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FY 2003

# Global Eco-friendly Environmental Technology Dissemination and Awareness Project

(CDM Workshop)

Commissioned by: New Energy and Industrial Technology Development Organization (NEDO)

## 1 Introduction

The International Center for Environmental Technology Transfer (ICETT) has been working on human resource development programs for green productivity since 1998 as part of the Climate Technology Initiative (CTI)<sup>1</sup>. This is a scheme in which developed countries voluntarily develop and disseminate technology intended to reduce greenhouse gas emissions. Application of Cleaner Production (CP), resource and energy saving technology and Clean Development Mechanism (CDM) has not made much progress in the developing countries of the Asia-Pacific region for reasons such as manpower and capital shortfalls and subsequent delays in plant modernization. Meanwhile, rapid industrialization is gathering pace with the recent industrial promotion campaigns.

The primary activity of this Project was the holding of workshops. Participants worked on capacity building to serve for sustainable development focusing on such things as CP, resource and energy saving technology, CDM and so forth. Based on partnerships with overseas governments and enterprises, the Project was intended to effectively assist with productivity enhancement in developing countries. Attention was also given to global warming control technology for the development of knowledge, technology and organizational ability through raising the awareness of administrators and engineers in the Asia-Pacific region. There were also capacity building programs for such things as CP and CDM in order to strongly promote the development and dissemination of technology conducive to reducing greenhouse gas emissions with the collaboration of developing countries.



Discussion in the workshop



An Environmental Administrator in the Third District

## 2 Project strategies

Each workshop and discussion had the aim of developing the Project to establish newer partnerships by enhancing capacity to take action in global cooperation, to make proposals to those governments and enterprises interested in establishing partnerships with assistance organizations and also to promote collaboration within the region. This Project also has the following major objectives to assist with administrative and private capacity building to serve as the basis for the independent efforts of Asian countries: (1) Introduce environmental conservation measures and technology involving global warming control; (2) Establish partnerships with the perspective of "South-South corporation" within the region. The Project therefore proposes the following strategies with both vertical and horizontal approaches to carry out the activities.

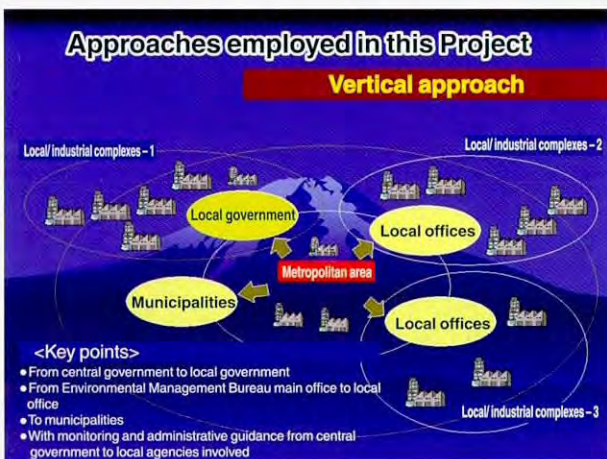
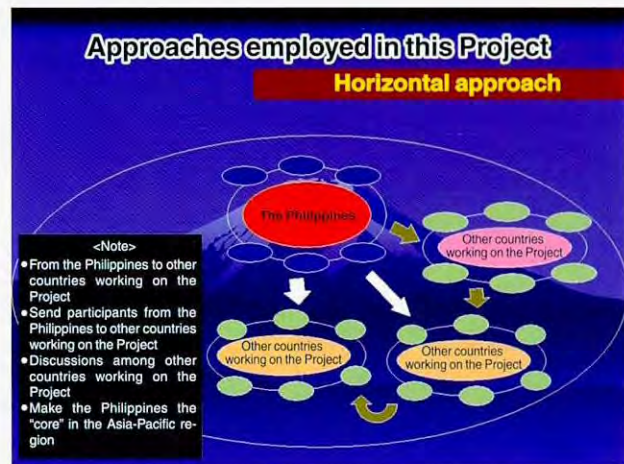
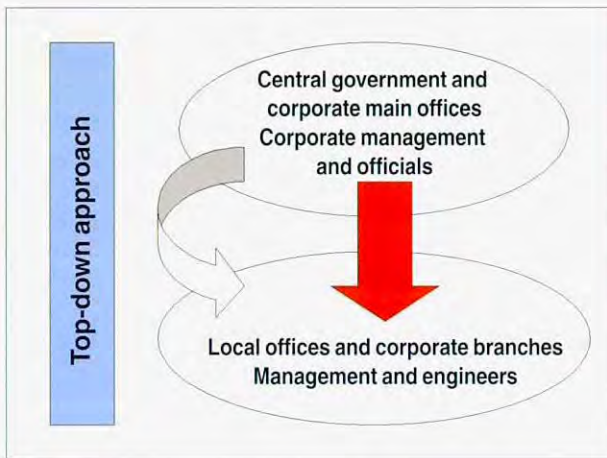
With the vertical approach to hold workshops in Metro Manila, the Philippines, capacity building programs were held for the central government offices of the Metropolitan area (Department of Environment and Natural Resources, Department of Science and Technology, Department of Energy, Department of Trade and Industry and their agencies) and administrators of their institution and corporate management and engineers from companies under the Chamber of Commerce and Industry. Other capacity building programs were held outside the Metro Manila area for the local agencies of the central government, municipalities, quasi-governmental environment organizations and corporate management and engineers from companies in the industrial complexes under the local offices of the Chamber of Commerce and Industry. Staff trained by ICETT were appointed as the lecturers.

