ICETT

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INTERNATIONAL CENTER FOR ENVIRONMENTAL TECHNOLOGY TRANSFER

CONTENTS

FY2008, commissioned by Mie Prefecture

Environmental Management Human Resources Development Survey Project: Visit by students of Japan-Germany Dual Masters Degree Program in International Material Flow Management (IMAT)

Outline

This year again, in response to the invitation by the governments of Mie Prefecture and Yokkaichi City, a group of 14 comprising students and a lecturer of IMAT, a Japan-Germany Dual Master's Degree Program, made a seven days visit to Mie Prefecture from January 11. In addition to the courtesy calls on Akihiko Noro, the Governor of Mie Prefecture, and Toshiyuki Tanaka, the Mayor of Yokkaichi City, the group visited 15 sites, including companies, facilities and schools in the Prefecture, for environmental observation. They also participated in an environmental seminar to acquire extensive experience and knowledge, while exchanging with the students of Yokkaichi University.

Background and purpose of the project

German University of Applied Science Trier, known for its environmental management studies, and Ritsumeikan Asia Pacific University (APU) located in Beppu City, Oita Prefecture, offer a joint master's degree program focusing on environmental issues, called "International Material Flow Management" (IMAT). Students in this program study for one year in Japan and one year in Germany, to acquire master's degrees from both universities.

The exchange with IMAT started in autumn two years ago, when Governor Noro and former Yokkaichi City Mayor Tetsuo Inoue visited University of Applied Science Trier. Last January, 25 students and lecturers visited Mie Prefecture. This year, ICETT was commissioned to plan and host the project.

Project outline and schedule

Students:
On the morning of January 11, 13 participating students (6 males, 7 females) who are currently studying at APU arrived in Nagoya via overnight bus. The students were from nine countries, including Indonesia, China, India, Myanmar, Germany, Croatia, Ghana and Uganda; Ms. Cle-Anne from Trinidad and Tobago was the leader. Ms. Andante Hadi P. and Ms. Andhika Okktovina, from Indonesia, spoke fluent Japanese, as they have been studying at APU for four years. Half of the participating students introduced themselves in Japanese. This year again, Mr. Knaus came from Germany to serve as Lecturer and Project Manager.

Schedule:
Besides courtesy calls, the participants visited many companies and facilities that have realized environment-related achievements. At each company, the students had lectures on the company and plant, then moved to plant tours. Despite the rather tight schedule of the bus tour, the students completed all the scheduled visits and held discussions till midnight after returning to ICETT.

Date	Morning	Afternoon
Jan 11 Sun	*Arriving at ICETT	*Welcome party *Joint study meeting
Jan 12 Mon	*Chubu Electric Co.'s Kawagoe Power Plant	*Sanyu Giken *Tsu Housing Center
Jan 13 Tue	*North Water Purification Center *Toshiba Corporation Semiconductor Company	*Yokkaichi Chuo Technical High School *Waste Disposal Center *Courtesy call on Yokkaichi City Mayor
Jan 14 Wed	*Morita Holdings	*Aino Agricultural High School
Jan 15 Thu	*Courtesy call on Mie Prefecture Governor	*MFCA seminar
Jan 16 Fri	*Sankei Kogyo *Suzuka Fuji Xerox	*Taiheiyo Cement Corporation
Jan 17 Sat	*Summary *Closing Ceremony	*Departure from ICETT

Ms. Okktovina (right) and Mr.Leo from Indonesia, at the welcome party

Exchange with students of Yokkaichi University

In addition to ICETT, Mie Prefecture and Yokkaichi City staff who took part in the bus tour, on January 11 and 12 Prof. Nitta, students and staff members of the Faculty of Environmental and Information Science, Yokkaichi University joined the program to enjoy exchanges with participating students. On the 11th, 5 students from the Nitta laboratory gave presentations in English regarding their research on the current status of local recycling businesses. These presentations were Ise Newspaper's top story on the following day.


伊勢新聞

県内企業に環境視察

「先進的な活動に興味

独のトリアー単科大生ら来県

Jan 12 Ise Newspaper, as the top article

Courtesy calls on the Governor of Mie Prefecture and the Mayor of Yokkaichi City

The students visited Yokkaichi City Hall in the afternoon of the 13th to pay a courtesy call on new Mayor Tanaka, and the prefectural office in the morning of the 15th to pay a courtesy call on Governor Noro. After each visit, they exchanged opinions with the staff members of the environment-related sections.

Gift presented to new Mayor Tanaka by Ms. Cle-Anne, representing the students

Commemorative photo with Governor Noro

Participation in MFCA seminar

In the afternoon on Jan 15, at Kirara Hall of the Suzuka-sanroku Research Park Center located next to ICETT, a Material Flow Cost Accounting (MFCA) seminar was held by Mie Prefecture under the sponsorship of METI. The students participated in the seminar, at which IMAT lecturer Mr. Knaus gave a keynote speech titled "Material Flow Management."

Conclusion

Some proposals were summarized on the final day. One impressive opinion concerned Japanese houses, whose U index (heat retention index) = 6, which is 6 times worse than houses in Europe (U = 2 or below) and requires improvement, with revision of laws in view.
After receiving their completion certificates, the participant students left ICETT in the afternoon and returned to Beppu via overnight bus.

Group photo after closing ceremony

Despite the cold snowy weather during the period, the program provided the participants with opportunities not only to study, but also to experience such examples of Japanese culture as Oshichiya (7-night memorial service) at Senjuji Temple in Tsu City and a visit to Ueno Castle.

