

## MINUTES of

### The 5<sup>th</sup> Tripartite Roundtable on Environmental Business

Dates: November 22<sup>nd</sup>-24<sup>th</sup>, 2019

Location: Kitakyushu, Japan

Theme: Initiative for realizing a virtuous cycle of environment and growth

Participants: Chinese, Japanese, Korean delegates

#### OPENING SESSION

**Mr. KONDO Akira, Chief Executive of Environment Bureau, City of Kitakyushu (Japan)** made an opening remarks welcoming all delegates from China, Japan and Korea.

**Ms. LIU Ting, Section Chief / Senior Engineer of Foreign Environmental Cooperation Center, Ministry of Ecology and Environment (China)**, gave a brief summary of last year's 4th TREB meeting.

Commemorative photograph was taken during the photo session.

#### SESSION 2: Practices on Environmentally Sustainable City

**Prof. KIM Doohwan, Technical Advisor of Kyunghwa Engineering Co., Ltd. (Korea)**, the Chair of Session 2, started the session with an introduction of the topic and presenters for the session.

**Ms. MURAKAMI Emiko, Director of International Environmental Business Promotion, Asian Center for Low Carbon Society, City of Kitakyushu (Japan)**, delivered a presentation on "Kitakyushu's Challenge toward the

Sustainable City”. She started her presentation with an introduction of Kitakyushu. Kitakyushu tried to overcome the pollution problems resulted from industrial development through building a partnership across residents, private companies and the government. With the acceleration of economic growth, new environmental industries including energy hub promotion as well as the local energy retailer have been emerged. Kitakyushu Eco-Town project as an example aims for zero waste emission through the collaboration with the suppliers to trade waste that can be recycled for raw materials. She introduced that Kitakyushu established Asian Center for Low Carbon Society to contribute to the Asian sustainable development through accumulated network, technology and its experiences. It also built the intercity cooperation with the 6 cities in China, Shanghai, Tianjin, Wuhan, Tangshan, Handan and Dalian, based on the discussion in the 16th TEMM. The important role of Kitakyushu to promote SDGs were highlighted. She stated that since Kitakyushu is facing challenges toward localizing SDGs, it has made contribution to achieve SDGs which includes the Future City Initiative selected by Japanese government. She concluded her presentation by stating that ‘upon developing international environmental cooperation and environmental businesses taking advantage of our experience and network, know-how and innovation, we are aiming to promoting our unprecedented way delighted and respected by people on the spot.’

**Mr. WU Feng, President of Shenzhen SPARK Co. Ltd. (China)**, delivered a presentation on “Environmentally sustainable urban practice”. He mentioned that environment pollution and health damage have been caused due to lack of appropriate management for air pollution, water quality, solid waste and water resources. Resource management, appropriate technology and urban city management are essential to establish sustainable smart community. Especially, IT, cloud system, mobile technology is able to develop a safe smart city. Chinese government are promoting smart community which is a foundation of smart city. With an increase of population in urban cities, more energy deficit, heavy traffic jam, less access to public social service will be increased. SPARK

can provide a service for real time city management and low-carbon technology/products and service.

**Mr. LIM Seongha, Education Team Manager of Sustainable Environmental Education Center, Jeju Special Self-Governing Province (Korea),** presented “Examples of improved environmental consciousness for an environmentally sustainable city.” He gave a brief introduction of Sustainable Environmental Education Center. Aiming at strengthening the environmental competencies of Jeju province residents through environmental education, the center conducts various activities along their major policies. Carbon Free Island Jeju by 2020 and separating waste sorting day system were introduced as remarkable examples. They already had certain results towards realizing a sustainable city. He underlined the importance of improving environmental consciousness through environmental education, and introduced their seven programs. His presentation was concluded with their future efforts in developing methods to maintain program satisfaction, gradual expansion of education improvement of program quality and developing and providing effective programs dealing with various environmental issues in order to advance environmental consciousness establishment of a sustainable city.

**During discussion time,** an active discussion was made.

1) **Mr. SHAO Kunkun to Ms. MURAKAMI Emiko:** Give advice to China on separating waste collecting on Kitakyushu’s experience.

**Ms. MURAKAMI Emiko to Mr. SHAO Kunkun:** We choose the way citizens feel easy to understand to act. Domestic waste was categorized to combustibility, plastics, bottles and cans which are collected at home. Small household appliances and used oil are collected at supermarkets, so people can throw when coming shopping. A citizen center in each district collects waste papers. We keep improving the system in accordance with feedbacks from citizens.

