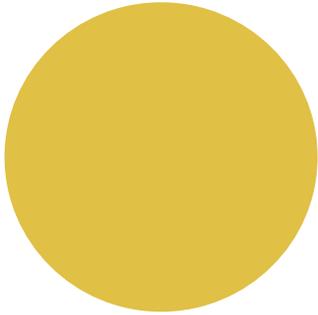




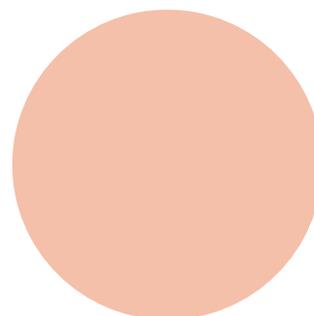
Tales of Hope



Grassroots Activities of
Education for **Sustainable Development (ESD)**
in Asia and the Pacific



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Education for **S**ustainable **D**evelopment (**ESD**)
in Asia and the Pacific



This publication follows the family-name-first style for Japanese people's names in accordance with the Japanese custom.

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INTRODUCTION

Education for Sustainable Development (ESD)

Human beings have been fostering a rich and diverse culture on earth in the heart of nature's bounty. Essentials that keep us alive, such as food, clothing, and shelter, are clear indicators of how human beings in every corner of the world have been living in harmony with the natural environment. On the other hand, material affluence due to rapid economic growth has led to the destruction of nature, disparity of wealth, etc., which is, in reality, the act of uprooting the foundation of our lives. Thus, there is indeed a need for a shift from economic development to sustainable development, balancing society and economy based on the culture embraced by the natural environment. Sustainable development envisions not only the balance between the natural environment and human activities but also a peaceful society in which people respect each other and are tolerant and nonviolent.

Here, ESD means to learn in order to acquire values, attitudes, and lifestyles that are necessary to realize such a society. It is hoped that someday we can lead a sustainable life, appreciating the fact that all of us are supported by Mother Nature and the human activities carried out within society. ESD aims (1) to promote such inner development of people and (2) to translate this development into action, which links to further momentum in order to realize a fair and peaceful society in which human beings can coexist with nature.

ESD can be practiced anywhere as a lifelong learning process—home, school, community, and society as a whole—and it can target everyone. In the concept of ESD, it is important to consider the topics of learning as being interlinked in the environment, society, and economy, with culture as an underlying dimension, although such specific themes can be identified as environmental problems like water resources, waste management, and energy use,

climate change, human rights, gender issues, peace, poverty alleviation, HIV/AIDS, migration, urbanization, etc. Learning a selected topic with such multiple viewpoints enables us to recognize the wider linkage between humans and nature and among human beings.

In sum, ESD seeks to nurture a person who is aware of the issues concerning sustainable development, holistically comprehends the relevant issues and their links with himself/herself, and is equipped with values and skills to direct efforts toward sustainable development.

United Nations Decade of Education for Sustainable Development (UNDES)

In December 2002, the United Nations General Assembly announced the Decade of Education for Sustainable Development from 2005 to 2014, cosponsored by forty-seven countries. Prior to the assembly, the Japanese government, in cooperation with Japanese NGOs, proposed UNDES during the 2002 Johannesburg Summit. In response to the announcement, the United Nations Educational, Scientific, and Cultural Organization (UNESCO), appointed as the lead agency of the Decade of Education for Sustainable Development, published the International Implementation Scheme (IIS) of UNDES.

According to the IIS, the overall goal of UNDES is “to integrate the principles, values, and practices of sustainable development into all aspects of education and learning.” Further, UNDES considers that such endeavors in learning “encourage[s] changes in behavior that will create a more sustainable future in terms of environmental integrity, economic viability and a just society for present and future generations.” In order to achieve this goal, the following objectives have been detailed in the IIS:

- Foster an increased quality of teaching and learning in ESD

- Help countries to progress toward and attain the millennium development goals (MDGs)
- Provide countries with new opportunities to incorporate ESD into education reform efforts
- Facilitate networking, linkage, exchange, and interaction among stakeholders in ESD.

The UNDES is highly expected to evolve as that which generates synergistic effects not only with MDGs but also with precedent global initiatives such as Education for All (EFA) and United Nations Literacy Decade (UNLD).

The UNDES seeks to expand the opportunities of learning to sustainable development through formal, nonformal, and informal education for people of all ages, both in developed and developing countries. Therefore, cooperative partnership among the government, civil society, business enterprises, and media is indispensable.

..... ABOUT THIS PUBLICATION

To transform the broad concept of ESD into concrete activities by building upon similar efforts that have already been made, the Asia/Pacific Cultural Centre for UNESCO (ACCU) and the UNESCO Asia and Pacific Regional Bureau for Education (UNESCO Bangkok) jointly organized an “ACCU-UNESCO Joint Regional Seminar for the Promotion of Education for Sustainable Development in Asia and the Pacific” in Tokyo, Japan, from February 23 to February 25, 2006, in cooperation with the Japanese National Commission for UNESCO. This regional seminar was supported by the UNESCO/Japan Funds-in-Trust for the Promotion of Education for Sustainable Development.



This publication is a compilation of the keynote speeches, case presentations, and reports of the field visits conducted during the abovementioned seminar. Chapter I presents two highly suggestive keynote speeches, describing the current challenges of “Sustainable Development” and “Education.” The case presentations in Chapter II illustrate grassroots activities, well exemplifying ESD, which had been implemented even before the launch of UNDES, to be followed by commentaries from ESD perspectives. Chapter III is dedicated to describing, as an innovative approach to ESD, the “Asaza Project,” a strategy for establishing a sustainable society in the Lake Kasumigaura catchment basin in Japan.

The seminar dealt with six realms of ESD—gender issues, poverty reduction, natural disaster preparedness, community development, cultural diversity, and environmental education among the various themes emphasized in ESD. These are among the areas of focus in the “ACCU-UNESCO Asia-Pacific ESD

Programme,” which the ACCU was entrusted by UNESCO to implement. On this occasion, the ACCU identified “ESD-oriented” undertakings among a wealth of activities that it came across in the Asia-Pacific region and requested the presenters to speak about their activities with a focus on each of the themes listed above.

Here, “ESD-oriented” activities refer to those that consider more than a single issue, taking an approach that envisions a sustainable society in which human beings can coexist peacefully with nature. The respective themes were emphasized so that the participants at the seminar could realize that ESD-oriented activities are not something new that will need to be worked upon from the beginning, but something that already exists. The “ESD-oriented” aspects of each case presentation could be extracted as follows.

The gender case from Pakistan indicates the manner in which the Khwendo Kor tackles gender inequality through a strong partnership with community members, with due consideration for societal and cultural backgrounds of the area in which it works. Its activities are aimed at not only empowering women but also realizing a just society in which both male and female citizens can equally participate. In this manner, both its goals and approaches well exemplify the philosophy that underlies ESD.

The poverty reduction case from the Philippines introduced here perceives the activities carried out by the Tribal Mission Foundation International in a broader context and aims at income generation through sustainable agriculture without deforestation. In other words, its farming methods actually address the issue of sustainable development by balancing economy and the environment.

The natural disaster preparedness activities in Bangladesh, where cyclones are unavoidable, regard disaster preparedness as a part of participatory community development. In this presentation, a high involvement of stakehold-

ers, especially the strong commitment of village volunteers, is highly suggestive of ESD-oriented undertakings, let alone the theme of disaster management, which is one of the key action themes of ESD.

The preserving traditional townscape presentation from Japan deals with two important realms of ESD—community development and cultural diversity. It represents the issue of culture that underpins the three essential pillars of ESD—the environment, society, and economy. This case illustrates how people not only preserve but enhance traditional culture by living within the community. This offers valuable insight as a case of community development based on culture promotion, where in many parts of the world development results in the disappearance of traditional culture.

Unlike the other four presentations, the last **presentation on environmental education and its network from New Zealand** discusses the concept of sustainability at the national level. Here, environmental education is regarded as education for sustainability, incorporating the indigenous perspectives of the Maori tribe. Having explained a national supporting mechanism for education for sustainability, the presentation poses an important question of how to link it to the wider section of society.

Upon reviewing all the case presentations, it becomes clear that each realm of human, social, and economic development contributes to sustainable development. From such a viewpoint, this publication aims to envisage another horizon by reorienting our past endeavors in a positive light toward sustainable development.

The following is the outline of the ACCU-UNESCO Joint Regional Seminar for the Promotion of Education for Sustainable Development in Asia-Pacific.

1. Background of the Seminar

ACCU is a nonprofit organization that works in line with the principles of UNESCO for promoting mutual understanding and cultural cooperation among peoples in the Asia-Pacific region.

ACCU was established in 1971 in Tokyo, Japan, through the joint efforts of both public and private sectors in Japan. It has since been implementing various Asia-Pacific regional cooperative programs in the fields of culture, education, and personnel exchange in close collaboration with UNESCO and its member states. As regards educational cooperation, special emphasis has been placed on literacy, nonformal education, and environmental education.

In 2005, with the launch of UNDESD, ACCU was entrusted by UNESCO to implement an ESD-related program in the Asia-Pacific region entitled “ACCU-UNESCO Asia-Pacific ESD Programme under UNESCO/Japan Funds-in-Trust for the Promotion of Education for Sustainable Development” (hereinafter “ACCU-UNESCO ESD Programme”), which is now being implemented in cooperation with UNESCO Bangkok.

2. Overall Objective

The overall objective of the seminar is to launch the ACCU-UNESCO ESD program widely in the Asia-Pacific region and to provide momentum to the efforts made by UNESCO member states of the region to achieve the goals of ESD.

3. Immediate Objectives

The following are the immediate objectives that have been set in order to achieve the above objectives:

- (1) To provide participants with detailed information on the “ACCU-UNESCO Asia-Pacific ESD Programme” and to invite them to participate in it
- (2) To deepen the understanding of ESD by sharing and discussing examples of the good activities that are being implemented in the Asia-Pacific region, which are expected to inspire UNESCO member states in their efforts toward the implementation of the ESD programs, including the “ACCU-UNESCO Asia-Pacific ESD Programme.”

4. Participants

- (1) A representative who is responsible for ESD in the National Commissions for UNESCO of the following countries or a person who is designated by the National Commissions:
Bangladesh, Bhutan, Cambodia, Fiji, India, Indonesia, Iran, Kazakhstan, Lao PDR, Malaysia, Mongolia, Nepal, Pakistan, Papua New Guinea, the Philippines, Sri Lanka, Thailand, Uzbekistan, and Vietnam.
- (2) Experts in the related fields of ESD
- (3) UNESCO
UNESCO Bangkok
Asia-Pacific Programme of Educational Innovation for Development (APEID)
Asia-Pacific Programme of Education for All (APPEAL)
UNESCO Field Offices in Asia and the Pacific
- (4) Observers

Hereafter, the ACCU plans to continue publishing the outcomes of “ACCU-UNESCO ESD Programme” as part of the ESD Good Practice.

CHAPTER I

Keynote Address



Saving the Earth through Sustainable Development

Arima Akito

Member of High Level Panel on the UNDES
Director, Science Museum
Former Minister of Education

Good morning. My name is Arima Akito, and in principle, I am a nuclear theoretical physicist. My tenure as Minister of Education was a very fruitful time for me to publish numerous papers, many more than I did when I was in university. Till today, I continue to publish papers on nuclear physics. Therefore, if I were requested to speak to you about nuclear physics or elementary particle physics, it would be much easier for me than to speak to you about the very difficult problem that I am about to. I am no expert; I am still learning about the nature of the problem of global warming. The topic of my lecture today is how to save the earth through sustainable development.

I am deeply honoured to be present here today. Thank you for giving me this opportunity to speak to the representatives of various countries at this ACCU-UNESCO Joint Regional Seminar for the Promotion of Education for Sustainable Development in Asia and the Pacific.

1. What Does Sustainable Development Involve?

Personally, I believe that sustainable development implies changing our lifestyle in order that everyone can live more comfortably, safely and happily, without the destruction of our natural environment. Education is one of the most important tools for achieving this goal. Allow me to clarify; when I mention education, I do not mean education only for children and the youth but a life-long education for adults as well. According to me, educating leaders, including educators, is of particular importance. I am deeply concerned that many leaders today, who are active in both the political and industrial spheres, still do not have a proper understanding of the current crisis facing our planet.

When discussing sustainable development, it is first necessary to objectively ascertain the facts involved in the various issues confronting us, so that we can view these facts from the perspectives of natural science and sociology. I do not think that there will be many differences in opinion between scientists and researchers, even if they come from different countries.

Next, we need to find solutions to each problem and take appropriate action. We are bound to encounter major differences in opinion from one country to the next, or even from one region to another within the same country due to differences in economic conditions and lifestyles. If these differences are taken into consideration in education for sustainable development, it will first be necessary to impart to people of all countries—regardless of their gross domestic products (GDP) —a common understanding of the current state of nature and human society.

Further, we should thoroughly educate people from countries with high GDPs—especially major consumers of energy or food—about the importance of conserving natural resources and preventing environmental destruction caused by industries and other economic activities.

2. Promotion of the 'Mottainai' Campaign

Nobel Peace Prize winner, Ms. Wangari Maathai, is currently in the process of launching a global campaign called the 'Mottainai Campaign'. *Mottainai* is a Japanese word meaning 'what a waste', and Ms. Maathai is calling upon people across the world to stop wasting things. I lend all my support to her cause. A huge reduction in the consumption of energy resources, including oil, natural gas and coal; construction materials like concrete; and food by Japan, the United States and countries in the European Union is the central pillar for a sustainable development policy. Therefore, people should be informed about the spirit of the Mottainai Campaign.

At the same time, I think that we should convey the same message to the people in countries that are undergoing rapid development so that they refrain from making the same mistakes that industrially advanced nations like Japan have made. To do this, it is necessary to educate current and future leaders, a task that is even more important than educating the general public. It is my hope that we can provide people with the information and knowledge they require to avoid the problems faced in the past, such as environmental destruction, diseases caused by the chemical and industrial pollution of soil and water, soil depression caused by excessive agricultural chemicals, the production of farm products that are harmful to health, and air pollution caused by toxic fumes like nitrogen oxide (NO_x), sulphur oxide (SO_x) and carbon dioxide (CO₂) from cars and factories. For instance, we must ensure that nobody suffers from *Minamata Diseases* again; this is a neurological disorder caused by eating fish contaminated with mercury from industrial waste water discharged into the sea. We must learn from our mistakes and consider how we can teach people to improve the economy and their standard of living without destroying the environment.

3. Energy Issues

1) Increase in Energy Consumption

Let us now examine specific issues that are currently being faced by the world and by Asian nations in particular. I would like to discuss four issues: energy, pollution and environmental destruction, global warming and food.

Allow me to begin with energy issues. Currently, the world's population is crossing the six billion mark. This figure is expected to climb to eight billion by 2050 (Figure 1). Some earlier predictions had even used the figure of ten billion; however, the pace seems to have slowed down. Still, we must not become too complacent when there are still so many people living on the planet; this requires too much energy and food. Thus, it is obvious that energy consumption will increase.

Figure 2 shows the changes in world population and per capita energy consumption. The statistics indicate that energy consumption will continue to increase. Organization for Economic Co-operation and Development (OECD) countries are already consuming too much energy. The figures on per capita consumption indicate that the United States uses sixteen times more energy than do developing countries and OECD countries; Japan uses approximately eight times more energy.

When considering newly industrialized countries such as China, Korea, India and Singapore, one can forecast that their consumption increase may not reach the level of the United States, but it will definitely reach the level of OECD countries or Japan (Figure 3). For example, if we were to consider industrialization as well as the increase in the number of automobiles in China, it could be said that energy consumption in Asia will make a quantum leap.

2) Fossil Fuel

The issue now facing us is how much fossil fuel we can continue to use. This

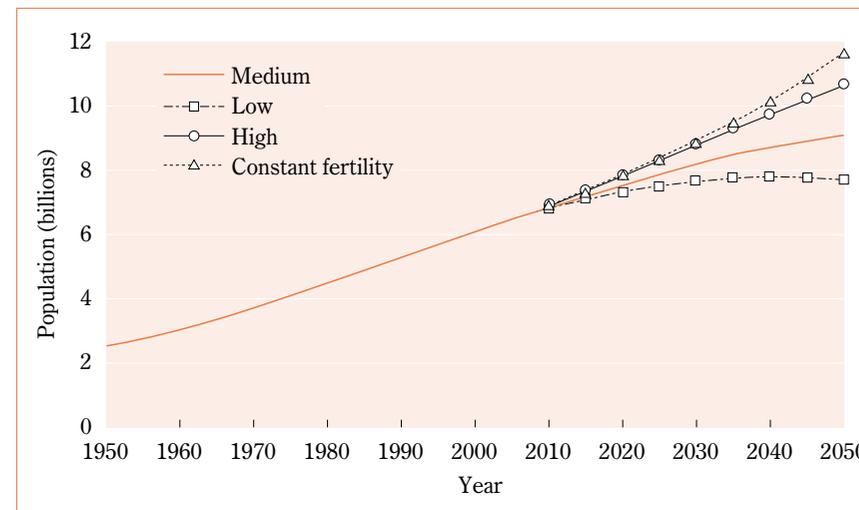


Figure 1 Changing world population (from World Population Prospectus The 2004 Revision, 2005)

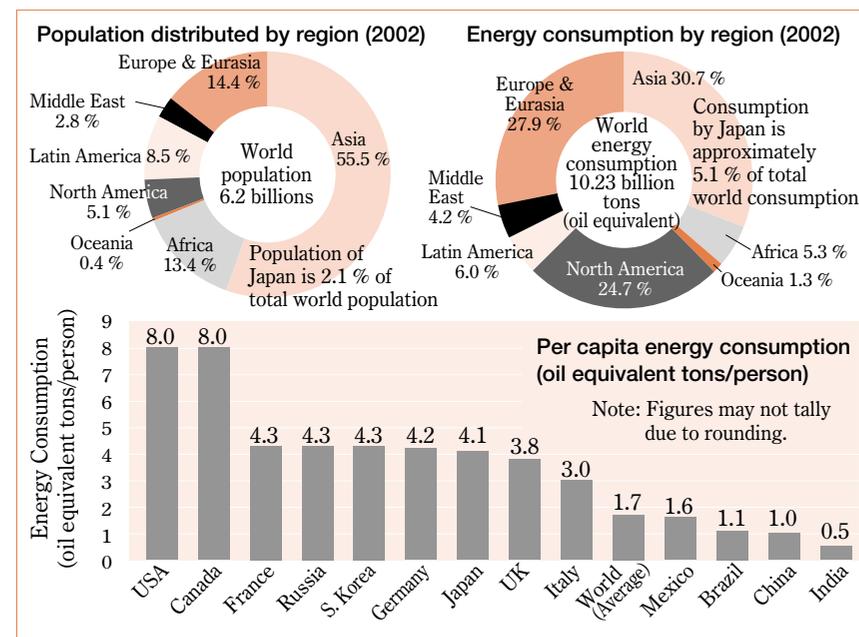


Figure 2 Population and per capita energy consumption by region (<http://www.iae.or.jp/energydata/data1022.html>)

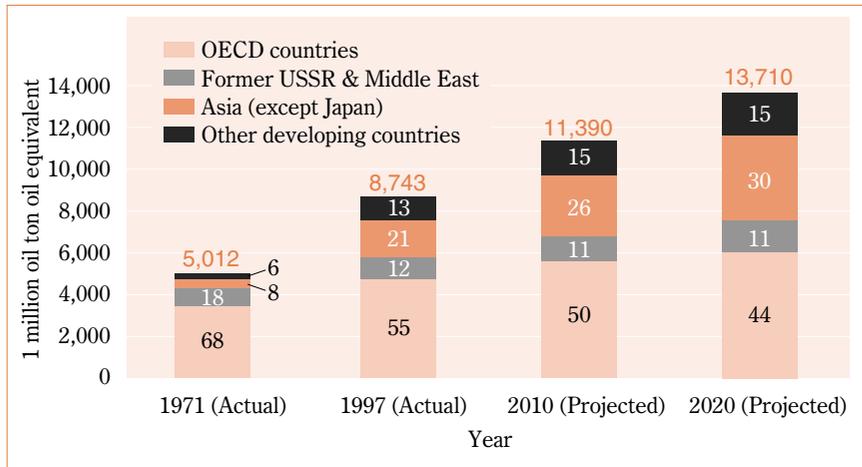


Figure 3 Energy consumption changes and forecasts (from OECD/IEA World Energy Outlook 2000)

Table 1 Reserves of world energy resources (from Agency for Natural resources and Energy, Ed., Energy 2004, Energy forum, January 2004)

	Oil	Natural gas	Coal	Uranium	
Proven recoverable reserves ²⁾	1.0480 trillion bbl.	156trillion m ³	984.5 billion t	3.93 million t	
Status of reserves by region	North America	3.6 %	4.4 %	26.1 %	17.9 %
	Latin America ³⁾	10.6 %	4.7 %	23 %	6.5 %
	Europe	1.8 %	3.8 %	13.2 %	3.5 %
	Former USSR	7.5 %	35.4 %	22.9 %	30.6 %
	Middle East	65.4 %	36.0 %	0.2 %	0.0 %
	Africa	7.4 %	7.6 %	5.6 %	17.8 %
	Asia & Oceania	3.7 %	8.1 %	29.7 %	23.8 %
Annual production	27.0 billion bbl (73.9 million BD)	25 trillion m ³	4.83 billion t	37,000 t	
Recoverable years	40.6 years	60.7 years	204 years	61.1 years ¹⁾	

Note 1: As adequate uranium stocks exist, annual production will be lower than annual demand (62,000 t). Consequently, the recoverable years for uranium were obtained by dividing the proven recoverable reserves by the annual demand.

Note 2: Uranium figures are for 2001. Other figures are in 2002.

Note 3: Mexico was included in Latin America starting with the 2002 edition, so care is required when comparing with earlier years.

chart shows the confirmed amount calculated (Table 1). You are aware that oil is predicted to last for only another 40 years; natural gas, 60 years; uranium-235, 65 years. Fortunately, it seems that coal will last much longer: over 200 years. However, although 40 years was the estimate provided for oil many years back, the total reserve volume has not changed much, even after several decades, due to improvements in drilling technology. Today, we can drill in areas that were earlier considered impossible; new oilfields are also being discovered. We need to give due attention to both the proven and unidentified reserves as well as to how much available energy is remaining. In addition, it is necessary to focus our attention on future energy sources like methane hydrate. The price of oil will continue to rise because fossil fuel is limited.

Now, using available data, let us calculate how long these resources can be sustained in rapid growth or mid-range growth scenarios (Figure 4). At the

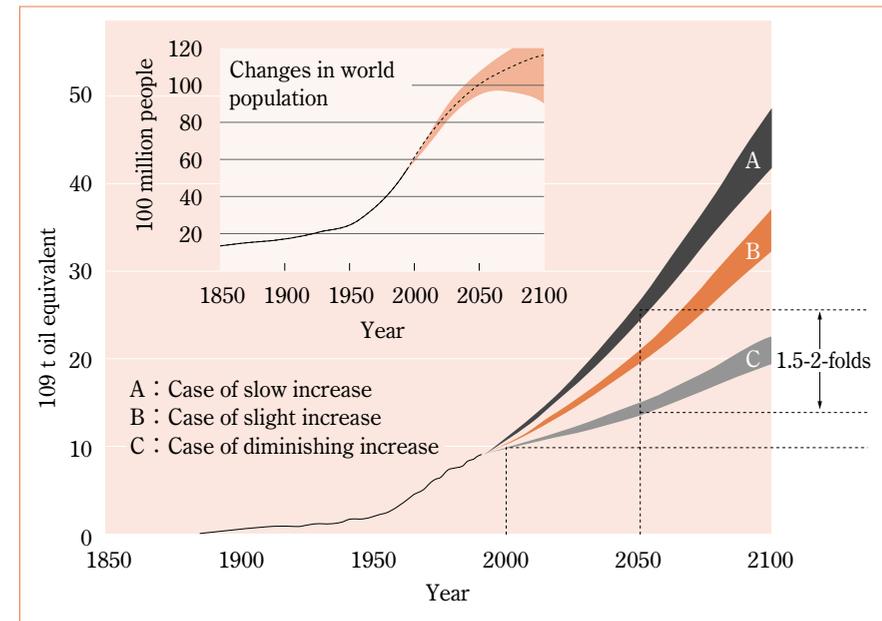


Figure 4 Prospects for world energy demand (from Global Energy Prospectus, 1998)

lowest estimate, the energy consumption will increase by 1.5 times. Therefore, in any scenario, fossil fuels will only last for approximately 100 years. Coal will last slightly longer, approximately 200 years. Therefore, our dependence on coal will increase in the future; however, the use of coal will pose another problem. Coal burning emits CO₂, which causes air pollution and global warming. In this sense, fossil fuels such as gas and oil will have similar problems; therefore, the use of coal, in particular, should be minimized in order to prevent pollution.

3) New Sources of Energy

In terms of power generation, 50 percent and ten percent of the total power generation in Sweden and Japan respectively comprises reusable energy without pollution or consumption risks (Table 2).

An observation of the percentage of new sources of energy in terms of total primary energy, which is 30 percent in Sweden and five percent in Japan, may appear to give us cause for comfort. This is not the case. This percentage is

Table 2 Renewable energy as a percentage of energy supply by country (Including hydro power)

	Total primary energy supply		Generated electricity volume base	
	1998 Actual	2010 Projected	1998 Actual	2010 Projected
Japan	5.2 %	7.5 %	9.7 %	11.3 %
USA	7.0 %	6.9 %	10.9 %	9.2 %
Canada	17.1 %	—	61.8 %	—
EU	5.3 %	11.6 %	13.9 %	22.1 %
UK	1.0 %	—	1.7 %	10.0 %
France	6.4 %	—	15.0 %	21.0 %
Germany	1.7 %	—	4.5 %	12.5 %
Italy	4.8 %	—	16.0 %	25.0 %
Denmark	8.5 %	—	8.7 %	29.0 %
Sweden	28.1 %	—	49.1 %	60.0 %
Austria	22.2 %	—	72.7 %	78.1 %

estimated by including hydraulic power, water power generation and biomass energy. Since energy generated by solar power and wind power is still in very low proportions, one might say that it is necessary to build more dams to generate more energy. However, there is no space left to construct any more dams in Japan, save for some small dams. There is no room to increase hydraulic power generation.

This leads us to the question about the possible use of pure new energy sources like solar power or wind power. In 2000, the percentage of new sources of energy, including biomass, accounted for only 1.2 percent of the total primary energy in Japan. Attempts are being made to drastically increase the proportion of new sources of energy by 2010. This plan aims to provide fifteen times more solar energy and 23 times more wind power to Japan in a span of ten years. Some of the results of this plan were visible in 2003: the percentage had increased from 1.2 percent to 1.6 percent. However, even if the plan is well-executed, we can only expect an increase of three percent by 2010. In the United Kingdom, new sources of energy account for only three percent of the total energy. If this level were to be increased to 30 percent in Japan, the process would take approximately 150 years, assuming there is a two percent increase every ten years.

Now, I would like to discuss biomass thermal energy. When people hear the term 'new energy', they immediately think of solar power or wind power; however, biomass thermal energy is also a new source of energy, the utilization of which should be fully explored. The United States and Brazil produce fourteen and fifteen million kilolitres of ethanol respectively. The total usable biomass energy can be reached as half of the year 2000 world energy demand. Therefore, biomass is a more promising source of energy than solar power or wind power. Unfortunately, with the existing technology, the issues of high cost and low thermal efficiency remain to be addressed. Therefore, the potential of biomass thermal energy is not utilized yet. We need science and technology to deal with these issues.

4. Pollution and the Environmental Destruction

1) Stop Pollution and Curb Environmental Destruction

When fossil fuel is burned, NO_x , SO_x and suspended particulate matter (SPM) are released in the air. These substances have a negative effect on human health, for instance, they cause asthma. Further, acid rain is harmful to plants, animals and fish. Another form of air pollution is caused by automobile emissions, particularly emissions from diesel cars.