We expect this visit will be beneficial not only for the IMAT students, but also for environmental management human resources development in Mie Prefecture. We thank you all for your cooperation with this project.

(Sonobe, Matsuoka)

FY2008, commissioned by Mie Prefecture

Environmental Cooperation Program for Asia (ECPA)

Outline

ICETT has conducted “Environmental Cooperation Program for Asia” (ECPA), commissioned by Mie Prefecture, since fiscal 1998. Developing nations in Asia are faced with water contamination, air pollution and solid waste disposal problems that have arisen locally in association with rapid economic growth. These nations are also increasingly exposed to cross-border pollution and global environmental problems, including global warming due to increased emission of greenhouse gases, such as carbon dioxide. The resolution or control of these worsening problems requires spontaneous efforts based on collaboration among relevant parties (government, businesses, residents, various organizations). Mie Prefecture, having overcome the Yokkaichi Pollution, has a wealth of knowledge and experience regarding environmental preservation. As part of its active commitment to international environmental cooperation, the Prefecture has implemented comprehensive policies for environmental preservation that include environment improvement planning and human resources development, while sharing such policy achievements with other areas in Asia, so as to help developing nations resolve their increasingly serious environmental problems. This year, the program selected Sihanoukville, a special city of Cambodia, as the sixth country.

Overview of Sihanoukville

The Kingdom of Cambodia and Sihanoukville

Sihanoukville has an area of 868 km^2 and a population of 200,000. The three administrative districts in the City are subdivided into 22 communes and 94 villages.

Program background and outline

ICETT has conducted “Environmental Cooperation Program for Asia” (ECPA), commissioned by Mie Prefecture, since fiscal 1998. As part of Mie Prefecture’s commitment to international environmental cooperation, the program aims to encourage local governments in Asia to decide on environmental plans and carry out environmental improvement. Environmental improvement plans were developed and environmental study centers were established in Imus City, Philippines in fiscal 1998 and 1999; Rayong City, Thailand in 2000 and 2001; Probolinggo City, Indonesia in 2002 and 2003, and Ha Dong City, Vietnam in 2004 and 2005. The Mongolian People’s Republic was selected for fiscal 2006 and 2007, and a project was carried out in the BayanZurkh District in the administrative district of the capital, Ulaanbaatar. This ECPA project focused particularly on human resources development, placing high emphasis on Trainer Training (training participants, who are involved in ICETT projects, serve as instructors and leaders to establish a system for developing trainees.)

This fiscal year, Sihanoukville, a special city in the Kingdom of Cambodia, was selected as the sixth country. An implementation agreement was concluded while the current situation of environmental preservation was analyzed, problems were narrowed down, and the basic environmental plan was decided. Few local governments or assisting organizations in Japan have thus far been involved in helping environmental preservation of this city. Since increased tourism from abroad is expected, as are expanded trade volume and increased foreign currency inflow, more attention will be drawn to the importance of the basic environmental plan. Under such circumstances, the enlightenment seminar and the training program in Japan were positioned as the “pillars” of this project.

Human resources development activities in the enlightenment seminar and the training program in Japan sought to enhance the potential abilities of city officials in charge of policy implementation, regarding building environmental preservation strategies, sharing information related to waste disposal and developing tourism in consideration of the environment. The training emphasized mastery of basic knowledge regarding the fundamental environmental plan and decision-making method (know-how), enabling trainees to implement policies as leading instructors.

Signing Ceremony: October 15, 2008
Enlightenment seminar: October 15, 2008
Number of participants: 76

At the signing ceremony, the ICETT Managing Director signed the Implementation Agreement with the Mayor of Sihanoukville. The enlightenment seminar was also held in conjunction with the ceremony-- not only to clarify the significance and purpose of this ECPA project, but also to emphasize the importance of establishing a basic environmental plan. Moreover, experts were invited from the United Nations Industrial Development Organization (UNIDO), the Ministry of Environment and the Ministry of Education, Youth and Sports of the Kingdom of Cambodia to introduce the environmental policies of the country.

Training program in Japan: November 30 – December 20
Number of trainees invited: 9

This training program was unique in that it invited not only administrative officials in the departments of environment, tourism, fishery etc., but also relevant business people and local residents, with the aims of encouraging further commitment by all related parties and contributing to deeper understanding of environmental preservation, as well as to the promotion of environmental preservation policies. The training addressed topics considered important in Sihanoukville, from preventing environmental problems to waste issues and water preservation. The objective of the training was to enable participants to implement practical measures in their home countries through deeper understanding of the environmental preservation efforts in Japan, and of their importance. Through training the trainees shared knowledge of environmental preservation in Mie Prefecture, while exchanging opinions with experts from the Department of Environment and Forestry, and during an official visit to the deputy governor.

After reaffirming the importance of environmental issues in Sihanoukville and developing shared understanding of the problems faced by each trainee through report presentations, lectures on Yokkaichi Pollution raised trainees' environmental awareness and taught them techniques for preventing environmental pollution. This achieved deeper understanding of the current situation of waste disposal, as well as of measures and policies for waste reduction. There was also a presentation on the case of a resort area in the Shima district, one of the tourist sites in the Prefecture, which gave trainees insight not only into environmental preservation measures, but also into tourism development. Trainees visited a Shima City facility offering "beach experience," where they enjoyed various ocean-related experiences. (See article.)