As part of these approaches, the workshops held in Metro Manila appointed the ex-training participants who had completed training programs given by NEDO-ICETT in Japan for specialist resource persons and lecturers, as well as environmental specialists from international agencies and from Japan.

In particular, the ex-training participants who completed the programs presented the successful precedents in Japan. The Project will now need to develop the central-government-led top-down approach in order to regionally deploy the "know how" for capacity building established through the workshops in Metro Manila and the environmental conservation technology.

<sup>1</sup> CTI was proposed at the First Conference of the Parties to the U.N. Framework Convention on Climate Change (COP1) and the importance of international technology development, enhancement and dissemination in finding solutions for climatic change issues were recognized. It is a Convention held for signatories to the United Nations Conference on Environment and Development (UNCED; held in Rio de Janeiro, Brazil) in 1992 in order to stabilize the concentration of greenhouse gases (e.g.: carbonic anhydride, methane) in the atmosphere. These increased greenhouse gases have been warming the Earth which will have an adverse impact on nature including the ecosystem. Effective in 1994. Ratified as of now by 187 countries including Japan, and the EU.





Discussions are under way for the horizontal approach to develop activities in other Asia-Pacific countries which are keen to introduce CP and CDM from the Philippines as a starter.

This Project was established in order to demonstrate to or discuss with third countries those successful examples of CP/CDM awareness in the Philippines as well as in Japan, the government-led transition from CP to CDM by companies and successful cases of CP/CDM enhancement.

For these reasons, this Project has employed both the "vertical approach" and the "horizontal approach" for the solution of problems through capacity building. The problems include those such as noncompliant facilities and input materials for CP/CDM enhancement, lack of knowledge regarding CP/CDM on the part of veteran engineers and lack of understanding of CP/CDM on the part of corporate executives and management.

Simply transferring advanced technology from Japan to the Philippines is insufficient to fulfill the objective of disseminating useful technologies suitable for the Philippines. The Project shall therefore consider the economic, social and climatic conditions and technological level in the Philippines to create and disseminate the technology.

More specifically, taking into account the various difficulties confronting technological dissemination and

transfer, the most practical and efficient measure for technology transfer is to develop human resources. Specifically, this is capacity building which will enable planning and execution of energy efficiency improvement measures with minimum investment and in the most appropriate ways for developing countries. Accordingly, enhanced active workshop programs can accelerate capacity building with numerous multiplier effects. Capacity building will be effective when being carried out within a country but it will also produce desirable results when training participants are invited to developed countries including Japan. Continuous effects from this, however, cannot be expected because the number of persons who can receive training will be limited, and the training participants invited are especially the promising elites, who are likely to experience job relocation after returning to their countries. For these reasons, continuous capacity building outside the country is also indispensable.

From this perspective the most effective measure for human resource development is to have continuous on-the-spot technical assistance. Financial and human resources should be focused on this, which is also to follow up previous NEDO projects. This Project did not work on the physical technology transfer itself, but on developing the programs for directions consistent with other activities of Japan, recognizing again that this Project is being executed to "fertilize the soil" for smooth business technology transfer including capacity building in developing countries and raising awareness of environmental issues. The primary objectives of the assistance from Japan were to ensure that the necessity for CP and CDM is fully recognized and to increase the number of people who understand them. Additional discussions are also planned to ascertain if the proposed projects prepared in the workshops are actually feasible, and the results will be presented and reported to all interested parties.

### 3 Achievement of the Project

First, the Project achieved a great deal, as follows:

- The practical knowledge about the Philippines was well understood by participants (shown in the questionnaire)



- It implemented tailored programs in consideration of situations in the Philippines (NEDO-ICETT ex-training participants participatory programs)
- The programs were established through perspectives to select appropriate themes, to focus on the assistance areas in which Japan has expertise and to share the experience in Japan (general sessions: international organizations; successful cases: role assignment in Japan)
- Wide participation from the other side (advertised widely focusing on industrial society; not inclined toward specific administrative agencies or enterprises)
- Worked in collaboration and alliance with established assistance programs (reports to NEDO Head Office, NEDO Overseas Offices, Japanese Embassies, Japan External Trade Organization, Japan Bank for International Cooperation, etc.)