The harmful effects of SPM on human health have been confirmed by a study conducted in several cities in Japan, such as Tokyo, Osaka and Kobe. In China, air pollution is cause for serious concern, particularly around Beijing and Lanzhou. New Delhi, Jakarta, Bangkok and Manila are also facing similar problems.

While on the issue of air pollution, it should be noted that Japanese power companies have made efforts towards desulphurisation; these have been successful. Therefore, it is not necessary to continue mining sulphur. As a result of the action already taken, the amount of SO_x in the air has been reduced significantly. However, the reduction of NO_x and SPM emissions remains a major issue for the public health community.

2) Solving the Problems of Garbage and Waste Disposal

Due to industrialization and the mass consumption society, we have accumulated substantial amounts of industrial and domestic waste. This is a huge problem in many cities and countries. Let us now discuss the issue of waste in some detail.

Water pollution has many causes, such as industrial waste or domestic waste, as well as waste from urban areas and farmlands. Waste from households includes waste from kitchens, toilets, bathrooms and cleaning. These wastes sometimes include organic substances and nutrient salts. Since waste from

domestic consumption is dumped into water bodies, it damages the water quality of beautiful lakes and rivers. Pollution also exists in the oceans that run alongside big cities and plant sites or sites that once had industrial plants. Other issues to be addressed are those of soil contamination by organic solvents and the contamination of underground water. This type of underground water pollution and soil pollution is faced by several countries and by Japan in particular. Individuals and organizations involved in industrialization should collaborate and work towards curbing these problems.

Then, based on the above, how should we dispose of these large amounts of garbage and waste? Products such as automobiles, television sets, personal computers, washing machines and cookers are mass produced, sold cheap and distributed to domestic households; after use, the products are discarded. These large pieces of equipment as well as huge amounts of paper garbage, food waste, plastics and paper containers all amount to excessive garbage and waste. According to data from 2000, the total waste in Japan amounts to 50 million tons; this equals one kilogram of waste per person. There is a saying that if we accumulate all the food waste from Japan, we would be able to resolve the hunger problem in Africa.

Although technical solutions are requested and required, what we should do right now is promote the '3R campaign': Reduce, Reuse and Recycle. As stated by Ms. Maathai, 'We should view things with a Mottainai spirit. We should not waste. We should encourage and promote recycling and reusing as much as possible'.

5. Global Warming

The biggest problem related to fossil fuel burning is that of global warming caused by CO_2 emissions. The world has witnessed various events from the end of the nineteenth century to the twentieth century; two of these are outstanding. The first event is the Industrial Revolution, which started in the United Kingdom in 1760 and spread to Europe until 1830. The Industrial

Revolution led to a vitalisation of human activity, leading to an increase in CO₂ emissions. An investigation of the ice in Antarctica can provide a fair estimate of the amount of CO₂ that was present in the air 1000 years ago. As shown in **Figure 5**, in the 1800s, the amount of CO₂ in the air was approximately 280 parts per million; today, this number shows a dramatic increase: 350 parts per million. It is obvious that in the past 50 years, the CO₂ concentration in the air has been increasing.

I would now like to discuss the measurement of the phenomenon of global warming from 1880 to 2000. Over the past 100 years, the earth has experienced a temperature increase of about 1 degree centigrade. Most geophysicists opine that this temperature increase is caused by an increase in the CO₂ concentration in the air. One basis for this conclusion is the result obtained from calculations using new computers like the Earth Simulator in Japan. Scholars concentrating on this research are of the opinion that no other phenomenon can explain the sudden increase in the earth's temperature, other

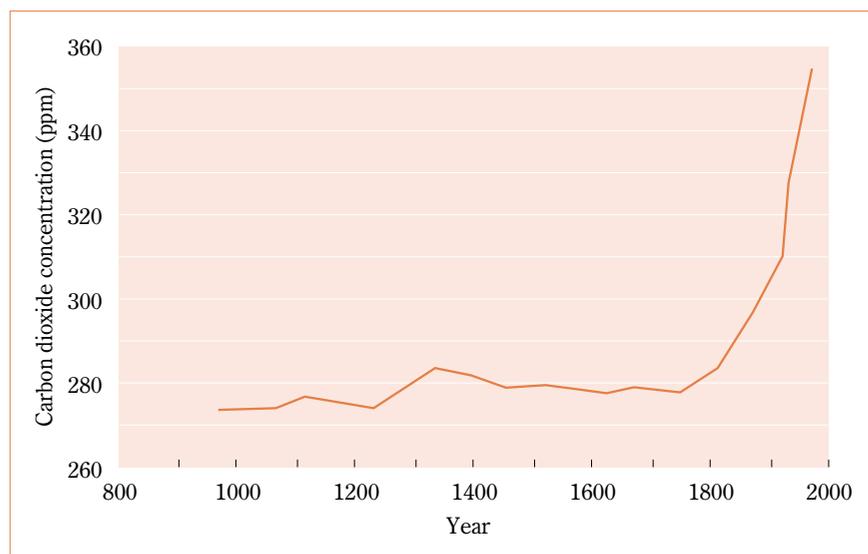


Figure 5 Changes in carbon dioxide concentration (Based on analysis of Antarctic sheet ice cores and other sources)

than the increasing CO₂ concentration. Of course, we cannot establish this as a scientific certainty, but most meteorological researchers say that it is highly probable.

Let us now take a look at the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (**Table 3**). In the twentieth century, the average temperature increased by 0.6 degrees centigrade, and the average sea level increased by ten to 20 centimetres. The earth also experienced more hot days and less cold days. Large rainfalls increased in the mid- to high-latitude areas of the northern hemisphere. Some areas experienced many droughts, and glaciers started retreating. Further, the area of snow coverage has been declining by ten percent since the 1960s. These are the impacts of global warming. If this phenomenon continues, the sea levels will continue to rise, and it is possible that some island nations will be submerged. By 2100, Japan will be a tropical country. Japan will also be faced with higher cases of malaria and an increase in cholera infections. This temperature increase can also impact the eco system in a major way.

1) Movements Surrounding the Kyoto Protocol

Against this backdrop, the Kyoto Protocol was formulated in 1997. In 1993,

Table 3 Emerging effects of warming (from IPCC Third Assessment Report)

Reference points	Observed changes
Average air temperature	Rose approximately 0.6 °C during 20 th century
Average sea levels	Rose 10-20 cm during the 20 th century
Hot day (thermal index)	Probably increased
Cold days (days when frost forms)	Decreased on virtually all continental areas
Heavy rains	Increased in mid-to high latitudes in Northern hemisphere
Droughts	Increased frequency in some areas
Glaciers	Receding extensively
Area of snow cover	Area decreased 10 % (since 1960s)
Weather-related economic losses	Increased by factor of 10 (over past 40 years)

Kyoto held the Third Conference of Parties to the United Nations Framework Convention on Climate Change, the COP3 Meeting. The parties attending this conference were unable to arrive at a consensus because of the equality interests and conflicting power struggles among industrialized nations and developing nations. However, none of the parties concerned could ignore the conclusions of and warning by the IPCC. The then former vice president of the United States, Mr. Gore and others made a huge effort to come to a compromise, in the form of the Kyoto Protocol. Still, it took a long time for this protocol to take effect. One of the reasons for this was the persistent protests of some parties, especially the United States. The new Bush administration finally withdrew from the Kyoto Protocol, but Russia ratified the protocol in 2004. Therefore, two requirements for the Kyoto Protocol to take effect had been fulfilled. The first requirement was that over 55 signatories had to exist, and the second was that industrialized countries accounting for 55 percent of CO₂ emission in 1990 should be signatories. Since these requirements were met, the Kyoto Protocol took effect on sixteenth February 2005 as International Law.

It is regrettable is that countries such as the United States and Australia are still in disagreement about this protocol. As a scientist, I cannot guarantee that CO₂ is the cause of global warming, but this is the opinion held by a majority of the researchers. Most importantly, though, it is a question of time. Waiting for definitive evidence to ascertain that CO₂ emission is indeed the cause of global warming is not an affordable option. We must act now or it will be too late!

6. Food Problem

Now, please observe the cereal self-sufficiency rate (Table 4). Thailand, Myanmar, Viet Nam, Laos, Cambodia and India have self-sufficiencies of 100 percent or above, but Korea and Japan have low self-sufficiencies. It is surprising to notice that China has only 95 percent cereal self-sufficiency due to high economic growth. Therefore, China is now starting to import cereal or

grain.

Next, I would like to show you the proportion of Chinese food consumption as against worldwide consumption (Figure 6). As can be seen from this figure, the population of China is almost constant. However, the consumption of pork, vegetables and fishery products has increased, and this number is very close to an astonishing 50 percent. China has been progressing in the fields of industry, manufacturing

Table 4 Cereal self-sufficiency rate in Asian countries, 2001

Country	Cereal self-sufficiency rate
Thailand	158
Myanmar	126
Vietnam	125
Laos	124
Cambodia	116
India	107
Pakistan	99
Bangladesh	97
China	95
Indonesia	87
Philippines	82
South Korea	36
Japan	28

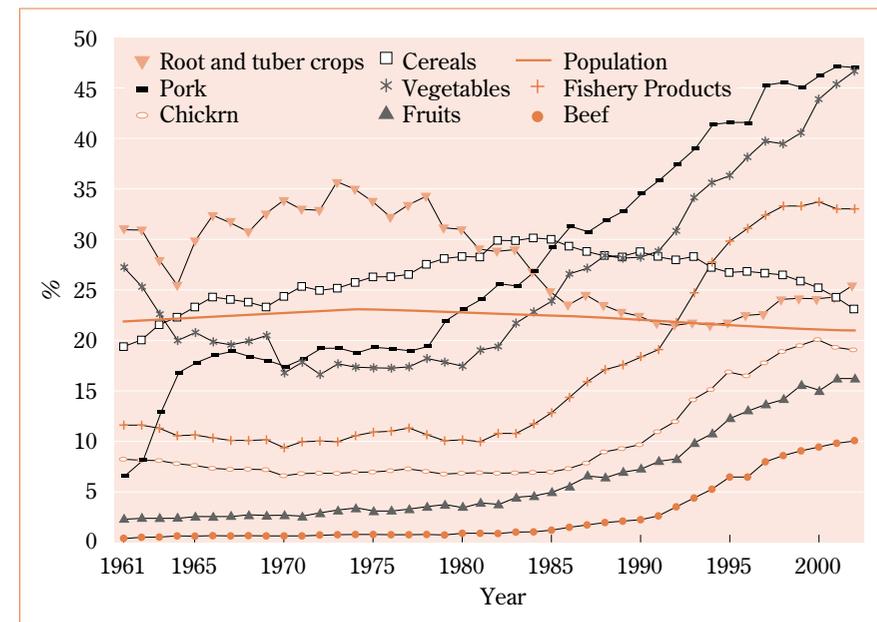


Figure 6 Trends in world share of China's food consumption (from Honkawa Data Base)

and agriculture. However, reflective of the economic growth of China, the share of consumption of potatoes and grains has been decreasing. China's food production peaked from around 1996 to 1998 and is now declining (Figure 7). This could be an effect of industrialization. According to the estimate by Mr. Lester Brown on Cereal Production and Consumption, China has become the largest importer of soybean (Figure 8). Production in the United States will exceed consumption, and this country will continue to be an exporter; however, in countries with large populations, such as China and India, consumption is expected to exceed production by 2030. The signs of this excess are already evident in China. According to Lester Brown, India is in the same situation, and the year 2030 is close at hand.

At the same time, the United Nations has estimated that Asia's population will increase to 5.7 billion by 2050. The population in 1995 was 3.5 billion, and already there has been an increase of two billion people, 400 million of whom live in East Asia; 300 million in Southeast Asia; 1.3 million in Central

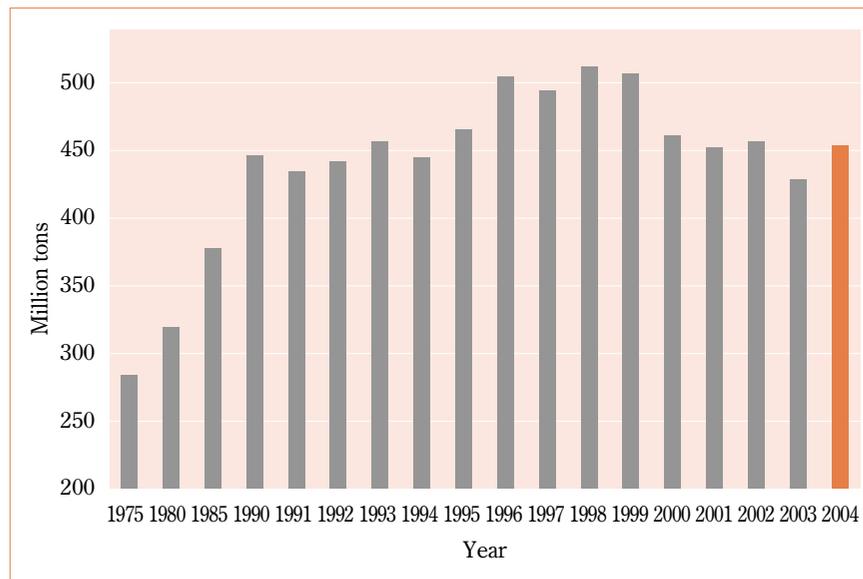


Figure 7 Food production in China (from Honkawa Data Base)

and South Asia (Table 5). However, as I have stated at the beginning, owing to the success of the population policy in China, the world population forecast for 2050 was reduced from ten billion to eight billion. The population of Asia, however, will increase by 1–1.5 billion people by 2050. In particular, there has been a large increase in India and the central and southern areas in Asia. This population of 1.5 billion exceeds China's current population. If we do witness such a dramatic increase in population, measures will have to be taken in terms of energy resources and food supplies. One view is that we will need to increase irrigated farmland by 30 percent by 2025 in order to cope with such a population explosion.

Increasing irrigated farmland will require large amounts of water. Again, let us use China as an example. This figure shows China's total water supply, which has declined by five percent. At the same time, since China is faced with dramatic economic growth, there has been a big demand for water for industrial and domestic use. Therefore, in the past fifteen years, water for

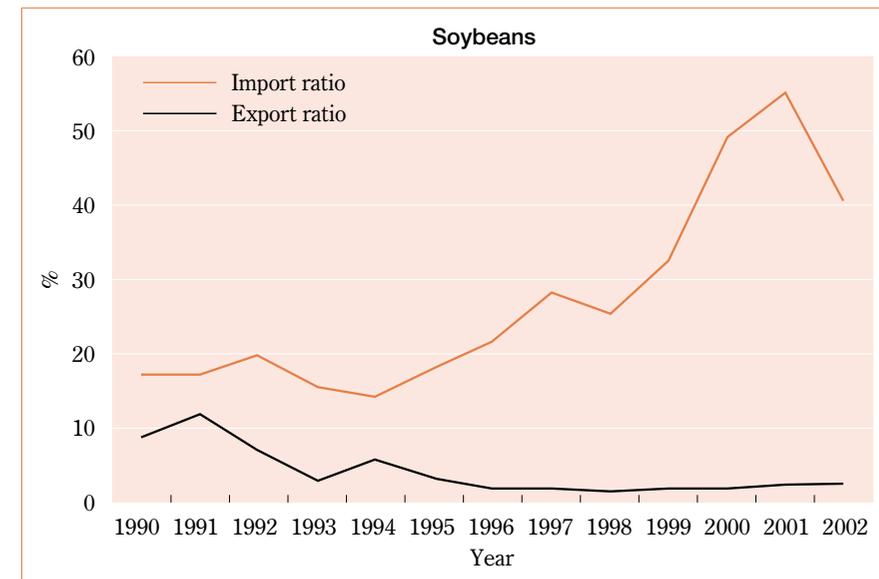


Figure 8 China becomes the biggest importer of soybeans (FAO statistics)

agriculture has been reduced by 40 billion square metres.

China is now promoting the ‘greenification’ of mountains, and attempts are being made to convert the desert into farmland. Due to this shortage of water, the flow of a big river like the Huang He has been disrupted several times. In order to cope with this problem of water shortage, China constructed the San Xia Dam, which reserves five times more water than all the dams in Japan. The water shortage is also causing a reduction in the level of ground water; another cause for this is global warming.

Apart from the problem of water shortage in China, there are also areas in India where irrigation is left incomplete, causing an annual decrease in farmlands by 1 million hectares. Pakistan, India’s neighbouring country, is suffering from salt damage and relinquishing six million hectares—which is 60,000 square kilometres—out of fourteen million hectares of farmland.

The generation of CO₂ by burning must be stopped in order to curb global warming. Therefore, it is necessary to acquire fertilisers that are cheap and safe for people and which do not destroy the land.

As already stated, a population increase, which is higher than the current Chinese population, is expected in Asia, particularly in India, by 2050. In

Table 5 Future forecasts of Asia’s population (from United Nations, World Population Prospectus, 1994 revision)

Population (million persons)	1995	2000	2010	2020	2025	2050
World total	5,716	6,158	7,032	7,888	8,294	9,833
Asia	3,458	3,736	4,264	4,744	4,960	5,741
East Asia	1,424	1,493	1,605	1,707	1,746	1,820
Central and South Asia	1,381	1,526	1,817	2,076	2,196	2,673
Southeast Asia	484	527	607	679	713	851
West Asia	168	190	234	281	305	397

accordance with this population growth, the area for irrigated farmlands needs to be expanded by 30 percent until 2025; however, farming is still facing the threats of water shortages, incomplete irrigation, salt damage and the desertification of grasslands. This agricultural crisis will be exacerbated by global warming. Some of these issues for the improvement of irrigation can be solved through international collaboration. Otherwise, we could promote scientific and technological research in the field of agriculture to combat related issues like salt damage.

7. UN’s Decade of Education for Sustainable Development

As you are aware, last year, the United Nations put forth the declaration of the Decade of Education for Sustainable Development. I hope that students and people around the world will soon become aware of the issues that we are facing, what we need to do to protect our global environment, and how we should solve this problem. It is my hope that this decade will be a successful one in this regard. I also wish to see more people becoming involved in the Mottainai Campaign started by Ms. Maathai, as many more people need to understand the 3R campaign of Reduce, Reuse and Recycle. Education is requisite for people to retreat from a mass consumption lifestyle and save the earth we live in today.

Thank you very much for your attention.

Lecturer

Arima Akito

**Member of High Level Panel on the UNDES
Director, Science Museum, Japan
Former Minister of Education**



PROFILE

Graduated from Department of Physics, The University of Tokyo in 1953. Doctor of Science (physicist). Nuclear Physist. He hold prominent positions such as Research Associate of Institute for Nuclear Studies (INS) of The University of Tokyo, Lecturer and Associate Professor of Department of Physics of The University of Tokyo, Professor of State University of New York at Stony Brook, Professor of Department of Physics of The University of Tokyo, President of The University of Tokyo, President of The Institute of Physical and Chemical Research (RIKEN), Member of the House of Councilors, and Minister of Education.

As a scientist, he receives many awards such as the Japan Academy Prize (1993) and Legion d'honneur (1998).

He is also known as a leading Japanese Haiku poet.

He strongly believes that education is the only solution to break away from the crisis human beings are facing, such as energy, food and water resource problem, and global warming. According to his belief ESD is a timely and significant move, he plays an active role as a member of high level panel on the UNESD.

Keynote Address

Developing Youth in Leadership for Sustainable Living

Sombath Somphone

Director, Participatory Development Training Centre (PADETC)

Good morning. It is an honor to have been invited as a keynote speaker. This is, in fact, my first keynote speech.

The topics that I am going to talk about cover two main issues. One is comparing education and schooling. The other is looking at the model of development, particularly the presentation and visualization of a sustainable model of development. This presentation is meant to elicit your thoughts and ideas. What I am about to say is part of the truth but not the whole truth. The rest of the truth is in you, so we need your participation.

Education for sustainable development contains two very important issues: education itself and sustainable development, both very important concerns today. Little progress is being made in these areas, in fact, the situation is spiraling downwards into a crisis. Yet, most of us have not woken up to this fact. Material comfort is somehow blinding us into believing that somehow, someday, things will work out. Here we are still waiting. Can this Joint

Regional Seminar for Promotion of Education for Sustainable Development, ESD, be a wake-up call? I would like to believe so!

Schooling *versus* Education

First of all, let us look critically at education itself. I strongly believe that we do not practice real education at the moment. What we practice is basically schooling. There is a big difference between education and schooling. In real education, people actually get smarter, but in our present practice of schooling people get dumber.

Schooling is rather boring, even threatening, I would say. It is a one-way communication dominated by teachers. Students are spoon-fed. Schooling can be compared to the imprisonment of human brain cells. It is a dumbing-down process.

On the other hand, schooling can also be made more participatory, more activity-based, more creative, more team-work oriented, more stimulating to the brain, more fun. Let's make it interesting for young people. For example, storytelling can be done in such a way that the children themselves can take part in it, and this has been proven to greatly improve their reading skills because it is interesting and fun for them to participate. Storytelling also promotes teamwork, leadership skills, confidence, and much more. Aerobic dance is a fun way of doing exercises together and also has physical, mental, and social benefits.

You may wonder whether a teacher can do all of this. The answer is "No." A teacher does not have to know how to do all of this. A teacher can enlist the help and participation of the students themselves, young and old, as a peer-to-peer education system.

There are a lot more of these examples, but the dumbing-down process does not only take place in the school system. It also takes place in our homes,

especially in our living rooms, through the TV sets. Mass media is nothing but a one-way communication. It is a weapon of mass destruction of human brain cells. It impedes us from thinking.

But media can also be used for education purposes. Video can be a powerful tool for education by engaging the young to produce their own radio programs, their own TV programs. We actually encourage a lot of young people to listen to and watch their own programs, and their peers' programs. Let them own the airwaves. Why should we give it to the companies? Young people are energetic, curious, always searching for themselves, pursuing their interests. We adults do not allow them to take part in the development process. They need to be more involved in society, and not just be a part of the schooling process. They should not be isolated any longer and we should not continue to isolate the school from the community.

People involved in education and development do not really know how to best make use of the media whereas commercial people and those in the entertainment industry make billions of dollars out of it. It is time that we wake up to this fact and do something about it.

So far, we have been talking about the methodology of teaching and learning. Now, let us critically look at the content of what we teach. School curricula generally do not respond directly to the needs of the students nor those of their families and the community. Schools hand out certificates as rewards that have little intrinsic value, just as the mass media encourages a false sense of what we need to fulfill our lives that drives us into indebtedness and an unsustainable materialistic lifestyle.

Activity-based Learning Should Start from Young Years

There is no reason why we cannot incorporate a sustainable lifestyle into the curriculum today. That would generally make our ESD more relevant. We

can and must start educating the young at an early age: We should not make the mistake of believing that they are too young to learn. We know very well that young people can learn from what they see, hear, and do a lot faster than we think. They should have the opportunity to learn survival skills from the communities and their families (**Figure 1**). Indigenous knowledge should be the bulk of the local curriculum.

First, we must identify what young people are interested in, and use these activities to teach as many skills as possible. Through cultivating earthworms with kitchen waste, children will learn about biology, the environment, and the discipline of taking care of another form of life. Through organic gardening, children can learn math, science, economics, culture, and health, as well as about the environment, in a very concrete way. Parents can help in deter-

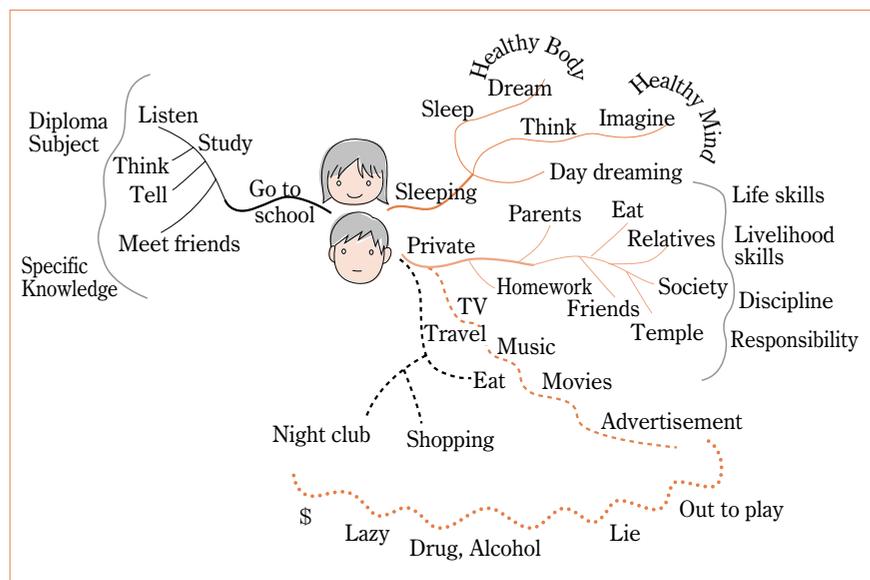


Figure 1 How young people spend their time of the day—roughly eight hours for on sleeping or resting, eight hours in school, and eight hours on their private activities. In the old days they practically all of the eight hours of private time are spent with the family learning useful life skills. In modern days they spend most of their private time on shopping and entertainment.

mining what the contents of the garden should be, whether in schools or local communities. Learning should be activity-based, discovery-based, and participatory. Schools and communities should be integrated with each other. Students should be allowed to enjoy learning. We should not subject them to mental stress and boredom.

Fundamental Components of a Model of Sustainable Education

On a larger picture, education can be sustainable only if it is operated within a sustainable model of development. The two are inseparable and interdependent. Let us visualize what a sustainable model of development is.

Figure 2 looks a bit like a UNESCO logo but that was not the intention, just a coincidence. A sustainable model of development is a model that strikes a balance between the four pillars: economic development, environmental harmony, cultural promotion, and preservation, and, most important of all, the development of the heart and the mind, the inner development. Sometimes we call it spiritual development, but this aspect is very much missing from most development models and also from education.

The goal of development should be Genuine National Happiness, GNH, learned from the Bhutanese experience of GNH which is Gross National Happiness. I think right now they are considering using Genuine National Happiness, because Gross National Happiness somehow infers that you have to measure it, but Genuine National Happiness is something that we all strive towards. We do not need to account for it. We do not need to number it.

Here you see that education is at the heart of the model (**Figure 2**). The four pillars representing different contents are anchored in the curriculum and are part of the education process. Hence, the contents of education should also be balanced against the four pillars of development. Balance is the key to the success of the model.

The Education System and the Role of Governance

At the base of the model is good governance, which is necessary to support and promote such a sustainable development model.

A government system is only as good as the people who run it. They must be competent, caring, honest, responsible, and socially committed. Where can we find people of such character? In this model, they are shown as the product of education and not of schooling. Unless we have a good education system we will not be able to have good governance. The two are interlinked.

How do we break this vicious cycle of bad education and bad governance? What are the points of entry?

Changing from one type of government system to another is certainly not a

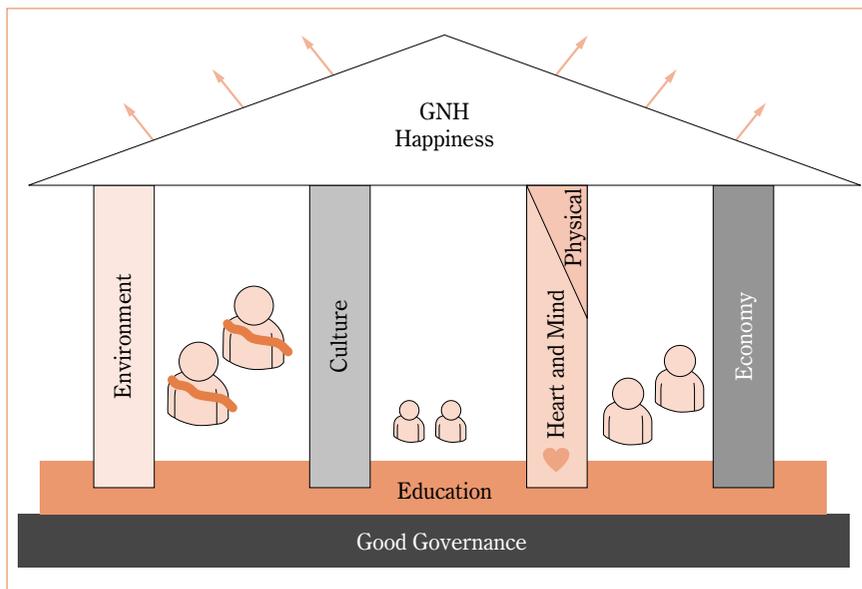


Figure 2 Model of sustainable development People shown in the picture represent elderly (left), children (center) and adult (right).

good point of entry. Many countries have tried it. They have experienced feudalism, capitalism, socialism, communism, and back to capitalism again but in a big way called “globalization.” (By the way, I would like to remind you that globalization is a predominantly one-way system. This means that the big economies engulf the smaller ones.)

