of
economy and society Dr. Hiroshi Sano, Advisor to General	utilize in establishing circulative Manager, Advanced Polymers Planning Manager, Circular Economy Department,
environmentally conscious mater	I for reducing plastic- Introduction to al SILBIO series , Marketing and Development Department,

Venue for delivering the online seminar (Nagoya Innovator's Garage) The seminar was conducted online with attendees at the venue limited only to a small number of invited guests.

### Independent Project



# ICETT 30th Anniversary Commemorative Project

### Overview

The International Center for Environmental Technology Transfer (ICETT) was established in 1990 by the business circles of the Chubu central region of Japan, Mie Prefectural Government and Yokkaichi Municipal Government with the aim of contributing to conservation of the global environment and sustainable development of the global economy. In FY2020, which marks its 30th anniversary, we produced the 30th anniversary commemorative newsletter, and organized the 30th anniversary commemorative ceremony and seminar with the cooperation of the Mie Satellite Office of the Collaborative Research Organization for Future Regional Society, the University of Tokyo. At the seminar, Dr. Masahiko Hirao, Professor at the Graduate School of the University of Tokyo was invited as a resource person with a profound knowledge of plastic resource recycling, and delivered a presentation on the theme of the present situation, challenges and future course of action involving plastic resource recycling - from the perspective of sustainable consumption and production.

### Background and Purposes

Since its founding, ICETT has been contributing to facilitating solution to a wide range of environmental problems, including industrial pollution, the waste management, and climate change by transferring the technology and know-how to government officials, business operators, technical experts, researchers, and many others in developing countries through training courses and technical guidance. In recent years, capitalizing on our deep connection with the petrochemical industry in Yokkaichi City, we positioned the promotion of plastic resource recycling as the core of our activities, thereby pursuing to broaden the scope of our projects.

This 30th Anniversary Commemorative Project was implemented to express our appreciation for all the support extended to our activities to date and to share our recent initiatives and their expected future development.

### Contents

### 1) The 30th anniversary commemorative newsletter

ICETT Newsletter Vol. 69 was published as the special30th Anniversary Commemorative Volume in December 2020. This volume consists of three parts, with the first part featuring our efforts toward the promotion of plastic resource recycling, a theme presently constituting the core of our activities. The second part covers the per-

formance of our projects during the last five years and messages from people involved overseas, while the third part, a compilation of materials, looks back upon the last thirty years since our establishment.

This volume is available on our website: https://www.icett.or.jp/shuppam/kikanshi.html It can also be viewed by scanning the QR code on the right.

2) ICETT 30th anniversary commemorative ceremony and seminar Date: January 23, 2021

Venue: Humanitec Plaza as the main venue, connected online with Nagoya Innovator's Garage, the Mie Prefectural Government's office and Tokyo



Mr. Akihisa Mizuno, Foundation Chairman, ICETT (Chairman, Chubu Economic Federation) Right

Left Mr. Eikei Suzuki, Chairman of the Board of Directors, ICETT

Bottom:

(Governor of Mie Prefecture) Mr. Tomohiro Mori, Vice Chairman of the Board of Directors, ICETT (Mayor of Yokkaichi City)



Session I: Commemorative Ceremony

①Address by the organizer; ②Introduction of ICETT activities Session II : Commemorative Lecture

①Presentation "The present situation, challenges and future course of action involving plastic resource recycling - from the perspective of sustainable consumption and production" Dr. Mahiko Hirao, Professor, Department of Chemical System Engineering, Graduate School of Engineering, the University of Tokyo

②Closing Address

Mr. Junji Tanehashi, Foundation Vice Chairman, ICETT (Chairman, Yokkaichi Chamber of Commerce and Industry)



Dr. Masahiko Hirao, Professor at the Graduate School of the University of Tokyo

Professor Hirao delivered a presentation, focusing mainly on sustainable consumption and production patterns, the present situation of and challenges for plastic resource recycling, and the future course of action for plastic resource recycling.

In the first part of his presentation, Professor Hirao indicated the necessity of linking supply, consumption, circulation, and production processes, which are presently separated from each other, thereby creating a sustainable society through cooperation, collaboration, and co-creation. In the second part, he emphasized the importance, in promoting resource recycling, of evaluating recycling technology in terms of the prevention of global warming, the prevention of fossil resource depletion and economic feasibility; and for making such evaluation, the importance of adopting the approach of Lifecycle Assessment (LCA), whose scope of evaluation covers a product's entire lifespan, from raw material extraction to eventual disposal. Professor Hirao expressed his commitment to spreading the approach of LCA in recycling plastic resources as well through scientific discussions from the perspectives of tech-

nology, systems and challenges. A summary of his presentation can be found on: https://www.icett.or.jp/jouhou/r02/ 30syuunen\_houkoku.html



\*Available only in Japanese

# **Results and Outlook**

In this project, ICETT declared once again its determination to contribute to identifying and solving environmental problems in developing countries with extensive and appropriate utilization of the technology possessed by industrial circles in Japan, especially in the Chubu region, and knowledge and proven practices obtained by experts in governmental and academic circles in the country.

We count on your continued support and cooperation in this endeavor.

INTERNATIONAL CENTER FOR ENVIRONMENTAL TECHNOLOGY TRANSFER Issued 3684-11, Sakura-cho, Yokkaichi, Mie 512-1211, Japan TEL.+81-59-329-3500 FAX.+81-59-329-8115 https://www.icett.or.jp



Back numbers of Newsletters can also be found on the ICETT website

For protection of the environment, recycled paper and vegetable-based ink are used for printing.

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