Second, discussions took place, mainly among ex-training participants of the NEDO-ICETT Project, on collaboration between the central government ministries and their local offices or among central government ministries. One of the special achievements is setting up discussions on effective capacity building and technology transfer with the Department of Science and Technology and the Department of Environment and Natural Resources of the Philippines as preparation for this Project. There was an idea to expand the discussions with the Project office to other ministries and departments. This is because it is deemed important to make central-government-led independent efforts within the Philippines, while discovering what is lacking and what should be learned from each other. In this way it is possible to complement each other through sharing the successful experiences and projects of one ministry with other ministries and through discussions as collaborative activities among ministries.

Third, there are key points important for dissemination of environment and resource and energy saving technology to developing countries through workshops. These are: to understand CP, resource and energy saving and CDM, to raise awareness of the issues and to ascertain how to solve problems.

This Project also included numerous discussions to solve problems such as setting environmental action plan sessions to raise awareness and having the participants discuss their expectations regarding the assistance from Japan and proposing issues to raise awareness of CP and CDM.



The action program sessions appeared to form an effective theme for this Project, as there were lectures and practical training suitable for actual situations to enhance independent efforts. It was not simply providing one-sided knowledge from developed countries to developing countries.

Fourth, this workshop was originally planned for 50 people but the actual number of participants was increased to 85. Possible reasons for the increased number of participants are as follows:

- (1) The Philippine Chamber of Commerce and Industry joined in to support this Project. This made it easier for the enterprises under the PCCI to participate, unlike in previous NEDO projects.
- (2) The theme included both CP and CDM which were timely issues so that people from companies which have already learned a lot about or are interested in CP and CDM could participate fully. Seventy-seven per cent of the participants were management and engineers from industrial enterprises.
- (3) The workshop was held in the Makati area which has numerous company head offices and is conveniently located.
- (4) Both medium and small sized enterprises from the Philippines, which are interested in CP and CDM and have raised awareness, participated in the workshop.

Fifth, more understanding of CP on the part of corporate management should be obtained even though the organization, measures, capacity building programs and training on CP are becoming permeated under the guidance of the Department of Environment and Natural Resources and the Department of Science and Technology. CDM also requires more awareness raising on the part of corporate officials and engineers as well as management. Issues to be considered for future projects in the Philippines included the fact that companies in the Philippines require assessment to ascertain appropriate CDM projects from the environmental conservation technology that each company possesses and also CDM awareness.

## 4 Prospect and issues for the future of this Project

Looking back on the action program sessions in the workshops of this Project, the necessity of CP and CDM as assistance from Japan were recognized, but the participants seemed to have expected to understand more and to obtain knowledge and technical information on environmental conservation technology and so forth. This also serves to permeate each type of CP technology and cross the bridge to CDM projects. The participants should fully grasp the actual conditions of CP and CDM in Japan and in the world and go back to their own work sites to carry out further discussions. They should reflect on the GAP projects among governments or carry out a project. It is important to realize the achievement of this Project as specific projects for sustainable cooperation among developing countries and Japan. Introducing cases of CP



and CDM in Japan and awareness raising of CDM project systems are earnestly requested for the prospect and issues for future activities of this Project. Specific case requests are as follows.

- (1) Implement programs for companies for awareness and understanding of CDM.
- (2) Raise CP awareness of corporate management or hold discussions.
- (3) Ensure environment conservation measures and technology are permeated from central government offices to local offices.
- (4) Implement continuous capacity building.
- (5) Implement capacity building including developing database of CP/CDM information (including example case study).
- (6) CDM training.
- (7) Enhance South-South corporation.

The next stage of action for this Project is to spread the Project from Metro Manila, making the Philippines the "core", to other countries and areas based on a request from the Philippine government. Capacity building is one of the effective methods for "technology transfer to and

international collaboration with developing countries" and short-term intensive training is one of the project establishment activities which serves to improve the environment of developing countries as well as to deepen knowledge. Thus, workshops will be examined to enable proposals for project plans employing partnership among international organizations, developing countries and Japan as well as the traditional project enhancement workshops.

ICETT is focused on projects for developing countries. The IEA/CTI Steering Committee held in Germany on September 22, 2003 decided to appoint Japan as presidency holder (two-year term) and ICETT to serve as the Secretariat of IEA/CTI, an international organization, effective from October 1. IEA/CTI is an organization established to solve global environmental problems led by European countries and ICETT will contribute more toward the issues by serving as its secretariat.



