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ESD CURRENTS

CHANGING PERSPECTIVES FROM THE ASIA-PACIFIC

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ESD CURRENTS

CHANGING PERSPECTIVES FROM THE ASIA - PACIFIC

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Selected Abbreviations

ACCU	Asia/Pacific Cultural Centre for UNESCO
AEYVE	Asia-Europe Young Volunteers Exchange
AFRC-UT	Agricultural and Forestry Research Center of the University of Tsukuba
APCEIU	Asia-Pacific Centre of Education for International Understanding under the auspices of UNESCO
APEID	Asia-Pacific Programme of Educational Innovation for Development
ASPBAE	Asia South Pacific Bureau of Adult Education
ASPnet	Associated Schools Project Network
AUEDM	Asian University Network for Environment and Disaster Management
CCN	Consumer Citizenship Networks
CENDP	Centre for Development and Emergency Practice
COE	Centre of Excellence
DM	Disaster Management
DPRE	Disaster Preparedness and Response Education
DRR	Disaster Risk Reduction
EE	Environmental Education
EETAP	Ethics of Energy Technologies in Asia and the Pacific
EFA	Education for All
ENDP	Education for Natural Disaster Preparedness
ESD	Education for Sustainable Development
FASPPED	Forum of Asia Pacific Parliamentarians for Education
GCS	Global Communities for Sustainability
GLLSD	Global Learning Space for Sustainable Development
GOLFRE	Global Open Learning Forum on Risk Education
HESD	Higher Education for Sustainable Development
HFA	Hyogo Framework for Action
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IYPF	International Young Professionals Foundation
LINKS	Local and Indigenous Knowledge Systems
MDGs	Millennium Development Goals
MOE	Ministry of Education
NGO	Non-Governmental Organization
NPO	Non-Profit Organization
ODL	Open and Distance Learning
OECD	Organisation for Economic Co-operation and Development
PADETC	Participatory Development Training Center
ProSPER.Net	Promotion of Sustainability in Postgraduate Education and Research Network
RCE	Regional Centres of Expertise
RUSHSAP	Regional Unit in Social and Human Sciences in Asia and the Pacific
SEEDS	Sustainable Environment and Ecological Development Society
SIDA	Swedish International Development Cooperation Agency
TEI	Thailand Environment Institute
UNCED	United Nations Conference on Environment and Development
UNDAF	United Nations Development Assistance Framework
UNDESD	United Nations Decade of Education for Sustainable Development
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNIFEM	United Nations Development Fund for Women
UNU-IAS	United Nations University, Institute of Advanced Studies
UN/ISDR	United Nations International Strategy for Disaster Reduction
WHAF	Women's Health Advocacy Foundation
WHE	World Heritage Education

Introduction

"The ecological imbalances and socio-economic and financial problems that we face today strongly indicate that our interdependence has become destructive and unsustainable. The urgent challenge is, therefore, how we can learn to generate a new constructive interdependence, as encapsulated in the concept of 'sustainable development.' It is the task for ESD to contribute to this global learning process."

Koïchiro Matsuura, International Forum on ESD Dialogue 2008, Tokyo, Japan, 3 December 2008

As the first half of the UN Decade of Education for Sustainable Development reaches its midway point, it is perhaps timely to pause and reflect upon our collective efforts, to strengthen, and continue to forge, interdisciplinary and multi-sectoral linkages which are so critical to the future of mainstreaming Education for Sustainable Development (ESD) throughout the education sector.

In the Asia-Pacific Member States continue to stress that ESD needs to focus not only on interconnections between diverse networks, but to influence the 'wider agenda of education' and development. If ESD is not to be a simple addition to the existing education system, it is imperative to work towards integrating the principles and content of ESD into it. First and foremost, however, we should reassess what we believe should be the purpose of education and what should be its role from now on.

This publication provides a snapshot of activities in the Asia-Pacific to stimulate discussion for all players in the ever increasing circle of stakeholders in Education for Sustainable Development. The importance of consistently creating network associations for a sustainable future is further reiterated, as we look at the diversified landscape of initiatives that fall under the widening ESD umbrella.

By definition, ESD programmes and activities in the Asia-Pacific region must be increasingly responsive to current and emerging crises in the world. However, this is both a strength and a weakness; immense flexibility is encouraged which, in turn, requires ESD initiatives to be consistently adapted according to the context of implementation. This precarious balancing act is not one to be taken lightly. Influencing education sector reform and policy change are not simple tasks that will be completed with the stroke of a pen. Nevertheless, we should not be discouraged but instead invigorated with the knowledge that change is underway. However, as most revolutions, change will not take place overnight.

The articles presented here have been prepared by many collaborators in the region who are committed to moving ESD from the periphery to the core of global education initiatives such as Education For All and the Millennium Development Goal 2 (Universal Primary Education). A consistent message that this publication underscores is how difficult it is to map out a single path towards ESD. An abstract term in and of itself, our biggest challenge is now to extract this common goal and translate it into strong policy directives and tangible actions at the macro-level.

These articles assembled are not presented as a compendium of activities, they are reflections upon challenges and possibilities for ESD in the region and it is hoped that they will contribute to ongoing dialogue and generation of renewed action towards the realization of a learning society shaping our collective future.

Derek Elias
Chief, Education for Sustainable Development
UNESCO Asia and Pacific Regional Bureau
for Education, Bangkok

Learning for Change: ESD Co-ordination in the Asia-Pacific Region

By the ESD Unit, UNESCO Bangkok

Imagine a time in the future when poverty and hunger in the Asia-Pacific region are minimal, a time when tolerance and respect for diversity are the norm, a time when clean technology is the primary source of energy and a time when individuals from all walks of life are empowered to make informed, appropriate decisions for their future.

One might call this a vision of a sustainable future, a vision which will vary from person to person and culture to culture. Whatever this vision may be, however, the question still remains, "What do we need to learn to get from here to there?"

Education for Sustainable Development (ESD) in the Asia-Pacific region is learning to answer this question and, with climate change and other global issues making their way onto the policy agenda, the importance of ESD continues to grow.

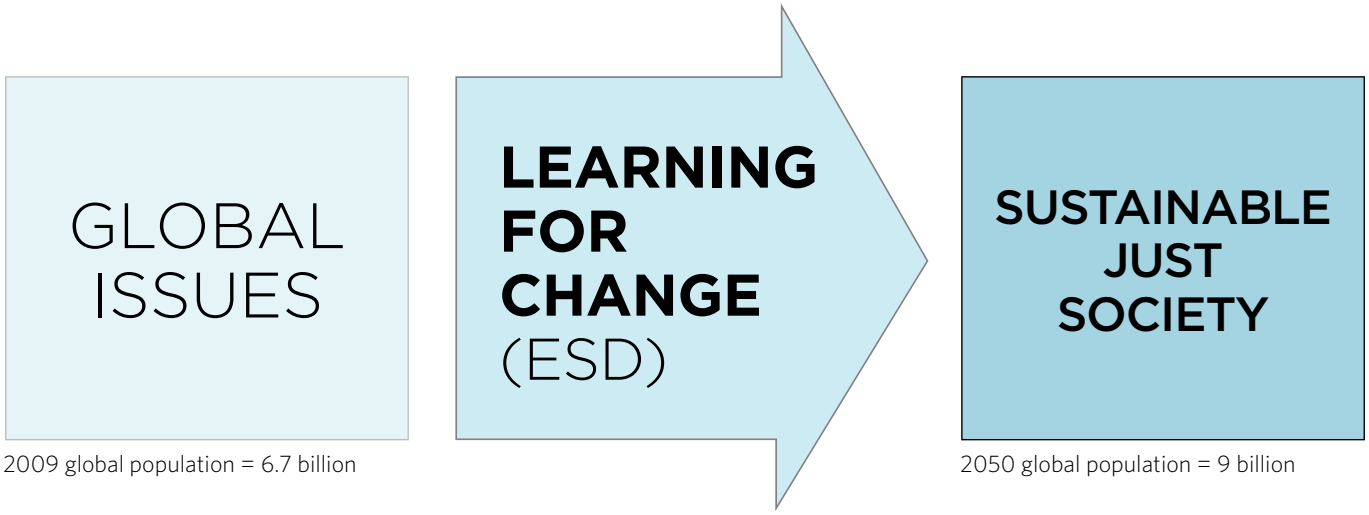
Since the launch of the Decade of ESD in March 2005, countries in the region have shared innovative approaches to initiating ESD through the establishment of national ESD committees, conducting national workshops and seminars and through online discussions about the processes for developing national ESD monitoring systems. Evidence from the first years of implementation suggests that ESD should be integrated into national development strategies to further promote change through quality education, requiring coordination among national stakeholders.

But... how do you coordinate an education initiative that engages a wide range of sectors from the environment and culture to health and science? How do you coordinate actors for a learning initiative that aims to address climate change, and also issues of peace, illiteracy, HIV/AIDS and others? Furthermore, practical challenges for ESD in the region continuously surface - many potential partners are struggling to move beyond the scope of environmental education to fully engage in ESD; national actors conducting ESD-related activities are not co-ordinated and collaboration among key stakeholders and sectors is proving difficult. UNESCO Member States also have concerns about the depth and substance of activities being branded as "ESD". Limited financing has becoming a barrier for collaboration; and, most importantly, national sustainable development priorities still need to be acknowledged to guide ESD programmes towards concrete objectives.

Evidence from the first years of implementation suggests that ESD should be integrated into national development strategies to further promote change through quality education, requiring coordination among national stakeholders.

To assist UNESCO Member States in the Asia-Pacific region to find answers to these challenges, in 2008, UNESCO Bangkok, with the generous contributions of the Japanese Funds-in-Trust, conducted a series of co-ordination and capacity building workshops throughout the region. The workshops aimed to build additional capacity for ESD leadership, coordination and monitoring at the national level to meet the immediate challenges of implementing ESD in the region; and to prepare for the World Conference on ESD to be held in Bonn, Germany in March/April 2009.