- 2) **Mr. SHAO Kunkun to Ms. MURAKAMI Emiko:** How do you dispose kitchen waste and how much is the cost?
- 3) **Ms. MURAKAMI Emiko to Mr. SHAO Kunkun:** In housing complex, residents throw it as combustibility garbage. People need to buy trash bags. Small bag is 30 Japanese Yen, and large one is 50 Japanese Yen. People with garden compost the waste. These activities realized reducing waste.
- 4) **Ms. YANG Suin to Ms. MURAKAMI Emiko:** What made you to start improving air pollution with cities in China?  
**Ms. MURAKAMI Emiko to Ms. YANG Suin:** The environmental collaboration project with Da Lian City, China.
- 5) **Ms. YANG Suin to Ms. MURAKAMI Emiko:** What was the most effective activity in improving air pollution?  
**Ms. MURAKAMI Emiko to Ms. YANG Suin:** Changing fuel from coal to low sulfur oil gas and biomass reduced sulfur oxides and dust.

### **SESSION 3: Contribution for sustainable community by business sector**

**Mr. ZHU Zhanhong, Vice General Manager of PRC Hong Kong / Delta Aluminum Industry Co. Ltd. (China),** Chair of Session 3, started the session with an introduction of the topic and presenters for the session.

**Mr. PARK Seunghyun, Senior Manager of Korea Southern Power (KOSPO) (Korea),** delivered a presentation on “The KEF (KOSPO Environmental Fund) Project.” KOSPO, which operates and develops power plants nationwide and worldwide leading wind power industry and renewable energy sector, KOSPO has been developing a new business known as Kospo Environmental Fund (KEF) considering the recent environmental changes at home and abroad. The KEF is a social contribution budget planned in proportion of the fossil fuel power plant generation capacity, which budget is used to fund social contribution projects aiming for environmental improvement such as reduction of greenhouse gas and fine dust under 100 per cent public-led decision making.

In 2019, top eight ideas out of 65 entries were rewarded and three feasible projects were funded. All these projects are to contribute to reducing fine dust / CO2 emission, improving support infrastructure for the disadvantaged and assuring the people's participation rights. He emphasized that KOSPO would improve communication with the regional residents and carry out their social obligations as a company that engages with the community as best as they could.

**Mr. MATSUO Yasushi, President of The Merry Corporation (Japan),** presented "Effective solution for regional food waste recycling – Merry's System-". Designing food waste recycling cycles and installing and operating composting facilities as main services, the Merry Corporation established innovative food recycle system namely *Merry's System*. He stated that this system aims at expanding the recycle cycle of food resources, realizing reduction of cost burden of customers in food-related industry and environmental burdens, and contributing to boost local economy by strengthening economical linkage for resource utilization with establishment of recycle loop of food resources. It is consisted of two site circulations. One is on-site circulation, which promotes food waste recycling at home by lending and installing composting equipment. The other is off-site circulation which supports producing and providing compost from collected food waste for farmers. He described this combination has been contributing to realize ecological society in Kitakyushu City. He emphasized that The Merry Corporation keeps conducting business with the goal of "Reducing" the amount of food waste and processing costs, "Making" compost using food waste, and "Connecting" the circle of food waste recycling loop in order to contribute to the creation of sustainable society.

**Mr. SHAO Kunkun, Managing Director of IEM Holdings (China),** delivered "IEM BASE ECOSYSTEM". IEM BASE signifies an international cooperation base of high end environmental equipment manufacturing and they are the corporate joint venture with 14 business enterprises of which 6 international

business enterprises in Japan, Korea, Germany, etc., mainly working in wastewater treatment, solid waste management and water resources sectors. Due to serious and complicate environmental problems happening in China, IEM established a platform in order to facilitate a communication with local government and collect useful information from industrials. They have been implementing various projects with business partner enterprises and local governments on technology transfer, intellectual property right, manufacturing and finance. Their business networking is expanding to enhance business incubation and capacity of local government business enterprises.

**During discussion time**, active discussion was made.

1) **Mr. LI Lihua to Mr. MATSUO Yasushi:** How do you transport kitchen waste?

**Mr. MATSUO Yasushi to Mr. LI Lihua:** 95 per cent of total waste including kitchen waste is processed on site. The rest are transported efficiently. For example, transfer waste once a month. We consider gradual implementation is important.

2) **Mr. SHAO Kunkun to Mr. MATSUO Yasushi:** Is the waste from rearing and aquaculture target as well?

Mr. MATSUO Yasushi: It depends on its components if it is applicable to farming. Unsuitable one for agriculture goes to methane fermentation.