## Environmental Cooperation Program for Asia Environment Management Seminar Workshop

**(FY 2003 Commissioned by Mie Prefecture)**

In recent years, the ICETT has been implementing the "Environmental Cooperation Program for Asia (ECPA)". This program was commissioned by Mie Prefecture for comprehensive international environmental conservation, targeted at the level of the local municipality. It is implemented through cooperation between Mie Prefecture and local municipalities in Asian countries which are aiming for sustainable development.

ECPA Projects were implemented in Imus City, the Philippines in FY 1997-1999; in Rayong City, Thailand in FY 2000-2001; and in Probolinggo City<sup>1</sup> in East Java Province, Republic of Indonesia starting in FY 2002.

FY 2003 saw the final year of the Project in Probolinggo City, the third city to enjoy ECPA Projects and an Environment Management Seminar Workshop was held there in December 2003.

The main purpose of this Workshop was to make public the achievements and case examples of the ECPA Project for environmental improvement in Probolinggo City. The intended recipients were the citizens of Probolinggo and neighboring municipalities.

This time a Seminar Workshop was planned, as a seminar held in February 2003 was not fully successful in terms of failing to take note of a wide range of opinions

held at various levels of society.

Neighboring municipalities were asked to participate in the propagation of the pioneering environmental improvement activities in Probolinggo City. In all, 18 municipalities from all over Indonesia took part in this Seminar Workshop.

The Seminar Workshop was held over two days, December 17th-18th, in the main meeting room of Probolinggo City Hall in order to provide enough space for the numerous participants.

The Seminar took place on the first day, the 17th. A researcher engaged in studies at the Ministry of the Environment and a university in Indonesia was invited to be the speaker.

<sup>1</sup> The Republic of Indonesia is an archipelago of more than 1500 large and small islands and Probolinggo City is located in East Java Province on Java Island. It has a population of approx. 200,000 people. It lies 180 km to the east of Surabaya, the second-largest city in Indonesia, and is an important city for transportation. It is a suburban agricultural city also well-known in Indonesia for producing good mangoes and grapes. In coming years, Probolinggo is expected to experience economic growth with a number of recent foreign-capitalized companies making inroads.



A Probolinggo civil servant, in charge of the ECPA Project, reported that the city has been working on the "Basic Environmental Plan (BEP)" with the slogan of "a Green and Free Pollution municipality" as a desirable environmental vision. The city is establishing an "Environmental Action Plan" based on BEP, as well as working on practical activities such as sorted collection and recycling of household refuse. The importance and necessity of environmental education was explained, including allowing elementary schoolchildren to take part in the environment conservation activities in order to increase public awareness of the environmental issues.

Between lectures, the participants enjoyed an environmental play with the theme of an appeal for tree planting. This was performed by local elementary and junior high school students in ethnic dress. The play was well arranged with the traditional music and dance of Indonesia. The participants, the speaker and the staff of ICETT from Japan were really impressed by the passion for environmental conservation shown by the citizens of Probolinggo as well as others taking part.

The speaker, Mr. Helmy of the Ministry of the Environment, praised this Seminar highly, with a great deal of enthusiasm from the people of Probolinggo, saying that "The participants in this Seminar were from various levels of civic society and the elementary and junior high school students performed an original play to 'warm up' the Seminar, showing that the people of Probolinggo are highly interested in the environment. They also intend to establish their own BEP. Such a thing does not exist in Jakarta, our Capital, or its suburbs. In that sense, Probolinggo is the city with the highest interest in environmental issues in the whole of Indonesia."

The Japanese Consulate General in Surabaya conveyed his good wishes to the Seminar, as this year was designated as "The year of JAPAN- ASEAN Exchange in 2003". Thus, the first day of the Seminar came to a successful closure. Various news media representatives, including TV, radio stations and newspaper were present to collect news items.

On the second day (the 18th) a workshop was held, with discussions involving the participants. People from neighboring municipalities and the university researcher who spoke on the first day at the seminar also joined in the workshop.

The discussions had four unit sessions with different themes prepared by the organizers, and civil servants working on the ECPA Project moderated the discussions. Each unit session involved around 30 participants and they discussed various issues: (1) "Domestic refuse management", (2) "Industrial effluent management", (3) "Awareness raising among residents" and (4) "Environmental education". Each unit made a presentation

### JICA Group Training Course:

## "Capacity Building Regarding Global Warming (Kyoto Mechanism)"

A five-week training session commissioned by JICA was implemented from June 30 to August 1 in 2003.

Ten training participants from 10 developing countries (Argentina, Brazil, Chile, the Philippines, Viet Nam, Laos, Indonesia, Thailand, Turkey and Egypt) took part in the

after the discussions, where specific and proactive propositions (Environmental Action Plans) for each theme were presented to demonstrate the high level of interest in the environmental issues among the seminar participants (including citizens of Probolinggo).