More than 50 senior-level ministerial representatives from 24 countries participated in one of five sub-regional workshops – conducted in Bishkek, Kyrgyzstan; Ha Long Bay, Viet Nam; Manila, Philippines; Hangzhou, China; and Colombo, Sri Lanka – along with members of civil society, higher education and the private sector. Eleven



2009 global population = 6.7 billion

2050 global population = 9 billion

countries engaging in ESD for the first time, worked with colleagues familiar with a wide range of ESD challenges in order to provide practical insights and recommendations that will carry ESD in the Asia-Pacific forward.

Lessons learned during the co-ordination and capacity building workshops, to carry forward to the World Conference on ESD include:

Focusing ESD on national sustainable development priorities – Countries can focus ESD by identifying three or four key national sustainable development priorities, such as food security, literacy, health, climate change, etc., to develop a practical foundation for ESD and foster the knowledge, skills, values and attitudes to address sustainable development more generally.

Incorporating ESD into national development plans - ESD not only needs to be included on the national agenda, but also incorporated into national sustainable development strategies, national poverty reduction strategies, education sector development plans, etc.

Establishing inter-ministerial support for ESD – Cross-sectoral collaboration is seen as essential for linking ESD to EFA, the MDGs and other programmes in order to address national sustainable development priorities.

Raju Babu Pudasaini (National ESD Monitoring Focal Point, Nepal) working with colleagues to prioritize lessons learned for developing national ESD indicators © UNESCO

Internalizing ESD within national budget structures - Budget ownership needs to be advocated for ESD within the relevant ministries, starting with education.

Establishing support for capacity building – ESD capacity is needed for policy makers, for educators (to support the integration of thematic content into curricula, relevant pedagogy and learning), and for national ESD indicator development and monitoring.

These lessons learned, identified obstacles and challenges, along with other insights from UNESCO Member States that will be carried to the World Conference on ESD for further elaboration and action in the region, leading to quality education and learning for a sustainable future.

Countries participating in Asia-Pacific ESD Coordination and Capacity Building Workshops in 2008

Central Asia
Kazakhstan
Kyrgyzstan
Tajikistan
Uzbekistan

East Asia
China
Japan
Mongolia
Republic of Korea

South Asia
Bangladesh
Bhutan
India
Maldives
Nepal
Sri Lanka

South East Asia
Brunei Darussalam
Cambodia
Indonesia
Lao PDR
Malaysia
Philippines
Singapore
Thailand
Timor Leste
Viet Nam

Networking for ESD

By Sampreethi Aipanjiguly

When the resolution to start the UN DESD was adopted, the Education for Sustainable Development Programme at the United Nations University, Institute of Advanced Studies (UNU-IAS) based in Yokohama, Japan, decided to focus its efforts on strengthening co-ordination and co-operation among those who were already implementing ESD activities. Another focus, the programme decided, would be to reduce the gaps in access to information. With this in mind, the concept of Regional Centres of Expertise (RCE) was developed.

RCEs are intended to be networks that bring together institutions from various sectors at the local level to jointly promote ESD. They serve as engines to drive the exchange of knowledge and to promote dialogue among local stakeholders through partnerships for sustainable development, whilst simultaneously creating a knowledge base to support ESD actors. It is envisioned that networks of RCEs worldwide, will constitute a "Global Learning Space" for Sustainable Development.

The network of RCEs has grown rapidly since the first seven were created in 2005. Today, there are over 60– 11 in Africa, 26 in Asia, 16 in Europe, 8 in the Americas – all actively promoting ESD. These networks work on a variety of issues, primarily based on the challenges faced by the regions they work in. Major themes that RCEs are exploring include sustainable production and consumption, sustainable health, biodiversity conservation, teacher training, e-learning, youth and sustainable development, climate change and disaster mitigation. Activities at RCEs range from a forum for leaders in the Netherlands, to the management of the Nairobi river basin in Kenya, as well as motivating ESD youth activism in Ireland, and forming school clubs to promote sustainable development in Kano, Nigeria. Numerous seminars and conferences on ESD have also been organized in these regions.

RCE activities arise from the translation of the UN DESD's global objectives into local contexts. The strength of the network lies in the diversity of stakeholders: schoolteachers, professors at higher education institutions, NGOs, scientists, researchers, museums, zoos, botanical gardens, government officials, local enterprises, media, civic associations, students and learners at all levels, are brought together by RCEs for a common cause – that of ensuring quality in education and learning for a sustainable future.

[RCEs] serve as engines to drive the exchange of knowledge and to promote dialogue among local stakeholders through partnerships for sustainable development, whilst simultaneously creating a knowledge base to support ESD actors.

For more information on RCEs, please refer to www.ias.unu.edu/efsd/rce.

Sampreethi Aipanjiguly is the Communications Coordinator for the ESD Programme at UNU-IAS.

Summer art school in RCE North East, UK © Aidan Doyle/RCE North East, UK.

Training programme on sustainable health organized by RCE Lucknow, India. © Ashutosh Dwivedi/Centre for Environment Education (CEE), India

ESD in Indonesia at a Glance

By Agung Purwadi

To preserve the natural resources Indonesia has been blessed with, the use of these resources needs to be better managed through local wisdom and various informal, non-formal, and formal education content aimed at maintaining and preserving natural resources for future generations. However, it was only recently that wisdom and content were coined as Education for Sustainable Development.

Several activities have been undertaken in the name of ESD and include the following: First, is the development of the National Standard of Educational Content. This standard accommodates the three perspectives (environment, society and economy) and fifteen components of ESD. Based on this standard and others, each school builds its own curriculum allowing them to cultivate ESD through relevant local examples and usage while adapting local wisdoms.

Secondly, ESD messages are provided through both curricular content and extra-curricular activities. As curricular content, ESD messages are conveyed through an integrative approach and are incorporated in natural and social science studies as well as in other subjects. For example, messages relating to human rights, security, gender equality, cultural diversity, health and HIV/AIDS have been incorporated into social studies subjects; while messages related to natural resources, climate change, rural development as well as disaster prevention and management, are generally taught as part of science subjects. On the other hand, messages for developing togetherness, beauty, self-discipline and honesty are commonly provided through extra-curricular activities, such as school health services, the Youth Red Cross, Scout Movement, Flag Hoisting Troop, and the Outdoor Enthusiasts Group. To promote these values, interventions in school culture are important to implement the vision of schools as an educational space (known as Wawasan Wiyata Mandala).

Finally, Indonesia currently has two ESD Regional Centers of Expertise (RCEs). They are Gadjah Mada University (GMU, a public university) and Biotrop (a SEAMEO Research Centre). As a member of the Global Learning Space for Sustainable Development (GLLSD), the vision of RCE in GMU is to develop in harmony with mother nature and to promote sustainable development in the region through formal, non-formal and informal education and action towards poverty alleviation and illiteracy eradication. To achieve these goals, the ultimate objectives include an improvement of community welfare sustainability through: poverty reduction and illiteracy eradication, promoting public participation in sustainable development, and integration of sustainable development into on-going activities.

The strategies to meet these objectives include: policy development to effectively promote sustainable development; networking and establishing partnerships between main players, including education institutions, governments, businesses, and the community; mainstreaming SD through formal education at university, school and pre-school levels; public education through non-formal and informal education; and, incentive programmes for sustainable development initiatives based on village business enterprises.

Several success stories of the GMU in promoting ESD include (i) the annual deployment of final year GMU students (through a programme known as KKN-PPM) to help members of rural villages improve their lives while cultivating values of ESD, including literacy education and sustainable poverty alleviation; (ii) development of earthquake mitigation equipment; and (iii) continuing co-operation between the universities and several districts in developing self-sustaining energy villages which run on bioenergy from locally abundant agriculture and animal waste.

The community of Piyungan village, Bantul district, Central Java province uses biogas energy for small-scale home industries. The biogas is an innovation of the research of KKN students. © University of Gajah Mada, Yogyakarta, Faculty of Animal Science.

At the end of August 2008, the Minister of National Education promulgated the plan to enrich ESD philosophically, by introducing the 'soul of ESD' in Indonesia, or the "Noble Character Education" (Pendidikan Akhlak Mulia) concept. It is believed that once a person reaches this level of morality, their actions will be in accordance with and in full cognisance of the three ESD perspectives of environment, culture and economy and how they interlink with sustainable development.

Dr. Agung Purwadi is the Director of the Centre for Policy Research and Educational Innovation, at the Indonesian Ministry of National Education.

An Academic Network for ESD

Members of ProSPER.Net at launching ceremony © UNU-IAS

By Zinaida Fadeeva

Within the context of the United Nations Decade of Education for Sustainable Development (UN DESD), the United Nations University – Institute of Advanced Studies (UNU-IAS), through its Education for Sustainable Development Programme, launched the idea of a network involving higher education institutions in the Asia-Pacific region that are committed to work together to integrate sustainable development (SD) issues into postgraduate courses and curricula.

The alliance, called the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net), was formally launched on 21 June 2008, in Sapporo, Japan, with 18 higher education institutions from the Asia-Pacific region –Australia, China, India, Indonesia, Japan, Malaysia, the Philippines, Republic of Korea and Thailand, together with two regional universities in Asia and the Pacific – as founding members.

In spite of the fact that ProSPER.Net is a very new initiative, three joint activities are already being carried out: 1) Integrating SD issues in business schools; 2) Faculty training on SD, and 3) Postgraduate programme in public policy and SD. Other emerging joint activities like summer schools on SD, and the publication of ESD guidelines are being developed. These joint projects are mainly funded by the Ministry of the Environment of Japan.

ProSPER.Net, in co-operation with Elsevier, has established the ProSPER.Net-Scopus Young Scientist Award, to recognize outstanding young scientists who have made significant contributions to the area of sustainable development. Since SD is a broad issue, a topic shall be chosen for awards each year. These topics include environment, engineering and technology, agriculture, corporate social responsibility, and business. In the first year business is the topic of the award.