Program results and future outlook

Regarding policies and technologies for environmental preservation in Japan, training participants from Cambodia showed particular interest in 1) the actual status of environmental education for children, 2) composting of garbage and 3) the current status of waste disposal by public institutions.
After round-the-clock efforts toward establishing the City's first basic environmental plan, the training program in Japan successfully ended on December 20; each trainee received a completion certificate.

Enlightenment seminar: March 2009 (scheduled)
Number of participants: 50 to 80 (expected)

Trainees who have completed the ICETT training program are expected to work actively as trainers in the Kingdom of Cambodia. An enlightenment seminar is planned for March in Sihanoukville, where the basic environmental plan established during training will be open to interested parties and citizens of the City and implementation of practical environmental preservation measures will be encouraged, through the cooperation of all parties.

(Ueda, Mashita)

Energy Efficiency Improvement Program in China

Outline

Since April 1, 2008, ICETT has conducted the “Energy Efficiency Improvement Program in China” as a METI-supported program in collaboration with relevant organizations in China. The program targets Yunnan and Gansu Provinces in China, with the aim of helping prevent global warming by reducing greenhouse gas emissions through energy efficiency improvement. The following presents the case of Yunnan Province.

Background

Global warming is increasingly attracting global attention as a serious environmental issue calling for urgent action, through international collaboration and through the systems of individual countries. China, being the world’s second largest emitter of greenhouse gases, has been promoting the reduction of its greenhouse gases emissions, especially by its industrial sector. The country’s 11th 5-year Plan has the binding objective of reducing energy consumption per unit of GDP by 20% by 2010. Although a certain level of energy saving has been achieved at the initiative of the central and local governments over the past two years, further efforts are required to achieve the objective.

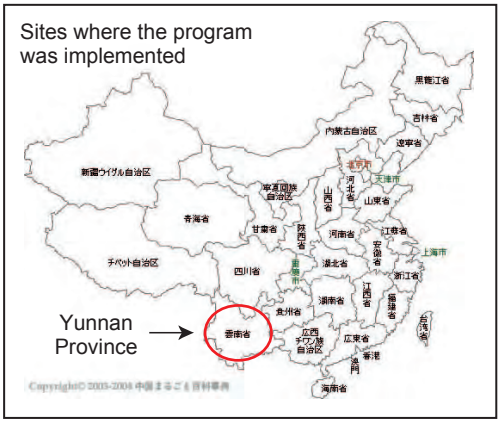
Under these circumstances, ICETT, with help from a team of Chinese experts led by Prof. Meng of Tsinghua University, conducted a survey in fiscal 2007 on energy-saving needs in China. The results showed that the Yunnan Provincial Government had been promoting the establishment of energy efficiency improvement policies, while Yunnan Energy Efficiency Technology Service Center had been actively supporting the implementation of energy efficiency improvement measures by companies. Yunnan Province has various energy-intensive industries, relying on old-fashioned plant equipment and production processes. To reduce energy consumption in the Province, effective energy-saving measures must be taken.

With this as background, the program has launched various activities targeting Yunnan Province, with the aim of helping prevent global warming by reducing greenhouse gas emissions through energy efficiency improvement.

Purpose and outline of the program

While the purpose of this program is to help prevent global warming, the program target was narrowed down to the chemical fertilizer industry, an energy-intensive industry, with the goal of reducing greenhouse gas emissions by improving energy efficiency in the industry. Activities implemented under this program include energy conservation diagnosis at model plants and technical assistance in improving energy-saving technologies and energy management methods. These efforts are aimed at advancing toward the program’s goal by practically reducing energy consumption. At the same time, activities are carried out that indirectly advance toward the goal, such as by providing training for the entire chemical fertilizer industry in order to transfer or disseminate experience and technologies cultivated in Japan, and to enhance understanding of energy efficiency among participants.

Meanwhile, technical guidance is provided for companies and Yunnan Energy Efficiency Technology Service Center, to help them become capable of implementing more effective measures for energy efficiency improvement and thereby strengthen energy-related policies in Yunnan Province. Moreover, workshops are held to disseminate energy conservation measures for chemical fertilizer industry identified at the model plants to other similar chemical fertilizer plants in Yunnan province, in hope of making them sustainable and maximizing their effects.



Program activities

This program consists of two projects: 1) energy efficiency improvement at model plants and 2) energy conservation training

1) Energy efficiency improvement at model plants

The purpose of this project is to encourage the chemical fertilizer industry in Yunnan Province to shift from the conventional production process to a more energy-efficient production process.

Under this model project, the research for selection of model plants and the energy conservation diagnosis at the model plants were performed in May and August, respectively.

1. Research for selection of model plants

Five plants were subjected to a simplified energy conservation diagnosis in order to select two as model plants for chemical fertilizer industry in Yunnan Province. In

the research, relevant personnel of the plants were interviewed and on-site inspections were conducted, mainly by Japanese expert. After the research, evaluation and discussions were made in the project team on the basis of selection criteria including the simplified energy conservation diagnosis results, motivation and institutional readiness for energy efficiency improvement, scale of energy consumption, potential for energy efficiency improvement and versatility of energy efficiency improvement. Yuntianhua International Chemical Co., Ltd. Yunfeng and Tonghai Chemical Ltd. were then selected as the model plants eligible to receive assistance.