The Seminar Workshop in Probolinggo came to a successful completion with 118 participants in total over the two days.

The ECPA Project in Probolinggo City in East Java, Indonesia is due for completion in March 2004; Probolinggo City has approximately quintupled the environmental budget (Approx. one billion rupias in 2002; two billion rupias in 2003; five billion rupias in 2004). There are plans to reform the organization set-up of Probolinggo Environment Office in 2004 to enhance its functions. The Environment Office was originally established in 2001.

There are also environment conservation activities designed to be appropriate for their own towns set up by Probolinggo civil servants who have experienced new environmental improvement activities. These include such things as the sorted collection of domestic refuse in Mie Prefecture through the ECPA Project and other activities for environmental education. Many of these are still in progress but are expected to be continued to make Probolinggo an Indonesian city of advanced environmental activities, both in name and in fact.

Probolinggo is now expected to be the core to diffuse the environment conservation activities to the whole of Indonesia as well as neighboring municipalities.

There were many fluctuations in international affairs from 2002 to 2003.

Incidents have occurred such as the terrorist bombing in Bali Island on October 12, 2002 and the SARS epidemic in Eastern Asia, mainly in China, which were not directly related to the ECPA Project but should have been concerned as we forwarded the Project.

The interested parties in ECPA Project in Probolinggo often said "Great, the Japanese are Asian as Indonesians are and they are like elder brothers for us" and "We sincerely appreciate the efforts of Mie Prefecture and ICETT whom respectively commission and implement the ECPA Project".

We also appreciate that those who have supported the ECPA Project are the warm-hearted Indonesian people, friendly toward the Japanese, and their passion to preserve the environment of their towns.

In truth, we give special thanks to the local interpreters for their sympathetic advice and solid support.

Last but not least, we also would like to express our appreciation to those other people, too numerous to mention, who have lent support to this ECPA Project.

training. The majority of them were administrative officers serving with their central governments.

Selection of the training participants required greater attention than in previous years. This was because the recruitment period was in early Spring, from February to April,



meaning that SARS was a major concern. Another factor was the great disparity in the relative weighting assigned by each country toward addressing the global warming issue.

The purpose of this course was training government personnel in charge of the “Kyoto Mechanisms”<sup>1</sup>. This is a system for trading greenhouse gas (GHG) emission credits included in the “Kyoto Protocol” involving the “United Nations Framework Convention on Climate Change (UNFCCC)”. The training is designed to be a countermeasure against global warming which will operate by improving on the “Technical trainings for global warming prevention” course held up until 2002.

The training’s focus was on the “Clean Development Mechanism (CDM)” for trading GHG emission credits between developing countries and developed countries, included in the “Kyoto Mechanisms”. It was established as a flexible measure, for developed countries to achieve the GHG reduction target. For this system to work, transference of money and technology from developed countries to developing countries is necessary. Moreover, it should also contribute to sustainable development in developing countries.

Established acceptance mechanisms in the developing countries, where the actual GHG emission reduction projects will take place, are also needed for this system to function. The training is designed with the objective that the training participants will become aware of what abilities are required in the developing countries and what roles they have in global warming prevention. The training included introduction to certain technologies with the potential of employment in actual CDM projects. In this way, the training participants could gain a clearer impression of actual “CDM” projects.

The “Kyoto Protocol”, however, has so far been largely ineffective because of issues such as the withdrawal of the USA, the world’s largest source of greenhouse gas emissions, and the non-ratification of Russia. Another issue is that developing countries are not obliged to carry out GHG emission reduction. While the system itself is still fairly uncertain and half of the training participants’ countries had not yet ratified the “Kyoto Protocol” it was difficult to deal with this theme in such a situation. We might think of its purpose as trying to look ahead to what might happen when the Kyoto Protocol is finally effective and to ask for the establishment of acceptance mechanisms for rules and projects.

The training curriculum started with orientation, to learn about the ICETT and life in Yokkaichi City, how to obtain information, how to use personal computers and to explain the structure of the curriculum. The orientation was followed by presentations from each training participant so the others grasp the conditions of the energy saving strategies and global warming prevention in each country. The job descriptions of each training participant were also laid out, to understand one another and share the issues.

Lectures were started after the orientation; there were five sessions as shown below, with specialists invited to introduce the state-of-the-art and technologies in each area.

- (1) Climate changes due to the accumulated GHG
- (2) The Kyoto Protocol and the Kyoto Mechanisms
- (3) Energy and resource saving for the reduced emissions
- (4) Introduction of recyclable energy and technology development to reduce GHG emissions
- (5) Creation of an environmental action plan for the training participants’ own countries to sum up the training.

