JENESYS East Asia Future Leaders Program 2009

Environment:

Symbiosis with Nature and a Sustainable Society

From June 1 to June 14, 2009

The Japan Foundation

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Preface

The Japan Foundation organized the East Asia Future Leaders Program (Youth Exchange) with the theme of "Environment: Symbiosis with Nature and a Sustainable Society." The program was held from June 1, 2009 to June 14, 2009 as part of the Japan-East Asia Network of Exchange for Students and Youths (JENESYS), which was announced by then-prime minister Shinzo Abe at the Second East Asia Summit (EAS) in January 2007.

The Japan Foundation was established in October 1972 as a special legal entity supervised by the Ministry of Foreign Affairs with the aim of deepening understanding of Japan overseas and contributing to the enhancement of culture and the welfare of humanity in the world through international cultural exchange. It was subsequently reorganized as an independent administrative institution in October 2003. As part of a cultural exchange program, the organization carries out personnel exchange programs to enhance mutual understanding among countries and to contribute to the capacity development and networking in civil society. In this context, the organization has been commissioned by the Association of South-East Asian Nations (ASEAN) to implement various programs under the framework of the JENESYS Program since its inception, including the East Asia Future Leaders Program.

Targeting candidates that will lead and forge the future of the next generation in various countries, this program aims to promote a better understanding of Japan and to develop mutual understanding in East Asia through cultural and social activities and the exchange of views in Japan. By discussing critical issues in East Asia, it also aims to build up a human network in social strata and different fields in East Asia.

This year, we invited forty young people who are actively engaged in promoting environmental education as community leaders and educators at NGOs, schools, and other related institutions from fourteen different countries, namely Australia, Brunei, Cambodia, China, India, Indonesia, Korea, Myanmar, New Zealand, Philippines, Malaysia, Singapore, Thailand, and Viet Nam. Bearing in mind that people in all layers of society now recognize the need to take action to protect the environment, and that civil bodies and schools are the driving force promoting a sustainable society, I think this is a good time to highlight environmental education as the theme of this year's East Asia Future Leaders Program.

During those fourteen days, participants visited Tokyo, Kyoto including Miyama-town, Ise, and Nagoya to see practices and projects that promote environmental education and sustainable communities and exchange information and opinions with the Japanese counterparts in the respective cities. They had intensive and stimulating discussions with fellow participants for two whole afternoons, sharing views and experiences in Japan to deepen their understanding of Japanese culture and society, as well as other unfamiliar cultures and environmental practices in the countries that the participants came from. I hope that the networks developed in this program will be continued and contribute to the further development of practices to realize sustainable communities.

The program was implemented with the support of the Ministry of Foreign Affairs, the Ministry of the Environment, the Ministry of Education, Culture, Sports, Science and Technology, schools, NGOs/NPOs, business enterprises, and academic experts. In particular, Dr. Kimiko Kozawa, the former chairperson of the Japan Society of Environmental Education, kindly took a role as a general advisor to the planning and execution of the program, along with Dr. Masahisa Sato, Lecturer at Tokyo City University, and Dr. Yutaka Iwamoto, Lecturer at Tokai University, as coordinators. We wish to express our sincere thanks to all the parties concerned.

Masaru Susaki
Managing Director
Arts and Culture Department
The Japan Foundation

East Asia Future Leaders Program
General Overview of "Environment: Symbiosis with Nature and a Sustainable Society" Program

Kimiko Kozawa
Professor Emeritus at Tokyo Gakugei University, Professor at Tokai University

Now in the twenty-first century, humanity finds itself confronting serious environmental issues affecting its home here on earth. Stopping the destruction of the earth's "external nature"—the very foundation of life for all living things, including humans, requires great wisdom.

The words "immutable" and "trend" illustrate an important point. "Trend" does not simply mean the fashion of the moment, but rather changing as needed with the times, while "immutable" indicates the essential values that remain the same throughout time. So have we considered our environment enough in our history? Environmental issues should be addressed by all generations, but this program was organized to target the younger generation, which can adapt and think more flexibly. The program sought to ask what is "immutable" across the generation and how should we respond to "trends" in appropriate environmental conservation in this century dedicated to the environment with a structure intended to encourage learning in the participants' countries and between the participants themselves, not just in Japan. The program was planned with the aim that, as global citizens, participants would take leadership roles in their home countries and go to work with the world as their larger field of action.

The participating countries enjoy a rich diversity in the "shape" of their nature. These blessings of nature are incorporated in everyday lives and have shaped culture in these countries. The program was thus organized around this premise—in other words, the view that a sustainable way of life has been developed as part of the cycle of sun, water, earth and air and the cycle of forests (mountains), rivers and oceans—as well as the framework that we "learn from the past, live in the present, look to the future." Specifically, (1) thinking about the direction of community design for sustainability, (2) developing studies on the interrelationship between various elements in the economy, society, nature and culture and their mutual reliance, and (3) thinking about the environment, which is equivalent to thinking about re-building the relationships between people, between people and nature, people and communities, people and history and culture, people and society, and people and the world. By connecting, relating, extending (global context) and deepening (values and cultural aspects inherent to a community) these themes, we build learning that fosters a global outlook that values the relational logic. This amounts to an attempt to respect the diversity represented by each country's outlook on nature and the environment and the local culture, and the relationship between these elements.

The actual visits gave the participants an awareness of nature's ecosystems as a universal value and of the interrelationship and fragility of the global system, and focused them on perspectives based on systems methodology, thoughts and practices in coexisting together with nature. This was obvious in the way that, when they visited Miyama-cho or the forests at the Ise Jingu Shrine and the Kaisho-no-mori Project, the participants were jolted awake by the "internal nature," or didn't want to leave the forests.

At the same time, the participants are well aware that globalization has put the principles of competition into play in their own countries, as well as Japan, which has given rise to various contradictions. This was demonstrated in the opinions that the participants expressed the first workshop, when they shared their views on the inhibiting factors and encouraging factors in their analyses of current conditions. This was also expressed in their response to the landfill site for waste and their legitimate criticism of Japan's excessive packaging. I think that the participants understand that, as a result of our pursuit of a prosperous life, we have created this waste that cannot be processed and that has a harsh impact on the planet, and therefore it is important not to use materials for which we lack the technological capacity to process and to reduce the amount of waste generated.

Efforts to create sustainable communities have skillfully used local environmental resources to raise the standard of living, and an imbalance between this kind of "lifestyle knowledge" and the scientific knowledge born of modernization has caused our environment to collapse and made life more difficult for independent citizens and consumers (not moving as

pawns in the game of consumption). For this reason, we need to foster the skills essential for a more sustainable lifestyle.

This goes hand-in-hand with the promotion of environmental education. Why is the shrine at Ise moved every 20 years? This tradition came from a symbiotic and cyclical scheme devised by people who determined that 30 years would be too long of a period for the construction techniques to be handed down effectively, and was also related to the time it took to grow and ready the timber needed to construct the buildings. All countries provide education to pass down its culture. There were some views opposing eco-houses using high-tech technology, but we need initiatives that capitalize on local human resources and environmental resources, based on the worldview and environmental outlook that "small is beautiful"—in other words, John Dewey's "reflective thinking." The objective of creating a sustainable community is equivalent to the belief that nature itself is a universal value and that nature gives life to people, and has formed local communities supported by a network of mutual benefits. It is established as a social system that does not consider environmental conservation alone, but also environmental technology—in other words, it is connected to the study of the interrelationship that society, economy and culture have with nature.

It would be difficult for the perspectives gain the overall perspective involving connecting, relating, extending through what they learned in this program's visits alone, so we designed the program with a workshop on the first day, including a self-introduction and preliminary survey, followed by a workshop halfway through and a workshop on the final day. We addressed this issue by adopting methods and taking a holistic approach. By comparing Japan and the other countries, we came up with ways that sustainable communities could be developed, and I expect that the participants will return to their own countries and use what they have learned. This program adopted a participatory learning style, but many participants were teachers, and were very interested in the visualization of teaching materials. Many said that they wanted to use this concept in their own countries, and it would seem that they understood the significance of hands-on, participatory learning.

Finally, I want to touch on two issues. First, if a similar exchange program is offered next year, I think that we should consider allowing young leaders in Japan below the age of 35 to participate as well. For example, one or two Japanese young people could participate in each group in the workshops. Second, a similar program should be held throughout Japan with young people who have been providing environmental education thus far in Japan. I hope that this would spread participatory learning using a holistic approach in Japan as well.

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Program Overview

Program Overview

1. Program Objective and Purpose

At the Second East Asia Summit (EAS) held in January 2007, then-prime minister Shinzo Abe announced that Japan would invest 35 billion yen over the next five years to carry out a large-scale exchange program. Under this program, about 6,000 young people would be invited to visit Japan every year, particularly people from countries participating in the EAS (ASEAN, China, South Korea, India, Australia and New Zealand), with the aim of building strong relationships in Asia through this major youth exchange. Based on this plan, the Japanese government launched the Japan-East Asia Network of Exchange for Students and Youths (JENESYS) Program in fiscal 2007, and began a wide variety of exchange programs, such as invitations and dispatches, with the cooperation of other countries and relevant organizations.

Since fiscal 2007, as part of JENESYS the Japan Foundation has carried out the East Asia Future Leaders Program: Youth Exchange Program, targeting young people with the potential to become the next generation of leaders in countries responsible for the future of communities in East Asia. These programs are intended to offer opportunities to gain an understanding of Japan's society and culture, as well as promote the development of close networks among the young generation and the formation of a shared identity as participants debate and discuss issues common to the East Asian region to deepen mutual understanding and share experiences in this program. The theme for the program is a social issue shared by Japan and the targeted regions in an area in which Japan has considerable experience and a track record of initiatives taken through public action and schools' educational programs.

The theme for the fiscal 2009 program was "Environment: Symbiosis with Nature and a Sustainable Society," carrying on the fiscal 2008 focus on the environment. Forty NGO/NPO staff members in the field of environmental education and teachers or employees in the education field were invited for the period from June 1 through June 14, 2009. Japan's traditional outlook on nature and its culture, based on coexistence with nature, as well as the efforts of Japan's government, schools, companies and NGO/NPO to realize a sustainable, recycling-oriented society were introduced through workshops, lectures and visits to organizations

2. Overview of Program Implementation

2.1. Breakdown of Participants

Two to four young NGO/NPO workers in the environmental education field or teachers and educators in elementary and secondary education were invited from each of the targeted countries listed in Table 1. The participants were young professionals with English proficiency aged 35 or younger, as a general rule. There were 19 men and 21 women, and 14 were teachers, 23 worked for NGOs, and three worked for government organizations.

Table 1 Number of participants by participating country (broken down by gender)

	Men	Women	Total (people)
Brunei	2	2	4
Cambodia	2	0	2
Indonesia	2	2	4
Laos	0	0	0
Malaysia	1	2	3
Myanmar	2	2	4
Philippines	3	1	4
Singapore	1	0	1
Thailand	1	2	3
Vietnam	3	1	4
Australia	1	1	2
New Zealand	0	2	2
India	0	2	2
China	0	2	2
South Korea	1	2	3
Total	19	21	40

2.2. Program Description

- Lecture by Professor Kimiko Kozawa

Professor Kozawa explained various policy issues related to the environment, and changes in and outcomes of environmental education programs. She also raised a key issue, namely: "As long as humans exist, waste will continue to be generated, which will lead to soil contamination and water contamination. Treating this costs money, and we have to think about who will pay for this. We cannot expect a short-term resolution, so it is important that we keep working on this issue and, while doing so, imagine

the consequences for the future." In the question-and-answer session, Professor Kozawa was asked about achievements in environmental education specifically for teachers and environmental education provided at schools, and whether Japan's cleanliness was due to the penal regulations on littering. Professor Kozawa replied, "Children sort garbage at school and at home, so this becomes a habit, and they throw away garbage even if there is no incentive."

- Stop Ondankan

Stop Ondankan combines exhibits and action programs to show the public that global warming is a problem that has an immediate impact on them, and as such to encourage them to take action to reduce global-warming gases that cause this problem. The center has a book corner, an exhibit corner, and an experience-based workshop corner. A staff member called an "interpreter" helps visitors deepen their understanding of global warming. The managing staff gave a brief overview of the Ondankan and explained about the teaching materials and tools it loans to educators and community centers around the country, which led to a lively question-and-answer session about the center's funding sources, how it attracts volunteers, and the effect of its tools.

- Lecture by the Ministry of the Environment

Mr. Hiroyuki Suzuki from the Ministry of the Environment's Office of Environmental Education discussed the history of the development of environmental education and the Ministry of the Environment's environmental education policies. As examples of the latter, he mentioned the Ministry's Eco-Family Project, ASHEEP21 (After School Environmental Education Program 21), the Junior Eco Club, and the "environment superman: Eco-gainder" television program for children, all of which are part of the AAA (Anyone, Anywhere and Anytime) Program. The participants asked him many questions, such as what kind of education can be given so that food is not wasted, given Japan's low food self-sufficiency rate, what is the first step in beginning environmental education, and what can be done to make eco products more affordable. Mr. Suzuki's explanations were very gracious.

- Umi-no-mori (Sea Forest) Project

This is a project launched by the Tokyo Metropolitan Government in 2007 and expected to be completed over a 30-year period in which trees will be planted on a landfill site filled with waste and surplus soil to a depth of 30 meters. A total of 12,300,000 tons of waste was dumped here between 1973 and 1987. Currently, the Tokyo Metropolitan Government is leading the efforts with the invaluable cooperation of city residents, companies and NPOs. The forest is taking shape as seedlings that students from the city's elementary schools raised from acorns and seedlings bought with funds raised by Umi-no-mori are planted. The project aims to create a forest by recycling resources, and as such compost is made from branches and leaves pruned in the city's parks and streets and soil is created by recycling raw sludge. The participants stated that this effort to create a forest in a landfill in one of the world's largest cities and keep a balance between a city and a forest's ecosystem was very memorable.

- Shinonome Elementary School

Shinonome Elementary School became a member of the UNESCO Associated School Network Project in 2006, and is actively involved in education promoting international understanding that is rooted in the community, as well as cross-curricular teaching to provide Education for Sustainable Development. After the principal, Mr. Toshio Tejima, explained the school's educational principals, the topics by grade, and the program itself, the participants watched a class in which students caught dragonfly larvae in a pool together with local residents as part of the third graders' Great Dragonfly Rescue Operation (a project in which fallen leaves are put in the pool in the winter, and doragonfly larvae are caught and raised in the classroom before the pool is opened again in the summer). The participants also saw the school's Biotope and the vegetable gardens cultivated by each grade. The participants were very impressed with the principal's initiative, and also thought that the cross-curricular approach used in environmental education was excellent.

- Miyako Ecology Center

The Center was established as center for environmental education in Kyoto to commemorate the holding of the Third Session of the Conference of the Parties (COP3) in 1997. The building is equipped with a wide range of energy-efficient and resource-conserving equipment for solar power generation and utilization of rain water. The Center's experience-

based exhibits encourage visitors to think about environmental issues, and the Center also supports partnerships with citizen groups and environmental activities. After the staff gave an overview of the Center, they carried out the hands-on learning activities usually done with local elementary school students on wind power generation, water conservation, rooftop greening, and garbage. The participants joined in on their own initiative and seemed to enjoy themselves. At the end, everyone gathered again in the conference room for a thirty-minute wrap-up session. A question-and-answer session was held on affiliations between the Center and relevant groups such as NGOs and NPOs, information communication, the way in which the volunteer staff called "eco mates" are utilized, and the Center's future outlook. The participants were impressed with the enthusiastic staff, and wished they could have an environmental education center with such easy-to-understand exhibits in their own country.

Miyako Ecology Center's Exhibit-based Environmental Education

Eco Kitchen

This experiment encourages participants to think about how much water we use when we wash our hands. Participants wash their hands in a wasteful way and then wash their hands while trying to conserve water above the water tank so that they can see the difference in the amount of water collected in the tank. This makes participants think about the difference with a single hand-washing, and the difference that builds up over one day, one week, and one year.

Water contamination

A breakdown of contamination of home waste water by location shows that 39% comes from the kitchen, 30% from toilets, 21% from baths, and 10% from washing and other. This exhibit encourages participants to consider what we can do to reduce oil, which is the cause of the contamination of kitchen waste water.

Compost

This exhibit explains the cycle in which compost is used, earthworms eat the kitchen waste, the earthworms defecate, other microorganisms eat the excrement, this creates dry soil, and this can be used as fertilizer in the Center's rooftop garden. The amount of worms varies depending on the amount of soil and kitchen waste. In the case of the Center's compost (about 60 square cm), this amounts to about 500 earthworms because the Center does not have much kitchen waste. It takes about one year before garbage can be used as fertilizer, but the earthworms eat kitchen waste before it rots so the compost has almost no odor.

Vegetables

Currently, greenhouse cultivation means that a wide range of vegetables can be eaten year-round, but raising 1 kg of tomatoes requires 137 L of coal oil in the summer and 1,365 L in the winter. Vegetables have seasons, and tomatoes—which are said to be effective in cooling the body—were originally eaten in the summer, so do we really need to eat tomatoes in the cold winter too? The rooftop garden teaches children about how vegetables grow and which vegetables grow in each season.

Energy

Participants are divided into two teams, and charge the battery of mini-cars by using fans to turn a wind turbine connected to the mini-car battery. Once the mini-cars have been charged, the teams compete by running the mini-cars. This experience highlights the difficulty of accumulating energy.

Garbage

Kyoto City has a pay-as-you-throw program that charges 45 yen for a 45 liter bag, but disposing of 5 kg worth of garbage costs 269 yen, so the fee-based designated garbage disposal bag program alone does not recover the disposal costs. Some students think that sorting garbage is environmental, but this exhibit is intended to show that it is not.

Rainwater

Kyoto City subsidizes the purchase of rainwater collection tanks. All schools in the city have such a tank, which promotes the effective use of rain water.

Eco mate

Eco mate is a program that registers and employs people that have completed a special training course as volunteers for a maximum of three years. Currently, 80 company employees, NGO staff, students and housewives are registered as eco mates. They help to raise the general public's understanding about the Center and environmental education. This program, which is one-of-a-kind in Japan, is the Center's greatest strength.

- Miyama Town

After a greeting by Miyama Town Developm ent Committee Deputy Chairperson Chizuko Suetake, Hiromi Ohata, Head of the Regional Administration Division's Regional Revitalization Section of Miyama Town Hall of Nantan City Hall, gave a history of how the town was founded and provided an overview of environmental conservation programs in the Miyama town region, such as efforts to conserve the area's houses with thatched roofs. This was followed by a description by Ms. Suetake of how the residents created the town, led by the Town Development Committee. Currently the town faces the issues of a declining birth rate and a rising elderly population, and Ms. Suetake explained that several projects are underway to ensure that the town remains a desirable home into the future.

After lunch, the participants toured the thatched-roof houses (in Kita-Shuraku, or the Northern Hamlet), which have been designated as a preservation district of important traditional structures and receive 700,000 visitors every year. Entering the beautiful landscape in which homes with thatched roofs stand in tiers on the sloping ground, the participants were told about the work to preserve and restore the thatched roofs, the 62 ladder pipe nozzles that have been installed and the resource center (one of the homes which has been opened up for visitors).

Miyama Town, Nantan City

Current status of declining birth rate and aging population

The population stood at over 10,000 50 years ago. Currently the population is 4,500, with 39% of the population aged 65 or older. As part of the "Reinvigoration Project" in the four designated "marginal villages,"* the village interacts with people from outside of the village, such as university students. The Village Development Committee is addressing this problem by encouraging I-turns (relocation of people from the city to the country) and U-turns (return of people to their hometowns in the country) by placing people in empty homes, offering land, and improving the educational environment and creating a town in which tourists would want to return to live in. Currently, about 300 residents came to live here as an I-turn, and one-third of the 27 elementary school students are from families that made this I-turn.

Agriculture in Miyama town

Since little revenue is generated from agriculture and forestry, many households combine agriculture with company employment in another town. The Miyama town Forest Association is responsible for managing the forests, but the trees are not cut down as the price is low, and currently the forest lies in waste. Local timber is normally not used much, but local timber is used in the cultural village, and local timber has also been used to build general homes in some regions. There were 120,000 visitors in 1985, but this has now increased to 700,000.

Preservation of thatched-roof houses

Miyama is also home to artisans skilled in building thatched-roof homes, which are rare even in Japan. Since these houses can be destroyed in about 20 minutes if they catch fire, 700 million yen was spent to install 62 ladder pipe nozzles with government support. The ladder pipe nozzles are monitored by computer, so that in the event of a fire, the 10,000 tons of water stored in the tank is discharged in 15 minutes and a curtain of water is created so that the fire sparks cannot jump to other homes. The maintenance costs for the ladder pipe nozzles are subsidized by the national government, Kyoto Prefectural Government, and Tannan City, while 80% of the cost of repairing the roofs is paid by the national government, Kyoto Prefectural Government, and Tannan City and 20% by the households.

Kita-Shuraku (Northern Hamlet)

This part of Miyama has 34 thatched-roof homes in which families live. There are two guest houses, but the sign is small so that the house's appearance is not marred. The thatched roofs are contained by ornamental crossed rafter ends called "chigi." These homes have three, five or seven of these rafter ends, but only one house in Kita-Shuraku, which used to belong to the village headman, has seven. As fire is the biggest risk for thatched-roof houses, family crests and fish sculptures are hung from the gable from which smoke is released and inscribed with the character for "water" in prayer that fires do not occur.

*Villages in which 50% or more of the population is aged 65 or older, and as a result of this aging population, it has become almost impossible to maintain the community's functions.

- Ise Shrine

The group received an overview of the shrine from Mr. Yoshiki Abumiya a stuff from the shrine's Public Relations department, and then visited the Uji Bridge, the Sacred Music and Dance Hall and the Main Shrine. They also washed their hands at the place for ritual cleansing and in the Isuzu River, and offered prayers following the Shinto bowing and clapping ritual (two bows, two claps, one bow). This helped the participants experience the mystical atmosphere of the shrine. The participants then offered prayers at the Kagura-den (Sacred Dance Hall) and watched Shinto music and dancing. Having been cautioned not to talk in loud voices, the participants were grave in their demeanor. Finally, two of the shrine's micro-buses took the participants to the sacred forests surrounding the shrine to walk through the forest. The participants were told how timber is produced, selected and harvested, and how the shrine forests are preserved to preserve the quality of the water in the Isuzu River, which flows through the region, and ensure a stable supply of timber. The participants said that they had gained an understanding of the close relationship between culture and environmental conservation and that they had found the techniques for the construction of a new shrine and transfer of the enshrined object from the old to the new shrine at a regular, preordained time, and the Shinto music and dance to be very interesting.

- Nagoya Plastic Handling Co., Ltd.

After an explanation of the city's efforts to reduce garbage from an official of Nagoya City's Department of the Environment, the plant manager of Nagoya Plastic Handling explained that all of the plastic garbage, which is designated as recyclable, collected in Nagoya City is processed at this plant, with 120 tons brought in each day and 32,000 tons annually. All of this garbage is processed in 10 hours. Subsequently, the participants watched the garbage being brought in, sorted by machines, and then sorted by hand. The participants said that they were inspired by Nagoya City's enthusiasm, stating that they wished their own countries would follow this example of collaboration between government and the private sector. After seeing the people working amidst the bad smells and the mountains of garbage, in a question about the health of the company's workers a participant stated that showing this to the public could raise awareness about recycling and garbage sorting.

- Aichi Kaisho Forest Center

This environmental education center, which was used by the Aichi Pavilion Seto when the Aichi Expo 2005 was held, has permanent exhibits, conducts studies and research, distributes information, and provides hands-on learning experiences all related to environmental education. The participants were given a tour of the Center's library and the exhibit space by Mr. Kimio Miwa, the director of the Center, and then walked along the course created for elementary school students in the neighboring forest before it opened. Participants stated that the environment was wonderful and that the Center provided so much information, and also that they were glad they had been able to experience the walking course in the forest themselves and learn about this experience-based approach to environmental education tailored to children.

Lecture and Workshop Records

June 2, 2009
Lecture on the Environment "Japan's Environmental Issues and Trends in Environmental Education"

Kimiko Kozawa

1. What is environmental education and environmental studies?

Environmental education and environmental studies are not simply concerned with obtaining knowledge from texts about environmental issues. Rather, hands-on learning practices are employed to gain an interest in our surrounding environment and cultivate the skills and attitudes that will enable independent initiatives and actions aimed at creating a better environment—in other words, developing the qualifications and public awareness needed to resolve environmental issues as citizens of the global environment. At the same time, there is not one right answer in the debate over how society should address environmental issues, so we could say that environmental education is the process whereby each individual considers and debates what exactly a sustainable society would look like and the roadmap to achieving this vision.

Environmental education explores everyday social issues an d real problems in the community and thinks of ways to resolve them. This type of study integrates "learning" with "living" through self-initiated involvement and connections with issues affecting our future. We could even say that it learning for the future, in terms of creating a sustainable community and society. We all want to live healthy and secure lives with a sense of spiritual well-being. Environmental education and environmental studies is the way in which we learn to create this environment—i.e., a sustainable community—and acquire the ability to actually improve the environment.

2. Trends in Japan's environmental education

Trends in environmental education initiatives in Japan can be divided into five periods.

1) 1950s – early 1970s: The Japanese people have strived to live together with nature since ancient times. In the Edo period, this interaction with nature deepened, and even now certain regions have active nature conservation programs. However, the Elementary and Middle School Environmental Pollution Education Research Committee (later renamed as the National Elementary and Middle School Environmental Education Research Committee) was established to protect school-age children from the industrial pollution and natural destruction caused by the high economic growth. In 1971, the Ministry of the Environment was established.
2) Late 1970s – early 1980s: International conferences on environmental education were held, but this did not affect Japan's environmental education. Nevertheless, there was greater awareness of the importance of environmental education in universities, and study groups were initiated.
3) Late 1980s – early 1990s: Global environmental issues attracted more attention, and in 1988 the Ministry of the Environment put together guidelines entitled "Building a Better Environment Together" to encourage the public to take part in environmental conservation activities. This was followed by the establishment of the Basic Environment Law in 1993, in which Article 25 gave environmental education a social role. At the same time, in 1990 the Japanese Society of Environmental Education was established, and the Ministry of Education devised the "Environmental Education Guidance Materials" (middle and high school edition; 1991). This established the foundation for the promotion of environmental education.
4) Late 1990s – 2000: The Second Basic Environment Plan made environmental education one of the 11 strategic environmental policies, and the "The Future of Environmental Education and Environmental Studies" (1999, Central Environment Council) laid out the direction in which to take environmental education in pursuit of a sustainable society.
5) Since 2001: As we approached the century of the environment and the public increasingly called for environmental education to be promoted, the establishment of the Law for Promotion of Environmental Education (lawmaker-initiated

legislation) was passed in 2003 marked a new day for environmental education in Japan. This law posits the low (zero)-carbon society, ecologically harmonious society and recycling-oriented society as the solutions to three crises to be given priority: global warming, resource depletion and the ecosystem crisis. As laid out in the Third Basic Environment Plan (April 2006), environmental education should be promoted as a means to develop people and communities that will preserve the environment. At the same time, the Law for Promotion of Environmental Education began to be revised as Japan's environmental education approached a new stage and different sectors began to work together.

3. Method for promoting environmental education and environmental studies

Environmental education aimed at creating a sustainable society devoted to the precepts of a low (zero)-carbon society must integrate life knowledge and scientific knowledge in the basic learning process, and not simple teach environmental actions such as diligently turning off lights. Environmental education should be viewed as rebuilding the relationships between individuals and between people and nature, people and the community, and people and the entire world. It is important that the relationship that people have with nature and "things" be restored—in other words, to learn about the history and knowledge of people that have protected our forests, mountains, rivers, seas and land.

The Japanese people have endeavored to live together with nature since ancient times. The Japanese did not exhaust all of the blessings of nature, but instead managed resources with a sense of moderation so that it would be left for the next generation. The daily act of living was carried out as part of the relationship between people and nature.

Contact with nature from childhood to adulthood imparts leads to the enjoyment of the abundant benefits of nature, and this experience shows us that, as living beings, humans are part of the ecosystem. Emotions about nature are shared between different generations, and we gain a deeper understanding of how we coexist with nature.

However, greater urbanization has led to the loss of accessible natural environments, while man-made environments increase and the "external environment" is destroyed. Not only have the resulting pollution problems caused by our lifestyles and urbanization and global environmental issues grown worse, but we are destroying our "internal environment" as our sensitivity and five senses have dulled.

The principles behind the promotion of environmental education are as follows, based on the principles of the Tbilisi Declaration. (1) Environmental issues are closely related to other disciplines, so an integrated perspective that takes an interrelated and multifaceted approach is essential. (2) Environmental education should be carried out in a comprehensive manner by working together in a range of locations and across all generations. (3) Programs are carried out while clarifying specific goals, and the programs themselves do not become part of a personal objective. (4) Environmental education not only involves knowing the current status and causes of environmental issues as a piece of knowledge, but linking this to actual action. (5) This requires skills in identifying issues, analyzing issues, and compiling and utilizing information, so environmental education incorporates the process by which a student experiences for his/herself, feels and understands. (6) Environmental education should identify and utilize resources such as the raw material of communities with diverse places to live, human resources and networks. (7) A community's traditional culture and history and the wisdom of our predecessors is utilized in environmental education. The Content must develop the following with attention to system and sequence and from the perspective of a sense of place:

(1) Natural structure (ecosystem, natural resources and their management);
(2) Impact that human activity has on the environment (changes in natural structure brought about by people);
(3) Involvement between people and the environment (role, responsibility, culture of people vis-à-vis the environment); and
(4) History and culture of involvement between people and the environment.

This approach is the problem-solving learning style that cultivates a reflective mind-set. The general process is as follows. First, we become aware of the problem (perception and concern), then we clarify the structure of the problem and the reciprocal relationship between the elements (knowledge), we gather information needed for analysis or to make projections (motivation), we analyze this information (motivation and mental capacity), we seek alternative solutions for a solution (mental capacity), predict and evaluate the results that this method would yield (mental capacity), and select a solution (judgment). The parentheses indicate the skill that is developed in that step of the process.

This process begins with the questioning spirit and curiosity always asking "why" and "how come" that children are born with, and follows a learning process that moves from exciting curiosity (awareness), deepening understanding (investigate), mental capacity and insight (thinking) and finally to putting into practice and participating (changing and

being changed). This follows a spiral pattern, and is known as action research.

This learning process must involve empathic learning through holistic concepts and approaches that enrich a person's "internal nature" from childhood to adulthood. This is nurtured through the involvement of people with nature, interpersonal relationships, connections between families, schools and community, and connections between nature, people and culture.

With an emphasis on this kind of involvement and connections, academic approaches and system thinking opens up a perspective of coexistence with different cultures, and partnerships must be built for the development of an educational framework with an eye to sustainability, education that links learning to action, roots in the community, and community development and community spirit.

Human lives are formed on a reciprocal relationship between nature, culture, economies and society. We must maintain a stable balance between the environment and the economy in order for humans to live. We can't just think about the environment, and problems would result if the economy dominated. We must have the imaginative faculty to grasp these mutual relationships and totality.

In so doing, the most important thing is for people to think with an independent mind and consider how we want to live and what kind of environment we want to live in. Creating a sustainable community involves making choices about the way we want to live. This choice is not handed down by people, but created oneself.

The International Conference on Environment and Society: Education and Public Awareness for Sustainability, organized in Thessaloniki in 1997, adopted the Declaration of Thessaloniki. Article 10 states "The reorientation of education as a whole towards sustainability encompasses not only environment but also poverty, population, health, food security, democracy, human rights and peace. Sustainability is, in the final analysis, a moral and ethical imperative in which cultural diversity and traditional knowledge need to be respected." Education oriented toward the environment and sustainability must be given priority.

Collaborations and partnerships with a wide range of partners can be expected to integrate our natural awareness, scientific awareness and social awareness of the involvement between humans and the environment, give us an ethical and moral sense of our roles as global citizens, encourages us to take responsibility for our actions and change our lifestyles, participate voluntarily in creating a sustainable society, and fulfill our role as citizens capable of collaborating to resolve the environmental issues that have become urgent issues on a global scale.

4. Examples of environmental education in action

There are several examples in which the objectives and methods described above have been incorporated in environmental education. These include (1) the development of environmental education programs to prevent global warming and its webbing method, (2) a local community model embracing resource recycling for garbage, (3) 3R initiatives carried out by businesses, government and communities, (4) significance of project to renovate an eco-school and the actual state of environmental education, (5) school training systems to develop curriculum in Japan's schools, greening school yards and creating green curtains, and (6) learning about the environment by using environmental learning centers. I have omitted details here, but these examples show us that "The best way to social development is to foster citizens who are aware and understand environmental management, and participate in creating democratic community (R. Hart)."

Commentary on Workshop

Yutaka Iwamoto

Full-time lecturer in the Course of Environment and Resources, Department of Human Development, School of Humanities and Culture at Tokai University

The JENESYS Program introduced workshops this year, the second year of this program. These workshops were held on June 6 (Saturday), one week after the participants had arrived, and on June 13 (Saturday) as a wrap-up after all of the programs were finished. In both of the workshops, participants exchanged their views about what they had learned and what they had felt about the management of sustainable community activities and environmental education and environmental ethics and cultural values during their visits in Japan. In the workshop, magic markers, post-it notes and wood-free paper were provided at each table. Participants wrote their own impressions on a post-it note, and then presented their thoughts to the group. After they had shared their opinions, the participants' impressions were categorized by affixing the post-it notes to the wood-free paper. A representative from each group presented these results so that everyone's views were shared.

Unfortunately, the outbreak of the H1N1 influenza virus meant that some of the programs that had been planned could not be carried out in this year's JENESYS program. However, in the first week participants visited Tokyo's coastal area to see environmental initiatives in this city built and developed by human ingenuity, and saw environmental education and ESD in action. In the second week, participants observed initiatives in outlying regions, so that these different experiences in the first and second weeks actually deepened their learning. This had a strong impact on the workshops as well, and was revealed in participants' expressions. The places the participants toured in the first week included places that had a generous economic foundation; this seemed quite alien to the participants, who come from countries with different social conditions.

At the workshop held on June 6, participants were divided into six groups by stakeholder (those working in schools and those not working in schools) as the participants' complex thoughts intermingled. This workshop stood out in that all of the groups were using the same key words to express their views of the problems they'd been given: social support, government support and financial support (funding and budgets). Several groups expressed similar opinions about the contributing factors and inhibitory factors for sustainable community activities and environmental education. These opinions emerge as shared views in workshops held to carry out a range of activities both in Japan and outside of Japan. In particular, the more formal the environment and educational activities, the harder it is to carry them out without a range of support. However, if we look at it another way, this can be seen as a deeply-felt view that is tantamount to an appeal that if only this kind of support can be provided, we can put our thoughts into action. Corroborating this, many participants listed inhibitory factors that included the phrase "lack of." For example, awareness among teachers, interest in environmental education, effective and flexible tools, human resources, volunteers, practice, subsidies, policies, master plans on environmental education, advanced technology, infrastructure, knowledge and experience were all deemed to be "lacking." Further analysis of conditions is needed since the background informing these views—economic conditions and cultural values in the respective countries, as well as daily habits—differ. However, when they compare their own countries to Tokyo, which has human resources, infrastructure and an economic foundation that is impressive even in Japan, it is only natural that participants should feel as they do. Tokyo is a global city in which people, goods and money are concentrated, and it has developed rapidly over the past few decades. High-rise buildings have increased dramatically, and Tokyo's landscape and lifestyle has been transformed since the old days. There are ongoing debates even in Japan about these rapid changes. In other words, when thinking about initiatives in Tokyo, we must not only include Tokyo's particular approach to development and its environmental programs, but must also use our critical thinking skills. In this respect, the participants in this fiscal year's JENESYS program expressed critical and analytical views in response to questions by the coordinator at the end of the workshop on June 6, so they went into their second week with their questions in mind.

In the second week, the participants left Tokyo and learned about programs in outlying regions such as Kyoto, Ise, and Nagoya. Once we were into the second week, the participants were smiling and talking together, and the program was held

in a relaxed and friendly atmosphere, perhaps because the participants were communicating better with each other. These favorable conditions prevailed in the lead-up to the wrap-up workshop on June 13. During this workshop, six groups were formed with members from different jobs and nationalities, and participants gave their personal views on what they had learned in their study tours in Japan in terms of management and environmental ethics and cultural values, as in the June 6 workshop. In the first half of the workshop, they shared their views in the group and wrote the outcome of what they had learned on a poster.

This year's participants listened to each other's views even more intently than last year's group, shared views pro-actively, and engaged in such heated debates that the time was all but forgotten. One group sorted out their opinions for each place they had visited—Stop Ondankan, Miyako Ecology Center, and the elementary school, for example—and looked ahead to the future by listing the positive and negative aspects of each. Another group categorized their views under the overarching framework of "values" and "ethics", and then closely analyzed the important opinions with shared values and ethics. This latter group gave an extremely interesting presentation on opinions related to people's informal lifestyle, such as individual values and beliefs, sense of community, and modernity vs. tradition. Another group wrote down opinions related to project management as spokes of a wheel, with "project management" as the key word in the center. Another group sorted its views into four categories: technology, education, culture and policy. I was intrigued that this latter group wrote "1+1=3" under "education" to express their view that interaction between people has unlimited potential when done right, thus getting at the essence of education.

In the second half of the workshop, the participants were organized into groups by country to share opinions about how everything they had learned in this study tour could lead to practice and action after they return to their own countries. The groups then prepared posters. Unfortunately, time constraints meant that the posters could not be presented, but this was an opportunity for the participants to gain an awareness of what they had learned by writing it down. I have high hopes for the programs these participants will carry out after they return home.

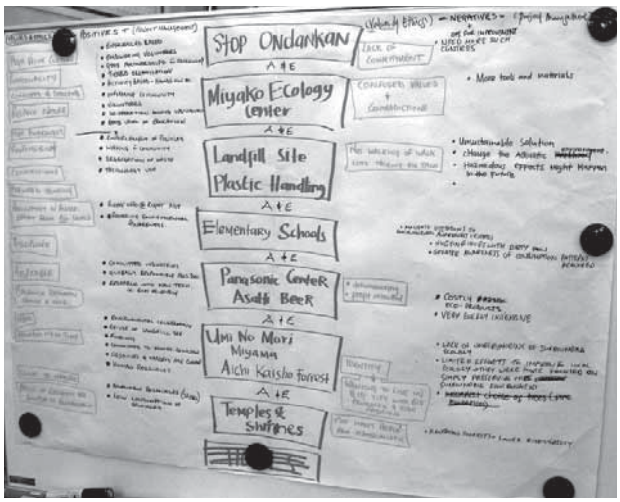
The basic point of workshops is for people to work together and consolidate the wisdom that emerges in this process to share views on the connections and extension of the problem structure. This makes participants aware of issues they had previously not noticed, and gives them an opportunity to think about specific actions for the future. This was a natural activity in societies during the "analog" age, when people were inter-linked, but in Japan we are worried that we have forgotten the importance of this in the new digital age. In terms of education, this approach prevents education from becoming uni-directional and learning from losing its substance. We become aware of what we have gained in learning, and this can cause changes in values. There is a movement in education circles in Japan to consider the basic significance of learning and examine educational practices in which textbook knowledge was simply transferred to the student, and incorporate social issues that do not have one right answer into education. I hope that the project participants will continue to think seriously about this possibility and become active in their own countries as leaders of the next generation.

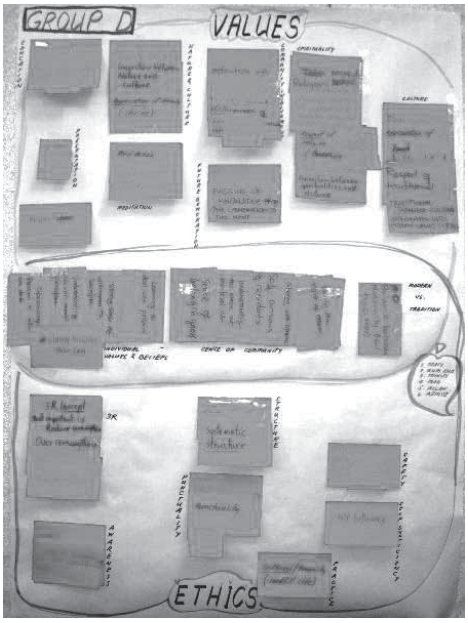
The graduate student from Tokai University who participated in the workshop on June 13 is interested in international environmental problems, and has decided to go to Africa next year to work on environmental issues. He is eager and hopeful, and I am very grateful to all of you who motivated him in this workshop.

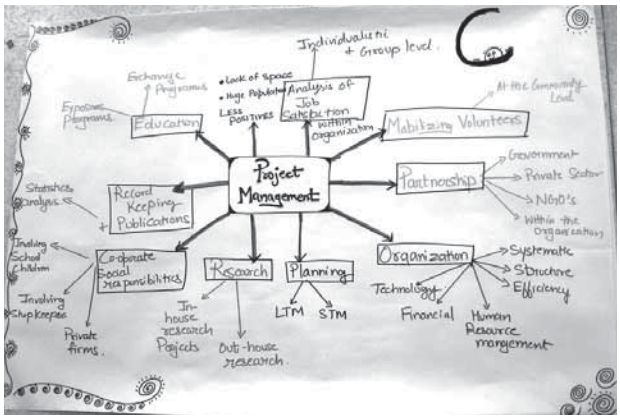
Yutaka Iwamoto

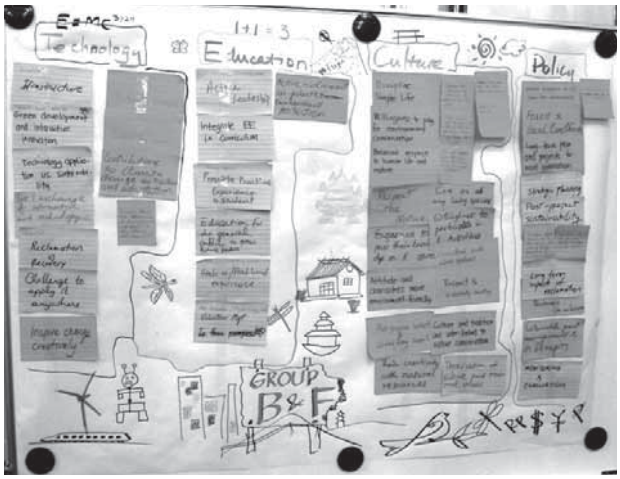
Completed doctoral course in United Graduate School of Education at Tokyo Gakugei University; Doctor of Philosophy in Education (EE ESD)

Member of steering committee for Kanagawa Development Education Center (K-DEC)









Group work completed by participants (June 13)

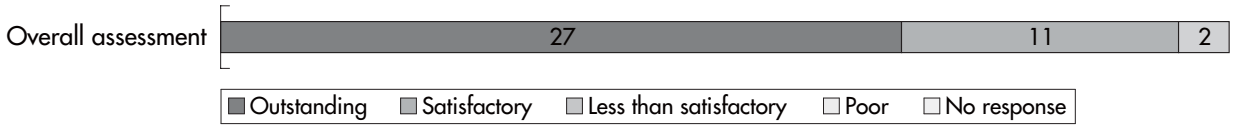
Project Evaluation

Project Evaluation

1. Program Overview

The results of a questionnaire given to participants in the East Asia Future Leaders Program: Youth Exchange Program showed that 38 of the 40 respondents, or 95%, rated the program overall as "Outstanding" or "Satisfactory." The participants gave a particularly high assessment to the visit to the Miyako Ecology Center, with all respondents replying that they were "Outstanding" or "Satisfactory;" 85%, or 34 people, responded that they were "Outstanding." There was also great interest in the school visit, with almost all respondents claiming that they were "Outstanding" or "Satisfactory" with the visit to Shinonome Elementary School in Koto-ku. The respondents said that they were particularly impressed by the school principal and the teachers' enthusiasm and the students' warmth. Besides the visits to the Miyako Ecology Center and the school, over 50% of the respondents replied that they were "Outstanding" or "Satisfactory" with the lecture on environmental education by Dr. Kozawa, the trip to Kyoto and Nara, the workshop giving a general overview, the Ise Jingu Shrine, the Zen meditation experience, and the Tokyo Chubo Landfill Site. Over 80% of respondents gave positive evaluations to other visits and programs, stating that they were "Outstanding" or "Satisfactory."