ProSPER.Net is expected to expand and include more institutions. The "glue that binds" is a collective commitment to uphold the vision and aspiration of creating a sustainable world.

For more information refer to www.ias.unu.edu/efsd/prospernet.

Dr. Zinaida Fadeeva is an Associate Fellow for the Education for Sustainable Development Programme at UNU-IAS.

Asia/Pacific Cultural Centre for UNESCO (ACCU)

By the Asia/Pacific Cultural Centre for UNESCO (ACCU), Japan.

Coming to the arena of ESD from the field of cultural diversity, adult literacy and non-formal education, the Asia/Pacific Cultural Centre for UNESCO (ACCU), Tokyo, has been implementing the following ESD projects, in addition to various projects in the field of EFA, which may be closely linked to ESD.

ACCU's ESD projects

1. **Innovation Programme for ESD:** Initiating and supporting ESD good practices in fields such as poverty reduction, literacy in minority languages, natural disaster preparedness, non-formal education ESD curriculum, and ESD in rural primary schools in ten countries in the Asia-Pacific. At the end of the project term (2006-2008), evaluation missions were conducted in a new ESD evaluation framework called ESD "HOPE" Evaluation mission (Holistic, Participatory and Empowering.)

2. **COE (Centres of Excellence) Programme for ESD**: Bringing different expertise in five organizations in policy advocacy, research, community development, and higher education as catalysts of ESD
   - Asia South Pacific Bureau of Adult Education (ASPBAE)
   - Dhaka Ahsania Mission (DAM)
   - Thailand Environment Institute (TEI)
   - TVE Asia Pacific (TVEAP)
   - The University of the South Pacific (USP)

3. **Development and Dissemination of Common learning materials across borders (PLANET: Package Learning Materials on Environment) series on water, forest, waste management and natural disaster preparedness**: with a package of a cartoon animation video, poster, booklet and facilitator's guide, the PLANET materials facilitate quality learning which encourages learning to action.

4. **ESD Photo Message Contest, Letters to Tomorrow 2007 "Celebration of Our Living Culture":** Inviting people to think about their own sustainable future, the first contest attracted more than 3,200 entries from 38 Asia-Pacific Counties in 16 languages. An ESD Photo Caravan exhibition of prize-winning works and workshops is being organized in Japan and will tour other countries.

PLANET on Forest Conservation © ACCU

5. **Support to UNESCO Associated Schools Project Network in (ASPnet) in Japan**: Promoting ASPnet in Japan through ESD good practice and exchange opportunities.

Through the implementation of the ESD projects above, some lessons learned include:

Reaching a full agreement and understanding on the concept of ESD is difficult if attempted through theoretical discussion only. On the other hand, if the direction of ESD is based on local needs and understanding, "learning by doing" is an effective strategy. Through the course of any ESD project, the same question "What is ESD?" has to be asked repeatedly by all the stakeholders. Initial reactions to the ESD concept among teachers/facilitators are as follows: Isn't it too difficult? Isn't it too

Participatory Learning in Innovation Project, Thailand © ACCU

2007 ACCU Asia-Pacific ESD Photo Message Contest,
"Celebration of Our Living Culture"
Grand Prix © ACCU/Thanavich Kumsopha

© ACCU

diverse? Isn't it too obscure? Isn't it too complicated? Or, no thanks, we already have too many things to do! However, sharing ideas such as the following, seems effective in moving forward an ESD approach to learning:

- Start where you are (expertise, needs, issues).
- Use your existing strengths (expertise, network, etc.)
- Widen the scope a little bit (mindful of three pillars of ESD: economy, society, environment and the encompassing sphere of culture).
- Do things a little bit differently (teaching/learning processes, materials).
- Listen to others, share ideas with them and reflect upon your own project/teaching and goals.
- Look at learners first; an effective ESD project will evolve around learners' needs.

ESD makes a difference and the differences are felt by those involved:

- ESD facilitates new networking/ partnership opportunities between different subject areas, between different ministries/sectors, and between schools and communities.
- ESD brings learning and discovery for everyone involved; from learners/ students, teachers/facilitators, and project managers.
- It also brings a sense of self-esteem, empowerment and hope.

The concept of ESD urges people to review a project repeatedly and make adjustments in content and through the process of the project. It attempts to connect community/local needs to global challenges, and, at the same time, the future with the past.

Collaboration of Local Stakeholders for ESD in Okayama City

By Hirofumi Abe

Okayama University was accredited as UNESCO Chair in Research and Education for Sustainable Development in April 2007. The UNESCO Chair has been undertaking ESD projects both within and outside the campus. Meanwhile, the Okayama region was designated as one of the first, seven Regional Centres of Expertise on Education for Sustainable Development (RCE) by the United Nations University in June 2005. While RCE Okayama was co-ordinated by municipalities, schools, NGOs and civil society organizations, their collaboration with higher education institutions was insufficient. The establishment of the UNESCO Chair at Okayama University has facilitated the university's involvement as a whole to ESD efforts and its collaboration with Okayama stakeholders. The chart below indicates that the core entities and partners have been regularly collaborating for formal education and non-formal education, as well as in the field of international and interregional co-operation.

A feature of RCE Okayama is the collaboration among the civil society organizations in order to promote environmental education and international understanding. The UNESCO Chair has been providing advice and has also co-operated with international activities. In particular, Okayama University hosted the ESD International Conference in 2006, 2007 and 2008 in collaboration with NGOs. Another feature of ESD efforts in Okayama is the Kominkan (i.e. community centre)-based activities. The UNESCO Chair has been co-operating with Kyoyama ESD Promotion Commission which is based at Kyoyama Kominkan, for the promotion of ESD activities and raising awareness of sustainable development issues.

Stakeholders and ESD-related Activities in Okayama

Okayama University has participated in the Forum of Higher Education for Sustainable Development (HESD), which facilitates information and experience sharing and exchanges on ESD among Japanese Higher Education Institutions. In addition, Okayama University has become a member of the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER. Net), established in June 2008 under the organization of United Nations University Institute of Advanced Studies (UNU-IAS).

Collaboration among Okayama University, Kominkans, municipalities, and civil society organizations has been successful. However, there is significant room to introduce ESD into primary and secondary formal education, especially through collaboration among formal and non-formal education institutions.

The Secretariat, UNESCO Chair at Okayama University, can be contacted at unesco@cc.okayama-u.ac.jp, or through their website: www.esd-okayama-u.jp.

Professor Hirofumi Abe, Chair-Holder, UNESCO Chair at Okayama University

ARE YOU READY FOR A TYPHOON?
DO YOU KNOW WHAT TO DO DURING A FLOOD? HOW WILL YOU ACT AFTER A VOLCANIC ERUPTION?

EDUCATION FOR NATURAL DISASTER PREPAREDNESS

TAKE CONTROL OF YOUR WORLD

Achieving Education for All: A Comment upon the Content and Purpose of Education

Interview with the Former Regional Advisor for the UNESCO Institute for Statistics, Ko-Chih Tung.

© UNESCO/P. Kulapongse

ESD Unit: What is the fundamental relationship between EFA (Education for All) and ESD?

Ko-chih Tung: ESD can be considered as the content of EFA. It seeks to further answer the question, "Education for what purpose?" What kind of society are we trying to create through our teaching and learning programmes? EFA addresses gender equality and social equality. These are related to human rights and the right to education and also life skills. But societal goals, in the bigger context, is sustainable development. ESD is not only supposed to be a course; instead, it goes right across EFA and is supposed to be mainstreamed into basic subjects. ESD is, therefore, education with a social conscience and a deliberate purpose.

ESD Unit: Based on findings from the *EFA Mid-Decade Assessment in the Asia-Pacific Region*, how can ESD contribute to EFA to reach the Dakar Goals?

Ko-chih Tung: Among the findings of the EFA Mid-Decade Assessment are that there is not enough information about early childhood and no organized assessment being performed. Many countries did not regard this area to be part of formal education. Additionally, the life skills area is not thoroughly covered because it is not part of the formal education sector and there is no systematic programme for the non-formal sector. Sustainable development really needs to focus on the early stages of life in order to address the structures of inequalities at the source. For ESD, this translates into the way we have to look at education, in terms of the incremental steps in the human development cycle. If we miss this first phase, we will miss the rest of life. Another major finding is the importance of the relationship between the lingual-ethnic cultural diversity of societies and, thus, teaching and

learning environments, as well as insuring harmony or discordance between these two areas. The common underlying assumption when developing these policies is that we are dealing with homogenous populations with a notion of centralized government, providing education for all. However, in reality, and especially in Asia, we are working with multi-lingual, multi-ethnic societies. This results in an oppositional relationship in which pluralism based on diversity is not seen as a natural resource but is instead, suppressed. From a sustainable development point of view, we need to harmonize these contradictions. Education systems have to look at diversity as a source of enrichment and creativity in order to develop solutions to these problems.

ESD is, therefore, education with a social conscience and a deliberate purpose.

Further implications for ESD involve the development of an additional skills dimension: for sustainable development, we need to go beyond rote memory. We need to develop not only physical skills but also cognitive skills. This was not part of the study and is instead my own addition. There is a new dimension of emotional skills management which is also another very important area to focus on.

ESD Unit: How can ESD link to EFA at the national level to move quality learning forward?

Ko-chih Tung: The question we need to ask ourselves is to what extent is sustainable development as a subject mainstreamed in the schools and in national education systems? We have to update current monitoring and evaluation methods, and the end of decade assessment should be modified to include education content from the viewpoint of sustainable development. Are teachers getting trained in this area? Are there relevant teaching materials and textbooks to support ESD? To what extent is ESD embedded in these resources? ESD has to be implemented through curriculum reform.

ESD Unit: Based on the *EFA Mid-Decade Assessment*, what needs still exist for monitoring education quality?