Energy conservation diagnosis at a chemical fertilizer plant

2. Energy conservation diagnosis at model plants

While the progress of the simplified energy conservation diagnosis results review was monitored, the two model plants underwent detailed energy conservation diagnosis. They had eagerly accepted the proposals for improvement suggested by the expert on the basis of the simplified energy conservation diagnosis results obtained in May, showing their positive attitude toward energy efficiency improvement.

The expert provided the model plants with advice and instructions for more effective improvement, as well as new suggestions for further energy efficiency improvement based on the detailed energy conservation diagnosis.

Energy efficiency improvement guidance for chemical fertilizer plant staff

Meanwhile, trainings on energy efficiency improvement were held, to deepen understanding of the suggested improvement technologies and promote the implementation of improvement measures.

2) Energy conservation training

A training was held July 14-18 with a total 66 participants, including officials of the Yunnan Provincial government and management personnel of the chemical fertilizer plants. On the first day, lectures were given on the energy-saving policies of Yunnan Province, the central government's subsidies for promoting energy efficiency improvement, and energy-saving measures in Japan. The lectures, in which experts in each field explained the global concerns of energy demand and greenhouse gas emissions, enhanced participants' understanding of the relationship between energy efficiency improvement, for which companies are required to take urgent action, and the current status of the global environment. The lectures on the second and third days, technological information regarding energy saving for each device and process in a plant, were provided by a Japanese expert. On the fourth day, a Chinese expert gave lectures on energy auditing and energy conservation plans. The need for energy auditing and the contents to be included in an audit summary report were explained. On the final day, group discussions were held regarding the problems of energy efficiency improvement in plants, to prepare participants for the launching of energy-saving activities at their companies, after the training.

In the feedback questionnaire collected at the end of training, many participants said that they obtained useful information from the specific explanations on energy saving, thanks to much more practical case studies than those in any other training they had experienced.

Energy conservation training targeting company management personnel

Program achievements and future activities

Under the model project, the effects of energy efficiency improvement measures in model plants proposed by Japanese expert were calculated. As a result, the measures that each model plant has decided to take are estimated to reduce the CO_2 emissions by 89,000 tons per year at Yunfeng and by 30,000 tons per year at Tonghai Chemical, demonstrating substantial contribution to prevention of global warming.

We will continue to contribute to prevention of global warming by further disseminating the effects of the improvement measures at model plants broadly to the other similar chemical fertilizer plants in Yunnan Province.

(Shioya, Nagasaka)

FY2008, commissioned by Yokkaichi City

Global Environment Workshop for Junior High School Students 2008

ICETT has hosted the “Global Environment Workshop for Kids” since 2002 (targeting junior high school students since 2007, and elementary school students before that), with the aims of deepening the interest of children who will shoulder the future in global environmental issues and encouraging them to think about such issues from an international perspective.
This year, to commemorate the 111th anniversary of Yokkaichi City, junior and senior high school students from Tianjin City in China and Long Beach City in the US, a friendship city and a sister city of Yokkaichi City respectively, were invited. They studied environmental issues, exchanged opinions and deepened their understanding of the importance of international cooperation with students of Shiohama Junior High School in Yokkaichi City.

Through various experiences, the youngsters deepened their mutual understanding, thought together and interacted with each other.

On August 12, at the height of summer, a total of 28 participants - 8 junior and senior high school students and 2 leaders each from Tianjin City and Long Beach City, as well as 8 junior high school students from Yokkaichi City - arrived at ICETT, to stay together for the 9-day workshop.

First, the participants were given a tour around the city of Yokkaichi to familiarize them with the City. They boarded the patrol boat “Kamome” to visit Yokkaichi Port, then took a bus to tour the No. 1 Industrial Complex, the place of origin of Yokkaichi Pollution. Lectures were also given on the history of Yokkaichi Pollution and measures taken by Yokkaichi City for environmental preservation. During a lecture explaining harmonization of the environment, the students showed keen interest by asking some tough questions. At Chubu Electric Co.’s Kawagoe Electric Power Museum “Terra 46,” they learned the mechanism of electric power generation and conducted an experiment in generating electric power by pedaling bicycles. The students who were doing the pedaling and the students who were cheering them on both enjoyed the experiment regardless of their difference in nationalities. They also entered the Kawagoe Thermal Power Plant and had the precious experience of looking directly at the site of power generation.

To get to know each other, students introduced their cities, ports and schools. Tianjin City, with a population of approx. 10,240,000, is a municipality under the direct control of the central government along with Beijing, Shanghai etc. Facing Bohai Bay, Tianjin City has long thrived as a gateway to the sea. It has enjoyed remarkable economic growth, and further development as an industrial city has been progressed. Long Beach City, a large suburban city with a population of approx. 470,000, is located in the southern part of California State. Facing the Pacific Ocean and having an oilfield, it serves as an industrial port city.

Experiment at Terra 46

This workshop offered many diverse experiences that enabled students to directly learn about Japanese culture. They tried their hand at making bamboo fans, applying glue to a bamboo frame with a brush, pasting a sheet of Japanese paper on it and then drying it. Although the work seemed easy, they struggled to complete their fans with the help of members of the Yokkaichi Consumers Association and the Kita-Kawarada Women’s Circle, who joined the workshop as assistants. The students also learned how to use Furoshiki, a Japanese wrapping cloth that can be used to wrap and carry objects of any shape. These items represent the original forms of the Japanese traditional eco-style of living, in which use of fans instead of electric fans or air conditioners, or Furoshiki instead of plastic shopping bags is encouraged. Students wrote messages on each other’s completed fans and took them back to their home countries. “I will keep this as a treasure for my whole life,” said one student happily.