In the space provided for free comments, many respondents stated that this opportunity had not only deepened their understanding of Japanese culture and society, but it had also given them a better understanding of environmental issues and environmental education in Asia Pacific countries, and also wrote of their pleasure in being able to build a network with other participants.

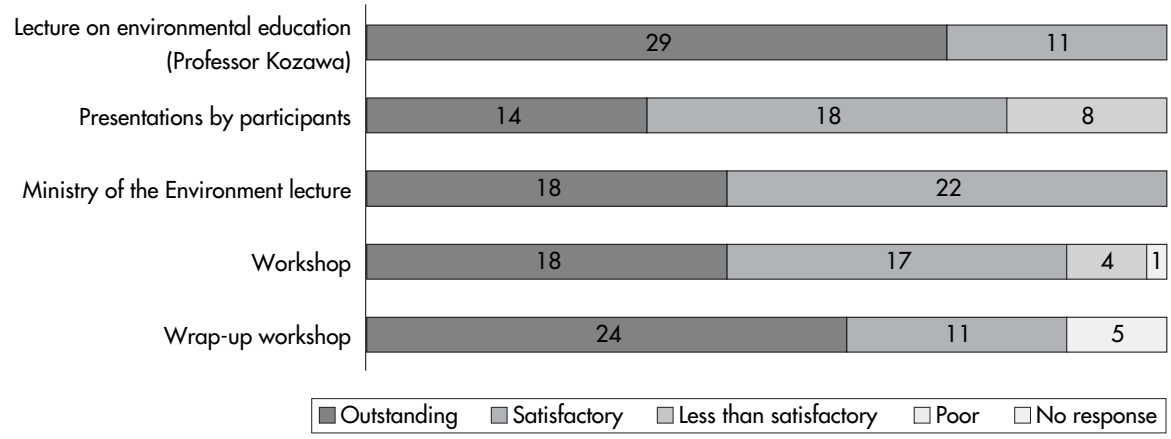


Comments from participants

- This program was managed and run extremely well. This was a really unique program that enabled me to learn about environmental education together with participants from all over Asia at the same time that we were learning about Japanese culture and knowledge.
- Everything was great! I felt that the two-week program was put together with good balance.
- I gained an understanding of the various methods used to carry out environmental conservation activities. Japanese people are very concerned about the environment, and I was struck by the motivation spurring efforts to develop technology that will be gentler on the environment and create a brighter future.
- It was great that the participants were able to exchange information on ideas and experiences on environmental issues and environmental education. I was also pleased to be able to develop a network through which I will be able to exchange information in the future.
- The trips to the Ise Jingu Shrine and Miyama-town helped me understand Japan's culture and religion. I had such a wide range of experiences, from traditional culture to advanced technology.
- It was wonderful that we were able to meet people from different cultures, experience Japanese culture in different cities, learn about environmental education in other countries (particularly Japan), and that this program was put together really well.
- I was happy that we will be able to continue to exchange information in forums and on websites even after the program is over.

2. Lectures and workshops

Kimiko Kozawa, former chairperson of the Japanese Society of Environmental Education, gave a lecture on Japan's environmental issues and trends in environmental education up until now and currently. Of the respondents to the questionnaire, 73% (29) replied that they were "Outstanding" or "Satisfactory." In addition, 60% (24) responded that they were "Outstanding" with the general workshop, which analyzed Japan's efforts to address environmental issues and environmental education in terms of management and ethics and morality over the two-week stay.



Comments by participants

(1) Lecture on environmental education (Professor Kozawa)

- This lecture gave me a good understanding of environmental issues and environmental education in Japan, and was a good preparation for our visits to related organizations.
- Her explanations of crucial issues gave me a deeper understanding.
- The professor's experiences in the environmental education field changed my assumptions. She explained environmental education so that it was easy to understand.
- Many of the teaching methods used in environmental education could be proposed at my own organization, so it was very beneficial.

(2) Ministry of the Environment lecture

- The lecture was extremely informative. I was glad to have the chance to hear from Japan's policymakers.
- I learned a lot. I was impressed that the Japanese government supports environmental education effectively and on an ongoing basis.
- I was happy to get this introduction to a range of activities in environmental education policies. I wanted to know how this is related to Japan's environmental conservation and energy conservation policies.
- The presentation and the video aimed particularly at children were really good. My country has environmental education programs, but it is not a priority for the Ministry of Education yet.

(3) Presentations by participants

- This was a good ice-breaker that familiarized the participants from various countries with each others' countries and programs.
- I was able to share a range of new information from overseas and gained the courage do something when I return to my own country.
- I was happy that I was able to use PowerPoint to prepare my presentation.
- It was good, but unfortunately I wasn't able to hear the presentations from participants in other teams.

(4) Workshop (June 6)

- The interaction with participants from different countries who all came for different reasons and the group discussions were really good experiences. We were able to share our experiences in resolving our own problems and the strategies we used.
- Sharing our opinions brought the discussion to an entirely new level. Discussing issues with people from other countries gave me a deeper knowledge of other people's activities.
- It was really helpful that we were able to look back on the program with an interim evaluation of the program. It put the focus on the program's purpose, which helped to prepare me for our visits to other regions.
- It was really hurried so I felt like I wasn't really understanding. I think a brainstorming session would have been good, with a focus on recommendations that could potentially resolve issues.

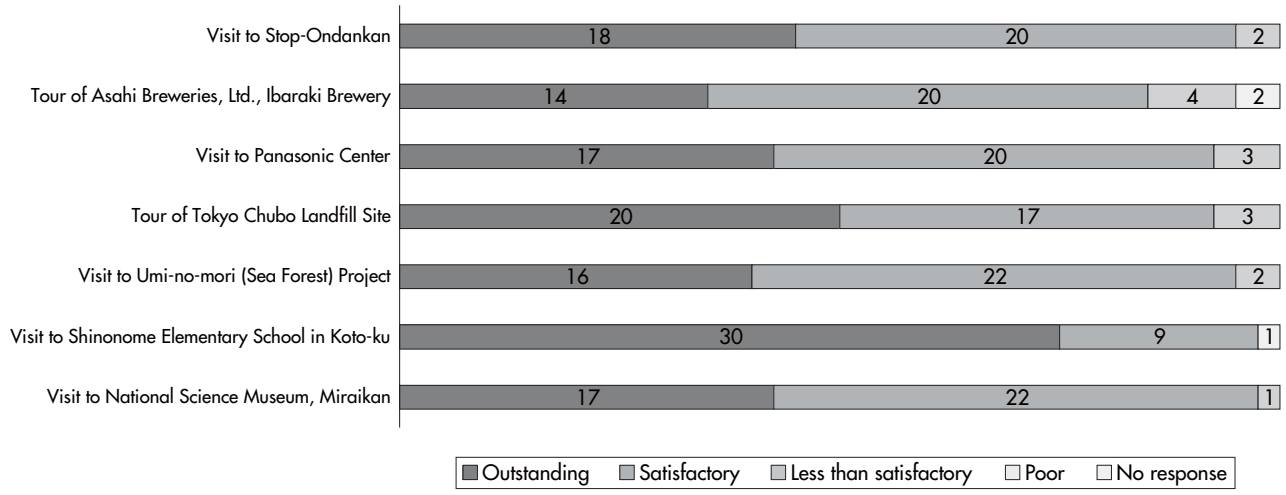
(5) Wrap-up workshop

- It was interesting to discuss what we learned in the fourteen-day program and our impressions in a group, cooperating with the group members.
- It was good to share our thoughts and the lessons we learned. Group work also saved time, which was good.

- It was an excellent discussion that gave me a chance to look back on our experiences and activities and also gave me the courage to really try to bring about change in my own country after my return.
- This really impressed me with the morals and attitudes of Japanese people. The teachers' wrap-up encouraged me in my own environmental activities in my home country.

3. Programs during stay in Tokyo

During the visit to Tokyo, the group visited NPOs promoting environmental education and schools, as well as companies working to address environmental issues. Of the visits within the city, the questionnaire respondents were particularly pleased with the visit to Shinonome Elementary School in Koto-ku, with all respondents, excluding one who failed to respond, replying that they were "Outstanding" or "Satisfactory." Those responding that they were "Outstanding" amounted to 75% (30) of respondents.



(1) Stop-Ondankan

- The exhibits lucidly presented global warming and solutions. My own country does not have a facility such as this because of lack of funds, and I would like to enable people in my own country to have this same experience.
- I learned about the teaching materials and models that I could introduce in my own country.
- I thought it was a great idea to learn about environmental issues in an entertaining way.

(2) Asahi Breweries, Ltd., Ibaraki Brewery

- There was a good balance between technology and the environment.
- I was surprised that the beer is produced so efficiently without generating any waste.
- It was an interesting tour, but there wasn't much explanation of what Asahi Brewery is doing to reduce CO_2. I would have liked to hear from a manager or CSR supervisor.

(3) Panasonic Center

- The high-tech technology and exhibits of the future were excellent. The encouragement to buy, which is the very opposite of nature conservation, made me feel uneasy, but this probably just reflected Panasonic's view that you can enjoy your life while conserving the environment.
- This was a really illuminating experience. It was great to see how cutting-edge technology is being adopted in industrial products. It made feel that people would be able to live in a way that is gentle on the environment in the near future.
- It was great to have the chance to see cutting-edge technology, but I wish there had been some explanation of the problem of all the garbage created when electronics are thrown out around the world, and the short life of electronic products with the launch of newer models.

(4) Tour of Tokyo Chubo Landfill Site

- I think most participants' countries burn garbage with no restrictions, so this was very interesting. I wish we could have discussed different garbage disposal methods after the visit.
- This was very informative because we don't have anything like this in my own country. The landfill's ability to manage waste was impressive, and I expect it to improve even more in the future.
- The explanation about the garbage disposal process in Tokyo was very easy to understand.

(5) Umi-no-mori (Sea Forest) project

- I was really impressed by this initiative in Tokyo—one of the world's largest cities—to make a former garbage disposal site into a forest and preserve the balance between cities and the forest ecosystem.
- This was an extremely impressive plan, and I'd like to share this idea with other people of like minds.
- I'd like to visit again in a few years and see how the forest has grown. I really liked the idea of planting trees for the next generation.
- I was impressed that this tree-planting project was all paid for with donations from the public and companies. I would really like to see Umi-no-mori on the day that the trees have grown to their full size.

(6) Shinonome Elementary School in Koto-ku

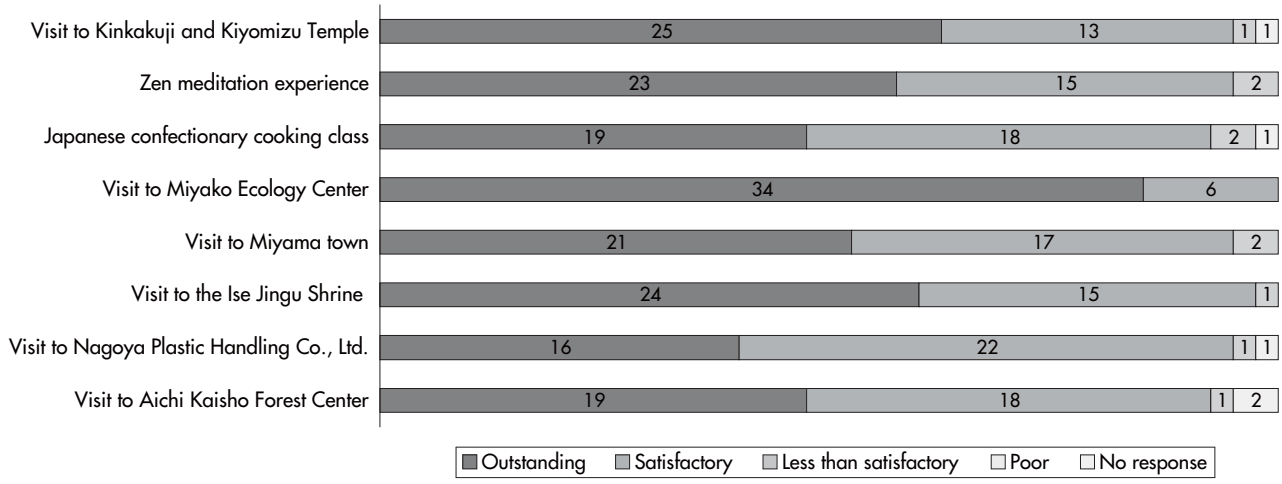
- I'm glad that I had this chance to meet such wonderful children and the principal and to see how environmental education is being put into practice.
- I think it is great that the children experience nature in their own school with the school's Biotope and dragonfly catching.
- Getting children into the habit of environment-friendly practices when they are young will have a major impact later. The principal was very enthusiastic and is an excellent guide. The teachers put a lot of thought into environmental education.
- I really liked this school. I would like to try some of these activities at my own school.

(7) National Science Museum, Miraikan

- This visit was really good. The exhibits were clear-cut.
- This was very memorable, and it was a great place to learn about science.
- I wish we could have a museum like this in my own country, giving students a place to experience science and technology for themselves.

4. Programs in outlying regions

The questionnaire respondents were more satisfied with programs in outlying regions than the programs in Tokyo, with 85% (34) stating that they were "Outstanding" with the Miyako Ecology Center, and more than half of respondents replied that they were "Outstanding" with the visit to Buddhist temples in Kyoto, the Zen meditation experience, the visit to Miyama-town and the visit to the Ise Jingu Shrine.



Comments from participants

(1) Visit to Kinkakuji and Kiyomizu Temple, visits to cultural institutions

- I really liked beautiful, peaceful Kyoto. It gave me a sense of the richness of Japan's culture and history.
- It was really good. I was impressed with the way in which the Japanese preserve their culture.
- Japan assimilates culture, technology and the environment with such good balance.

(2) Zen meditation experience

- This was the best! It was really fulfilling, and I hope students and other people can have this experience.
- Their message on the environment was very sincere and pure. I really hope that all of the participants remember the

monk's words to us. This was one of the best visits we had.
- I really liked this experience of a completely different world. I am grateful for this amazing opportunity.
- This was a great message from a great monk. I will never forget the monk's hospitality.

(3) Japanese confectionary cooking class
- I have always liked cooking and eating sweets, so I was glad to have this unique cultural experience.
- It was fun to interact with the other participants while enjoying Japanese culture.
- This was a really good program that gave participants an understanding of cooking methods, an important part of Japanese culture.

(4) Visit to Miyako Ecology Center
- This was a fabulous center—it was eco-friendly and I wish we had something like this in my own country. I learned practices that I would like to recommend to my students and other teachers.
- This was a really forward-thinking facility in which staff and volunteer work hard to conserve the environment.
- I was glad to be able to tour this excellent tour, which educates the public in a fun and effective way.
- The staff were very kind and energetic and understood that they were doing something valuable. This is the best place for students.

(5) Visit to Miyama-town
- The natural environment in Miyama was breathtaking, thanks to the efforts of the town's residents. This demonstrates how important it is that people act to protect the environment.
- I was extremely impressed with the way determined leaders brought new life back to the aging town and preserved historical buildings.
- It was a great visit. It would have been even better if we could have stayed even one night.
- This place could be a model for regions and countries that have lost forests. Miyama does not use forests much, and the sight of their efforts to preserve the thatched-roof homes was very memorable.

(6) Visit to the Ise Jingu Shrine
- This was a very special experience. I am grateful that we were able to go.
- The temple and forest were really beautiful and peaceful. I was very moved to hear that people have venerated and valued the shrine and the surrounding environment for more than 1,000 years. It was a very restful place.
- It was good opportunity to experience the relationship between nature and spirituality and the power of tranquility.
- I was impressed by their attitude, the way the river has been kept clean, and the way the natural environment has been protected.

(7) Visit to Nagoya Plastic Handling Co., Ltd.
- I would like my own country to use this kind of technology for waste disposal.
- It was a very good experience to see waste disposal at the municipal level. (Even private-sector companies participate in waste disposal and a range of institutions and divisions cooperate together in the waste disposal process.)
- I was impressed with the City of Nagoya's efforts to reduce garbage and promote recycling. This is a very good model for other cities and countries.
- The process for handling plastic is very efficient and I was glad to have the chance to observe this, but isn't reducing plastic products the most effective way?

(8) Visit to Aichi Kaisho Forest Center
- We didn't have much time, but we saw the forest and learned about environmental education based on personal experiences tailored to children.
- This brought various thoughts to mind. This is the optimal place for environmental education.
- It's wonderful that children can have environmental education out in nature from elementary school.
- This was great. I'd like to build a center like this in my own country.

Post Program Report by Participants

Japan – Preservation Power

Sarah van Erp (Australia)
Waste Minisation Project Officer, Total Environmental Centre

It was June in Japan, and I had been selected for a two-week study tour of central Japan as one of 40 delegates representing 14 countries throughout South East Asia. The talk was about recycling, tofu, energy efficiency and general amazement at the extraordinary amount of packaging the Japanese produce!

With close to 130 million people living in Japan – a staggering 340 people per km^2 - I expected to be wowed by the systems that keep Tokyo, the world's most populous city, smoothly running and right on time. And I was.

As we bullet trained through central Japan I was surprised by how much of the land is forested. Most flat areas which are rare and therefore highly valued, are working rice paddies. So when it comes to low cost rubbish disposal (aka landfill), Japan doesn't have the storage space Australia does. How do they manage? Cities like Tokyo squeeze in their 35 million residents by building up rather than out, and have resorted to using their harbour as 'reclaimed landfill' with the intention of foresting much of the reclaimed area. A sustainable solution? Not really. Let's call this what it is: ocean-filling.

My brief visit showed that for all their efficiency, the Japanese are struggling just like the rest of us, to find a 'system,' which can cope with modern consumerism. It is consumer waste which is now filling up their precious Tokyo harbour. But in other Japanese cities, attempts to reverse the trend are up and running. Nagoya, for example, is streamlining the types of plastic in use to promote up rather than down-cycling of used materials; and introducing strict recycling targets and extended producer responsibility (EPR) for electronic waste.

Most of the tours we took in Japan had a waste focus, so I had the opportunity to see EPR in practice, and query our hosts on waste minimisation in Japan. I witnessed zero waste at the Asahi Breweries (including hostess uniforms made from 100% recycled materials), Panasonic's demonstration eco-home, complete with wall-projected interactive computer, and the Miyako Ecology Centre where volunteers are trained to be ambassadors for environmental education in their communities.

While these visits (and more) kept us busy, it was the Ise Jingu Shrine that represented my ideal of Japanese culture, taking us on a journey back to around 690 AD, and the beginnings of the Shinto religion. On arrival we were asked to put our flashing cameras away and take time to listen to the sounds around us: the birds and the gentle rustle of the cypress leaves.

For hundreds of years the shrine has been pulled down and completely rebuilt again every 20 years. This is not, as I thought at first, a waste of resources, but a study in economy. No nails are used in the assembly, and following disassembly, the materials are distributed throughout Japan for re-use in some 169 shrines. The 20-year span represents the time necessary for one generation to pass the skills down to the next, keeping the ancient construction skills perfectly intact – genius!

Building the shrine requires the wood of 10,000 cypress logs – each more than one meter in diameter and some more than 400 years old. About a quarter of the logs come from the forests in the mountains surrounding the Shrine. Since 1922, shrine caretakers have established a cypress planting project so that its own forests will, in time, produce all the necessary logs.

The Ise Jingu Shrine is considered to be the spiritual home of the Japanese people and a testament to their commitment to sustaining their cultural heritage. But I have to admit that outside the temple walls, tradition and innovation run a ragged race.

Take the art of packaging. The effort that goes into presenting goods for consumption in Tokyo's brightly lit and crowded shopping districts is truly mind boggling.

Without a doubt, I will return to Japan to find that the contradiction has been neatly resolved. As we were informed several times by various enthusiastic officials, it is now government policy for 'salary men' to remove their ties when things heat up during rush hour, in summer. If that can happen, anything is possible!

In the meantime, my sincere thanks to the Japan Foundation for this invaluable opportunity and for introducing me to 40 new friends from around South East Asia.

Sayoonara (Goodbye for now!)

Yearnings, Learnings and Realisations – JENESYS 2009

John Stamatiou (Australia)
Environmental Scientist, Sinclair Knight Merz

With the elected theme of 'Environment: Symbiosis with Nature and the Environment,' without a doubt the Japan Foundation's JENESYS 2009 East Asia Future Leader's Programme was an experience of a lifetime, both culturally and professionally. By combining lectures and workshops with eye opening site tours, the group was given a clear snapshot of a society in a time and place as a catalyst to inspire critical discussion on issues surrounding global environmental sustainability.

Beyond the programme schedule, the defining strength of JENESYS 2009 was the contribution of local experiences and knowledge from each delegate, as diverse and fascinating as this was, within a framework of a truly global society facing global issues. The saying, 'think global, act local,' seems a very apt summary of group sentiment throughout the programme.

Two weeks of solid debate between candidates reinforced the following key points to achieving global environmental sustainability:

- A consistent unified approach is essential;
- 'Many hands make light work' – we all need each other and effective communication is a must;
- Affecting global change is more a 'bottom up' than 'top down' process;
- Educating people is a long process and persistence is paramount – so start young!
- Ignorance is bliss but knowledge is power; and
- Money rules the world, so speak to people in the terms they understand.

So how can we implement the programme's findings and make a difference? Well, by bringing together 50 highly intelligent, like-minded young individuals from diverse regions and backgrounds and creating a lifelong and truly global contact network, our job has become much easier! Indeed, during the two weeks in Japan, participants regularly discussed the need to be unified and interconnected in our efforts to achieve a sustainable future society.

Aptly so, after the programme, participants have been contacting each other unceasingly with questions and handy advice, recognising that their local efforts as sustainability champions have now been boosted 50 fold! And considering the calibre of this year's delegates, I am very confident that the momentum generated from the JENESYS 2009 East Asia Future Leader's Programme will translate into tangible differences to our local communities.

Since the program, I have been busy spreading the good word about the Japan Foundation, together with the key outcomes of the JENESYS programme, with friends, colleagues and the local community. This has included a lunchtime presentation series to colleagues, a radio interview for 95.3 World Radio, a series of informative E-mails and lots of lunchtime conversations. The interest in the programme and its outcomes has been phenomenal, showing a genuine desire for people to progress to a more sustainable way of living.

At a professional level, I have been actively implementing the key principles discussed during the programme within major infrastructure projects that I am currently involved with. These projects include some of the largest resource developments in the history of the state of Western Australia. Encouragingly, both developers and service providers in Western Australia are increasingly aware of the need to deliver sustainable projects, which is allowing for some exciting progress in the field of sustainable design.

At a personal level, the JENESYS programme and all its participants have reinforced the urgent need for sustainable living for the average Australian citizen. Although it was no secret to me, one of the most astounding revelations for the JENESYS candidates was that Australia was actually the largest per capita emitter of CO_2 in the world, not the U.S.A! Given this, it is even more important for me to lead by example within my local community and ensure that I am part of the global environmental solution and not the cause.

Post Program Report
JENESYS East Asia Future Leaders Program 2009
June 1 – June 14, 2009

Mohammad Shari Bin Hj Abd Kahar (Brunei)
Deputy Head Master, Dato Marsal Primary School

Introduction

During the last fourteen days, 40 participants from East Asia get together in Tokyo, Japan under the Japan Foundation. The purpose of the foundation for inviting youth from the East Asia region was to educate them with a prepared program, expecting them to play major roles as community leaders in their respected countries.

Even though the schedule was very tight due to time constraints, the agenda was very enjoyable and all the participants were able to learn more about Japan, especially from the lectures, visit and workshops.

♦ Participants from Brunei Darussalam with the Japanese Ambassador Mr. Hashimoto Itsuo and officials

Here are the summary and the evaluation of the program from my point of view from day 1 to day 14.

Day 1 – 1st June 2009 (Monday)

♦ Our arrival at Narita International Airport was welcomed by some officers from JENESYS and representatives from our embassy in Tokyo.

♦ The weather was fine and we took the limousine bus to Shiba Park Hotel together with the participants from Cambodia, Thailand, Myanmar and China.

♦ Our arrival at Shiba Park Hotel was welcomed by our program facilitator.

♦ We were given a briefing about the accommodation and the program itinerary.

Day 2 – 2nd June 2009 (Tuesday)

- Program orientation and overview of the program and some general information from the officers of JENESYS.
- The participants were divided into three groups and each of them were given an opportunity to present and share what they and their organization does for environmental and sustainable communities, based on their pre-program report.

- Lecture on Environmental Education and Environmental Problems in Japan by Dr. Kimiko Kozawa, former Chairperson of the Japanese Society of Environmental Education.
- Dr. Kozawa presented an overview of the development of environmental education in Japan, along with the social and environmental problems in the background: Policy programs in important fields, Trends in EE/EfS in Japan, the guidelines of environmental education promotion, the approaches of EfS and the Contents of Environmental Education.

Day 3 – 3rd June 2009 (Wednesday)

- The visit to Stop-Ondankan, a place open to the public, where the facilities educate the community about the global warming.
- The center was totally subsidized by the Ministry of Environment, Japan.
- Lecture on Environmental Education by Mr. Hiroyuki Suzuki, Officer of Environmental Education, Ministry of Education, Japan.
- Mr. Suzuki explained the necessity of Environmental Education in Japan, the history of efforts toward Environmental Education in Japan and the introduction of Environmental Education policies of Ministry of the Environment, Japan.

- Visit to Asahi Breweries, Ltd, Ibaraki Brewery, one of Japan's major beverage companies actively engaged in various eco-friendly activities.
- We also visited one of its zero waste emission factories and saw the line production for beer. It was carefully designed to reduce consumption of resources and the emission of CO_2 and to achieve 100% waste recycling.
- Some participants were given a chance to taste the Asahi Beer.
- In the evening, a welcoming reception was given by the Japan Foundation.

Day 4 – 4th June 2009 (Thursday)

- The visit to the Panasonic Center was a very wonderful experience in Tokyo, Japan. The participants were divided into three groups. Each group was led by an instructor, who gave detailed information during the study tour.
- The business vision of the Panasonic Center was to contribute to the "Coexistence with the Global Environment" through cutting-edge technologies.
- They also introduced energy-efficient products to reduce CO_2 emissions and a lifestyle with ecological technology to improve environmental performance in the home.

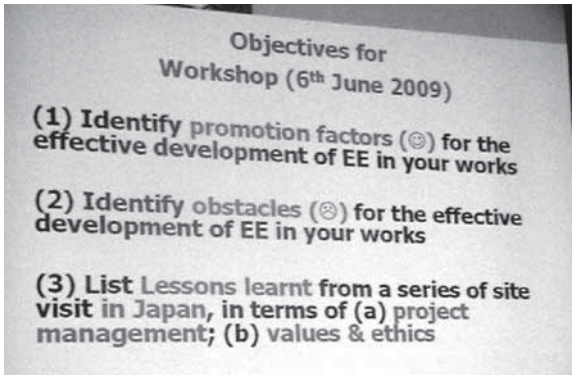
- The visit to the Tokyo Chubo Landfill Site shows how the Japanese government tries to make use of the waste disposal for Tokyo's 23 wards.
- The visit to the Umi-no-mori (Sea Forest) Project, launched in 2007 by the Tokyo Metropolitan Government. Hundreds of thousands of trees were planted in 8 years. They used 30-meter depth of waste and soil at a former landfill site as big as 88 hectares, where about 12,300,000 tons of waste was dumped.

Day 5 – 5th June 2009 (Friday)

- The visit to Shinonome Elementary School. It is part of a UNESCO Associated School Project Network. They have been promoting 'Education for international understanding rooted in local society' and trying to disseminate their educational contents and methods both at home and abroad.

- The Courtesy Call on the Ministry of Foreign Affairs.

Day 6 – 6th June 2009 (Saturday)



- 1st A workshop was facilitated by Dr. Kimiko Kozawa, Dr. Masahisa Sato, and Dr. Yutaka Iwamoto.
- The workshop was based on the participant presentation and feedback from previous sessions.

- The participants were divided into 5 groups and a member from each group in turn made presentations to the whole group.

Day 7 – 7th June 2009 (Sunday)

- All the participants traveled to Kyoto by bullet train Nozomi.
- The journey took about 3 hours, and we were so lucky that we could see Mount Fuji.
- On our arrival, we were straight away taken to visit some of the cultural and historical places in Kyoto.

- The visit to cultural and historical places in Kyoto. Kinkakuji (Temple of the Golden Pavilion).
- Kinkaku (Golden Pavilion) is a popular name for one of the main buildings of the temple, which is properly called Rokuon-ji Temple. In the 1220's it was the comfortable villa of Kintsune Saionji.
- The visit to the Temple Kiyomizudera also in Kyoto.

Day 8 – 8th June 2009 (Monday)

- The visit to a Temple.

- We visited a Japanese Sweet (Wagashi) Class at Kawabata syoumen-higashiiru Higashiyama-ku, Kyoto, Japan.
- We make four Japanese cakes, ①*Higashi Kizato*, ②*Jou-namagashi Uiro*, ③*Jou-namagashi Neri-kiri*, and ④*Jou-namagashi Kinton* (mashed sweet bean jam)

- The visit to the Miyako Ecology Center. The center was established to commemorate the organization of COP3 in Kyoto in 1997.
- The center is utilized as an environmental study center and a place from which to initiate activities that aim to preserve the environment.
- The center provideds hands-on displays and eco-friendly facilities.

Day 9 – 9th June 2009 (Tuesday)

- The visit to Miyama Town, a beautiful historic Japanese village with traditional farm houses and fresh water streams.
- The lecture there was conducted by Mr. Ohata, on Environmental Preservation in Miyama Town.
- The participants also visited a settlement that consists of 38 thatched-roof houses out of 50 houses.
- The settlement is designated by the national government as a preserved area for groups of historical buildings.

Day 10 – 10th June 2009 (Wednesday)

- Travel from Kyoto to Toba by bus. The bus departed at 2.00 pm. The weather was slightly rainy and humid.
- We stayed at the Toba Hotel International. The room was designed like a traditional Japanese home.

Day 11 – 11th June 2009(Thursday)

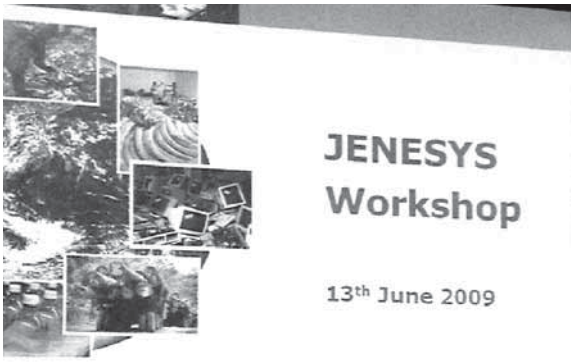
- The visit to Ise Jingu Shrine. The primeval forests of Ise Shrine cover an area of 5,500 hectares. The main sanctuary of the forest has been left untouched and the remaining forest has been used to supply all the timber of Japanese Cypress needed for the reconstruction of the sanctuaries every 20 years.
- In the afternoon, all the participants traveled to Nagoya by bus.
- In Nagoya, all the participants stayed at the Hilton International Hotel, Nagoya.

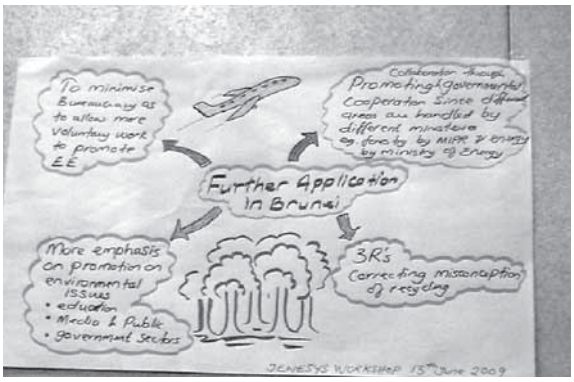
Day 12 – 12th June 2009 (Friday)

- The visit to Nagoya Plastic Handling Co. Ltd.
- The lecture here was given by Mr. Takada, from the Environmental Affairs Bureau of Nagoya City.
- The content of the lecture was the overview of the city's history and implementations to decrease the amount of garbage in the last decade.

- The visit to The Aichi Kaisho Forest Center.
- The main purpose of the center is mainly to educate Japanese children by hands-on activities where the children are brought to the forest so that they can see and feel the real forest. The center provides real facilities in the forest near-by, so that they can monitor the children during activities.

Day 13 – 13th June 2009 (Saturday)





- Wrap-up workshop, again facilitated by Dr. Kozawa, Dr. Sato, and Dr. Iwamoto.
- Again, each group made presentations with elaborated feedback on the past 12 days study tour.

♦ Farewell party and certificate presentations.

Day 14 – 14th June 2009 (Sunday)

♦ Departure.

♦ All Brunei Darussalam participants were driven to Narita International Airport by the transport provided by Brunei Darussalam Embassy in Tokyo, Japan.

CONCLUSIONS

❖ The overall program was enjoyable, fun, and valuable.

❖ The accommodation was very carefully arranged.

❖ The study tour brought us to look more closely into the hearts of the Japanese people.

The Japan Foundation East Asia Future Leader Program Post Program Paper

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JENESYS East Asia Future Leaders Program 2009

PROGRAM SUMMARY AND EVALUATION

The East Asia Future Leader Program which was held on 1st June to 14th June 2009 in Japan was primarily aimed at developing international cultural exchange programs. During the two-week duration of the Program, participants from East Asia countries were given the opportunities to exchange information and discuss common issues with counterpart specialists in Japan as well as to share a view in developing an interregional/international network to promote environmental education and sustainable development. These were carried out through lectures, workshops and site visits.

Itineraries for the program were well organized. I personally considered all the lectures, workshops and site visits to be profoundly meaningful and most relevant to the theme of 'Environment: Symbiosis with Nature and a Sustainable Society.' It has indeed been a privilege to be invited to this program and I hope to be able to contribute back upon what I have gained through this program, both in my country as well as on an international level.

The following were the itineraries of events during the two weeks in Japan:

On Tuesday June 2nd 2009, as a formal introduction to the program, participants were invited to a Program Orientation where Program Overview, objectives and general information were clearly explained to everyone involved. Present was Mr. Masaru Suzaki, The Managing Director, Department of Arts and Culture of The Japan Foundation.

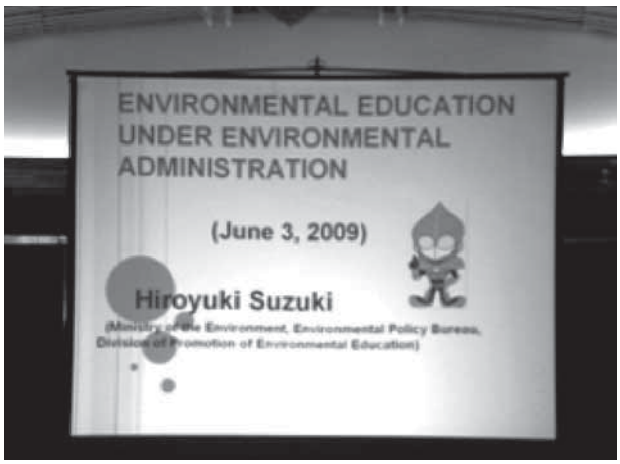
Our first Lecture which was on Environmental Issues and Environmental Education in Japan was presented by Dr Kimiko Kozawa, a prominent figure in the JENESYS program. Dr Kozawa's presentation highlighted the development of environmental education in Japan, along with the social and environmental challenges faced by the nation. Dr Kozawa is an impressive intellectual and it has been a privilege to have met and known her through the program. Her expertise and experience as a General Adviser to JENESYS has indeed benefited participants through her wealth of knowledge and the information shared.

This was followed by participants' presentations.

Everyone had the opportunity to share their activities and projects relevant to environmental education and sustainable development in their area of work. It was certainly a remarkable session as each participant shared their unique information and experience from their own countries. It was also a good ice-breaking activity, as participants began to know each other well and learn more about their colleagues' professions and countries. Perhaps in future programs, more use of Information Technology can be utilized during the paper presentation. Participants should be allowed to use projection of their audio visual materials using laptops or desktop computers. Nevertheless, time constraint during the event was well understood.

A fun walk to Stop Ondankan began the third day itinerary on Wednesday June 3rd 2009. It allowed us to view Tokyo Tower and do some sightseeing along the way to Stop Ondankan. Although it was a little unfortunate that time constraints did not allow us to explore Stop Ondankan well enough, participants did have the opportunity to be briefed about the Center and the services and facilities it provides. It was motivating to see how the Center operates with its information, library services, workshop area as well as other facilities such as school programs, trips, research and group study. This was clearly evident of Japan's commitment to take action for climate change. I could certainly foresee the success of such center should it be introduced in schools or other educational institutions in the region.

Mr. Hiroyuki Suzuki from the office of Environmental Education, Ministry of Environment proceeded with the itinerary for the morning. Mr. Suzuki explained policies for the promotion of environmental education and some of the good practices on environmental education in Japan. This was very good information as it served to inform participants on the role of the Japanese Government in the preservation of the environment. Mr. Suzuki also elaborated on the necessity of environmental education, the history of efforts towards environmental education and the how the Environmental Education Policies were introduced in the Ministry of Environment.



A unique experience for me was the visit to Asahi Breweries Ltd in suburban Tokyo later that day. As one of Japan's major beverage companies, Asahi is actively engaged in various eco-friendly activities, both in product development and in SCR activities. I considered it interesting to learn something new, as it is not a familiar element to where I came from. Asahi's efforts in reducing consumption of resources and emission of CO_2 as well as to achieve 100% recycling are certainly commendable and relevant to the theme of this program.

A welcoming reception was held at Shiba Park Hotel

later in the evening where all participants were formally introduced to the audience and guests present.

On Thursday June 4th 2009, we went to visit the Panasonic Center in Tokyo. It was impressive to see the Eco Ideas Home and the other Panasonic Futuristic Products such as the VIERA section, Blu-ray Theater, Plasma Technology Section, Future Life Wall, Nintendo Game Front and RiSuPia. However, I personally believe that this prompts the question of 'why produce more' versus 'reduced consumption of resources.' But then perhaps, there is also more of a need for balance between a 'comfortable lifestyle' and the 'conservation of nature and the environment.' Overall, it was a fascinating visit as we were able the see the highly sophisticated and state of the art Panasonic products.

The Chubo Landfill Site visit on the afternoon of Thursday June 4th 2009 allowed us to see how the Tokyo Metropolitan Government Landfill Site operates. Participants were briefed on how disposal sites were made suitable for the 21st Environment Friendly Century and the Environmental Policy associated with it. Such a facility is not yet available where I come from, so this visit was certainly very informative and educational.

I consider the next site visit, to Umi-no-mori (Sea Forest) project site, to be, among the many, most interesting feature of this program. It is indeed fascinating to see how an island of refuse and surplus soil can be transformed into a verdant forest as to create a beautiful Tokyo surrounded by water and greenery. I believe I also feel affection for the idea of 'building and making it for the children.' The Sea Forest is more of a 'gift for the next generation' and certainly another 'act of kindness to earth.' It is indeed my personal wish to come back to Japan again in the future, to see Umi-no-mori.

Friday June 5th 2009 began with a visit to Shinonome Elementary School, a member of UNESCO's Associated School Project Network. The programs and activities run by the school are certainly inspiring and the school's commitment to the environment is clearly apparent through the efforts made. The cross-curricular teaching was made in accordance with the national school curriculum to implement Education for Sustainable Development. Perhaps in future programs, visits to colleges and universities can also be included to enhance the coverage of the program.

This was followed by a visit to The National Museum of Emerging Science and Innovation (Miraikan). This is an interesting place to visit and it was quite unfortunate that we did not have sufficient time to explore the museum. Nonetheless, it was a thoroughly enriching experience to see the innovations and I do hope to go back there with my children in my next visit to Japan.

We went for a Courtesy Call to the Japan Ministry of Foreign Affairs, where we met and were briefed by the Deputy Minister of Foreign Affairs. Several issues and areas of interests and concern were discussed between the Deputy Minister and several participants.

The first Workshop was held on Saturday June 6th 2009 at Shiba Park Hotel. Everyone had the opportunity to discuss among themselves the issues raised during the program so far. Participants were also assigned to identify promotion factors and obstacles for the effective development of environmental education in their area of work. We were also required to list lessons learnt from the

series of site visits in Japan, in terms of project management and ethical values. Thus, the workshop acted as a platform for participants to enhance their understanding on what they have seen in Japan so far and to discuss issues relevant to environmental education and sustainable development. My suggestion for future workshops would be to perhaps include more use of Information Technology such as the use of laptops and computers for presentations of group work, rather than the use of print materials. Nonetheless, the workshop was indeed a useful session for all to share their views and information regarding the program.

On Sunday June 7th 2009 we travelled to the city of Kyoto by Shinkansen Nozomi 17. The two-and-a-half hour journey allowed us to view the remarkable Mount Fuji and other sights along the way to Kyoto. Upon arrival in Kyoto, we were taken to visit cultural and historical places including the Kinkakuji, The Golden Pavilion.

Monday June 8th 2009 began with the visit to a Zen Temple in Kyoto, where we had the opportunity to experience Zen Meditation. This was indeed a distinctive moment for me, as it introduced me to a new experience of 'a totally different world.' I found it rather enriching to see how such religion and culture are practiced in Japan. We were attended by a humble priest and were served very fresh green tea with traditional Japanese sweets during our stay there.

We then went to a Japanese sweets cooking session at Kanshundo. This was another exciting itinerary in the program. It was interesting to experience Japanese sweets cooking as we worked alongside the baker or chef in charge of the place.

Next was the visit to Miyako Ecological Center. Personally, this has to have been the most remarkable part of the program. As a center established in commemoration of the organization of COP3 in Kyoto in 1997, Miyako Ecological Center is utilized as an environmental study center and a place from which to initiate activities that aim to preserve the environment. I was amazed with the presentation of the building itself that acts as a display of its commitment to the environment. The Awareness

Learning Center, Hands on Ecology Corner and Theater have all shown to make learning full of fun discoveries.

On Tuesday June 8th 2009, we were taken to Miyama, a town famous for its landscape, characterized by century-old houses with thatched roofs. We were given a lecture on policies and implementations to regenerate the aging town while conserving historical buildings. We stopped by a beautiful rose garden on our way to the settlement. It was fascinating to see the beautiful and well preserved settlement.

On Wednesday June 10th 2009, we travelled to Toba, a beautiful picturesque city where we had the opportunity to stay in a traditional Japanese hotel room.

Thursday June 11th 2009 began with a visit to the

primeval forests of Ise Jingu Shrine. This was very captivating with the huge area covered by forests itself. Participants experienced the spiritual home of the Japanese people as we walked through the Divine Forest. It was indeed a very educational and cultural experience. We left for Nagoya later that day.

On Friday June 12th 2009 we went for a visit to Nagoya Plastic Handling Co. Ltd., where we where briefed on how the company treats plastic garbage collected by Nagoya City as segregated garbage.

This was followed by a short visit to Aichi Kaisho Forest Learning Center for Sustainability. It was a brief yet useful visit to the Learning Center and we also had the opportunity to walk into the forest nearby.

We then travelled back to Tokyo on Nozomi 28, another enjoyable journey on the Shinkansen passing by the remarkable Mt Fuji on our way back to Tokyo.

A Wrap up workshop was held on Saturday June 13th. Participants and organizers had the opportunity to share and discuss the overall outcome of the program as it reached its end. Participants were required to list lessons learnt from a series of site visits in Japan in terms of their project management, values and ethics. They were also required to develop further application plans at personal levels as well as national levels.

A Farewell Reception was held later that evening followed by a certificate presentation to all participants, by Mr. Masaru Suzaki, Managing Director, Department of Arts and Culture of The Japan Foundation. It was indeed a good closing to an excellently well organized program.