Ko-chih Tung: A monitoring system should track the full policy cycle, which is composed of a directive function, a mobilization function, an implementation function, and a delivery function.

We need to develop criteria that allow us to determine to what degree the current state of policy is in accordance with sustainable development priorities. This could involve an inventory checklist of characteristics of SD - however, policy is more than just a statement. The extent of policy implementation can be measured in terms of directives, budgetary allocation, designation of implementation agency and different manifestations of intention to mobilize resources.

ESD Unit: Some say that a qualitative indicator is simply a set of quantitative indicators that have yet to be disaggregated. Along these lines, then, is it also possible to quantify 'quality learning for sustainable development?'
In terms of quantifying 'quality learning for sustainable development', we can begin with some form of indicator of presence or absence; even qualitative virtues, such as colour and love, are quantifiable. Thus, quality simply means a pre-systematized phenomenon. Quantification starts with an analytical breakdown (or taxonomy) of a concept into measurable discrete dimensions. In this case, ESD attempts to bring about behavioural change: behaviour is manifested and observable and is thus, quantifiable. One can make an inventory of different types of

ESD gives a rationale for the whole education system. It gives a heart to EFA which, before, was just a skeleton.

behaviour sought, and start recording the presence or absence of these behaviours on a checklist and perform periodic measurements of appearance or disappearances to track changes in behaviour.

ESD Unit: Based on your experience working with education monitoring and planning for almost 30 years, if you could guide education into the future with a single message, what would the message be?

Ko-Chih Tung: Education pertains to teaching and learning. The most important aspect is that it all boils down to an acquisition of knowledge and skills. The most essential part of this acquisition of knowledge and skills is to answer the question, "for what purpose?" Education should give meaning to your life, meaning to what you do with your life and should allow you to make the best use of your life. ESD is a comment upon the content and purpose of education. Education is a societal investment for sustainable development with several levels of development: individual, community, society and state.

EFA will be increasingly regarded as a framework which will allow us to see which important things have been done in the education field, while ESD is an area which will be more and more emphasized. ESD gives a rationale for the whole education system. It gives a heart to EFA which, before, was just a skeleton. The reason for EFA is captured in ESD. EFA now has a heart and has acquired a brain as well. To view education merely as a quantitative goal, with aims to produce more and more, is but a soulless approach. ESD, on the other hand, gives a soul to education.

Ways To Move From Mass Schooling to ESD

By Sombath Somphone

Mainstreaming, or scaling up holistic education, often faces difficulties and challenges, especially from traditional educators and parents. However, there are ways to scale up the concept of alternative education, or education for sustainable development. It can be made more acceptable by the mainstream education system through well thought out strategic interventions, which must gain the support of teachers, local education authorities, parents, communities, and religious leaders.

The Participatory Development Training Center (PADETC) based in Vientiane, Lao PDR, has been introducing concepts and practices of more holistic, integrative, and sustainable education approaches into the Lao education system for over 10 years. PADETC used methodologies to promote a more holistic approach to education, initially in 10 schools for two years, and now expanded to more than 100 schools, falling in line with the government's policy to improve the quality of education.
Initial results in the 10 piloted primary schools are as follows:

> Quality education and holistic learning can be an important entry point in changing the mindsets of the next generation to value sustainable development and wellbeing.

- A significant improvement in academic performance of students in all 10 schools (an estimated 20 percent to 30 percent increase) with much of the success due to the introduction of well designed standard lesson plans which guide teachers to be activity-based and child-focused;
- Increased motivation of teachers and school principles to adopt new approaches, and participation of community members, including local religious leaders in fundraising activities;
- An increased self-confidence of students.

PADETC has drawn on their experience with public schools, and from lessons learned from the Roong Aroon School, located just outside Bangkok, Thailand, to develop a general strategy for implementing ESD in formal education. The General Strategy is as follows (to be implemented in any order):

1. No shock therapies - use terminologies that are child-friendly, empowering and non-threatening.
2. Introduce activity-based and holistic learning, starting within classrooms, and build experience to move out to the school yards and then eventually, to encompass the community.
3. Consulting and involving members

Learning from farmers how organic rice is grown © PADETC

Students learn how to cook different ethnic foods in a camp © PADETC

Leadership training game © PADETC

Sombath Somphone is the Executive Director of the Participatory Development Training Centre (PADETC) in Vientiane, Laos.

of the community to identify important indigenous knowledge (or livelihood skills) to be topics of activity based learning.

4. Bring in members of the community to be volunteer teachers on the subject of their specialty.
5. Use of student volunteers to assist teachers in carrying out activities - really encourage peer-to-peer education, not in specific issues, but as a regular practice;
6. Balance the head and the heart: competencies, ethics, and social responsibility
7. Identify important development issues as study topics for students to work on, including fieldwork in the community (real-life evidence-based learning).
8. At the onset of each school year, bring together teachers who teach the same grades to agree on topics for teaching their different subjects.
9. Encourage students and teachers to produce their own books as much as possible to avoid total dependency on official textbooks as the sole learning tool.
10. Setting up manufacturing of products which not only have economic significance but also have an associated value the school can identify with and be proud of, as a part of experiential learning.
11. Production of teaching tools of various formats, such as print and video films, can add much more value to the work performed by students and teachers. A forum to share and show these tools will promote a holistic culture of learning.
12. Start with a small group of schools which have open minded teachers and principals. Use their experience to show and train others.
13. Establish a learning park or learning corner at the school and then slowly use the community real life setting to expand the "learning park". Eventually move towards communities of learning centres/ parks.
14. A school committee is preferred over the parents association, as it includes a wider representation of stakeholders. Parents' participation should be made mandatory at the onset, prior to accepting their children into the school.
15. Connect the dots of good practices and sharing of resources locally, regionally, and globally.

Quality education and holistic learning can be an important entry point in changing the mindsets of the next generation to value sustainable development and wellbeing. The present generation of adults has a moral responsibility to set this future generation in the right direction, or to put them on a path different to the one we're on today.

Adapted from S. Somphone (2007) "Possible ways to moving from mass schooling to ESD", delivered at The 3rd International Conference on Gross National Happiness, Bangkok, Thailand.

Risk Communication and Participatory Learning: Focusing on Effective Disaster Education

By Yukiko Takeuchi and Rajib Shaw

Risk communication is defined as "an interactive process of the exchange of information and opinion about flood risk among individuals, groups, and administrators". This approach emphasizes that opinions and information should be exchanged in ways that encourage clear expression and mutual confidence.

Effective school safety lessons begin through appropriate risk communication among students, teachers, parents and other members of the community. To enhance effective risk communication, it is of vital importance to break the "school boundary," and to link schools with their surrounding communities. Thus disaster and risk communication education begins through interactions with the environment and its people.

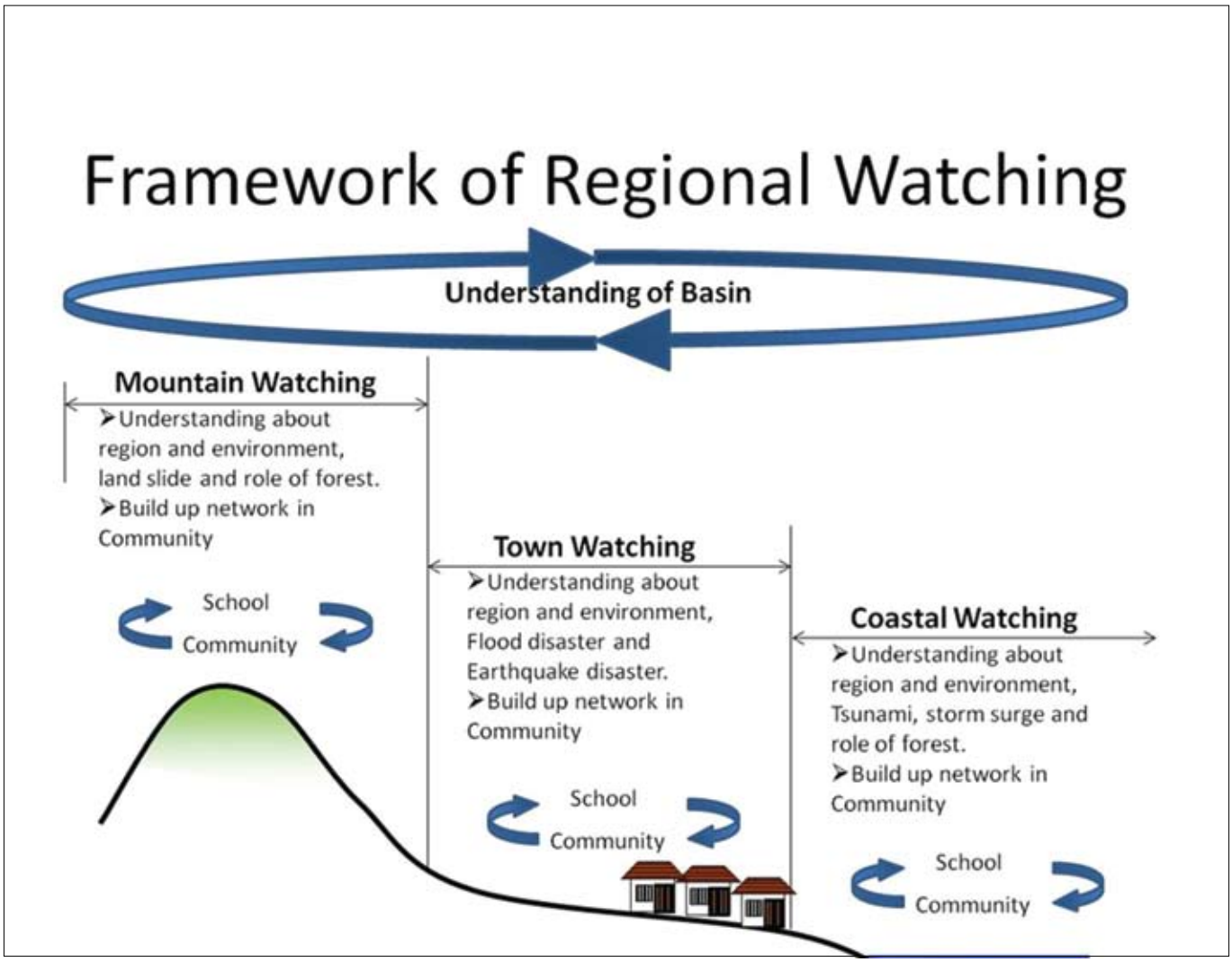
"Town watching" or regional watching is found to be effective for risk communication learning with students. Town watching is a participatory technique used in communities or in neighbourhood planning activities by larger administrative units (such as municipalities or cities), in order for residents to recognize problems as a group and to develop solutions together.