3) **Mr. SUN Yiting to Mr. MATSUO Yasushi:** I would like to know some examples of ESG investment.

**Mr. MATSUO Yasushi to Mr. SUN Yiting:** As the result of 2019, environmental infrastructure was established with one billion Japanese Yen to recycle 20,000 tons of food waste. It is expected to expand to ten times more in the future.

**Ms. YANG Suin to Mr. MATSUO Yasushi:** Japan and China collaborate in many industries. We would like to exchange environmental technologies with. Do you have other recycling?

**Mr. MATSUO Yasushi to Ms. YANG Suin:** Food recycling is the main

business. However, Kitakyushu has an organization of recycling companies.

#### **SESSION 4: Environmental Labelling**

Introduction of the session was made by the host, **Mr. GOTO Toshihiko, CEO of Sustainability Forum Japan (Japan).**

**Mr. SAZANAMI Tomoyuki, Manager of Criteria Certification Section, Eco Mark, Japan Environment Association (Japan),** delivered a presentation on “China Japan Korea Type I Ecolabel Mutual Recognition Initiative.” He first introduced Type I Ecolabel and the current ecolabels in each country. Then, he explained the development history of harmonizing ecolabelling criteria since the first discussion held at the 5<sup>th</sup> Tripartite Roundtable Meeting on the Environmental Industry in 2005. The presentation showed that the mutual authentication helps the reduction of social costs and the environmental impact on a global scale, and the relaxation of trade barriers of import and export. Nine product categories have been mutually agreed and 490 products have been already certified through China Japan Korea Mutual Recognition Agreement (MRA). In this March 2019, a working level meeting was held in Tokyo, Japan, and the three countries reached an agreement of Furniture’s common criteria. The Agreement will be endorsed at TEMM21. He emphasized that the three countries would have continuous discussion on improvement of active MRA to enhance tripartite cooperation.

**An agreement was signed by Mr. YAMAGATA Hidenori, Managing Director, Japan Environment Association (Japan), Mr. LI Lihua, Sino-Japan Friendship Center for Environmental Protection, China Environmental United Certification Center, Senior Engineer (China), Ms. YANG Suin, Ministry of Environment, Environmental Industry and Economy Division, Deputy Director (Korea).**

Commemorative photograph was taken during the signing event.

## **SESSION 5: Potential of Finance for Sustainable Community Development**

**Prof. KIM Doohwan, Technical Advisor of Kyunghwa Engineering co., Ltd. (Korea)**, Chair of Session 5, introduced the topic and the presenters of the session.

**Mr. SAITO Takahiro, Managing Director of the Shiga Bank, Ltd. (Japan)**, delivered a presentation on “Sustainable management of the Shiga Bank, Ltd. –Role of Regional Financial Institutions that Change the Financial Flow-.” He first gave a brief introduction of the Shiga Bank. Their long CSR history made them the first city bank signed UNEP FI in 2001, certified as Eco-First Enterprise, and the first regional bank declared Shigagin SDGs Declaration in 2017. He explained their environmental management are consisted of three examples; Principles for Lake Biwa, New Business Support Loan (SDGs Plan) and SDGs Business Matching Fair. He emphasized that the bank had announced their sustainability vision to realize “Good circle of economy and environment” in this February, and to keep contributing to the sustainable development in local society.

**Mr. SUN Yiting, Senior Advisor of China Energy Conservation and Environmental Protection Group Consulting Ltd. (China)**, made his presentation on “Green Finance for Sustainable Communities”. He started with four key words that enable to realize sustainable communities: low carbon, smart, funding demand and funding mobilization. With regard to supporting environmentally sustainable growth globally, China scaled up green finance. He introduced two financial instruments. One was Green Credit. Under two policy frameworks, three green sectors of emerging industries of strategic importance and 15 green projects and services were set as funding targets.

Currently, 10 per cent of the bank lending went to the green projects and services, and more than the half of them were spent for green communication and transportation and renewable and new energy. The other was Green Bond. The Green Bond were consisted of two funds; the Green Financial Bond funded by the financial institutions, and Green Enterprise Bond funded by the corporations. By October 31, 2019, Chinese institutions issued 148 green bonds with amount of CNY235.736bn (USD33.68bn). He stated that China's Climate Finance has been achieving positive results in transitioning to low carbon, climate resilient development, capacity building and awareness raising.