Making bamboo fans to experience a taste of Japanese culture

Another unique Japanese experience, “nagashi somen,” was also offered. With a device created by connecting bamboos by the members of an NPO called “a group for cultivating nature and children,” students enjoyed eating the somen noodles moving in a flow. Although they seemed to have a hard time using chopsticks and struggling with the flowing somen, they showed big appetites. Not only the somen noodles, but the flowing cucumbers and tomatoes also satisfied them. All of these foodstuff are produced locally without using extra fuels for transport/packaging, and are therefore environment-friendly and safe. The 18 students from Tianjin and Long Beach also experienced homestays in Japan. They were heartily welcomed by their host families, and though their period of stay was short, they seemed sad to leave.

Participation in the Environment Summit for Junior High School Students

The biggest event of this "Global Environment Workshop for Junior High School Students" was the "Environment Summit for Junior High School Students," hosted by the government of Yokkaichi City and the Yokkaichi City Environmental Forum. The purpose of the summit is to explore from a global perspective the roles of youth who will comprise the next generation, and contribute to the implementation of environmental activities.

After the keynote speech by Ms. Kazuko Murata, Vice Chairman of the Japanese Forum of Environmental Journalists, participants from Tianjin, Long Beach and Yokkaichi cities introduced their cities and ports.

Presentations were then given regarding the environmental situation of each city. Students held discussions till late every night in preparing for this presentation. In Tianjin City, air pollution has become a serious problem, especially due to the escalating use of passenger cars, which has had serious impact on human health, as well as on the acid rain phenomenon. The presentation concluded that the development of fuel cells and the dissemination of environmental education would comprise an effective solution to these problems. The presentation on Long Beach City addressed the issues of air pollution, water quality management and waste, and introduced various approaches taken as measures for improvement. As for

Resolution announced by all participants

Yokkaichi City, the experience of Yokkaichi Pollution and the measures taken by companies and local governments were presented. Ideas for the eco and recycling activities that can be performed by each citizen were also presented. Every team gave a well-conceived, wonderful presentation.

At the end of the Summit, all participants announced their resolution: "In order to protect our beautiful green earth, taking this environment summit as a starter, we will join hands to form a circle, and take action to protect the global environment."

"I realized that my actions could change the people around me."

There was a great deal of feedback from the participants after the Environment Summit. Here are some examples:

• The issue that interested me most is separation of trash. Although it seems troublesome, separation is scientifically reasonable; I will try to separate trash carefully from now on. (Tianjin City)
• I realized that there are a lot more things we can do to get more students involved in environmental activities. (Long Beach City)
• I understand that we should take action instead of just talking. (Yokkaichi City)

The comments above, though they are just part of what we received, indicate that the participants have discovered or are struggling to discover what they can do, and that changes have occurred to their awareness regarding the environment.

Furthermore, many participants said that they learned about the situations of other participants' countries and were impressed by their environmental preservation activities, and that they wanted this event to be continued, since they had such a good experience interacting with many people from other countries.

This experience of exchanging with students of the same age from different countries will have a definite impact on their future, an impact we believe is positive, not negative. This was a long workshop at 9 days, but it seemed too short for the participating students. All the boys and girls cried at the farewell. I am grateful that all participants could stay till the end and return home safely, thanks to the cooperation of all of you. As the staff in charge, I personally appreciate the opportunity of being able to see all 24 of your smiles. Thank you! (Yada)

CTI International Research Exchange Program

CTI side event held at the 14th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP14)

From December 1 to 12, 2008, the 14th Conference of the Parties (COP14) to the United Nations Framework Convention on Climate Change (UNFCCC) was held in the historical city of Poznan, Poland, where future schedules were decided regarding the framework for the next greenhouse gas emission reduction agreement at COP15, to be held in Denmark in 2009. UNFCCC is a treaty whose governing organization determines frameworks for international commitment, having as its ultimate objective the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." Under the framework for addressing this challenge that confronts all humankind, the Ad hoc Working Group for deciding the next international framework will at its March 2009 meeting organize the Chairman's Notes summarizing proposals from the member states, upon the basis of which negotiation text preparation is scheduled for the meeting in June.

Statement by Saito, Minister of the Environment, at a ministerial conference

ICETT, having participated in activities of CTI (Climate Technology Initiative) as CTI's international secretariat since 2003, on this occasion held a CTI side event in conjunction with the main conference. The event was attended by government officials, private sector representatives, international organizations, NGOs etc. committed to the issue of technology transfer relating to climate change. Reports on the progress of CTI activities and lessons learned from the deployment of low carbon technologies were presented.

Panelists at the CTI side event

CTI Chairman, Elmer Holt, opened the side event underlining that CTI has been fostering international cooperation in the accelerated development and diffusion of climate-friendly technologies, and that CTI's membership is open to all nations and organizations that share its objectives. He also underscored the important role the private sector plays in the enhancement of international technology transfer activities. This view is derived from CTI activities in tackling various challenges facing the facilitation of technology transfer under the UNFCCC, which made it clear that the governments and private sectors have their own roles to play. Given the current situation, in which most technology transfer activities are carried out by the private sector, the government's role is to establish policy/regulatory frameworks to encourage foreign direct investment that can help prevent climate change. He stressed that CTI's strength lies in its ability to closely cooperate with the governments of various countries, business circles, the International Energy Agency, UNFCCC secretariat and several other international organizations in promoting technology transfer.