Leading personnel in each area with up-to-date information were invited as lecturers. The latest materials were needed for the training as the rules for each area of the “Kyoto Mechanisms” are still being established and supplemented.

In total, we were assisted by twenty-two administrative organizations and nonprofit foundations as well as other corporate bodies. These included the Ministry of Economy, Trade and Industry, the Forestry Agency, NEDO, 10 organizations including Mie University, and 9 companies from major industrial fields (e.g.: electricity, oil, steel, pulp and paper, and automobile industries) for sessions to introduce energy and resource saving technology.

It was not too hot during the field training outside the ICETT building as we had a great deal of rain in July and the temperature did not rise very high, for good or for bad. The training lasted for five weeks but there were only 18 days for actual lectures excluding the orientation, the presentations to show the training results and the days-off. The schedule

<sup>1</sup> The Joint Implementation provided in Article 6, the CDM in Article 12 and the Emission Trading in Article 17 are the three mechanisms collectively known as the ‘Kyoto Mechanism’ among those included in the Kyoto Protocol. The names include “Kyoto” because these systems were agreed on at the Kyoto global warming conference (COP3; Third Conference of the Parties to the U.N. Framework Convention on Climate Change) held in December 1997.



A group photo taken after the opening meeting



Presentation of environmental action plans



for the training participants was really strenuous with 11 lectures at the ICETT and additional courses at companies and administrative organizations in 11 different cities. Even the young training participants (mostly in their 30's) looked really tired at the end of the training, but they seemed to have enjoyed staying in Japan, going shopping by shuttle bus to Yokkaichi station as well as making independent tours to Ise, Shima, Nara and Kyoto.

Environmental action plans for use when the training participants returned to their own countries were prepared at the end of the training. Many training participants had entertained ideas to employ "forest absorption of carbon dioxide" as CDM projects before the training, but none of the final reports after the training contained those ideas. Instead, other issues were presented, including climate change, the Kyoto Protocol, lack of interest or knowledge involving issues concerning CDM projects among administrative bodies and the general public as well as lack of information. Many training participants designed plans with projects other than the "forest" plan after the training.

Training participants were also actively communicating with the lecturers for the training to establish links with them as many lecturers have overseas activities. The training participants seemed to understand that global issues can only be solved when developed and developing countries are effectively collaborated.

The training participants joined an international party in the evening on July 10 held at Suzuka International University which was hosted by the University and co-hosted by the JICA, the ICETT and the Mie International Exchange Foundation. All of the training participants enjoyed talking

with townspeople attending the party. The training participants received warm applause when they made speeches in their own languages and sang a Japanese song, "Shiki no uta (a song of the four seasons)" on the stage. Home stay and home visit programs were also set up for the training participants on July 12 and 13 with the help of Yokkaichi International Association to give them some opportunities to see typical Japanese family life.

On the last day of training the training participants also enjoyed a brief visit to the "Sensory Environmental Experience Fair for Kids 2003" hosted by Mie Prefecture at Suzuka Research Park where the ICETT is located.

In conclusion, we would like to express our appreciation, to all those who helped out with this training, that the training was completed fulfilling the intended purposes, especially with the help of the administrative organizations, companies and citizens, and that we could provide the training participants with some experience of the cultural traditions in Japan. We would also like to ask you for cooperation for next year.



At a lecture

## JICA Special Country-Specific Training Course: "Environmental Monitoring Training Project in Egypt"

A JICA-commissioned training program targeted at Egyptian Environmental Affairs Agency personnel was held for 6 weeks from October 14 to November 21, 2003. This was the fourth year for this training to take place.

There were six training participants from five cities in Egypt; Alexandria, Cairo, Mansoura, Suez and Tanta. They were analysis engineer and administrative officers.

In the previous three years the training programs were given intending to improve the skill of the analysis engineer of the local monitoring stations. This year, the fourth program was designed to make the administrative policies reflect the monitoring data. Analysis engineer and administrative officers were invited to receive training to collaborate with interested organizations for policy planning.

Ramadan was observed from October 25 for one month after the training participants arrived in Japan and there were matters to consider such as the health condition of the training participants and what time to serve them dinner. The curriculum could not be greatly altered but care was taken not to make the schedule too tight.

The training included the following four sessions.

- (1) Environmental administrative policy
- (2) Introduction to monitoring and data usage [air, water, etc.]
- (3) Environmental pollution control technology
- (4) Summing-up session





During session 1, a lecturer invited from the United Nations Centre for Regional Development spoke about the trend of global environmental management. He also referred to the history and improvement in cases of pollution in Yokkaichi City, including efforts made by the Ministry of the Environment. Training participants prepared country and job reports to make presentations on the overview of Egypt and the environmental problems that the country faces, as well as what kind of environmental problems the training participants intended to solve through their work and what they would like to learn in Japan.