Participants departed for their respective countries on Sunday June 14th 2009.

Overall, the itinerary of the program can still be further improved. Perhaps with the development of the communication aspect, if Japanese language is going to be used in the majority of the events, future participants should perhaps be given the opportunity to take an intensive Japanese Language course prior to their arrival in Japan. This should promote better understanding and cooperation between participants, lecturers and organizers. Similarly, if the English language is requested on a fluent level, then perhaps all parties should be required to be able to use the language fluently without the need of interpreters.

One best element I will remember most from this program will be Moko San, our group tour guide. I believe she is the best representation of Japan, always 'cool,' very respectful, tolerant and very patient with all the participants. To me, she displays the Japanese diligence, courtesy and true hospitality.

POST PROGRAM ACTIVITIES

The following have been scheduled in Negara Brunei Darussalam:

1. Sharing session with the Ministry of Education
2. Lecture and Workshop for School Leaders
3. Sharing session with teachers in the College
4. Sharing session for Environmental Education as part of Subject Curriculum
5. Sharing session with teachers in Cluster Six institutions
6. Sharing session with Secondary School Teachers
7. Lecture on environmental education for students
8. Workshop for Teachers
9. Workshop for Student Leaders
10. Lecture and Workshop for Youths in Negara Brunei Darussalam
11. Sharing session with Parent Teachers Association

MEDIUM AND LONG TERM PLANS

Medium Term Plan

i. To promote and further develop Environmental Education in Negara Brunei Darussalam through relevant activities and programs at national and international levels
ii. To form an alumni with Negara Brunei Darussalam's participants of JENESYS programs
iii. A proposal for an online program with Miyako Ecological Center and Stop Ondankan is in progress. This project is aimed to educate both teachers (including school leaders) and students on environmental education and sustainable development.
iv. Association with the Brunei Generation Green Society for the promotion of environmental education and sustainable development.
v. To initiate the establishment of Environmental Education as a part of the curriculum

Long Term Plan

i. To participate in national and international events/ conferences/seminars relevant to environmental education and sustainable development
ii. To be involved in the inception of Environmental Education as part of the national curriculum
iii. To develop a 'Stop Ondankan' and 'Ecological Center' of our own in Negara Brunei Darussalam

On the whole, the Japan Foundation East Asia Future Leader Program has been indeed a thoroughly excellent and enjoyable program. I certainly felt privileged to be given the opportunity by the Japan Foundation to participate in the Program. It was definitely a network of diverse culture and perspectives which I believe can stand as a platform for the promotion and development of environmental education and sustainable development. And the most incredible experience from this program, apart from the wealth of knowledge gained, is the friendship fostered with colleagues from the fourteen countries and Japan.

Post JENESYS Program Report on Environmental Education and Environmental Issues

Marlizayati Binti Johari (Brunei)
Tutor in Physics Education, University of Brunei Darussalam

The JENESYS program on environmental education and environmental issues has made an impact on my personal life in terms of daily habits. The eye opening experiences have made me aware of the issues and the impacts of excessive packaging and excessive waste in our own country and culture. This is brought upon by the unforgettable site visit to the Chubo Landfill. The sight of plastic bags and the waste management on reclaimed land due to excessive waste made me more appreciative and think twice before discarding materials.

People around the world are aware the existence of the 3R's: Recycle, Reuse and Reduce. However, thinking back over the discussion sessions that we had during this program, there is an issue that comes to my attention regarding the 3R's at our own education system. There is a misconception on the order of importance of 3R's. There is more emphasis on Recycle whereas in actual fact, Reduce plays the main role in saving our environment.

Recently, I was fortunate enough to be invited to teach Year 4 students of Bachelor of Arts in Primary Science Education on global warming. I used this opportunity to raise the issue of 3Rs. Since these students are our future local primary science teachers, it would help to disseminate the information to our younger generation, especially children. In the class, we discussed the causes and consequences that the world is facing due to global warming. As an activity, I asked them to draw mind maps on how we can minimize the impact of global warming on different levels such as personal level, industry level, policy making and so on. These students were divided into 3 groups of 4, of which then they had to select a presenter for the group.

The main theme that I noticed from their presentations was the importance of awareness. Many local initiatives have been meted out to enhance the public's knowledge on global warming, from schools to private sectors such as banks. However, there is a lack of knowledge on the "know how" on the personal level, where students can contribute to by curbing the green house gases. Therefore, I shared my knowledge and my experiences from the JENESYS program where we can make a difference by doing small things such as reducing the amount of rubbish produced by individuals and inculcate the idea of thinking about the environment before using. A simple effort such as planning our journey between one place and another in order to minimize the amount fuel used in a car signifies our effort to save the world.

As I am an educator for the initial teacher training course at our local University, I can disseminate and correct the predominant misconception on the 3Rs. Furthermore, the two weeks JENESYS program has given me a new insight on new pedagogical method in delivering lessons concerning energy and the environment, especially from our visit to the Stop-Ondankan and the Panasonic Centre. The activities shown to us can help to develop more creative lessons to produce bigger impact on the students' beliefs about the environment and habits on daily basis.

The idea of a centre such as Stop Ondankan has inspired me to develop future plans in setting up such organizations. This can be done within our local University where all the faculties can join hands in making it a success. However, as I am about to pursue my further study abroad, this plan has to be put on hold. Nevertheless, our University is in the process of creating a sustainable community within the University. This small step is an act which can contribute to the phrase 'think globally, act locally.'

I am grateful for the opportunity that was given to me by the Japan Foundation to participate in the JENESYS program. The program has helped in building networks between different countries and had been an eye-opening experience for myself. Exchanging ideas and information has helped to diversify and enrich our approaches towards environmental education and environmental issues.

The Miyako Ecology Center, Kyoto

Mohammad Azmye Bin Haji Alamin (Brunei)
Chief Technical Assistant, Ministry of Development

The program itinerary included a visit to the Miyako Ecology Center on Monday, June 8th 2009 at 3.30 pm.

As Kyoto has become internationally known as a World Heritage City, the Center was built to commemorate the hosting of the Kyoto Conference on the Prevention of Global Warming (COP3) held in 1997 and the Kyoto Protocol.

The Kyoto Protocol is a protocol produced at the United Nations Conference intended to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

INTRODUCTION

The Miyako Ecology Center is the Kyoto Municipal Center for Promotion of Environment Protection with the vision: "Fostering a Kyoto that exists in harmony with the Environment".

It is a steel structure with a surface area of 1056m^2 and an approximate floor space of 2700m^2. It has three floors, including a basement and rooftop. The Center features a number of areas that promote Climate Change and the use of energy saving methods. These features are divided into four parts, namely:

Look, Touch, Feel: Hands-On Displays

The exhibition corners feature displays that allow visitors to study in a hands-on way, everything from global environmental issues to the local ecological wisdom of Kyoto.

The Entire Building Serves as an Eco-Exhibit

Throughout the building, many devices have been installed to conserve energy and resources. Many kinds of naturally-sourced and recycled materials have also been used as building materials.

Provides User-Friendly Facilities

Efforts have been made to provide facilities, which are friendly to all of the Center's visitors: there are wheelchair accessible restrooms on every floor, elevators, and other specially designed facilities.

Promotes a Partnership of Study and Action

Many citizen groups have been involved with the planning of this facility from the earliest stages and still take part in managing and maintaining the Center.

HANDS-ON EXPERIENCES AND LESSONS

Upon Arrival to the Center, we were escorted to the First Floor Theater where we were briefed on the history and workings of the Center. Like previous places visited, the staff adopted the idea of 'Cool Biz;' i.e. wearing more comfortable work attire due to the summer weather and keeping the building at a constant 28 degrees to reduce energy usage; i.e. air-conditioning.

We were then separated into four groups, and each tour group was headed by the staff of the Miyako Center and led to different parts of the building.

Water Conservation Display

Our Tour guide led us to the second floor of the building where the group was asked to gather around a sink and faucet. Before starting, he asked the group to 'boo' him if ever he did anything non-eco-friendly and wasteful.

He then began showing the group how most people washed their hands at home. After opening the tap and rinsing his hands for awhile, he started walking around looking for soap, stopped for awhile to answer his phone, talked on it, then looked for a wash cloth to dry his hands. While doing all of this, he left the water running all the time without once turning off the tap. The group gave him 'boo's at each wasteful unnecessary task that he did, which added to the hands-on experience of the experiment.

Once finishing, he asked the group what he did wrong and of course, each necessary task was pointed out. A number of other things were also pointed out, like keeping water running while brushing teeth, shaving or washing the dishes. The group was reminded that such unnecessary tasks were water wasteful and that if required, please to firstly close the tap beforehand.

Biotope and Roof Display

The next area was the rooftop, where a biotope is

grown. A biotope is an open space in which many plants and living things can thrive. The roof biotope features vegetables, flowers and a pond where fish are kept. It is made possible by a membrane spread on top of the flat roof that acts as insulation and also as a collecting agent for rainwater that falls onto the roof. The water collected is used to flush the facility's toilets and to water the biotopes.

Other than the biotope, the rooftop was also designed to be used for learning about generating nature's energy from the sun's rays and the wind. Solar panels and barometers are used to help generate the energy required by the facility, thus reducing the total amount of electricity acquired from the city's main grid.

Waste Management Display

The Waste Management Section is located on the first floor of the building. There were a number of glass displays that showed the amount of household items that were thrown away everyday, from empty plastic bottles, to tin cans and vegetables. Our guide mentioned that not only old and worn out items were discarded, but he also pointed out that some items that were still usable like food tins that were not yet expired and shoes that were still in great condition were also thrown away.

He then took out a number of differently sized covered dustbins. Each dustbin contained fake money that portrayed the different amounts of money that was required to finance the dumping of each sized dustbin; i.e. the bigger the size, the more money was required to process the waste.

We then moved to a small Japanese-type room where he took out a plastic bag full of everyday items. He then asked the group to sort out the recyclable and non-recyclable items. The point of the exercise was to show the group just how easy it was and how little time it took to do the separating and that if more people did it, the easier it would be, to process it. Also, the less time it took, the less energy and money would be utilized by the government.

SUMMARY

The design of the center can be incorporated into buildings here in Brunei, especially the solar panels and barometer. Due to Brunei's equatorial climate, flat roofs are not practical but the collecting of rainwater for flushing toilets and watering flower-beds and gardens is.

The use of tiles and bricks made from recycled glass cullet for flooring in the restrooms as well as for the pavement that surrounds a building can be adopted in the future, once the technology is available in Brunei.

Similar hands-on experiments and display methods can be utilized to show the nation's public how wasteful certain tasks can be and how they can help to protect the welfare and workings of the environment as a whole, through a change in habit and awareness.

The center is mainly reliant on the efforts of the large volunteer staff that helps in the workings of the facility, thus citizen participation is something that needs to be emphasized, in the near future.

Post Program Paper

Navuth Prum (Cambodia)
Project Manager and Assistant, LEUCAENA/CCN

1- Looking back on the program after returning from Japan

* Orientation. We were given information on study tours and communities that focus on environmental preservation and Environmental Education (EE) and the lessons we could learn from visiting the sites.
* Lecture on environmental education policies by Mr. Hiroyuki Suzuki, Ministry of Environment, Environmental Policy Bureau, Division of Promotion of Environmental Education. He focused on three points: 1 - Necessity of Environmental Education, 2 - History of Effort toward Environmental Education, and 3 - Introduction of Environmental Education Policies of the Ministry of the Environment.
* Visiting the Panasonic Center. The guides showed us some new Panasonic products. They explained the Eco-idea house, which saves energy and cleans the pollution indoors. Solar panels are attached to the roof of the house to generate electricity. Energy is saved in the battery as well, and can be used later, to generate electricity in the house. All of the equipment is remote controlled.
* Visiting the Chubo Landfill site. Representatives explained the process of waste converting, to make landfill for the site. There are two layers for filling, one is plastic waste and ash three meters deep and the other is covering soil, 50 cm deep.
* Visiting Miyako Ecology Center. The features of the Miyako Ecology Center are: 1- Look, Touch, Feel: Hands-on displays (the exhibition corners feature displays that allow visitors to study in a hands-on way, everything from global environmental issues to the local ecological wisdom of Kyoto). 2 – Provision of user-friendly facilities (Efforts have been made to provide facilities which are friendly to all of the center's visitors: there are wheelchair accessible restrooms on every floor, elevators, and other specially designed facilities). 3 - The entire building serves as an Eco-Exhibit (Throughout the building, many devices have been installed to conserve energy and resources. Many kinds of naturally sourced and recycled materials have also been used as building materials). 4 - Promotion a partnership of study and action (Many citizen groups have been involved with the planning of this facility from the very earliest stages and still take part in managing and maintaining the center).

2- Plans for using the experiences from Japan, next year.

In September this year, we will celebrate a general meeting of all communities (67 communities). At that time, we will send them information on the environmental impacts and environmental education.

We will set up a schedule to implement activities in communities as follows:

Step1: Provide environmental education to community volunteers.
- Clean up the environment in and around their houses.
- Collect waste and make compost
- Evaluate

Step2: Promote the activities of community volunteers to educate villagers.

Step3: Provide environmental education to children.
- Cooperate with elementary schools.
- Provide EE to children at the elementary level.

* We will cooperate with two sectors (Agriculture and Health Care) to promote the activities of environmental education in each community.

Post Program Paper
My Major Activities after the Study Tour
My Medium- and Long-Term Plans

Say Bora (Cambodia)
Environment Education Coordinator, Japan International Volunteer Center

1. Introduction

Environment is a broad term, which refers to both living thing and non-living things that surround us. Human beings are also a part of the environment. To have a better livelihood, people have developed modern tools to extract resources from the natural environment including fish, forest, water, minerals, and fuel, and turn it into new products such as plastic bags, plastic bottles, houses, buildings, etc. which cannot naturally decompose. At the same time, humans have been educated on many issues and methods to better use the natural environment effectively, to conserve remaining resources, and to manage the natural system. Environmental Education has provided an understanding on the values of the environment and new concepts for sustainability of environment conservation and management.

Environmental awareness has been rooted in the world since decades ago. At that time, it showed impacts on the forest and water from the way some countries conducted rapid extraction of natural environment. Currently, we should change our attitude to ensure our quality of life in the future. We should empathize on daily needs such as air, water, and food. The negative change of environment has contributed to climate change which makes difficulty in production. Climate change, loss of forest, animal, and biodiversity, reduction of fish production, endangered species, and illegal commercial logging are some of the big threats to environment in the world. Cambodia is threatened as well, especially in the Soutr Nikum District, Siem Reap province where JVC has been working. Illegal logging and fishing activity, the lack of proper management of plastic waste and animal manure have lead to the decrease in fish resources and air quality, soil fertilizer, and water quality respectively. These activities happen because people do not understand the impact of the problem and how to solve them or find alternative solution to make a better living. Part of the reason is the limitation of information dissemination. Environmental education is one of the most effective ways that each community can struggle with the difficulties and make their own future, which can absolutely shape a better environment for the younger generation.

Regarding to these, JVC decided to include its Environment Education Project with existing activities being implemented in the Soutr Nikum District, Siem Reap province. Environmental Education will provide capacity building to primary school teachers and students as well as to other interested relevant stakeholders and environmental education resources.

2. Overall goal

Community becomes aware of the environment by supporting Environmental Education activities

3. Project goal

We consider that environmental education is for all people, from children to the elderly, in communities and according to the generation. The project goal is to provide alternative education to students of schools.

4. Objectives

To achieve this goal, we stress the different objectives and take different methods

(1) to build the capacity of teachers to be able to teach and experience in Environment improvement activities
(2) to facilitate in the creation of environmental education resource learning

5. Project Activities

During my study tour in Japan, which was supported by the Japan Foundation, I learnt many things such as culture, religion, food, language, technology, and environment, etc. All of these have stuck in my mind and eyes. Especially, I have learnt many things about environmental activities, which previously I thought were impossible to do. This study tour has provided me with lots of ideas and experiences, particularly biotope and artificial environment, which I had thought would be impossible to do in Cambodia. However, there are also many negative points I have learnt about Japan. After I came back from

the group study tour from Japan, I decided to integrate some interesting environmental activities in my existing environment project as follows:

5.1 Build teacher capacity:

We will provide intensive training to all the teachers in these 4 schools about the basic concepts of environment, ecology and development followed by skill training related to water, soil, forest, waste, chemical pesticides, and air, with one experiment for each topic.

5.2 Integrated environmental education in the school curriculum

Schoolteachers, in cooperation with JVC, will work together in integrating environmental education activities in practical science (topic), from grade 3 to grade 6.

5.3 School Biotope making

JVC, in cooperation with schoolteachers; will work together to make school biotopes as learning materials for the kids.

5.4 Environmental education training to students

Teachers from grade 3-6 will integrate or introduce some environmental contents any time during their instruction of practical science. Then students will be asked to do some research at home related to waste, trees, vegetables, rice etc. in their environment, in addition to some practical experiments at school such as tree planting, waste collection, drawing insects, etc.

5.5 Environment campaign

One or twice a year, JVC, in cooperation with school teachers and students, commune authorities, commune health centers, and villagers will conduct an environmental campaign in an area such as plastic waste collection or tree planting.

5.6 Study tour for students

Three highest scoring students in each class (according to our limited fund) will be selected for a study tour to visit a natural mountainous resort or zoo in Cambodia once a year, to introduce the connection between what they have learnt and the reality. We will then encourage these students to further disseminate their findings to other students, who could not go.

5.7 Exchange visits by school teacher

All teachers will be brought to visit and learn from other schools about environment education activities, especially to learn from schools that have already implemented environmental activity.

5.8 System of Rice Intensification (SRI) experiment at school

During rainy season, each school will conduct an experiment on SRI and traditional rice cultivation in small plots at their school with other students to compare which one works best and let students learn about rice cultivation from making seedling beds until harvesting.

5.9 Vegetable growing at school

The school will make a small vegetable garden and let students practice and learn how to grow vegetables. The harvested vegetables will be cooked at school. We will encourage students to make their own garden at home.

5.10 Environmental education school library

JVC will cooperate with each school in setting up a school library. We will offer support by providing some books, posters, and other training materials, which are useful not only in environmental education but also in other general topics.

5.11 School environment competition and EE student award

We will set up one committee to evaluate the school environment situation. Good schools will be rewarded at the end of academic year. In addition, we will give to good students who really take care of environment, some small reward as a souvenir.

5.12 Result dissemination

Two workshop sessions will be arranged per year to disseminate the results to stakeholders and get their feedback.

6. Project output:

- 80% of teachers are able to teach EE lesson
- Each school is capable of making and teaching EE lessons and have enough EE training material
- Each school has 1 library and 1 biotope for learning

Plan of Operation (EE 3 years)

No.	Activities	Input	Output
1	Prepare questionnaire for site selection	EE team	• 1 set of questionnaires • District education officers, commune members, villagers, and school teachers are interviewed
2	Survey for selecting school	EE team and questionnaires	• Understand education policy and plan • Select and priority school
3	Prepare EE concept paper	EE team	• Define goal, objective, project plan
4	Prepare Training Need Assessment	EE team and questionnaires	• Understand about general education, environmental knowledge, and their future needs
	Prepare lesson	EE team	• Define the topic and contents
5	District workshop	EE team Education district officer Primary school School committees Commune members	• Open EE activity in Siem Reap province • Participants understand about EE project
6	Basic concepts training	EE team Training manual, training material	• Teachers understand the basic concepts of environment, ecology, and development • Teachers are able to share to their students
	Skill training and practical activities	EE team Training manual, training material, and equipment to take practice	• Teachers will come up with new ideas and some practical activities for experiment
	Sanitation training	EE team Commune health center staff Training manual and training manual	• Teachers understand the impact of waste • Teachers are able to teach to students
	Management training	EE team	• Teachers are able to make plans and implementations for their own school
7	Study tour/exchange visit (teachers and students)	EE team	• Teachers see and understand • Able to motivate students • Students disseminate to other students
8	Tree nursery School students and teachers	EE team	• 1 school 1 tree nursery • Fruit trees, multipurpose trees, and timber trees
9	Environmental day (district level) Waste and tree planting campaign (commune level)	EE team Relevant NGOs Teachers and students Local authority Villagers	• Participants understand the importance and impact on the environment • Take action to protect the environment • Plant trees in school, students' homes, and along the road
10	Make school biotope	EE team Teachers and students	• Teachers are able to use biotope as EE learning center • Attract students to learn EE
11	Create school library	EE team Teachers	• Teachers able to manage the library • Make the students interested in reading and searching • Attract students to come to school
12	School environment competition and EE students award (Annual prize award)	EE team Environment committee (EE team, teachers, school committee members, local authority) District education officer	• Committee members will evaluate environment situation fairly • Able to priority 1 good environment school for rewarding • More competition among students
13	Quarterly workshop with teachers (& district workshop 2 time/year)	EE team School teachers Education district officers Local authority	• Results are disseminated to the relevant stakeholder • Feedback provided
14	Monitoring and evaluation	EE team	• Able to check and reflect the results
15	Next Plan	EE team	

Environment Education Project PDM

Narrative Summary	Objectively Verifiable indicator	Means of verification	Important Assumption
Overall Goal Community becomes aware of environment by supporting EE activity	Village and school environment cleaned	Survey report and observation	Social security stability
Project Purpose To provide alternative education to students of schools	1. Students aware of environmental situation around them 2. Students practice at school and at home (change attitude)	Monthly progress report and observation	No restriction from MoEYS Teachers do not move out
Outputs 1. Teachers have capacity to practice EE for students 2. School has resources for EE	1.1 80% of teachers are able to teach EE lesson 1.2 Each school is capable of making EE lesson and has enough EE training material 2.2 Each school has 1 library and 1 biotope for learning	Monthly progress report	Teachers do not move out
Activities 1. Capacity building of teachers of the target school 2. Improve educational environment of the target school	**Inputs** 1. Construction of biotope 2. Setting up library (resource center) 3. Provide other basic materials for EE (limited) 4. Human Resources 1. Country Director (International staff) 2. EE project coordinator (Local staff) 3. EE project assistant (local staff)		**Pre-condition**

Post Program Report on East Asia Future Leaders Training Program in Japan June 1st to 14th 2009

Zhenxi Zhong (China)
Operations Director, Shanghai Roots & Shoots

Weeks have passed since I returned from my two-week trip to Japan as one of the participants of the East Asia Future Leaders training program organized by the Japan Foundation. There is no doubt that it is one of the most memorable experiences I have ever had in my life, which I believe has already generated benefits both in a personal way and in my professional life.

I was truly amazed at how diversified our participant group was, 40 people from 14 countries. Each one of us had brought with us plenty to share, as we came with enthusiasm to learn from fellow participants and professionals in Japan. Diverse as our cultural backgrounds were, we found that it took us no time to become friends. Through discussion-oriented workshops and interesting field trips, we got to learn more about each other's work and were able to enjoy our time in Japan in general. By the end of the trip, we had established such close relationships that it was hard for us to say goodbye. This was my first visit to Japan, but I know it will not be my last. I fell in love with the country and its culture. More importantly, I will always associate Japan with the fond memories we share.

Upon my return to Shanghai, I was able to reflect on the two-weeks spent in Japan and apply the knowledge I learned to my every-day work. The focus of my work is environmental education and education for sustainability through experiential learning. It was very enlightening for me to visit environmental education facilities such as Miyako Ecology Center, Stop Ondankan and Shinonome Primary School, all of which serve as successful models for environmental education where students have access to the latest development in environmental research and be inspired to make a difference in the community. Many of the games and tools used in these environmental education facilities can be replicated in China. For example, Shinonome Primary School encourages students to learn about nature by growing plants in the school yard. We have a similar project in Shanghai in our member schools called Organic Garden, whereby we assist students in setting up their own garden in schools to grow organic vegetables and fruit. At Miyako Ecology Center, there are many exhibits, which show the impact man has on the environment and what happened to the environment when we exploited our natural resources in an irresponsible way. They are very powerful and effective tools to communicate the message to the students that each human being should take the responsibility of taking care of our own planet. Our environmental curriculum program has the same concept of education through hands-on activities. Many of the exhibits at the Miyako Center are easy to replicate and localized to reflect the situation in China, which I believe will help students understand that every individual matters and that every individual can choose to make a positive difference.

Japan certainly has a much more sophisticated environmental curriculum for students from the primary school level all the way to the college level. We are trying to improve our environmental curriculum to complement what schools in China have for environmental education. It is a new concept for Chinese schools to integrate environmental education and education for sustainability into all subjects taught, such as Chinese, Geography, English, Chemistry, Physics, Math and so forth. Our goal is to help teachers and students understand that environmental education overlaps with almost all other subjects and that it is critical to adopt a holistic perspective on sustainability, to be able to understand the interaction between society, economy and environment. The materials I brought home with me from Japan have proven instrumental in conveying the message to my colleagues and the teachers we work with. We are translating the graphics, which demonstrate the interconnection between environmental education and other subjects taught at all age levels. In addition, we are sorting out the booklets and brochures I collected in Japan and having them translated so our volunteer teachers can use them for their own teaching, immediately.

My understanding of sustainability was significantly deepened by the visits to Miyama Village and Ise Jingu Shrine. I was touched by the fact that people have heartfelt respect for nature and consider it the sacred core of the culture, which people's lives revolve around. This is what we are trying to instill in our students; an understanding

that man is not the master of nature, but rather part of nature. Only when we learn how to live in harmony with other forms of life and the environment as a whole, can we sustain ourselves.

I wrote a trip report to share with my colleagues and the students we work with in 188 schools. I am also invited to speak at the Global Link Initiative monthly gathering about my trip to Japan. There is no doubt that I will keep spreading the message and sharing my experience with like-minded people. It is very possible that our group of 41 will work together to create some international projects which will provide an opportunity for more people to benefit from the cross-cultural exchange. I look forward to the day we have our reunion in Japan or in any of the 14 countries represented, when we take our commitment to environmental conservation further into the future.

Annex

News coverage of the work of Shanghai Roots & Shoots

- Shanghai Roots & Shoots named the Best Green Initiative of Shanghai by the readers of That's Shanghai magazine
  http://shproto.urbanatomy.com/index.php/i-ahearts-shanghai/85-i-love-shanghai/1515-best-of-shanghai-2009-the-winners
- Shanghai Roots & Shoots Eco-Audit Program credited in Shanghai Daily as the grassroots green initiative which helps people change their lifestyle for a greener world
  http://www.shanghaidaily.com/article/?id=410212
- Linkin Park supports Shanghai Roots & Shoots Million Tree Project to fight desertification in Inner Mongolia
  http://www.smartshanghai.com/blog/809/Charity_Spotlight:_Roots_&_Shoots_shanghai
- Shanghai Roots & Shoots feature in Shanghai Family
  http://www.shfamily.com/bin/view/magazine/schoollife_april_2008_roots_and_shoots_grows_in_shanghai
- Tori Zwisler, Founder and Executive Director of Shanghai Roots & Shoots interviewed by Danwei.org
  www.danwei.org/charity/roots_and_shoots_qa.php
- Shanghai Roots & Shoots staff featured in Greener Magazine
  http://issuu.com/ecodesignfair/docs/greener01_mag/31?zoomed=true&zoomPercent+100&zoomXPos=0.017029972752043543&zoomYPos=0.2559462254395036
- For more updates of the Roots & Shoots projects, please visit our website
  www.jgi-shanghai.org

Future Plan Post-JENESYS Program
Linking the Energy and Ecology Networks among Chinese NGOs, Japanese NGOs and JENESYS '09 Participants

Yu Yin (China)
Research Fellow, Mekong Program on Water Environment and Resilience (M-POWER)

The JENESYS Program 2009 on "Environment: Symbiosis with Nature and a Sustainable Society" provided me a great experience in learning about Japan's environmental education and environmental protection programs, as well as making friends with young leaders from fourteen Asian countries. I am very grateful for what I have gained from the 2-week study tour program.

Activity after JENSYS Program

After the JENESYS Program, one of my key activities is to explore the Chinese environmental NGOs that work on Energy saving, alternative and renewable energy promotion and climate change, and link them with related Japanese organizations and the JENESYS participants for climate change and energy efficiency campaigns in the future.

In recent years, climate change and subsequent impacts has become more appealing. The climate change is a global phenomenon, which closely related to the energy generation and consumption, international trade and economic growths of individual countries. The United States, for instance, used to be criticized as the largest carbon emission country until 2008, when China caught up and ranked highest of carbon emission countries. However, a large portion of the carbon emission in China is from producing goods for export to the USA, Japan, Europe and rest of the world. Under the global economy, China is famed for cheap labor, land and other resources, including energy consumption. However, the reality is that Chinese laborers are being abused with long working hours and cheap working rates. The land is mostly controlled by the local governments, who welcome foreign investment, in hopes of creating job opportunities, to promote local economic development and to upgrade their own position. In addition, energy generation and distribution is monopolized by state enterprises with little information disclosed. The current four-trillion RMB (59 billion USD) economic stimulative package to fight for economic crisis seems to have had good economic return, yet this package has stimulated enormous consumption on electronic appliances and vehicles, and these energy consumables will not only boost carbon emission, but also increase bulks of electronic waste that may pollute land and water.

Therefore, I believe that to mobilize environmental NGOs and civil society groups to promote energy saving, energy efficiency, alternative and renewable energy generation, and a low carbon lifestyle are very necessary. My past working experience has interlinked me with a wide range of environmental civil society groups in China and along the Mekong riparian countries. The JENESYS Program has again widened my network. I will use all of these networks to develop some initiatives on these tasks.

Medium and Long Term Plan

My medium and long term working plan will focus on promoting environmental sustainability and socially equitable development of the Mekong River Basin. This mission is quite relevant to the theme of the 2009 JENESYS Program — "Environment: Symbiosis with Nature and a Sustainable Society." A few of the visits will be linked in the future, such as activities related to climate change and eco-tourism, and a lot of JENESYS fellows' work.

The Mekong River is an international river that flows through Southwestern China and the Southeast Asian Mainland. It is shared by six countries, namely, China, Myanmar Lao, Thailand, Cambodia and Vietnam. The riparian countries have very diverse economies, soc-cultures and political systems. The river basin has rich natural resources, and the topography and proportion of the river basin shared among each country is different but interdependent. For instance, fishes in the Mekong River are abundant common resources but they are vulnerable to the flow change and to dam construction. In recent development, hydropower construction has become very active in almost every riparian country. However, most

hydropower dam sites are in ethnic minority areas. These dams will flood their most fertile land and change their means of livelihood and culture. The dams will change river flow, and create floods or droughts to the downstream, which could stimulate transboundary conflicts among riparian countries.

My middle and long term plan, therefore, will be built on my short term plan that is based on the climate change and energy saving network to actively and continuously promote and provide education on energy saving, alternative energy usage, and the impacts of climate change on the public in the Mekong riparian countries. This network will advocate the reduction of energy consumption from the demanding side, and promote environmentally friendly energy generation mechanisms on the supply sides. It will also update people about climate change research, discuss the issues of climate justice, and promote low carbon lifestyles.

The vision of the network will be to protect the biodiversity of the Mekong River and to avoid transboundary conflicts due to water management and usage, while people in riparian countries can have enough energy to use and use it efficiently. I hope that with my previous and current networks and with the help of current JENESYS fellows, we can energetically contribute to this vision.

"I conceive that the earth belongs to a vast family of which many are dead, few are alive and countless numbers are still unborn" "Modern technology owes ecology an apology" Therefore When We Heal the Earth We Heal Ourselves

Ranjeeta Rani (India)
Trained Graduate Teacher, Gyan Mandir Public School

My Japan visit was a very enriching and fruitful experience where I got to learn many things. Being a teacher by profession and an enthusiastic environmentalist, this trip proved to be a feather in the cap. My post program experience happened to be equally interesting, motivating and educational.

On the onset I would like to applaud the efforts made by Japan Foundation whether it was accommodation, food, travel or the lectures and visits. Punctuality and sincerity made it just perfect. The visits I would like to acknowledge and appreciate are:

a) Ecology Centre
b) Ise Jingu Shrine
c) Stop Ondancan
d) Kyoto Centre
e) Panasonic Centre – Eco Ideas

At the ecology centre I was impressed with the variety of hands on activities available for students to try out. Learning by doing is more effective and this fact is fully exploited by the centre.

Ise Jingu Shrine was a classic example of environmental concern in pace with traditional values. Keeping in mind the culture, tradition and its requirements, the efforts made by the activists, people concerned are worth praise. The forest visit was also an inspiring one.

As we very well know about the Kyoto Protocol, it was not surprising to learn about various activities conducted at **stop Ondankan** and the Kyoto centre to make people aware of Global warming and its effects.

The Panasonic Centre provided us with brilliant eco-ideas. The future technology proposed was a magical-wall computer. Though the things shown were quite expensive, keeping environmental concerns in mind, the ideas were bright and innovative.

The landfill site was a good example of how a beautiful forest can be created out of it. At **Umi-no-Mori**, a waste treatment plant had actually succeeded in transforming waste into that which is less harmful, while drastically reducing the quantity.

Now coming to the post program activities back in India, the first difference I found between the two countries is that Japan is able to carry out its planned activities very well because of its small land area and small population. In India, in spite of having a big chunk of the population who are really keen on keeping the environment clean for a sustainable future, the plans somehow fail to make a difference in a person's life. However, the efforts made at schools and university levels are commendable. We have various clubs involved in conducting many activities namely:

(a) Eco Club
(b) Globe Club
(c) Health Club
(d) Energy Club

Through these clubs students are made aware of environmental concerns and the need for sustainability. At the same time, they are empowered to make a difference with their ideas. They are encouraged do their bit to improve present environmental scenarios.

After returning to India, I shared my experience with my colleagues at a staff meeting through a beautiful power point presentation. I told them about the workshops conducted and the outcomes shared during my visit to Japan.

The next step was to target the students. Being a biology teacher, environment is an integral part of my subject. I shared the information of Japan's rich tradition and culture with students in the V, VI, VII, VIII, IX & X grades. They were very enthusiastic to know more about what happened each day and thus the interaction

continued for many days.

An idea clicked in my mind – why not tell parents and community members also about my experience? I asked my students to exhibit an eco ideas house and Eco Township during our PTA meeting and Annual exhibition. The presentation was appreciated a lot by visitors.

Last but not the least, I have interacted with the teachers of other schools so that they are also able to dissipate the knowledge to their students.

The exhibits made by the students incorporating ideas from Japan will be entered in interschool competitions so that more and more people come to know about these ideas.

It's just a beginning …….

……. there are miles to go ahead

I would like to add that it is each individual effort that counts, though it may be a drop in the ocean.

"Nothing could be worse than the fear that one had given up too soon and left one unexpended effort that might have saved the world"

After Program Report JENESYES-2009

Shweta Kukreja (India)
Psychologist and Teacher, Springdales School

As a part of our psychology curriculum, students are taught environmental psychology at the 11th and 12th grade levels at Springdales School, where I work as a psychology teacher.

My Japan visit has really enhanced my understanding of various concerns and issues related to environmental education and thus I plan to implement the same understanding and knowledge to my teachings.

Environmental psychology is an interdisciplinary field focused on the interplay between humans and their surroundings. The field defines the term "environment" broadly encompassing natural environments, social settings, built environments, learning environments, and informational environments.

In my environmental psychology classes, I address environmental problems such as density and crowding, noise pollution, sub-standard living, and urban decay. As environmental psychology is a field that relies on interaction with other disciplines, there are three necessary fields that it must collaborate with: the behavioral sciences (sociology, political science, anthropology, economics, etc.), interspecialization (other psychologies such as developmental, social, cognitive, etc.), and the design professions (architecture, interior design, landscape architecture, etc.) .The interaction among these fields helps environmental psychology address problems with multiple perspectives.

During my Japan visit, I as an educator, got lot of exposure and we all got the opportunity to interact with other people from multiple disciplines and thus broaden our horizons. Now I feel very happy that I am able to share these experiences with my psychology students.

The whole experience of visiting different places in Japan has helped me as an individual to inculcate **Environmental Consciousness** within myself. Now I do the same with my students through my teaching.

KORNITA GREEN SCHOOL
An Integrated Approach to Saving the Environment

Astri Wahyuni (Indonesia)
Guest Teacher, KORNITA High School

BACKGROUND

Most youth spend eight to nine hours a day in school buildings, therefore a coordinated school environmental program that focuses on preventing and solving environmental problems at the school site can provide an excellent model of attitudes and behaviours for young people to emulate.

In Indonesia, waste has become a major problem especially in big cities, where approximately 80% of waste (116 mio tons/year) is sent to final dumping areas, which become increasingly overloaded; while the rest is polluting the environment. In Bogor, a city with a total population just under one million, produces 154 tons of garbage per day, equal to the weight of 154 elephants. 65% of that waste goes to the final dump, while the remaining 35% is scattered in the environment.

One of the main sources of this waste is schools. Students produce paper and plastic waste from their activities on a daily basis. The level of environmental awareness is still low, yet students spend most of their daily time in schools and often, bring the schools' behaviour to their home.

Other than that, there have not been many greening efforts done. The global warming issue is only perceived as material knowledge, without the knowledge of how to take real action in contribute to tackling global warming. Not every school is willing to spend more time in educating their students on environmental issues. But actually, there are opportunities to leverage environmental awareness in schools, by involving all components of the schools – from headmasters, teachers, students, and security officers - in environmental programs.

KORNITA GREEN SCHOOL

Kornita high school, located inside the Bogor Agricultural University initiated the KORNITA GREEN SCHOOL program, focusing on green and clean school waste management, waste segregation, composting, greening and recycling. The program focuses on high school student education on how to handle garbage wisely, through waste segregation, composting and recycling, to reduce the amount of garbage material sent to landfills as well as to decrease the impact on the environment.

Having started with a small group, Kornita Green School emphasizes student movement on waste management that empowers the role of active leadership from student leaders to become the agent of change in creating a better environment. A simple but practicable knowledge about handling domestic waste is transferred to these student environment leaders where they will spread the knowledge to other students in Kornita High School. The Kornita Green School approach lies on the spirit of student empowerment where they become the subjects in implementing environment programs.

TARGET OF THE PROGRAM

- High school students in grades 10 and 11 (since grade 12 students already focus on their final exam). Each class has five green champions as their class representatives.
- Teachers
- Other school elements: security officers, cleaning service

OBJECTIVES

The aim of the Kornita High School Program is:

- To reduce the impact of waste on the environment by student empowerment, which engages students in implementing the 3 R principles in school (Reduce, Reuse, Recycle)
- To develop an environmental awareness particularly among students, and all school departments
- To contribute to reducing CO_2 in the environment
- To develop student movement by giving skill training

CHALLENGES

- Gain full support from all school departments
- Gain support and trust from the students. They still perceive that environmental knowledge is a serious thing that is hard to understand. As a young people, they really like up to date information and a trendy approach
- Funding for infrastructure instalment (composter, wet land)

LESSON LEARNED FROM JAPAN

From my visit experience in Japan, I learned a lot from various environmental practices. I learned that conducting sustainable Green school programs should use holistic approaches, which should also involve every member of the school community.

I learned from the visit to Japan, that there are three important aspects that need to be taken care of:

1. Ecological Literacy

In Japan, every student and every teacher develops a comprehensive understanding of the basic patterns and processes by which Nature sustains life, and how these ecological concepts relate to sustainable human communities. In Indonesia, it is not common to talk about sustainable ecological conditions, because we have an abundance of natural resources. People ignore the important behaviour on how to conserve energy; the reason a big picture understanding is needed from an early stage in school. Through the knowledge on ecology, students will understand their role in the environment and how they should act to save the earth for the future generations.

2. Learning by Living

The success of environment programs in Japan is how Japanese school students adopt and demonstrate environmental principles such as the 3Rs (reduce, reuse, recycle), renewable energy, energy efficiency and resource conservation. This allows for an experiential "place as pedagogy" teaching approach, and enhances the environmental awareness of students and staff who see their school utilizing green practices on a day-to-day basis. Students learn a lot while they do it, and they will remember it as their daily habit.

Japan also has some learning centres that provide clear information for students, in order to understand global warming. Students need to know global environmental issues in a fun way; I should talk in their language to be understood.

3. Environmental Ethic

All members of the school community develop a personal and collective code of responsibility to Nature, the Earth, and future generations, that entails constraints on individual conduct and institutional policies, and they apply this environmental ethic along with sustainable development principles when making decisions that affect the school.

STRATEGIES AND ACTION PLAN

Kornita Green School is an initiative to change the mindset of Kornita's students in handling waste, including the treatment of organic waste. Inorganic waste like plastic, which is often found in the school, is another problem being faced and has become a challenging issue, not only for schools but for the government as well.

By combining the previous strategy with the lessons learnt from Japan, the full strategy developed as follows:

Preparation Stage

1. **Establish a Green School Committee**. A teacher committee is developed, to ensure who is responsible for whom. The teacher committee will be responsible for implementing environmental practices in Kornita High School. To set benchmarking and to get a full understanding, the teacher committee will visit other schools and communities that already implement environmental behaviour. After the visit, teachers will have a one-day workshop to plan every single detail to execute the green school program, based on their visit.

   To ensure the sustainability of the program, teachers also play an important role. Students graduate every year, while teacher stay. So, teachers must also follow the environment training and as the facilitators, their role is to give daily motivation to implement green behaviour among the students. Teachers will be allowed 5-10 minutes every day, to remind students of the progress of the program.
2. **Adopt an environmental (or sustainability) vision statement**, and create opportunities for everyone in the school community to see it and champion it often. Get the students to illustrate it.
3. **Conduct an environmental survey in the school**; a pre-test of ecological literacy levels of the students, to create a baseline or starting point so that all stakeholders will be able to see (and brag about) the results of the Kornita Green School projects.
4. **Develop an integrated green curriculum**: It is important to have all teachers on board, by having green curriculum, where every teacher can convey environmental messages through their subject of study, from ethics to implementation tips.
5. **Provide infrastructure for every class**. Install separate garbage bins for organic and inorganic waste, and composters to help students learn how to make compost.

Program Implementation

1. **Focus on REDUCE, as the main campaign message**. I learnt that from the famous 3R, it is reduce, which can give the biggest impact. For the school campaign, we will focus on reduce to encourage students to change their consumption behaviour. (e.g. bring their own water bottle and lunch box).
2. **Develop and train green champions**
   We believe the best way to educate students is through peer educators. Green champions are educated to be environmental class representatives. Each class decides the best five students to be their green champions, who will follow the environmental training regularly. After participating in the environmental program workshop, they return to the class and engage other students in the school to be involved in the Kornita Green School movement.
   One-day training, covering initial assessment and knowledge on global warming, is conducted. The objective is to give big picture understanding about human contribution to environmental destruction. The students are given lots of brutal facts, to crack their minds and paradigms about the environment, to hopefully trigger them into doing something to reduce the impact
3. **Material**
   In the process of implementation, there are a few stages of approach. Step by step activities are developed, so that students will gradually understand how to take real action for the community.
   a. Waste Segregation
      We gave students knowledge on how to segregate organic and inorganic waste. In every class, there are two separate garbage bins, so that students can easily put waste based on its category. Organic waste is transformed into compost by having a composter in every class, while inorganic waste (mostly plastic and paper) is transformed into something more useful, like recycled paper or simply selling plastic waste to the scavenger.
   b. Greening
      As part of the greening process, students plant traditional medicine trees, and use compost as the fertilizer. Every class has their own mini garden and must take care of the plants in their daily activity.
   c. Media Awareness
      As part of the advocacy process, students must campaign their environmental actions through bulletin boards or self-made-newsletters. The objective is to create bigger awareness to all school departments to also contribute to the movement
   d. Community Engagement
      Students will experience working in their community outside school and learn how the environment becomes important in our daily life.
4. **Inform, involve, and celebrate!** Acknowledging, sharing and celebrating goal achievements is important for keeping motivation high. To accelerate the program, we conduct green class competitions to motivate students to bring the movement to the next level. Through the competition, students can come up with creative ideas on how to save the environment. As a big bang event, the competition is also a strategy to give student recognition and awards for their efforts concerning program implementation.

Monitoring the Program

Monitor and progress evaluation will be conducted through regular audits and updates, to ensure that goals are being met, and to gather data to inspire further action.