Ms. Wanna Tanunchaiwatana of the UNFCCC Secretariat in charge of technology transfer says that CTI plays an important role in implementing the Expert Group on Technology Transfer (EGTT)'s action plan, as CTI contributed greatly to the implementation of a "training of trainers" workshop for project development in September 2008. The trainers who participated in that workshop will lead the regional workshop that UNFCCC plans to hold in Africa in early 2009, where CTI's Private Financing Advisory Network (PFAN) program is expected to play a significant role in the preparation of the project financing proposals.

CTI side event participants

The CTI PFAN is a public-private joint program launched by CTI as a means of bridging the gaps in project development, with the aim of helping project developers create financially viable proposals. Mr. Peter Storey, international coordinator of the CTI PFAN program, explained that the program provides project sponsors and developers in search of financing with free consulting services, and supports them through intellectual/technological assistance and matchmaking service, in the belief that improvement of the financial and technological abilities of the relevant parties is crucial to their obtaining funds for projects. In order to be accepted into the CTI PFAN program, however, a project must undergo a CTI PFAN review, in which from the content of the proposal it should be determined that the project's financial feasibility is highly likely to be enhanced by PFAN support. CTI's PFAN program proved its effectiveness in the resolution of COP13 in 2007; the EGTT is now discussing how this program can be incorporated into the next framework for greenhouse gas emission reduction. CTI's PFAN program is also providing support - mainly through consulting services by finance experts - for the "Asia Forum for Clean Energy Financing," for ASEAN countries to be organized by ICETT in Singapore in March 2009.

Mr. Dabajit Das of Winrock International India (WII) presented the outline of an energy efficiency intervention program targeting an industry cluster of steel-rolling mills in the Bhavnagar region of Gujarat State in India. Supported by the collaboration of WII and ICETT, this program seeks to reduce greenhouse gas emissions by improving/updating the cluster's inefficient system, with its high pollutant emissions, into a highly efficient, environmentally friendly and sustainable system, and to ultimately disseminate the improved technologies widely in other industrial clusters of steel-rolling mills. The improvement proposals for demonstration units, already drafted, include a wide range of specific improvement ideas, from short-term options such as introducing temperature controllers inside the heating furnaces to long-term options, such as introducing coal gasification equipment in the cluster. It seems highly likely that the successful cases in the project will spread widely if business operators and local financial institutions become aware that energy efficiency improvement leads to increased profit. Meanwhile, some developing nations view intellectual property rights as a barrier to technology transfer, but Mr. Das and Mr. Storey, who have been engaged in practical work in the project's development, said that intellectual property rights, though an issue that merits some consideration, is not as great a problem as some parties believe.

The CTI side event was broadcast via the UNFCCC webcast, to widely disseminate the CTI message. You can view the archived webcast via the link below.
http://copportal1.man.poznan.pl/Archive.aspx?EventID=72&Lang=floor

During the COP14 period, ICETT set up an exhibition booth as the CTI international secretariat, to provide information and answer specific questions.

(Kuroda)

"Tanabata" Star Festival

Participants from 27 countries gathered

An event celebrating "Tanabata" star festival was held on July 5, to promote exchanges between the participants, who were staying at ICETT, and the local residents who supported them, including members of the participants' host families.

Enjoying the cheerful night were 32 participants from 27 countries in three training courses, and many Japanese involved. Bamboo branches were decorated with colorful strips of paper on which participants wrote their wishes. After enjoying fireworks, participants from Latin America gave a dance performance. The training program at ICETT offers opportunities not only to learn environmental technologies, but also to discover the cultures and customs of other participants. We will continue to plan various events for mutual exchanges that can attract local citizens and raise their interest in ICETT and the countries of the participants.

(Tamura)

Participants and local children

Green Framework of Innovative Strategy on Sustainable Consumption and Productivity in the Philippines

Outline

Since fiscal 2007, ICETT has conducted the "Green Framework of Innovative Strategy on Sustainable Consumption and Productivity (GFIS Project) in the Philippines," targeting the Philippine's National Capital region and some specific local regions, in response to the requests from the Philippine Department of Science and Technology (DOST) and the Department of Environment and Natural Resources (DENR) of the Philippines. For the second year of the project, discussions were held with local Japanese governmental institutions and other relevant organizations, using the human networks developed in the Philippines and in accordance with METI policies for supporting the Philippines. Under this Project, model regions were selected as demonstration sites for promoting waste disposal, resource and energy savings. Human resources development activities were launched for company engineers and administrative officials responsible for providing technical instructions to companies, academic experts, local consultants, and other stakeholders. Technical trainings and orientation workshops for companies in the model regions (companies), as well as the training course in Japan (study tour) were offered. The training at ICETT was particularly emphasized, in which participants learned not only the resource-saving/energy-saving technologies of Japan, but also about recycling systems, through field tours to eco-towns, and about biomass as an alternative energy source to oil. Reports on the training can be seen on the websites of the Philippine government, DOST and DENR.