It has been proven that the governance system is not really a good point of entry for setting up this model of development because good governance is only as good as the people who run it, and the people who run the governments are the product of the model of development. As long as we have only the present schooling system, we are not going to have good governance. We should improve our schooling system to enable it to become an education system. Only then can we get what we call “responsible individualism,” which is actually a phrase from the famous Canadian philosopher John Ralston Saul, rather than communism, capitalism and so on (Figure 3).

But since all of these are interdependent, education is dependent on whether we have good governance to set it up. Good governance depends on whether we have a good product from education, good people to run it. So where are the points of entry? How do we break this cycle? They are all interdependent. I don’t know the answer. I hope to get more answers from you. I hope that this strikes up some discussions.

Child Education as a Point of Entry

What I can say is that I have tried out something. I have my point of entry right here, education itself. But before I came to this point of entry, I started by introducing sustainable agricultural techniques, and then broadened this to bottom-up planning involving everybody for rural development processes. Then, I realized that this does not quite work because the attitudes of the people that we wanted to influence had been set already. It is very difficult to change their mindsets. They are less open to new ideas and new techniques.

After fifteen years of working, I shifted down to working with younger people, university graduates. I worked with them for three years hoping that I would be able to influence their mindsets. After three years, I realized it was too late. By the time they graduate from university, especially our Lao university, they have not acquired certain essential skills, their minds are no longer open to new ideas and you cannot really change their attitudes.

So, I am now working with a much younger age group, primary, secondary, and university levels, on extracurricular activities. I promote leadership skills, and include them to help improve the education system or the schooling system itself. In the paper which will be circulated to you, you will see how youth leadership skills and sustainable lifestyle have been described.

Bringing in young volunteers to help teachers with activities both inside and outside the classroom has increased the interest of the young student in

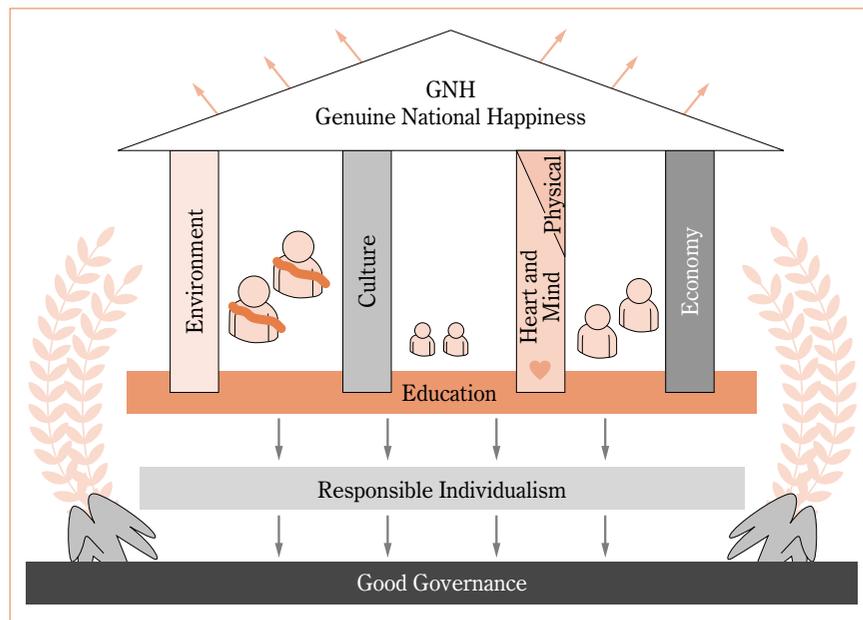


Figure 3 “Responsible individualism” and model of sustainable development

learning. After less than two years, we have observed that young students learn a lot faster this way. But this is only a small example. I am sure all of you have many good experiences, but how to build on these is still the big question, because whenever you scale something up, the quality tends to drop. At this point, I would like to say that unless we have this model of development, it will not be possible to scale it up.

A Tutoring Tool for the Development Model

Here, the media plays a very important role. Our future plan is to produce and test tutoring tools using video films, not to replace teachers but to supplement and to facilitate. We are planning to record the best teachers teaching their favorite subjects, using the best lesson plans, the best teaching and learning tools, combined with real life activities. This video will help teachers to improve themselves as well as benefit students who can excel faster. It is a tutoring tool, and with the best teachers and best materials, I hope that we can expand it without compromising quality, and the video can be accessible anywhere at any time.

Furthermore, I would like to use this tool in what they call video servers that are found in hotels, where you can choose whatever movies to see and so on. If it is accessible through video servers, students and teachers can choose to watch whatever lesson back and forth any time. The technology is available but we are not using it for educational purposes. It is being used purely for entertainment.

So I would like to recapture the key points. At present, we only have schooling. We do not really practice education, and the model of development being followed is not sustainable. The media plays a great role, but only if we involve young people, involve the community, take some control over the media and produce the films ourselves as technologies become more available, I think only then will we be able to really promote education for sustainable development.

Thank you very much for your kind attention.

Q & A

Q Your presentation has made us feel hopeful about the situation. Basically, we are facing a very serious problem. At the intellectual level there is more work, but we are facing a problem at the implementation level. As you pointed out it is necessary to scale up but not at the cost of losing quality.

Also, you have suggested that more use of technology can be helpful. My question is whether it can be standardized. Can we generalize and standardize taking into context the situation and level of development which varies so much?

I also wonder about the reason why you have used heart and mind but not soul or spirituality.

A Thank you very much. These are very good questions. Yes, hearts and minds and spirituality, all of this should actually be represented in the human body. If you look at a person as a whole person, we have to develop the physical, the inner feelings and spirituality of that person. For example, it is known that human beings are born with multiple intelligences. However, when we educate people, we only look at one or two of these intelligences, basically logic and the arts, and the way we teach is basically through imposing knowledge and forced feeding. We are not stimulating or encouraging the other intelligences enough. Therefore, a lot of children are classified as not very smart by omission. This is a crime against human intelligences. Yes, a lot of this can be standardized by sharing the information and the experience from all the people here. I think many things, especially the process, can be standardized if you work together, set up whatever you think are the best practices and best ideas through graphics or whatever, and then

they can be translated into different languages. So many things can be done, and I hope that this stirs up more interest.

Q I would like to ask you about scaling up and implementation. Political will is extremely important. And international trends such as globalization are much more powerful than local initiatives. I would like to hear your ideas on that.

A Again, this is a very important question. That is why I propose the Bhutanese model. I think the advanced countries, as Dr. Arima mentioned, have gone too far, the material aspects of life predominating at the expense of the heart. And they now feel they are missing something and want to move back. However, developing countries are saying that such a model is not sustainable while the corporations are promoting more consumption. It is the corporations that are behind the politicians. The politicians are basically puppets of the corporations while the corporations run the world. But we can look at this from a positive point of view. That is, we as the consumers or the public are the ones who have power over what to consume. It follows that the public needs to be educated to recognize who wields the real power. But who is responsible for telling the public what to consume even if they don't really need it? It is the media. However, there is opportunity in the area of media also. Technologies have evolved to the point where we can own and produce our own media at much lower cost. So media is an important point of entry. Also, I think concerted efforts will work. Political will can come from people like us here, not from the politicians.

Q Your four pillars remind me of the pillars of 21st Century Education that were expounded by UNESCO and written about in a book called "*Learning: The Treasure Within*". When you pointed out the spiritual development in education, were you considering the mentality of the child as it grows from pre-school when they are learning to become independent, in grade school when they are so intelligent that very few fail, and then in high

school when they fail but their sense of learning how to work is so strong? I wonder if you had considered in your four pillars the background of the four pillars of UNESCO's 21st Century Education.

A Sorry I have never seen the four pillars of UNESCO. This is my ignorance and I have to learn more.

Q Thank you for the video. I think it is so stimulating and you have shown us the real aspect of what disturbs us about education, and you are right about the video. As a journalist, I sometimes feel that what UNESCO tells us is not easy to understand and even incomprehensible to society. I spend more than half of my time writing about our work. The video was an excellent portrayal of your thoughts. Thank you.

A Thank you.

Q A comment I would like to make is that I think adults should continue to learn and be educated because children stay with their parents after schooling. Sometimes we think that we are too old to learn new things, but I think we should continue the learning process. Particularly in Asia-Pacific, where we have a large number of illiterate adults, I think if we go for both schooling and also education outside schooling, then I think we can strengthen this ESD effort.

A We should definitely continue learning throughout our lives. Sorry that I have misrepresented this, but I am basically looking for a point of entry in this vicious cycle, and the opportunity that we are not taking advantage of is young people. There is so much potential there. We see things as adults but we don't see things from the child's point of view very much.

Going back to the state of our development again, advanced countries see the problems. They see that less industrialized or less developed countries have their attractions; they have their own characteristics, for example, the concept of livability. A slow pace of life is actually much more livable. Countries such as Nepal, Bhutan, and Laos have some very attractive aspects, but we do not acknowledge these and publicize them. If we do not recognize this capital, we will lose it. I think there is something left for us to capitalize on yet that we can share. Laos, for example, is being labeled as one of the poorest countries in the world. The Lao people seem to be happy, and say "We have a lot of relatives and friends." They do not see themselves as poor, but as being labeled as poor by outsiders. The correct term is "cash poor," not just "poor." In terms of contentment, inner spirit, I think we are quite rich. Environmentally we are quite rich, but we are yet to recognize that, which I think is rather dangerous.

Q I have just one small comment to make. Our main problem regarding the environment stems from rapid globalization. In your model, I think we should also somehow try to fit in education of the corporations. We should also prepare lectures and an education model for the multinational companies, so that along with economic development, they also bring environmental preservation and development.

Secondly, I also feel that in community development programs, which are related to environment and resource saving, the community should also involve corporations and wherever they set up their business, along with the community, they should participate in the overall development of the environment. In case this fails, then we should also build up our legal system in such a way that they are penalized. They should not be let off.

A Yes, definitely, the corporations should be educated. Here again, people who run the corporations are sometimes less concerned about the heart. They basically aim to make profits. That's the flaw. But if people who

graduate from business schools were trained in social responsibility, I don't think they will be heartless as are the present corporations. There is a movement for socially responsible business practices. This is being advocated by people who are more mature so those should be the people we start working on. There are some companies that have no waste at all, 100% recycling. So we should promote and learn from those experiences.

Q Both presentations were very good, but the presentation was mainly concerned with the methodology of the teaching. I think the whole teaching system and education system should be reoriented. We have to look at the context and global issues as well as local issues. When we cannot reorient the entire education system and curriculum, textbooks, teaching-learning activities, and materials, maybe the methodology itself will work, but one methodology cannot work for all the things that we want to achieve. So we also have to discuss the reorientation of the entire education system in such countries. Thank you very much.

A I fully agree with you. I was just looking for a point of entry. The teaching methodology, as looking at the lesson plan itself, should be structured in such a way that is child-centered, activity-based, and includes discovery learning and so on, and then that should be extended to the textbook itself later. Here, we want to reorient textbooks to be more efficient, not confusing for the children nor too narrow on certain issues. Indigenous knowledge, as I mentioned, should be the bulk of the local curriculum. Local curricula in most countries are allotted at least 20%, but it is only contained in the policy, and is not being implemented. The Ministry of Education generally does not know how to include the local curriculum, but the community can participate in identifying what kind of local indigenous knowledge can be part of the local curriculum and that can be taught in or outside the school itself. That is, activity-based, so there are lots of possibilities. I fully agree with you.

Lecturer

PROFILE

Sombath Somphone

Director, Participatory Development Training Centre, Lao PDR



Mr. Sombath received a Bachelor of Education and M.S. in Agronomy and Soil Sciences from the University of Hawaii. He has served as a Chief Technical Advisor of the Rice-Based Integrated Farming System Project and the Participatory Development in Communities Project. Since 1996, he has been the Director of the Participatory Development Training Centre (PADETC). In May 2002, PADETC received an award from the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) for “Empowering the Poor through Human Resource Development”. He was awarded the 2005 Ramon Magsaysay Award for Community Leadership, in recognition of his strenuous efforts in motivating the country’s young people to become its leaders towards a sustainable future.

ESD-oriented Activities at the Grassroots



Gender

Women Rising up against Gender Inequality

Maryam Bibi

Chief Executive, Khwendo Kor (Women & Children Development Programme)

Commentator: Jose Roberto Guevara

Lecturer, RMIT University (Royal Melbourne Institute for Technology)

Gender issues are very complex and are most often misunderstood. Gender is misinterpreted and not properly implemented. I will try to simplify these issues in a lay person's terms; however, I will not delve into details about why gender is misinterpreted and why the situation is the way it is. I am merely stating that these are the facts and I am relating these facts to gender issues.

What is Khwendo Kor?

I hail from Pakistan. Pakistan is a developing country in South Asia, with a population of 140 million. Pakistan is one of those countries, where the ratio of females is less than that of males (females make up only 48% of the total population).

One third of the population lives below the poverty line¹. According to the United Nations Development Programme (UNDP) report, Pakistan ranks very low — 135th out of 177 — on the human development index. Almost two

1 Author's Note: The monthly income of these families is less than two dollars a day.

thirds of the population lives in rural areas.

Pakistan shares borders with Afghanistan, Iran, China, and India. The orange square (■) on the map show where the Khwendo Kor Women and Children Development Programme is implemented, and the dark gray square (■) show where our regional offices are located (Figure 1). The figure illustrates that we are also working near the Afghan border. Although it is not shown on the map, we have regional offices in the tribal areas on the border with Afghanistan. One of our regional offices is located in Bannu. This regional office covers the tribal area of Waziristan, where the military operations against the local Taliban are taking place.

I would like you to be aware of the present situation in these areas, for example, the poverty, population growth, security issues associated with Afghanistan, and above all, the extremely rigid tribal feudal and patriarchal

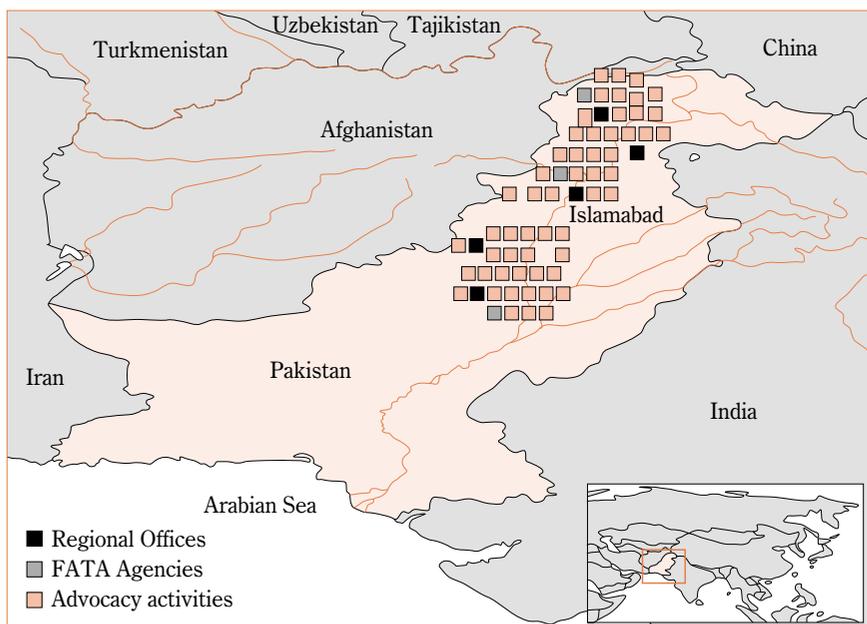


Figure 1 Working area of khwendo Kor

society.

Khwendo Kor is a Pashto word, meaning “Sister’s Home,” and its focus is the development of women and children (Figure 2). The idea behind it is that unless women work together and collaborate with each other, collective empowerment will never be realized. Thus, Khwendo Kor means that, in essence, women have to struggle for their own causes and development — something that is reflected in the name.

Our main thematic areas are ① education, ② primary health care, ③ microenterprise, and ④ human rights and advocacy, with the support of social organization and partnership building; I will discuss these areas later. Cross-cutting themes are poverty, the environment, and gender. As I explained, although we are focusing on the development of women, we are also aware of the very vital role of men. Basically, the rationale behind Khwendo Kor is that from submissive citizens, women and children will become more active citizens, and will be more empowered at the family level. We believe that mentioning

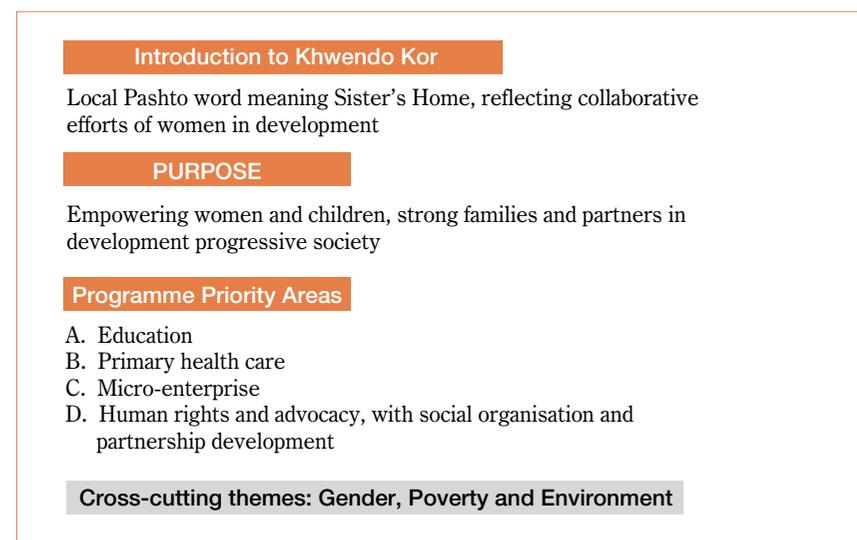


Figure 2 Introduction to Khwendo Kor

family is extremely important because in recent years, it has become controversial. By strengthening the family unit, within each family unit, women recognize that their role is extremely important.

During yesterday's seminar, I felt that we cannot move forward unless we have partnerships with others stakeholders at all levels, nationally and internationally. Therefore, it has been included in the purpose of the organization that in order to realize a progressive society, partners at the community level have to be empowered.

Gender Issues

Khwendu Kor was formally established and registered in 1993, but we started work in 1992 and have fifteen years of experience in the field of development of women and children. The gender issues that we are facing and which are already very severe, negatively impact our work such as female education, microenterprise, other developmental work, and the economic empowerment of women. As you know, people in the villages are poor, but women are the poorest. Let me illustrate this by providing some examples. The major reason that girls cannot attend schools is the lack of opportunity. Girls are busy grazing cattle and helping their mothers in the household chores, leaving them with no time to attend school. Poverty is one of the most difficult gender factors and it has an extremely negative impact on the status of women. In some tribal area, where we are working for, the literacy rate is below 1%. In the tribal villages — near the border of Afghanistan — in which we work, we are unable to find a single educated girl capable of becoming a teacher. The literacy rate is very poor, making it a huge factor that hinders our work of accessing girls as well as mobilizing them.

As mentioned before, these villages have a rigid tribal and feudal culture and the society is very patriarchal so the structure is right from the family and to the community. I will give you a few examples to illustrate this. The structure of the family and society in a tribal culture is so rigid and inflexible that

when you talk about the development of women, everyone in the village becomes alert. People in the village think, “These women (NGO) have come to free our women.” When we go to a village, the community leaders have often asked, “Can't you make Khwendu Kor (Sister's Home) a brother's organization, because the name is very feminine.” Our answer is “No, we cannot change the name. It is for the development of women, so you have to live with that.” Nevertheless, working in these tribal areas and being accepted by the people is a difficult process. Mentioning the name Khwendu Kor at the village level is not easy. Further, new male staffs joining Khwendu Kor feel uncomfortable since they join the NGO for employment rather than for the mission and vision of the organization. Therefore, it takes time — one to two years — for male staffs to start feeling a sense of ownership toward the organization and start working for the development of women and children. By now, you probably understand how difficult it is to even introduce yourself in the remote sections of the tribal areas.

Discrimination against Women

I will now give you an example of the rigid tribal culture by discussing cases involving violence and honor issues. In the rigid tribal culture, women are considered as representing family honor. When there is an election and you ask a candidate how many children he has, even if he has eight children, of which four are girls, he would reply, “I have four sons.” When you ask him again if he also has daughters, he might mention, “Yes, I also have four daughters.”

We have something called a domicile certificate, which certifies that you belong to a certain area, and in our domicile in the tribal area, women do not have a photograph because it is considered shameful for a woman to be photographed.

There also exist other issues — such as domestic violence — that you have to be very careful about. For example, in some communities, a man from out-

side the community cannot speak to a young woman who belongs to that community because it is considered an honor issue. Such beliefs exist not only at the village level but are also reflected at the institutional level; as a result, government departments have very few women. In the education department, there are a few women, but in many offices, we see female government education officers who are fairly senior but who cannot communicate properly because of restrictions and the paradigm and misinterpretation of the teachings of Islam.

Islam is a very empowering religion, but the misinterpretation of Islam is a huge factor that hinders the development of women. Unfortunately, at all levels, we have very limited knowledge of Islam. Even our clergy interprets Islam very narrowly, resulting in Islam being considered as a power to keep women ignorant and inside their houses. Therefore, in order to enter such communities, an organization like Khwendo Kor has to be very strong, knowledgeable, experienced, dynamic, and multidimensional. We have learned all this through ten to fifteen years of experience.

There are other factors that serve as barriers to our work, for example, propaganda and funding from the West, and European countries, NGOs, and other civil societies being seen as agents of the West. People think that NGOs working in these remote areas intend to convert Muslims into Christians or Jews, and are wary of NGOs. Therefore, first, it is necessary to build trust to make the relationship an equal one, and then talk about the development of women. With regard to education as well, there exists a problem in the system. Because some villages located in the remote areas are so poor, it is hard for most of the villagers to see the relationship between sustainable education and an affluent lifestyle. Therefore, they do not understand the importance of sending their daughters to school.

Further, Pakistan is rather unlucky. It is always suffering from some sort of disaster. Recently, there was the earthquake, and the worst affected were



Photo 1 Community based girls' school

the school students and teachers, a large number of who were killed. **Photo 1** shows the schools that Khwendo Kor has established for the earthquake victims who were students. Initially, seventy-six girls were registered in this school.

Coping Strategies for Gender Issues

With regard to coping strategies, we adopt a holistic approach; therefore, we do not view things in a compartmentalized manner. On the other hand, we view society as a whole, and then delve deeply into the people's needs, which they themselves articulate and prioritize. We are very sensitive to the culture of the people we work with. We wear traditional clothes and do not wear any makeup when we visit the villages. We hire local people and take them into confidence without imposing things on the people. We make the local people make decisions instead of imposing certain courses of action on the people. Being Pakistani or Pushtoon does not mean that you will be accepted in the next village you visit. This is because there is tremendous diversity in cultures. You need to know a great deal about the village's culture, and

greater understanding and trust building is required. There is, as I said, a lack of trust at all levels — the government and donor levels — and then the federal and provincial government levels. This distrustfulness among the government, the federal and provincial government, and the village is caused mainly by the lopsided power balance, which obviously affects the activities of Khwendo Kor. Our successful strategies are community participation, transparency, and honesty. We do not promise what we cannot do, and we develop a sense of confidence and trust in the people. We work with them only when they are ready, and it is not necessary that they will be ready immediately. We have to stick to these rules.

Achievements of Khwendo Kor

Women contribute to the income generation of the families because poverty is one of the common issues in the rural communities of the areas in which we work. Women are so poor that many mothers have debts. Mothers are involved in the promotion of girls' education. In a few successful cases, some mothers are involved in health activities. These women are the members of a health committee and women's education committee. They are trained and receive scholarship loans.

In my opinion, one of the achievements of Khwendo Kor is that it has managed to carve a niche for itself in a very patriarchal and rigid society, despite having faced numerous problems. There were numerous attempts to destroy our work; once, our office was even bombed. Our offices were not allowed to function, and our schools were shut down. We were thrown out from many villages, but we survived and expanded. Starting with one or two villages, we are now working in more than 200 villages and have very good relations with the government, community, and partners working in the villages. Most of our schools have been taken over by the government. Our teachers are acknowledged by the government and are considered as regular government teachers, which is a huge achievement. Education has become an important, integral part of our activities because we realized that unless you raise the

issue at the policy level, all efforts become fruitless. Based on our experiences, I have a few recommendations.

Recommendations

As I keep saying, we have to think in a gender-sensitive manner. For example, we can use “chairperson” instead of “chairman.” We use “brotherhood,” so why not “sisterhood?” The answer lies in the way you think, the way you

Table 1 Recommendation for gender-sensitive manner

Global Level

- Gender budgeting-impact assessment
- Environmental impact assessment
- Inter-sector co-ordination: poverty, agriculture, politics, resource allocation
- Accountability: monitoring the trends and impact of the international politics and institutions
- Resource allocation for advocacy and for community based education and development
- More actively promoting the role of civil society and NGOs
- Encourage peace, tolerance and harmony
- Introduce disaster preparedness strategies. Move from re-activeness to pro-activeness

National Level

- Gender sensitive policies, regulations and resource allocations
- Implementing code of conducts on the basis of universal human rights (e.g. Prevention of domestic violence and sexual harassment)
- Coordination: information sharing, role clarity, avoiding overlapping
- Address governance issues
- Build and enhance the role of civil society

Local Level

- Mobilization and achieving participation: more active role of the excluded women in particular
- Capacity building: building and strengthening local gender balanced institutions
- Bridging people and government
- Advocating cause of the ordinary people especially women at the policy level

→ **Empowering everyone in the society**

look at things, the way you carry yourself, the way you treat others, and in your attitude and behavior. It is not something mechanical that you are provided with; nevertheless, you should be aware of the issues and become gender sensitive. This is why I always say that in order to realize a gender-equal society, long-term commitment and a change in thinking are required. It impinges on the structure and creates uneasiness, but it will not disempower men. It is about further empowering everyone, empowering poorer as well as powerful men by decreasing their workload (Table 1).

Thank you very much.

COMMENT From an ESD Perspective

Jose Roberto Guevara

First, let me say “*Mabuhay*” (meaning welcome in Tagalog) from the Philippines. I also wish to convey my greetings on behalf of the peoples of Australia, from both the Aboriginal and the migrant communities, to which I belong. In particular, I would like to extend greetings from RMIT University, the Royal Melbourne Institute of Technology, and from Professor John Fien, who is a familiar figure to most of you due to his continuing work in education for sustainable development (ESD). Unfortunately, he is unable to join us because he has to attend another meeting on ESD at this very moment in Paris.

I thank the Asia/Pacific Cultural Centre for UNESCO (ACCU) for inviting me to contribute to this meeting. Moreover, I would like to thank Maryam for sharing the passionate work that she and her colleagues have been doing. We can easily perceive the innovative nature of the project that Maryam presented by considering the manner in which Maryam’s group is dealing with the complexities and the overwhelming issues faced by them. I would like to

Table 2 Possible Themes and Priorities of ESD according to the prospectus for innovation programme

Environmental Perspectives: natural resources (water, energy, agriculture, biodiversity), climate change, rural development, sustainable urbanisation, disaster prevention and mitigation
Socio-Cultural Perspectives: human rights, peace and human security, gender equality, cultural diversity and intercultural understanding, health, HIV/AIDS, governance
Economic Perspectives: poverty reduction, corporate responsibility and accountability, market economy

begin by quoting from her concluding statement that becoming gender sensitive requires a “long-term commitment … It impinges on the structures and … it is about further empowering everyone.” In the context of ESD, this can also be stated as, “to become educated for sustainable development or sustainability requires a long-term commitment … It impinges on the structures and … it is about further empowering everyone.”