MILESTONE OF THE PROGRAM

We have a big dream. That is why we also develop program milestones, from short- to long-term implementation

Short Term

- Conduct training of trainers for student leaders on environmental awareness through 3R principles (reduce, reuse, recycle)
- Infrastructure instalment (composter and biopore)
- Develop media awareness amongst students
- Align environmental knowledge with student curriculum

Medium Term

- Establish student extracurricular organization
- Teacher becomes trainer

Long term

- Replication to other schools in Bogor

All of My Experiences in Japan Have Inspired My Life a Great Deal

Sri Wedarni (Indonesia)
Teacher, SMAN 4 Denpasar

Major activities

First of all, I would like to produce a report for my school about my experiences so far. This report will also be sent to the school library, so that it can be read by all visitors there. In order to share this experience with more people (not only the people in the school community but also other people from different school communities who are interested in my experience), I will also plan to upload this report to the school website. I expect that my experience will inspire all people to learn how to conserve or sustain our environment in countries located in East Asia, especially Japan.

Being a Biology teacher, I was so happy to have this chance, because I can directly implement this experience in the process of teaching and learning in the field of Biology. Based on this experience, I am able to make plans to improve my biology teaching materials, in relation to environmental conservation as implemented in countries located in East Asia, especially Japan.

My mid-term plan

I will share my experiences on environmental education with people (especially my colleagues at our school community) here in Indonesia, because I found that there is a tight relationship between my job here in Bali (as a biology teacher) and what I got in Japan. What I got from this program is that it is important to bridge the communication between the two countries, so that we have the same views about the environment. Japan and Indonesia have similar characteristics of nature. These two countries consist of islands. To share my experience on this program, I plan to run a workshop where I can inform the participants about the efforts taken in Japan to educate their people so that they have a better understanding of the environment. The results of this workshop will then be socialized in the Denpasar biological teachers' forum (MGMP) which is held regularly every 4 weeks. The teachers participating in this forum will then be able to continue this information to their students in the classroom. We know that all teenagers, or the young generation, will also have the same chance to continue or to implement this program (Jenesys program). What I expect from the young generation is that they must have it in their mind that it is important to look after our environment for its sustainability. As we all know, Bali is only a small island, but one of the world's most popular tourist destinations. Therefore, the people who live in this island should pay more attention to their environment.

From my experiences in Japan, I will have a good chance to develop my teaching materials and curriculum. I will also encourage my students to create small projects on how to look after our environment, like what I found in Japan. Miyama inspired me to develop my teaching/learning model that I will apply at school. I'm starting to divide the rubbish into organic and inorganic categories. From the organic waste, I will start to make compost.

My long-term plan

I hope this program will be continued in the future. To keep in touch with all of my colleagues that I met in Japan, I will make a forum or simple blog where I can share all my activities that I have done, with members of each country. Through this blog, we can also share difficulties that we find when we try to apply this program. This will enable us to always update our information so that we are inspired to do something to save our world.

Next year I plan to invite people from other schools around Indonesia and also our SISTER SCHOOLS (our school has sister schools in Korea and Germany) to discuss the efforts that need to be done to save our planet from being polluted. Hopefully we will have a better understanding of our environment. I hope this project will be facilitated by the Department of Education of Indonesia. I will share what I have done in my school based on what I learned in Japan.

Post Program Report

Sun A Lim (Korea)
Staff, Citizens' Movement for Environmental Justice

I have organized a seminar to give the students in my office an opportunity to study the background of climate change. Also, I have "climate schools" carrying out some action programs.

The Youth for Climate Justice was established as an outcome of the Citizens' Movement for Environmental Justice in the year 2003. It has annually been carrying out education for youth, outside campaigns, and in-house forums concerning the climate, with participants from universities all over the country.

I received a great amount of environmental education and experience through the JENESYS tour program. I shared information with my co-workers and students. I explained the Japanese climate change education system represented at the Stop Ondankan Center and Miyako Ecology Center. Then we compared Japan with Korea. I also talked about with my students about what we could do to change Seoul, from a mid- to long-term perspective.

In the era of climate change, how prepared is Seoul, the largest city of Korea? Warming is progressing rapidly in Seoul, where the temperature has risen 2.3 degrees in the past 100 years. In response, Seoul announced the 'Seoul environment friendly energy declaration' on April 2, 2007. According to this plan, the city will increase its consumption rate of new renewable energy by 10% (2% in 2010) by the year 2020, while the overall consumption rate of energy in Seoul will be reduced by 15% (12% in 2010) by the year 2020 (based on the standards of 2000). Also, Seoul service personnel said that they will reduce greenhouse gas emission by 25% based on the standard of 1990. Considering that goal of greenhouse gas reduction for all of Korea has not yet been confirmed, the announcement of Seoul's goal was very far advanced. Looking at energy consumption status of Seoul, a proportion of homes and businesses use 56%, and transportation uses 30%. Therefore, the reduction of energy consumption in the sectors of buildings and transportation is a key. Accordingly, through demand management in these sectors, we have to reduce greenhouse gas by reducing energy consumption.

According to Korea Energy Management Corporation's data of 2006 concerning large energy consumers, among 190 domestic institutions, almost half, or 89 institutions were located in Seoul. They consume over 5,000 TOE per year. After 2000, energy use quantity of Seoul showed a stable trend in decrease, but after 2004, it again showed a rising curve. Therefore, it is believed that it will be difficult to accomplish the goal of reducing energy consumption rate by 12% by 2010, in Seoul. Up to 2006, the volume of energy consumption in Seoul had been increasing every year. Between 2004 and 2006, use of electricity had increased 9.5%. The self-sufficiency level of Seoul is a mere 2.2%. Electricity used in Seoul is produced by thermal power plants in the Taean, Boryeong and Dangjin regions and by nuclear power plants such as Uljin. Seoul citizens are using electricity conveniently but they are shifting environmental damages according to production of electricity to other regions. Therefore, Seoul must manage the demand for electricity more positively and deploy demand suppression policies for institutions consuming great amounts of energy. In Japan, Metropolitan Tokyo obliged over 1,300 business that are large-scale energy consumers to submit 'five-year plans for carbon dioxide reduction' in 2002 and subsequent reports. The Metropolitan Government of Tokyo evaluates these plans and reports submitted by corporations in five stages and announces the results on their homepage. They also implement a total reduction obligation system per business genre. Seoul needs to positively introduce a policy like Tokyo's.

Seoul spends about 30% of its energy in the transportation sector, which is about 9% higher than the national average, and must worry about suppressing the use of cars. 87.5% are 'me alone cars and Seoul is in a dire and urgent situation for shifting to environmentally friendly transportation. The public transportation policy of Seoul is being improved day by day but the necessity to introduce a powerful congestion toll system like London is very big. In the case of London, after the introduction of its congestion toll in 2003, the number of cars entering into the downtown area was reduced by 20% and the city has achieved a reduction of carbon dioxide generated on streets by 16%.

An evaluation of climate change policies of 7 large metropolitan local autonomous organizations in 46 indexes of 7 sectors by Green Korea United showed that

Seoul is well equipped with a climate change reaction system compared to other large metropolitan cities based on material and human foundation such as abundant budget, professional human resources, and population. It was discovered that the mayor's intention and will were firm and that the city is reflecting good policy-making suggestions by experts in the field of climate change. The problems are where individual development businesses implemented by the city, such as new towns and high-rises, have a high possibility of generating large-scale greenhouse gas on the contrary to have established plans in the entire system. Cases without the inclusion of individual goals and implementation methods of greenhouse gas reduction per business are the majority. In order to supplement this problem, one method might be to connect to greenhouse gas policy while managing the flow of materials within Seoul, through an 'index of ecological footprint' just like in London.

The operation of an exclusive implementation institute for energy climate change countermeasures is necessary for a more concrete climate change reaction system in Seoul. Seoul and Korea Energy Management Corporation shall cooperate to have a connection system. Then, the implementation of a demand management policy for large energy consumption institutions can be carried out effectively, such as with new town businesses including large scale development projects. It will be important to establish an integrative energy plan and to establish low energy consumption type architecture and urban planning. Regarding the old downtown district and old independent houses in Seoul, a financial system shall be prepared along with the establishment of a support system, so that insulation and energy efficiency improvement businesses can be deployed.

More than anything else, the autonomous districts of Seoul shall be put on the front line in climate change reaction. Just like the Songpa and Youngdeungpo districts, more autonomous districts in the dimension of district halls are required. Regional energy policy shall be established with the biggest goal being the establishment of a sustainable energy system in Seoul. Through the expansion of renewable energy, we have to increase the energy self-sufficiency level of Seoul. In particular, the introduction of urban power generation plants at citizens' development centers and educational institutions must be implemented proactively.

An Afternote on the Participation in 2009 JENESYS

Hwang Yukyeng (Korea)
Teacher, Puhung High School

Two months have passed since I came back from JENESYS Programme held in Japan from June 1 through 14. The places I visited in the JENESYS Programme itself were impressive, not to mention the warm care and concern of The Japan Foundation towards participants. In addition, it is meaningful that networking among the participants was actively established and they not only shared news, but also exchanged environmental education-related activities and ideas for progress in each country.

The first thing I did after having been to the JENESYS Programme was to rearrange my schedule and pictures from Japan. I prepared for classes by making presentation materials and videos of the memorable things and people in Japan and things to learn about the environment. Japan is geographically very close to Korea, however, its natural environment, national character, and level of development level differ, especially in attitude towards the natural environment. My students showed much interest in the environmental ethics and philosophy of Japanese people and the environmental policies of the government, as well as various activities in schools and the NGOs. The students asked me if they would be able to study environmental education or environmental technology in Japan and if so, what process they should go through. In sum, the JENESYS Programme suggested a vision for the future not only to me but also to my students.

I watched various 'ECO' movements in Japanese society through the JENESYS Programme. The 'ECO' in progress in Japan, to reduce CO_2 emission, is practiced among the government-enterprises-communities-schools-families all together. In addition, various regions and buildings have kept their traditions while at the same time accepting renewable energy and green technology. Recently, the hot issue in Korean society is 'low-carbon green growth.' However, the green growth the government addresses seems to be promoted in the form of adding 'green' to the existing development system, which is very regretful. I envied Japanese 'ECO.' I would like to try to make the 'low-carbon green growth' currently in vogue in Korea one that revives the environment and tradition. I would like to let my students taking my class know the honest power of nature, the wisdom to use natural energy instead of fossil energy and atomic energy, and that a world where everyone shares everything is more beautiful than one in which only a few get the best of it.

Another great impression from the JENESYS Programme was environmental education activists from Southeast Asia. In fact, Southeast Asian countries may be a little poorer than Korea in terms of economy or social infrastructure. However, I thought that the activists from Southeast Asia I met through JENESYS were very passionate and creative and had the wisdom to utilize even a small amount of funds wisely. After coming back to Korea, I started to take an interest in the intermediate technology, which has spread all over Southeast Asia recently. I created a bicycle power generator using the intermediate technology I studied, during summer vacation. I have a dream to support local activists in Southeast Asia, by participating in the manufacturing of such power generators also in the future. Given that this JENESYS Programme is 'support for environmental educators' in progress in Japanese socitety, I would like to focus on 'support for intermediate technology to environmental activists' in the same vein.

Lastly, once again I would like to express my deep gratitude to The Japan Foundation for supporting an international and concrete environmental educational networking.

Applying a Newly Found Principal to Real Cases

Michael Youngdawng Moh (Korea)
Secretary, Wetlands Korea

I visited the entire Wetland Protected Area in Korea during this summer. It was hot, humid and also scorching. I was totally tanned. More precisely, I was burned. I received irreparable damages to my skin. Now I look much older than I did when I was in Japan. My JENESYS trip was heaven compared to my trips to the Wetland Protected Area. During the trip to the Wetlands, I missed the nice hotel room and relaxing onsen in Toba. Of course, my JENETEMPURA friends, too.

A lawyer's brain works in a very simple way. Find a principle and apply it to the case. My brain also works in that simple way. I always had the idea that environmental education should not be taught. Also, that environmental education should be based on heart-on experience, not head-on experience. It was just in my mind, but now I have become certain. In other words, I found a principle for environmental education: "DO NOT TEACH."

We should save water. Yes, we should. I was told to save water more than … let's say 100 times (maybe more than that). But I never ever really saved water. Since Korea has relatively rich water resources, I didn't really have to do it. Water is cheap in Seoul. But one single demonstration made me a "WATER SAVER." At the Kyoto ecological center, I saw Rani from India washing her hands with almost no water. It was such a shock to me. I think I have consumed water 10 times more than Rani. I didn't know there existed such a way to wash hands. After that, I wash my hands in a very economical and ecological way. If I had been told to save water in Kyoto, I would still be washing my hands the same old way. The main idea of Miyako Ecology Center in Kyoto[1] was to provide information, not to teach. The manger told us that people are TOLD what not to do or do everyday. This is why people don't like to be told. He gave me that great principle: "DO NOT TEACH."

After I came back to Korea, I discussed this newly found principal with my Wetlands Korea people[2]. And we decided to apply this principal to the real world. On behalf of the Ministry of Lands, Transportation, and Maritime Affairs, Wetlands Korea conducted a public awareness program for the local communities of Wetland Protected Areas. We applied the principal to this program. We did NOT teach them. We provided information. We just let them know that there were many ways to enjoy and appreciate nature. We told them that there were many possible ways to earn an income in harmony with nature. But we did not tell them that they should conserve nature. We even had an art class for adults. In the class, they drew birds, shells and crabs. They enjoyed it. They did very much. Some of them told me that it was such a fresh and enjoyable education and they would like to have more. We DID NOT TEACH them, but they would like to learn more. I think I have proven that the principal is right; if you give up teaching, they will get interested and start to learn.

It is easy to lose your trust in people. You might think you know better than others. You feel like you should teach them, educate them. But I have trust in people. They will do the right things, in the end. Environmental education should, I believe, start from this trust in people. Education is more effective by providing information, not by teaching.

Wetlands Korea is planning to use this new method in various cases. We are planning workshops with school teachers, NGOs and GOs. We do not have long-term plans yet. With great support from my JENETEMPURAS and members of the "Hotbath Buddy Council," Wetlands Korea and I will continue to make successful cases.

I would like to thank the entire staff of the Japan Foundation. The whole trip was greatly designed and we all were well taken care of. Thank you.

1 The exact name of the center did not come to my mind. So I consulted with uMi. According to her vivid memory, the name is Miyako Ecology Center. Thank you, uMi.

2 For 14 days, my Wetlands Korea people greatly managed everything. I would like to thank them.

Lesson Learned in Japan

Adman M Adam (Malaysia)
Lecturer, Faculty of Biomedical & Health Sciences, University of Industry Selangor

I'm trying to flashback to my visit to magnificent Japan in June 2009. It has been a couple of months since I have physical been away from Japan, but the feeling of excitement during my stay in Japan has never gone away. I believe the rest of the participants had the same feeling with their own interpretation of the beautiful country of the Red Sun. As agreed upon earlier, we had to submit our post-report to the diplomatic organizer pertaining to our findings in Japan. There are so many snap shots in my memories, which actually make it hard for me to choose which experience I need to talk about first. Before putting my hand to this writing, I had managed to make brief contact through Yahoo Messenger with a wonderful guy, one of the members of JENESYS 2009, Vo Cong from Vietnam. He made me more enthusiastic about sharing my experiences in Japan through this writing from my own point of view. From there, I decided to present my writing in a casual style, unlike my first article that I presented, regarding "Illegal Dumping of Hazardous Wastes: The Need for Environmental Funding under the Environmental Quality Act, 1974." First, I tried to ask myself; "what are the key aspects that I want to emphasise in this writing?" Meanwhile, in my mind I wanted it to be a free flow of writings, as long as they meet the requirements proposed by Aya Yokoi, the graceful organiser.

To begin with, the most significant findings during my study tour in Japan were the obvious 'will to volunteer' among the Japanese; something I seldom find in my very own country. This 'will to volunteer' really hit my conscience, particularly the question of where this 'will' derived from. I could see that this specific practice well suited the Japanese community. My observation on this matter became clear when I watched the 'save the dragonfly' catching activity at Shinonome Elementary School and then again at the Miraikan National Museum. By looking a little more closely, I could see that volunteering activities do give a beneficial impact to the development of a society. In my imagination, this concept confirmed an extraordinary quality in building a helping attitude. From the naked eye, these seem like easy things to do, but in reality, no one will not start it without a monetary return (in the case of Malaysians). I really don't know how to answer my own question earlier, that only in my thought this concept of 'the will to volunteer' is deeply related with to their origin culture. Perhaps I didn't make any attempt at scientifically looking into these scenarios. During the limited time that I was able to spend on the scene, I tried my very best to look at the faces, features, and emotions of the Japanese volunteers. Although I'm not really an expert in assessing personalities, I am pretty sure from their facial expressions that the Japanese volunteers showed 'satisfaction' in doing their work, which I can hardly explain or elaborate further. The volunteers seemed to look very happy and to be enjoying whatever activities that they were involved in.

From this whole scene, I truly wished for the 'will to volunteer' to be imbedded in Malaysian communities and or maybe more realistically for it to start to happening among my very own students, whom I teach in my class. As part of the knowledge that my students gain from lectures, tutorials, lab sessions, etc., I strongly feel that they (my students) need some extraordinary quality like the Japanese volunteers, in other words the spirit of the 'will to volunteer.'

Since the new semester just started in early August, I'm starting to think about what approaches I can undergo to make my students realise the importance of the 'will to volunteer.' Earlier, before the new semester resumed, I had a chance to meet a young vibrant gal, miss Umi from WWF Malaysia, whom I got to know during my visit to Japan, thanks to the JENESYS Program 2009, which provided me with a chance to meet other very talented people from Asia. She is the nearest person that I am able to have contact with. We talked about the possibilities of potential programs or projects and maybe even events that can be jointly initiated between my students, my Faculty and Umi's WWF. Through this initial discussion we hope to possibly initiate a collaboration program in this year-end, pertaining to the environmental awareness initiative. As a part of that, Umi and I share the same goal, with hopes that after this we will be able to initiate more activities in the future with our dear friends from other countries we met through JENESYS and even with Japanese organisation such as the Japan Foundation, Stop Ondankan centre, Japan universities, schools and many more.

My basic intention is to expose, inculcate and activate

my students into initiating and participating in activities that make them feel good, especially in the never ending environmental awareness campaign. As a result, their efforts will contribute greatly to our communities, guarantee environmental sustainability, most importantly get their own what I call 'good environmental-self satisfaction.' If my students begin to enjoy what they are doing, with continuity, this will show that part of my mission is accomplished.

I realize that all of this sounds like a dream, utopia we can say, but I think I should try and make a move. My first attempt is to try going through the process together with my students, facing all of the sceptics and challenges. Then perhaps along the journey, we will gain other real experiences and learn new things. I'm hoping that while we walking through our words, people might start to see our message, and join together in supporting our objectives.

Everybody will agree, we need development and frankly speaking it requires environmental sacrifices. So, it will be our duty to minimise the environmental impact and manage it well towards sustainability. There is always an option; it's just a matter of choosing the best option. In helping to choose the best option, what we need is to take advantage of the extraordinary quality in our hearts and scientific minds.

Until then, we shall never stop learning...

August 2009

Post JENESYS 2009 Program Report

Sofia Johari (Malaysia)
Officer, WWF-Malaysia

The JENESYS East Asia Future Leaders Program 2009 theme was Environment: Symbiosis with Nature and Sustainable Society. The programs' objective was to 'promote a better understanding of Japan as well as cultivating future leaders with an understanding of Japan in the various layers of society and fields through discussions on critical issues in East Asia, to build-up a human network in the East Asia'.

Overall, there were 40 participants from 14 countries, namely 9 ASEAN countries (Brunei, Cambodia, Indonesia, Malaysia, Myanmar, The Philippines, Singapore, Thailand, Vietnam), Australia, China, India, Korea and New Zealand. Malaysian participants comprised of 3 people from WWF Malaysia and a local university in Malaysia; Sofia Johari (WWF Malaysia – Kudat Banggi Priority Conservation Area project), Umi Abdul Rahman (WWF Malaysia – Tiger Conservation) and Adam Adman (Local Malaysian University).

Japan was one of the countries that had a high number of H1N1 flu outbreaks at the time of the program. The participants' health was a major concern. The Japan Foundation therefore provided each participant with a few boxes of face-masks and a body thermometer to monitor their health. There were a few changes in the itinerary due to H1N1 concern in some schools. The program was efficiently organized by Japan Foundation by providing escorts/guides and translators to make sure it ran smoothly as planned.

Lectures on environmental education and issues were given by experienced and respected professionals in their field such as Dr. Kimiko Kozawa and Mr. Hiroyuki Suzuki. Based on one of the lectures given, an inspiring story was told about how one environmental conservation movement was started by a group of uneducated housewives due to their concern for their family's health. This showed that compassion and the sense of responsibility towards others is one of the most important driving factors towards taking care of the environment.

Environmental Education in the Formal Education System in Japan

There are a few schools in Japan, which infuse environmental education in their school subjects and curriculum. One example is Shinonome Elementary School. The school is a member of the UNESCO Associated School Project Network. This school implements cross-curricular teaching in accordance with the national school curriculum, to implement education for sustainable development. The school promotes environmental education by engaging students in outdoor activities such as catching dragonfly larvae in the school's pool in summer, and taking care of them until they are ready to be released in the Biotope within the school compound area. The Biotope is a set-up simulating the natural environment. The school's Biotope was planted with rice paddy, kiwis, flowers and few other types of plants. The school kids were taught to experience the whole process of making a product. Using this as an example, the students experience planting a paddy, harvesting the paddy to get rice, processing the rice to make rice cakes and then planting again. Experiencing the process is the key to a deep understanding and appreciation of nature and the environment.

Promotion of Green Lifestyle and Environmental Education through Dedicated Facilities

Visits to environmental education facilities included visits to Stop-Ondankan, which means Stop Global Warming in Tokyo, the Miyako Ecology Centre located within Kyoto prefecture and the Miraikan National Science Museum. Both Stop-Ondankan and Miyako Ecology Centre were opened in 2004 to educate the general public on the environmental issues and Global Warming. The facilities' main activity is developing interactive materials, hands-on activities and modules for environmental education to be used to promote green lifestyle and better understanding of how human daily activities impacted the environment, as well as how to reduce the impact.

Stop-Ondankan and Miyako Ecology Centre are operated by mainly volunteers who promote the facilities and environmental related activities to recruit more volunteers. At the Miyako Ecology Centre, there are only a few permanent staff members working in the centre. However, the centre has almost 100 volunteers dedicating most of their free time in helping to run the activities there.

The Chubo Landfill site in Tokyo is where bulk waste

and non-combustible waste are being treated. Participants also visited the Tokyo Metropolitan Government tree-planting project, Umi-no-mori (Sea Forest), which was established in 2007. Some 480,000 trees will be planted over the next 8 years on the top of a 30-meter depth of waste and soil at a former landfill site as vast as 88 hectares, where a total of 12,300,000 tons of waste was dumped. The cost for forestation will be fully covered by donations from citizens and enterprises.

Promotion of Environmentally Friendly Products by Private Companies

Panasonic is one of the world's leading electronic brands. In Japan the company embarked on research and development of their electronic products to reduce energy consumption and CO_2 emissions. The Panasonic Centre's business vision is contributing to "Coexistence with the Global Environment" through cutting-edge technologies. The cutting edge technologies exhibited at the centre ideally will make life more convenient and energy efficient. In order to demonstrate the efficiency of the new products and technology, the centre has an eco-house where they demonstrate the importance of positioning lights in a room to get their maximum effect. This showed that it is not a matter of how many lights you have but how you manage their positioning. In the future corner, a giant size screen on a wall was the highlight of the latest technology innovation at the centre, with technology such as moving digital files and folders by moving your hands from a distance. This is a costly new product, however according to the guide, the more demand there is for this product the cheaper the price will be and this applies to other green products such as food.

Asahi Breweries is one of the major Japanese beverage companies and is actively engaged in various eco-friendly activities both in product development and in their CSR program. Participants were brought to visit one of its zero-waste-emission factories in the suburban Tokyo area to see the beer production line, which is carefully designed to reduce the consumption of resources and emission of CO_2 and to achieve 100% waste recycling. This is another fantastic and ideal facility with cutting edge technology that most of the participants' countries will not be able to afford.

Promotion of Nature Through Preservation of Japanese Ancient Culture and Religious Activities

A visit to Miyama Town in Kyoto prefecture, famous for its landscape and century-old houses with thatched roofs showed that Japan is an aging country. There are more elderly/retirees than youth or young people at their prime productive age in this area. Almost all of the young people are working in big cities such as Tokyo. The settlement that consists of 38 thatched roof houses out of 50 houses is designated by the national government as a preserved area for groups of historical buildings. The town is designated to revitalize the aging town while conserving the historical buildings.

JENESYS participants were brought to visit a few religious places, which are mostly located within Kyoto prefecture such as the Kiyomizu Temple and Ise Jingu Shrine. Participants were also given the opportunity to experience zen meditation where individuals are taught how to relax their mind while being aware of their surroundings in order to appreciate nature and their environment.

The Ise Jingu shrine which was surrounded by primeval forests covering an area of 5,500 hectares, amounts to about one third of Ise city. The main sanctuary is situated within 180 hectares of forest that has been left untouched and the remaining forests covering 5,320 hectares have been used to supply all the timber of Japanese cypress needed for the reconstruction of the sanctuaries every 20 years for the Shikinen Sengu ceremony. This has been the tradition since its establishment, which is said to have been in 4 BC. In 1926, a new reforestation program was started in order to supply the necessary timber for the Shikinen Sengu ceremony over the coming 200 years. The purpose of this program is to supply the material for the Shikinen Sengu ceremony, but also to keep the pure Isuzu River clean and to keep the natural environment sustainable.

The environmental and conservation theme of these cultural and religious places became a major attraction for tourists from all over the world. This promotes the value of the ecosystem such as the forest and rivers and how it has played an important role in sustaining human existence since ancient times.

JENESYS Programme Workshop

The "sharing experiences" session is one of the most interesting parts of the workshop. Participants were given a chance to present the environmental education provided and any environmental issues their respected country has. Common issues faced by the developing countries are lack of support from the governments to promote environmental education and provide facilities to promote green lifestyle, such as proper segregation bins and recycling centres, as this is not the governments' priority. Establishing expensive facilities is not possible within some of the participants' countries due to the governments' lack

of concern on the environmental condition and being too immersed in the political scene. Thus it means that political stability is important before the government can embark on promoting environmental awareness.

Apart from learning about Japans' culture, its environmental education system and limiting factors faced in promoting environmental education towards a sustainable society, the participants learned about punctuality. Punctuality is not a culture value in most participants' countries, however it is an important value towards becoming a more efficient individual/ community.

Japan's Strong Points in Promoting Green Lifestyle Towards a Sustainable Society

The government strongly supports the promotion of green lifestyle. This support is reflected in the efficient promotion of environment related activities and policies, establishment and initiation of government supported environmental education facilities, recycling factories, as well as public infrastructures such as rubbish segregation bins and so on, particularly within big cities such as Tokyo. Establishing these kinds of facilities cost a lot of money that most developing countries or third world countries will not be able to afford as spending a lot of money on these facilities is not the priority of the governments in these countries.

The majority of people working in non-profit organizations that promote green lifestyle and environmental education are volunteers. Volunteers support the operation of non-profit organizations that educate the general public on how daily activities affect the environment, at facilities such as Stop-Ondankan and the Miyako Ecology Centre. Though most of the volunteers are older generations or retirees, they are very committed to campaigning and promoting a green lifestyle. Being involved in environmental activities is also seen as a good way to socialize.

Japanese culture is also a very attractive culture, where promoting conservation of the environment and nature through culture will easily work.

Recommendations

1) Establish sustainable networking between the 14 countries by having joint activities and annual meetings to share experiences and to evaluate progress of work being done in each country.
2) Japan emphasizes re-cycling and the Japan Government has put a huge effort in building modern recycling facilities. However this is still not enough. Appearance and presentation of a product is very important for the Japanese, thus everything sold in Japan is nicely packaged, most of the time double- or triple-wrapped. Thus, Japan is a very big producer. Japan should emphasize more on reducing instead of building more recycling facilities and reclaiming more sea area for landfills.
3) Limited land area is also a huge problem, sea areas are being reclaimed for landfills due to not enough space to dump all the garbage generated by its huge population. New cities are also built on reclaimed land and this has an impact on the marine ecosystem. The impact on marine environment is irreversible, thus reclamation should not be encouraged. Compensating reclaimed areas by replanting forest on it should not be promoted as 'the way to go green.'
4) Most of Japanese raw materials for wooden products are sourced from outside the country, perhaps due to lack of commercially high value wood within the country itself. In order to become more aware of the global warming issue, Japan should also emphasize on monitoring how much wood they extract from the tropical countries where most of the high value woods came from and communicate this to the consumers.
5) The presence of Japanese participants taking part in the program itself would give participants from other countries a chance to see the Japanese youths perspective on the country's environmental education and other related issues as well as sharing their experiences and knowledge on their work in educating the public on environmental issues in their country.

Post JENESYS Activities in Malaysia

1) Communicating lessons learnt from the JENESYS program in Japan to WWF Malaysia and the community living within the proposed Tun Mustapha Park.
2) Improving the existing environmental education materials.
3) Keeping in touch with the JENESYS participants and keep updated on each other's activities.
4) Try organizing a joint activity to sustain the networking established during the JENESYS 2009 program.

Environmental Thinking and Social Transformation

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Introduction

In June 2009, 40 delegates from 14 countries in Asia and Oceania were invited by the Japan Foundation to participate in a Japan East-Asia Network of Exchange of Students and Youths (JENESYS) Program. The program unites participants from various disciplines; government, non-government agencies and academicians (school teachers and university professors). The individual independents environmental practitioners proved to be of great importance to contributing to a rich and diverse discussion regarding the theme of the program; Environment: Symbiosis with nature and a Sustainable Society.

I still feel a tremendous gratitude for the opportunity I was given to attend this program to learn more about environmental issues from a Japanese Perspective. I see myself working in the field of Environment Education (EE) and wildlife conservation for quite some time in the future. How then did participating in the JENESYS Programme influence and benefit my individual life and work? I believe I valued all activities throughout the program. This significant occasion has broadened my knowledge and enriched my experience in numerous aspects, especially in the field of EE. In other words, the experience really opened my mind to some unfamiliar things and provided opportunities to comprehend new ideas.

Background

Environmental education (EE) is a learning process that increases people's knowledge awareness about the environment. This development includes associated challenges, develops the necessary skills and expertise to address the challenges; fosters attitudes, motivations, and commitments to make informed decisions about the environment and its well-being. It is anticipated that eventually all individuals will take responsible action. Thus, I do believe that environmental awareness starts and depends on individual commitment and motivation to help ensure environmental quality and the quality of life. However, this effort will not be accomplished without active support and participation by any of these bodies; governments, organizations and community, through education and engagement initiatives.

Environmental education should not be restricted to the narrow scope of school education. It should reach a wider public in order to effectively address environment issues. In other words, environmental education should be understood not only in the aspect of formal education, but also in that of non-formal and information settings like our everyday life.

Lessons and Take – Home Messages

Through my observation, this well-organized JENESYS programme addressed and possibly became good examples of some of the points above, by giving each one of us a chance to improve our understanding on environmental education and issues in Japan. At the same time, we were able to also share or experiences on the issues in our own countries during group discussions and happy hours in a relatively short amount of time.

Some of the key lessons and messages are:

[1] Some ideas and insights on environmental education and issues in Japan. This included briefings and discussions with the hosts at many places we visited. I would like to thank Dr.Kimiko Kozawa and Mr.Horoyuki Suzuki for prior presentations For instance:

- The Stop-Ondankan, Learning and Ecological Activities Foundation for Children (LEAF), and Miyako Ecology Centre are good examples of learning centres to promote understanding of environmental education and issues in which people from all walks of life can enjoy and learn interactively.
- Government efforts and initiatives toward the promotion policy of Environmental Education can be noticed from the visits to Tokyo Chubo Landfill Site, Umi-no-mori (the sea forest) project site or Nagoya Plastic Handling Co.Ltd.
- Koto Shinonome Elementary School's implemented Environmental Sustainable Development (ESD)

learning as an inter-subject approach in schools; the preservation of nature and culture by the community in Miyama Village.
- How large-scale businesses like Asahi Breweries Ltd. and Panasonic Center make an effort in contributing to green lifestyle.

[2] In additional to lectures, workshops and visits to related venues to the discussion subject, the JENESYS Programme is a unique programme which not only aims at exchanging technical inputs but also sharing cultural aspects such as historical and natural heritage as well as traditional practices and foods. What attracted my attention most was our visit to temples and shrines; namely the Grand Shrine of Ise, the Golden Pavilion, Rokuon-Ji Temple and Kiyomizu Temple also the visit to Jingu Sanctuary Forest (sacred forest).

It was interesting to observe how the traditional practices and religious institutions (Shintoism) can influence Japanese lifestyle and attitude towards nature and preserve their natural environment. The Shinto beliefs regard the land and its environment as children of Kami (deity) and see nature as the divinity itself, promoting people to look at environment with the spirit of reverence and gratitude. Every society and individual has their own unique religion, beliefs and traditions.

Therefore, this experience really inspired and convinced me to continue to study about differences of traditional practices and religions, which obviously can give very significant impacts on environmental education. Although my knowledge is limited, I do understand that all religions do mention and promote to all their followers to respect and do virtue to all creatures in this world.

Next Steps

Hence, to achieve the WWF-Malaysia Conservation Education Programme vision is to bring changes in attitudes and actions in the society by raising awareness and appreciation of the Malaysian society towards environmental issues and species of wildlife conservation by embracing and internalizing the concept of Environmental Citizenship. I believe the continuity process of learning and sharing information with various stakeholders and partners are important factors.

Instead of projecting current education and awareness approaches (research, advocacy work, community engagement, publication, etc) to achieve our goals, my team and I are looking forward to a new approach. In order to raise awareness on environmental and wildlife conservation issues among predominantly Muslim communities in Malaysia, religious leaders (Imams) can be seen as powerful conservation ambassadors to promote conservation messages from an Islamic perspective (religious sermons). This effort would be in partnership with relevant religious department from national and state levels.

The potential of such religious sermons to increase awareness and concern was published in a scientific journal during this period. The reference for this paper is: Clements, R., Foo, R., Othman, S., Rahman, U., Syed Mustafa, S. R., and Zulkifli, R. 2009. Islam, turtle conservation and coastal communities. Conservation Biology 23: 516-517.

Conclusion

To sum up, after discussing the challenges in facing current environmental education, the programme participants have proposed a range of possible solutions and approaches that can be implemented in their respective countries. Some of these include:

- Close collaboration with the community and a democratic approach to project planning and implementation.
- The integration of social, political and environmental issues into environmental education programmes,
- Identifying problems and using experimental and creative teaching / learning methods.
- Active involvement of non-governmental organizations and local associations that has been an important factor contributing to the growing prominence being given to environmental education.

I cherish the fact that the programme has achieved its objectives by assembling a wonderful and diverse group of interesting people from different backgrounds and perspectives to exchange knowledge and experiences. Thanks to advanced technology nowadays, we have been able to keep communicating and preserving our friendship and networking to this today. Like someone once said, despite all differences and geographical separation, we are still considered as ONE - 'Jenetempuras, the great green warriors!' and definitely, 'We will share everything!'

Report on JENESYS 2009

***Thiha Kyaw**, Roger* (Myanmar)
Youth-Coordinator, Mangrove Service Network

JENESYS East Asia Future Leadership Program 2009 was organized by Japan Foundation. This program consisted of very effective program itinerary and was filled with interesting issues for a person who is doing coordination work on environmental conversation activities in Myanmar. During the whole program I was able to learn and observe many things which were trained and systematically implemented for current and future generation of Japan.

After my experience in the JENESYS program, I would like to categorize the itinerary in (7) main sectors. In fact, each sector had a very good project management system. These sectors and project management system are as follows:

Sr.no	Sector	Project Management System
1.	Stop Ondankan and Miyako Ecology center	Experience Base: Empowering Volunteers, Good Partnership and Community, Activity Base: (hands-on, etc…), Informing Community, Volunteers, Co-operation among Volunteers, Good Level of Education.
2.	Landfill Site and Plastic Handling	Enforcement in Policies, Working in Community, Segregation of Waste, Technology Use
3.	Elementary School	Right Information at the Right Age, Fostering Environmental Awareness
4.	Panasonic Center and Asahi Beer Breviary	Committed Industries, Globally Responsible Project Development, Research into New Technology (i,e.: Eco Friendly System and Products)
5.	Umi No Mori (Sea Forest), Miyama (Thatched-Roof or Traditional Housing), Aichi Kaisho Forest	Environmental Conservation, Re-use of Land Fill Site, Committed to Environmental Concerns, Objective and Targets are Clear, Funding, Human Resources.
6.	Temples and Shrines	Renewable Resources, Low Consumption of Resources, Culturally Transmitted to Younger Age (Such as Ritual, Dances, Prayers, etc...)
7.	Workshop and Lectures	Getting Individual Ideas and Participating, Effective Methodology and Approaches, Net-Working Among the Participants and Exchange of Knowledge, Skill, Attitude, Success and Obstacles. Motivation.

After returning from Japan I have spent most of my time disseminating my experience and knowledge gained from my visit and travel to different places in Japan, but due to the vast standards and living conditions, I am unable to convince colleagues and partners. I am now continuing work in my mother institution (MSN) as part of an endeavor to improve environmental issues within our capacity, which comprises of training communities in the establishment of mangrove nurseries, rehabilitating damaged mangrove forests, and promoting environmental awareness within communities. We are also encouraging villagers to form forestry user groups and training them in establishing community forestry groups for the proper usage of forest resources. We are at present producing freshwater tree seedlings and mangrove seedlings in the Cyclone Nargis affected villages in a few townships like Bogalay and Maulamyinggyiun. Since November 2008 we have produced 150,000 fresh water tree seedlings and distributed them to villages in the Bogalay and Maulamyinegyun townships. We are continuing to produce another 150,000 fresh water tree seedlings for planting in November and December 2009, to replace the trees lost in Nargis. The bad effect of trees lost in Nargis is having a very bad impact on the climate in Myanmar. MSN, with the view of improving the climate in the coming 5 to 10 years is producing and arranging the planting of as many trees as possible and also is putting effort into producing mangrove seedlings for which seeds were not available after Cyclone Nargis. MSN also encourages and trains villagers to produce and use fuel-saving self made mud stoves as measures to reduce the cutting of trees.

While working on the Environmental issues undertaken by MSN I have also taken part in CBDRM training in the delta, with the assistance of CARE Myanmar and Maltese International; NGOs working on Post Nargis Rehabilitation activities in the Ayeyarwady Delta and Yangon Division. The experience and knowledge gained from my JENESYS participation have been very useful in meetings and trainings in villages.

Over all results of this JENESYS program have been very fruitful for me and also beneficial to my constitution. I look forward to future opportunities like this while implementing our normal activities.

On "Environment: Symbiosis with Nature and a Sustainable Society" Study Trip Report Period 1 – 14 June, 2009

Gum Sha Aung (Myanmar)
Farmer Field School Coordinator, Metta Development Foundation

A. Introduction

I was privileged to participate in the Japan Foundation East Asia Future Leaders and Youth Exchange Programme, from June 1 to 14, 2009. The programme is also known as the Japan-East Asia Network of Exchange of Students and Youths (JENESYS) Programme. The main theme of this year's exchange programme was "Environment: Symbiosis with Nature and a Sustainable Society." There were 40 participants from 14 countries in this programme. Most of the participants were from to South East Asia, and some of them came from China, South Korea, India, New Zealand and Australia. The programme aimed to promote and contribute a better understanding of Japan and its real situation in the field of environmental education, sustainable community development, and the preservation of biodiversity through concept paper presentations, group discussions, and exposure trips to different areas and sectors. In the mean time, participants were also given opportunities to exchange information and discuss common issues related to the field of environment. During our study trip, I also got a chance to share my experiences as well regarding the Metta Development Foundation's 10-year experiences in environmental conservation activities that have been implemented at the community level in Myanmar.

B. Major activities during study trip

i. Presentations from the experts

Two special lectures were presented on environmental education and environmental problems in Japan. Dr Kimiko Kozawa presented how environmental education process gradually evolved in the formal education sector, based on the historical foundation. She also pointed out that sustainable society is impossible if we can not build proper links between economy, society, nature and culture. Therefore, environmental education is crucial among the citizens in order to create a better environment, and have a responsible attitude and behaviour towards the environment. Mr Hiroyuki Suzuki also made a presentation on environmental education under environmental administration. He mentioned that environmental education is crucially necessary due to current global environmental crises such as global warming, natural resource exploitation, and degradation of ecosystems. Therefore, the urgent task is to construct a sustainable society that ensures the development and prosperity of human society. He further presented an overview of law and policies for environmental conservation and the promotion of environmental education in Japan.

ii. Environmental education in practice

We were given opportunities to visit both formal and non-formal education programmes that promote and implement environmental education in the field. Koto Shinonome Elementary School was one of the best examples of places we visited in order to observe and learn about the implementation of environmental education. The school is promoting environmental education through action and a child-centred approach. The school is building not only mental intelligence but also the eco-intelligence of the school children. The hope is that the children will able to create and build a more sustainable society in the future.

Stop-Ondankan (Global Warming) and Miyako Ecology Centre are other good examples of environmental education for the public, including school and university students. According to the centre representative, they have 160 centres for environmental education around Japan and most of them are run by university and senior citizen volunteers. The centres focus on raising awareness, learning and action in regards with the scope of environmental issues such as waste, deforestation, water and energy consumption, carbon emission and global warming, etc. Moreover, the centre provides user-friendly facilities and hands-on displays such as exhibitions, pictures, photos, demonstrations, as well as small libraries. They are also situated in accessible locations for most of the general public.

iii. Waste management and landfill sites

In Japan, every municipality faces huge problem with waste management. We observed waste management in Tokyo and Osaka during our visit. Tokyo Metropolitan Government Landfill Site could be the largest landfill site in Japan and is located at the sea port of Tokyo. Waste management involves collection, transportation, intermediate processing, land-filling and covering of the landfill site with topsoil. The bureau of environment mentions that the annual waste volume of Tokyo has increased enormously since 1985, mainly because of the new lifestyle and company systems. In 1989, the waste volume was 4,900,000 tons. The landfill site only can accept another 40 years of waste from now on. Therefore, it is very important to build a "reduce, reuse and recycle" society in Japan. At the same time, the landfill site itself has become an educational centre for school children and the general public to learn about waste and the environmental problem that they are currently facing.

iv. The commercial sector and their practice

Some of the Japan based companies in the commercial sector have started taking action concerning environmental and ecological issues. We visited Asahi Breweries Limited and Panasonic Electronic Company Centre. Both companies have attempted to set up and build on eco-friendly technologies, which enable the reduction of energy consumption and carbon emission.

v. Culture, nature and religious spiritualities

This is the main theme of our trip and we had wonderful experiences with the culture, nature and Japanese spiritualities. Almost everyday, we could enjoy Japanese traditional food such as tofu, fresh raw fish, seaweed noodles, tempura, miso soup and Japanese sticky rice. We were also able to learn how to make Japanese sweets when we were in Kyoto. Most of the Japanese traditional food depends on locally available ingredients as well as the local ecosystem. However, it is very sad to learn that almost 60 per cent of the food needs to be imported from outside of Japan. This implies that the ecological footprint of Japan's food consumption is significantly high in the region. It may also give us some ideas concerned with sustainable society.

When we arrived at Miyama, in Nantan city, most of us felt at home. The visit provided a sense of home coming experience in Japan. Most of the buildings remain as well-preserved traditional Japanese thatched-roof housing. We learned that there are only three communities that remain as traditional thatched-roof communities in Japan. At the same time, the villagers also face difficulty in sustaining their village economically as well as socially. Most of their children have left for the city and only adult people are living in the village. However, the community itself is still moving on and providing as an educational centre for the people.