In the aftermath of a devastating typhoon season in 2004, Kyoto University has undertaken a unique neighbourhood watching programme in Saijo, a small coastal city in the Ehime Prefecture of Shikoku Island, Japan. The city is surrounded by mountains and the safety of the town is very much dependent on forest management of surrounding areas.

A combination of "town watching" and "mountain watching" experimentation was thus conducted with 12-year olds to assess the level of understanding between what these students witnessed and the connections made to environmental risks. The unique aspect of this town watching is the involvement of wider stakeholders (students, parents, teachers, neighbourhood associations, community leaders and city government). A survey taken before and after town watching, measured the impact of the process on students' understanding of the potential risks posed in their surrounding area.

A similar approach has been undertaken in Viet Nam. Also, coastal watching is a popular practice in the southern part of the Indian state of Tamil Nadu. In this case, the tsunami generation model and the potential protection offered by the coastal green belt, is analyzed through experimental learning.

Through these learning initiatives, students' understanding and knowledge of the characteristics of natural disasters and resulting risks is significantly increased. A combination of experimental learning and regional watching provide holistic learning opportunities for students, and have made the disaster education process a success for risk reduction. These types of holistic learning processes outside school boundaries are necessary to provide appropriate disaster education to students, and to make them and their surrounding communities aware of the potential risks and dangers they face.



Neighbourhood watch programme in Saijo, Japan © Kyoto University/ Rajib Shaw

Yukiko Takeuchi is a Lecturer in Kyoto University Graduate School of Global Environmental Studies and specializes in Risk Communication. Rajib Shaw is an Associate Professor in Kyoto University Graduate School of Global Environmental Studies and specializes in community based disaster risk reduction and environment-disaster linkages.

Capacity Building Institutions for Strengthening ESD in Formal Education

By Marie Neeser

Education has long been recognized as a key response to issues of unsustainable development of our environment, societies and economies. Capacity development of practitioners in the formal education sector is important to make ESD effective.

The SIDA (Swedish International Development Cooperation Agency) sponsored International Training Programme (ITP) in ESD in Formal Education[1] provides an opportunity to exchange knowledge and experience in ESD in the formal education sector, all across the world. The programme aims at increasing the understanding of the different dimensions of sustainable development and the educational response required.

The ITP in ESD in Formal Education is an in-service training programme and is built around the participants' Change Project, which acts as the key training tool towards bringing about a positive change in ESD work of the participating teams' institutions. The project enables participants to link the learning from the programme to their own ESD work contexts.

This nine month, five phased, training programme is offered through a dual-mode of learning - both face-to-face and through distance learning. Since 2002, the programme has built the capacity of over 200 professionals from Asia and Southern Africa.

The major learnings in 'Capacity Building for ESD' as derived from the experience of the ITP in ESD in Formal Education, include the following:

- Policy and practice are dynamic processes which enhance each other: policy though necessary, is not a sufficient instrument for change. There is thus the need for policy to be interpreted and implemented, so that lessons learned are applied in the policy formulation process;
- Knowledge and understanding of learning and socialisation are necessary for individuals to understand the processes of change for ESD that they themselves are part of;
- The relationship between individual and institutional learning in ESD is often complex, involving elements of disagreements, debates and discussions. To go beyond simplistic understandings of change, it is important to introduce perspectives of conflict and power regarding the relationship between different contexts (e.g. policy and practice), between individuals, and between individuals and institutions;
- An understanding of different educational traditions is essential

An understanding of different educational traditions is essential for understanding challenges and barriers to implementation of ESD.

[1] The ITP in ESD in Formal Education is sponsored by Sida and co-ordinated and organized by Ramboll Natura AB, Sweden in partnership with SADC-REEP, South Africa and CEE India.

Practitioners from different Asian countries in discussion © Ramboll Natura AB

An institutional team from China scanning ESD material © Ramboll Natura AB

for understanding challenges and barriers to implementation of ESD.

The new model of in-service training, as tried in the ITP over the last two years, is about engaging an 'institutional team' (a participant, a co-participant and their supervisor), rather than an individual, in working towards a positive change in ESD work throughout the training programme. The working of each institutional team as a 'unit' for ESD has been found to be effective in supporting the post-training impact and application of newer ESD learnings and experiences within the participating institutions.

With the use of e-communication tools, the training team, located in three different development education institutions in Sweden, South Africa and India, supports the participating teams and their institutions in scanning through key global learning and literature on ESD and applying it into their ESD work.

Marie Neeser is the Programme Director of the International Training Programme in ESD in Formal Education at Ramboll Natura AB, Sweden.

The Asia-Pacific ESD Monitoring Project: Lessons Learned for Developing National ESD Indicators

By the ESD Unit, UNESCO Bangkok

The Asia-Pacific ESD Monitoring Project was launched in March 2006 responding to the Decade of Education for Sustainable Development (UN DESD) International Implementation Scheme's (IIS) recommendation to identify suitable and relevant ESD indicators at every level – local, national, regional and international – and for each initiative and programme. The project, funded by generous contributions from the Japanese Funds-In-Trust, assists with the monitoring of progress and achievements during the UN DESD in the region.

The first phase of the project was led by UNESCO Bangkok with assistance from the Commission on Education and Communication (CEC) of the International Union for Conservation of Nature (IUCN) and facilitated by Macquarie University (MU) in Australia. Phase I produced the Asia-Pacific Guidelines for the Development of National ESD Indicators and the accompanying Quick Guide to provide UNESCO Member States in the region with a practical resource for developing ESD indicators at the national level. The Guidelines were developed in consultation with over 100 experts and national representatives through an interactive online forum and project meetings.

Phase II of the project aimed to take stock of the challenges, lessons learned and next steps when using the Guidelines to develop a national ESD monitoring system. This undertaking was been coined the Country Update Process and evolved from discussions during the Workshop for the Development of Asia-Pacific National UN DESD Monitoring Systems held in Bangkok, Thailand, from 2 to 4 April 2007.

Every three months, beginning in June 2007, UNESCO Member States in the Asia-Pacific were invited to submit country update progress reports to UNESCO Bangkok, outlining their achievements, challenges, lessons learned and next steps toward the development of their national ESD indicators, data collection and reporting mechanisms. Responses were compiled and distributed in report form to UNESCO National Commissions in the region. All countries in the Asia-Pacific region were invited and encouraged to take part in the county update process. By April 2008, 18 countries in the Asia-Pacific were able to contribute.

Challenges and Lessons Learned

Since the conclusion of the country update process in April 2008, many people have asked, "What indicators did you develop?" However, this question misses the point. Indicators are not the intended outcome: it is the lessons learned from the country update process that are important.

Some of the core lessons learned include: 1) the need for the strong will of government to lead and participate in the practice of developing a national ESD monitoring system; 2) the need to build on existing monitoring structures, such as those of EFA, and linking to the work of national statistics offices; and, in particular, 3) the underlying notion that an enabling environment for ESD is needed to pave the way for the development of national ESD indicators. This enabling environment, in many cases, involves, the establishment of a national ESD committee, the engagement of stakeholders from across sectors in ESD, the development of a national plan for ESD and the creation of a of working group to focus specifically on ESD indicator development and monitoring.

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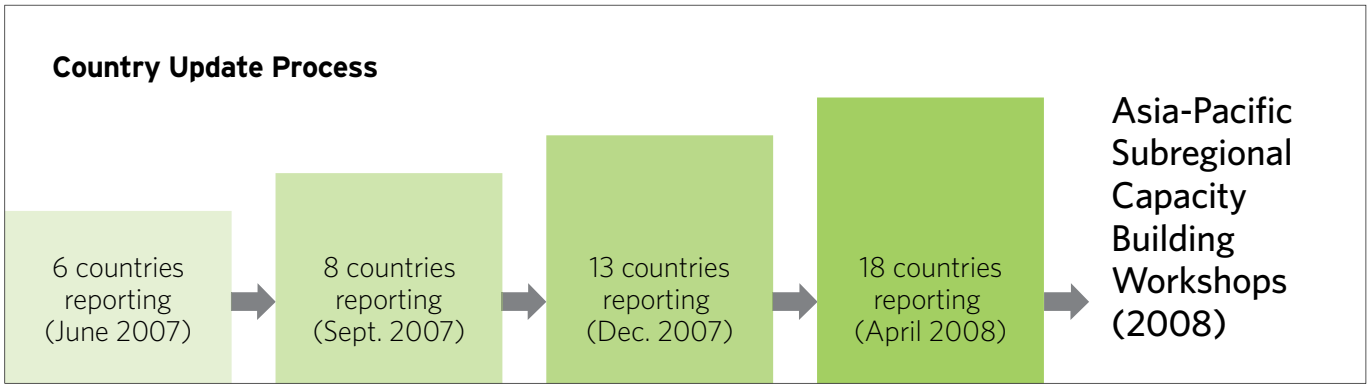


No country had developed a comprehensive framework of national ESD indicators by December 2008. To do so, core challenges still need to be overcome to move forward the development of national ESD monitoring systems. Three of the most notable challenges include: 1) the need to co-ordinate the wide range and scope of ESD activities and actors at the national level; 2) the need to raise awareness among potential key partners that ESD is an intersectoral platform that goes beyond education and the environment to engage other sectors such as science, culture and communications; and 3) national ESD priorities and goals in most countries have yet to be identified to guide the development of indicators.