However, Maryam and I had different entry points. My entry point when I was working with local communities in the Philippines was the environment. Maryam’s entry point involved women, and she has described to us the innovative projects that she and her colleagues have undertaken. We can learn many things from the innovative character of their work. In particular, their activities were linked to three key documents: “The Prospectus for ACCU-UNESCO ESD Innovation Programme,” “The UN Decade of Education for Sustainable Development, International Implementation Scheme,” and the “Links between Global Initiatives in Education.” These are the three key documents that I will use as reference points. I would like to connect these documents to the program that Maryam just presented, which is innovative in itself, so as to explain how her activities are related to ESD.

First, the entry point is clearly thematic. Table 2 describes the possible themes that can be used in ESD approaches. From among them, I would like

to emphasize gender equality. Maryam presented these as cross-cutting themes. I do not think that she prepared the presentation with ESD in mind, but if you would look at **Figure 2**, the cross-cutting themes are socio-cultural in terms of gender, economic in terms of poverty, and environmental in terms of the issues faced. The entry point of her activity has been gender, but it also includes cross-cutting themes. This is why I regard the activities undertaken by Maryam and her colleagues as innovative.

Second, these projects demonstrate the characteristics and features identified in the United Nations Decade of Education for Sustainable Development (UNDESD) International Implementation Scheme (IIS). Although I shall not discuss all of them in detail, I would like to highlight three particular characteristics that I believe are clearly demonstrated in Maryam's projects; these are highlighted in orange (**Table 3**). Therefore, Maryam's projects are based on the principles and values that underline sustainable development. Yesterday, Mr. Sheldon Shaeffer, Director of UNESCO Bangkok, defined ESD as balancing environmental, societal, and economic considerations, which is clearly a cross-cutting theme in Maryam's presentation. Apart from this, her project deals with issues such as promoting the ideals of gender equality, fair and peaceful societies, and human rights. It is evident that one

Table 3 ESD features identified in the UNDESD IIS

- is based on the principles and values that underline sustainable development
- promotes life-long learning
- is locally relevant and culturally appropriate
- accommodates the evolving nature of the concept of sustainability
- addresses content, taking into account context, global issues and local priorities
- builds civil capacity for community-based decision making, social tolerance, environmental stewardship, adaptable workforce and quality of life
- is interdisciplinary. No one discipline can claim ESD for its own, but all disciplines can contribute to ESD
- uses a variety of pedagogical techniques that promote participatory learning and higher-order thinking skills.

of the core program areas Maryam's group took into account was human rights.

Third, we should consider what is ESD. In her presentation, Maryam has clearly emphasized the importance of a partnership approach.

In this presentation, I aim to show how Maryam's activities actually fit in with innovative ESD practices, with very obvious results. Her work is locally relevant, culturally appropriate, and interdisciplinary. Her strategies are not only culturally relevant, such as the dresses worn while visiting communities, but also interdisciplinary in the researchers' holistic perception of women. They do not separate the economy from society and culture, and this kind of holistic perspective confirms the interdisciplinary nature of Maryam's work.

In conclusion, I have identified the three points that make these projects innovative. First, they are thematically cross-cutting. Second, they are connected to the IIS features of ESD. Finally, they are also related to the other three global initiatives that were mentioned above. Please observe this list of successes identified by Maryam (**Table 4**). One of the global initiatives appearing in this list is Education For All (EFA), which looks after the com-

Table 4 Achievement of Khwendo Kor

- 10,000 girls and boys have been enrolled in 200 Community Based Girl's Schools
- Built 20 adult literacy centers
- Trained 200 teachers
- Formed 160 Village Education Committees (VECs)
- Formed 60 Parent Teacher Associations (PTAs) in collaboration with the government
- 102 schools handed over to the government, community or philanthropists
- Increasing awareness of child rights
- Innovations: child birth registration, ID for women, election, movement against corporal punishment
- Part of local, national and international level

pletion of primary education and gender equality in the enrollments, for both the children and the adults participating in their program. Furthermore, their program is also related to the UN Decade for Literacy, which specifies that the entry point for achieving Education for All is through inculcating literacy in boys and girls. Moreover, the Millennium Development Goals have set targets advocating universal primary education. I am sure that Maryam's group is aware of these goals; however, at the same time, well-designed projects are inherently based on, as well as responsive to, context.

Therefore, this is a challenge for all of us. I have discussed the innovative approaches that we can learn from and the need to relate them to the three abovementioned documents. However, the most important aspects of these examples that we need to focus on are how these projects can help us to identify the criteria for reviewing the project proposals at the national commission level, or for project proponents, how these projects can guide our own development and educational practices. I believe that, this aspect is important for each project. The principles of practice are more important than the documents that we have been provided with, which are mere guides. The manner in which we apply these principles of practice in education to achieve sustainable development is very significant. It is my belief that we will continue to examine this aspect as we listen to the other projects that will be presented to us today.

Once again, I thank you for the opportunity to provide my comments, and I thank Maryam for her ongoing commitment to gender equality, which actually contributes to sustainable development.

Presenter

Maryam Bibi

Chief Executive, Khwendo Kor (Women & Children Development Programme)



Born in 1955 in a remote area of Pakistan, Maryam Bibi currently is the Chief Executive of Khwendo Kor. She founded Khwendo Kor (which means sister's home in Pashto) for women and children development through education, health care, micro-credit, advocacy and partnership building in 1993. Khwendo Kor has expanded from a staff of four to 110, with five regional offices in some of Pakistan's remotest areas, difficult to access and hostile to the concept of female emancipation and empowerment.

Besides being the Chief Executive Maryam Bibi is the board member of many organizations for example Sungi Development Foundation, SPARK, etc. For her accomplishments Maryam has been awarded UN recognition of Services Award 2000, Human Rights award 2001, National Civil Awards of Pakistan, Sitar-i-Imtiaz 2001, Fatima Jinnah Award 2003 and she was one of the 29 women nominees from Pakistan for the Nobel Peace Prize in 2005.

Maryam has received her Masters Degree in Social Policy from York University in 2002 and is currently in the process to complete her MPhil research from York.

PROFILE

PROFILE

Jose Roberto Guevara

Lecturer, RMIT University (Royal Melbourne Institute for Technology)



Jose Roberto 'Robbie' Guevara is an educator with extensive experience in adult, community and popular education, and participatory action research, particularly in the fields of environmental education, education for sustainable development, and HIV-AIDS education. Education for him is a two-way learning process; hence he has a strong passion for participatory, creative and experiential learning methodologies and a commitment to reflective practice.

He is currently a Lecturer in the BA International Studies Program at the Royal Melbourne Institute of Technology (RMIT University) in Australia. He has continued to keep his involvement with ESD in the Asia-Pacific region through the Asian-South Pacific Bureau of Adult Education (ASPBAE) and the Asia/Pacific Centre for Culture of UNESCO (ACCU) ESD Programme.

Commentator

Poverty Reduction

Introduction of Upland Integrated Indigenous Agriculture and Literacy Education

Maria Elena Julianda Bicaldo
Managing Director, Tribal Mission Foundation International, Inc. Mindanao

Commentator: Chiba Akihiro
COE Visiting Professor, International Christian University

Mabuhay. It is a great honor and privilege to be here with you at this ACCU-UNESCO Joint Regional Seminar for the Promotion of Education for Sustainable Development in Asia and the Pacific. I would like to express my gratitude to the organizer and sponsor of this event, the ACCU, UNESCO Bangkok, and the Japanese National Commission for UNESCO.

Let me give you a background of the Philippines, which is the country I come from. The Philippines has a population of 80 million people, and a large percentage of this comprises young people. It has 7,100 islands, including three main archipelagos, Luzon, Visayas, and Mindanao. There are at least 100 ethnolinguistic groups in the Philippines and they are distributed among the archipelagos. In the past few years, our country has been suffering economic crises due to political instability, the peace and order situation, and globalization. Since I am not an economist, I will not dwell on the issue of poverty. I am just a lay Filipino citizen with a passion to help build peace in my nation and work specifically with the indigenous groups.

My presentation is about Upland Integrated Indigenous Agriculture, which involves an integration of functional literacy and sustainable agriculture among the Matigsalug, an indigenous tribe in Mindanao, the Philippines.

Introduction to the TMFII

Before I proceed, let me introduce Tribal Mission Foundation International, Inc. (TMFII), the organization I represent, by mentioning three significant milestones in the history of the organization that have led to a deeper involvement in the community transformation. Our work with the indigenous people started in 1986 through relief assistance in the form of food, clothing, and other basic necessities. Along with that, we used to run free medical and dental clinics. However, more needs were arising than the organization could provide for among the people.

Therefore, in 1990, we shifted our focus to capacity building training and built a training center to train community development workers in holistic development. Most of the workers we trained had only completed their primary education; however, through appropriate training and the tools they acquired, they became effective facilitators in their own communities.

TMFII was first introduced to the Functional Literacy and Adult Education Project through the Capacity Building Workshop by the Notre Dame Foundation for Charitable Activities, Women and Enterprise Development (NDFCAI-WED), which was the driving force of the Mindanao NGO Literacy and Education Network. When the NDFCAI-WED was identified by ACCU as a Philippine partner for the Literacy Resource Centre for Girls and Women (LRC), the network expanded and we became part of it. At present, we have 36 member NGOs spread all over Mindanao. This partnership has been instrumental in enabling a small NGO like ours to become effective in its service delivery. As proof of our work, several network members have received prestigious awards in the area of literacy and education.

Let us now watch a short video clip narrating the situation of the indigenous people, which was what motivated TMFII to become involved in literacy and community development.

[VIDEO]

We envision empowered movements of indigenous people transforming communities, and we would like to see a strong insider movement that defines the peoples' dreams for their own community and that works toward their development as well as nation building. Our mission is redeeming people and the environment through community development.

We have several major focuses; however, due to time constraints, I will only talk about transformational education, holistic community development, advocacy, and networking. First of all, with regards to the goal of transformational education, we aim to provide culturally relevant training modules to indigenous communities. To achieve this, we trained facilitators on a four-month live-in training on holistic community development. Second, concerning the goal of holistic community development, we aim to empower indigenous communities towards sustainable community development and meaningful participation in society. Education is the foundation of all our community development efforts. Most of our community projects are integrated into the Functional Literacy classes including the Community Health Program, Livelihood, and Community Forestry. Third is our advocacy and networking, we aim to nurture partnerships with different agencies, churches, and individuals in the process of transforming communities.

The Upland Integrated Indigenous Agriculture Project

Poverty is a complex issue. Some of the identified causes of poverty have been the violation of human rights, racial discrimination, the peace and order situation, and illiteracy. However, like the peace and order situation, illitera-

cy can be both the cause and result of poverty.

We will now watch another video clip showing a situation in the mountain areas in which we are working; following this, I will explain the project that addresses the poverty situation of the indigenous people. This project is called the Upland Integrated Indigenous Agriculture Project, and is an integral part of the Functional Literacy Project

[VIDEO]

The Upland Integrated Indigenous Agriculture Project has five major activi-



Photo 1 Literacy classes in the community

ties. The first is the facilitators' training, wherein we train local facilitators with regards to the principles of sustainable farming, soil and water management, sloping agricultural land technology, and natural farming. **Photo 1** shows pictures of the community in which we are conducting the literacy classes and the manner in which the classes are conducted.

One of the technologies we have adopted is called "Sloping Agricultural Land Technology." We refer to it by its acronym, namely, SALT. SALT is a simple, practical, low-cost, and timely farming system for the uplands. The system not only controls deforestation and minimizes erosion but also augments crop production, thereby increasing the farmers' income. SALT was developed by the Asian Rural Life Development Foundation, based in Mindanao.

Farm Development Using the SALT Method

After learning the basics of sustainable farming, the next activity is farm development using the SALT method. The first step in SALT is using an instrument called the A-frame (**Photo 2**). The A-frame is used to locate contour lines, for the planting of hedgerows. The next activity is the actual farm development.

Indigenous people are usually nomadic. The culture of having no permanent residence is due to their belief system; however, on closer look, it can be observed that this lifestyle is somehow dictated by their economic situation.



Photo 2 The A-frame used to locate contour lines

The traditional practice for land preparation—the slash and burn technique—is what we saw in the video clip. In this method, after several planting seasons, the farmers' yield dramatically drops, making it necessary for them to move to another area so that they can produce enough food for themselves. Thus, the slash and burn practice is a repetitious process that destroys the land.

The depletion of the soil nutrients can be attributed to two major things: soil erosion and the under-nutrition of the soil. To address this situation, we have introduced the planting of nitrogen-fixing plants such as flemengia, renzonii, and indigo ferra. As hedgerows, they keep the soil from eroding and help restore the fertility of the soil. The farmers can then trim the plants when they reach a certain height, with the trimmings put back into the soil. After a while, they decompose, making the ground fertile. **Photo 3** shows how the

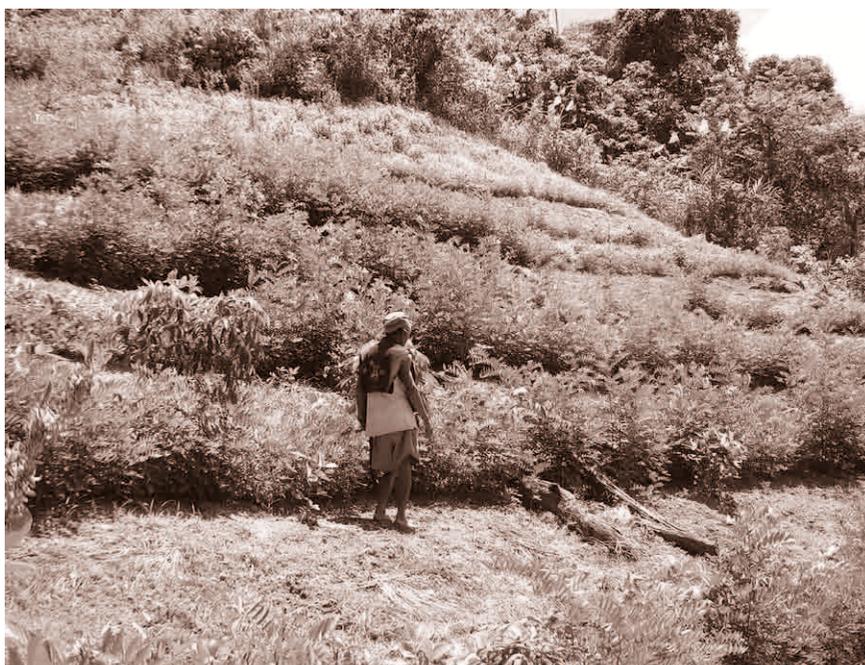


Photo 3 The plantation—six months after initiation of the project

plantation looks six months into the project.

We have also started planting permanent crops (**Photo 4**). These tribes have survived for thousands of years by gathering forest products. Replacing gathering with farming has not been easy, but because of our years of involvement in the community, the tribes have seen the results and value of farm planning, and are beginning to adopt the technology. We have also taught them how to plant short-term and medium-term crops such as pineapples, bananas, peanuts, and root crops. Now, the tribes use these crops as their food, and sell the excess produce in the market.

The local facilitator has a large role in monitoring the progress of each farm. The farmers are scattered across different villages in the mountains, and the local facilitator responds to their inquiries and concerns.



Photo 4 Planting permanent crops

Production of Fertilizers and Pesticides through Natural Farming

The third activity of the Upland Integrated Indigenous Agriculture Project is the production of fertilizers and pesticides through natural farming technology (NFT). This NFT can be traced back to 1935, when it was advocated by Mokichi Okada. He was a Japanese philosopher of holistic health and a health advocate of alternatives to chemical farming. This natural farming technology promotes the production of beneficial microorganisms to maintain good soil conditions. With the continuous use of beneficial microorganisms, natural farming results in higher productivity at a lower production cost. Moreover, it is sustainable because it can be practiced by everyone. It is also convenient and environment as well as farmer friendly.

One of the examples of the beneficial microorganisms we produce through the process of fermentation is the indigenous microorganisms (IMO). Other



Photo 5 Preparing the microorganisms

microorganisms are from fermented plant juice, fruit juice, oriental herbal nutrients, etc. **Photo 5** shows how these microorganisms are prepared. The most important ingredient is crude sugar, and through the process of fermentation, several concoctions can be obtained. For instance, fruit juice can be extracted from mango and papaya, and when applied to the plants and added to the soil through spraying, sweetens the fruit that is growing.

Formation of the People's Organization and the NFT Center

The other project activity is the formation of the People's Organization and the establishment of the NFT Center. To make natural farming fertilizer available anytime, the NFT Center offers the concoction to members of the organization at a minimal cost. This prevents the farmers from easily reverting to the slash and burn practice, and prevents those who can afford the concoction from using chemical fertilizers, resulting in them enjoying an increase in their yield.

The last project activity is the marketing of the produce. Through the People's Organization, farmers are helped to market their products.

Evidence of Change

Upland Integrated Indigenous Agriculture is part of our Functional Literacy Program and is the fourth stage of the program. The first stage is basic literacy; the second, literacy cum health and environmental care; the third, literacy cum values along with gardening; and the fourth, literacy cum upland integrated indigenous agriculture. Ever since we started in 2001, we have worked in fourteen tribal villages and have involved 156 farmer students. The farmers involved have developed 75 hectares of land, and there are 940 strips of hedgerows. If the farmers fail to cultivate their farms, the farms easily return to becoming forestland because of the hedgerows. We have planted more than 10,000 fruit trees such as mango, lemon, durian, guava, coconut, avocado, lanzones, and rambutan trees. The farmers who are involved in this

project have earned an extra income of more than 2,500 pesos. If converted to US dollars, this sum is equivalent to a mere 55 dollars. However, for a cashless economy such as that of the indigenous people, who are basically living without money, it is a lot of money.

We have seen that natural farming and the SALT farming technique are now being widely promoted across our country. The founder of our organization has been traveling around the Philippines, promoting the natural farming technology. We have been hearing that these methods have produced numerous positive results (Table 1). These methods have been introduced not only in horticultural the farming system but also for the raising of livestock.

Feedback from the Indigenous People

I will now share some feedback from the indigenous people.

“Initially, we never used to plan our farming. We used to just plant anything anywhere, and would leave the results to fate. Now, while we wait for the fruit trees to yield fruit, we are already harvesting some crops for our consumption and for selling.”

“We are happy that we don’t have to buy fertilizers and can make them ourselves. Besides, they do not harm the environment.”

We adopted the Upland Indigenous Integrated Agriculture technology for the

Table 1 Project output

Number of villages	=	14
Farmers- students involved	=	156
Farms developed	=	75 hectares
Number of strips of hedgerows	=	940 strips
Number of fruit trees planted	=	10,000 + such as mango, lemon, durian, guava, coconut trees,avocado, lanzones, rambutan
Average income increase	=	P2,385 each cropping

indigenous tribes in Mindanao simply because it involves building on what they have. They are farmers. Land is very important to their existence; therefore, we are teaching them to harness the material resources that are already present. This is the poverty alleviation program that TMFII has adopted for the tribes in Mindanao.

Q & A

- Q** Do you happen to have any more detailed information on the technology for the concoction that produces beneficial microorganisms?
- A** Actually, I have a manual that can be photocopied and circulated. We are giving that for free.
- Q** What level of education do the facilitators have?
- A** Most of them have only completed grade two or sometimes grade three in elementary school, but I was amazed after the training. They have learned a lot and are really impacting the community.
- Q** So they undergo training before they are sent out?
- A** Yes, we have several trainings for them.

COMMENT From an ESD Perspective

Chiba Akihiro

Thank you, Maria Elena. The presentation she made was wonderful; I am very overwhelmed by it. I happened to be in Mindanao last week, and I attended one of the graduation ceremonies of an alternative learning system for out-of-school youth. I was highly impressed with the great number of activities taking place in Mindanao. We hold the inaccurate impression that Mindanao is primarily an island rife with terrorism, kidnapping, murder. At the same time, even though this is the reality, it should be acknowledged that Mindanao is a rich and beautiful island; I consider it an island of hopes and dreams as well because of the numerous activities undertaken by the NGOs in order to improve the situation, whose efforts I found impressive. I believe that future stability and development efforts will bring peace to the island, and I am certain that this will trigger an enormous surge in its development. The type of activities being undertaken by this foundation at the grassroots will indeed be the basis for future development.

Efforts like those described in the above examples need to be encouraged through regional cooperation. There are numerous other activities being conducted on a similar level, and we have to identify and include these in our joint partnership, which, I believe, will enhance cooperation and development.

In this regard, I refer to the Millennium Development Goals (MDGs). The first goal is the reduction of poverty, which I think is the major and most important issue in the current decade. The objective of the decade is “to reduce the poverty of people by 50% of the 1990 level.” Although large-scale efforts are required to achieve this goal, the kind of activities being illustrated currently will support the endeavor to improve the situation.

However, a disturbing issue is the increasing inequality and income gaps. This is also another serious reality at present, as corroborated by the United Nations Development Program’s (UNDP) recent Human Development Report, which illustrates that the income of 500 rich persons in the world is greater than that of 416 million poor people. This is something that should be taken note of. Moreover, there are one billion people who live on less than 1 dollar a day, in absolute poverty, and this number increases further to 2.6 billion if we include those who live on less than two dollars a day. A serious problem concerns the fact that provision of safe drinking water for these 2.6 billion people will cost an enormous amount of approximately 7,000 billion dollars, which is less than the amount at which perfume currently purchased in Europe. Therefore, we have to consider the ways in which we can combine the efforts of these grassroots activities and ensure that these endeavors gain greater significance in international cooperation. Therefore, we should take on the responsibility to support and bring these efforts to the notice of the international community. According to me, the type of workshop held today is one such vehicle that can work as a bridge between the reality and the international efforts. Thank you very much.

Presenter

Maria Elena J. Bicaldo

Managing Director, Tribal Mission Foundation International, Inc. (TMFII) Mindanao

Ms. Bicaldo is in-charge of the general management of TMFII program and services on transformational education, holistic development and advocacy. TMFII is a Filipino, Davao-based Non-profit development organization, a member of Mindanao NGO Education & Literacy Network. She finished a degree on BS Electrical Engineering in Bicol University. She was also trained on Non-Formal Education approach thru the capacity building training for network members. She is the project coordinator of TMFII first Functional Literacy class in 1996. Later she pioneered a TMFII-branch in Palawan where she further immersed working on sustainable development.



PROFILE

PROFILE

Chiba Akihiro

COE Visiting Professor, International Christian University (ICU), Tokyo



Prof. Chiba is in charge of research on “education for conviviality in Aisa” at ICU 21st Century COE Program “Education and Research on Peace, Security and Conviviality.”

After obtaining MA in education at ICU in 1959 and working at the Secretariat of the Japanese National Commission for UNESCO for two years, he started his career in the Secretariat of UNESCO in 1961 and he assumed such positions as the Deputy Director, Regional Office for Education in Asia (Bangkok), Deputy Assistant Director-General for Education and Assistant Director-General for Coordination of Operational Activities at UNESCO HQ in Paris until he retired from UNESCO in 1991. From 1991 to 2004, he served as professor and graduate school professor at ICU.

Currently serving as a member of ACCU Council, Chairs of its Committee for the Program of Educational Cooperation and Steering Committee for Education for Sustainable Development in Asia and the Pacific.

Also member of the Board of Directors of the National Federation of UNESCO Associations in Japan and the chair of its Committee for the World Terakoya Movement. Senior Advisor, Kumon Institute of Education, Adviser, Nomura Life-long Integrated Education Center.

Commentator

Natural Disaster Preparedness

Taking a United Stand against Cyclone

Mohammed Nasir Ullah

Director, Cyclone Preparedness Program, Bangladesh Red Crescent Society

Commentator: Nakayama Shuichi

Professor, Hiroshima University of Economics

Madame Chairperson, distinguished participants, ladies and gentlemen, *ohayo gozaimasu* and good morning. I would like to take this opportunity to extend my sincere thanks and gratitude to the Asia/Pacific Cultural Center for UNESCO (ACCU), UNESCO Bangkok, and the Japanese National Commission for UNESCO for inviting me to attend this august seminar and share my views. It is an honor and privilege for me to make a presentation on the Cyclone Preparedness Program (CPP) of the Bangladesh Red Crescent Society.

The need for Cyclone Preparedness Program (CPP)

The Cyclone Preparedness Program is one of the most sustainable and effective disaster preparedness programs in the region. It is acclaimed by experts nationally and internationally. Many of you are probably already familiar with the Cyclone Preparedness Program, or CPP. However, I would like to tell you in brief about the organization and its various activities.

Bangladesh is one of the most disaster-prone countries in the world because of its geographical situation. We have disasters such as cyclones, floods, tornados, droughts, earthquakes, fires, and river erosion. Of all these disasters, cyclones are the most dangerous and regularly kill thousands of people. This table, here, will help understand how dangerous cyclones are (**Table 1**). About half a million people were killed on November 12, 1970. In 1991, 139,000 people were killed by cyclones, undoubtedly the most dangerous natural disaster of our country.

The History of CPP

There was no early warning system organized in our country until 1965. The Bangladesh Red Crescent, with the help of the International Federation of Red Cross and Red Crescent Societies (IFRC) introduced an early warning system in the country to minimize the loss of lives and properties of coastal communities of Bangladesh. In 1966, the Swedish Red Cross, in co-operation with the IFRC introduced an early warning system in the country as a pilot scheme.

Following the cyclone of 1970, the United Nations General Assembly requested the IFRC to take the initiative in establishing and improving the

Table 1 Loss of lives in cyclonic disaster

Year	Month	Area	Wind speed	People killed
1822	May	Barisal	—	40,000
1876	October	Hatiya/Noakhali	—	110,000
1897	October	Kutubdia	—	14,000
1960	October	Noakhali	160 kph	3,000
1961	May	Meghna estuary	144 kph	11,466
1963	May	Cox's Bazar	200 kph	11,520
1965	May	Coastal region	210 kph	19,279
1970	November	Noakhali/Chittagong	225 kph	500,000
1991	April	Coastal region	235 kph	139,000

pre-disaster planning program of Bangladesh. The International Federation and the Bangladesh Red Crescent Society undertook an extensive evaluation of the program and developed a new strategy, which from February 1972 led to a new program consisting of more than 20 thousand volunteers and a telecommunication network linking 24 stations.

In June 1973, the Government of Bangladesh approved this new program, accepted the financial responsibility for the recurring expenditure, and set up a joint program management through the Program Policy Committee and the Program Implementation Board.

The Policy Committee is headed by the Honorable Minister of Food and Disaster Management, the Implementation Board is headed by the Secretary of the same Ministry, and the Director of the Cyclone Preparedness Program who is a Member Secretary of the Board.

The Goal of CPP

The main goal of CPP is to minimize the loss of lives and properties in cyclonic disaster by strengthening the capacity of coastal communities of Bangladesh in disaster management. To achieve this we have three objectives:

- ① To develop and strengthen the disaster preparedness and response capacity of coastal communities vulnerable to cyclones
- ② To increase the efficiency of volunteers and officers
- ③ To maintain and strengthen the CPP warning system and ensure effective response during a cyclone

Further, to achieve this, we have eight activities:

- Disseminate cyclone warning signals issued by the Bangladesh Meteorological Department to the community people
- Assist people in taking shelter
- Rescue distressed people affected by the cyclone

- Provide first aid to the people injured by the cyclone
- Assist in relief and rehabilitation operations of BDRCS
- Assist in the implementation of the Bangladesh Red Crescent Society Disaster Preparedness Plan
- Assist in participatory community capacity build-up activities
- Assist in the co-ordination of disaster management and development activities

Volunteer Organizations and operational method

The main strength of this organization is the volunteers. The CPP is organized in 274 unions under 32 upazilas divided into 2,845 units. Each unit comprises fifteen members. There are three committees—unit, union, and the upazila (Sub-District) Committee.

The CPP Dhaka office receives special weather bulletins containing warning signals from the Bangladesh Meteorological Department as soon as a depression is formed in the Bay of Bengal. This information is transmitted to six zonal officers over HF (High Frequency) radio. The assistant directors, in turn forward it to unions through VHF (Very High Frequency) radio. Places where VHF radio is not installed, the message is passed on by messengers. The union team leaders immediately contact the unit team leaders. The unit leaders with their volunteers spread out in the villages and disseminate the cyclone warnings door-to-door using megaphones, hand sirens, and public address systems. The unit team leaders are thus alerted and they start working immediately. In serious situations, the government gives an order for evacuation. The volunteers follow this order and advise and help people take shelter in cyclone centers or other available safe places.