The spirituality of Japan is quite interesting for me. According to literature, Japan has more than 8 million gods and goddess. We were able to experience some of the rituals of Zen Buddhism and their way of mediation. The Grand Shrine of Ise still provides as a spiritual home for the Japanese people. We got a chance to walk on the holy land and could feel the power of nature inside the forest. Kagura, the ancient Shinto ritual dance provides us healing power through music and ritual performance. Rokuonji, the Golden Pavilion and Kiyomizu Dera Temple visit also enriched our knowledge about the historical background, highlighting the great cultural and spiritual heritage of the Japanese people.

vi. Reforestation practice and education centre

Umi-no-Mori is a landfill site that we visited. They are trying to establish a reforestation programme on the landfill site area. Aichi Kaisho Forest educational centre was one of the most interesting places for me during our visit. Regeneration of natural forests takes time and Aishi Kaisho forest centre gave us a clear idea of the importance of forests, nature and human relationship. Providing practical education inside the forest is one of the best examples that can help people to reconnect with nature.

C. Lessons learned from the study trip

During the series of site visits in Japan, I learnt a lot in terms of project management as well as ethical points of view. I also learned from my friends; those who came from different countries and diverse work experiences. We had a lot of fun and socializing during our visit in Japan. I would say that if there is no fun, then there will be no sustainability. I have summarized and highlighted some of the learning points as below, from my study trip.

I have observed that the level of awareness on environmental education in Japan is significantly high due to the policies support of government to the formal and non-formal education sector. According to Dr. Kozawa, environmental education has been fully integrated in the formal school curriculum and this curriculum has been implemented by every school in Japan. During our visit to Koto Shinonome Elementary School, I was able to observe that school children are provided an opportunity to learn about nature and environment through experiential

learning. This included activities such as the dragonfly rescue operation, exposure trips to various places that relate to environmental education, practical gardening and rice farming, meetings and discussions with farmers and preparation of local food. Through this learning process, children are able to understand about nature and environment related issues well enough to have their own feelings about nature. Such great experiences will enhance their value and points of view regarding nature and environmental conservation. I found that community and parent involvement in environmental education process and activities is crucial for future generations to develop as ecologically intelligent citizens.

At the same time, there are many places that play the role of non-formal (informal) learning centres for environmental education in Japan such as stop Odankan, Chubo Landfill Site, Miyako Ecology Centre, and Aichi Kaisho Forest Centre. All of these provide a lot of valuable information as well as learning points for the mass public, including children. I have observed that most of the centres are able to provide and facilitate awareness, learning and action regarding to global and local environmental issues which are directly relevant to their daily life such as waste reduction, energy saving, housing material, transportation, food and farming, etc. Tokyo Metropolitan Government Landfill Site is one of the best living examples for the people or consumer from Tokyo as well as for the rest of the world, to see the impact of environmental degradation, consumption, pollution and the challenges of waste management.

I also learned of the crucial participation of the private sector on environmental conservation to address today's global man-made environmental crisis.

We must recognize that the economic and technology sectors have a lot to contribute to corporate social responsibility in order to prevent global warming and a further ecological crisis. Based on my observation, some of the Japan based corporate business sectors are involved and have invested huge amounts of their business in research and development for a future green economy and technology. Some of their visible practices to save global warming are the application of energy-saving technology, efficient use of natural resources, reduction of carbon emissions and the application of a "reduce, reuse and recycle" concept for environmental conservation. These are some of the good examples of initial contribution from the business sector and it must apply in the wider business community. At the same time, other countries' business sector should also learn from these experiences for the future of a greening economy and market collaboration.

Furthermore, nature and human culture cannot be separated from each other. If people change their cultural values, then there will be a huge impact on nature as well. During my visit, I observed that this kind of change is very visible in Japan. In the past, Japan people loved to a simple way of life, which was directly related to their system of culture and beliefs. However, when modernization arrived into Japan, the culture dramatically changed into a consumer society. Nowadays, Japanese consumers have used immeasurable amounts of energy and natural resources, and are producing waste that has became a serious challenge for the country in order to sustain for the future generation. Therefore, it is vital for Japanese people to re-explore the deeper meaning of their culture, nature and spiritualities. I hope that the Miyama community, religious shrines and temples around the country and the traditional city of Kyoto all have a lot to say to the people of Japan as well as to the world. Especially from the Buddhist tradition, before arriving to the Buddha stage, he himself saw the old, the sick and the dying. It opened up the opportunity to realize the situation and provided a chance to find the liberation paths. Therefore, each of us and Japanese people who also possess Buddha's nature within, should realise ways in today's environmental crisis, to find the liberation paths that Buddha has already shown us before. It is true that if there are no plants left in the world then there will be no place for Buddha to reincarnate, meditate and enlighten. Let's save the planet now!

D. Conclusion and future application

Soon after arriving back from the Japan study trip, I have already made several presentations based on my study trip, sharing experiences to member of our organisation. They have opened up the space for a lot of discussion among my colleagues on our country on the global environmental issue.

At the same time, I have been working as a non-formal educator for the farmers in my country and we have been promoting sustainable ways of living and farming among the communities. This is a very useful experience for me as well as for my organisation in order to integrate and enhance environmental education for the future development of a community programme.

Furthermore, I have been closely working with agriculture-based training centres that are based in different geographical regions in our country, which has also provided me a chance to be involved in the process of environmentally friendly development and eco- centres. In the near future, all of the training centres will be able to

provide environmental education for the mass community as well as for school children.

Finally, I would like to express my heartfelt gratitude to the Japan Foundation and those who were involved in organising and leading the wonderful, meaningful and very fruitful study trip.

JENESYS East Asia Future Leaders Program 2009 Post Program Paper

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1) Major activities after the group study tour program

The group study tour to Japan, June 1-14, 2009, has been very beneficial to me, and I believe it will be beneficial to all the children studying in our schools across the country, with whom I can disseminate information, and share the knowledge and experience I gained from the tour. Here I would like to thank the Japan Foundation, Tokyo for sponsoring us, personnel from the Japanese Embassy in Yangon for selecting us and helping us in the pre-tour stage, and all those who have benevolently supported us in many ways during our stay in Japan.

As a primary level science teacher, I know I have the responsibility to impart to my children as well as share with my working colleagues, all that I have seen, heard and observed about environmental preservation and conservation work done in Japan. Children need to be made aware of their surroundings first. They need to learn to appreciate beauty in nature. They need to understand the law of symbiosis, and clearly see the causes and factors that lead to destroying the beauty and upsetting nature. Ultimately, they will be motivated towards conserving and preserving their environment.

To this end, as soon as I arrived back in Yangon, I prepared a full report of my study tour in a sort of diary form (please find attachment 2) together with a slide presentation of some of the best photos I shot during my visit, with a view to sharing my experiences with my working colleagues and the English teachers from the English Language Teaching Contact Scheme (ELTeCs). Initially, I had planned to make my presentation at the ELTeCs Workshop at my school on June 21, 2009, but for some reason, the workshop was postponed to July 26, and I couldn't make it as I had to go to Malaysia for further career development.

Obviously, environmental education cannot be carried out single-handedly. To be effective, and to achieve maximum results, it has to be a holistic approach involving all teachers. With the support of the headmaster of ILBC Kyaikkasan, Mr. Fernando LayMaung, and the approval of the Board of Education, Environmental Education was eventually introduced into the curriculum on Tuesday, August 11, 2009, and this will go down into the long-term plan.

2) Long-term Plan

A long-term plan for the whole school has been developed by a group of science teachers led by Dr. Khin Than Nwe, head of the Science Department and Dr. Min Min Aye, Science Coordinator for Secondary classes. Please find **Appendix 1: (Introducing Environmental Education)**

This is just a starter, and as the plan develops, new additions and modifications will be made along the way to make it more interesting, challenging and motivating.

Moreover, in teaching Science and Geography, environmental topics will be dealt with more thoroughly through projects and activities, and credits will be awarded for good performance in the task. Normally, a well-done project/assignment/practical earns a good 20% - 25% of the total score in the subject which in itself is enough motivation for the students to do their best in the assigned tasks. (Please find **Appendix 2** for a sample project on **Polluting the Earth's Water Resources** for Primary 5 students; ages 9-10).

Furthermore, the school holds a 20-minute assembly or homeroom period every morning as part of its character training. Every class level gets to assemble once a week, and there are four assembly weeks in a month. The first two weeks are given to the *word of the month*, and the last week to Myanmar studies. As the new plan is implemented, the third week will be devoted to environmental education where Environmental issues will be presented in the form of talks, discussions, debates, slide shows, documentary films, short plays, quizzes, choir, etc. with the whole school participating. Accordingly, each class will get one hundred minutes of environmental education during that week, and this will go on throughout the year. (Please find **Appendix 3**: Presentation at one assembly on ***Saving the World*** by secondary 2 on August 6, 2009.)

As stated above, in order for the plan to be successful, we need to involve all parties concerned in the education of our children: students, teachers and parents. Here I would

like to stress the importance of teacher education before anything else. Since teachers are the secondary educators after the parents, they should be in the know of what is safe and what is toxic/harmful in the children's environment. They should get together and discuss environmental issues arising at school. Some topics of interest may include the following:

1. *Chemicals and children* that looks into the chemical load, increase in chemical use, children's vulnerability to chemicals, sick building and sick school syndrome, children's susceptibility to chemical exposure, suspected endocrine disrupting chemicals.
2. *Understanding the toxicology of chemicals*,
3. *Maintaining* good indoor air quality, indoor air pollutants, and the importance of ventilation,
4. *Identifying chemical pollutants and safer alternatives*,
5. *Developing policies to protect children from environmental health and safety risks*,
6. *Introducing Integrated Pest Management plan in pre-schools* that will look at some common pests such as flies, mosquitoes, fleas, cockroaches, ants, rodents etc., and methods to control them.
7. *Reduction of CO_2 emissions by proper ventilation and lighting systems*, improving water-saving performance of washers/dryers, toilets, bathrooms, using heat efficiently, and using fuel cells and solar power generators for energy, etc.

In conclusion, the International Language & Business Centre is the leading private school in Myanmar that offers quality education and English language training to over six thousand children attending its schools in eight major cities: Yangon, Mandalay, Myitkyina, Lashio, Taungyi, Taungoo, Naypyidaw, and Myeik. Thus, under the leadership of the Board of Education, which is the governing body of the company, the same/similar plan will be implemented in all these schools, reaching out to thousands of children across the country. And I am happy to have been able to initiate and bring about all these changes for the preservation and conservation of the environment.

Appendix 1 : Introducing Environmental Education

Objectives: i) to develop the naturalist intelligence of the students by making them aware of their environment and the law of symbiosis in nature;
ii) to make them understand causes of and factors that lead to destruction of nature;
iii) to inculcate in them love for the environment and the will to work towards conserving and preserving the environment.

Level	Topics for Homeroom/Assembly Talk	Class Projects	Group Activities
Primary 1-3 (Lower Primary)	➢ The beauty of nature ➢ The importance of preserving the natural environment ➢ How nature is destroyed by human beings ➢ Conserving the environment	**Trash** ➢ How to separate Waste ➢ How to recycle Waste ➢ How to practice the 3Rs: Reduce, Reuse, Recycle	➢ Trip ➢ Group discussion ➢ Survey ➢ Volunteer work ➢ Singing songs ➢ Growing plants
Primary 4-6 (Higher Primary)	➢ The beauty of nature ➢ The importance of preserving the natural environment ➢ How nature is destroyed by human beings ➢ Conserving the environment	**Pollution** ➢ Different types of Pollution ➢ Examine the causes and effects of pollution ➢ How to reduce pollution ➢ How to practice the 3Rs	➢ Trip ➢ Group discussion ➢ Survey ➢ Volunteer work ➢ Singing songs ➢ Growing plants
Secondary 1-4	➢ The beauty of nature ➢ The importance of preserving the natural environment ➢ How nature is destroyed by human beings ➢ Conserving the environment	**Plastics** ➢ Properties of Plastic ➢ Disadvantages of using plastic ➢ How to practice the 3Rs Global warming ➢ Examine the causes and effects of global warming ➢ The relationship of global warming and emission of the greenhouse gases like carbon dioxide ➢ How to reduce pollution ➢ How to practice the 3Rs	➢ Trip ➢ Group discussion ➢ Survey ➢ Volunteer work ➢ Singing songs ➢ Growing plants

Appendix 2 : Project on Polluting the Earth's Water Resources

Date : September 1, 2009

Class level : Primary 5

Age : 9-10

Objectives: i) to make students realize that things we use every day can cause water pollution;
ii) to let them see for themselves the harmful effect of pollution on aquatic life;
iii) to make them keep in touch with, and become aware of things that happen to their environment.

Materials needed: Six clean cups, pond water, duckweed/ algae, lubricating oil, washing liquid, vinegar, detergent powder/liquid, a substance that you think pollutes water

Instruction: Collect six clean cups. Collect some pond water with some duckweed or algae. Put the same amount of the pond water and weed into each cup. Leave the cups by a sunny window. After a few days, put one of the following into each of the five cups: lubricating oil, washing liquid, vinegar, detergent, a substance that you think pollutes water. Label each cup to what has been added to it.

Watch what happens to the weeds over the next few days, and record your observations in the table below.

Cup	Observations					
	Date	Date	Date	Date	Date	Date
1						
2						
3						
4						
5						

Appendix 3:

Presentation by Sec 2C students, ages 13-14, on 6 August 2009; Homeroom Teacher, U Maung Maung Aye.

(10 Students from Secondary 2C walked up onto the stage in single file; taking their positions at designated places. 5 Student musicians from the same class sat with their guitars in one corner. When everyone was in position, a student announcer stepped forward and began.)

"Good morning everyone. Today's talk is about 'Saving the World.' The population of the world is increasing. According to last month's statistics, it was 1.744 billion. Factories are running day and night, making materials for us. More and more vehicles are running on the road. The polluting of air also comes from burning wood, coal, gas and petrol. When fossil fuel burns, CO_2, SO_2 and NOx gases are produced, and they blanket the earth causing global warming. Also, these gases are absorbed in water to form acid, and acid rain kills trees, as well as fishes in the rivers and seas. The air is heated up causing severe weather changes. Ice melts in polar regions, raising the sea level.

Everyday we throw lots of things away such as packets, cans, jars, bottles, cartons, newspapers and plastic bags. There are also factory waste, kitchen waste, cloth and dust. We, the students of Sec II C are very much afraid of the disasters that might happen in our generation. We want to say something on how to save the world."

(Guitarists lead the song, and all students join in)

Song : [C]Hand in [F]hand we stand[G7]
All [Am]across the land
We can make this [F]world a better [G]place in which to [C]live
Hand in [F]hand we can [G]start to understand[Am]
Breaking down the [F]walls that come between us for all [G7]time, for all [C]time

(Three students step forward; James introduces himself and his friends)

"Good morning, everyone. I'm James. This is Zin Wint Wah Hnin, and Rose. Today we are going to talk about the pollution on Earth."

Land Pollution

James: "Land Pollution is mainly caused by the rubbish we throw everyday. Materials such as plastic and glass will not decompose even after a thousand years. To prevent this, we should practice the 3Rs." (Reduce, Reuse and Recycle)

Water Pollution

Zin Wint Wah Hnin: "Rivers are home for fish and other aquatic animals. Unwanted waste from the cities pollute the water. Sewage is pumped into the rivers. And the rivers become too polluted. To save the aquatic species, we should clean the rivers and support organic farming."

Air Pollution

Rose: "Carbon Dioxide from car exhaust fumes and factories are polluting the air we breathe everyday. These Carbon Dioxide leads to Global Warming or causes Greenhouse effect which makes the earth warmer. So, the polar ice caps melt, and the sea

level rises, flooding the lower regions. Trees take in these CO_2 to photosynthesize and emit O_2.

So, to protect the air from polluting, we should grow more trees and save the existing ones."

(The three students retreat to their former positions, and the singing begins.)

Song: We are the [F]world, [G7]we are the [C]children
We are the [F]ones who make a brighter [G7]day
So let's start [C]giving
There's a [Am]choice we're making
We're [Em]saving our own lives
It's [Dm]true we'll make a better [G7]day
Just you and [C]me

(Another three students step forward and the leader introduces herself and her two friends:)

Su Myat Lin: "Good morning everyone. I'm Su Myat Lin. She is Tun Htwe Lin and He is Myint Thura Kyaw. We are going to talk about Recycling".

"Recycling is defined as treating things that have already been used so that they can be used again. Many things can be recycled. For example, paper, plastic, glass, metal and so on. All these things can be collected and sent to factories for recycling."

Tun Htwe Lin: "Plastics should be reused as the production can pollute the air dangerously.

Plastic does not decompose easily. It is better not to use plastics. Now, in Mandalay, the use of plastics is not allowed. I wish the same law be applied in the whole of Myanmar to prevent pollution. Glass can also be reused and recycled".

Myint Thura Kyaw: "Clothes can be donated to charity. We can even make new clothes from the old ones. If it's not suitable to wear, we can still use them as rags for cleaning.

The production of all metals cause pollution. So, we must reuse and recycle them as much as possible. To conclude, recycling is an important thing to do in saving the world."

Song : Heal the [C]world, make it a [Dm]better place for [G7]you and for me
And the [C]entire human race ... There are [Am]people [Em]dying if you
[F]care enough for the [Em]living make a [Dm]better place for [G7]you and for [C]me.

(Two boys step forward)

Kenny Kyaw: "Good morning, everybody. I'm Kenny Kyaw, and this is Bo Bo Oo. We would like to talk about chemicals that destroy wild life. Chemicals, waste chemicals from factories kill plants, insects, and fish. So do some chemicals used on farms. Some animals and plants are poisoned when sewage is thrown into rivers and the sea."

Bo Bo Oo: Many more animals and plants lose their homes when land is cleared for building new roads, houses, shops, factories and dams. There is then, nowhere for the aquatic animals and plants to live, and so they die. There are some ways to protect wildlife. Make a wild flower garden because it can save many insects like butterflies caterpillars and bees.

Song: [C]Teach us well; teach us how to [E7]care,
Give us [Am]love, love that we can [Dm7]share.
And we'll [F]walk hand-in-[Em]hand,
In the [Dm]light of the rising [G7]sun.
We are the [C]young.

(Two students step forward)

San Lae Lae Cho: Good morning, everyone. I'm San Lae Lae Cho, and this is Ye` Min Aung.

In the city, trash and rubbish are mostly dumped on the outskirts of town. It causes a lot of land pollution, and it takes up a large area, too.

Ye' Min Aung: In the village, people are so poor that some of the trash, for example, plastic, bottles etc., which can be reused are reused. So, there is less land pollution.

San Lae Lae Cho: As the city has many cars and factories, air is polluted with smoke and smog. And that is not good for the health of the residents.

Ye' Min Aung: As the village is not very developed, there are less cars and factories so the air is not very polluted. Also, because there are many trees and plantations, the air is fresher and cleaner.

San Lae Lae Cho: As I told you, the city has many factories and industries, and most of their chemical waste is dumped into the nearby rivers and seas, polluting them.

However, the village doesn't pollute rivers and seas. They are kept naturally clean.

So, we should make the city a cleaner and better place.

Song: We are the [F]world, [G7]we are the [C]children
We are the [F]ones who make a brighter [G7]day
So let's start [C]giving
There's a [Am]choice we're making
We're [Em]saving our own lives
It's [Dm]true we'll make a better [G7]day
Just you and [C]me.

Student Announcer Concludes:

"Good morning, again. We have talked about the pollution of air, land and water, what causes pollution, and the consequences thereafter. We also talked about how we

can combat pollution, and preserve our environment. Let us therefore, keep our campus clean by systematically throwing litter into the trash bins. Let us reduce the production of unnecessary materials such as plastic, glass etc. by reusing and recycling. Let us grow trees and plants and flowers to make our environment green and beautiful. Thank you.

Post Program Report

San Zwa Li (Myanmar)
Teacher, Total Learning Academy

Program Summary and Evaluation

First and foremost, I would like to thank the Japan Foundation for giving me an invaluable once-in-a-lifetime experience.

It is hard to express in words how I felt during the whole trip in Japan. Every place we visited had its own impact and I could not blink my eyes even for a single second. I tried to grasp every valuable piece of knowledge that they provided, though I was sometimes amazed and carried away by their cutting-edge and ecological technologies.

My experiences during the 14 days in Japan

Monday, June 1

As soon as we left Narita airport, we could see the green and thick forest along both sides of the road. I kept on taking pictures of that green scenery. After a long drive, we arrived at the hotel, the Shiba Park Hotel, where we stayed for about 6 days. We were specially welcomed by our leaders, who were our group leaders. After receiving a series of instructions and information, we got to our respective rooms. Every one of us was given a special room, which showed that we are very special to them. This made me realize that the "Environmental Issue" is very important for everyone on earth.

After taking a one-hour rest, I felt fresh and was ready to go out for dinner. This is the very first moment that I felt the freshness of the environment in Japan. The air was so fresh that I took a deep breath and experienced the benefits of nature. Along the way to finding a place for dinner, I noticed the well-disciplined walking system on the sidewalk. This system is opposite to that in Myanmar. We have to walk on the right side in our country, but in Japan, they walk on the left side. One thing that surprised me was that no one crossed the road before the signal showed green, even though there were no cars on the road. I learned how every one is trained to respect the law and the regulations.

Tuesday, June 2

Lecture on Environmental Education and Environmental Problems in Japan

I appreciated Dr. Kimiko Kozawa's lecture on the environmental issues and environmental education in Japanese schools. Some of them were simple and applicable in my school. The social and environmental problems in Japan were also interesting. Moreover, I learnt a lot on how we can practically introduce environmental education in our schools, even though we do not have a specific subject on it.

Wednesday, June 3

Stop Ondankan

I was deeply impressed by the volunteers at Stop-Ondankan who work and spend their own precious time for others. This activity is satisfying; however, it would be a big challenge for the people in Myanmar to have so many volunteers, while everyone has to struggle for their living.

Lecture on Policies for the promotion of Environmental Education

The policies for the promotion of environmental education and some of the good practices on environmental education in Japan are also very interesting. I wish that my country leaders would have such effective policies to bring about a sustainable society in my country.

Asahi Breweries, Ltd, Ibaragi Factory

I was amazed by the zero-waste-emission factory of Asahi breweries, Ltd. I was satisfied by their theoretical explanation on how they designed their factories and production line to reduce consumption of resources and emission of CO_2. However, I really wanted to learn more about the practicality of their technology of achieving a 100% waste recycling process, when one of the staff showed us that the uniform they were wearing was made from recycling.

Welcoming reception

Before the reception started, I was already excited about tasting the famous Japanese Sake and Japanese food such as Sushi, Sashimi and a variety of raw seafood. All the food that they served was extremely delicious to me. At this party, we were so warmly welcomed that we felt at home. That was an unforgettable moment for every one of us from different countries that were gathered there wearing our traditional dress.

Thursday, June 4

Panasonic Center

I appreciated the Panasonic Center for displaying their warm welcome to us. The Panasonic Center exhibited products manufactured by cutting-edge technologies. Their eco ideas house implements efficient uses of energy by using the limitless natural resources. I learnt how to save electrical power and how to design an eco house from the abundant natural resources. I liked their toilet bowl which is specially designed to use only a very little water. Moreover, I was satisfied to experience the cutting-edge technologies and being massaged by the massage chair at the Panasonic Center even though it was for a very short period. I am also looking forward to the day when we can use the energy efficient products (of the Panasonic Center) to reduce CO_2 and to have a lifestyle with the ecological technology to improve environmental performance at home. The "eco ideas" at Panasonic are fantastic.

Tokyo Chubo Landfill Site and Umi-no-mori (Sea Forest) Project

Though the whole process of treating bulk waste and non-burnable waste is properly organized and was very interesting, the sea forest project was far more interesting. From this site, we could see how many tons of waste on average were produced and dumped in Japan and in how many years this land will be filled by the waste. I was eager to know how the government is going to handle the treatment and disposing of waste when all this land is filled.

Friday, June 5

Shinonome Elementary School

I was impressed by the cross-curricular teaching for sustainable development at Shinonome Elementary School. I was very happy when I saw the students participating enthusiastically in their dragonfly rescuing activity. This activity shows their rich sense of humanity and their respect for biodiversities. Moreover, the lessons taught in their Social Studies such as "Life and Waste disposal," "Water and our daily life" are empowering lessons for the students, which can give them a great awareness of the relationship between humanity and nature. The practical life exposed to the students in the school compound such as growing rice and school gardening is the best way to teach the students about the Japanese traditional life of agriculture. Besides, the beautiful cultural dance that the students performed was evidence of the fact that they are also taught to respect and value their culture. Every real life experience that they provide the students is a source of learning about the environmental issues. Their aim and the educational goals are, with no doubt, very emphatic and will surely bring about resourceful future leaders for the next generation and society. By seeing all these, I have decided to use any suitable and practical environmental activity for my students in my organization.

Miraikan Science Museum

In this museum, every theme is worth the visit. Their cutting-edge science and technology are resourceful in understanding science and technology from different views, for the visitors - young learners as well as those who are doing research. I saw many local students learning and observing science and technology practically to enhance their study.

Monday, June 8

Historical Places

When I visited the historical places in Kyoto, I found out how the Japanese value and preserve their cultural places. The Golden Pavilion, Kiyomizu Temple and the Zen meditation places all reveal their richness in the cultural heritages. This is also the first time in my life to experience meditation.

Miyako Ecology Center

Being an environmental study center, their hands-on displays and eco-friendly facilities really provided us with many ideas about what the environmental problems are and what we can do to deal with them. Many kinds of naturally sourced and recycled materials that they used for the building their conserving energy and resources were very interesting. The user-friendly facilities that they provided showed their willingness to empower different visitors. We studied a lot about global environmental issues from a hands-on perspective. Some lessons that will be very useful for me are sorting out the rubbish, using recycled things, building a biotope and saving water and power. I surely recommend that this center is worth a visit because of all the valuable lessons and environmental activities they provide.

Monday, June 9

Miyama Town

I missed my home town when I visited the Miyama town. Though I have seen thatched-roof houses, I have never seen such thick roofs like in Miyama. They have specially designed emergency water hydrants. The museum in this town is very interesting and full of historical things even though it is very small compared to the Miraikan Science Museum. I can experience the honesty and hospitality of the Japanese people in this town. When I imagined the lifestyle

of the Japanese people centuries ago, I was amazed by their incredible development of those days. This preserved area in Miyama town shows how much Japanese value their culture and historical things. This will have a great influence on my life to value and preserve nature.

Tuesday, June 10

Toba

Toba Hotel, half-Japanese and half-Western style was somehow enjoyable to stay. We were able to experience a mixed-cultural living style. Sitting in the Japanese traditional hot springs was the most unforgettable experience that I had.

Wednesday, June 11

Ise Jingu Shrine

The preserved forest area of 5,500 hectares shows their wealth in forestry. I was deeply impressed when I saw the preservation of the huge tall trees. Their awareness on the environmental issues is high enough to keep the natural environment sustainable. Their respect and care for nature makes them deserve to be appreciated and imitated by other countries.

Thursday, June 12

Nagoya Plastic Handling Co. Ltd.

The plastic treatment factory was interesting. As they mentioned, I agree that the only effective way to achieve sustainable environment is to decrease the amount of garbage and this can be accomplished by the 3-Rs, reuse, reduce and recycle. The pillar that they made by compressing plastic garbage would be very useful if they can give reliable proof on the strength and the lifespan of it.

Finally, I would like to give my sincere regards to all those who were included in arranging this invaluable program without any inconvenience for every one of us from the very beginning till the end of the program.

Post-program activity plan

1) Major activities after the study tour program

On the third day of arrival back at my school, we had a planting project. As I mentioned in my pre-program paper, our organization has planned to plant as many trees as possible within this year. We are continuing this planting project and I have to organize the entire program in order for it to be done well. All students including Kindergarten students participated enthusiastically and are aware of the importance of having trees around us.

After two weeks, I shared my experiences in Japan with my organization as well as my church community using a power point presentation. They appreciated the rich culture of the Japanese people and their concerns for nature. My school leaders, including me, decided to have a volunteer team who will work together and promote environmental activities.

We gave the students an assignment on "The importance of 3-Rs, reuse, reduce, and recycle," which taught them about environmental issues and to become involved in environmental activities. They also gained a sense of caring for nature through their preparation for the assignment.

Our last activity was recycling paper. The secondary students had done this activity as their Science project. They made some paper sheets decorated with flowers using the recycled papers. They learned how many trees are saved by recycling the papers and the consequences of this process with the environment.

2) Medium- and long-term plans

- One of my other plans is "School gardening". This plan will be introduced gradually.
- Teaching the students to have environmental ethics and environmental activities
  appropriate to our country such as:
  - Using less water
  - Switching off the power when not in use
  - Disposing garbage in a proper way
  - Keeping ones surroundings clean
  - Sorting out garbage
  - Implementing 3Rs in everyday life
  - Passing knowledge on environmental impact of Japanese people
  - Awareness of biodiversity
  - Discipline in their daily life
  - Attitude on environmental activities
- Participating in awareness campaigns such as in my organization, church, monasteries and other communities
- Developing a curriculum relating to environmental education in my school
- Updating my activities and informing participants of this project regularly
- Organizing some workshops within our network participants and with the existing environmental based groups, NGOs and other organizations
- Having international and regional linkage
- Working with the local authorities
- Approaching the Ministry of Forest, Ministry of Agriculture or Environmental Departments

I will endeavor to accomplish the entire above-mentioned plan in the long term.

Post Program Report

Nicola Bould (New Zealand)
PhD Candidate, University of Otago

Since returning home from the 14-day whirlwind tour of Japan, I have thrown myself into my studies. My aim is to complete my PhD thesis by mid October, so it is consuming my every waking hour. However, I have spent a few hours in presentations discussing my experience in Japan, I must admit that meeting the other delegates still persists as being the highlight. When I travel, I find it hard to meet people who have similar philosophies and beliefs as I do; yet this programme sat me smack in the middle of a group of like-minded individuals. I know I have made life-long friends with some of these people. I have so far presented to environmental planning students and design and engineering colleagues who found my experience of Japan to be insightful. I still enjoy exploring my thoughts on the people, the country, the environmental actions and non-actions, the issue of the source of waste being so problematic and the notion of over-packaging.

The knowledge and experiences that I learnt from Japan and from the other delegates is already proving to be valuable for my research and for my understanding of how other countries are dealing with complex issues. The biggest challenge for me has been to appreciate the different weighting of environmental and social problems that New Zealand's neighbours are currently experiencing compared to our own. I have been aware of the breadth of these issues for some time but to actually talk to people who deal with these problems daily is exceptional.

As for my plans for the future, they currently revolve around the completion of my thesis. Once complete, I intend to work specifically with businesses and educational institutes who are keen to empower themselves to create positive environmental and social change within their field. My experiences from Japan will continuously feed into my work and I look forward to being able to meet my life-long friends again, whether in their countries or in mine.

I would like to thank the Japan Foundation and all of its financial sponsors who made the JENESYS Future Leaders Program 2009 possible. I also want to say a huge thank you to the exceptional efforts of all the people involved who created such a flawless tour of Japan. I cannot express enough gratitude for the opportunity to experience such an amazing combination of exceptional food (yay for sushi, tempura and tofu), interesting site visits, educational workshops, super-fast transport, flash hotels and beautiful cities with their captivating people. So thank you to our knowledgeable tour guides and all of you wonderful organisers.

Japan - More Than Just Tofu and Tempura

Tracy Roberts (New Zealand)
Education for Sustainability Adviser, University of Canterbury Education Plus

I feel extremely privileged to have been selected as one of the two representatives from New Zealand to attend this year's JENESYS East Asia Future Leaders Programme. Being given the opportunity to participate in the program, and to meet the other participants, was very rewarding and has given me experience and knowledge that will be of great use to me into the future.

Before participating in the programme I had never visited Japan, and I knew little of the culture. It will come as no surprise that, as a result of this experience, my knowledge of Japan, and the countries of the other participants, has greatly increased. The networking potential was fantastic, and the connections made have already begun to pay dividends with the requesting and sharing of resources and ideas via the internet. I feel I have formed long lasting friendships with some of the other participants and look forward to one day having the opportunity to meet them again.

Discovering Sustainability in Japan (and in participants' home countries)...

We discovered, during the many discussions, that sustainability issues in our different countries are very similar and that there is a need for behaviour change in a range of areas. For example, in many countries recycling is promoted in favour of the reduction or reusing of materials, where, in fact, reduction should be promoted as being the most sustainable of the three.

As well as the discussions on sustainability, I found the conversations about the varying education systems and education for sustainability (EfS) in participants' countries, to be very useful. Of particular interest was whether EfS is compulsory, how it is taught, and to whom it is taught. One of the more encouraging sessions was that on the education system in Japan and the inclusion of environmental education in Japan's teaching curriculum. Also, of particular interest, were initiatives to educate and encourage children to be more environmentally aware, such as the invention of ECO NEKO and the Eco Warrior television program.

It was great to see the students at Shinonome Elementary School out of the classroom and taking some action by using nets to search the swimming pool for dragonfly larvae. It was also beneficial to hear about some of the other experiences the students had during their learning about sustainable development. It was fantastic to see that the school was carrying out cross-curricular inquiry learning around a range of sustainable issues in all year levels of the school. This is the type of school in which I, and other teachers with a passion for sustainability, would love to teach.

Bringing home the knowledge gained …

Back here in New Zealand, sustainability is, sadly, not one of the eight essential learning areas required to be taught to students. It is left to teachers who value EfS to incorporate it into their already busy teaching schedules. A revised curriculum (released in 2007) is to be implemented by 2010. Whilst EfS is not given the attention needed, it is mentioned in the principles for planning of the curriculum as one of the "future focus areas" that needs to be considered. It is also mentioned as a possible "value" desirable in students. Other than this, sustainability is left to be incorporated into the Science and Social Science learning areas.

I am currently employed by the University of Canterbury as a School Advisor in EfS. Part of my role is to work with teachers to help them plan their school curriculum and units for their teaching areas that include sustainability. Since returning from Japan, I have continued my work with a range of schools to help them incorporate sustainability into their syllabi. This includes working with individual teachers, small groups and running professional development courses.

My work with individual teachers involves assisting them to implement sustainability achievement standards into their Year 12 and Year 13 programs. These achievement standards are assessments that can be carried out in the last two years of a student's secondary education. Contact with the teachers continues throughout the year and involves visiting them in their schools, giving feedback on assessment tasks the teachers write, and responding to e-mails and phone calls requesting advice. As they are relatively new assessments, teachers have been appreciative of the support that I have been able to provide them.

One of the courses I have been involved in running

is intended for teachers of ESOL (English for speakers of other languages) and aims to help them monitor their students' progress using the English Language Learning Progressions (a document designed by the Ministry of Education in New Zealand). We model the use of this document through a series of lessons we have designed within an Education for Sustainability context. This is a series of three workshops which we run in three cities in New Zealand's South Island. The first workshop had the theme; "world trade issues – the economics of bananas," and looked at the issue of fair trade and food miles. The second in the series had an energy production theme and looked at renewable and non-renewable resources. The third and final workshop is currently in the planning stage and has the theme of taonga (a Maori word which means a treasured thing). We plan on looking at water and language as taonga. Teachers participating in these workshops have given us positive feedback around the idea of teaching within a sustainability context, as opposed to teaching language in isolation, which is so often the case in ESOL classes.

Another course I have helped facilitate, since my return from Japan, is a course on cooperative learning. This involved informing the teachers about the key purposes, foundations and elements of cooperative learning and these were reinforced through cooperative activities which the teachers took part in throughout the day. Earlier in the year we had run another course which followed a similar structure to this course but covered experiential learning. I am currently working with a teacher who attended this course and who is now trialling experiential learning with her class, with the goal being for the students to take some form of action with regard to increasing the biodiversity in the school grounds. My role includes supporting the teacher, modelling activities in class, and encouraging reflection in both the teacher and the students.

What the future holds for me…

I have been seconded for this year to UC Education Plus as a school advisor. Next year I will be back in the classroom, as a Senior Biology teacher, maintaining my passion for sustainability and incorporating it into all my classes. I am currently completing the second paper of a postgraduate course with my goal being to complete a Masters of Teaching and Learning. My aim is to specialise in Education for Sustainability, with a specific focus on effective pedagogy and professional development of teachers in this area.

Rebuilding Babel

JP Alipio (Philippines)
Eco Tourism Guide and Environmental Education Facilitator,
Cordillera Expeditions/Cordillera Green Network

It is always an eye opener when you travel to foreign countries and all of sudden you find yourself the minority in a thriving population of this foreign land. Walking along the street you are alone in a steady stream of strangers who all seem to share a common heritage, while you, a foreigner with a different color and a different language, struggle with hand signals simply to communicate that you want the dish without tofu or raw egg.

Building an environmental future for Asia isn't the easiest thing to do. Even now, ASEAN nation leaders cannot agree on such simple issues as trans-boundary pollution, managing air pollution in their cities, waste, destruction of ocean resources, and loss of biodiversity. It seems they come to meetings each with their own agenda and local cultural, ethnic, and religious peculiarities that make diplomacy almost an exercise in futility, cooperating over environmental problems –something even more so.

Arriving in Japan for the Jenesys future environmental leaders program, I came with the same mixed thoughts. There were 40 of us from all over east Asia; Koreans, Cambodians, Bruneians, Aussies, Burmese, Muslims, Christians, Aetheists, Buddhists it was as diverse a group as any each with their own peculiar habits, dietary needs, even views on the environment, it was a nightmare just thinking of having to adapt to everyone.

2 weeks later, a few days after I got home, I received this email from Azmye from Brunei – "For the first time in months, I actually received 32 emails in one day. Ha ha ha. Cool beans…." And another email from Astri from Malaysia; "yes you are right, the people make the journey even memorable! oow, I miss you guys! I miss every silly joke and conversation. I learnt a lot during the trip, especially hearing different stories from inspiring Jenetempura people." - Looking at my computer screen I couldn't help but smile. Here was such a diverse group of strangers who knew virtually nothing about each other 2 weeks before, other than that we were all environmentalists, and here we were all exchanging emails like old chums.

"Tempura and Tofu again!? I Love Tempura and Tofu!" Says Tung from Vietnam in his unmistakable Vietnamese English accent, staying in Kyoto we were treated to traditional Japanese meals for lunch every day. And by the third day, most of the Asians who are accustomed to spicy and tasty food were making jokes about our daily staples of Vegetable Tempura, Tofu, and Green tea. Although I loved the food, I could understand how tasteless the food would seem to people who had become accustomed to so much spice in their meals and to have it for a week would probably drive them insane. Of course our daily diet became a rallying point towards building such a noticeably cohesive group. Jenetempura! I chuckled to myself as I thought of the term we now referred to ourselves as, due to the fact that we had been eating Tempura and Tofu for the past 2 weeks

Jokes' aside, bringing together such a diverse group of people and making them work together is a feat in itself. The main strength of this program is not simply that it showcases to environmentalists all over east Asia Japan's best environmental programs and designs but it gives us, the so called 'future leaders' the chance to share experiences, expertise, and ideas with each other. We found that despite our differences, we were more alike than we would have imagined, maybe it was because we were all environmentalists or the fact that we all felt like isolated strangers in a foreign land and banded together to fight against the oppressive tofu and tempura. But in truth it was the fact that even if we each had different taste buds, religions, skin colors, we all shared one thing –and that was the love of the earth that we lived in. We all relished the fresh air and the forests, watched the sky for birds and starry nights, or walked the beaches with the grains of sand on our feet and the salty air in our nostrils.

By creating this Jenesys program the Japan foundation not only equipped young leaders with tools to address the environmental problems of our own countries but made connections for the future of the region's environment. Relationships were created and not simply fleeting acquaintances as evidenced by the 30 emails a day I have been getting from everyone from as far as India to as close as Singapore but good friends and colleagues all willing to work together for the sustainable future of our region.

I saw John of Australia at the airport before we left, he was one of my daily running buddies during the whole 2 week Jenesys program, and he said something that was

most likely the truth neither of us wanted to hear: "this may be the first and last time that we will all be together like this… we may see each other individually or maybe with a few others, but I don't think we will ever be able to come together again as a group like this." I looked at him and nodded he was probably right, but I was sure that the bonds that were made would last a lifetime.

Even with the different languages, dialects, and cultures, we had come to a common understanding about our place in the region and our role for the future of our region's environment. And while ASEAN leaders have a difficult time coming together for a common future, we had –in the short span of 2 weeks rebuilt Babel. But this time the tower was something that would not only reach the sky. We were building our environmental future together.

Post Program Report

Allan A Flores (Philippines)
Teacher, Capital University Basic Education Department

My recent trip to Japan gave me a chance to participate in worthwhile experiences and memories that will always be treasured, remembered, and can be shared with others. All of these experiences were made possible by the very active and environmental-conscious JENESYS Program of the Japan Foundation, and the very supportive Japanese government. Though the study tour was brief, its impact to the forty (40) grantees from fourteen (14) countries in the regions of East Asia, Southeast Asia, South Asia, and Oceania was deep. It has improved and honed my skills more in loving and protecting our planet.

The Stop-Ondankan, the Asahi Breweries, Ltd., the Panasonic Center, the Chubo Landfill Site, Shinonome Elementary School, the Sea Forest Project, the Nagoya Plastic Handling Co. Ltd., the Miyako Ecology Center, plus the eloquent talks by Dr. Kimiko Kozawa, Mr. Hiroyuki Suzuki, and Ms. Naomi Takasu- all these gave color to the study tour. The historical and religious sites we visited in Japan were additional bonuses of the tour.

After the study tour program, my mission as a teacher, as a scouting coordinator, as Student Body Organization (SBO) adviser, and as an environmentalist, did not stop. In addition, environmental activities are now my top priorities. Here are just some of my activities:

TREE PLANTING/CARING

There are still lots of hectares waiting for trees to be planted at Barangay Taytay, El Salvador City. Aside from the college students of Capitol University who are the regular planters and caretakers of the mangrove plantation of the said site, my SBO officers give our support, too. Once a month, on Saturdays, we go there for mangrove planting unmindful of the scorching heat of the sun. Our next target is the Barangay Gusa of Cagayan de Oro City.

COASTAL CLEAN-UP DRIVE/ COMMUNITY OUTREACH PROGRAM

Twice a month, my scouters go there (to El Salvador City) for a coastal clean-up drive, which was originally put into practice by the College of Nautical Studies of Capitol University. In addition to that, one of the scouting activities that we practice is community cleaning. We take the lead in cleaning Barangay Gusa, of Cagayan de Oro City. This is our way of maintaining Cagayan de Oro City, clean and green.

FULL IMPLEMENTATION OF THE 3Rs

Our school, the Basic Education Department of Capitol University, has launched a bulletin board structuring contest utilizing mostly recyclable materials from the school canteens. These materials include PET bottles for mineral water including their caps, crowns of bottled soft drinks, drinking straws, sticks from hot dogs, and the like. This will now be a practice in our school. We celebrated Nutrition Month last month and the good news is, my class won championship of the bulletin board structuring contest. Hand made trophies were the prizes made of recyclable materials. This month, we celebrate the Month of the Filipino Language. Another major contest is the bulletin board structuring. The awarding ceremony will take place on the 27th of this month. Frugality, resourcefulness, and creativity are virtues that our students learn from this activity.

PROPER WASTE DISPOSAL

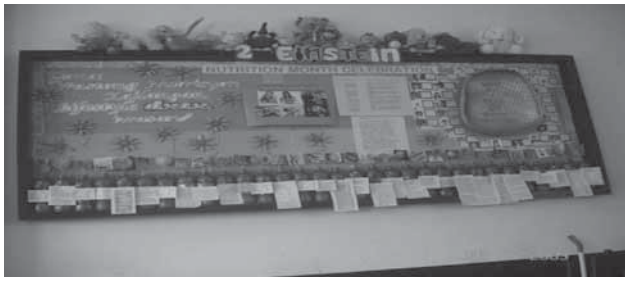
One serious problem our school is facing is the improper disposal of waste. Although there are garbage bins on campus, students and some of the school staff members seem to litter everywhere. This creates hovering flies and at times, the area has a foul odor. The Parent-Teachers Community Association, this year donated two (2) garbage bins per class from the lower graders (grades 1-6) to the high schoolers (1st year -4th year). The garbage bins are labeled Biodegradable and Non-biodegradable. The class that is able to segregate their waste properly will be awarded on the 31st of this month.