Next Steps

To assist UNESCO Member States in addressing these challenges, UNESCO Bangkok, in collaboration with UNESCO field offices and UNESCO National Commissions in the Asia-Pacific region, conducted a series of subregional workshops in 2008, sponsored by the Japanese Funds-in-Trust, to assist Member States in:

- Building capacity for ESD leadership and co-ordination in an effort to strengthen political will for ESD; and link and establish support for new and ongoing ESD initiatives;
- Establishing conceptual and practical linkages between ESD, ongoing education initiatives such as EFA and national sustainable development strategies; and
- Mapping national and subregional ESD resources, activities, actors and their scale of involvement in ESD and their needs for moving ESD forward.

Subregional workshops were intended to assist countries in establishing an enabling environment for ESD to further develop national ESD indicators and monitoring systems.

Sharing Local and Indigenous Knowledge: The Canoe is the People

By the ESD Unit, UNESCO Bangkok

By sharing indigenous knowledge and know-how between elders and youth, the Local and Indigenous Knowledge Systems (LINKS) project enhances the inter-generational transmission of knowledge.

"The technology of building these ocean canoes...that's something to be very proud of. And it teaches us self-esteem. We were something. We did something. Therefore we can do something now; and therefore we can see a future for ourselves," says Cook Islands canoe builder and navigator, Sir Tom Davis (Papa Tom).

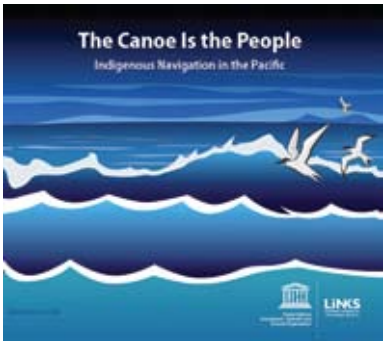
Globalization is reaching every part of the world. More and more, young people abandon their cultural heritage in order to take part in mainstream society. Concerned about this trend, UNESCO launched the LINKS project in 2002 as one of a new generation of cross-cutting projects to maintain the vitality of local knowledge within communities. By sharing indigenous knowledge and know-how between elders and youth, LINKS enhances the inter-generational transmission of knowledge. This programme is now under the Science for Society section in UNESCO Paris Headquarters.

The Canoe is the People CD-ROM was launched in Paris in October 2005 under the overall co-ordination of the LINKS programme and with contributions from academics, traditional knowledge holders, present-day navigators, voyaging societies, photographers and filmmakers, as well as UNESCO's offices in Apia and Bangkok. The idea of developing an educational resource on the theme of indigenous navigation in the Pacific, was seen as an ideal project through which to stimulate the interest of youth in their Pacific island heritage – as well as building a sense of pride and accomplishment; and to bring about inter-generation knowledge transmission.

By sharing indigenous knowledge and know-how between elders and youth, LINKS enhances the inter-generational transmission of knowledge.

The interactive possibilities of the CD-ROM format has enabled the inclusion of 77 videos, 41 traditional stories and accounts and 40 images and diagrams to help convey an understanding of the complexities of navigation. A New Zealand (Aotearoa) Maori language version of the CD-ROM was produced with the assistance of the University of Waikato and launched in Christchurch, New Zealand at the World Heritage Committee, July 2007. This is the first version in an indigenous Pacific language with more planned for the future.

To support the use of the CD-ROM, a Learning Resource Pack (LRP) has been



developed with the aim of integrating it into Pacific school curricula. The LRP includes classroom materials for teachers and students that allow the seamless application of the CD-ROM in upper primary and lower secondary schools. It includes a curriculum plan, 26 lesson plans with detailed study guides, four assignments and many suggested activities. Many practical examples and real life applications have been used to complement the existing curriculum to stimulate the interest of learners and to develop a lifelong interest in indigenous knowledge and its place in contemporary society. It is hoped that indigenous knowledge will remain a dynamic, creative and productive resource that remains highly valued throughout the Pacific region.

A draft version of the LRP was presented to a Pacific Directors of Education meeting in May 2008. A pilot project for 2009 is in development to trial the materials and devise approaches to integrate them into the local school curriculum in three Pacific island countries.

A sample lesson plan from the Learning Resource Pack.

STRAND C: BECOMING A NAVIGATOR AND NAVIGATION

Topic	Sub topic	Objectives Students will be able to:	Integrated Learning Objectives	Lesson, Periods, Minutes (')
1. Introduction to Pacific Navigation	1.1. Non-Instrument Navigation or Wayfinding.	1.1.1. Explain the main differences between Pacific Island and Western methods of navigation (K).	**Social/Cultural Studies** Identify and explain how technological changes have affected the ways in which people maintain and pass on their heritage. Identify and discuss the skills and knowledge that have traditionally been of great value to Pacific Islanders (K & A). **Social/Cultural Studies** Develop a pride in their own heritage, culture, language and artistic expression and a belief in their preservation, promotion and maintenance (A). **English** Follow the main points in a discussion and make appropriate contributions (K).	2 periods 80' LESSON 13
		1.1.2. Explain the similarities and differences between Polynesian and Micronesian methods of navigation (K).	**Social & Cultural Studies** Be aware of and value local and regional seafaring culture and traditions (K & A).	
		1.1.3. Explain the significance of ritual, spiritual and secret knowledge such as Aruruwow and Sea Brothers (K).	**Social & Cultural Studies** Be aware of and value local and regional seafaring culture and traditions (K & A).	
			Total for Topic	2 periods 80 minutes
2. Becoming a Navigator	2.1. Ways of Learning and Remembering.	2.1.1. Describe and explain the experiences and procedures for becoming a navigator in their own country (K).	**Social & Cultural Studies** Understand and value traditional methods of becoming a navigator (A).	2 periods 80' LESSON 14
		2.1.2. Explain the significance of observation and memory (K).		
		2.1.3. Explain the significance of poetry, songsand chants in memorizing and recording knowledge about navigation (K&P).	**Social/Cultural Studies** Develop a pride in their own heritage, culture, language and artistic expression and a belief in their preservation, promotion and maintenance (A).	
		2.1.4. Demonstrate expertise at performing traditional songs and chants (K,A&P).	**Social/Cultural Studies** Develop a pride in their own heritage, culture, language and artistic expression and a belief in their preservation, promotion and maintenance (A). **English** Express their ideas, feeling and values in their own poetry and fiction (K & A).	

The Eco GO Beyond Schools Sustainable Development Programme of MAS Holdings in Sri Lanka

By Amanthi Perera

MAS Holdings is an apparel solutions provider in Sri Lanka committed to sustainable development. Launched in 2006, the Eco GO Beyond programme is a key strategic corporate responsibility initiative which focuses on sustainable development education and the creation of sustainable mindsets. To date, the programme has involved over 11, 000 youth in 30 rural schools in Sri Lanka.

Whilst sustainability is emerging as a key global concept it is not incorporated in Sri Lanka's school curriculum; the UNESCO/UNEP sustainable consumption report of November 2000 reiterates this. The model and curriculum MAS Holdings advocates, was developed by accessing the work of experts in the field, from the United Nations Environment Programme (UNEP), Youth Exchange (YXC) and the Consumer Citizenship Network's (CCN) "Looking for Likely Alternatives" (LOLA) toolkit. This initiative is endorsed and supported by the Ministry of Education.

The process of the programme consists of two phases: initialization and activation. Initialization occurs through introductory visits to the schools and a briefing meeting for principals held at the Ministry of Education. Thereafter, the in-school workshops are held. Each workshop includes audio visual presentations, lecturing, playlets and mobile exhibits.

The activation phase comprises of the design and implementation of interventions that encourages students to enter the decision-making process along with educators, to identify and share best practices of SD in the school, home and community. Activation takes place via 30 Eco GO Beyond clubs and culminates in school based exhibitions and awards ceremonies.

Many schools in Sri Lanka have the tendency to concentrate heavily on the environmental dimension of sustainability, rather than incorporating a more holistic approach towards sustainable development that also comprises of social and economic sustainability. Thus, a key challenge is to inculcate the importance and necessity of integrating all three dimensions of sustainability in participating schools. This is achieved by insisting that all projects which take place in the activation phase should demonstrate an understanding from the perspective of all three sustainability dimensions.

A good example is a school which conducted a project on the effective disposal of household waste (glass, metal and paper). While the environmental sustainability element of this project was evident, the students went on to show that economic sustainability could be achieved through earning income by selling this waste to a recycler, and that as all profits were donated to an orphanage in the area, this project would also be contributing to social sustainability.

> ESD is thus an obvious choice [for corporate citizenship efforts] as it creates a self sufficient community and gives equal weight to economic sustainability along with social and environmental sustainability.

Private sector involvement in ESD and for that matter in any area of education, should be done very carefully and in a focused manner. Traditionally, the sphere of education has not come under the purview of the private sector; thus, schools may be reluctant to give private organizations access to decisions that will affect their students. this is why it is essential to create partnerships for

Workshop Participants © MAS Holdings

ESD workshop playlet © MAS Holdings

© MAS Holdings

credibility (MAS Holdings conducts their programme under the patronage of the Ministry of Education).

Companies such as MAS Holdings believe in corporate citizenship efforts which will have a long term benefit for recipients. ESD is thus an obvious choice as it creates a self sufficient community and gives equal weight to economic sustainability along with social and environmental sustainability. This is of more significance in developing nations where the economic constraints on the community are great. Another lesson learnt through the MAS Eco GO Beyond programme, is that ESD is a continuously evolving subject. While the fundamental concept may be concrete, the issues surrounding ESD keep changing, thus it is very important to keep updating the subject matter. This translates into an ongoing teaching and learning process. At the end of this two year launch, MAS has recognized the need for refreshed and revised training initiatives in 2009 for the schools which have already completed the initial school workshops.