**Ms. YANG Suin, Deputy Director of Ministry of Environment (Korea),** delivered her presentation on "Plans and Results of the Korean Environmental Industry Fund for the Future." She explained that the overview work of the Environmental Industry Fund for the Future was launched in 2017 and the governmental support of enacting acts for support environmental industry. Through the simplified operating process and system, the fund is expected to be established 500 billion Korean Republic won by 2021. She stated that the Ministry seeks for investment target, creates investment environment, and performs management in order to improve the investment conditions for the environmental industry which grows rapidly and keep virtuous cycle of the environmental industry development through recovery of investment and reinvestment.

**During discussion time,** an active discussion was made.

- 1) **Mr. LI Lihua to Ms. YANG Suin :** What is the ratio of government and company out of the fund resources? Are companies able to receive benefit when the fund period was over?

**Ms. YANG Suin to Mr. LI Lihua:** Government owns 47.50%. Companies could take a part of benefit.

## **SESSION 6: Contribution for Sustainable Society by Business Sector**

**Mr. SHAO Kunkun, Managing Director of IEM HOLDINGS (China)**, Chair of Session 6, introduced the topic and the presenters of the session.

**Ms. KIM Kyeong Yeon, Senior Consultant of ECO & PARTNERS (Korea)**, delivered her presentation on “Contribution to achieving SDGs through environmental industry’s participation in global cooperation projects”. ECO & PARTNERS provides various sustainable development-related consulting services for governments and corporates as well as advisory services for international organizations, governments and businesses of developing countries. ECO & PARTNERS mentioned that Environmental Industry in Korea turns their obligation into a chance and endeavors to practice of sustainable development with a view to enter a new emerging market. She introduced a series of infrastructure projects implemented by some Korean corporations and funded by Governmental ODA Agency such as KOICA and EDCF and Multilateral ODA Organizations. A few of technology solutions to developing countries in order to achieve SDGs goals.

**Mr. MATSUNAGA Yasushi, Marketing & Sales Director, Shabondama Soap Co., Ltd. (Japan)**, delivered a presentation on “-Towards Sustainable Community Development- Efforts to meet SDGs by Shabondama Soap Co., Ltd.”. Describing their corporate and environmental principles, he introduced their development history of additive-free soap. He described that the test result of synthetic surfactant by showing a video on an experiment to horse mackerel. This human-friendly product had 100 per cent of biodegradability and low hazard for aquatic lives and plants resulting in environmentally friendly product. He stated their corporation expanded the business by promoting this human and environmentally friendly product as their main product. He then explained their initiatives for SDGs implemented both nationwide and worldwide. In addition, their corporation established the Research Centre for Infectious Diseases to promote cure for infectious diseases in collaboration with industry-

academia and promoted environmental education through delivering lectures and receiving tours at their factory. He concluded his presentation with introduction of their future activities to contribute to the development of sustainable community by achieving all SDGs and he called for the participants to choose human and environmentally friendly additive-free soap for our future environment.

**Mr. ZHAO Rong, President of Delta Aluminium Industry Co. Ltd. / Hon Wo Recycling (Holdings) Limited (China)**, made his presentation on “Prospect of Recycling Metal Industry and Explorations on Management.” He first gave an introduction of their corporation, explaining 70-year recycling nonferrous metal history in China. He described that the scrap metal import of China would be strictly controlled in future, and the recycling nonferrous metal industrial development has shown great significance in China. Also, he stated that it was inevitable way to build high-standard recycled resources industrial parks. As focusing on construction, environmental protection, management, services and supporting industrial chains is highly important, at the same time, it is necessary to establish innovation capabilities so as to develop the industry while taking account of combining new internet technologies and traditional industries. The presentation was concluded with showing the importance of learning from good practices presented at TREB5 in order to develop the recycling metal industry.

**During discussion time**, an active discussion was made.

1) **Mr. SHAO Kunkun to Ms. KIM Kyeong Yeon**: Do you conduct a third-party evaluation when implementing international aids?

**Ms. KIM Kyeong Yeon**: On studying process, we work with two experts, local expert and technical expert.

2) **Mr. SHAO Kunkun to Ms. KIM Kyeong Yeon**: How do you select suitable technologies to the local area, and how do you collaborate with them regarding project costs?

**Ms. KIM Kyeong Yeon to Mr. SHAO Kunkun:** The government is also involved at demand survey. Also, partner companies check the project.

**Ms. YANG Suin to Mr. SHAO Kunkun:** Most projects are implemented with local entities.

3) **Mr. SUN Yiyong to Ms. KIM Kyeong Yeon:** How much do private companies raise funding?

4) **Ms. KIM Kyeong Yeon to Mr. SUN Yiyong:** Some banks are involved.