MAXIMUM PARTICIPATION OF SEMINARS/SYMPOSIA CONCERNING THE ENVIRONMENT

Our school gives full support to the environmentally-related activities. Next month, we will be celebrating the science month. Aside from the monthly bulletin board structuring contest, other highlights include the investigatory project of the high school students, educational tour/field trip, tree planting for the third year and fourth year high school

students, symposia and film viewing of the first year and high school students concerning global warming and climate change, and class painting contest stressing the importance of protecting the environment.

Lastly, on August 29, this month, my SBO officers will be joining a summit on Environmental Sustainability sponsored by the United Nations Youth Association of the Philippines-Cagayan de Oro City Chapter (UNYAP-CDO). After the summit, they will echo the same thing to all the students of Capitol University Basic Education Department and the local officials of Barangay Gusa, Cagayan de Oro City.



This was my bulletin board during the nutrition month which won first. The stuffed toys on top of the board are not part of the contest.

This is my bulletin board this month. Note the two (2) trophies on top. They are also recycled.

It's Too Late to Be a Pessimist

Joe Lim (Singapore)
Project Manager, Singapore Environment Council

Looking Inward instead of Outward and Walking the Talk…

Our impromptu trip to the Aichi Kaisho Forest Centre 12 Jun 2009

40 fantastic participants from 14 countries, 14 fabulous days with 3 full meals a day, 3 motherly guides, government officials, university professors, at least a dozen hardworking staff from the Japan Foundation and countless numbers of people behind the scenes, who cleaned our bathrooms, made our beds, served us breakfast and coffee, drove us to our destinations and made our stay in Japan memorable; many thoughts were churned out during this period.

I decided on this title as many of us during this trip saw, learnt, observed and tried to be more mindful of our actions; from refusing plastic bags given out at the am/pm 24-7 convenience shops to putting the "Do not disturb" tab on our doors the next morning NOT because we are anti-social but because we don't want the chambermaids to change our towels and bed sheets daily.

There were occasions when I was at the Shinonome Elementary School and Chubo Landfill Site in Tokyo when I saw so many similarities between what the Singapore and Japan Government policies on Education and Waste Management were. From the Eco-gardens/ ponds inside the school compound to our stands on incineration; it was stunning! I cannot say much about the Japanese Government Environmental Policies as we were only given superficial introductory tours of the facilities due to the lack of time; but my government's long term Singapore Green Plan 2012[1] seems to overly rely on using Technology to solve our environmental woes instead of looking into the mindless and excessive consumption ever so prevalent in Singapore (or any modern city for that matter). If we watch the media in most of these huge cities, there seems to be nothing wrong with our current rate of consumption; that all is fine, so long as we can adopt the latest technology in handling waste, recycling and promoting economic GDP growth. Renewable energy is going to solve our climate change problem; if only it could be so simple. Going back to the pre-industrial way of life is simply not realistic; but we have got to realize that any developments in technology to counteract our human damage to the environment will never keep pace. Simply because our Greed will always be at least a couple of steps ahead of the latest technology.

Sustainable Development seems to be a nice banner to display but how many countries are actually doing it? Let us look inward at ourselves; as individuals. In our initial reports submitted before the trip, I touched on our confusion between a NEED and a WANT; and this was blatantly exhibited at times during our trip as we were fed and housed in conditions where we would have burst our daily carbon quota. Of course we were distinguished guests from our respective countries and it's only common protocol to give us the best, but many of us did observe that some took it for granted when they commented about the food and program arrangements; and when we had our evenings free; many chose to spent it on 'mindless' shopping; going to where all the glitter and action is and trying to satisfy our 5 senses to the fullest. I must admit I was tempted on several occasions too; like buying a new digital camera.

Trying to change our lifestyle and mindset takes time; and sometimes I think it's harder when one is already a 'leader' in our own community. However, our actions and words have a far greater impact in our respective communities as many of us mould younger minds and come from more privileged backgrounds; very often with authority in our hands, we do have the power to change; and it all starts with ourselves looking at our daily actions

1 http://www.mewr.gov.sg/sgp2012/

and lifestyles.

We tend to be more lenient with ourselves and more strict with others in the course of our environmental 'crusade'; thus if we bother to pause and contemplate; we are often not 'Walking the Talk', but merely 'Talking the Walk'. One very good example could be seen by observing the number of participants who actually remembered to use their Re-useable Hashi(Chopsticks) given on the very first day. (We probably threw away 20-30 pairs of disposable chopsticks each during the entire trip; and recycling though good; is the least important among the 3 Rs as we still need water, energy and chemicals to recycle anything.)

One very impacting and useful lesson I learnt during my 2 weeks in Japan is the fact that rubbish is often not collected daily; and even if it's done everyday, there are certain items for certain days. (eg mon - plastic day, wed - paper day). I think this is a very good mindful exercise and thus it would be great if Singapore eventually has an annual "No Rubbish Collection" Day! We are starting small by getting organizations and schools to look at the quantity of waste being disposed of daily and concurrently talking to the waste collectors on the possibility of not coming to a neighbourhood to collect the rubbish for a day. We are facing several huddles on this, as unlike other temperate climates, the stench coming out from rubbish not collected for more than 24 hours in the tropical heat of Singapore would make many city dwellers cry foul; least to say the fiesta the flies and other insects would engage in.

This "No rubbish collection" Day will hopefully get the support of schools and companies on the 24th of October 2009; which is the International Day of Climate Action (www.350.org). In addition, we plan to organize a coastal cleanup along the east coast of Singapore; a popular recreational spot for many on weekends. A Coastal cleanup is a very good start to introduce anyone to our fragile environment and how wasteful a society we live in nowadays. The purpose of a cleanup is NOT to physically cleanup the place but to remind ourselves the next time we buy/throwaway stuff; whether it could be Reduced (by only buying/using what is needed not what's on SALE!), Reused (so that less would be thrown away daily) and Recycled if the above 2 steps cannot be performed anymore. Living in a "throw-away," 'one-time usage" culture is not a sustainable way to progress; and surely not a positive carbon-mindful lifestyle one should adopt. We hope a coastal cleanup can mould this mindset.

In fact if one were to go one step further, there are actually 2 more Rs to adopt even before we practice the conventional 3Rs. Re-think(Pausing and contemplating whether we Need to buy it or Want to buy it) and Refuse (not taking stuff we dun need). So the 5Rs should be Rethink, Refuse, Reduce, Reuse and Recycle.

From the good feedback and response we had when screening the HOME movie on the 5th of June as part of the global release of this much awaited movie by famous director Yann Arthus Bertrand (Author of the book "Earth from Above"); we decided to spread this message to companies and organisations to book cinema halls either for private screenings within their company or invite schools and kids from children's homes and welfare homes to watch it together with them. This project is currently happening till the end of the year.

We also are discussing the possibility of project attachments for our volunteers to learn from our Asian Pacific friends made during this Jenesys Programme.

A Personal 10 steps for a Good Life that won't Cost the Earth[2]

1. Take a Walk (exercise, better health, psychological benefits from green space)
2. Enjoy the finer Things (Finer often means simplicity; think out of the box)
3. Have less, Do more (materialism doesn't equate happiness; earn less-spend less!)
4. Time is not money (It's much more valuable! Keep a diary)
5. Think Positively about the future and make plans
6. 5 Rs – Refuse, Reduce, Reuse, Repair and Recycle
7. Cut down Dirty Energy (energy audit, voting with our plugs)
8. Live authentically (be mindful of the 'herd mentality')
9. Get Creative (make music, art; it's meditative and develops self-awareness)
10. Eat Well (We used to eat less meat (50% less) and less qty; we only have 4 out of 32 teeths designed to cut meat and our intestines are more like Cows than Lions)

The food industries – it's almost as pollutive as our car exhaust!

Upon waking up

Take in couple of deep breaths; breathing; an activity which accompanies us from the moment we are born yet grossly unnoticed. And as we are mindfully breathing, spend some time thinking of one act we can do today Not only for the planet but for another living being.

2 http://www.happyplanetindex.org/

A basic need - FOOD

Bread again? Rice again, or cereals again? There are currently 1 billion hungry people on this planet. Our weekly food bill has gone up; so has our quality. We all know people are hungry NOT because there is not enough food grown but more likely because luckier people like us are wasting it/not appreciating it enough. Take time to chew your food more.

Eating Again? Most of us are lucky enough to have at least 3 meals daily. No wonder 12.5% of global annual greenhouse gases comes from agriculture by-products (Transportation Fuels account for only 14%)[3]. Although in much smaller quantities; Methane (fart gas) and Nitrous Oxide (laughing gas) are 20 and 298 times more "heat trapping" compared to CO_2 respectively.

Nutritionists have done studies that people who eat less live longer and we should try to stop eating when we are 75% full due to delay signals our stomachs send to our brains; which is a further distance from our mouths!

A dinner feast anyone? Our ancestors only had 2 meals a day; having 3 or more meals is a very recent pastime. That is partly why coronary heart disease is by far the top ailment in our modern society today. The other 2 main reasons are a meat-based diet and our mental-health (stress).

Dinners in many cultures are more a social event; in which case potluck parties and food sharing is a good idea but can be a waste of food if one is not careful in the planning of who brings what and how much. Sitting together at a dinner table sharing stories or playing the guitar beats eating with the "trance-box" (TV) switched on; it's less of a carbon footprint too! Medical evidence have suggested watching TV induces a mental state almost identical to clinical depression.

3 http://en.wikipedia.org/wiki/File:Greenhouse_Gas_by_Sector.png

Environmental Education: An Important Foundation for Sustainable Development

Mooksuwan Walaiporn (Thailand)
Researcher, Campaign for Alternative Industry Network (CAIN)

This is the first time I have ever visited Japan. It is my great appreciation and gratitude to the Japan Foundation that made my first visit a much valuable experience of life. After the 14-day learning with JENESYS East Asia Future Leaders' Program 2009 in Japan, I have been inspired to work further on environmental education for people in Thailand. It also let me return home with lots of hopes.

I know what I have learnt from this trip could not be immediately applied and integrated into what I have been doing right now. But it would certainly be a useful resource for myself and my organization, particularly on the environmental education program that we plan to set it up in the next few years. I hope I can get in touch with the Foundation when the idea comes through.

I would like to share parts of what I have been doing after coming back and my near future plan with my colleagues. Parts of them have been set up based on some ideas I got from Japan.

1. Share what I have learnt to my colleagues and general public

1.1) I had a small meeting with my colleagues in the first week of July 2009. In this meeting I shared my experiences and what I learned in Japan including the exchanges of ideas and comments among our team. Most of my colleagues were very interested in the waste management issue. They were also excited when listening to the stories about the educational materials and the learning centers, in particular, stories of the Stop-Ondankan and Miyako Ecology Centers. I told them I was very appreciative and inspired by what the Japanese have prepared and the education they provide for their younger generations. The children were very delighted in what they were learning as well.

1.2) I wrote an article titles "Foreign Ash" and publicized it on www.chemtrack.org, a website of the Knowledge Platform on Chemical Safety run by National Center of Excellence for Environmental and Hazardous Waste Management (NCE-EHWM), and on www.toxic-alert.blogspot.com, my own webpage. This article talks about waste management in Japan including the present situation and future solutions. The story of Japan's waste management is expressed through narration on wasted-paper. I hope this story can make people come to realize how huge the waste problem in Japan is, and look back to his or her way of living, consuming and managing his or her waste at home.

2. Some recent and forthcoming activities I have done at CAIN

2.1) We shared our ideas about the problems of waste and its management at the TPBS. TPBS, or the Thai Public Broadcasting Service is the first Thai public and commercial-free broadcaster and was established on January 15, 2008. TPBS is seeking ideas for their programs on environmental issues. So TPBS organized a meeting with representatives of NGOs and academics to gather suggestions and recommendations. CAIN was invited to share in the meeting as well. We consulted within our group and concluded that TPBS should do a program on the waste issue in order to raise people's awareness and understanding of the linkage between waste and other related problems as well as long run but sustainable solutions. We have hope that all information delivered widely will alert people to change their behavior.

2.2) We are leading in advocating the national solutions of the E-waste and community hazardous waste issue in the 2nd National Health Assembly which to be held in December 2009, at the UN building in Bangkok. The National Health Assembly is a tool or mechanism for Thai citizens to participate in the national health related policy development. It is a provision of National Health Law B.E. 2550. For the 2nd National Health Assembly, CAIN, where I am working, has proposed a policy related to community hazardous waste management particularly waste

from electrical and electronic equipment, because we actually realize that waste problem has a strong relation to many other problems such as climate changes, environmental deterioration and human health. Moreover, Thailand has no efficient system for managing waste from electrical and electronic equipment, so it is very necessary to develop such a system as soon as possible. The Japanese-like system is one of the most interesting which Thailand should learn from.

3. The medium- and long-term plans

Since August 2009, CAIN has been restructured and changed to be a legitimate foundation called the "Ecological Alert and Recovery-Thailand" or EARTH, so at the present time we are in the process of developing EARTH's activity plan for the medium- and long-term. EARTH has 2 major work issues which are 1) environment and 2) chemical and hazardous waste. Some concepts and ideas, particularly the integrated-approach education, which I learned from Japan, will be applied to the plan.

For the 5-year plan, we aim to establish a learning center on ecology and the environment. Part of the center's activities is to set up a mobile learning unit. We hope the mobile unit would be helpful in moving around efficiently to provide education and training to communities, schools and other places. For example, it would provide and educate an audience on the relationship between environmental and ecological systems in rivers, the Gulf of Thailand and the local communities' health. The educational materials, which I saw in each education center in Japan, would be very helpful in this program. I was very impressed because it shows the great effort the Japanese people put into enlightening their children and saving their country and the earth. I will adhere with this impression and apply it to Thai society, particularly our children. Thank you.

Post Program Paper

Pooncharat Songthammawat (Thailand)
Researcher, Thailand Environment Institute

My major activities after the study tour program are: To report to my colleagues about the study tour program and to share knowledge between us, as I am now a staff member of G2G. **G2G or Go to Green** is a project of the save energy activities campaign at the Thailand Environment Institute (TEI). The activities include turning off lights and air conditioners during the lunch break, paper reuse, waste separation (food scraps, plastics, papers and office equipments) before put it in a bin, sharing energy news and environmental news through a radio program during the lunch break on Tuesday every week and the last activity is study tours of waste management at other institutes.

Regarding long-term projects, I will report my experience in the **Phli Bai Journal**, which is an environmental journal for children. The children will join me by sharing energy saving practices and/or environmental conservation at school or in their daily life. The next project will be exchanging knowledge and sharing experiences of waste management in school projects and expanding this to the community level, building an environmental conservation network.

Post Program Report

Le Ngoc Tuan (Vietnam)
Specialist, Ministry of Natural Resources and Environment

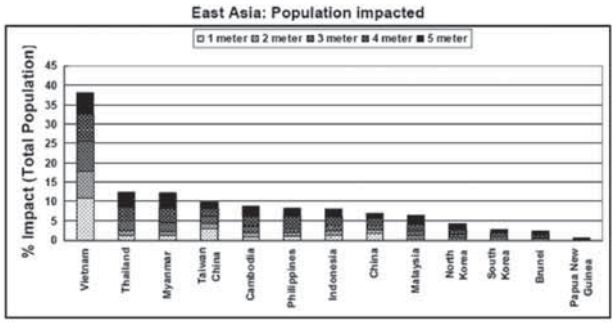
Major activities

Like other participants from the 14 countries participating in the Japan Foundation JENESYS East Asia Future Leader Programme, I had two wonderful weeks in Japan, having learnt much information and gained experience on environmental education in Japan. Also, it was a good opportunity for all of us to exchange with each other.

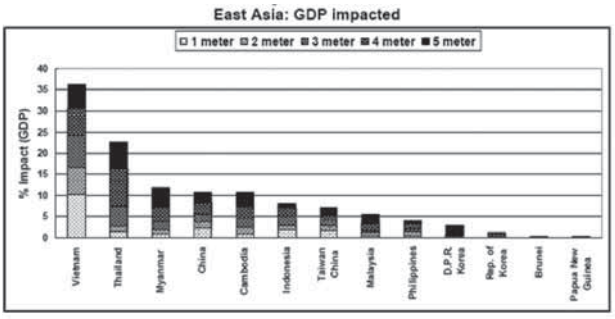
After workshops and site visits in Tokyo, Kyoto, Toba and Nagoya, I was really interested in the experience and lessons in terms of project management, and ethics and values in Japan.

As an official working for the Government (in the Ministry of Natural Resources and Environment), I paid a special attention to the projects of the Stop Ondankan in Tokyo and the Miyako Ecology Centre in Kyoto.

Vietnam, according to a World Bank working paper released in 2007, will be one of the five countries worst affected by sea level rise, caused by global warming and climate change. The paper states that a 1 metre sea level rise would displace around 10.8 percent of the Vietnam's population and wipe out 10 percent of Vietnam's economy with disproportionately high impacts in the Mekong and Red River deltas, which are now two main rice bows in Vietnam.



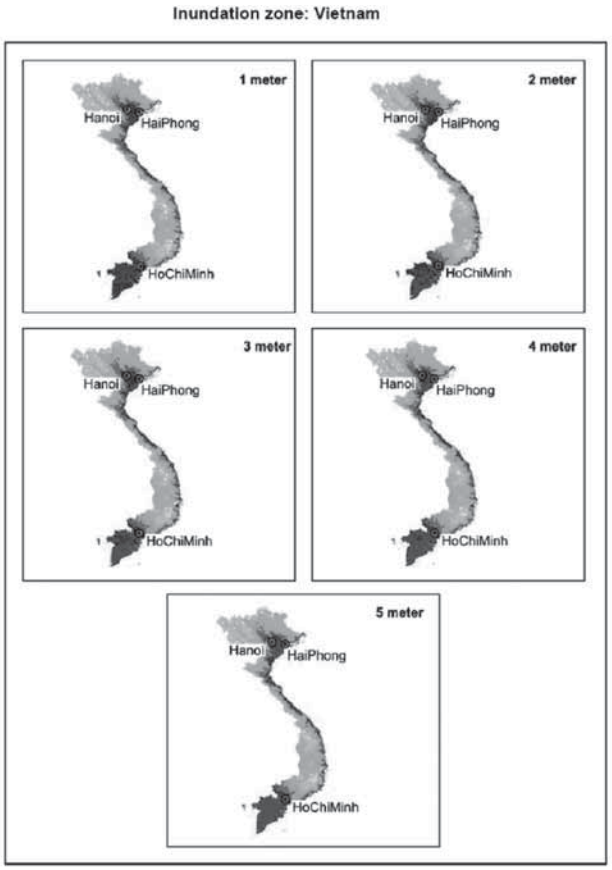
(Source: World Bank)



(Source: World Bank)

Vietnam's largest city, Ho Chi Minh City, would be inundated if the sea level rises by more than one metre. (*see Picture 1*).

Picture 1. Scenarios of inundation in Vietnam



(Source: World Bank)

Vietnam has recently adopted its National Target Programme on Responding to Climate Change. One of the major activities within the programme is education and dissemination with an aim at helping Vietnamese people know about climate change with global warming and sea level rise and ways for adaptation and mitigation.

The establishment of a Stop-Ondankan-like centre is necessary for the future. Therefore, one of my major activities after the study tour programme may be involved in such an activity. Hopefully, what I've learnt from the presentations made by people from the Stop-Ondankan and the Miyako Ecology Centre will help me in this project.

Mid and long-term plans

As I have mentioned above, one of the major activities I will be involved in is the education on climate change with global warming and sea level rise.

Thus, my mid and long-term plans will focus on this activity. In the mid-term plan, I will develop a project on education centres on climate change in major cities. With well-developed materials, staff volunteers will be able to provide knowledge on climate change, global warming and sea level rise for Vietnamese people.

In my long-term plans, I will try to promote the expansion of such education centres to other regions of the country. People in Vietnam should know about climate change and its consequences, in particular, possible scenarios of losses and damage caused by climate change, global warming and sea level rise. Furthermore, they should learn about mitigation measures including the promotion of a low-carbon economy and a sustainable development, which results from a balance among three columns of sustainable development; economic development, social progress and environmental sustainability.

In addition, Vietnamese people should learn how to become more responsible people for global environmental issues, thus helping them think and act globally to make a contribution to the protection the global environment for generations in the future.

Finally, after grouping together for two weeks in Japan, I hope that networking and partnership among the 40 participants in the programme will be part of my mid and long-term plans as we all have to act to protect our Earth, for the present and future.

Post Program

Nguyen Giang Huong (Vietnam)
Assistant, the Project for Implementation Support for 3R Initiative in Hanoi City

Thanks to the great chance provided by Japan Foundation, we were able to join the JENESYS program 2009. This was a memorable study tour full of knowledge on Environmental Education as well as traditional Japanese values.

However, above all, this chance brought to us a precious time to contact and communicate with other Youth who work in the field of Environment in East-Asian countries. We still keep in touch through this network as we exchange concerns, issues and countermeasures for our work.

The followings are some out-standing points, which are the lessons I learnt from this program.

1. Background on Environmental Issues and Environmental Education in Japan

Through the lectures of Dr. Kimiko Kozawa and Mr. Hiroyuki Suzuki, a background on environment issues and environment education was prepared for us. These lectures especially, brought us an overall viewpoint on the development of environmental education in accordance with economic development.

This was very useful information for the participants who came from developing countries. In those countries, we are facing a conflict between the environment and economy. Do we deal with this conflict, environment first or economy first? The lectures with some case studies in Japan helped me to find out that education to raise awareness of residents on environment should be organized to be provided during the period of economic growth. Even then, residents might not take actions during this period but they can gradually understand. *Most important is how to make a majority consensus within the community.*

2. Environment Education Program and Facilities

During the program, we had the opportunity to visit many environmental education facilities, such as: Stop-Ondankan in Tokyo, Kyoto Municipal Science Center for Youth …

What we learnt from those facilities is very important for me to apply in my job. For Children, any kind of education, including environmental education, should be very interesting and practical. In those centers, I learnt through a great experience on how to make demonstrations for children. Equipment used here is very impressive, not because of the appearance but also because of the purpose and its effects on the imagination of children and visitors like us.

We had a special chance to visit Shinonome Elementary School, to see how pupils in school are educated on environment and nature.

One point that should be emphasized here is the good combination between theory and practice in the environmental education program at this school. We visited the facilities of Shinonome School and witnessed an outside class on rescuing dragonflies by the pupils of this school. Children learnt about and found dragonfly larva in a pond, to support them to become a dragonfly. The garden of this school is also one of the spaces for children to understand nature and how human nature utilizes it for our life. This practical way of education allowed us to approach children more easily because their characteristic is very active, always wanting to discover. Later, theoretical lectures will be more effective because of providing practice in the good environments like this.

However, for developing countries, there are limitations in meeting conditions to invest in such a system of infrastructure for each school.

3. Involvement of Private Sector in Environment Activities

The Panasonic Centre and Asahi Breweries are private companies, which we visited during this study tour. Those companies showed us good examples of the involvement of the private sector to environmental policy.

In fact, those companies are global companies, thus applying such an environmental policy is not only to obey the national law but also to advertise their brands. Environmental issues now have become global issues for which there is concern by many of their customers around the world.

In Vietnam, we have many unions, such as: the Women's Union, Veteran's Union, Youth's Union…. If we can take advantage of these union to make a movement on using eco-products. That will be a useful approach to encourage private sectors in joining an environmental protection policy, which is a very difficult task in developing countries now.

4. Waste Treatment Facilities

Japan is one of the famous countries for the Solid Waste Management. Thus, when we visited the Chubo landfill, we were not surprised to see the facilities there. However, one big surprise came to me when I saw a small environmental education program in the administration centre of the Chubo landfill.

Japanese are very good at making such educational systems right at the waste disposal place. As a result, visitors can be left with a deep impression regarding what they discharge and how their waste is treated after collecting.

This kind of system in my country is not so developed because waste treatment facilities are often imagined to be dirty places by residents. I learnt that to make over the image of those facilities is one of the important ways to make residents understand about the SWM system.

5. Volunteers system

The most impressive lesson for me during this study tour is the volunteer-system. In Japan, anywhere we went we could see volunteers who were elderly, but still involved in the environmental education system for children.

In Vietnam, we also have a system of Youth volunteers in social activities. They are very active and enthusiastic. However, although youth and old both have their advantages, youths are very active but not patient as the experienced people. They are often attracted by some exciting activities like events….

Vietnam is in the developing process. There is a huge number of retired people, who are still want to contribute to society at any time. Creating activities for them to contribute as in Japan and the combination of different generations of volunteers might bring effective activities for environmental education to the society.

6. Network of Colleagues among East-Asian Countries

One of the purposes of JENESYS 2009 program was to make a network for Youth among the countries of East-Asia, who work in the field of environment. This purpose was successfully met this year.

Thanks to the chance provided to us by the Japan Foundation in addition to the convenience of the Internet, we still keep in touch with each other. We received much support from our JENEYS fellows, which we will pass on to the future.

Solid Waste Management: Lessons Lerned and the Situation in Vietnam

Vo Huu Cong (Vietnam)
Head, Center for Agricultural Research and Ecological Studies, Hanoi University of Agriculture

I was so lucky to have a great chance to participate in the East Asia Future Leaders Programme in Japan between 1-14 June, 2009. As never been to Japan before, I had thought that Japan is a small country compared to its neighbors in the region. However, I was surprised and really impressed at first site, of the clean and fresh country. There are very few constructions, little waste disposal, and not as many other environmental matters that can be seen more evidently in some countries.

Working at the University of Agriculture, I am very impressed by the solid waste management in Japan. Though this report is not enough to give the full scene of solid waste management in Japan and Vietnam, it will provide a thought for further implementation of solid waste management in my country.

SOLID WASTE MANAGEMENT IN JAPAN

Lessons learned from two examples in the JENESYS programme, June 2009:

1. Tokyo Metropolitan Government Landfill Site

The Tokyo Metropolitan Government landfill sites are areas of waste disposal for Tokyo 23 districts; the Outer Central Breakwater Landfill Site and the New Sea Surface Disposal Site. It is the final disposal field of the Tokyo port area, thus it plays very big importance.

This landfill site located in the Tokyo Bay, composed of seven sites chronologically based as follows:

Site 1: Shiomi, Koto-ku, covering an area of 364,000 m^2

Site 2: Yume no-Shima, Koto-ku, covering an area of 450,000 m^2

Site 3: Wakasu, Koto-ku, covering an area of 712,000 m^2

Site 4: Inner Central Breakwater Landfill site, covering an area of 780,000 m^2

Site 5: Outer Central Breakwater Landfill site (phase 2), covering an area of 1,990,000 m^2

Site 6: Haneda Offshore Landfill Site (Haneda Airport), covering an area of 124,000 m^2

Site 7: New Sea Surface Disposal Site covering an area of 3,190,000 m^2

Since reclaiming began in 1952, it is estimated that by 2006 there have been about 103.31 million tons of waste disposed in the landfill sites. Of the sites above, sites 1, 2, 3, 4, and 6 have finished filling in waste, whereas waste disposal is still being deposited at sites 5 and 7.

The process of filling in the landfill site is: Collection-Transport --> Intermediate processing --> Landfill --> Covering.

Collection: The collection and transport of waste is individually carried out by each of Tokyo's 23 districts. The waste is divided into three categories: large-sized waste, combustible waste, and incombustible waste. It is recorded that the total waste volume from the 23 wards in 2007 was 3,220,000 tons.

Fig 1: Waste classification

Fig 2: Forest plantation area

Fig 3: Waste disposal on landfill site

Fig 5: Plastic handling factory in Nagoya City

Fig 4: Seedlings for forest plantation

Fig 6: Waste classification

Intermediate processing: Before the waste is empoldered, intermediate processing in order to be able to use the disposal site for many years are carried out by the Clean Association of Tokyo 23.

Landfill and covering: All of the trash will be located at a specific place determined in the plan. Patrolling and insect control take place every day. After the waste is disposed it will be covered with soil. Other processes have also been carried out to create a good environment for the landfill site, such as planting a forest with seedlings, etc.

2. Waste Management in Nagoya

Nagoya is one of the largest cities in Japan with a population of 2,249,315 There are 1,004,690 households covering an area of 326.43 km^2 (April, 2009). The system of waste disposal is quite similar to that of Tokyo. However, the waste management in Nagoya has a focus on 3R (reduce, reuse, and recycle) as well as landfill disposal (Fig. 5 & 6).

SOLID WASTE IN VIETNAM

Industrialization, modernization, and urbanization have triggered Vietnam's economic development throughout the country. Among these processes, urbanization plays an important role in the development but also causes lots of environment issues. Solid waste is one of the biggest challenges putting pressure on the environment and health, becoming an obstacle to the development of society. Recently, solid waste has been a growing environmental problem that needs to be observed carefully (ISGE, 2009).

Solid waste is not classified at the primary sources such as households. It is collected, then delivered for storage on unused land or buried underground. Most of the land area used for burying solid waste (80-90%) do not meet salinity and technical requirements. It is found that the dangerous solid wastes from industrial activities are disposed together with waste from daily use (ISGE, 2009). According to a national environmental report (2004), the total amount of solid waste emitted in the country was recorded as 15 million tons; of which 250,000 tons was dangerous waste (including waste from hospitals). Solid waste from daily use presented the largest figure (about 13 million tons), solid waste from industrial activities emitted about 2.8 million tons and 770,000 tons came from trade villages. Solid waste from construction accounted for only

10% of daily use (about 1,360,000 tons). Solid waste from agricultural activities accounted for a little portion but the impact was on large scale, since it is used widely in the rural area.

The collection of solid waste for the whole country is estimated to be about 50-60% of the total emitted solid waste. The figure is about 70-76% in the larger cities. Due to rapid urbanization, solid waste from daily activities keeps increasing, with an average of 0.7-1.0 kg/person/day and further increasing 10-16% per year. However, the solid waste from daily activities is lower in the rural area, accounting for 0.3 kg/person/day, most of which is organic material. It is predictable that there will be more than 10 million people living in the urban areas by 2010; increased consumption demand and established trading sectors established; will force the amount of solid waste disposal up. Solid waste disposal will increase by more than 60% (daily activities) and 50% (industrial activities), and dangerous solid waste will triple (ISGE, 2009).

Study on solid waste in agriculture

As mentioned above, the solid waste from agricultural activities are not significant in terms of mass. However, scientists investigated that pesticides affect human health entirely and put a big pressure on the ecosystems and environment if not used if the producer's instructions are not followed carefully. In Vietnam, the use of pesticides has increased rapidly. It was recorded that the increase was about 10,000 ton/year in the 1980s to 21,600 ton/year in 1990 and 33,000 ton/ha in 1995. Areas that applying pesticides have also expanded up to 80-90% (Chien TD et al, 2008).

According to ministry of Agriculture and Rural Development, there is an average of 19,637 tons of chemical packaging discarded from agricultural activities per year, which is made of paper covered with zinc, and nylon bags... The waste from agricultural activities is not collected. It is scattered on the fields, in irrigating canals, and becoming a factor of serious environmental pollution. Surveys conducted at Tien Giang province, Dan Phuong, and the Tu Liem district of Hanoi showed that 80% of the households left the pesticide bag on the field, or in the canal. To protect the environment, health of farmers, etc. a specific program should be implemented in the area.

The collection of solid waste in Vietnam is facing lots of problems since the waste is not classified at the original sources. Trash is being disposed of by moving it up to a hole or some unused land. In agriculture, some places have facilitated tanks but the process or taking waste from agricultural activities has not gone further. To deal with these issues, I recommend an environmental education programme for the people who have to experience this type of pollution. The environment will be better if people become aware of their behavior and contribute their participation in the process of collecting, classifying, and transferring solid waste.

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JENESYS East Asia Future Leaders Program 2009 (1 – 14 June 2009)

Nguyen Thanh Tung (Vietnam)
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I extend my thanks to the Japan Foundation and the JENESYS program, which provided me with an opportunity to experience and explore Japan for two weeks in June 2009. It was definitely a helpful trip for all participants, especially for me and my work. During the trip in Japan, we visited many places, and met a lot of people, who shared with us plenty of useful information and experiences, which entirely impressed me much with intensive surprises.

In specific, most of the time participants worked and visited sites in Tokyo while the remainder was spent in Kyoto, Toba and Nagoya. In Tokyo, we obtained lots of information through lectures on Japan's environmental issues, environmental education and its development together with field visits to some interesting models. We went to Asahi Breweries and Panasonic Center, where we were surprised with the environmentally–friendly modern technologies with an incredible model of the Eco House. In addition to visiting commercial sites, our special attention was attracted to the initiative of the Stop–Ondankan. To us, it was definitely a meaningful model for the provision of guidelines and information sharing to a wide range of people. It is operated successfully with a great number of promoters, who are working on a voluntary basis. We also obtained lots of useful information such as visiting the Tokyo Chubo Landfill Site, Umi-no-mori Project, Shinonome School, and National Science Museum. To accomplish these projects not only requires a certain amount of money but also comprehensive and effective collaboration of various sectors and the full support of the local authorities and people.

Leaving Tokyo for Kyoto, we had chances to explore and learn more about the culture and history of Japan, such as the Golden Pavillion built in 1220 – inscribed as the World Cultural Heritage in 1994 - and Kiyomizu Temple. It was really a memorable time for us as we could sometimes forget the noisy world around and return to the past with an understanding about the cultural and the historical things. We entirely enjoyed traditional Zen meditation in the peaceful nature around us. Moreover, we visited the Miyako Ecology Center, which was established to commemorate the organization of COP3 in Kyoto in 1997. This is an environment study center with the aim of initiating and promoting environmental protection activities. There are about 80 "Eco-maids" together with a network with NPOs and NGOs staff members working at this center. One of the most interesting times in Kyoto was the visit to peaceful city of Miyama – a city in the forest. We met lots of friendly people there and learned about the history of the city as well as ongoing environmental protection activities. Leaving Kyoto and its many beautiful sites behind, we spent a night in Toba and had a visit to the Ise Jingu Shrine. It was the first time I had ever seen the beautiful primeval forests, which cover an area of more than 5,500 hectares. The meaningful and splendid history impressed us greatly, as did stories about the site lasting for hundreds of years.

The final destination of the Japan tour was Nagoya. All participants had a chance to understand about treatments of plastic garbage by visiting Nagoya Plastic Handling Co., Ltd and about forestation processes over dozens of years during the time in Aichi Kaisho Forest Center. The Japan tour ended with the trip back to Tokyo and some indoor discussions about the fruits of the two-week study tour.

In general, there is no doubt that the study tour provided participants with lots of useful information and experiences, which can, to some extent, be applicable to their current work. For my case, there is no long-term plan this time, but I do have short- and medium- plans to apply and share what I have achieved so far from the study tour.

Indeed, useful understanding and knowledge from the trip helped me much in my own work and partially improved my capacity, i.e. internationally - recognized concepts, initiatives, models and so on. Moreover, by working with other colleagues from different countries, I have learned a lot from their views and ongoing activities on environmental issues, e.g. environmental education, mangrove protection, waste management, biodiversity conservation, forest fire prevention and fighting, etc.

In fact, I have shared tour-related information widely to my colleagues and partners I am working with as well as

the activities I am involved in. In specific, below are some major activities, among others, that I have contributed so far since coming back from the study tour in Japan.

In early July 2009, there was a campaign launched by the Ministry of Agriculture and Rural Development (MARD) on "Action month for environmental protection and biodiversity conservation", which attracted the participation of a wide range of stakeholders working in the forestry sector in particular and civil society in general. Then, being aware of the importance of the environment and its related issues, the Department of Forestry has, in collaboration with other environment-related international organizations, such as UNDP, WWF, IUCN etc, made substantial efforts to establish a network (task force) working on Reduced Emissions from Deforestation and Forest Degradation (REDD). Of this, our office functions as the network secretariat together with technical inputs for its operations. Also regarding this issue, Viet Nam was selected, amongst nine countries all over the world, for implementation of the UN-REDD program.

In addition, Viet Nam was also selected for hosting the 1st Regional Forum for People and Forests in collaboration with the Food and Agriculture Organization (FAO) of the United Nations and the Center for People and Forests (RECOFTC), held in Hanoi between 18 – 20 August 2009. From the MARD side, it was my pleasure to be appointed as the focal point for the organization of this event. In addition to representatives of international organizations, forum participants came from 12 countries in the region, together working and contributing to the topic: "Carbon Financing and Community Forestry".

In addition, the Viet Nam Forestry Development Strategy (VFDS, 2006 – 2020) has been implemented for 3 years and we are now reviewing what has been done so far and providing recommendations for revision and improvement. The second development program, out of total 5 VFDS programs, dealing with Forest protection, biodiversity conservation and delivery of environmental services have been received with substantial attention.

Besides, being in charge of six Regional Forestry Networks (RFNs) with more than 45 forested provinces in Viet Nam, I am thinking about the topic of environmental protection for the upcoming meetings of the networks, which could be considered as follow-up or additional actions to the "Climate Change" topic of the last RFNs conference early this year.

For all of the above reasons, I would like to emphasize my gratitude and sincere thanks once again to Japan Foundation and the JENESYS program, which facilitated us in having such an impressive and meaningful study tour in Japan last June. Finally, you can proudly say that the study tour was successfully carried out, as on that basis a network of all of the participants is running smoothly and effectively for our common objectives on environmental education and protection.

Report from Japanese Coordinator

Changes in Program Participants' Perception of the Environment through Comparative Analysis of Frequency of Associated Words and the Cognitive Structure Based on Free Association Method

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1. Study Objective and Method

This report describes the ways in which participation in the JENESYS East Asia Future Leaders Program changed the participants' perception of the environment.

This study used the free association method with "environment" as the stimulus word. Samples were taken in a questionnaire format. The study was conducted with a pre-survey given the day that the program began (June 2, 2009), and a post-survey given on the final day (June 13, 2009) (40 respondents for the pre- and post-surveys). The questionnaire asked respondents to list up to 10 words associated with the stimulus word "environment" (associated words). The sample data collected was used to compare the frequency of the words in the pre- and post-surveys (comparison of total number of associated words, comparison of the number of each type of associated words, comparison of category of associated words), and the structure of perceptions of the environment was ascertained by analyzing clusters based on sample scores obtained by analysis with quantification method III. Associated words were classified in six categories for the frequency calculations: (1) natural environment, (2) social environment, (3) emotional evaluation, (4) destructive elements, (5) surroundings and (6) action. We then compared the results within these categories. We calculated the distance between associated words through cluster analysis using Euclidean distance to calculate the distance for the original data, and used Ward's method to calculate the distance for the consolidated data.

2. Results: Frequency Analysis

We observed changes in the response frequency of associated words for the stimulus word "environment" and changes in the type of words used in the response as a result of participation in this program. Table 1 (pre-survey) and Table 2 (post-survey) below shows the associated words for the stimulus word "environment" that had a frequency of three or more.

In the pre-survey (Table 1), "clean" (10), "green" (10), and "water" (10) had the highest frequency in responses. Approximately 40% of the associated words with three or more responses (27 words) were related to the natural environment (11 words). This was followed by five words related to the social environment, five related to an emotional evaluation, and four related to destructive elements. Respondents used only one associated word related to action and surroundings, respectively. Many of the associated words with a high response frequency were in the natural environment and emotional evaluation categories, while all of the associated words related to emotional evaluation shown in Table 1 had positive meanings, such as "clean" (10), "health" (5), "beautiful" (4), and "fresh" (3).

However, the post-survey (Table 2) identified

"pollution" (13), "green" (10), "air" (9), "sustainable" (9) and "water" (9) as the associated words with high response frequencies. Over 30% of the associated words with three or more responses (29 words) were related to the natural environment (10 associated words).This was followed by six words related to the social environment, five related to emotional evaluations, five related to action, two related to destructive elements, and only one related to surroundings. Although a relatively high number of the associated words with a high response frequency were in the natural environment and emotional evaluation categories, some responses used three associated words in a row related to action, which was the median among the associated words. Associated words related to action were "conservation" (6), "education" (6), and "recycle" (5); some of the associated words had not appeared in the pre-survey. Also in the post-survey, all of the associated words related to emotional evaluation had positive meanings, as with "sustainable" (9), "clean" (8), "beautiful" (4), and "colorful" (4).

A comparison of the total number of associated words, the number of the types of associated words, average number of responses and standard deviation in the pre- and post-surveys shows that, although the total number of associated words and the average number of responses increased in the post-survey, the number of types of associated words and the standard deviation fell. This indicates that, as a result of participating in this program, participants increasingly came to share common ground in their perceptions of the environment, and used more shared terminology as associated words in their responses compared to the pre-survey.

Table 1. Frequency of Associated Words (Three or More) for Stimulus Word (Environment) in Pre-Survey

Pre-Survey		
Associated Words	**Category *1**	**Freq**
Clean	Evaluation	10
Green	Natural	10
Water	Natural	10
Pollution	Destructive	9
Air	Natural	7
Waste	Social	7
Forest	Natural	6
Sea	Natural	6
Health	Evaluation	5
Land	Natural	5
Animals	Natural	4
Beautiful	Evaluation	4
Global Warming	Destructive	4
People	Social	4
Recycle	Action	4
Surrounding	Surroundings	4
Tree	Natural	4
Climate Change	Destructive	3
Community	Social	3
Ecology	Natural	3
Flood	Destructive	3
Fresh	Evaluation	3
Life	Social	3
Living	Social	3
Plants	Natural	3
Sustainable	Evaluation	3
Wind	Natural	3
Total number of associated words		355
Number of types of associated words		218
Average number of responses		8.87
Standard deviation		2.31

*1 The categories for classification are: (1) natural environment, (2) social environment, (3) emotional evaluation, (4) destructive elements, (5) surroundings and (6) action.

Table 2. Frequency of Associated Words (Three or More) for Stimulus Word (Environment) in Post-Survey

Post-Survey		
Associated Words	**Category *1**	**Freq**
Pollution	Destructive	13
Green	Natural	10
Air	Natural	9
Sustainable	Evaluation	9
Water	Natural	9
Clean	Evaluation	8
Forest	Natural	8
Community	Social	6
Conservation	Action	6
Education	Action	6
Recycle	Action	5
Surrounding	Surroundings	5
Waste	Social	5
Beautiful	Evaluation	4
Climate	Natural	4
Colorful	Evaluation	4
Natural	Natural	4
People	Social	4
Soil	Natural	4
Tree	Natural	4
3R	Action	3
Biotope	Action	3
Cool	Evaluation	3
Ecology	Natural	3
Global Warming	Destructive	3
Life	Social	3
Mountain	Natural	3
Policy	Social	3
Society	Social	3
Total number of associated words		362
Number of types of associated words		211
Average number of responses		9.05
Standard deviation		2.22

3. Results: Cluster Analysis (after determining sample score using quantification method III)

Using the associated words given in response to the stimulus word "environment," we performed a cluster analysis of the associated words to identify the structure of participants' environmental perceptions. To enhance the accuracy of our analysis in this survey, we applied quantification method III to the associated words and analyzed the clusters using the sample scores obtained by this analysis with quantification method III. Tables 1 (pre-survey) and 2 (post-survey) represent the dendrogram obtained in cluster analysis based on the sample score obtained using quantification method III.

In the pre-survey (Table 1), the associated words (27 words) can be roughly categorized in three clusters. The first cluster is for words related to "harmonious living environment and surroundings." This cluster groups together associated words such as "life," "ecology," "surroundings," and "beautiful." "Immediate living environment and surroundings" can be seen as forming one group of the elements comprising perceptions of the environment. The second cluster is related to "relationship between the natural environment and people." This cluster groups together many associated words related to the natural environment, such as "plants," "animals," "land," "sea," "wind," "tree," "water" and "air," and also groups together associated words related to inter-personal relationships, such as "community" and "people." "Natural environment" thus forms another group of the elements forming environmental perceptions. The fact that there are so many associated words in this cluster means that the participants are more strongly aware of the natural environment than the living environment. The third cluster is related to "environmental problems and lifestyle changes." This cluster includes "waste," "pollution," "floods," "climate change" and "global warming;" all of the associated words indicating "destructive elements" that were listed in the pre-survey are grouped together in this cluster. The participants associated "recycle" and "sustainable" with the problems of "waste" and "pollution." Similarly, they associated "green" with the problems of "floods" and "climate change," and associated "forests" and "living" with the problem of "global warming". This indicates that the participants saw lifestyle changes as part of the solution for these environmental problems.