DOST http://cptech.dost.gov.ph/gfis.htm
DENR http://www.emb.gov.ph/icett-gfis/

Program outline and purpose

Since fiscal 2007, in response to a request from the Philippine government, ICETT has implemented activities for improving energy efficiency (EE) and reducing environmental burden, with support from Japan's Ministry of Economy, Trade and Industry (METI). The two major contributions to the project were the development of trainers capable of providing technical instructions to companies in the targeted areas, and the provision of technical assistance for the model companies (regions). This project is wherein support is provided for the selected model regions of the National Capital Region (Metro Manila), Region 3 (Central Luzon region), Region 4 (Southern Tagalog region), Region 5 (Bicol region), Region 6 (Western Visayas region, implemented fiscal 2007) and Region 10 (Central Mindanao region, implemented fiscal 2007), including their small-and medium-size companies. This year, in order to further strengthen the regional offices that will play a central role in the efforts by the model regions, companies and local communities, various activities were implemented through close cooperation with METI, as well as with the Japanese Embassy in the Philippines and the JETRO Manila Center.

In the field of human resources development for qualified trainers, specific activities were implemented with the aim of improving the ability and knowledge of Philippines local administrative officers regarding environmental preservation, resource-saving technologies, energy efficiency improvement, cleaner production (CP) and waste disposal. The objective of these activities is to enable government officials to serve as lead trainers and provide instructions to model companies and regions, after they obtain necessary knowledge and techniques (know-how). In the model regions and companies, measures that would reduce environmental burden, improve energy efficiency, promote recycling, improve productivity etc. were promoted. As a result, the extent to which environmental burden and waste have been reduced, and energy efficiency has been improved in each of the model regions (company) could be presented in visible fashion through the use of data and pictures.

During this year's training program in Japan, study tours to companies and administrative institutions in Yokkaichi City, Mie Prefecture, where ICETT is located, as well as in Kanagawa, Ehime and Fukuoka Prefectures, were offered to prepare participants for applying the environmental / energy measures and technologies developed in Japan to the model regions in the Philippines. The training program in Japan was offered four times: in May, June, November and December, with a total of 38 participants.

Results of training program in Japan

Participants who had completed the training program became trainers after returning to the Philippines.
They held opinion exchange meetings and provided technical assistance in the model regions (companies). As of February 2009, eleven seminars, workshops and opinion exchange meetings have been conducted and hosted solely by graduates of the training program in Japan, supported by DOST and DENR, with a total of 325 participants. These seminars demonstrated the improved instruction ability of the trainees. Several remarkable results achieved under this program for improving energy efficiency and reducing environmental burden include the following:

1) As mentioned earlier, DOST and DENR engineers

themselves reported the results of the project, and used the opportunities provided by the seminars and workshops to recommend improvements to participating company management and staff members. Graduates from ICETT's training program in Japan are actively working as experts in the existing DOST and DENR training programs. In fact, having undergone training at ICETT, engineers of each governmental office have improved their auditing abilities to a level at which they are capable of providing technical instructions by themselves. A total of 73 graduates of the training program in Japan have performed auditing or monitoring of companies without ICETT help.

2) Cutters that reduce seafood residues were introduced, and the switch was made to photovoltaic generation and energy-saving bulbs, by applying knowledge obtained through a visit to the Mie Fishermen's Association's Miura Fish Distribution Center, and through technical instruction.

3) During the study tour to Miura Co., Ltd. as requested by DOST, participants learned the importance of energy efficiency and high combustion efficiency boilers. After the tour, technical assistance by the company led to the conclusion of a purchase contract of ten boiler units, partly with the help of company sales agents.

4) The CP/EE review manual, compiled in cooperation with DOST, is used by the trainees in auditing and follow-ups.

5) Progress and achievements of this project are occasionally presented on the websites of DOST and DENR (URL shown at beginning of this article.)

Finally, the project was evaluated by experts from both inside and outside of ICETT. It is hoped that the successes achieved in this project will contribute to further dissemination of these achievements to other regions and industries.

Comments by external / internal experts

Comment by external expert

Yoshitaka Nitta, Professor, Faculty of Environmental and Information Sciences, Yokkaichi University

Conventional ODA programs expend the larger part of their funding on establishing infrastructure, such as in building facilities, roads and ports. But such days have gone. While the term "capacity building, (CB)" which refers to human resources development in developing countries, is widely anticipated, ICETT is one of the major leaders in taking specific measures and achieving certain results in CB. This project is demonstrated as a energy/ environment measures that ICETT has implemented in the Philippines. ICETT's efforts are now going to show their reality. I hope it will steadily implement good measures for the accomplishment of CB, and further raise the reputation of ICETT as an organization that makes best use of the Yokkaichi Pollution experience.

Comment by internal expert

ICETT Technical Advisor
(Makoto Hoki, Professor Emeritus of Mie University)

I think ICETT is heading in a highly effective direction. It focuses on local engineers in selected regions and provides technical and financial assistance for such model regions, to encourage their self-help efforts. ICETT will be providing training programs for relevant local organizations, with the aim of promoting their self-reliance and public-private partnership. While continuously engaging in this type of activities, ICETT works as a party to policy dialogues, such as those for the Green Aid Plan, wherein I believe ICETT's presence will continue to be of increased importance in many ways.

(Mashita, Ohashi)

The Project on Invitation to Japan for Environmental Research (PIER): Project to succeed and develop the basic philosophy of Aichi Expo

Since Aichi EXPO ended with great success in September 2005, having enjoyed participation from 121 countries, various projects have been launched to succeed and develop the Expo's basic philosophy of "bringing together and internationally exchanging the wisdom of the world to address global issues." As part of these successor projects, since last fiscal year ICETT has invited leading researchers in environment-related fields to Japan, the objective being to encourage transfer to the researchers' own countries of the knowledge and technologies they acquire through their research activities in Japan.