After the cyclone, CPP volunteers rescue the injured and marooned people, provide first aid, and help post-cyclone relief operations.

The criteria for becoming a volunteer are permanent residency of that locali-

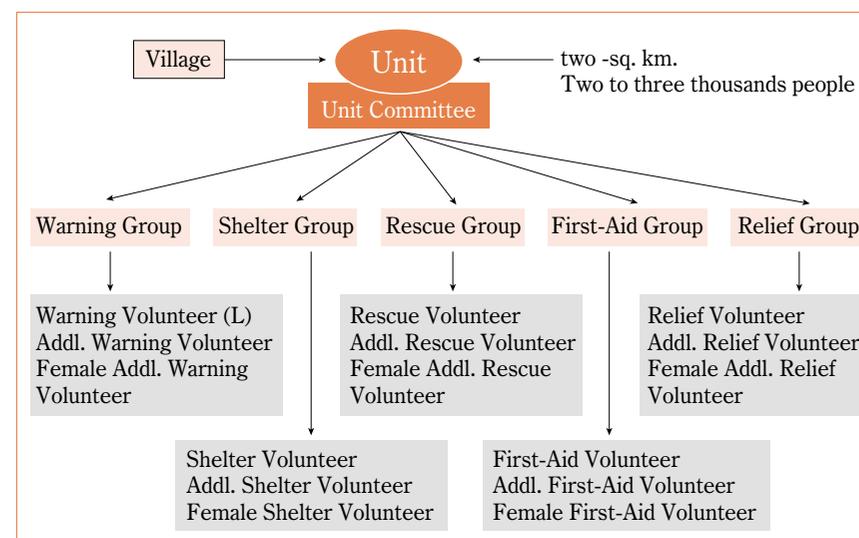


Figure 1 Volunteer organization

ty; commitment; having time and opportunity to render services; being self-supporting, honest, and sincere; having a favorable attitude towards volunteer work; and he or she should be strong, robust, and healthy. Furthermore, a volunteer must be able to read and write, and the age limit is from eighteen to 35 years.

Unfortunately, 23 CPP volunteers lost their lives while on duty, 22 in 1991 and one in 1997.

Most of the volunteers are cultivators, teachers, students, doctors, homemakers, community leaders, social workers, as well as businesspersons. Therefore, they are the community people, living in their own community. **Figure 1** is the organization chart of the volunteer organization. Of the fifteen members in a unit of volunteers, ten are men and five are women. They are divided into several working groups such as warning, shelter, rescue, first aid, and relief groups. They decide the agenda to be followed during and after the disaster.

The Bangladesh Red Crescent Society in co-operation with the International Federation has provided volunteers with different kinds of equipment for their duties. These include transistor radios, torches, megaphones, hand sirens, life jackets, raincoats, gumboots, hard hats, public address systems, first-aid kits, and rescue kits.

Figure 2 shows the CPP command area. Here, the coastal areas of Bangladesh can be clearly seen. The orange area was enrolled under this program from 1979 to 1992, the gray from 1993 to 1998, and the pale orange from 1999 to 2002.

Dissemination of Cyclone Warning Signals

This is the chart of dissemination of cyclone warning signals (Figure 3). When a depression forms, the Storm Warning Center or the Bangladesh Meteorological Department informs the Cyclone Preparedness Headquarters

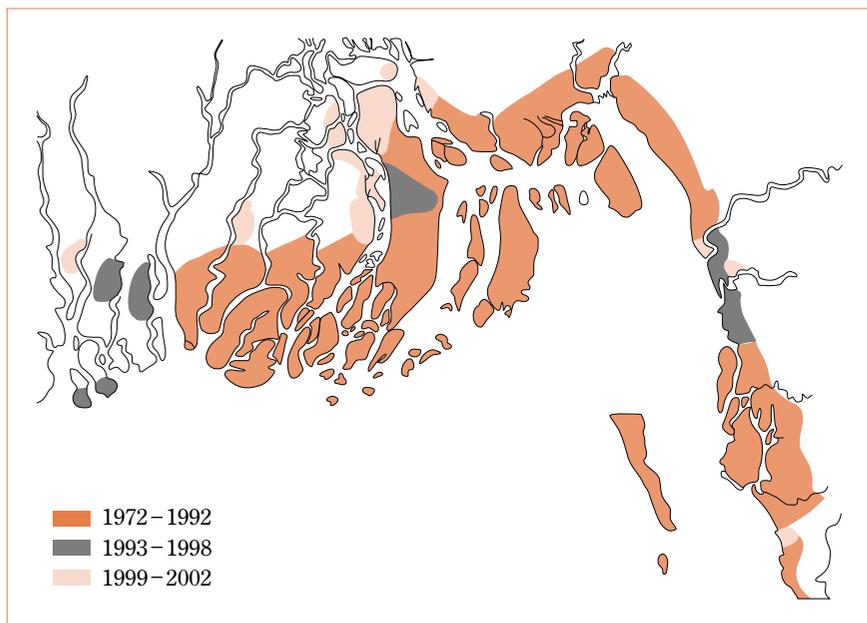


Figure 2 CPP command area

regarding this depression, its position, direction, as well as its speed. We then forward this to our zonal office. The zonal office further passes it to the union level, union to unit level and to the volunteers. For this, we have a wireless network. The headquarters of this network is in Dhaka. We have 128 radio stations located in different coastal areas. Generally, they communicate twice a day, once in morning and once in afternoon. During an emergency, we increase the contact frequency three to four times a day, or even throughout the day. Photo 1 shows a volunteer talking with another station and with the headquarters over the radio.

Figure 4 shows a cyclone shelter at the top. During a disaster, or when a

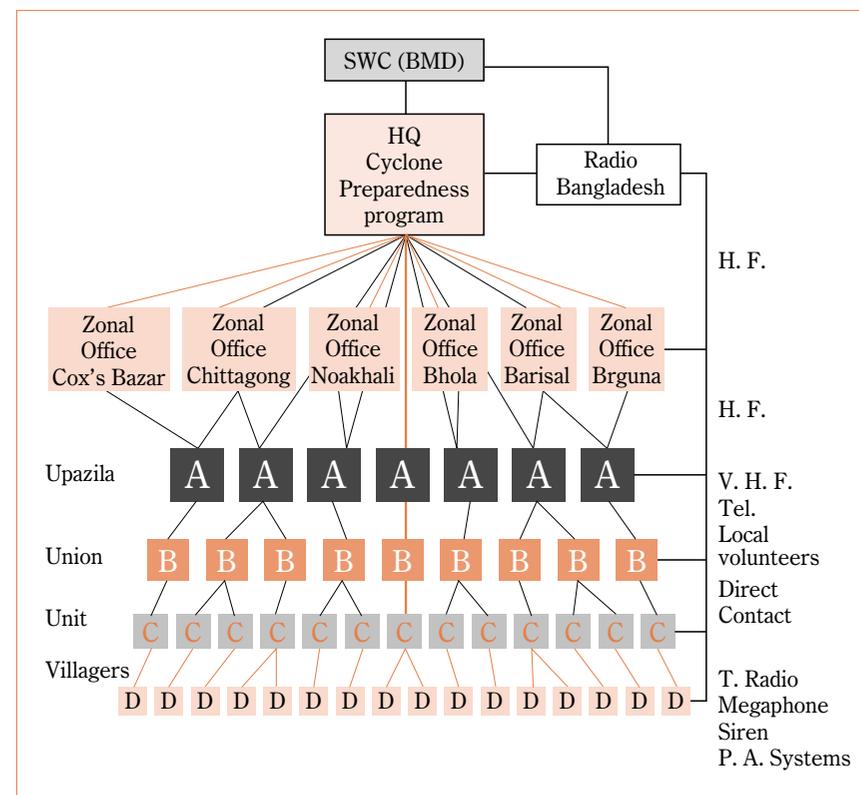


Figure 3 Dissemination of cyclone warning signals

cyclone is approaching, our volunteers request the community people to go seek shelter and save their lives. The flags shown below are the warning flags. When one is hoisted there is a signal from one to three, when two flags are hoisted there is a signal from four to seven, and three flags, from eight to eleven. The numbers indicate the danger level.

Orientation and Training of Volunteers

Volunteers definitely need some training. We provide them with orientations on Red Cross and Red Crescent movements; information on cyclones and their behavior, warning signals and their dissemination; first aid and rescue; disaster management etc. We also run some public awareness programs. These programs include volunteer's social contact, cyclone drills and demonstrations, organizing film and video shows, and awareness campaigns using radio and television programs. We distribute posters, publish leaflets and booklets, and stage dramas.

Our volunteers are also involved in other activities such as social activities during non-cyclone periods. Apart from the mandatory responsibilities, the volunteers are very much involved in performing social welfare activities by



Photo 1 A volunteer talking over the radio

integrating themselves with local government administration, NGOs, the upazila disaster management committee, educational institutions, religious institutions, social clubs and other agencies, and in events such as road accidents, fire, boats capsizing, river erosion, or epidemics. During these situations, the volunteers

support the helpless people and offer complete co-operation.

Preparedness Program for Cyclones and Earthquakes

We have also started working on the earthquake program. In co-operation with the European Commission cyclone and earthquake preparedness activities were implemented during 2004 and 2005 in Chittagong, Cox's Bazar, Feni, and Noakhali (**Table 2**). We also had a mock demonstration. Our volunteers demonstrated how to carry injured people during a disaster (**Photo 2**).

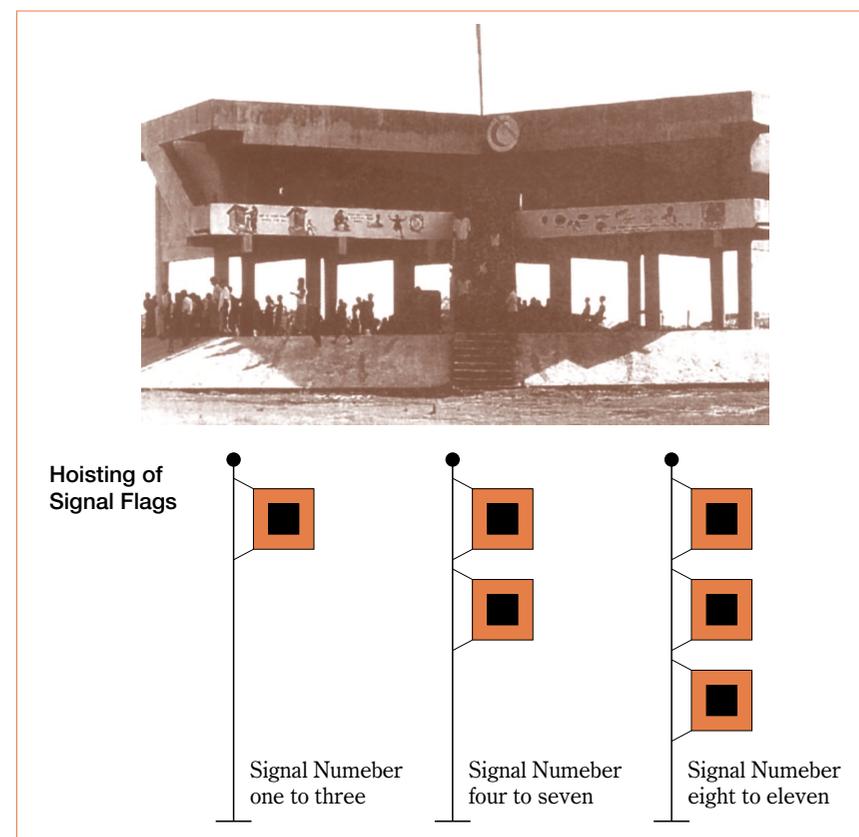


Figure 4 Cyclon shelter

Future Prospectus

Our future program is to expand command areas, which are still not covered. We intend to recruit and train more volunteers, provide more equipments, include tsunami/earthquake activities, and increase public awareness activities.

The CPP and the Bangladesh Meteorological Department were jointly awarded the Smith Tumsaroch Fund in 1998 for an outstanding co-operative effort that has already saved many thousands of lives.

Table 2 Cyclone and Earthquake Preparedness activities

In co-operation with European Commission the following Cyclone and earthquake preparedness activities were implemented during 2004-5 in Chittagong, Cox's Bazar, Feni and Noakhali :

1. Mass awareness rallies - 117
2. School student orientation programme in 55 schools- 55 courses
3. First aid refreshers training - 110 courses in 117 unions.
4. Search and Rescue training - 55 courses.



Photo 2 Volunteers demonstrating how to carry injured people

We look forward to co-operate with UNESCO. Since UNESCO is undertaking disaster preparedness program as part of education for sustainable development (ESD), we believe that UNESCO, the Red Cross, and the Red Crescent Movement can co-operate with each other regarding the disaster preparedness program in this region.

Thank you very much for your patience and kind attention.

COMMENT From an ESD Perspective

Nakayama Shuichi

The Cyclone Preparedness Program (CPP) was established by the Bangladesh Red Crescent Society in 1965, even before Bangladesh gained independence. Over the years, the CPP has expanded the geographical scope of its activities, enhanced its organization, and improved volunteers' capabilities to operate in local communities. A noteworthy point is that, overall, the CPP has proved to be a high-quality program for natural disaster preparedness. From this presentation, I have learned an ideal example of education for sustainable development (ESD) — a natural disaster preparedness program in areas where terrible disasters occur frequently. I have also identified some specific points for future discussion.

I have always maintained that ESD involves the continuous discovery of new horizons. Combining this thought with today's presentation, I have certainly gained some useful insights into the improvement of ESD.

At this point, I have two comments to offer on the presentation. First, the program reported here can act as a representative model of disaster preparedness, and the second concerns the steps required to improve ESD.

I will start with the first point. In the International Implementation Scheme for ESD (2005), 11 principal features were raised, based on the principles and values of sustainable development. Among them, the ninth item refers to decision-making in a local community, developing social tolerance, environmental preservation, and quality of life. In implementation, sufficient cooperation between activities of the national government, the local government, and nongovernmental activists is expected. According to the latest report, the purpose of the Bangladesh Cyclone Preparedness Program of the Bangladesh Red Crescent Society, with the help of the International Federation of Red Cross, is to improve the capability of locals in preventing disasters along coastal areas, and minimize the loss of lives and property due to cyclone damage. The report states that the CCP contended against the following three issues: (1) developing and strengthening the disaster preparedness and response capacity of coastal communities vulnerable to cyclones; (2) increasing the efficiency of volunteers and officers; and (3) maintaining and strengthening the CPP warning system and ensuring effective response during a cyclone. The report also remarks that the main strength of this organization is the local community volunteers, who are expected to act for the following eight activities:

- (1) disseminate cyclone warning signals issued by the Bangladesh Meteorological Department to the community people
- (2) assist people in taking shelter
- (3) rescue distressed people affected by the cyclone
- (4) provide first aid to the injured
- (5) assist in relief and rehabilitation operations
- (6) assist in the implementation of the Bangladesh Red Crescent Society Disaster Preparedness Plan
- (7) assist in participatory community capacity build-up activities
- (8) assist in the co-ordination of disaster management and developmental activities.

In general, the most critical item, minimizing damage by natural disasters, is

always facilitated by voluntary cooperation of people in the local community. The CPP has encouraged volunteers at the local community level to participate in their activities, organized them effectively, and trained them regularly to improve their capability to cope with the disasters. They are provided with sufficient practical training on handling various problems in the event of an actual disaster. The most critical point in natural disaster preparedness is cooperation between the national government, the local government, and the local community, particularly improvement of the capability of local volunteers who make an effort at the forefront to minimize the damage. The CCP seems well organized, in that it includes the essential cooperation system with the central government, which has proved effective, and consequently, the capability of local volunteers to tackle disasters is fairly high. Judging from these aspects of the CCP, I think we can say that it is a sound model for disaster preparedness against natural disasters, which suits the purpose of ESD.

The second comment is that the CCP should prepare a self-monitoring and self-evaluation system to develop the program in the future as an excellent model of ESD. The importance of monitoring and evaluating ESD program has been remarked by both the International Implementation Scheme for ESD (2005) and the ACCU-UNESCO Innovation Program for the ESD program (2005). Consequently, the establishment of a system for monitoring and evaluating the ESD is currently being discussed by UNESCO. However, it should be noted that the individual methods to monitor and evaluate should vary in accordance with programs in each area, reflecting the ESD program's policy to consider that local suitability and cultural compatibility of the methods applied are of utmost importance. Thus, self-monitoring and self-evaluation are crucial. It is, therefore, strongly expected that the Bangladesh Cyclone Preparedness Program equips itself with a self-monitoring and self-evaluation system and promotes the programs already established if they aim at acquiring international standards. In addition, an important index to prepare the self-monitoring and self-evaluation system might be whether the system would allow us to quantify qualitative depletion of how the awareness of disas-

ter preparedness and actual actions by the local people improve over the years.

Thank you.

Presenter

Mohammed Nasir Ullah

Director, Cyclone Preparedness Program,
Bangladesh Red Crescent Society

PROFILE



Born in Dhaka, Bangladesh in 1951. He received Bachelor's degree in economics from Dhaka University. He joined Bangladesh Red Crescent Society in 1972, and worked for various fields such as disaster management, public relations, training, fund raising, administration and etc. He was also in charge of Red Crescent youth development from 1975 to 1984.

At present, he is the director of Cyclone Preparedness Program of the Bangladesh Red Crescent Society since 2004.

PROFILE

Nakayama Shuichi

Professor, Hiroshima University of Economics

Commentator



As a chair of the Education Sub-Committee of the Japanese National Commission for UNESCO, he was involved in the promotion of Education for Sustainable Development (ESD) in the Asia-Pacific Region since 2003. In 2004, he worked on the situational analysis of ESD in the Asia-Pacific Region and published a working paper on Asia-Pacific regional strategy for ESD as an ESD consultant at the UNESCO Bangkok Office. Also, in 2006, he held the position of chairman of the selection committee for ESD at the Asia/Pacific Cultural Centre for UNESCO (ACCU).

He was born in 1940 in Oita prefecture. He received the degree of Doctor of Literature (D.Litt.) from Hiroshima University, and then obtained a Ph.D. from Banaras Hindu University. He worked as Professor Emeritus at Hiroshima University, where his specialization was Human Geography. After working as a professor in the Faculty of Education at Hiroshima University, he served as a professor and Dean in the Graduate School for International Development, and Cooperation and Director of the Peace Research Institute at the same University.

Community Development and Cultural Diversity

Living in Harmony with a Traditional Town Scape —Thoughts from Wakasa Kumagawa

Nagae Hisao

Chief Examiner (Curator), Cultural Division, Wakasa Town Board of Education

Commentator: Abe Osamu
Professor, Rikkyo University

1. Introduction

Hello, I am from a small town, recently named Wakasa-cho, Central Japan. This town is located in what was once the ancient province of Wakasa. The area, now in Fukui Prefecture, is known as the Wakasa area. As a member of the Board of Education, it is my responsibility to take care of the cultural heritage of this town.

This cultural heritage includes the Torihama Ruins from the Jomon period (approximately 10,000 to 300 BC). This period is known for the distinctive rope pattern design on earthenware pottery. We also have burial mounds and artifacts from the powerful clan who ruled Wakasa, dating to some 1500 years ago. Today, I will speak about a more recent addition to our cultural heritage dating from 1589—the traditional post town of Kumagawa.

2. Geography

Kumagawa is located to the north of Kyoto, the capital of Japan for approximate-

ly 1000 years, and northwest of Japan's largest lake, Lake Biwa (**Photo 1**).

Although the Japan Sea coast area is now considered to be the “back” of the country, in ancient times it was the main gateway for culture and people arriving from Korea, China, and from the more remote lands of Central Asia and to the west of China, such as India. Wakasa was the first settlement area in Japan on the Silk Route that led to Nara, and throughout the ages we have maintained a close relationship with Kyoto, Osaka, Kobe, and the surrounding areas.

3. Historical Background

Since the *Kofun* (ancient burial mounds) Period (400–600), the province of



Photo 1 Kumagawa valley

Wakasa has been sending marine products to Nara, Kyoto, Osaka, and nearby districts. The Kashiwade clan, founders of the province of Wakasa, supported the Imperial court in Nara with tributes of food, and this area came to be known as the Land of Culinary Tribute. So, it occupied an important position with regard to both resources (food) and foreign relations.

4. History of Kumagawa

The town of Kumagawa, located in a valley on the main road from Wakasa to Kyoto, is long and narrow. Toward the end of the sixteenth century, the feudal lord of Wakasa, Asano Nagamasa, recognized the town's importance in military affairs and highway traffic and supported its special development. The town quickly grew from 30 to 200 buildings. Kumagawa served as a relay point for marine products and other commodities between the seaside clans of Wakasa and the Kyoto-Osaka-Kobe area. It is said that as many as a thousand horses and oxen might be traversing through the town at any given time. Kumagawa became very prosperous.

But times change, and all things are truly impermanent. With the modernization of railways and highways in Japan, Kumagawa lost its role as a relay point for transportation. As a result, Kumagawa was all but headed for extinction. Of the 200 buildings it once boasted, fewer than half remained, a cluster of old buildings, some of them dating back to 1800.

Of course, this was the fate of towns all over the country, not just Kumagawa. Many towns that relied on traditional means of livelihood were swept under by the modern economic system and slipped into poverty and obscurity. Even in large cities, many neighborhoods were convulsed by the sudden post-war economic growth. Now, throughout Japan, all the towns and cities look identical. In fact, Japan has been steadily losing its traditional living environment.

This country is suffering from a loss of identity. I think that restoration of our

time-honored residential architecture in the provincial areas, such as rows of historic houses, is one of the means of revival. That is to say, the restoration effort is being made for the preservation of intrinsic traditional living spaces and the survival of the town; in other words, for people to continue living in the town.

The phenomenal postwar economic development of Japan has often been highly praised; however, in truth, we have in many ways lost more than what we have gained. We have suffered discontinuity between towns and villages (especially in mountainous regions), loss of traditional culture that formed the base for regional communities, and the destruction of traditional living spaces. The Japanese people must not forget what we have traded for our current prosperity. The recent incidents of murder and other acts of brutality are not unrelated to the loss of our traditions.

The movement to preserve rows of historic housing did not begin as a governmental policy, a government that is reeling under modernization, but began as a grassroots movement at the community and local levels.

5. The Japanese System of Townscape Restoration

A long thirty years ago, in 1975, in response to these community and local movements, the national government established a system known as Preservation Districts for Groups of Important Historic Buildings, designed to save the buildings that can possibly be saved. Today, there are seventy-three such districts located throughout Japan, and our own Kumagawa was the forty-second. Upon designation, the communities receive financial assistance for maintaining the buildings.

But the citizens of Kumagawa did not immediately give their unanimous approval to this system. They objected to the fact that there would now be restrictions on what they could do with their houses, which are their own

property. However, there are two sides to this issue. It can be looked at from the negative standpoint as restrictions, or positively as rules to follow in order to protect an inheritance. The people of Kumagawa chose the latter view.

6. The Town Houses of Kumagawa

Please allow me to describe Kumagawa itself in a bit more detail. Kumagawa has a 1.1 kilometer stretch of buildings running east to west and divided into three sections: upper, middle, and lower. A street runs between the two rows of closely linked old buildings, as does a canal called the Maegawa, which is always brimming with fresh, clear, flowing water. The mountains behind the old buildings offer beautiful scenic views all the year round (**Photo 2**).

Kumagawa is located on the traditional Wakasa Highway, which runs between Wakasa and Kyoto. It is now called the Mackerel Highway, because it was one of the major routes of transport for mackerels, prized during festivals and



Photo 2 Kumagawa street and canal

in daily life, caught in the fresh waters of Wakasa Bay.

7. Community Education and Action

The activities of Kumagawa residents did not begin with the architecture itself but with the study of the town on the old post road using old documents called the Kumagawa Archives. These residents wanted to learn about their history from the writings of their own ancestors. With that goal in mind, in 1975, a group of citizens formed the Group to Research Hometown History. Amazingly, it was in the same year that the policy dealing with Preservation Districts for Groups of Important Historic Buildings was created. It was also at this time that Professor Fukui Uyō, of the Department of Architecture at Fukui University, recognized and first publicized the historical importance of the buildings that were still serving as homes of the people of Kumagawa. In 1981, the initial investigation into the history of these buildings was begun. In 1983, residents formed an organization called the Committee to Protect the Kumagawa Row of Town Houses.

Then, in 1985, as an undertaking of the Japan National Trust, Professor Nishimura Yukio of the University of Tokyo, who later became a director of the selection process for World Heritage sites for ICOMOS, which is a panel of experts providing UNESCO with advice, carried out his investigation of Kumagawa. Students of Kumagawa Elementary School were allowed to work with him on this research (**Photo 3**). You can find that the people of Kumagawa, both adults and children, were able to learn about and come to appreciate the value of the historical legacy left by their own ancestors through the traditional buildings that are a part of their everyday life.

Still, the Special Committee for the Preservation of Kumagawa, as it was known at that time, had reservations about becoming a Preservation District for Groups of Important Historic Buildings.

It was then that I proposed that we change the name of the committee from



Photo 3 Field study of mud wall construction, Kumagawa elementary school

preservation to community building. That is to emphasize that, while recognizing the historical significance of the traditional buildings, we also wanted to recognize the importance of the way we live now and to see our past and our present as a whole. We should not confine ourselves to these buildings, which are our legacy, but should rather seek to incorporate them into our lives in a very genuine manner. With this in mind, since 1995, we have been calling the committee Special Committee for Community Building in Wakasa Kumagawa, and it is being headed by Kawai Kenichi.

As a result of the efforts of this committee, in 1996, some fifteen years after the research began, Kumagawa was designated a Preservation District for Groups of Important Historic Buildings. In the same year, Kumagawa was also designated as a Historic National Road and a Home of Water by the Ministry of Construction (**Photo 4**).

Among the activities of the committee are visiting similar architectural properties in other areas of the country, debating, and planning the best way to build the community, and publishing a newsletter.

Meanwhile, the community came together to renew traditional festivals and folk performing arts such as the Kumagawa Ondo, a style of traditional dancing songs, and the Festival of the Shiraishi Shrine. In 1998, the Tessen Odori, folk music and dance, which had not been performed in Kumagawa for eighty years, was brought back to life. The Kyoto Ichijoji temple, a group dedicated to the preservation of traditional performing arts, assisted in this effort, and the groups from Kumagawa and from Kyoto to continue to perform at each other's annual festivals (**Photo 5**). Members of the community were



Photo 4 Town scape improvement (telephone poles, asphalt road, etc.)
A: Before, B: After.

inspired to form the Committee for the Preservation of Traditional Performing Arts in Kumagawa.

After Kumagawa was chosen by the national government as a special site, repairs started on the traditional buildings. The need for craftsmen capable of carrying out restoration work increased, such as carpenters, plasterers, construction joiners, and tile roofers with knowledge of traditional techniques. In 1998, a group of engineers, technologists, and others formed the Research Group for the Preservation of Traditional Techniques in Kumagawa. They continue their investigations into folk house renovations today (**Photo 6**), and they have published a design guide on the subject.

I refer to the activities of these various associations, including community residents (at the center), skilled workers and technologists, people of learning and experience, and administrators, all of whom are committed to preservation and community building, as a mandala-like collaboration. It is truly an



Photo 5 Summer Tessen folk dance, Committee for the preservation of traditional entertainment in Kumagawa

organic entity wherein each part or individual has its own center, yet works in harmony and mutual respect for all the other parts, for the good of the individual and of the whole.

8. Principles behind Community Building in Kumagawa

The main goal of the community is not to create a commercial sight-seeing area, but to continue living in historical houses, in harmony with traditional culture. To explain further, their aim is not to view their heritage as something separate from their own lives, but to directly immerse or embody themselves in traditional culture. This is not to live in the past. Rather, it is to foster a culture which is dynamic, yet appreciates and incorporates the past (Photo 7). Furthermore, we can achieve the universal character by cultivating the local characteristics. This is the spirit of “Only one in the world, yet

the world is all one.” I think we can call these efforts “creative subjectivity.” By preserving and polishing the individual character of our particular area, I believe we can come closer to connect and understand with the universal character that we share.