Session 2 was started with lectures on monitoring and the training participants visited the City of Nagoya and Aichi Prefecture to have lectures on automobile exhaust gas emission regulation, noise and low-emission vehicles. Other lectures were given from staff in charge of new items of environmental monitoring equipment. These were such items as automatic water quality monitoring in the rivers of Aichi Prefecture and the difficulties encountered in implementing the method for the first time.

During session 3, training participants visited the sites of environmental management in various industries (e.g.: sugar refining, electricity generation, automobiles, chemicals, fertilizer and cement) and learned what pollutants are emitted and how they are controlled in order to be reduced. They also visited companies working on analysis to learn about the roles of private analysis organization. The session had a lot of new lectures including the labor environment involving the Industrial Safety and Health Law and radioactivity measurement to have more contents on administrative policies compared with practical training on analysis in 2002.

For session 4, the training participants prepared action reports containing their own ideas about what they can implement in the course of their work. They also made presentations, to be discussed with the lecturers.

The training participants visited Japanese families and stayed overnight through the home stay and home visit programs. This was before Ramadan started on the weekend after they arrived at the ICETT, as part of the community programs. The training participants were a little uncertain if they would be able to communicate with the host families in English that they are not familiar with, but it actually seemed harder to leave each family when they had to return to the ICETT. The training participants had some other activities to experience life in Japan through visiting local events such as flea markets and going shopping.

It was discovered through this training that there are no environmental quality standards established in Egypt; the difference between the emission standard and environmental quality standard was explained to them and the lecturer spoke repeatedly about why the environmental quality

standard is necessary. The lectures also included information such as that continuous monitoring will be performed to accumulate data which will be reflected in the administrative policies. Moreover, the environmental quality standard will be the basis by which to set the objectives when proposing future administrative policies and monitoring plans. The training participants learned that auxiliary monitoring plans and policies to improve the environment will be necessary in addition to the current monitoring to determine if companies are complying with the laws. The training participants also joined a global environment program for children to experience environmental education. The training participants recorded in their action reports that they recognized the need for the waste water treatment facilities and mentioned it in the presentations, saying that they felt environmental education should be started when children are very small. They would especially like to introduce and make sorted collection of refuse widespread.

The training participants seemed exhausted in the last week of October when Ramadan started and we were quite concerned about their health condition. Their stares looked somehow empty while moving between training sites by bus and they kept sleeping during lunchtime and on the outward and returning buses; we really thought that they might actually get sick. What we knew about Ramadan was very little, only that it starts at dawn and ends at sundown so we imagined that they would have liquid refreshment after the training and eat something light such as snacks to get through the hunger before dinner in the evening. However, after much of the Ramadan month had passed we learned that they actually have quite a lot of things to do before eating dinner. There seems to be many ways to do this, but an example that an organizer heard was that they first slowly eat dried dates presoaked in warm water or milk to soften them, and then they pray. The empty stomach with fasting slowly starts working during the prayer and they eat meals after that. One lecturer who ate milk-soaked dates said that they taste mildly sweet and pleasant but they expand in the stomach and make you feel full.

As one week passed after Ramadan started the training participants seemed to become used to the cycle and they seemed more relaxed and were not sleeping all the time. They told us, however, that the work hours during Ramadan are normally shortened and we imagined that it was tough for them to have to do all the tasks during training in an unfamiliar country. This kind of information should be taken into consideration for the next training program. We would like to thank all the training participants for their efforts.

We also would like to express our sincere appreciation to the administrative organizations and companies that collaborated with us.







## FY 2003 “Water Environment Management”

### Background and purpose

This training was planned as part of the “Assistance Project for Investment Environment Improvement-Training Participants Acceptance Project” by the Japan Cooperation Center for the Middle East (JCCME).

While the Middle Eastern countries have been focusing on development of their economic infrastructure on the basis of their rich oil resources, their governments have not been interested in nor have they made sufficient countermeasures for environmental protection. Each country is now required to balance economic development and environmental management, for environmental problems in the air, water and soil are becoming apparent through the process of industrialization and economic structural reforms. The population of most of the Middle Eastern countries has been increasing rapidly by more than 3% per year; the 6 countries of the Gulf Cooperation Council (GCC) have 30 million habitants and this is expected to grow to 80 million by the middle of this century. In addition to this population growth, improved standards of living and enhanced urbanization and industrialization have brought about other big problems emerging in the Middle Eastern region: drinking water supply and waste water treatment.