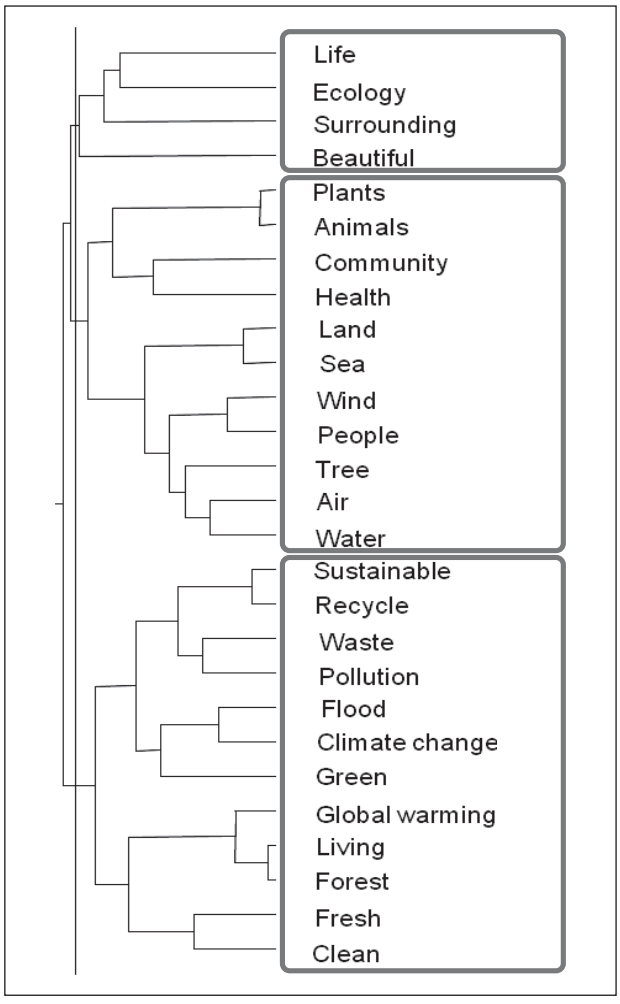


Figure 1: Tree diagram for cluster analysis of associated words
Stimulus word: Environment, Pre-survey, frequency of more than three for associated words

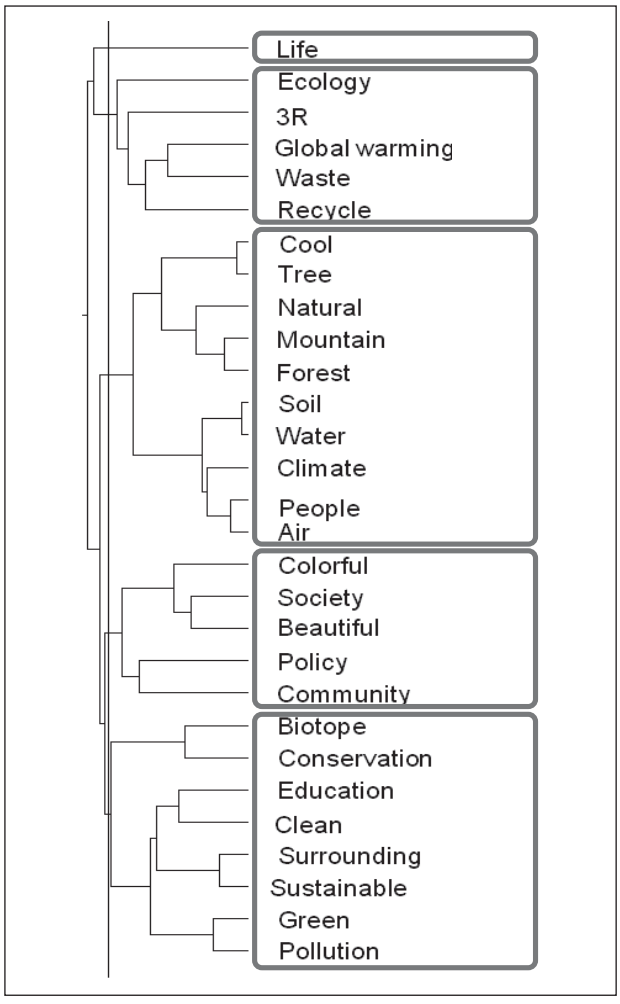


Figure 2: Tree diagram for cluster analysis of associated words
Stimulus word: Environment, Post-survey, frequency of more than three for associated words

At the same time, in the post-survey (Figure 2), associated words can be classified into five clusters. The first cluster is related to "life," with "life" given as the associated word for this cluster. The second cluster is related to "environmental problems and actions to improve lifestyle." This cluster includes not only associated words related to environmental problems such as "global warming" and "ecology," but also groups together "3R," "waste," and "recycle." This cluster indicates that the participants believe that actions aimed at improving one's lifestyle to address waste problems are important. The third cluster is related to the "relationship between the natural environment and people." This cluster groups together many associated words related to the natural environment, such as "tree," "natural," "mountain, "forest," "soil, and "water," and also groups together associated words related to interpersonal relationships, such as "people." This cluster also forms one group in the pre-survey, and demonstrates that participation in the program did not change its role as an important group in making up the participants' environmental perception.

The fourth cluster is related to "creating a diverse society and community." This cluster groups together associated words such as "colorful," "society," "beautiful," "policy," and "community." This reveals that visits to a wide range of regions in this program made the participants more aware of the "need to develop communities that value diversity."

The fifth sector is related to "action leading to development of a sustainable society." This cluster includes many associated words related to action, such as "biotope," "education," and "conservation," and indicates that participants feel motivated to take action to realize a sustainable society.

A comparison of the cognitive structure for the stimulus word "environment" in the pre-survey and post-survey, as described above, revealed the following significant changes.

- There were many associated words related to the natural environment in the pre-survey and post-survey, and both the pre- and post-surveys showed a shared perception of "the relationship between the natural environment and people."
- Compared to the pre-survey, concepts of "life" changed to a higher-level concept once the participants were more aware of the environment.
- The post-survey also had a cluster on "creating a diverse society and community." This cluster did not appear in the pre-survey, and represents a new environmental perception gained through participation in this program.
- In the post-survey, there was a grouping related to "action leading to development of a sustainable society." The many associated words related to action toward the creation of a sustainable society indicates that awareness of this type of action strengthened, in addition to perception of the natural environment and social environment.

4. Median point by attribute (distribution by country of origin based on quantitative method III)

The median point by attribute (country of origin) obtained using quantitative method III in an analysis of associated words based on the free association method reveals the following results in the pre- and post-surveys (Figures 3 and 4). Although there was some degree of commonality in environmental perception in the northeast Asia region and the southeast Asia region, there were discrepancies

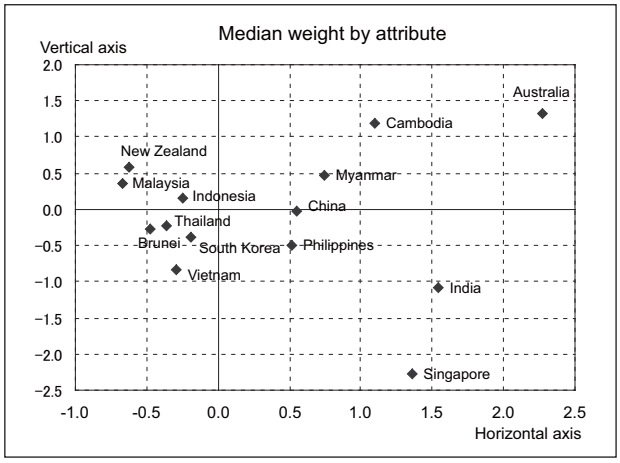


Figure 3. Median point by attribute (country of origin) obtained using quantitative method III
Stimulus word: Environment, Pre-survey, frequency of more than three for associated words

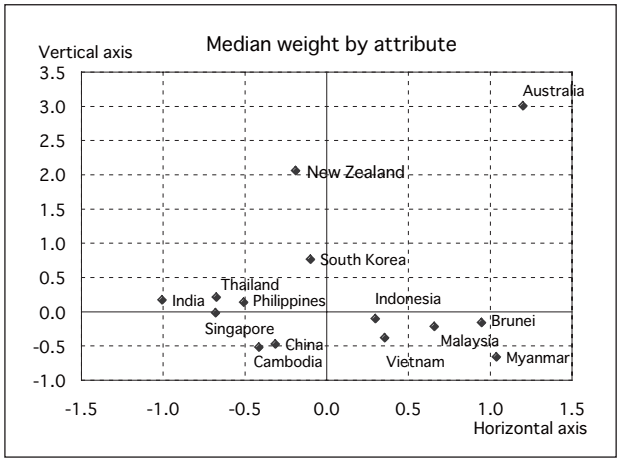


Figure 4. Median point by attribute (country of origin) obtained using quantitative method III
Stimulus word: Environment, Post-survey, frequency of more than three for associated words

in environmental perception in India in the southern Asia region and Australia and New Zealand in the South Pacific region. We will refrain from making any further observations of Figures 3 and 4 as further detailed analysis is needed.

5. Conclusion

This survey clearly demonstrated that participation in the East Asia Future Leaders Program changed some aspects of the participants' environmental participation and did not change other aspects. The pre- and post-surveys indicated that there was no change in the large number of associated words related to the natural environment and that the participants showed a shared awareness of the "relationship between the natural environment and people" in both the pre- and post-surveys. At the same time, we observed the following two changes: (1) compared to the pre-survey, concepts of "life" changed to a higher-order concept with a better awareness of the environment, and (2) in the post-survey, associated words were grouped in "creating a diverse society and community" and "action leading to development of a sustainable society." An examination of the extent to which environmental perception is enhanced as the context with "life" is deepened, the extent to which specific examples of actions leading to the development of a sustainable society can be given, and the way in which information is shared and debate deepened is essential to improving this program. Moreover, there should be further discussion of how the differences in environmental perception in India, New Zealand and Australia identified in an analysis using quantitative method III should be used in developing and carrying out the program in the future.

Materials

List of Participants

	Country	Name	Affiliation	URL	Field
1	Australia	Sarah van Erp	Total Environmental Centre	http://www.tec.org.au/	Environmental Chemistry & Toxicology
2	Australia	John Stamatiou	Sinclair Knight Merz	http://www.skmconsulting.com/	Environmental Science
3	Brunei	Mohammad Shari Bin Hj Abd Kahar	Dato Marsal Primary School	http://www.moe.edu.bn/srdm/index.htm	Education
4	Brunei	Pengiran Hajah Mashayu Binti Pengiran Haji Yusof	Duli Pengiran Muda Al-Muhtadee Billah College	http://www.md2000.20m.com/main.html	Education
5	Brunei	Marlizayati Binti Johari	University of Brunei Darussalam	http://www.ubd.edu.bn/index.html	Physics Education
6	Brunei	Mohammad Azmye Bin Haji Alamin	Ministry of Development	http://www.env.gov.bn/index.htm	Environmental Engineering
7	Cambodia	Navuth Prum	LEUCAENA / Community Cooperative Network	http://lcj.press.ne.jp/index.shtml	IT and Management
8	Cambodia	Say Bora	Japan International Volunteer Center	http://www.ngo-jvc.net/jp/projects/cambodia/	Agriculture / Agro-industry
9	China	Zhenxi Zhong	Jane Goodall Institute-Shanghai Roots&Shoots	http://www.jgi-shanghai.org/ColumnList.aspx?NodeID=2	Environmental Education and Education for Sustainability
10	China	Yu Yin	Mekong Program on Water Environment and Reslience (M-POWER)	http://www.mpowernet.org/mweb.php?pg=60	Development studies on natural resource management
11	India	Ranjeeta Rani	Gyan Mandir Public School	http://www.gyanmandirpublicschool.com/index.html	Biology
12	India	Shweta Kukreja	Springdales School	http://www.springdales.com/index.asp	Ecopsychology
13	Indonesia	Astri Wahyuni	SMU Kornita		Journalism
14	Indonesia	Sri Wedarni	SMAN 4 Denpasar	http://sman4dps.sch.id/index.php	Biology
15	Indonesia	Yahya Laode	The Indonesian Forum for Environment (Walhi) North Sulawesi	http://www.eng.walhi.or.id/ttgkami/ed/wsulut_prof	Environmental Management
16	Indonesia	Suprianto	East Kalimantan Environmental Education Network (JPL KALTIM)		Environmental Education Management, Social Forestry
17	Korea	Sun A Lim	Citizens' Movement for Environmental Justice	http://eng.eco.or.kr/	Planning and Management
18	Korea	Hwang Yukyeng	Puhung High School	http://puhung.hs.kr/?main	Environmental Education & Biology Education
19	Korea	Michael Youngdawng Moh	Wetlands Korea	http://www.koreawetland.org/en/main.html	International Environmental Law
20	Malaysia	Adman, M. Adam	University of Industry Selangor (UNiSEL)	http://www.unisel.edu.my/	Environmental Management

	Country	Name	Affiliation	URL	Field
21	Malaysia	Sofia Johari	WWF-Malaysia	http://www.wwf.org.my/index.cfm	Marine Science
22	Malaysia	Umi Rahman	WWF-Malaysia	http://www.wwf.org.my/index.cfm	Mass Communication
23	Myanmar	Thiha Kyaw	Mangrove Service Network		Youth Coordination in Environment Conservation Activities
24	Myanmar	Gum Sha Aung	Metta Development Foundation	http://www.metta-myanmar.org/	Agriculture, Community Development
25	Myanmar	Sang Za Nuam	International Language & Business Center		Science & Mathematics Teaching
26	Myanmar	San Zwa Li	Total Learning Academy	http://www.tlaschool.org/	Mathematics & Environment Teaching
27	New Zealand	Nicola Bould	University of Otago & Dunedin City Council	http://www.otago.ac.nz/	Furniture & Product design
28	New Zealand	Tracy Roberts	University of Canterbury Education Plus	http://www.edplus.canterbury.ac.nz/	Science, Teaching
29	Philippines	Michael Edrial	Haribon Foundation for the Conservation of Nature	http://www.haribon.org.ph/Home	Biology
30	Philippines	JP Alipio	Cordillera Expeditions / Cordillera Green Network	http://cordillera-green.net/	Biology
31	Philippines	Jasmin Gallano Egualan	Dep Ed.,Gov.Julio V.Macuja Mem.Comp. High School		Social Studies
32	Philippines	Allan A Flores	Capital University Basic Education Department	http://www.capitoluniversity.us/	English
33	Singapore	Joe Lim	Singapore Environment Council	http://www.sec.org.sg/	Economics
34	Thailand	Mooksuwan Walaiporn	Center of Excellence for Environmental and Hazardous Waste Management	http://www.nce-ehwm.chula.ac.th/index.html	Toxic substances and hazardous waste
35	Thailand	Akamal Aikmal Salaemae	Tham Vitya Foundation School	http://www.thamvitya.ac.th/tvm/index.php	Chemistry
36	Thailand	Pooncharat Songthammawat	Thailand Environment Institute	http://www.tei.or.th/	ESD
37	Viet Nam	Le Ngoc Tuan	Ministry of Natural Resources and Environment	http://www.monre.gov.vn/monreNet/Default.aspx?tabid=231	Environment Protection and Biodiversity Conservation
38	Viet Nam	Nguyen Giang Huong	The Project for Implementation Support for 3R Initiative in Hanoi City	http://3r-hn.vn/3rENG/Trangchu.html	Environment Economics and Management
39	Viet Nam	Vo Huu Cong	Center for Agricultural Research and Ecological Studies (CARES), Hanoi University of Agriculture	http://www.hua.edu.vn/en/default.asp	Natural Resources Management
40	Viet Nam	Nguyen Thanh Tung	Department of Forestry, Ministry of Agriculture and Rurak Development	http://www.vietnamforestry.org.vn/Default.aspx?webid=1	Forest Management

Itinerary

DATE	ACTIVITIES	
Tuesday June 2	09:30	Program Orientation
	10:30	Lecture on environmental issues and environmental education in Japan by Dr. Kimiko Kozawa, the former Chairperson of the Japanese Society of Environmental Education
	13:10–17:00	Participants' Presentations
Wednesday June 3	10:00	Visit Stop-Ondankan
	11:00	Lecture by Mr. Hiroyuki Suzuki, an official of the Ministry of Environment on environmental education policies in Japan
	14:30	Visit Asahi Breweries, Ltd., Ibaraki Brewery
	18:30	Welcoming reception
Thursday June 4	10:00	Visit the Panasonic Center
	13:45	Visit Chubo landfill site
	15:30	Visit Umi-no-mori (Sea Forest) project site
Friday June 5	9:30	Visit Shinonome Elementary School
	13:30	Visit Miraikan - National Museum of Emerging Science and Innovation
	16:00	Courtesy call on the Ministry of Foreign Affairs
Saturday June 6	AM	Preparation for the workshop
	13:30–17:00	Workshop
Sunday June 7	9:30	Leave Tokyo for Kyoto
	13:30	Visit cultural and historical places in Kyoto
Monday June 8	9:15	Zen meditation
	11:00	Experience cooking Japanese sweets
	15:30	Visit Miyako Ecology Center
Tuesday June 9	10:30	Visit Miyama
	13:50	Visit the preserved area for groups of historical thatched houses
Wednesday June 10	AM	Free
	14:00	Leave Kyoto for Toba
Thursday June 11	9:30	Visit Ise Shrine
	14:30	Leave Toba for Nagoya
Friday June 12	10:00	Visit Nagoya Plastic Handling Co. Ltd.
	13:40	Aichi Kaisho Forest Learning Center
	16:30	Leave Nagoya for Tokyo
Saturday June 13	AM	Preparation for the workshop
	13:30	Wrap-up workshop
	18:30	Farewell reception
Sunday June 14		Departure

Presentation Materials

Kimiko Kozawa

slide 1

Environmental Issues and Environmental Education in Japan

Dr. Kimiko Kozawa
Former President, Japanese Society of Environmental Education
Professor emeritus Tokyo Gakugei Univ.
6.2.2009

slide 2

Environmental Basic Plan 2007

slide 3

Policy programs in important fields

Issues in individual fields

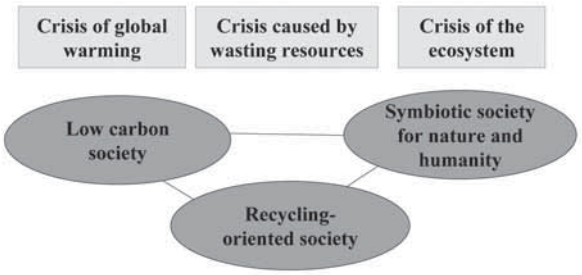
1. global warming
2. creation of a global material circulation and recycling society
3. good air condition in urban areas
4. good water circulation
5. reduction of environmental risks in chemical materials
6. conservation of biodiversity

Cross-sectional fields

7. a mechanism where environmental aspects are evaluated positively
8. promotion of human and community development, for environmental protection
9. development in science and technology, information, and long range policy strategies.
10. promotion of international activities to build framework and rules

slide 4

Aiming at building a sustainable society



slide 5

Trends in EE／EfS in Japan

- 1950s － early 1970s
- late 1970s － early 1980s
- late 1980s － early 1990s
- late 1990s － 2000
- after 2001

slide 6

1950s － early 1970s

slide 7

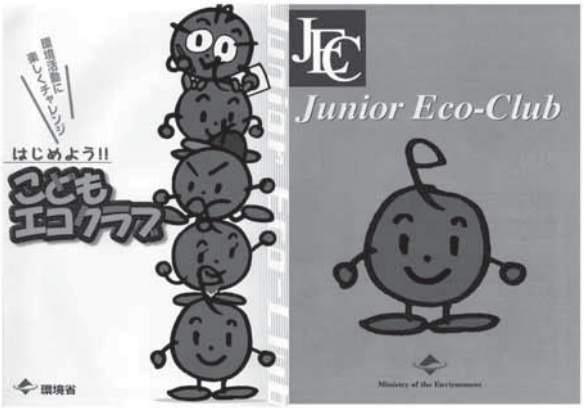
Late 1970s ~ early 1980s

- ◆ Environmental pollution → Environment
- ＊ National elementary and junior high school environmental education conference
- ＊ University environmental education conference → Cooperation
  - ・Environmental pollution education
  - ・Nature education
  - ・Environmental education

slide 8

Late 1980s － early 1990s

slide 9



Since 1994

slide 10

Late 1990s － 2000

<1999>

<2000>

slide 11

After ２００１

Law Concerning the Encouragement of Willingness for Environmental Conservation and the Promotion of Environmental Education

<2003・2004>

Ministry of Education, Culture, Sports, Science and Technology/ Ministry of the Environment/ Ministry of Agriculture, Forestry and Fisheries/ Ministry of Land Infrastructure and Transport/ Ministry of Economy, Trade and Industry

slide 12

Outline of the Law Concerning the Encouragement of Willingness for Environmental Conservation and the Promotion of Environmental Education

Sustainable society

Environmental conservation activities

Deepened understanding and rise in volition

Rise in willingness for environmental conservation

- Rise in knowledge and skills concerning environmental conservation at workplaces
- Registration of human resource accreditation enterprises
- Provision of information and quality improvement of manuals for human resource accreditation, etc.
- Improvement of base facilities for raising willingness for environmental conservation
- Provision of private land and buildings for nature experience programs, etc.
- Understanding of how partnerships function

Environmental education

- Assistance to environmental education in school education and social education
- Environmental education at workplaces

- Financial and taxation measures, etc.
- Active publication of information, etc.
- Consideration of the private-sector activities' autonomy, etc.

slide 13

Period of integrated study
2000-2002

- From educational concepts focusing on knowledge communication to those focusing on inquisition, creation, and expression
- Do not separate learning from teaching

slide 14

guideline of environmental education promotion

・problem → teaching approach

・observation → giving lessons approach

Awareness → Understanding → Search/Thinking → Action

slide 15

Focusing on a retrospective thinking process

Evocation (awareness)
↓
Deepening of understanding (study)
↓
Thinking power / insight (think)
↓
Practice / participation
(change by oneself / change others)

slide 16

The Approaches for EfS

1. interdisciplinary approaches
2. systems thinking
3. participation-type approaches
4. problem-solving-type approaches
5. approaches based on the perspectives of multicultural symbiosis
6. integrated approaches (holistic approaches)
7. approaches based on linkages and collaboration among diverse social sectors

slide 17

Ideas and the problem of environmental education in Japan

To concentrate wisdom to educate citizens who not only are able to "preserve" the environment but also to "independently participate in activities which create a better environment, and have a responsible attitude and behavior towards the environment."

slide 18

The School Guideline for EE

To foster the attitude by which awareness and knowledge on the environment and environmental problems are maintained, based on a comprehensive understanding and recognition of the relationship between human activities and the environment, while at the same time acquiring the skills, thinking ability and judgment which will help to facilitate individuals to adopt desirable approaches taking environmental conservation into consideration, and to make proactive participation in creative activities to improve the environment, and take responsible actions on behalf of the environment.<1991>

For building a sustainable society<2007>

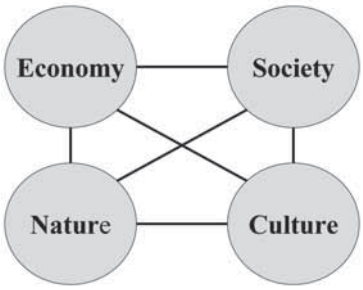
slide 19

The Principles of Promoting Environmental Education

1. A comprehensive viewpoint, which enables issues to be considered from a mutually linked and multilateral perspective, is indispensable.
2. Illicit the cooperation of all generations in various places.
3. Clarify a concrete target to act on and do not make the activity itself the target.
4. Tie understanding and knowledge in with the actual actions.
5. The process should include the learner's experience, feeling, and understanding.
6. Make use of the traditional culture, the history, and predecessors' wisdom in the region, in environmental education.

slide 20

For Sustainable Development



slide 21

The Contents of EE

1. Mechanisms of nature
2. The impact of human activities on the environment
3. The relationship between human beings and the environment
4. Culture and history of the relationship between human beings and the environment

slide 22

Organization of nature
- 自然生態系 — 自然界の物資循環、自然が持つ復元能力の限界、自然とのふれあいなど
- 天然資源及びその管理 — 天然資源の有限性・普遍性、天然資源がもたらす恩恵など

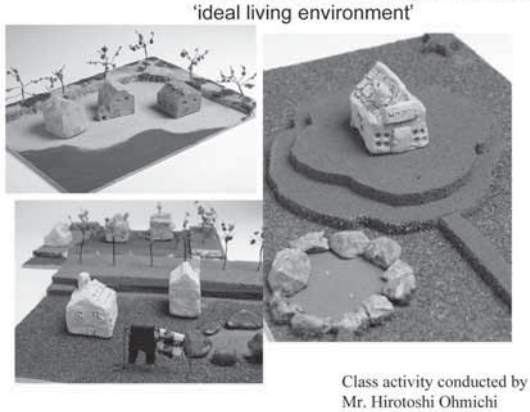
Impacts that human activities have on the environment
- 廃棄物問題及びその背景 — 廃棄物とは何か、家庭からの廃棄物、廃棄物のゆくえ、ライフスタイル、経済社会システム、豊かさとは何かなど
- 廃棄物がもたらす環境汚染 — 大気・水・土壌などに対する影響、海洋汚染、廃棄物と地球環境問題、危険廃棄物、産業廃棄物など

Ways for humans to live in harmony with the environment
- 廃棄物管理 — ごみ減量化と再資源化、資源の効率的利用、廃棄物管理のための法制度・費用負担、ライフスタイルの選択、循環型社会に向けたしくみなど
- 消費行動における意思決定 — ものに対する欲望、その社会・文化による影響、買い物と過剰包装、ものの購入（環境面からの商品評価など）、ものの合理的使用・管理、ものの再利用、ものの最終廃棄（ごみの出し方など）
- 循環形社会に向けた社会参加 — 物質への働きかけ、様々な人や組織による取組、個人・行政・企業の役割など

History and culture concerning human-environment interaction
- 暮らしと廃棄物にかかわる歴史と文化 — 昔の暮らし、今の暮らし、未来の暮らし、諸外国の暮らしなど

slide 23

Children's view of a living environment: 'ideal living environment'



Class activity conducted by Mr. Hirotoshi Ohmichi

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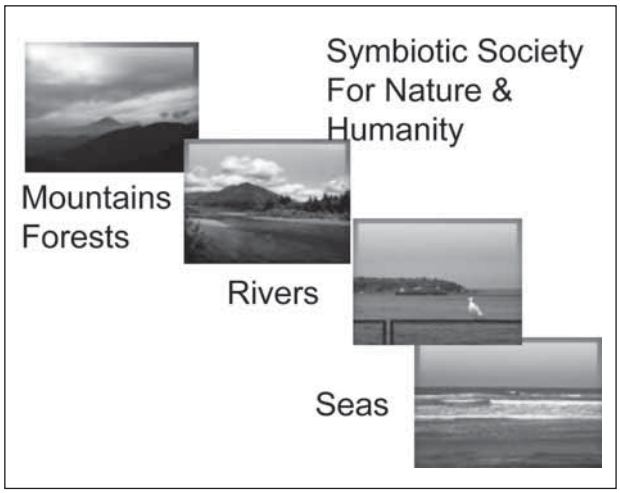


slide 26

Goals of environmental education

Objectives of the Belgrade Charter

i) Awareness/ iii) attitude/ vi) participation

v) Evaluation ability

iv) Skills

ii) Knowledge

Four objectives of general instruction

1. Awareness / volition / attitude
2. Thinking / judgment
3. Skills / expression
4. Knowledge / understanding

slide 27

CROSS-CURRICULUM

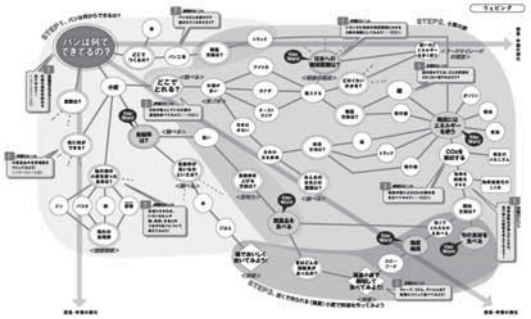
	国語	社会	算数	理科	生活	音楽	図工	家庭	体育	道徳	特活	総合
生活環境	■	■		■	■		■	■	■			■
資源エネルギー		■		■			■	■		■	■	■
人と自然	■			■	■	■	■			■	■	■
人と社会	■	■	■					■		■	■	■
食と農		■		■				■				■

slide 28

Development of an environmental education program on the prevention of global warming and its application to training

slide 29

Webbing



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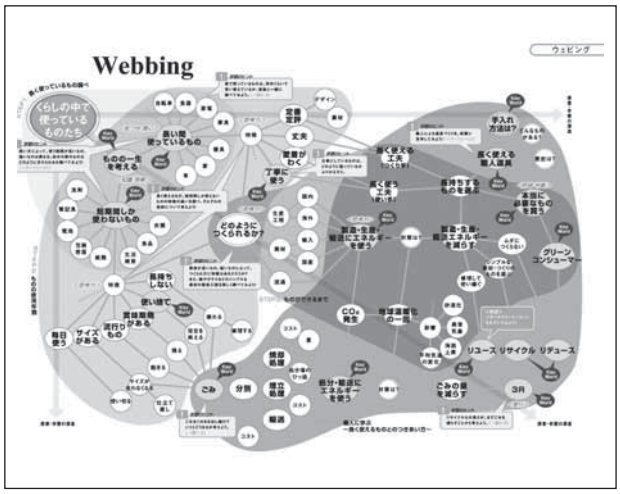
Things and global warming prevention programs

slide 31



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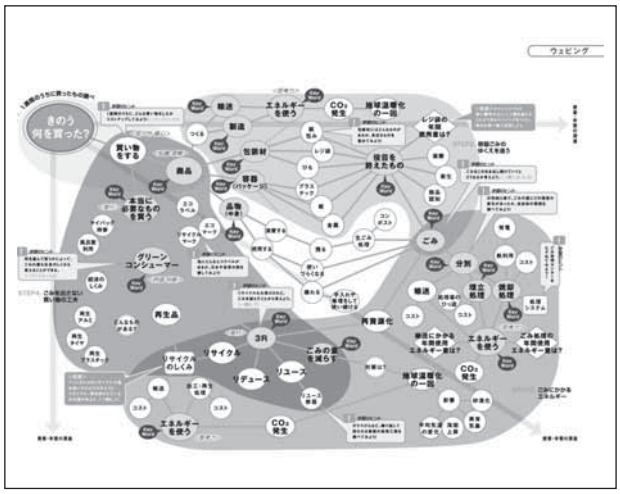
Waste and global warming prevention programs

slide 33



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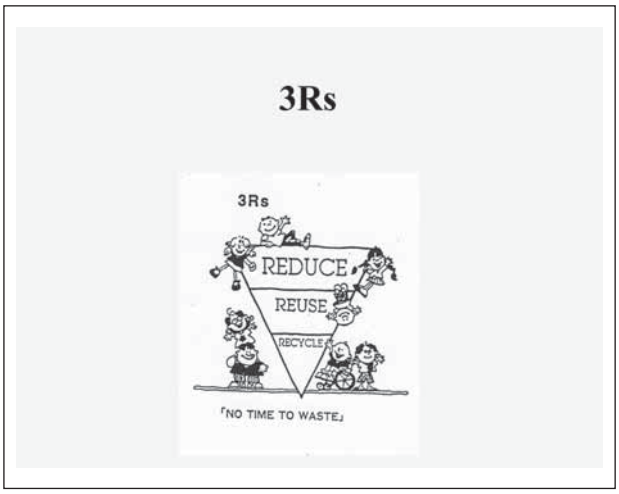

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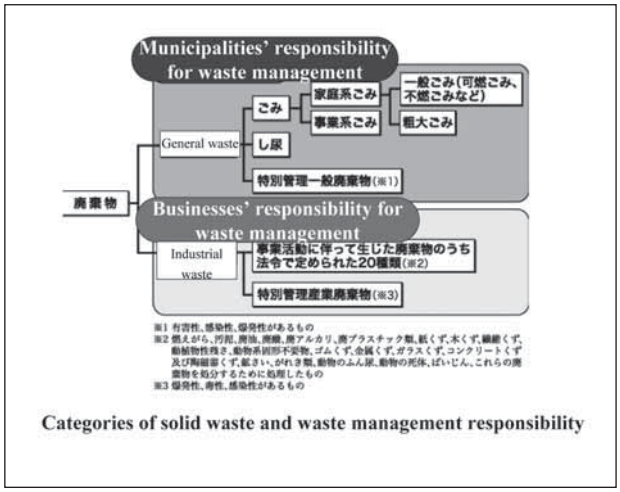
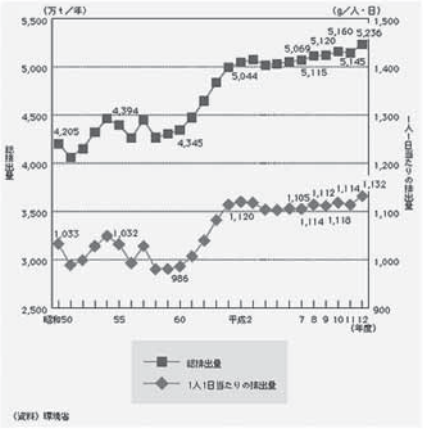


Categories of solid waste and waste management responsibility

slide 36



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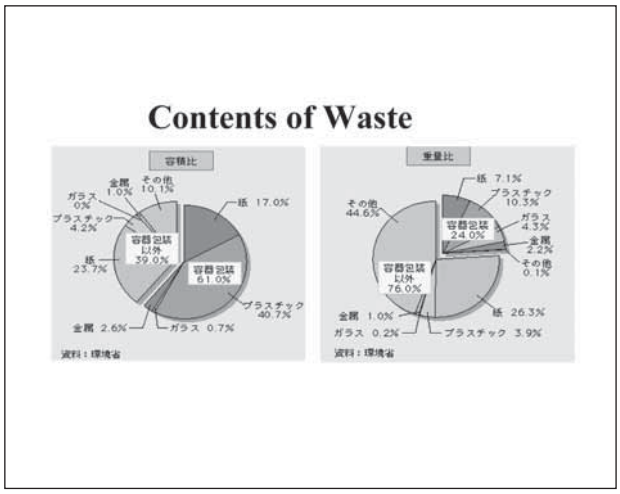

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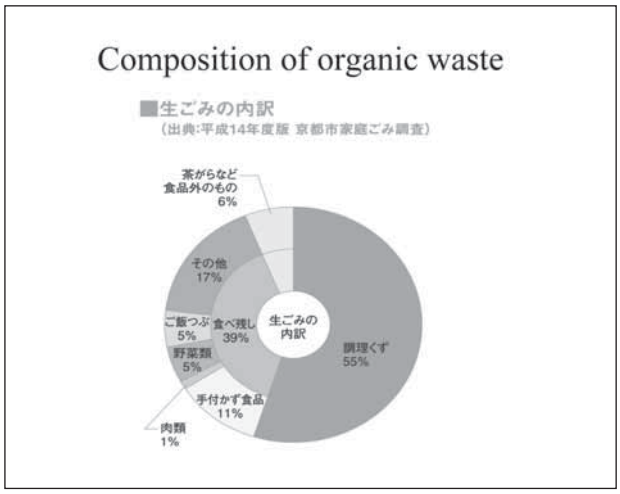

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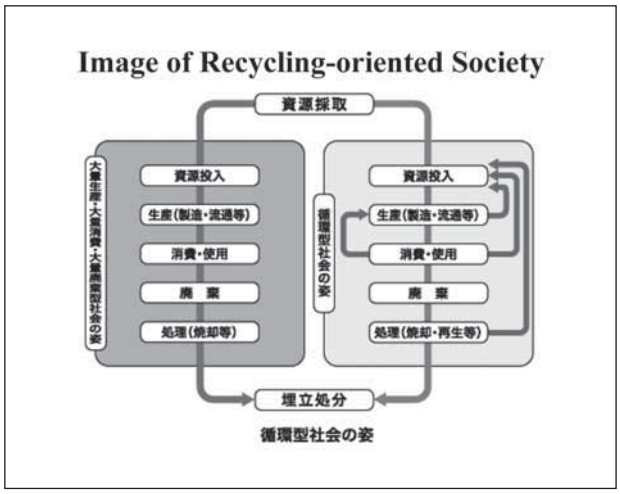

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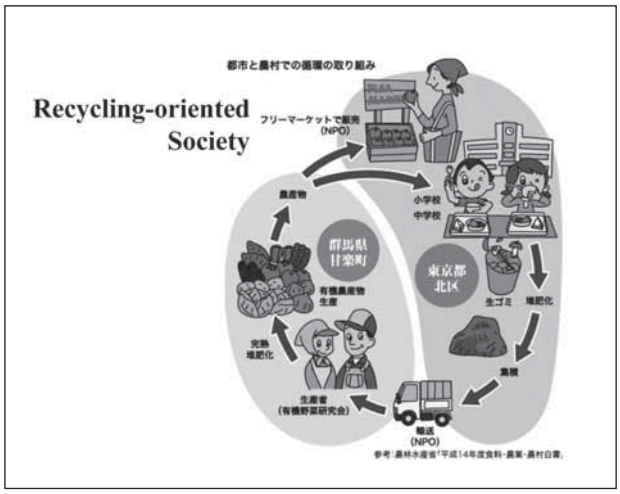

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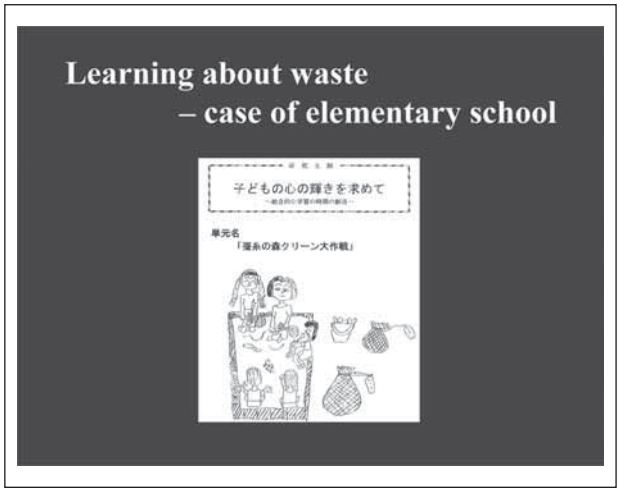

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Efforts for 3Rs

* By Marketing Business Entities :
  ➡ Eco-Niko Workshops
* By NPO and Local Companies :
  ➡ Nishinomiya City
* By Administration and School :
  ➡ Waste Reduction in Yokohama City
* For a Sustainable Future :
  ➡ Food ・ Life ・ Environment

slide 44

Eco-Niko Workshops <Seiyu Co.>

Step1 **Awareness** Get to know — Raising Awareness about the Life-cycle of Produce

Step2 **Understanding** Find・Consider — Considering to reduce waste and save energy

Step3 **Action** Paractice・Keep — Taking action by thinking deliberately

slide 45

Practical activities in Nishinomiya city

slide 46

Eco Challenge Cards

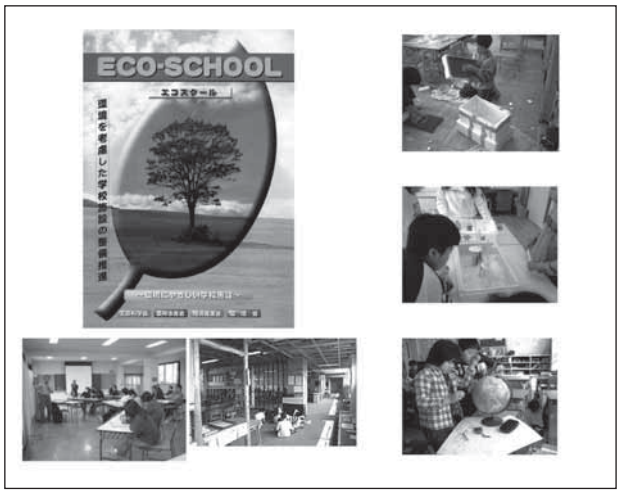
slide 47

Waste Reduction in Yokohama City

slide 48

Food ・Life ・ Environment ~Ekorin town~

slide 49



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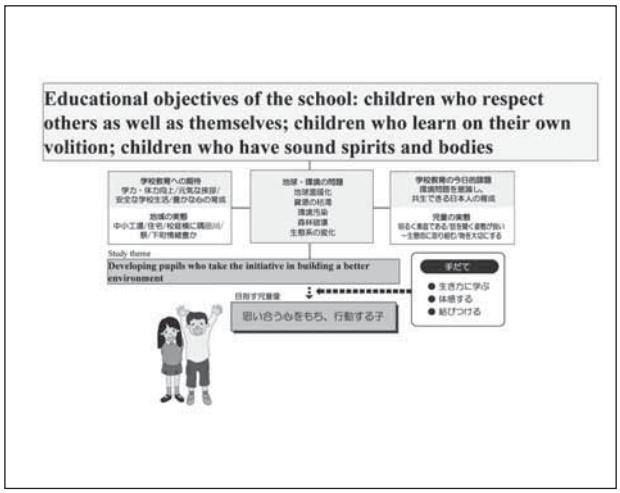

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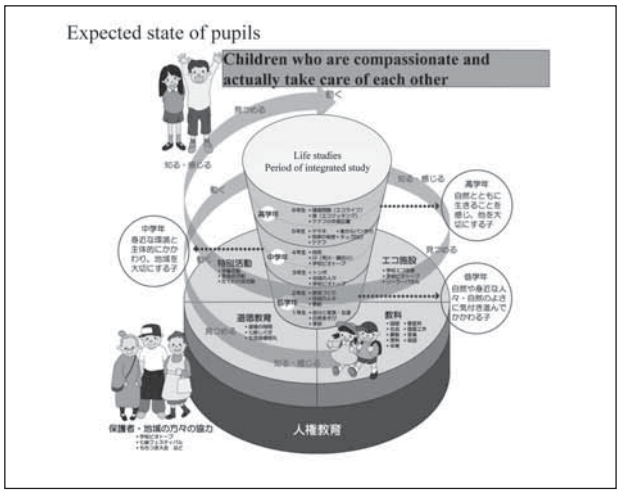

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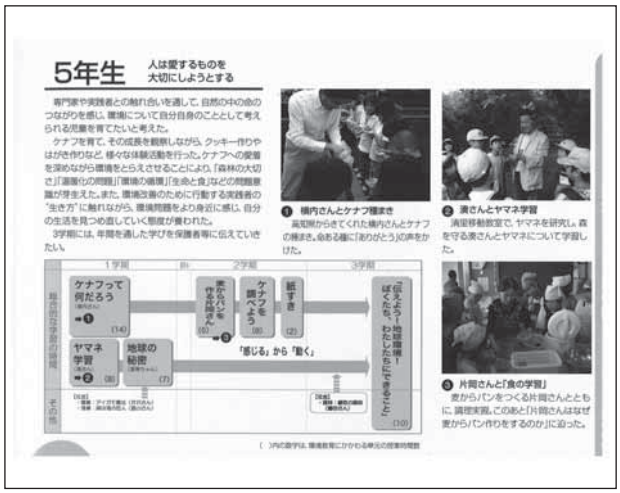