The MAS Eco GO Beyond Sustainable Development Education Programme has proven to be an effective process of advocating and embedding ESD and in 2008, UNESCO Bangkok and MAS Holdings signed a MoU, where MAS will share the concepts used in this programme for the formulation of a toolkit by UNESCO Bangkok to further promote ESD in Asia. Further, this process has also been borrowed by the Ministry of Education to initialize ESD in 40 more schools in the Western and Central Provinces of Sri Lanka.

Amanthi Perera is Executive, Strategic Corporate Social Responsibility, MAS Holdings.

Open and Distance Learning Supports Teachers' Professional Development in ESD: The case of the Green Teacher Programme[1]

By Shivani Jain

A challenge faced by the Centre for Environment Education[2] (CEE) in reorienting teacher education for ESD, is how to introduce principles of good quality education into in-service training, without necessarily having professionals take time off to come to the classroom. Open and distance learning (ODL) provided an obvious alternative. It is within this context of ESD and continuing learning within the teacher community, that the Green Teacher Programme is situated. CEE in partnership with the Commonwealth of Learning in Vancouver, Canada, undertook an experiment in the form of an ODL teacher training programme in ESD called The Green Teacher.

The Green Teacher Diploma is a distance education programme providing continuing learning opportunities in ESD to practicing teachers. The goal of the programme is to empower educators with the knowledge, ideas and skills which can help in "greening" their teaching. It is hoped that by sharing innovative experience and practice in ESD, this programme will help inspire educators to develop creative ideas and curriculum methodology and to further experiment in this area. This year long programme is currently offered in English all over India through six Study Centres.

A good in-service ESD training programme should be situated in the practical and working environment of the learners (or teachers in this case). The programme (a four to five month action-based teaching-learning programme embedded within the education system) provides learners with practicals in a real-life classroom situation, thereby ensuring the transfer of taught material and subject matter.

Individual discussions with Green Teachers on their programme projects conducted by each of the six Study Centre teams, supports the teachers' innovation and creativity in trying out new ideas on ESD within their classrooms and schools. Further, the programme is structured in such a way that it provides the freedom of learning at one's own convenience and style. The Course is designed in a mixed format of face to face and distance learning. Additionally, the course requirements - time commitment, essential entry level qualifications as well as utilizing expertise of the learners to shape their new learning- are much more conducive to in-service professionals and their training needs.

The Green Teacher programme has proved to be a classical example of weaving the strengths of Open and Distance Learning with the principles of good education and ESD.

[1] For more information on the programme, write to greenteacher2008@ceeindia.org.
[2] Centre for Environment Education (CEE) India is a centre of excellence supported by the Ministry of Environment and Forests, Government of India. CEE undertakes demonstration projects in education, communication and development that endorse attitudes, strategies and technologies that are environmentally sustainable. To this end CEE works at national, regional and international levels, developing relevant educational programmes and materials.

An outdoor classroom © Ravi Panchal/ Centre for Environment Education (CEE) India

A math teacher leads the school ESD movement!
Biji Varghese, working as a mathematics teacher with Asia English School, Ahmedabad, India, enrolled for the Green Teacher programme in 2006. Today Biji is proud of completing the Green Teacher Diploma after which she was given more responsibilities related to Environmental Education (EE). The school principal put her in charge of an international ESD project called "Global Communities for Sustainability" (GCS), an exchange programme between a selected network of schools in Australia and India. GCS provides exchange opportunities to key stakeholders from schools, youth groups and NGOs in order to facilitate learning for sustainability education. The Asia English School managers say that after completing the Green Teacher programme, Biji has refined her skills in not only interactive and innovative teaching-learning methodologies, but also in project management, which is crucial for co-ordinating an international ESD programme like the GCS.

An outdoor classroom © Ravi Panchal/ Centre for Environment Education (CEE) India

Shivani Jain is the Senior Programme Co-ordinator for Networking and Capacity Building at the Centre for Environment Education in India.

The Centre for Environment Education (CEE) India is a centre of excellence supported by the Ministry of Environment and Forests, Government of India. CEE undertakes demonstration projects in education, communication and development that endorse attitudes, strategies and technologies that are environmentally sustainable. To this end CEE works at national, regional and international levels, developing relevant educational programmes and materials.

Training for the Future

By Nitin Verma and R. Kuberan

Training Artisans for Sustainable Construction Practices

Construction Artisans are key agents for spreading sustainable construction practices in the rural context. In a post disaster scenario where rehabilitation and reconstruction is a daunting task, it is important to single out anomalies that have led to maximum damage. Artisans thus play a key role as agents of change.

The Sustainable Environment and Ecological Development Society (SEEDS) champions the cause of rehabilitation and reconstruction for disaster hit rural communities. While working with communities, SEEDS imparts training to local artisan groups for sustainable construction practices. The training is case- specific and mostly hands-on in nature for the benefit of the target group.

The target groups are not only direct beneficiaries like skilled masons and construction labourers but also local champions and young volunteers. SEEDS strongly believes that rural communities rely on each other's experience and traditional knowledge rather than on modern technology and expertise, hence these artisan groups are key agents for promoting sustainable practices on the ground.

In a similar intervention after 2006 floods in Barmer, a district of Rajasthan, SEEDS imparted training local artisan groups during its shelter rehabilitation project. These training programmes addressed issues such as technology upgrades in cases where there was a transition from the building of adobe houses to Compressed Earth Block (CEB) construction, as well as issues on safe building practices against future risks, and correcting prevalent anomalies in masonry and construction techniques.

SEEDS conducted these training sessions in a sustained process over a period of time. To start with, sensitisation workshops were conducted where the upgraded building material and technologies were introduced and these artisans were trained in their construction techniques. Workshops were followed by a hands-on training programme which allotted a unit of shelter to each trainee to construct. SEEDS technical staff frequently visited these units and pointed out anomalies during the building process. Finally, before allotting more units for construction, a short discussion session was conducted to answer queries and to rehearse the entire process and to absorb the learned information.

This group of artisans are a force to reckon with; some of the trainees became trainers and imparted training sessions to other groups. The artisan trainees reported that their productivity had increased and most importantly, the message of sustainable construction was spreading beyond targeted intervention areas. 'Artisans Training' had thus delivered its primary purpose and was indeed a catalyst of sustainable construction practices. SEEDS later replicated such training in a follow-up project of school restoration in the Barmer district, and in 2008 began implementing a similar process in a post-flood shelter project in the Balasore district of Orissa, India. Some of the members of the Barmer artisan group are now key members of the team imparting training to new groups in different conditions.

Risk Education for Sustainable Development

SEEDS India's learning model has been adopted for meeting this need by launching a "Certificate providing risk education for field practitioners who work with communities for the welfare of the people. They do not normally get access to formal education on disaster risk reduction. Also, the prospects for exchanging ideas with national and international experts are also bleak. Therefore, an open course on "Disaster Management for Field Practitioners", as part of the Global Open Learning Forum on Risk Education (GOLFRE) in affiliation with Centre for Development and Emergency Practice (CENDEP) of Oxford Brookes University, is offered. This three-month course is flexible and adaptable, fulfilling the specific needs of Field Practitioners and others intending to work in the field.

Dr. R. Kuberan is a Senior Advisor and Nittin Verma is a Senior Programme Officer with SEEDS, a non-profit voluntary organisation with a vision to make vulnerable communities resilient to disasters. Website: www.seedsindia.org.

Forum of Asia-Pacific Parliamentarians for Education, Jakarta Declaration 2008

At the Regional Parliamentary Conference for Education in Asia and the Pacific in Jakarta, Indonesia which took place from 24 to 25 October 2008, 16 countries adopted the Declaration of Jakarta. This Declaration acknowledges the necessity for greater participation by parliamentarians in the work of the United Nations and their respective specialized agencies, thereby helping to bring those institutions closer to citizens and their representatives and vice versa.

The parliamentarians reaffirmed their commitment to UN guiding instruments, such as the World Declaration on Education for All (1990), the Dakar Framework for Action and Education for All goals (2000), and the UN Decade of Education for Sustainable Development (UN DESD) recognizing their singular and collective responsibility to the well-being and human dignity of their citizens through quality and equitable education systems. In particular, the participants reiterated their belief "that Education is the key to achievement of individual and social well-being and peace and that ignorance and illiteracy are obstacles to development and the construction of democratic societies".

Participating countries pledged themselves to several goals, which include the following: to reassess constitutions, legal instruments, laws and regulations currently in force in member countries, so as to apply renewed energy to the right to basic education for all and to work toward its realization; to mobilize human, material and financial resources in order to facilitate the path towards achieving Education for All goals; to promote the education of girls and women in particular, in order to eliminate gender disparities and inequalities at all education levels; to promote the ethics and values of a culture of peace, tolerance, cultural diversity and sustainable development through education; and to recognize the role of teachers and educators and further encourage the development of quality teachers in order to achieve EFA goals.

In order to achieve these goals, the Members of the Asia-Pacific Parliamentarians pledged to establish a Forum of Asia Pacific Parliamentarians for Education (FASPPED).

ASP-ESD Clubs in Sri Lanka

By Prasanna Chandith

The Sri Lanka National Commission for UNESCO (SLNCU) has registered 84 schools under the Associated Schools Project Network (ASPnet). SLNCU, in collaboration with the Ministry of Education (MOE) has recently commenced a special project titled "ASP-ESD clubs in Sri Lanka". The aim of the project is to popularize the concept of ESD among teachers and students in the ASP schools. As a pilot project, we have selected 42 ASP schools in the Western and Central provinces to ensure easy communication and follow up. The final objective of this project is to convert the ASP clubs into ASP-ESD clubs in their respective schools.