The government of Japan has set up numerous ODA-based projects mainly focusing on water resource surveys and technical cooperation for desalination. More technical and financial cooperation is now requested from Middle Eastern countries including direct investment in waste water projects in the region which needs water desalination, in addition to cooperation for water resources using advanced Japanese technology. Japanese government leaders were also requested to cooperate in the issues of water resources when they visited Middle Eastern countries, with the result that the Japanese government has decided to actively address these issues.

The training program this year had 17 training participants from 7 Middle Eastern countries (United Arab Emirates, Iran, Oman, Qatar, Kuwait, Saudi Arabia and Bahrain) and 2 North African countries (Algeria and Libya). The training had the objective of developing the ability of the training participants to plan water environment management measures and technical implementation through the introduction of the administrative policies to the water environmental management, securing of water resources and waste water treatment technology. It was also to contribute to

Japan’s technical cooperation regarding the water resources in each country, in addition to the technology transfer.

### Training summary

The “Cooperation Committee on Water Resources in the Middle East” was established in September last year by the Japan Cooperation Center for the Middle East and the Water Re-use Promotion Center. This was done with the assistance of the industries involving water resource areas. Related enterprises and trading companies have joined in and will actively cooperate with the Committee. We were able to make the training substantial because this information enabled us to ask companies and administrative agencies for the lectures and site visits that the training participants expected.

The training was classified to the following four sessions.:

#### Session 1 Introduction

At the orientation, explain each course of the curriculum, information on daily life and computers and affirm the purpose of the training and the objectives of each session. Training participants will make presentations on their training objectives to confirm their needs.

#### Session 2 Environmental administrative policy

Start the training program with introductory sessions on the history of Japan’s environmental administration and efforts to establish water environment administrative policies.

#### Session 3 Secure/use of water resources and waste water treatment technology

Provide a wide range of information on desalination, maintenance of water pipes and technology to design water intake/discharge channels which are necessary to secure water resources. This is in addition to information on waste water treatment technology for petroleum complexes, the food industry and final disposal sites for wastes, and issues related to controls for marine contamination because of oil spillage, groundwater pumping and sewage disposal.



#### Session 4 Summary

The training participants prepare environmental action plans and make presentations to effectively address water environment management after they return to their own countries.

The training was conducted for 22 days from May 31 to June 21, when there was a great deal of confusion after the war in Iraq and safety measures to counteract SARS. The training participants had to take separate flights and arrived late in Japan to ensure their safety.

The training participants had opportunities to get to know Japanese culture in different regions because the training sessions were also held outside the ICETT: for 5 days in Tokyo and 3 days in Kyoto.

No training participants fell sick due to travel fatigue or the environmental changes experienced throughout the training period. There were also no training participants who showed off the specific customs of the Middle East, and they actively participated in the sessions with plenty of questions. They were really respectful to the lecturers at the end of lectures and site visits. The sites where they visited had good feelings toward them and the training was completed rather smoothly.

Finally, the training in 2003 was focused on the water environment management as last year, and we recognized that securing water resources is an important concern for them and it is necessary to cooperate on this issue.





# The Seasons of Japan

The last issue introduced a winter fire event called *Omizu tori* (water-drawing ceremony)" so the current issue will present another seasonal tradition: a summer fire event. The *Daimonji Yaki* (*Daimonji* Fire Festival)", also known as the *Kyoto gozan okuribi* (send-off fire of five mountains in Kyoto) is a summer feature among numerous festivals and events in Kyoto. This event is usually known as simply *Daimonji yaki*. It is performed on August 16 as part of the *Bon* festival (festival for the dead).

Similar events can be found in various places in Japan but the *Daimonji Yaki* in Kyoto is very popular with many visitors from all over the country. The milling crowds of onlookers make it really difficult to get back to the station after the event is over because the main streets are also so crowded. There are also many young couples, intoxicated with this extraordinary fire event.

It is a big fire emerging in Kyoto, without the neon lamps, on August 16 every year. The send-off fire, literally made on five mountains, is a religious rite of Buddhism to send back the spirits of ancestors which have returned home for the *Bon* Festival. There are six characters picked out in fire on the mountainside, comprising *dai* (large) as well as *myo* (miraculous), *hou* (doctrine), *funagata* (boat-shaped), *hidari daimonji* (the character *dai* lit to the west) and *torii gata* (the form of a shrine gateway). Recovery from diseases and expelling evil spirits are said to be the divine favors of this festival.

There are various opinions for the origin of this send-off fire: Kouboudaishi Kukai in the middle Heian Period, Yoshimasa Ashikaga in the middle Muromachi Period and Nobutada Konoe in the early Edo Period. There is even a source of opinion which holds that Christianity has a similar rite.

It is said to have started at least at the beginning of the modern history. This *daimonji* fire is a tradition in the ancient city well worth seeing. If you have not yet found a chance to tell someone you are attracted to how you feel about him/her, this might present itself as a good opportunity for you.



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