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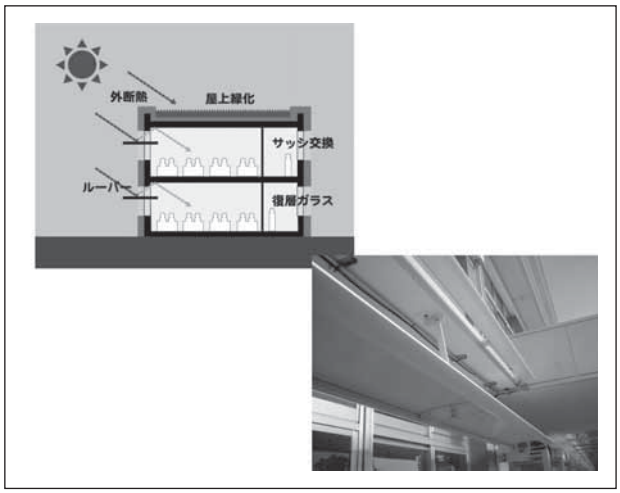

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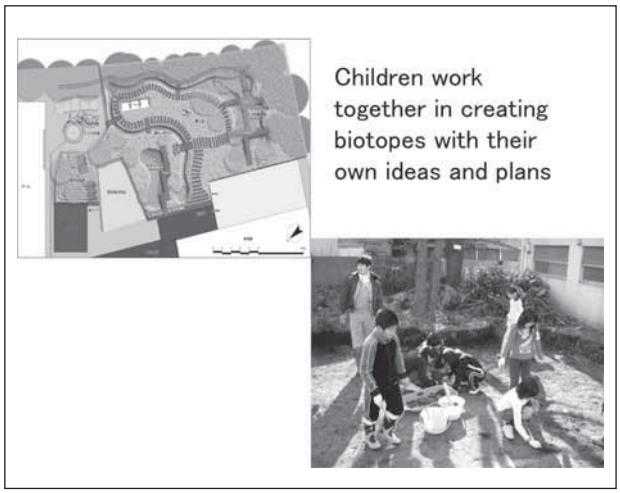

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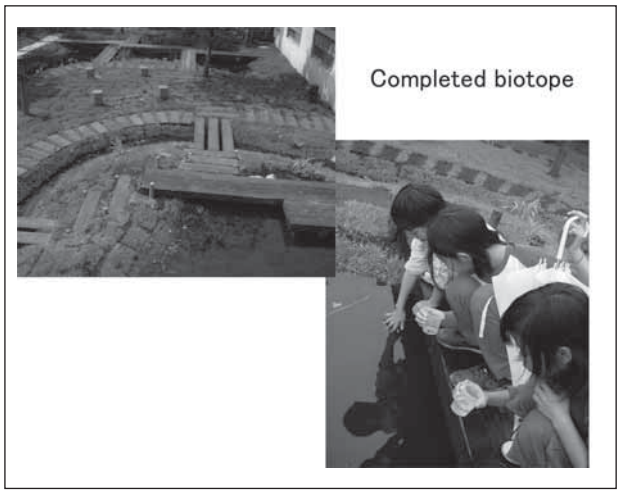

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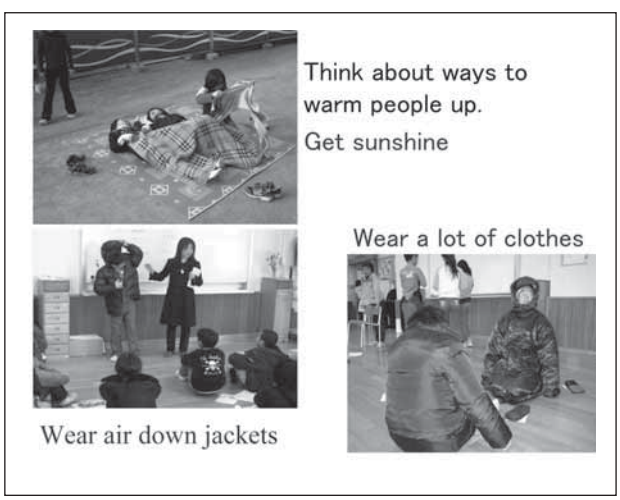

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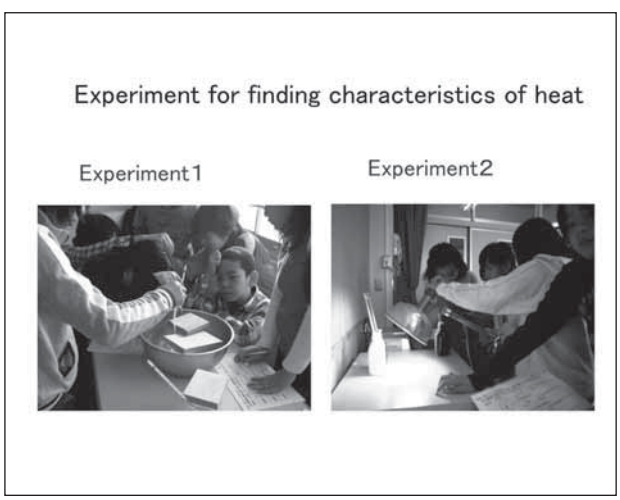

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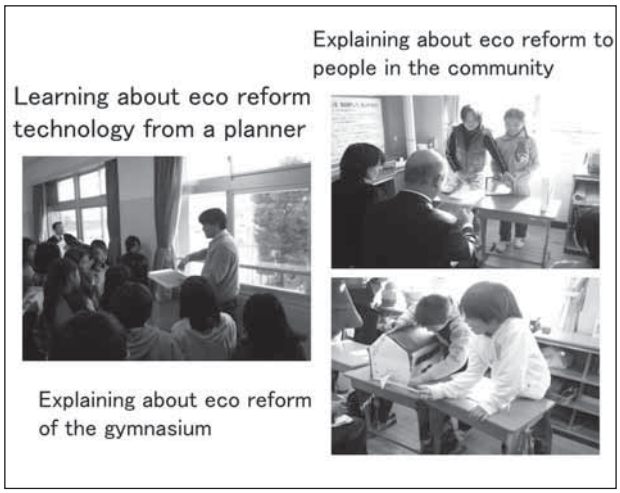

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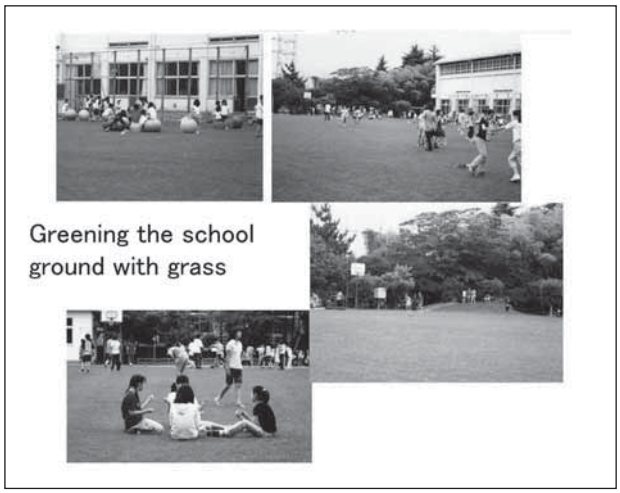

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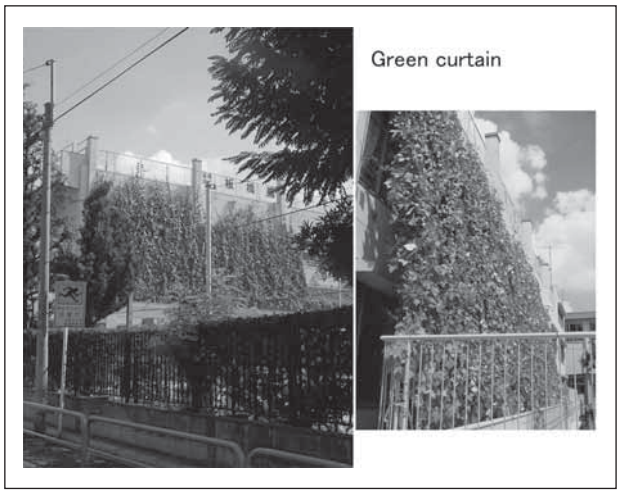

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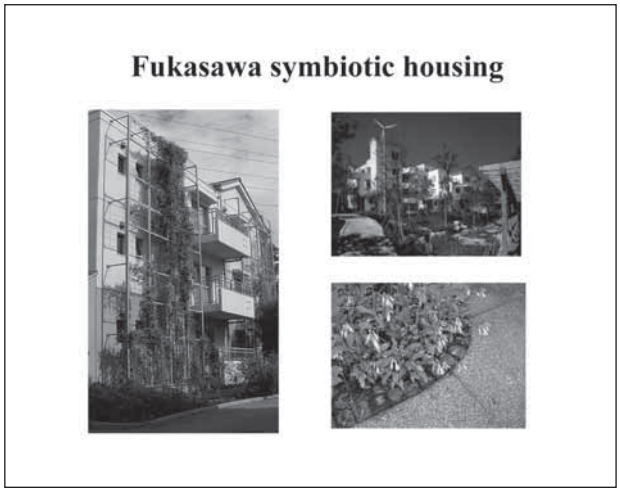

slide 66

slide 67

Making the annual Eco-school curriculum

表　年間計画

4	5	6	7	8	9	10	11	12	1	2	3	月
テーマユニット									フリーユニット			

テーマユニット…学び方を学ぶ
全体テーマは「環境」。（11～13年度）

環境
- 1年 森林・炭焼き・水から矢作川～明治用水の流域社会を考える
- 2年 身近なゴミ問題を通し、地域の自然環境を考える
- 3年 地球人としての生き方を考える

→ 6つの人の課題

フリーユニット…自主的で多様に学ぶ
個々の好奇心を基に決めたテーマで追究。

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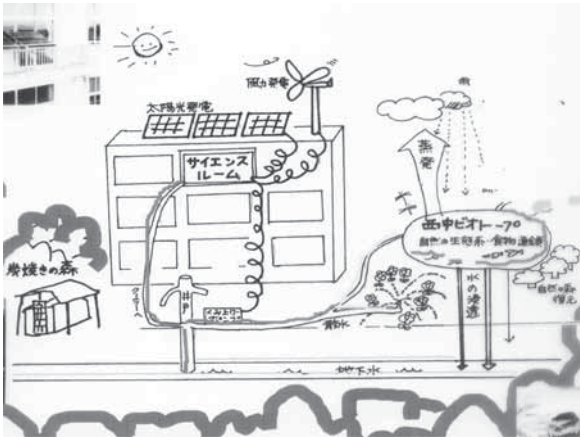


slide 70

slide 71

Any area is a place for learning 「A school with no roof」

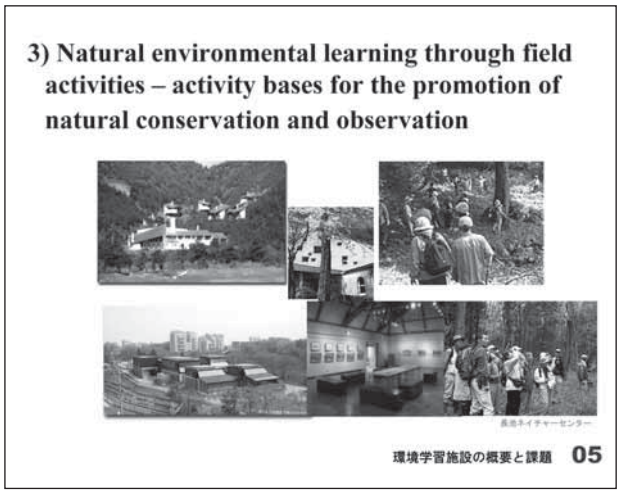
slide 72

1) Enlightenment facility attached to intermediate recycling plants, etc.

環境学習施設の概要と課題 03

slide 73

slide 74



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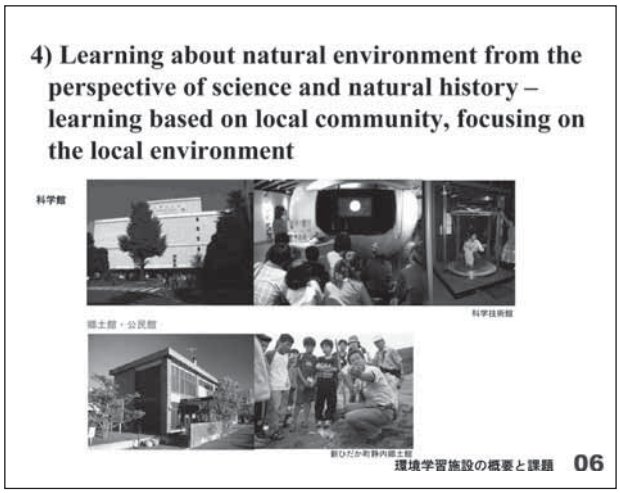

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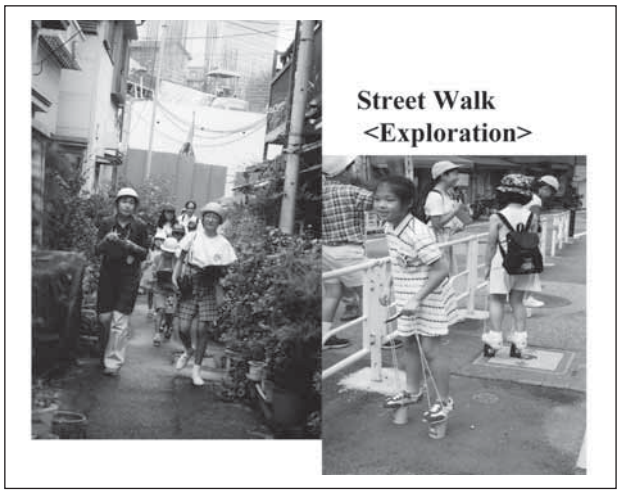

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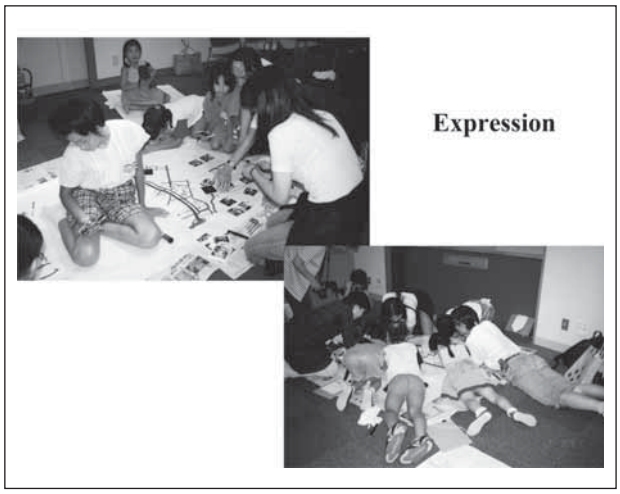

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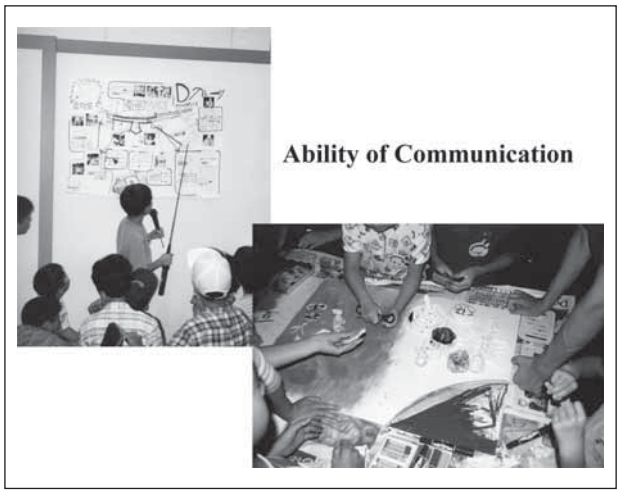


slide 83

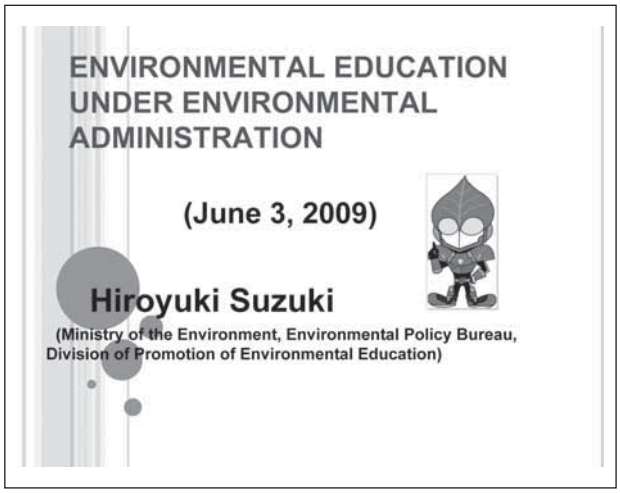
The best way to social development is to foster citizens who are aware and understand environmental management, and participate in creating democratic community

<Roger Hart>

slide 84

Hiroyuki Suzuki
Ministry of the Environment

slide 1



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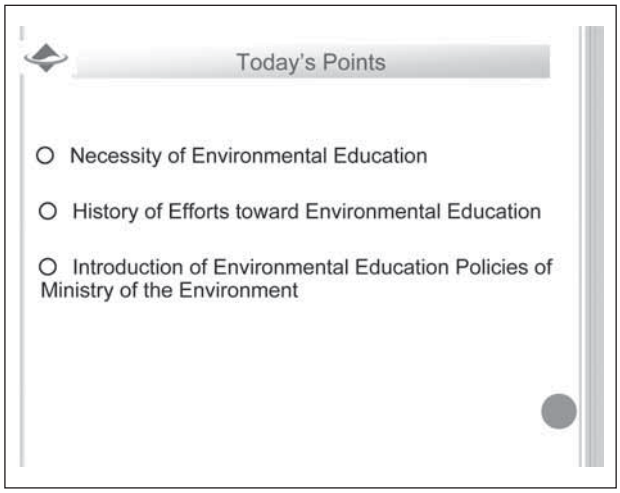

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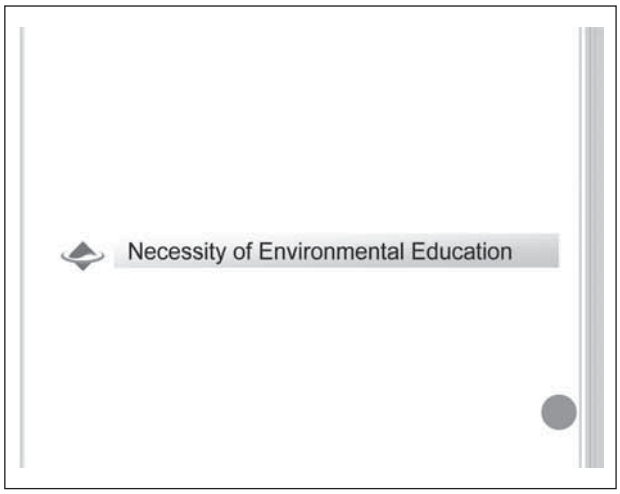

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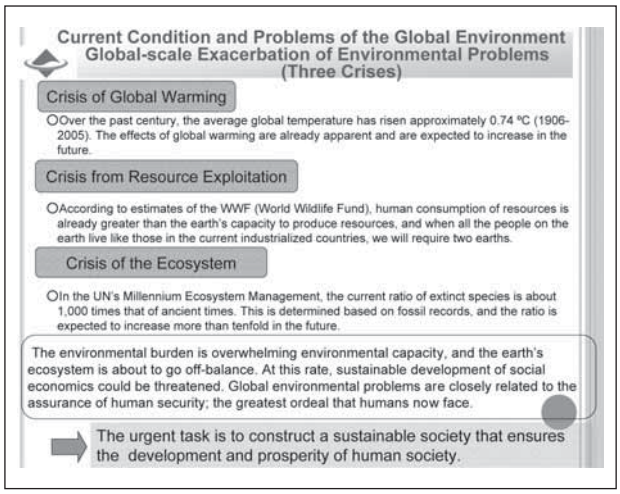

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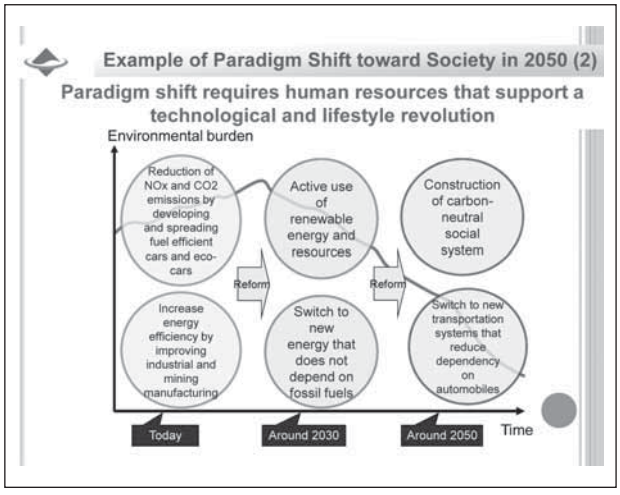

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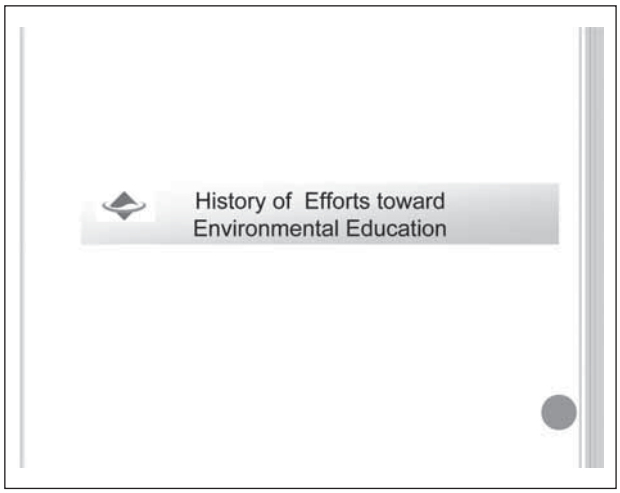

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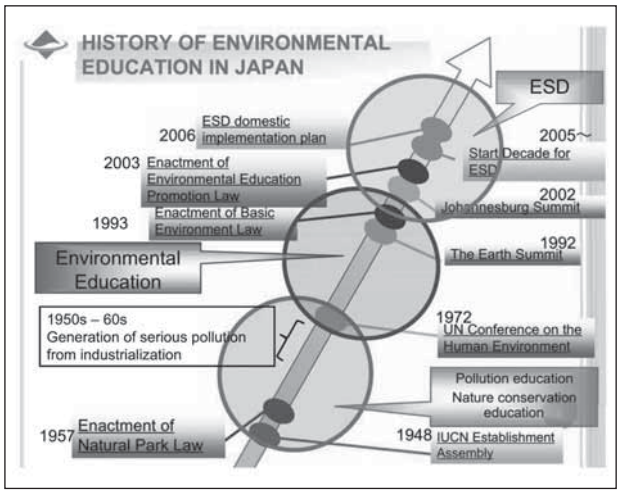

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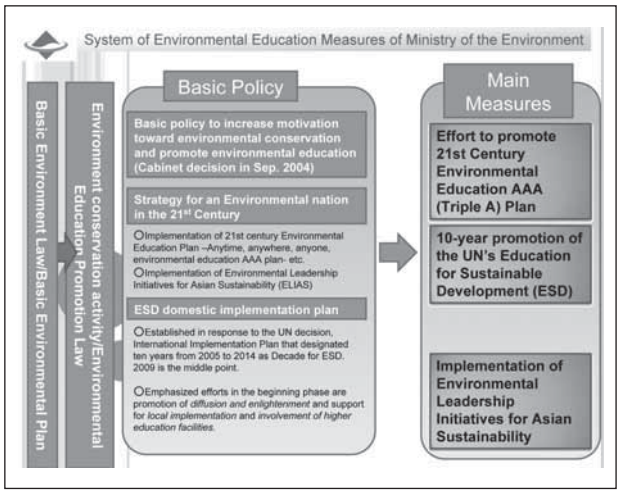

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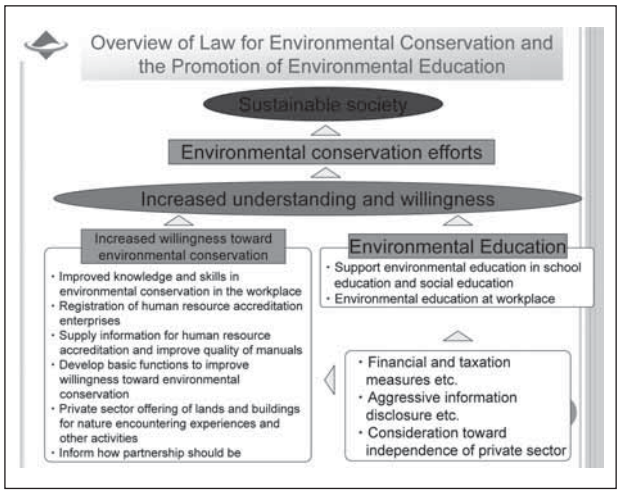

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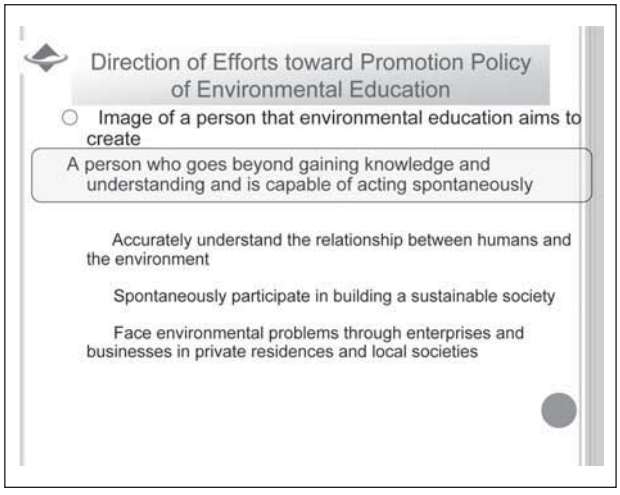

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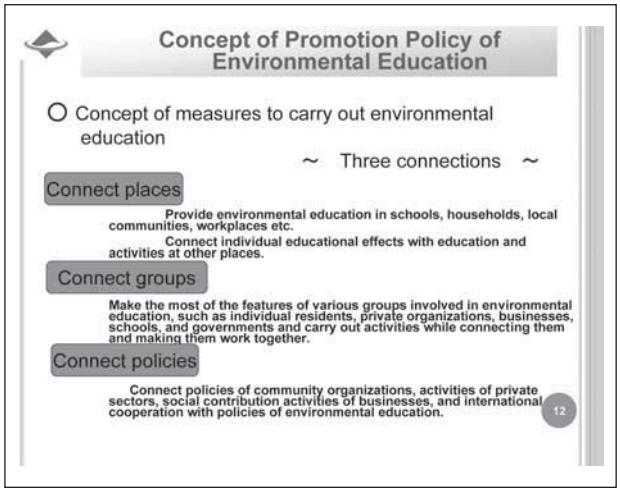

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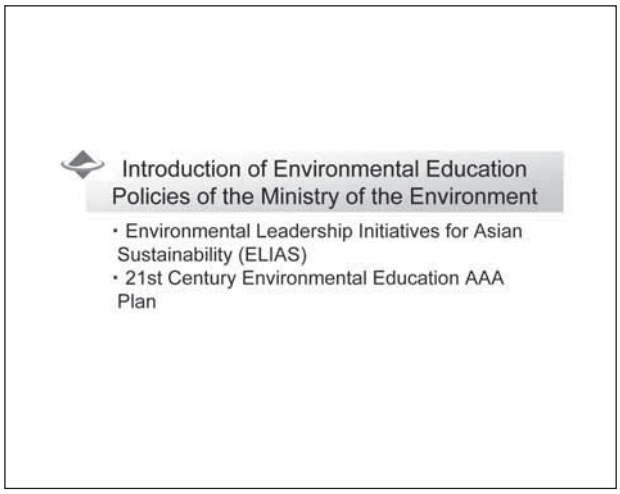

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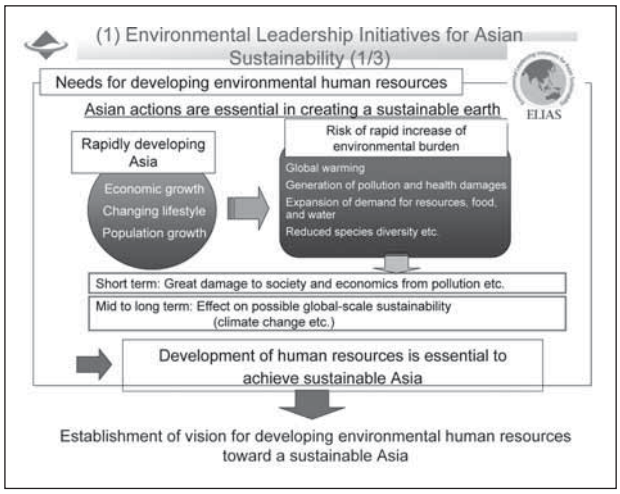

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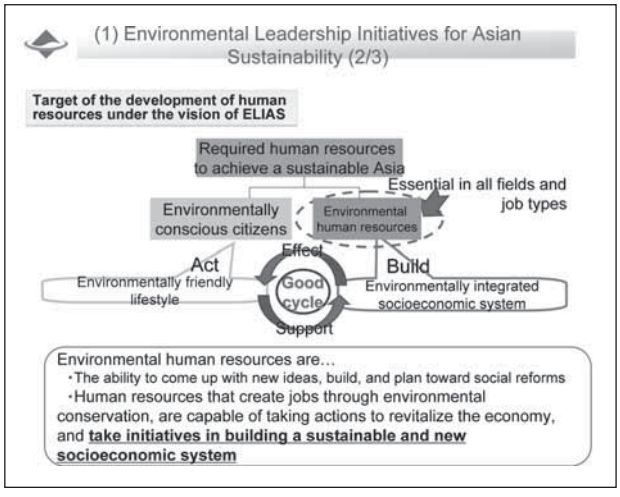

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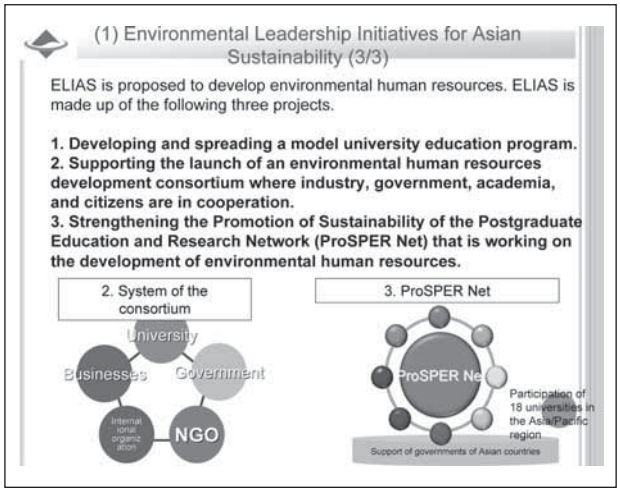

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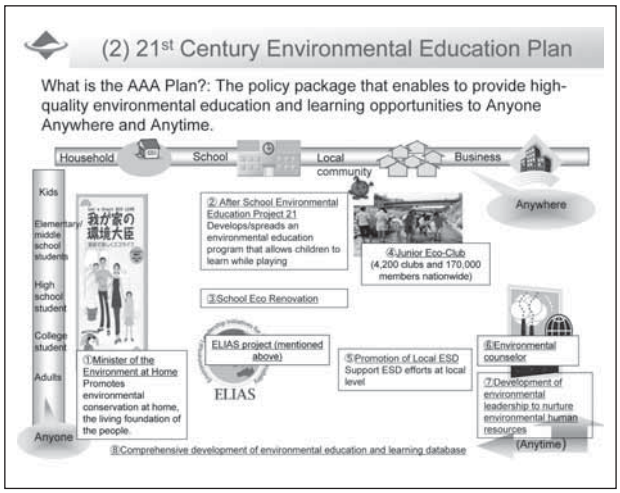

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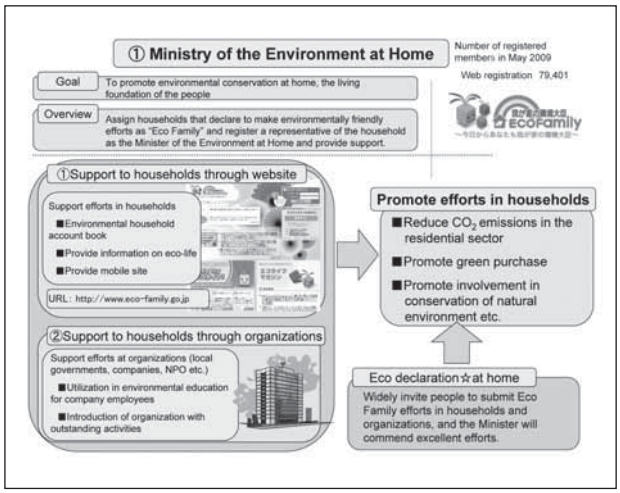

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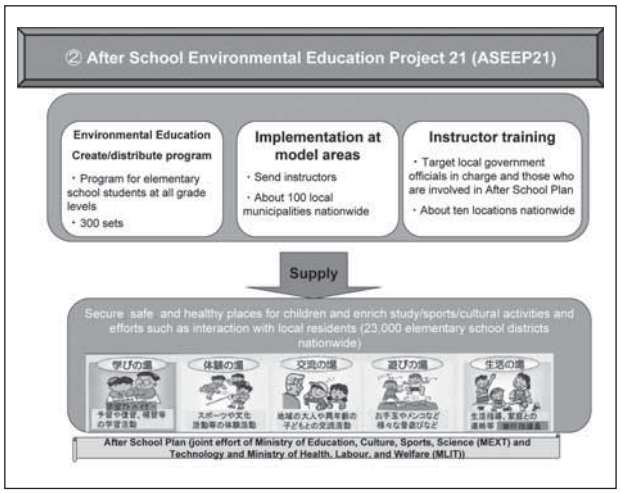

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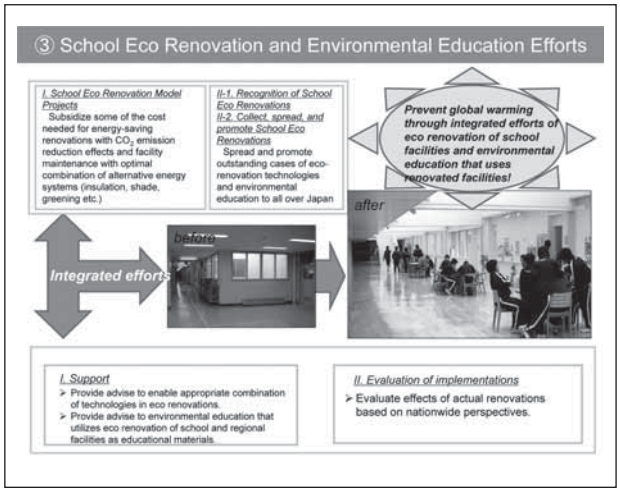

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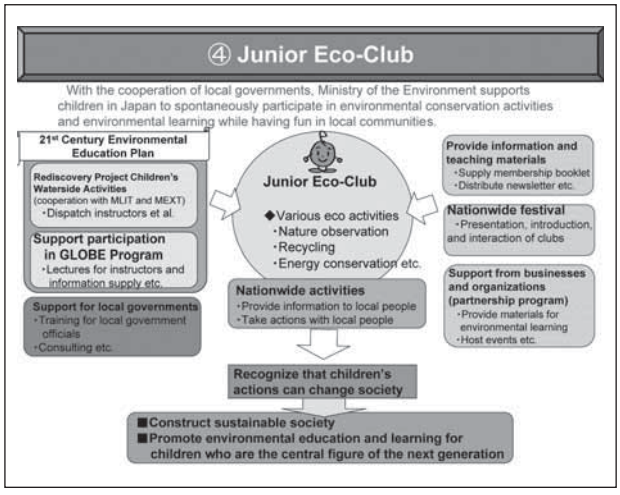

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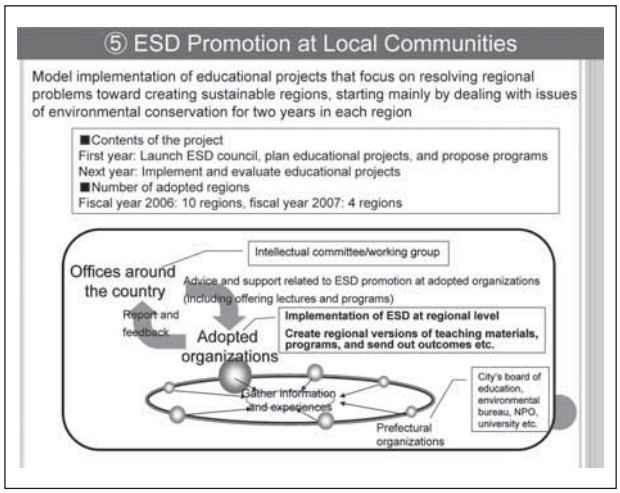

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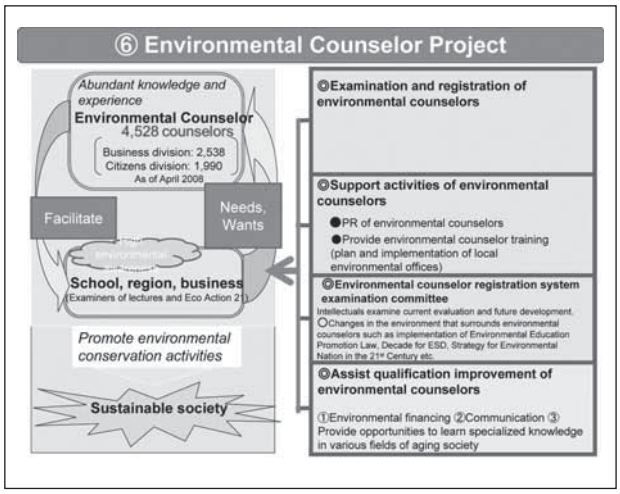

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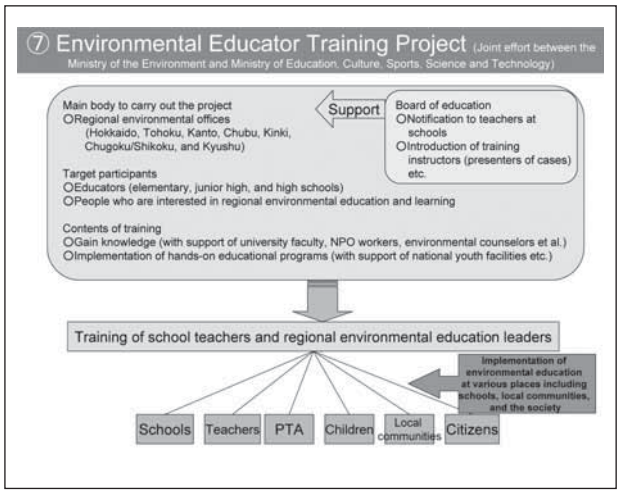

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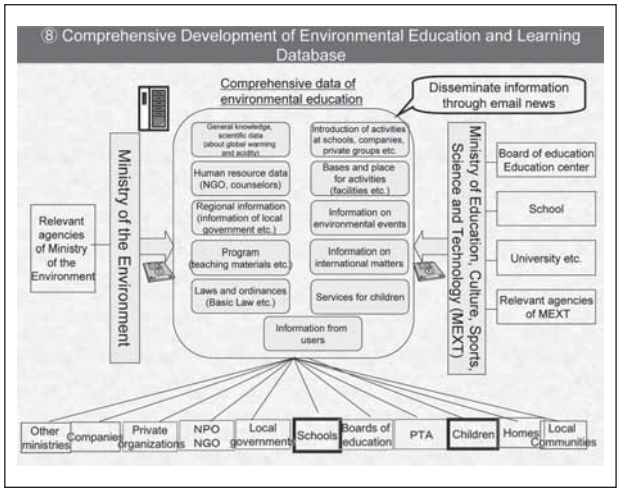

slide 30

Contacts

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The Ministry of Environment	Cyuogodochosya5, 1-2-2, Kasumigaseki, Chiyoda-ku, Tokyo 100-8975 http://www.env.go.jp/en/ (English)	03-3581-3351
Stop Ondankan	1-11-9 Azabudai, Minato-ku, Tokyo 106-0041 http://www.jccca.org/ondankan/index.html (Japanese)	03-5114-1284
Asahi Breweries,Ltd.,Ibaraki Brewery	1-1-1 Midori, Moriya City, Ibaraki 302-0106 http://www.asahibeer.co.jp/factory/brewery/ibaraki/ (Japanese) http://www.asahibeer.co.jp/english/ (English)	0297-45-7335
Panasonic Center Tokyo	2-5-18, Ariake, Koto-ku, Tokyo 135-0063 http://panasonic.net/center/tokyo/index.html (English)	03-3599-2600
Chubo Landfill Site	2 Aomi, Koto-ku, Tokyo 135-0064 http://www2.kankyo.metro.tokyo.jp/tyubou/index.htm (Japanese)	03-5531-3701
Umi-no-mori (Sea Forest) Project Tokyo Metropolitan Government	2-8-1 Nishishinjuku, Shinjuku-ku, Tokyo 163-8001 http://www.uminomori.metro.tokyo.jp/index_e.html (English)	03-5321-1111
Shinonome Elementary School	2-4-11, Shinonome, Koto-ku, Tokyo 135-0062 http://www.koto.ed.jp/shinonome-sho/default.html (Japanese)	03-3529-1451
Miraikan - National Museum of Emerging Science and Innovation	2-41 Aomi, Koto-ku, Tokyo 135-0064 http://www.miraikan.jst.go.jp/en/ (English)	03-3570-9151
Nanzenji Zen Center (Zen meditation)	59 Nanzenji Kitanobocho, Sakyo-ku, Kyoto 606-8446 http://zencenter.jp/main.html (Japanese)	075-751-7949
Kansyun-do (Cooking experience of the Japanese Sweets)	Shomen Higashihairu, Kawabata, Higashiyama-ku, Kyoto 605-0076 http://www.kanshundo.co.jp/museum/make/annai.htm (Japanese)	075-561-1318
Miyako Ecology Center	13 Fukakusa-ikenouchi-cho, Fushimi-ku, Kyoto-shi, Kyoto 612-0031 http://www.miyako-eco.jp/ (Japanese)	075-641-0911
Miyama Nature and Culture Center	56 Naka-shimo-mukai, Miyama-cho, Nantan City, Kyoto 601-0713 http://www.cans.zaq.ne.jp/m-kajika/ (Japanese) http://www.kayabukinosato.com/index.html (Japanese) http://www.miyamanavi.net/eindex.html (English)	0771-77-0014
Ise Jingu	1 Ujitachicho, Ise City, Mie 516-0023 http://www.isejingu.or.jp/shosai/english/index.htm (English)	0596-24-1111
Nagoya Plastic Handling Co. Ltd.	13 Showa-cho, Minato-ku, Nagoya City, Aichi 455-0026 HP N/A	052-619-4300
Aichi Kaisho Forest Learning Center	304-1 Yoshino-cho, Seto City, Aichi 489-0057 http://www.pref.aichi.jp/kaisho/ (Japanese)	0561-86-0606

Pictures

Lecture by Dr. Kimiko Kozawa (Tokyo)

Lecture by Mr.Hiroyuki Suzuki, Ministry of the Environment (Tokyo)

Shinonome Elementary School (Tokyo)

Shinonome Elementary School (Tokyo)

Shinonome Elementary School (Tokyo)

Courtesy call to the Ministry of Foreign Affairs (Tokyo)

Workshop (Tokyo)

Workshop (Tokyo)

Workshop (Tokyo)

Workshop (Tokyo)

Workshop (Tokyo)

Workshop (Tokyo)

Miyako Ecology Center (Kyoto)

Miyako Ecology Center (Kyoto)

Miyama (Kyoto)

Ise Jingu Shrine (Mie)

Ise Jingu Shrine (Mie)

Ise Jingu Shrine (Mie)

Shinkansen (Nagoya to Tokyo)

Wrap-up workshop (Tokyo)

Farewell reception (Tokyo)

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