Renovation in Kumagawa is taking place in the spirit of Giving New Life to Old Homes. Renovation of the first house was done by the architect Yoshida Keiji (Photo 8). This model renovation helped to create a positive attitude among the people of Kumagawa, some of whom had reservations about the project previously.



Photo 6 Investigation by research group for the preservation of traditional techniques in Kumagawa



Photo 7 Edo era festival A: An ‘Edo period street’ reproduced for the event, B: Edo Era rickshaw

Many people have come to see what we have accomplished in our community, and we are very grateful for their empathetic understanding of the community's lifestyle (Photo 9).

9. The Meaning of Sustainable

Now, I would like to directly address the theme of this meeting, Education for sustainable development (ESD). When translated into Japanese, it means education for development that can be maintained. Now, I would like to consider the meaning of the word sustainable. The word reminds me of an essay

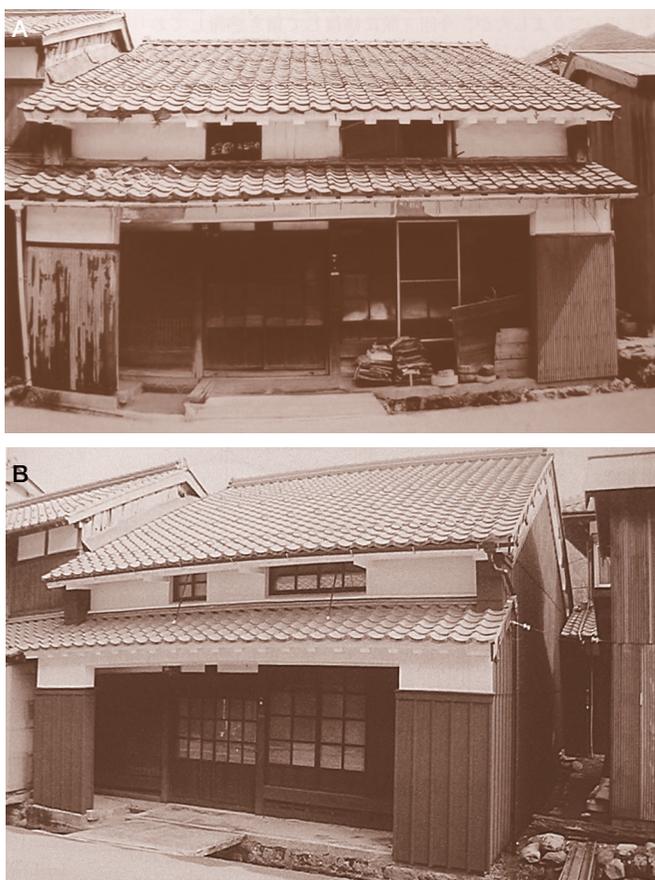


Photo 8 Renovation of a traditional house A: Before, B: After



Photo 9 Cultural exchange from Bhutan A: Welcome party for Bhutanese guests by Committee for Community Building in Wakasa Kumagawa, Feb 2005, B: Forum, C: Interaction with students of Kumagawa elementary school, D: With Special Committee for preservation of traditional entertainment in Kumagawa, E: Farewell photo of Kumagawa residents and new friends from the Kingdom of Bhutan, Feb 2005.

written some thirteen years ago by the environmental economist Tsuru Shigeto in an essay on environment and pollution in *Global Environment and the North-South Problem*. He wrote that we use the word “sustainable” to refer to the maintenance of the rate of economic growth, and he was a critic of fostering economic development at the cost of quality of life.

Maurice Strong, the Secretary-General of the Earth Summit as well as the Co-founder and Chairman Emeritus of the Earth Council, who worked on environmental problems for the UN from 1972, had a positive influence on the way we presently regard the concept of sustainability. He believed that sustainable development must meet three criteria: social equity, ecological prudence, and economic efficiency. This model gives no regard to maintain the rate of economic growth, or to the growth of GNP. Indeed, there may even be negative economic growth. The aim is to realize the richness of life!

The year before the last year, I had the opportunity to visit Bhutan, where the government aspires to achieve richness of life, and where careful attention is paid to the preservation of traditional culture. The policy makers there think in terms of Gross National Happiness (GNH). Here in Japan, as well, we have nurtured a holistic view of the world that underlies our unique culture. Matsuo Basho, the most prominent poet in Japanese “Haiku,” that is, the shortest mode of poetry, put his thoughts on the profound state of human life into the book “Follow the creation and return to the creation.” This illustrates the Japanese mental climate, where human beings and nature were inseparable. In fact, the term that we use to express the economy derives from the characters that mean government to relieve the suffering of the people. Now, however, the economy is viewed only in terms of measuring, planning, and managing wealth as mammonism.

10. The Meaning of Education: What is It We are Learning?

A philosopher has said that a time will definitely come when we need to think

of nothing but education, nothing but learning, itself. What in the world is it that we are learning these days?

11. The Fate of Capitalism

Capitalism seems to have dominated the entire world in the name of globalization through the medium of money. Michael Ende, a German writer, put thought into currency at the end of his life and left us Ende’s Last Message. I myself have pondered on money over time and came to think of it as something we have produced out of the desire for self, or “ego,” to be more precise, for self-preservation in an insecure world. Through the exchange of currency, our system of trade creates and strengthens deep barriers between the self and the other. This money-based consumerism has resulted in increased competition and emulation, which creates distinctions. Production of goods gives rise to newer goods, which results in the death of the old goods. There is competition to differentiate among and create goods, and the desire for goods that are useless than ever before. Differentiation is competition that extends upward, which is the reality of capitalism.

12. Self and Other are Not Separate

So far, it may seem that I have interpreted the society of our time one-sidedly, in my own way. Another modern phenomenon that is widely touted for its ability to bring the world closer together while, in fact, it often promotes separateness, is the so-called Information Technology revolution. It is sometimes said that IT works like a network of nerves in the body, connecting the parts to form a whole. In reality, though, this technology has not so much brought us together as one body as it has provided us with increased opportunities to go off in different directions. Is the human brain gradually exerting harmful effects on the earth like cancer cells?

The old merchants of Omi, in Shiga Prefecture, who established the modern business world here in Japan and founded many of the largest corporations, followed a system of ethics that decreed that it is the duty of merchants to

consider and make efforts to promote the public interest before one's own. In considering our own interdependence, we might learn a lesson from the teachings of these men. They developed a working axiom that stresses the organic nature of the world. It is called "the three okays." Simply put, it states: Seller: okay; Buyer: okay; Society: okay. That is to say, if a transaction is not good for any part of the Whole, trade cannot take place.

Kumagawa is one organic life, and for everyone in it to advance his/her way of being, I believe we must cross the borders of Kumagawa and pray for the good of all the people of the world. I believe this is the first step we must take with regard to the surrounding landscape and the global environment, as well. A small step in the wrong direction would lead us on the wrong journey.

It is said that if our mind is pure, our environment is pure. I cannot help but believe that we must hold this thought as we proceed. In my job, incompetent that I am, in considering the problems of society — or of this small portion of the world — I try to take into account the reality of our oneness. And so I hope that the proposed ESD will not become merely a business proposal aimed at creating outward desire for new things. Rather, I hope we can put the emphasis on the education — on learning the true way of living as One, on the reality of One World.

13. Conclusion

Finally, I would like to recite a poem that I had learned from my teacher. It says there is no distinction between self and other; we are one world.

In Japanese:

Hi wa manako, kokuu wa kokoro, kaze wa iki, umi yama kakete, wagami narikeri.

The sun is our eyes, the skies our heart, the wind our breath, the seas and mountains our body.

Thank you so much for your kind attention. I pray for the happiness of all of you, of your countrymen and women, and of the men and women of the entire world.

Q & A

Q How to deal with the preservation of old buildings with financial difficulties in maintaining them?

A Here, I would like to reconfirm what my work involves. I work not only for preservation of individual buildings but also for historical living environment with collectively located traditional buildings that represent Japan and the locality. Ordinarily familiar buildings are those that represent the locality as a collection of traditional buildings.

As mentioned in my presentation, I would like you to acknowledge that preservation of collective traditional buildings in Japan is considered a new system. It was established by activities of local residents who encouraged the entire nation to follow the same.

Please allow me to comment on these questions. I am not familiar with the exact situation in Laos and India, therefore, it is difficult for me to give a precise answer.

However, in case of Japan, residential activities created a preservation system of collective traditional buildings. This system primarily requires assessment of the heritage value of the buildings.

Based on this assessment, the local people themselves would learn the historical value of the buildings. By doing so, they can further understanding their town's history and be proud of their town. This was the case with

Kumagawa.

Conversely, I would like to ask a question to our delegates from Laos and India: Does your country have such a system? I would appreciate if you could answer this question later.

In the Japanese system, it is established that preservation of buildings, which have authentic heritage value can be financially supported by the national, prefectural, and local town governments.

For sustainable development of the town, interactions between preserved wards and outside areas are very important. Here, money needs to be circulated, just as our blood needs to be circulated.

Q You mentioned that there are 73 preserved wards. What is their current condition? Is ESD being followed in Kumagawa?

A In Japan, there are 73 preserved wards selected by the government and this number is continuously increasing.

This preservation system is not enforced by the government, but originated from the efforts of local residents. An increase in the number of preserved wards proves a certain achievement in which the following double effects are realized: Cultural contribution by protecting cityscapes as historical heritage, and economic contribution by stimulating the local economy, which has been polarized due to urban areas. In Kumagawa, people not only preserve buildings but they also continue to gather in groups to preserve, study, and interpret old documents and traditional technologies.

I would like to rephrase here that “voluntary” discoveries and protection of both tangible and intangible traditional cultures of the nation or local areas could become a starting point for sustainable development. However, I have

not heard of this view in ESD operations by UNESCO.

Development should not be dependent, forcible, and blindly follow modern civilization and urban areas. Instead, people and local residents of each country should respect their history, culture, and traditions and humbly understand and more importantly preserve them for future generations.

It is because deep wisdom and truth, which was developed and protected by predecessors over years, reside in history, culture, and tradition. Things and events, which are not scientific from a modern perspective, hold deep truth and people’s wishes. They have power of succession, which means life. This is the reason why discontinuation of history, culture, and tradition is referred to as extinction of an ethnic group.

Today, in the twenty-first century, capitalism seems to be leveling out the entire globe. Because of this, we should be deeply rooted to our individual history, culture, and tradition for further development. Realizing the development, based on personal history, culture, and tradition, we would rather acquire universality. In other words, relentless sophistication of unique individuality would actually become a means to achieve a universal world, which seems quite contrary. Because of this, one could accept others’ individuality. I think that people based on these principals could truly be called internationalized individuals.

I believe that the common wish for all humanity is voluntary development based on prayers for history, culture, and tradition of the country or the local area

COMMENT From an ESD Perspective

Abe Osamu

While many of the suburban cities in Japan have problems such as depopulation and depression that make the cities unsustainable, there are some cities such as Wakasa town, which are making steady efforts toward revitalization of the region. These activities for revitalization are just one example of “Education for Sustainable Development” (ESD), which is unique to Japan. ESD is comprehensive, interdisciplinary, and integral, and the Wakasa case contains many of these factors of ESD. Due to the time limit I have here, I will talk about the following three points from the ESD factors noted in the IIS along with a case example:

1. ESD and learning processes and methods
2. Roles of value
3. Spreading the concept of sustainability

First, as for the learning processes and methods, they have contributed to the implementation of non-formal education (NFE) among the residents. The residents learn from one another through interaction. They interact with people and various resources of the region as well as with the world. Through these interactions, the residents discover the history, culture, and traditions of Kumagawajuku and understand their importance. This learning process can revitalize the region and improve the residents’ lives. The process of interaction among the residents, and between the residents and the region, contribute to mental independence and establishment of identities. Interaction is a major learning method within ESD, and this type of bottom-up method is typical of learning in ESD.

Second, as for the roles of value, an organization of residents has contributed to the cultivation of values over a long period of time, and the residents have

helped establish these values through non-formal education. By values, I mean “respecting people, history, culture, nature, and diversity.” The IIS includes all of these values. Activities to construct a region are important processes that present these values and therefore should be included in the ESD. The residents who understood the values of Kumagawajuku and themselves, started to think about how they could express those values in a concrete manner and decided to work on “construction of sustainable Kumagawajuku.” The fact that the residents’ attitude resulted in the transition from preserving historical buildings to re-constructing the region, which is the next step, suggests that these efforts in Kumagawajuku were the results of ESD, which encouraged the residents to learn.

Finally, let me talk about spreading the concept of sustainability. The activities to construct the Kumagawajuku region through interactions with various resources of the region, such as people, history, culture, and nature, provide the residents with the opportunities to recognize and understand the importance of sustainability. Unfortunately, in terms of revitalization of the local economy, such as development of indigenous industries and sustained tourism, this case example has yet to reach the point of being sustainable. However, it can definitely be said that ESD is aiming at bottom-up sustainability.

The activities in Kumagawajuku are just one example of ESD in Japan. Construction of sustainable regions based on ESD, which have integrated environment, economy, society, and culture, are implemented all over Japan. In these ESD efforts to construct these regions, the approach of non-formal education through various interactions by the residents is well integrated. This suggests that non-formal education as well as formal education received by adults, who play the major role in construction of the regions, is the main field of ESD. The ACCU-UNESCO Asia-Pacific ESD Program focuses on non-formal education, and the case of Kumagawajuku also indicates the role of non-formal education in ESD.

Environmental Education

A National Network to Realize Education for Sustainability

Lynette E. Brown

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Secondary School, Taupo-nui-a-Tia College

Commentator: Nagata Yoshiyuki

Senior Researcher, Department of International Research and Co-operation,
National Institute for Educational Policy Research (NIER)

*Kia ora tena koutou katoa
Ki te whare e tu nei, tena koe
Ki te whanau e huihui nei, tena koutou
Ko Tauhara te Maunga
Ko Waikato te awa
Ko Taupo-nui-a-Tia te moana
Ko Lynette Brown toku ingoa
E mahi ana ahau kei te tari a kura Taupo-nui-a-Tia College
I roto I te wahanga kai whakaako taiao
No reira, kia ora tatou katoa*

Good morning. My name is Lynette Brown and I am from Taupo-nui-a-Tia College, New Zealand. I introduced myself in Te Reo Maori, our national language. In my introduction speech, I acknowledged the importance of environment and stated who I was and where I come from. I live on the shores of the most beautiful lake in New Zealand—Lake Taupo (Figure 1).

Presenter

Nagae Hisao

Chief Examiner (Curator), Cultural Division,
Wakasa town board of education



He worked at the Wakasa town board of education as an officer, with the responsibility of protecting cultural properties. Since then, working toward conducting a survey of ancient tombs, which are nationally- and prefecturally-designated cultural properties located in the town; in addition, he is working on the survey, conservation, maintenance, and utilization of the traditional buildings in “Kumagawajuku.” Kumagawajuku was chosen as a national conservation area for traditional buildings and historic national roads, and is among the top 100 best water villages; therefore, there has been a steady improvement of the landscape. Maintenance of the ancient tombs is of great importance and will be dealt in the future. His goal is to deepen my current work, the conservation and utilization of cultural properties, to the action which he calls “creative subjectivity.”

PROFILE

PROFILE

Abe Osamu

Professor, Rikkyo University



Majors in environmental education and ESD. Previously a full-time instructor at the University of Tsukuba and assistant professor at Saitama University. Currently working as a professor at Rikkyo University since 2002, and also serves as the head of the ESD Research Center at Rikkyo University, representative director of the Japan Council on the UN Decade of Education for Sustainable Development (ESD-J), committee member of the International Union for Conservation of Nature and Natural Resources (IUCN-CEC), director of Japan Environmental Education Forum, director of the Nature Conservation Society of Japan, steering committee member of the Japanese Society of Environmental Education (representative of Kanto Branch), director of Japan Environmental Council, specially appointed coalition member of the Science Council of Japan, and other positions.

Commentator

I work as a teacher of environmental education at Taupo-nui-a-Tia College. My role involves working with secondary or high school students as a teacher of biology, science, and environmental education (EE). I also work with the teachers in my school, since they integrate environmental education across the curriculum. I would like to take this opportunity to thank the Asia/Pacific Cultural Centre for UNESCO (ACCU) for giving me the privilege and honor of presenting the New Zealand perspective on education for sustainability (EFS). I would also like to acknowledge the work of Dr. Barry Law, who is the national coordinator for the national team that I am going to talk about. He sends his regards to many people here. I would also like to acknowledge the work of the EFS Coordination Team, which I am representing here today.

Expected Outcomes of the National Coordination Team

The New Zealand Ministry of Education recognizes the importance of education as the key to a sustainable future, and in response to this, established the national coordination team. The team comprises approximately 20 people,

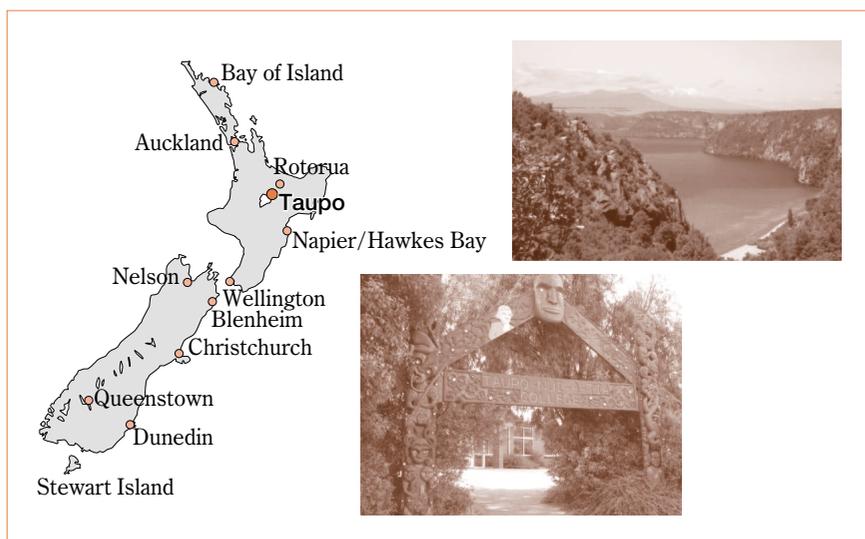


Figure 1 Lake Taupo and Taupo-nui-a-Tia College

with one national coordinator, a number of full- and part-time regional coordinators, representatives from colleges of education and universities and practicing teachers like myself. The team covers the whole of New Zealand, and we are working with teachers, students, and school managers in both primary and secondary schools. We work in both mainstream schools and kura, which are schools that reflect the Maori cultural identity through Te Reo Maori and cultural aspects through Tikanga Maori. We are also forging links with the community, since no school works in isolation; every school is part of a community.

Funding for this team comes through National School Support Service contracts from the government to the universities, which are considered as providers of teacher professional development. The main purpose of this team is to provide quality professional development to our teachers. Because the team is funded by the Ministry of Education, the Ministry has prescribed certain goals that we have to work toward. These goals are briefly presented in Table 1.

The first goal is to use data to inform our practice. We work with teachers, who take into consideration data from schools to inform their practice. This enables them to know which program best suits their students. We also consider data on ourselves and the way in which the team works. We work and plan strategically to offer the best professional development to the teachers in our schools.

The second goal is to offer professional development programs that challenge teachers' existing beliefs, with the aim of changing their practices. This includes a focus on attitudes and behavior or the linking of the head with the

Table 1 Ministry of Education Goal

- Data gathering and use of data
- Challenge existing beliefs
- Content knowledge and pedagogical content knowledge
- Inclusive school culture and professional learning communities

hands and the heart, which was described as the spiritual aspect by Mr. Sombath Somphone.

Third, the aim of this professional development is for our teachers to give our children the opportunity to become lifelong learners in order to empower them to become responsible citizens since they are our future decision-makers. Through this role, our focus is on enabling students to become involved in their own learning, to achieve results, and take action. I was impressed by Mr. Sombath's speech yesterday, when he talked about action learning. In New Zealand, we promote education through activities rather than through learning in school.

The fourth goal prescribed by the Ministry is to help establish inclusive school cultures and professional learning communities. These refer to professional learning communities formed within schools, between schools, and by reaching out into the wider community. Therefore, we have links to non-formal education. We encourage our teachers to use real-life examples from the local environment and a relevant and practical context for learning. This makes lifelong learning relevant for our students.

Our Vision

What would be an ideal way for students to learn English, math, science, or social studies? The study of the local environment—be it water quality, waste reduction, or the beautiful biodiversity that exists in New Zealand—provides a perfect learning context for this.

Innovation

The EFS or national coordination team has developed a long-term strategic plan with the vision that New Zealand is a nation of innovative and motivated people who instinctively think and act sustainably. To achieve this, the national team is working in partnership with schools, with our kura, and with key stakeholders, to be catalysts of change in New Zealand society, through

education. We model the sustainability ourselves; we are living examples of what we are trying to get our teachers to do today.

The operation of our team is characterized by innovation. The establishment of partnerships, integration of the Maori perspective, working under the Decade of Education for Sustainable Development (DESD) umbrella, and the contribution made to the national policy are all part of how the national team works. I will explain each of these points briefly.

The national team has divided itself into six working groups, each one working in an integrated manner.

Data Gathering

There is an emerging field of research in EE/EFS in New Zealand. However, the research is ahead of practice, and currently, there is not enough support at the government level, to bolster the changes that are emerging from the data. The national EFS team has been innovative and is looking at the evidence regarding shifts in teacher practice, teacher beliefs and expectations, and professional practice, and how this is impacting student achievement. We are gathering evidence ourselves on the establishment of inclusive school cultures by collating data that identifies issues, barriers, and future opportunities for EFS in New Zealand schools.

Research

The team has been involved with research in schools across New Zealand. This research is based on the partnership among coordinators, teachers, students, and the schools. It was funded by a research grant, and is a collaborative research project with one of our universities. The aim of the research was to find out if and how the work of the team is making a difference in teacher practice and student achievement, and how learning in a natural, local context is more meaningful for students. Initial results suggest that the work of the EFS team has had a positive outcome for the students.

Ropu Ako: Teaching and Learning

The third team we have established is called Ropu Ako, which means quality teaching and learning. From a cultural perspective, this team is focusing on experiential learning, cooperative learning, and inquiry-based learning through relevant, local examples.

We are producing resources that will support teachers and students to take action. Theory and practice are merged into quality booklets—with real-life examples—that will be available to teachers at all levels; these real-life examples will showcase what students can achieve. Students and teachers can use the examples as templates for developing their own action projects. Cultural views are highlighted to emphasize the relationship of the indigenous people with the environment. The main theme of these resources is students taking action.

Assessment for Learning

The fourth team we have established is focusing on assessment, especially the linking of relevant, authentic learning to assessment and qualification. This work has involved regional coordinators working with the government, the New Zealand Qualifications Authority, as well as students and teachers. We are also working with the Department of Conservation to develop unit standards in EFS, so that our assessments are based on real-life examples and the natural environment.

Resource Dissemination

The next team is responsible for the distribution of resources, research, and information on EFS. This team has worked in partnership with Ultralab South (a computer company) to develop an interactive blog site (<http://www.core-ed.net/esf/>). The site is not merely a duplication of existing web sites, but is, in fact, a portal for discussions, tools for action, useful links, case studies, National Certificate of Educational Achievement (NCEA) assessment tasks, funding, current research, and events. The site is opera-

tional and I have included the link in your notes for your reference.

Pre-Service Teacher Education

The final team, established late last year, is focusing on pre-service teacher education. Our data indicated that there was a need for us to address the training of teachers before they join our schools. Our team has proposed a plan to work with the providers of teacher education; this project, however, is still in its infancy stages.

Partnerships

The EFS team works on the basis of partnerships. Although the EFS team appears in the center of this diagram (Figure 2), our work is based on many partnerships with a large number of organizations. I will explain one or two of

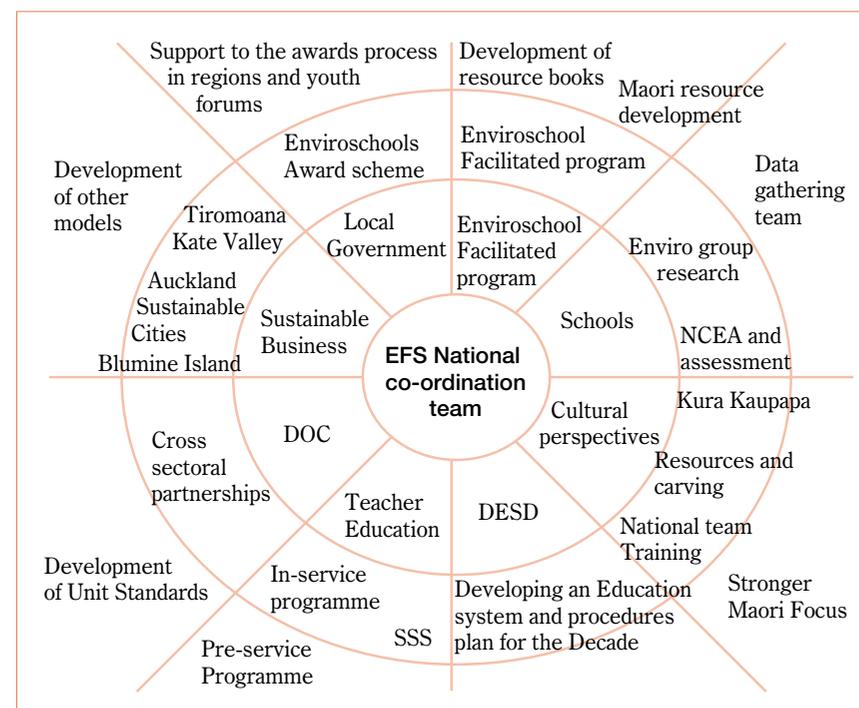


Figure 2 Partnerships with many organizations

these partnerships.

Enviroschools Foundation

In New Zealand, we have a program called Enviroschools. This program is a whole school approach to sustainability. We have a very strong partnership with the Enviroschools Foundation. Enviroschools are based on the following five guiding principles:

- ① sustainable communities
- ② environmental education
- ③ genuine student participation
- ④ inclusion of the Maori perspective
- ⑤ respect for the diversity of people and culture

The abovementioned five principles underpin all the programs in schools, the programs being based on four key aspects.

- ① the living curriculum: what is taught to our students
- ② the physical environment: our students are enhancing our environment to make schools harmonious and peaceful places.
- ③ the way the school manages its organization: the students provide input with regard to the way the school is run.
- ④ the operational practices, i.e., the way the school operates: we are encouraging our schools themselves to be sustainable.

Currently, across New Zealand, there are over 80 schools involved in the Enviroschools program. An example of the activities students are engaging in is planning for the environment. Teachers, principals, and parents are following these plans and they are noticing a difference in the school culture.

Department of Conservation

The Department of Conservation in New Zealand has the mandate for protecting our natural flora and fauna. Our relationship with this organization is based on this common desire to protect New Zealand's natural environment.



Photo 1 Students gathering data on different species

Students are involved in a range of activities, right from the local monitoring of native species to winning national awards. **Photo 1** shows students gathering data on different species in the native bush; however, it is the students who are teaching the teachers how to use the technology. The regional coordinators in the EFS team are working alongside the Department of Conservation staff to offer our students the chance to participate in hands-on conservation projects. They are also working with the Department of Conservation toward the development of assessment qualifications.

Sustainable Business Network

Another partnership involves the team working with the sustainable business network, specifically with the Untouched World Foundation, which is a business in New Zealand. Untouched World has sponsored experiences for students in the natural environment. Students go into the natural environment and take action. Examples include Blumine Island, a conservation-based project, and sustainable cities based in Auckland, wherein the students examined issues of waste and transport. Another project relating to waste is at Tiromoana, which is a major landfill site for waste. Students are given the

opportunity to develop a youth perspective on real-life issues. Their findings and recommendations are presented to the decision-makers and their voices are heard.