5) **Mr. QIU Yizheng to Mr. ZHAO Rong:** Do you have any prospect to draw Sino-Japan cooperation in recycling metal industry when your company make overseas development and investment in the third countries?

**Mr. ZHAO Rong to Mr. QIU Yizheng:** We have been cooperating in Thailand at a commercial basis. We would like to cooperate with Japan.

## **SESSION 7: Practice of Business Activities with Environmental Consideration e.g. Water Treatment or Air Pollution Prevention, Energy Conservation or Renewable Energy**

**Prof. KIM Doohwan, Technical Adviser of Kyunghwa Engineering Co. Ltd., (Korea),** Chair of Session 7, introduced the topic and the presenters of the session.

**Mr. FUKUDA Ryuji, Manager of KANEKA Corporation (Japan),** delivered his presentation on “KANEKA Biodegradable Polymer PHBH”. He first had a brief introduction of their corporation, including the engagement in ESG. He then explained their representative product PHBH. This innovative biopolymer was 100% bio-based and biodegradable. The product test showed that it had biodegradability equal to or higher than that of cellulose which was a component of paper. Also it was proved that PHBH demonstrated capability of biodegrades in soil and sea water. He introduced that the joint development of products using PHBH and related initiatives were under way in earnest. KANEKA aims to expand their business by increasing production capacity through intensive investment and due to an increase of demand for

biodegradable polymers in the world. He emphasized that KANEKA would accelerate the development of applications of PHBH and achieve 20,000 tons-scale business soon in the future.

**Mr. CHEN Dengke, Technical Director of Shanghai ANJULE Environmental Protection Technology Co. Ltd. (China)**, made his presentation on “Research and Application of GRTO in VOCs Governance.” He started with a brief introduction of their corporation. They were the environmentally friendly high-tech company certified by Chinese ministry. He then explained about their services focusing GRTO (Guarantee Regenerative Thermal Oxidizer) in VOCs (Volatile Organic Compounds) Governance Technology. This international leading brand Anjule GRTO is applied to various worldwide industries, namely petrochemical, coal chemical, and coking. Having many advantages to attract the world, their outstanding safety has been building trust of the world’s top companies. The GRTO safety is guaranteed by three measures, hardware security, operational safety and software security, and has realized zero poppet riser valve technology and 99.9% purification efficiency without accidents for ten years. The presentation was concluded with distinctive examples of Anjule GRTO application for corporation in Japan.

**Ms. CHOI Jina, Team Manager of Korea Environmental Industry Association (Korea)**, presented “Status of Environmental Industry of Korea”. She firstly gave a brief introduction of the environmental industry market in Korea. As the Korean market expanded the size, the export amount also increased from 1,275 billion Korean Republic won to 8,061 billion within 10 years. She introduced the status of three main media. In the water disposal field, they developed the excellent large-scale sea water desalinization technology, which shares 50 per cent of the world market. She then explained eco-friendly sanitary landfill, perfect leachate treatment and their intensive investment in the technologies to produce resources and energy from waste as examples of resource circulation technologies. Lastly, she described that the air pollution prevention technologies including excellent ship exhausted fume

denitrification/ desulfurization/ dust collection technologies and car emissions management technologies such as DPF.

**During discussion time**, active discussion was made.

- 1) **Ms. YANG Suin to all participants:** We are interested in air quality improvement and VOCs. We would like to strengthen the cooperation with Japan and China.

### **Session 8: Summarizing Session**

All delegates actively participated in the review and discussion of meeting minutes.

The final session was made by the host, **Mr. GOTO Toshihiko, CEO of Sustainability Forum Japan (Japan)**.

**During discussion time**, active discussion was made.

**Prof. KIM Doohwan, Technical Advisor of Kyunghwa Engineering Co., Ltd. (Korea)** gave an introduction to the 6th TREB.

**Prof. KIM Doohwan, Technical Advisor of Kyunghwa Engineering Co., Ltd. (Korea)** made a closing address. He expressed his gratitude to all participants.

**Ms. LIU Ting, Section Chief / Senior Engineer of Foreign Environmental Cooperation Center, Ministry of Ecology and Environment (China)** made a closing address. She thanked participants for having a great roundtable.

**Mr. GOTO Toshihiko, CEO of Sustainability Forum Japan (Japan)** made a closing address. He expressed his thanks to participants from three countries for making this roundtable fruitful.

**Mr. UEDA Yasuharu, Deputy Director-General of General Policy Division, Ministry of the Environment (Japan)** made closing remarks. He expressed his gratitude to all participants from China, Korea and Japan. He welcomed the successful discussions and the information of the 6th TREB in Korea next year.