Under this project, in each of the four research fields of air, water, waste and global warming/energy, one researcher is selected from among the applicants (basically limited to researchers in the countries that participated in Aichi Expo). The selected researchers are eligible to engage in research activities in specialized research institutions in Japan. This project not only meets the needs of the individual researchers, it also gains the understanding and support of the institutions to which they belong.

The research activities for which researchers were invited under this project, which started last year (2007), are outlined below.
*Names of researchers are given as initials, to protect personal information.

Researcher, Research theme and the Host organization in FY2007

AIR field

Researcher: Ms. R.A.W.R.A (Central Environmental Authority, Democratic Socialist Republic of Sri Lanka)
Theme: Analysis of PM10 and identification of the particulate sources
Host organization & period: Laboratory of Energy and Environmental Engineering, Graduate School of Engineering, Osaka University (6 months)

WATER field

Researcher: Mr. A.E.A.N.A.B (Egyptian Environmental Affairs Agency, Arab Republic of Egypt)
Theme: Assessment of Sediment Quality
Host organization & period: Laboratory of Marine Microbiology, Graduate School of Bio-resources, Mie University (6 months)

WASTE field

Researcher: Ms. M.A.A (Department of Environment, Islamic Republic of Iran)
Theme: Battery Recycling Programs from the Points of Recycling Technologies and Policy Developments
Host organization & period: Environment Preservation Center, Kyoto University (6 months)

ENERGY field

Researcher: Mr. K.C.P (The Energy Resources Institute, India)
Theme: Integrated Gasification Combined Cycle (IGCC) with the Pulverized Coal Combustion and Improvement of Energy Efficiency
Host organization & period: Energy Engineering Research Laboratory, Central Research Institute of Electric Power Industry (3 months)

Researcher, Research theme and the Host organization in FY2008

AIR field

Researcher: Ms. A.T (Pollution Control Department, Ministry of Natural Resources and Environment, Kingdom of Thailand)
Theme: The Development of Analytical Method for VOCs
Host organization & period: Energy and Environment Research Division, Japan Automobile Research Institute (8 months)

WATER field

Researcher: Ms. C.P (Chulalongkorn University, Kingdom of Thailand)
Theme: Promoting Sustainable Water Resource Management with Decentralized Wastewater Treatment System
Host organization & period: Environmental Systems Laboratory, Department of Urban Engineering, the University of Tokyo (8 months)

WASTE field

Researcher: Ms. K. S (Center for Pulp & Paper, Agency for Industry and Research and Development, Ministry of Industry, Republic of Indonesia)
Theme: Utilization of Sludge from Pulp and Paper Industry for Composting
Host organization & period: Biological Environmental Engineering Laboratory, Faculty of Engineering, Shizuoka University (8 months)

GLOBAL ENVIRONMENT field

Researcher: Ms. M. H.M (Department of Environment, Islamic Republic of Iran)
Theme: Effective Methods & Materials for Climate Change Education in Iran by Know/How Approaches
Host organization & period: Social and Environmental Studies Laboratory, Fukuoka Institute of Technology (8 months)

(Minamikawa)

Overseas Seminars on ICETT Research & Development Projects

Since its founding in 1990, through close cooperation with companies, universities and research institutions both in Japan and abroad, ICETT has implemented research and development projects to develop appropriate technologies that match the situations of Japan and various other countries, as well as leading-edge technologies that can help preserve the global environment. The main projects are the “Research and Development on Global Environment Conservation-related Technologies” program (1990 – 2002) launched by the Ministry of International Trade and Industry (now Ministry of Economy, Trade and Industry) and its successor programs (2003 – 2007) “Research and Development on Global Warming Mitigation Technologies (Kyoto Protcol)” and “Development of on Industrial Pollution Prevention Technologies,” under which various technological developments have been realized. Regarding the achievements of these projects, seminars were given not only in Japan but in several other countries as well.

Since fiscal 2005, ICETT has held the R&D Seminars not only in Japan, but also in China and some Southeast Asian countries, focusing on a theme that matches the situation of each country, selected from among the themes of the completed technology development projects. The first meeting was held in January 2006 in Tianjin City, a sister city of Yokkaichi City. Because this meeting was well received, the meeting was held again in Tianjin Economic-Technological Development Area (TEDA) in December of the same year.

In 2007, other meetings were held in Map Ta Phut, Thailand (February) and in Hanoi, Vietnam (December), participated in by 70 persons. In February 2008, a R&D Seminar was held in Cebu, the Philippines, with 170 participants, at the invitation of Philippine Institute of Chemical Engineers, Inc. (PIChE).

Seminar in Thailand February 2007

Seminar in Hanoi in December 2007

Seminar in the Philippines in February 2008

In November 2008, ICETT co-hosted a R&D Seminar in Jakarta, Indonesia with the Agency for Industrial Research and Development (AIRD) of the Ministry of Industry (MoI), Indonesia, commemorating the 50th anniversary of Japan-Indonesia friendship. 150 participants attended the meeting.

Seminar in Jakarta in November 2008
Four Japanese lecturers and the ICETT Executive Director

ICETT will continue to hold report R&D Seminars overseas, to introduce technology development achievements that meet the needs of the respective country, and will play an active role in efforts to improve the global environment.

(Kamimura, Sonobe)

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