Team members are involved with the facilitation and organization of national and regional forums for our youth, for example, the Sir Peter Blake Trust. Students from a range of schools convene for residential forums. Over five days, they take part in field trips, presentations, and workshops based on real, relevant issues. The findings are presented to the government and regional and local authorities. The regional coordinators continue to support the students when they return to their schools. Again, the “hidden teacher” in our students is encouraged and by working together in a collaborative and cooperative manner, they are empowered for lifelong learning. We encourage our

students to become our decision-makers.

Maori Worldview

I would like to talk very briefly about the innovation shown by the team in the way we value indigenous knowledge. The Maori perspective is incorporated in all the work we do. Indigenous knowledge is considered highly valuable. We have much to learn from our indigenous people, who have had a very long relationship with the natural environment, and we



Photo 2 The carving as a symbol of the mission—design of which incorporated both the traditional and contemporary views

wish to acknowledge this. As a symbol of our mission and work, a beautiful carving, which was a collaborative effort between teachers and students, was made (**Photo 2**). The design incorporated both the traditional and contemporary views and the key concepts of environmental education, biodiversity, sustainability, interdependence, and personal and social responsibility for action. The pedagogy that promotes action, i.e., experiential learning, cooperative learning, and inquiry-based learning are represented in the carving. The carving has been gifted to UNESCO in New Zealand and to the Ministry of Education for the duration of the decade, just to remind everyone of the pedagogy of education for sustainability and the importance of the Decade.

UN Decade of Education for Sustainable Development (UNDESD)

The EFS team has members on the committee of the UNDESD in New Zealand. Much of our work in schools is under the umbrella of the Decade. EFS is central to the action plan, and educational goals have been identified through the New Zealand action plan. The Ministry of Education in New Zealand will be playing a core role in this action plan by providing support for professional development for teachers, and tools to measure how we are moving toward sustainability.

Government Policy

Currently, New Zealand has very few formal documents that support EFS. The available tools include the Guidelines for Environmental Education in New Zealand Schools and See Change, a report by the Parliamentary Commissioner for the Environment. However, the team is very proactive in its contribution to the development of a new policy. We are involved with the current review of the New Zealand curriculum including the development of the future focus themes, of which education for sustainability is one. Key competencies that provide our students with the skills for lifelong learning are identified in the draft curriculum and ongoing work is being carried out on the development of issue statements for all essential learning areas, including

the concepts of sustainability in math, English, science, social studies, PE, and art.

Conclusion

In conclusion, I have presented a very brief outline of our national network for EFS, which has met with success. We have a national team and a national coordinator. I would like to read out a quote by Dr. Barry Law, our coordinator: “At the summary session of the first three years of our national network of education for sustainability in New Zealand, evidence points to a change in teaching practice, some change in school organization and operational management, and increased students’ motivation and students’ embracing education for sustainability.”

The EFS team has proposed a strategic plan to address curriculum design and implementation to change the mechanistic and traditional approaches to schooling. This will involve a transition to a more socially critical focus, which is necessary to bring New Zealand closer to sustainability.

No reira, tena koutou, tena koutou, tena koutou.

Thank you.

Q & A

Q How does education for sustainability fit with the policy of the New Zealand government, which has been promoting the privatization of a large part of the economy? It seems to be slightly contradictory. Could you please clarify this?

A The government is supporting our team because they recognize the importance of sustainability, and yes, the privatization of many organizations has taken place in New Zealand. However, these organizations are

now required to address sustainability in their operations. Thus, as the team, the goal is for our teachers to give students an opportunity to become lifelong learners and to lead these schools toward sustainability. It is possible that in a few years, some of our students will be working in these companies and will be the leaders of the companies.

Q Thank you for the wonderful presentation; it was very informative. I understand that New Zealand is offering assistance to some of the Pacific countries and I was just wondering if you could talk a little about the type of work you have done in the Pacific countries with regard to the program that you are running in New Zealand.

A So you want to know what we have done in the Pacific countries?

Q Or, if you have extended the program to some other countries in the Pacific.

A We are a team of educational advisors, and the only work in the Pacific that I am aware of is that a part of our team in Auckland had worked in some of the Pacific nations, the Cook Islands, and Tonga. I apologize, but apart from that, I am not aware of any other work that has been done in the Pacific. I would have to go back to New Zealand, find out, and then get back to you.

Q I was very impressed by what New Zealand is actually advancing with regard to education for sustainable development (ESD). Could you briefly explain your experience of the development of the national action plan of ESD? The reason I am asking you this is that in Viet Nam, the ESD National Committee has just been organized with 20 high officials, comprising vice ministers of relevant ministries. There are so many different teams of ESD, and it can be rather difficult to prioritize and formulate a national ESD

action plan. Therefore, could you kindly explain how you developed the national action plan and long-term strategy regarding ESD?

A Unfortunately, at this time, I am unable to do so. Although I am representing the national team, I am not actually on the decade committee. I would be more than happy to talk with you later, and have Dr. Law, who is on the committee, to contact you.

A If you don't mind, since I am quite familiar with the process in New Zealand as the Asia-Pacific ESD coordinator, I would like to answer your question very briefly.

What happened in New Zealand is that in late 2004, a conference, bringing together more than 200 people interested in ESD, was organized. From that meeting, this group of people proceeded to establish the national committee for ESD, of which Lynette's colleague, Barry Law, is a key and founding member. This committee includes representatives from the Ministry of Education, Ministry of Environment, indigenous people's representatives, youth, the media, the chairman of TV New Zealand, and all those who are interested in promoting ESD; thus, the committee comprises a whole bunch of different people. Also related to this comment, something that would be of broader interest to everybody in the room, is one of the projects that UNESCO Bangkok is involved in. I would now like to present our own view of what different countries are doing in terms of developing action plans precisely to help assist countries that are just starting out, such as Viet Nam and Thailand. Thus, we are working on a publication that will feature what has been taking place in Pakistan, Iran, China, and various other countries such as Japan, Australia, and of course, New Zealand in order to help initiate the process of dialogue and share ideas about what is really taking place with regard to the setting up of different committees.

Q Just one more question, Lynette, do you actually work at all levels of the education system like you do in the primary schools? Do you try and impact all these different levels of education?

A The mandate that we have is from the government since we are working in the field of formal education in primary and high schools. However, because we are innovative and very proactive, we have actually been working in the area of early childhood education and are starting to work in the area of tertiary education.

Q Thank you. Your presentation had some new terminology. You spoke about education for sustainability, and thus, we are at a meeting concerning education for sustainable development. When you use this term, is there any difference between education for sustainability and education for sustainable development?

A The national team itself wants their team to be called Education for a Sustainable Future. However, the New Zealand government wants us to be called Education for Sustainability, and my understanding is that in this context, both the names mean the same as education for sustainable development.

COMMENT From an ESD Perspective

Nagata Yoshiyuki

My name is Yoshiyuki Nagata; I am from the National Institute for Educational Policy Research (NIER) of Japan. We have been working in the field of international cooperation in education for nearly 40 years, mainly by organizing regional seminars and meetings. I am pleased to know that Dr. Barry Law, who collaborated with us on one of the environ-

mental education seminars, is now a key initiator working toward sustainability development at various levels in New Zealand. Having listened to Lynette's presentation, I have come to realize that some of the visions he had conceptualized then are now materializing.

My first encounter or experience with sustainability in New Zealand occurred two years ago during a visit to one of the Kura Kaupapa Maori high schools. At that time, the film "The Last Samurai" was showing in theatres, and one of the Maori students had asked me, "Did Samurai warriors eat their enemies?" I said, "No, we are not barbarians!" However, the student replied, "As part of a ritual, we did and performed a dance called Hakka." Have you heard of Hakka? You may have seen it in a game featuring the All Blacks rugby team. Before they begin a game, they perform a dance; this is Hakka. I do not know whether it is true, but according to the student, the people of the Maori tribes would cannibalize their enemies. However, when he insisted that they did not destroy the entire tribe, I remember thinking that this essentially captures the wisdom of the Maori tribe or the indigenous culture of New Zealand. They have a sort of wisdom that is 'midway' and avoids the extremes. Thus, this culture of sustainability has survived in New Zealand with different forms of wisdom. I believe that there must be such a cultural background underlying Lynette's wonderful networking project.

The National Coordination Team in New Zealand has produced an innovation that is different from the others that we have had the chance to observe and listen to today; this is because it is basically a coordinating network, stimulating and encouraging individual innovations that are culturally and locally relevant. Therefore, it is not an individual innovation working for itself, but rather, functioning for others as the center of networking. This is highly stimulating.

First of all, some of the features Lynette pointed out in her presentation

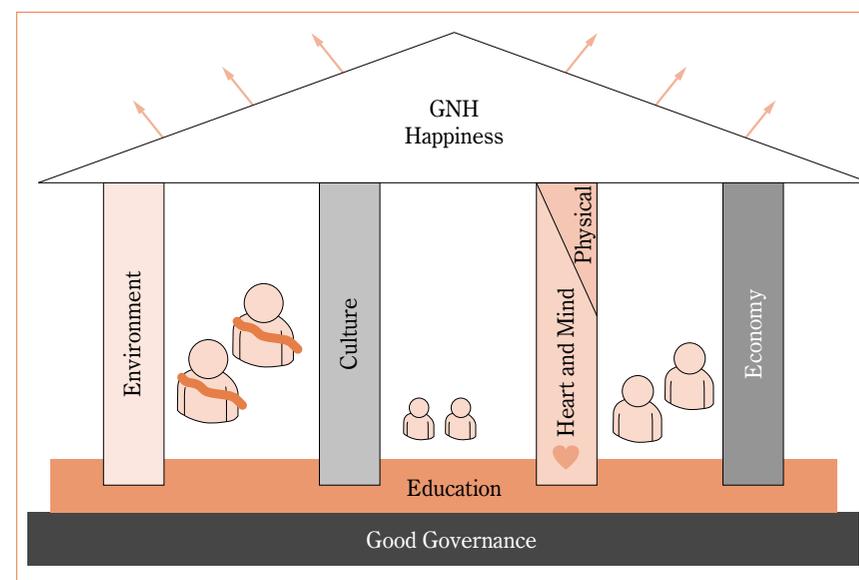


Figure 3 ESD model presented by Mr. Sombath in his keynote speech

reminded me of the nature of the problems we face in our daily lives. The problems we generally face—especially in the era of globalization—are multi-layered. The approach to the solution of a problem should therefore be multi-dimensional, multi-level, multi-directional, and multi-storied. As Lynette demonstrated, all the sectors on the stakeholders in the program are intricately interwoven and interrelated. This is an excellent example of network innovation.

Further, we can observe a support mechanism in this case. There is a support mechanism underlying the active innovations in New Zealand. Lynette's presentation secondly reminded me of Mr. Sombath's diagram shown yesterday (Figure 3). The efforts by the National Coordinating Team and EFS represent the four pillars on this screen. One of the pillars on the left is the "environment" pillar, the second one is "culture," and the third is the "spiritual" as well as "physical" pillars. Further, there is an "economy" pillar representing business. These pillars lead to happiness:

genuine national happiness (GNH). On the basis of the pillars in New Zealand, the networking or coordinating team provides education at the nationwide level. In addition, the governance is effective because the team addresses people's voices at the grass-root level and meets with the committee to prioritize national curriculum and to capitalize on the national budget and the local subsidies. Further, they encourage students to engage in decision-making in order to groom them into good governors in the future. The direction they are trying to take through this kind of new innovative network is obviously one that will lead to a GNH society.

Lynette's presentation lastly reminded me of the words from a book written by the Rome Club, which obviously had a substantial impact on the idea of sustainable development. According to these words, we live in such a limited world, as emphasized by Dr. Arima in his presentation yesterday. However, they stress that there are only two unlimited or infinite things in the world. One of them is the future generations. If we succeed in keeping our world sustainable, the statement that the number of future generations is unlimited would be true. However, the other concept is "our own creativity." If we cherish the creative power within our bodies and minds, and if we can encourage children and the youth to make the most of this power for their optimistic futures, I believe that our world will be given an opportunity to be sustainable.

I believe that Lynette's working team is providing such opportunities to community and society as a whole, i.e., opportunities to use the creativity in order to achieve a sustainable environment and culture, a sustainable spiritual development, as well as a sustainable or benign economy. This type of supporting network for sustainability—serving not only as a financial support but also a moral support—holds the key to enhancing the sustainable levels of the overall educational society.

Thank you.

Presenter

Lynette Brown

M. Env. Ed (Hons)
Teacher of Education for Sustainability,
Taupo-nui-a-Tia College, Taupo
Member of the National EFS co-ordination team.



Lynette is a teacher of Environmental education (EE), biology and science. In this role she is responsible for the integration of EE across the curriculum, and the establishment of environmental projects at the school.

Lynette recently completed a post graduate degree in EE from Griffith University. Her research focused on the barriers to the integration of EE in secondary schools. She is passionate about using the local environment as a context for teaching and has developed many units of work based around Lake Taupo.

PROFILE

PROFILE

Nagata Yoshiyuki

Senior Researcher, Department of International
Research and Co-operation, National Institute for
Educational Policy Research (NIER)



As senior researcher of the National Institute for Educational Policy Research (NIER), joined NIER, an associated Centre of UNESCO in 1995.

He was committed to a variety of international programmes in collaboration with UNESCO, etc. and also comparative studies on educational development mainly in Asia and the Pacific. Recently as a representative of ESD Study Group for the Asia-Pacific Region, he initiated case studies on ESD in the region.

PhD (Education), International Christian University, Tokyo.

He is the author of *Alternative Education: Global Perspectives Relevant to the Asia-Pacific Region* (Springer, 2006). His other publication includes articles on the issues of ESD. (<http://groups.google.com/group/Education4SD>)

Commentator

Innovative Approaches to ESD: Challenges of Asaza Project



Asaza Project

— Citizen-initiated Cooperative Project Connects Society, Environment and Economics

The “ACCU-UNESCO Joint Regional Seminar for the Promotion of Education for Sustainable Development (ESD) in Asia and the Pacific” held this time has been organized to deepen the understanding of ESD. However, since ESD focuses on environmental education, this Seminar dealt with subjects slightly different from the perspective of environmental protection. In order to maintain an overall balance, we selected an organization that works on environmental conservation for the visit. A large number of ESD operations in Japan tend to be inclined toward one of the three pillars—society, environment or economy—but a comprehensive perspective is inevitable for ESD activities. Considering this point, organizations which meet the below criteria were selected to be the subject of observation for the Asaza Project:

- Performing a wide spectrum of environmental education
- Participation of a wide range of residents from children to adults through the construction of social networks
- Continuous activities for the creation of economic benefits
- Having a range of activities that can be completed in a day

Outline of Areas of Activity for the Asaza Project

Kasumigaura, one of the main bases of the Asaza Project, is the generic name for the area including the three lakes, Nishiura, Kitaura, and Sotonasakaura, and the three rivers, Hitachi-tone, Wani, and Kita-tone River. It covers many water bodies, thus becoming the second largest in Japan, following Lake Biwa. Lake Kasumigaura spreads across the northeastern edge of the metropolitan area from southeastern Ibaraki to northeastern Chiba Prefectures. The total surface area of the lake is 220 square kilometer, but the shoreline is 252 kilometer, which is longer than that of Lake Biwa (230 kilometer). The geography is so indented that the basin area is about ten times the lake surface area, a close equivalent to one third of Ibaraki Prefecture. The characteristic of this lake is that the depth averages to only four meter (Figure 1).

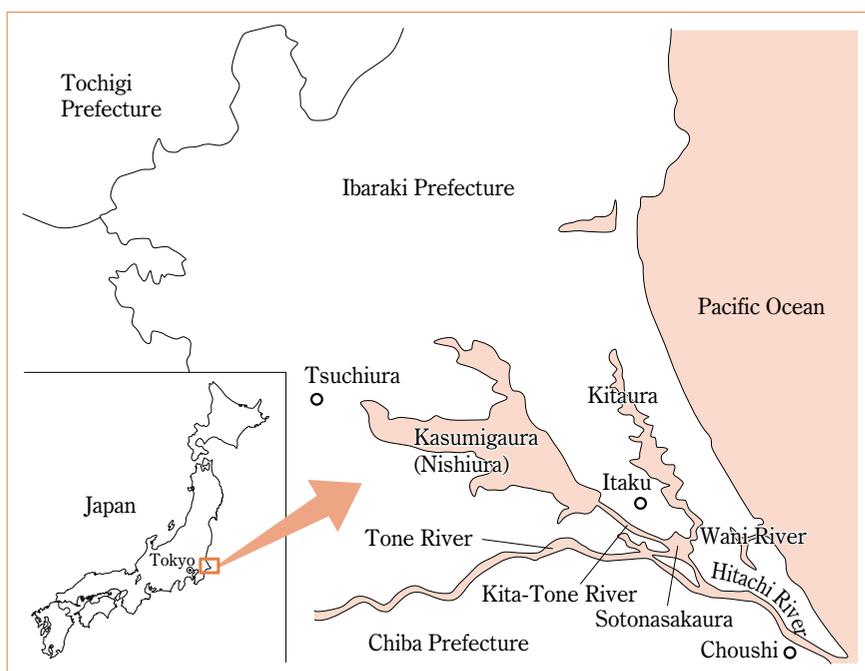


Figure 1 Lake Kasumigaura

Kasumigaura has long been familiarized by and has supported the people residing in its basins, resulting in its appearance in the “Hitachi Fudo Ki,” compiled in early eighth century, in the name of *Nagare Umi* (means “flowing sea”). However the environment surrounding Kasumigaura changed drastically during the economic growth that occurred from the 1960’s. Large-scale development, including the construction of floodgates at the Hitachi River and the Kashima Coastal Industrial Zone at the lower reach of Tone River, has continued in various parts of the region. As a result, water used for agricultural and industrial purposes, domestic wastewater, and municipal discharges from over ten million people settled in the urbanized residential area in the middle river areas and upstream were poured into the waters. Wastewater released during that period contained high concentrations of phosphorus and nitrogen, which affected the nutrition balance in water, causing mass propagation of planktons, water-bloom, underwater fauna, and flora. This frequently led to red tides and stench. In the 1970’s, massive clam and farmed carp die-offs frequently occurred due to contamination and water degradation, along with the loss of nearby woodlands. Popular swimming areas were shut down because they were “unsuitable for swimming,” and clam, crucian, and shrimp fishing declined. The natural environment of Kasumigaura was lost rapidly because of these factors combined with the construction of lakeside reinforcements to protect the agriculture and residents in the river area.

To stop the deteriorating condition, in 1981, the “Kasumigaura Eutrophication Prevention Ordinance” came into effect. The government created various individualized measures and programs; however, they did not lead to a fundamental resolution toward environmental preservation and conservation.

It is not only Kasumigaura that has such problems. Other lakes in Japan including Lake Biwa, Lake Shinji, and Lake Suwa are experiencing the same problem. For that reason, the effort to preserve and restore natural environment in Kasumigaura will act a reference for other cases in Japan, and furthermore, other cases in the world.

Background of the Establishment of Asaza Fund

In 1981, the “Citizens for Improvement of Lake Kasumigaura/Kitaura” was launched with the combined participation of various establishments, such as schools, fishery cooperative associations, forestry cooperatives, consumers’ cooperative associations, agrarian organizations, nature conversation groups, and enterprises. This was another approach developed by the private sector on its own to initiate environmental preservation and regional development in the Kasumigaura basin area. With the Council as the foundation, a plan to ascertain Kasumigaura’s environmental condition, in cooperation with the Nature Observation group members (elementary and secondary school students as the main actors) for over two years from 1994, and based on the results, to restore the shallows and sand beaches using water vegetation, particularly Asaza, which has wave-dissipating and sedimentation effects, was targeted. The Asaza Fund was founded in 1995 as an operational division of the Council to further expand this movement.

This Fund was reorganized in 1999 as a specified nonprofit organization (NPO) with the purpose of “recovering the natural environment and culture in the whole Kasumigaura basin area and Kitaura through its preservation and restoration, as well as creating a richer environment and consortism for the residents in the vicinities of Kasumigaura and Kitaura” (Current Director-General is Mr. Hiroshi Iijima.)

NPO Asaza Fund (hereinafter, Asaza Fund) defines the following nine operations to achieve the aforementioned purposes:

- 1) Preservation and restoration of waterfront and fishing grounds of Kasumigaura and Kitaura
- 2) School biotopes and environmental education
- 3) Preservation management of woodlands
- 4) Regional Asaza Project/development and support of environment-preserving industries and regions

- 5) Research on organism monitoring
- 6) Eco-tourism
- 7) Environment-preserving agriculture and farm-fresh service
- 8) Holding symposia and exhibitions
- 9) Revitalization and creation of Kasumigaura culture

What is characteristic about the structure of these operations is that there is no core organization. Instead, there are “grounds for coordinated effort,” which create mechanisms to integrate environmental preservation as a purpose into the acting bodies by meeting their individual goals through a non-binding network (Figure 2). Each acting body does not perceive environmental preservation as an obligation or regulation, but as a self-activating operation and thus proactively integrate it into their system. It is the role of Asaza Fund to coordinate such grounds and market them. Sharing the grounds for coordinated effort enables operations by different organizations that fulfill

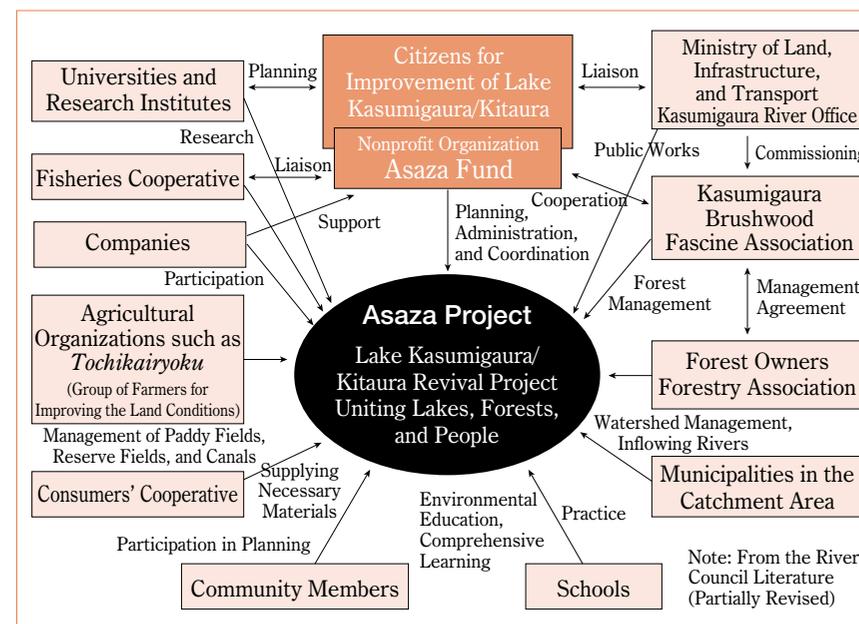


Figure 2 Nonbinding Network of Asaza Project (reprinted from Asaza Fund Web Site)

multiple purposes, such as environmental preservation, education/human resource development, scientific research, and regional development.

These operations have been recognized and have been introduced in the Japanese report at the Earth Summit 2002 as an innovative approach representing Japan. In addition, in the 2004 edition of the White Paper on the National Lifestyle, they were introduced as “public works by the citizens protecting the environment.”

The operations of the Asaza Fund are explained in detail below.

100-Year-Plan: The Dream of Asaza Fund

The Asaza Fund promotes the “Asaza Project,” which embraces the dream and goal of a future where nature and humans co-exist, a Kasumigaura where tokis (Japanese ibises) wheel in the sky, returning to wildlife in the next 100 years. The road to its achievement is shown in **Figure 3**, which includes a description of the species of birds that can live in waterside habitats. Starting from year 2001 to over 100 years, it is an enormous plan to recover the vegetation zone little by little, from irrigation channels, inflowing rivers, reservoirs, to woodlands. In the first half period of the Plan, the organisms to be recovered will be specified every 10 years, and their achievements will be evaluated. The latter half will be dedicated to cultural development.

Specifically, the goal for the first decade is to create shallows and reed beds extending out into the waters by waterweed planting. In the second decade, the Asaza Project intends to expand water vegetation and produce willow groves, which requires stabilization of sand along the shore. The 30th year may celebrate the completion of water vegetation throughout Kasumigaura and include the migration of the Japanese goose (*Anser fabalis middendorffi*). For the Japanese goose to migrate and inhabit Kasumigaura, it is necessary for water vegetation to spread further away from the lakeshore and dikes. Whether Kasumigaura can be inhabited by Japanese goose will be a measure

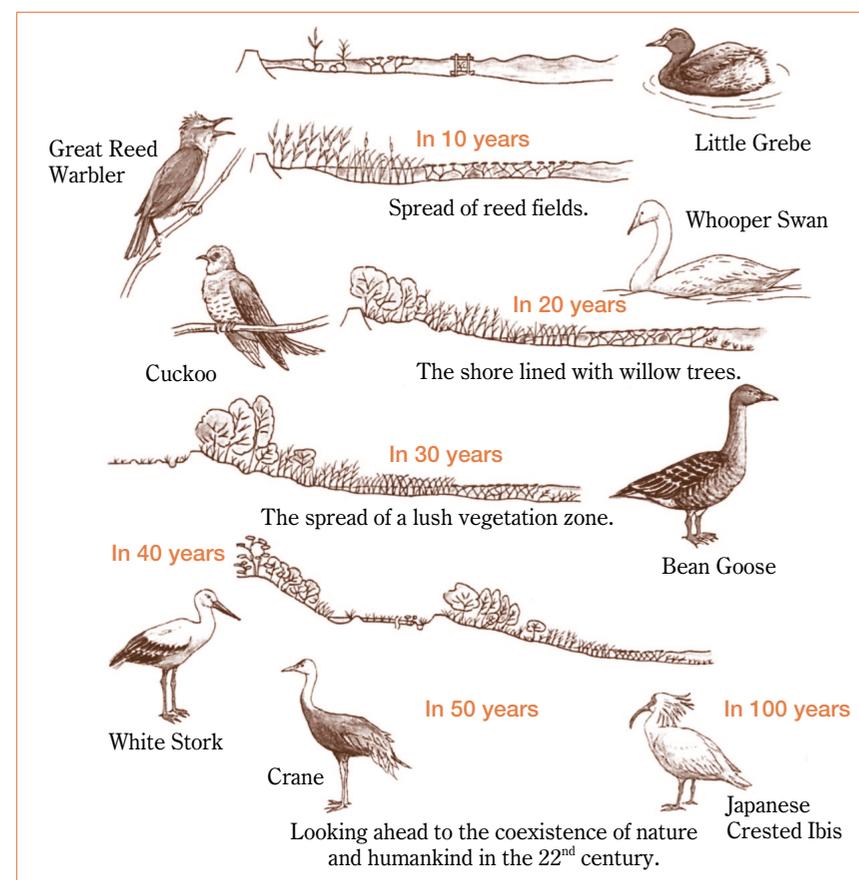


Figure 3 100-Year Plan of the Asaza Fund (reprinted from Asaza Fund Web Site)

of the achievement.

In the fourth decade, the Asaza Fund aims to recover the storks to the wild. It is expected that there will be a sufficient number of large trees in the sloped forests of Kasumigaura for the storks to nest. Those protected large trees shall provide nesting places, and indigenous fish living in the surrounding rice fields and lotus fields connected to inflowing rivers and the lake shall provide food for the storks.

At the halfway point of the Plan, the 50th year, the goal is to make Kasumigaura a habitat for storks. Then, in the 100th year, the Project aims to see the Japanese goose back in wildlife. Although there are many issues in restoring the picture of storks flying across the Kasumigaura sky, the Asaza Project will not cease working for the construction of a new co-existing relationship of nature and humans.

Asaza's "Foster Parent Program"

The shoaling shoreline of Kasumigaura once enjoyed a great variety of vegetation, which spread out into the coastal waters. However, the concrete revetment not only destroyed the original vegetation but also ripped up most of the reeds in the shallows by the waves breaking on the revetment. By the time the Project was started in 1995, reed beds had reduced to less than half of their size from before the construction of the revetment, and the animal and plant communities has been almost completely wiped out. Later, members noticed that the floating asaza kept the waters calm and relieved the shores from the waves. This was the foothold of the Asaza Project. The Project started out as a counteroffer against the stone-lined wave-dissipating blocks in Kasumigaura.

The Asaza Project first worked on the "Foster Parent Program." This program consisted of collecting waterweed seeds such as that of asaza's, growing them at home or at schools, and planting them back in the lake. Elementary school students and volunteers in the region became foster parents. The participants were greatly increased when Asaza fund call for people to be engaged in the direct action to save Lake Kasumigaura. As of March 2006, 170 schools in the vicinities of Kasumigaura and a total of 130,000 people have taken part in the Project.

Asaza, the plant which Asaza Fund takes its name from, is a kind of waterweed native to Kasumigaura, which bears a yellow flower (Floating heart; *Nymphoides peltata* (Gmel.) O.Kuntze). Currently, it is registered as VUL-

NERABLE (VU) under the Red Data Book (RDB) published by the Ministry of the Environment, but in earlier times they were seen all over the country. It also makes an appearance in *Manyoushu* ("A Collection of a Myriad Leaves"), the oldest poetry book in Japan. They are also widespread in the Korean Peninsula, China, and Taiwan. The largest asaza community in the country once existed in the shallows of Kasumigaura. The stems reach to the bottom of the lake and root tightly into the bottom sand, making them extremely tolerant to waves, and also calming them because of their extensive floating leaves. In addition, they are effective in consuming and removing eutrophication-causing substances in water such as nitrogen and phosphorus. Asaza gave the project a good tip to promote nature restoration of the lake.

The Asaza Project also works with planting other wave-dissipating plants to restore the original vegetation. To do so, the children interviewed older people in the region, asking them to draw a picture of the previous Kasumigaura, which they referred to in the restoration. These activities can be considered as "live education," which also contributes to inter-generation exchange.

Monitoring of Organisms in the Biotope

The other main activity of the Project is the guidance for placing biotopes in elementary schools in the basin region. Currently, 175 elementary schools are taking part in making biotopes (**Figure 4**). For instance, the Ishioka Elementary School created a biotope approximately fourteen meter long and 20 meter wide (**Photo 1**). The children are instructed to make and manage their own biotope, and observe frogs, dragonflies, birds, etc. that come to the biotope. The idea is to focus their interest on nature through the biotope. Biotopes in elementary schools are characterized as a part of environmental education for the children.

The principle of making the biotope is to not put anything that is not from Kasumigaura, other than asaza, waterweeds, reeds, rice-fishes, and pond snails. The project helps them understand the relationship between the natu-

ral environment and the biotope by observing the organisms that migrate to the biotope. Among the animals that migrated to the biotope, the animal with the shortest travel distance is the frog. Frogs travel from 500 meter to one kilometer, which corresponds to the distance around the school. Damselfly (specie of dragonfly but small in size), which can fly a one to two kilometer range, while Commons Skimmer (also specie of dragonfly but large in size) can fly a four kilometer range, which covers the area around the school one can travel on a bike. Birds travel the farthest in the basin region. Therefore, if frogs migrate, it indicates that there is an environment around the biotope inhabitable to frogs. If children observes Commons Skimmer, it can be said that there is a Commons Skimmer-habitable environment in the four kilometer proximity. They are able to naturally understand that people and other

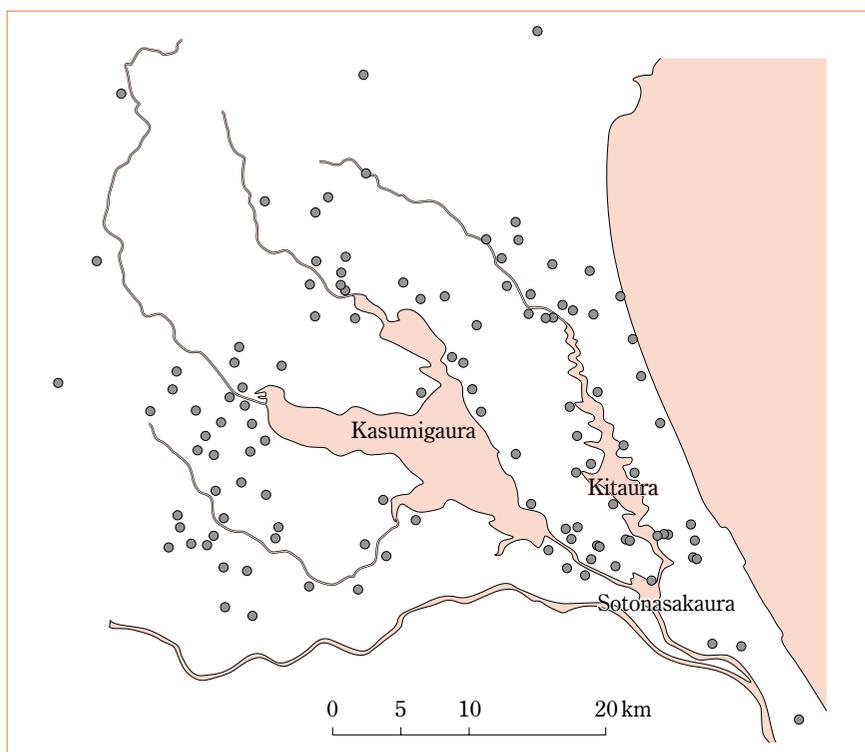


Figure 4 Schools with Biotopes in the Basin Region (reprinted form Asaza Fund Web Site)

living creatures share the same living sphere. When the biotope has too much asaza and/or waterweeds, they are removed and planted back into Kasumigaura—the biotope also functioning as a plantation for water plants.

The Asaza Fund has delivered a total of 163 lessons in biotope making from October 2004 to September 2005, to 9,545 children. Students and residents took part in these lessons as volunteers.

Furthermore, school districts are distributed in a two to three kilometer radius range because elementary school students are assumed to commute on foot. This two to three kilometer school district is also a community unit where various people live. The occupation of the student's parents vary from fishermen/farmers, shop owners, engineering and construction workers, to factory workers and officials. Action taken directly on children spreads to their parents and thus to the entire region, creating a kind of solidarity. It is also expected that the children's understanding of cooperative learning and activity concerning nature preservation will deepen. This is the ideal form of penetration, because the aim of the activity is to root into the society; howev-



Photo 1 School Biotope of Ishioka Elementary School

er, it is time consuming. This approach of constructing a network by expanding from school to the community, utilizing the existing social resources, is one characteristic of the Asaza Project.

Development of a Cooperative Monitoring System

The Project also involves an IT-based network, which was constructed to collect information monitored at the biotopes more efficiently and apply them effectively. This network was supported by a Sensor Network System developed by NEC (Japanese IT company), which was placed 1.35 to two meter above the ground near the biotopes (Photo 2, Figure 5). The System consists of a sensor that obtains temperature/humidity, insolation, and image data of the biotope, data transferring device, and solar cell. Using this device, which can be referred to as an “IT screen,” the data is sent and received in a relay format, showing and sharing each school’s environmental information real-time on a computer screen.

As an advanced application of this system, the Project is planning to construct an international network to observe birds that migrate across the boundary. For instance, you will be able to trace a migratory bird from the Philippines and Australia to Russia by constructing and deploying an extensive communication network of local residents and children of those countries.

Vegetation Preservation and the Use of Fascine

Effecting asaza is not as easy as merely planting them on the lakeshore. Without reinforcements, they will easily be washed away in a week. The Asaza Fund proposed placing a wave-dissipating facility using fascine made from branches and thinnings to help the rooting of asaza. The Ministry of Construction (now a section of the Ministry of the Environment) accepted the proposal and produced an experimental fascine wave-dissipater. Upon studying the effect it had on the protection of vegetation, it was proven that in fact it did have an effect, and therefore, was adapted as a vegetation protection project of public works from 1998. This triggered a series of extensive opera-

tions in the Asaza Project. As a result, the supply of fascine eventually could not be supported by volunteerism. In response to this, the “Kasumigaura Brushwood Fascine Association” was established to collect, maintain, and manage fascine. This was incorporated as a private limited company in 2001.



photo 2 WeatherBucket® installed at Elementary School (By courtesy of Asaza Fund)

Woodland preservation based on the two axes, citizen volun-

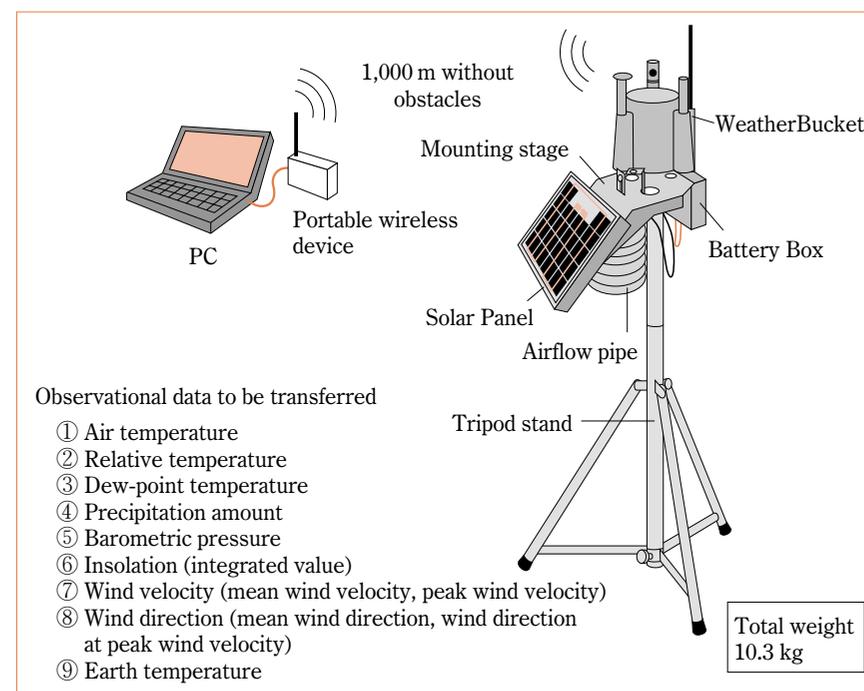


Figure 5 IT Screen “WeatherBucket®” (reprinted from SEC Corporation Web Site)

teerism and woodland utilization industry, small-scaled as it may be, can be regarded as the start of cooperative nature restoration projects. The creation of the structure to simultaneously implement the management of the devastated surrounding woodland and nature restoration of the lake was made possible by the Asaza Fund, which played a coordinating role between forestry representatives and the government. This contributed to the preservation of water source forests (30 areas, approximately 34 hectare), vitalization of forestry, and created new employment opportunities (maximum annual average of 5,000 people: day).

Wave-dissipation using fascine is a traditional method, developed by ancient Japanese who lived close to nature. This art is selected as one of the World's Global Environment Preservation Technology 100 at EXPO 2005 Aichi, Japan. Concrete is not required, and it can be applied to only a wooded area. After the growth of reeds and asaza and by the time the ecosystem is restored, the fascine will rot and naturally be integrated into the nature, making this a reasonable method that does not require removal. Fascine can be used to form a tideland in a lake, river, marsh, or near river mouths.

“One-day Woodcutter”

Utilization of fascine is in sync with water source preservation. Forests near the paddy fields in the ravine are situated on steep slopes, which frequently helped them escape the hands of development. A couple of decades ago, people went into the forests to gather building materials, firewood, and fertilizer, clear underbrush, prune, and remove fallen leaves. However, the diffusion of electricity, gas and fuel, and chemical fertilizer prevented the people from clearing the underbrush or cutting wood, and as a result, many forests were abandoned. Moreover, valleys are geographical features that are not recognized, making them an easy target of illegal waste and soil disposal. This has led to the pollution of the water source itself, including the forests and paddy lands. Because regeneration of paddy lands and forest is inevitable for the preservation of water sources, a new type of mountain valley preservation

and local industry development has been proposed and implemented through the participation of the citizens. This is the “One-day Woodcutter” project.

The “One-day Woodcutter” project is hosted by the Asaza Fund with the support of Kasumigaura Brushwood Fascine Association, Ltd and the NPO group Eco-town Hokota. Participants ranging from elementary school students to adults perform wood-cutting once every month on a Sunday, every year from October to May of the following year, which is the low growth period of timber. The cutting down of *Pleioblastus chino* (type of bamboo), shrubs, and creepers enables sunlight to reach the forest ground, which then helps rainwater seep freely into the ground leading to the depuration of water and reservation of biotopes. Fascines and branches that can be acquired from the “One-day Woodcutter” project are used to construct wave-dissipating facilities.

Preservation of the Water Source District “Yatsuda”

A “Yatsuda” is a paddy field in ravine. A “yatsuda” generally covers a small area and its boundaries are not clear-cut, therefore, making it unsuitable for cultivation with heavy machinery, which requires the management of the surrounding forests to secure sunlight. Due to this inefficiency and the rice acreage reduction policy, combined with the aging of the farming population, more and more “yatsudas” have been abandoned over the last 30 years. When cropping stops, the water channels cannot be maintained and thus hinder the constant delivery of “yatsuda” water to the lake. The water in “yatsudas” that is not used for land improvement becomes stagnant, while paddy lands that have drainage systems with underdrain canals lose water and water retention ability. If the water cycle suffers from a circulation problem, it falls into a vicious cycle of losing its living organisms such as frogs. The re-generation and maintenance of the “yatsudas” is indispensable from the perspective of preserving water quality and biota diversity.

To deal with this issue, the Asaza Fund and NEC have collaborated for the

implementation of a new water preservation model under an enterprise—NPO—Region (i.e., local industries such as brewery, miso-making, and agriculture) cooperation, to preserve water resources by traditional organic rice farming. The employees of the participating businesses and their families experience the year-round farming operation, which includes planting, weeding, harvesting, threshing, wintertime managing, and upland cropping. These are all done under the management of farm houses that own the cultivation rights for the land. The rice and soybeans that are harvested are used to make sake (Japanese rice liquor) and miso. Basically unused “yatsudas” are cultivated into rice and sake producing lands. NEC (who also contributed by “IT screening”) not only receives sake, but also uses the model to educate its employees and their families through their participation in farming.

In addition, involving the local residents in managing the farms creates another source of income for the farmers. The current yield does not allow market distribution of sake, but it is more than a dream to produce economic benefits by distribution upon the expansion of the operation.

Taking this opportunity, the Asaza Fund has set off to manage the yearly program that combines nature observation and experiencing traditional events and bamboo wares. Although the transportation expenses are borne by the employees, a total of 650 participants participated in the 2004 fiscal year, and 1,000 participated in the 2005 fiscal year.

The NEC office delivers news on what is happening and their results via company intranet, and share the information with non-participating employees. Through nature activities, which you cannot experience in the cities, employees who work in different fields and haven't met before get together, which helps strengthen their family bond. It is also reported that employees and their families who took interest and participated in sake brewing noticed changes in their environmental awareness and obtained a deeper understanding of the “objective of the project to preserve the water resources.” The

NEC Farms not only have educational purposes, but also are the experimenting grounds of innovative technology such as meteorological observation instruments and watershed management systems, contributing to the primary operation of the company.

Fish Meal Project

As a business model with the purpose of regenerating Kasumigaura and Kitaura, this project is concerned with the impact of foreign fish.

Domestic, agricultural, livestock, and industrial wastewaters containing eutrophication substances poured into Kasumigaura, caused and still cause mass generation of water-bloom. Along with this problem, the release and reproduction of highly adaptive and reproductive foreign fish such as the black bass (also carnivorous) have had a destructive influence on the ecosystems and habitats of the domestic species, namely the crucian and *Hypomesus olidus*. In response to this, a proposal was put forward to collect nitrogen, phosphorus, and other contaminants through fishery (Figure 6). In this project, foreign and unused fish are caught, and converted into fish meal, fish-based fertilizer. This fish meal is used for local organic farming and poultry farming. Because a fish-based fertilizer, i.e., the phosphorus and nitrogen from the lake, is used, we can prevent the phosphorous and nitrogen from outside to be brought into the basin. This is expected to decrease the inflow load of contaminants, while producing economic benefits in the region by effectively collecting phosphorus and nitrogen from governmental dredging operations.

Currently, there is an ongoing experimental project to sell crops harvested in the region using the fish meal. The crops are called “lake-friendly vegetables (Mizuumi ga Yorokobu Yasaitachi).” The Project not only eliminates foreign fish in a business cycle, but aims to make consumers think about environmental issues and acknowledge the “environmentally affinitive” lifestyle through food. In 2004, the creation of an environmental partnership for the

assessment of water depuration through fishing of foreign fish was concluded. Upon resolving numerous challenges, including getting subsidies and approvals from fishery operators, actual fishing started in May 2005, and by October 2006, vegetables were delivered to some consumers at the super-market called Kasumi (Figure 6).

Accomplishments and Prospects

The NPO Asaza Fund was founded in 1995 and consists of 39 regular members and 400 voluntary members as of January 2006. During the first five years from 2001, after the preparation period for social networking, they initiated the 100-Year Plan which got underway from 2004. As for the restoration of the lake, the short-term goals have been met at a slightly faster pace than planned. The goal for the next 20 years is to restore the submerged plants. The improvement of water quality is a prerequisite for the colonization of underwater plants, because if the life-sustaining sunlight does not reach the bottom because of lack of transparency of the water they will die. How effective the water resource preservation and other activities measures is the key to the success of the project.

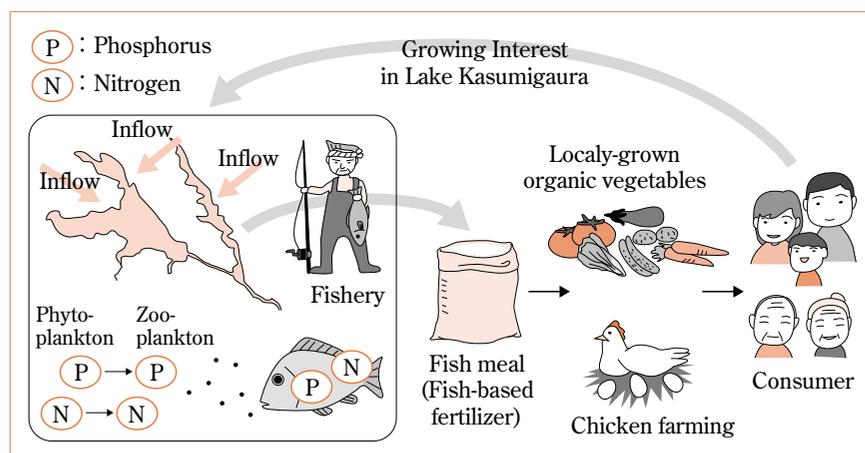


Figure 6 Fish Meal Project (reprinted from Asaza Fund Web Site)

It is also a turning point in terms of human resources. Currently, multiple projects are ongoing simultaneously throughout the basin, but the individual projects are small in scale. The Asaza Fund coordinates initially and collects subsidies and benefits, but as a matter of policy, they are only involved until the network starts functioning independently at a certain level. This has allowed them to have fewer members compared to other businesses of equivalent scale, but expansion of the projects would force them to secure more human resources. Securing volunteer staff and their education is particularly important, as well as commitment of trained staff and the development of mid-level and young staff members. The initial “foster parents” of the Asaza Project have already turned into university students. It would be ideal to have some of them join the Asaza Fund.

The cycling network the Asaza Project suggests is considered to be applicable to all and every part of the world. Projects that utilize local methods and local communities and schools can be implemented in any country. It is probable that environmental destruction such as the one observed at Kasumigaura can happen in developing countries when industry flourishes. In that case, they will be faced with the challenge to concurrently proceed with development and restoration. As a result of uniform development, Kasumigaura has suffered from environmental destruction. Putting this experience in use, we would like to mention that business deployments, such as the aims of the Asaza Project, which function with communities as their basic units, are important and that Japan is still in the process of exploring these possibilities. As a proposal to apply the successful measures of the Asaza Project to the case of other countries, in part or in whole, the Project has the potential to become a model for sustainable development.

Reference: Website of the Asaza Fund <http://www.kasumigaura.net/asaza/>

This script was written based on an interview given on April 21, 2006 by the Asaza Project representative Mr. Hiroshi Iijima, the related publications, and the Asaza Fund website.

PROFILE

Iijima Hiroshi

Director-General,
Specified Nonprofit Organization Asaza Fund



Born in 1956, Nagano Prefecture. Later, after moving to Ichikawa, Chiba prefecture, Mr. Iijima familiarized himself with the natural environment—the wild insects, animals, and plants—while playing in the mountain valley. During this time, he also witnessed the rich natural environment disappearing, little by little, before his eyes as a result of pesticide use and urban development.

This experience is referred to in the Asaza Fund website as “I can pursue these activities because I haven’t lost the deep impressions received during my days in elementary and junior-high school. It is the fruit of the good things in the child in me that I as an adult bring out.”

Mr. Iijima went through many social events in history: when he was a junior-high school student, Toki, the Japanese ibis, became extinct; during the 1960s, he saw in the news student activism growing everyday; and pollution too became a major concern. These social events underlined his decision to learn on his own, hoping to voice his perspective as one citizen instead of relying on violence or using titles or authority to deliver his statement, and to really make a difference in society. These experiences had a great impact on his later life. It was his grandmother who, being a school teacher, had the greatest influence on him at that time. He heard stories of Gandhi and Shozo Tanaka (a politician known for his fight against pollution to protect farmers from the end of the 19th century, into the 20th century) and was moved by their ideas and struggles. Mr. Iijima himself considered the operations of the Asaza Project to be his “Salt Satyagraha.”

After graduating from high school, he was engaged in part-time jobs for some time, and then moved on as a part-time researcher at the Ministry of Agriculture, Forestry and Fisheries in Tsukuba, following which he launched his full-fledged environmental protection operations. With environmental programs as his forte, he has been involved in the planning of the Lake Kasumigaura Revival Project (Asaza Project) and the Watarase Future Project (restoration of Watarase River basin); the planning and designing of biotopes (Itako Suigo Dragonfly Park, Yanno River mouth biotope, school biotope network, etc.); the direct sale of “Ohishikui rice” to consumers for nature protection farmers; and the establishment of Kasumigaura Brushwood Fascine Association for forest conservation. Currently, he holds many positions, including the representative facilitator of the Watarase Future Fund, Director general of “Citizens for Improvement of Lake Kasumigaura / Kitaura,” President of Hishikui Protection Foundation, and the President of the Ushiku Nature Conservation Society. He also actively conducts nature protection operations by citizen initiatives.

I. KEYNOTE SPEAKERS

- Dr. Arima Akito,
Director, Science Museum (Former Minister of Education)
- Mr. Sombath Somphone,
Director, Participatory Development Training Centre

II. PRESENTERS AND COMMENTATORS

Theme	Presenter	Commentator
Gender Equality	Ms. Maryam Bibi	Dr. Jose Roberto Guevara
Poverty Reduction	Ms. Marie Elena Julianda Bicaldo	Mr. Chiba Akihiro
Natural Disaster Preparedness	Mr. Mohammed Nasir Ullah	Dr. Nakayama Shuichi
Rural Development and Cultural Diversity	Mr. Nagae Hisao	Dr. Abe Osamu
Environmental Education	Ms. Lynette E. Brown	Dr. Nagata Yoshiyuki

III. PARTICIPANTS (Country names in alphabetical order)

● Australia

Mr. Jose Roberto Guevara
Lecturer, RMIT University (Royal Melbourne Institute for Technology)

● Bangladesh

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Programme Officer, Education Division, Bangladesh National Commission for UNESCO

Mr. Mohammed Nasir Ullah
Director, Cyclone Preparedness Programme Bangladesh Red Crescent Society

● Bhutan

Ms. Choden
Programme Officer, Bhutan National Commission for UNESCO

● Cambodia

Mr. Yos Eang
Deputy Secretary General, Secretariat, Cambodia National Commission for UNESCO

● Fiji

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● Japan

Mr. Abe Osamu
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Mr. Arima Akito
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*Chairperson of the Afternoon Session of Day 2,
24 February 2006

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24 February 2006

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Ms. Zaha Tamami
Programme Assistant, Education Division

IV. PROGRAMME

DAY 1 Thursday, 23 February

(am: room "Banri", pm: room "Kumpu" in Hotel Metropolitan Edmont)

0900–1000	<p>Opening Session Addresses by:</p> <ul style="list-style-type: none"> • Mr. Nakanishi Koji, Director-General, Asia/Pacific Cultural Centre for UNESCO (ACCU) • Mr. Sheldon Shaeffer, Director, UNESCO Bangkok • Mr. Inoue Masayuki, Secretary-General, Japanese National Commission for UNESCO • Message from Mr. Matsuura Koïchiro, Director-General of UNESCO • Self-introduction of participants and secretariat • Group photo session
1000–1030	Tea Break
1030–1200	<p>Agenda 1: Keynote Address Addresses by:</p> <ul style="list-style-type: none"> • Mr. Arima Akito, Director, Science Museum, Former Minister of Education, Japan • Mr. Sombath Somphone, Director, Participatory Development Training Centre, Lao PDR
1200–1330	Lunch break
1330–1340	<p>Agenda 2: Seminar Orientation by Ms. Shibao Tomoko, Director, Education Division, ACCU</p>
1340–1410	<p>Agenda 3: UNESCO's role in the International Initiative for UNDESD and Asia-Pacific Regional Strategy by Mr. Sheldon Shaeffer, Director, UNESCO Bangkok</p>
1410–1430	<p>Agenda 4: ACCU Asia-Pacific Regional Programmes for ESD by Mr. Nakanishi Koji, Director-General, ACCU</p>
1430–1440	<p>Agenda 5: Introduction to ACCU-UNESCO Asia-Pacific ESD Programme</p>

	by Mr. Derek Elias, UNESCO Bangkok and Mr. SATO Masahisa, ACCU
1440–1520	(1) 2006-2007 ACCU-UNESCO Asia-Pacific Innovation Programme for ESD
1520–1550	Tea break
1550–1630	Agenda 5: (1) continued
1630-1700	(2) 2006-2010 ACCU-UNESCO Asia-Pacific COE Programme for ESD
1830-2000	Welcome Reception hosted by ACCU at Room Banri, Hotel Metropolitan Edmont

DAY 2 Friday, 24 February

(room "Kumpu" in Hotel Metropolitan Edmont)

0900–1030	<p>Agenda 6: Innovative Approaches to ESD (1) Orientation by Ms. Shibao Tomoko, ACCU (2) Presentations & Comments Innovative Approach (1) - Gender Equality</p> <ul style="list-style-type: none"> • Presenter: Ms. Maryam Bibi, Khwendo Kor (Women & Children Development Programme), Peshawar, Pakistan • Commentator: Mr. Jose Roberto Guevara <p>Innovative Approach (2) - Poverty Reduction</p> <ul style="list-style-type: none"> • Presenter: Ms. Maria Elena Julianda Bicaldo, Tribal Mission Foundation International, Mindanao, the Philippines • Commentator: Mr. Chiba Akihiro <p>Innovative Approach (3) - Natural Disaster Preparedness</p> <ul style="list-style-type: none"> • Presenter: Mr. Mohammed Nasir Ullah, Bangladesh Red Crescent Society, Bangladesh • Commentator: Mr. Nakayama Shuichi
1030–1100	Tea break
1100–1230	<p>Agenda 6: (continued) Innovative Approach (4) - Rural Development & Cultural Diversity</p>

	<ul style="list-style-type: none"> · Presenter: Mr. Nagae Hisao, Wakasa Town Board of Education, Fukui Prefecture, Japan · Commentator: Mr. Abe Osamu <p>Innovative Approach (5) - Environmental Education</p> <ul style="list-style-type: none"> · Presenter: Ms. Lynette E. Brown, National Co-ordination Team of Education for a Sustainable Future, Taupo-Nui-A-Tia College, New Zealand · Commentator: Mr. Nagata Yoshiyuki
1230-1400	Lunch Break
1400-1500	(3) Discussion on the five projects presented
1500-1530	Tea break
1530-1645	Agenda 7: Furthering of Asia-Pacific Regional Cooperation for the Promotion of ESD
1645-1700	Closing Session

DAY 3 Saturday, 25 February

0800-1730	<p>Field Visit</p> <p>On-site visit to and Discussion at Asaza Fund Ishioka City, Ibaraki Prefecture</p>
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Tales of Hope