Awareness programmes targeting ESD concepts in schools and how to achieve ESD objectives in these schools have been carried out. These programmes include the assignment of specific tasks to school principals to identify ESD priorities in their schools, and to prepare separate project proposals related to ESD concepts.

The selected priorities include the following: solid waste management; peace and cultural diversity; health promotion; sustainable agriculture; reduction of water and electricity consumption in the schools; and the development of school and class libraries. Thus far, promising project proposals have been received from the targeted schools.

The next step is for principals to sensitize their teachers and the ASP club members to ESD concepts; this step is then followed by peer group activities to further promote ESD concepts in a wider circle which includes friends and parents. This process thus encourages a larger network of participants, extending ESD advocacy beyond the schools.

Through these approaches we hope to create ASP-ESD clubs. Apart from these specific projects, the SLNCU looks forward to imparting training through teacher training institutes to enable all teachers to become peace educators in order to promote core values such as: respect for others; respect for the environment; positive thinking; developing inner peace; learning to live together; critical thinking; resolving conflict non-violently and to build peace in the community. This is to be done through holistic and integrated methods in the teaching and learning processes in the schools, using the existing subject matter, without overburdening the school curriculum. Appropriate school-based monitoring and evaluation systems are also required to be put into place in order to ensure the success of these programmes.

Prasanna Chandith is the Deputy Secretary General of the Sri Lanka National Commission for UNESCO.

ECCE & ESD

A Promise of Dynamism, Synergies and Hope for "Our Common Future"

Bottle photograph © Steve Wampler/Flickr

...our societies urgently require new kinds of education that can help prevent further degradation of our planet, and that foster caring and responsible citizens genuinely concerned with and capable of contributing to a just and peaceful world.

...these new kinds of education must be available to all – not only a handful of people – and take place in various settings, including families and communities.

...they must begin in early childhood, as the values, attitudes, behaviours and skills acquired in this period may have a long-lasting impact in later life. Thus, early childhood education clearly has an important place in the efforts to bring about sustainable development.

From 'Introduction' by Ingrid Pramling Samuelsson and Yoshie Kaga in "The contribution of early childhood education to a sustainable society", UNESCO, Paris, 2008.

ECCE: Early childhood Care and Education

ESD in Tertiary Education: A SANZ Partnership

'Every new day in the world begins in New Zealand. Light and time start here. Youthful in age and outlook, New Zealand is the natural home for fresh ideas. Come catch some new light.'

By Kari Adams and
Hayden Montgomerie

About the Partnership

In New Zealand, the National Commission for UNESCO employed a half-time UN DESD Co-ordinator based within the Secretariat of the National Commission for the first two years of the UN DESD.

Having established a relationship with Sustainable Aotearoa New Zealand (SANZ) who organised the 2006 Stakeholders Forum for the Decade, in July 2007 the National Commission entered into a formal partnership with SANZ.

This partnership focused on three key deliverables: the finalisation of a strategic plan for the UN DESD in New Zealand including a monitoring and evaluation framework; the development of draft indicators for the UN DESD; and providing a governance committee for the UN DESD. The National Commission has provided limited funding to SANZ to provide for UN DESD co-ordination and activities in New Zealand. This relationship has allowed SANZ to leverage matching funding from other sources.

SANZ has engaged with a wider range of stakeholders and recently completed a think tank process looking at future scenarios for New Zealand. SANZ is now working on the second stream of the NZ strategic plan, which aims to increase public education for sustainability. This commenced in November 2008 with a forum that was held to discuss how sustainability can be embedded into tertiary education.

A Case Study Engaging the Tertiary Sector

Throughout the tertiary education sector, individual champions of strong sustainability have been working for years to raise the profile of solid sustainability values and embed sustainability principles into their teaching programmes. From lessons in eco-design in engineering through to 'green accounting', New Zealand tertiary educators have taken it upon themselves to develop better graduates: graduates with a real appreciation of the current global change drivers and equipped with the skills to lead the paradigm shifts required.

A Cross-Institutional Approach

Representatives from every tertiary institution in the country used the opportunity to identify ways the sector can exercise its mandate as the critical conscience of society, support leadership in tertiary institutions, respond better to the growing interest in sustainability issues from leading New Zealand businesses and the media, and to engage the central government.

Above all, participants recognized the need to take action that is outside the 'business as usual' paradigm of small, incremental change.

The Need for Urgency

The SANZ Chair, Dr. Wayne Cartwright, identified two areas of development that require urgent attention. First is education that prepares citizens for unprecedented global and local change. Dr. Cartwright notes that "straightforward foresight and scenario analysis has shown us that the global changes we will face as soon as 2030 will be outside the range of prior human experience in terms of magnitude, speed and simultaneity."

Secondly, SANZ calls for tertiary institutions to lead, to prepare, and to support students by guiding them towards a commitment to strong sustainability. "We must move beyond awareness-raising", notes Dr. Cartwright, "and start to embrace the systemic principles of strong sustainability and the ethical stance needed for that commitment".

International Conference: "Learning Together for Tomorrow: Education for Sustainable Development"

The 10th APEID International Conference held in Bangkok from 5 to 8 December 2006 focused on Education for Sustainable Development (ESD). It was funded by the Japanese Funds-in-Trust for ESD. The conference promoted the United Nations Decade for Sustainable Development (UN DESD) from 2005-2014 and strengthened UNESCO's role as the lead agency for UN DESD. It brought together some 200 teachers, educators, the private sector, members of the media, curriculum developers, educational administrators and policy makers from informal, non-formal and formal education sectors in the Asia-Pacific region, to share ESD-related research findings, innovative practices, experience and lessons learned. The conference was successful in meeting its key objectives to strengthen co-ordination and collaboration among network members, raise awareness and understanding of ESD and serve as a catalyst for the creation of ESD action plans.

Straightforward foresight and scenario analysis has shown us that the global changes we will face as soon as 2030 will be outside the range of prior human experience in terms of magnitude, speed and simultaneity.

Celebrating Success

Through sharing success stories it is obvious that the New Zealand tertiary sector has already started this journey. Examples from smaller institutions such as Otago Polytechnic can now be told alongside stories from Scandinavia and the UK. In Otago's case, strong and innovative leadership has led to the establishment of an organisational goal that 'every graduate may think and act as a "sustainable practitioner".'[1]

Valuable insights were also shared relating to increased student demand and changing expectations. Also discussed was the opportunity that exists for the New Zealand tertiary education sector to secure a 'sustainability-minded' position on the global stage. New Zealand continues to attract international students, who also pack their expectations of pristine mountains, clean air and untouched beaches. Given that international education remains New Zealand's fourth largest export industry[2], there is a great opportunity to connect the nation's tourism icons with the education that helps to preserve them.

Where To From Here?

Representatives from participating institutions have formed a working group called STENZ (Sustainability in Tertiary Education in New Zealand). This group met in November 2008 to plan their collaborative journey towards making this vision a reality within the Decade. The group will look to work in collaboration with the Ministry of Education, the Tertiary Education Commission and the Vice-Chancellors Committee, as well as creating an online collaborative space to share knowledge, experience and information between sustainability educators.

For more information, please visit www.phase2.org.

New Zealand Educated website: www.newzealandeducated.com

Kari Adams is a Consultant at Sustainable Aotearoa New Zealand (SANZ) and Hayden Montgomerie is a Programme Officer for Education, Youth and Human Rights for the New Zealand National Commission for UNESCO.

[1] Otago Polytechnic, New Zealand. Education for Sustainability website, cited 12/12/08. http://www.otagopolytechnic.ac.nz/about/sustainability/education-for-sustainability.html
[2] NZ Tertiary Education Commission Media Statement 'International education: the way forward', 17/08/2006. http://www.tec.govt.nz/templates/NewsItem.aspx?id=1051

Envisioning the Future of Agriculture: The ESD Way

© Obihiro University/Takayuki Maki

By Junichi Takahashi

Obihiro University of Agriculture and Veterinary Medicine held the Obihiro Asia and the Pacific Seminar on Education for Rural Development (OASERD), in Obihiro, Japan, in August 2007. OASERD promotes ESD in agriculture and livestock production in the Asia-Pacific region. So far, specialists have participated in discussions to further promote ESD for agriculture in rural areas, and to produce more tangible programmes and outreach activities. Even with the support of modern and advanced agricultural technology in Japanese rural societies, recent global environmental and food security and safety issues have cast a pall over rural development.

Food security stability and assuring food safety are problems in most international communities today. Because of globalization and the deregulation of food products, however, zoonotic infections caused by livestock pathogens, have quickly spread across the globe in the latter part of the 20th century. Taking into account increased population growth in developing countries, as well as the deterioration of the Earth's environment, collective action is needed to face these challenges.

According to data published by the Intergovernmental Panel on Climate Change (IPCC) in 2003, anthropogenic sources of greenhouse gases (carbon dioxide, methane, and nitrous oxide) have abruptly increased due to agricultural and livestock activities. Their sources range from enteric fermentation, animal waste and rice paddies, to biomass burning, landfills and domestic sewage. Developing land for agriculture has resulted in deforestation and a loss of biological diversity. Global warming is leading to changes in farming styles in rural areas in Japan. Moreover, these changes have also contributed to a spread of endemic infectious diseases in tropical regions and affected environmental hygiene related to securing safe water sources.

Dr. Junichi Takahashi is a Professor at the Graduate School of Animal Science, Sustainable Animal Science at Obihiro University of Agriculture and Veterinary Medicine, in Hokkaido, Japan.

The following updated seminar programmes will be offered:
2009 "ESD on agriculture and livestock production and global environmental issues"
2010 "ESD on infectious diseases and global environmental issues"
2011 "ESD on food security and global environmental issues"
2012 "ESD on human health and global earth environment"
2013 "ESD on distribution of agriculture and livestock products for food safety and global environmental issues"

Higher Education in Environment and Disaster Management

By Rajib Shaw

To address the increasing impact of disasters, the HFA[1] (Hyogo Framework for Action) Thematic Area 3 focuses on strengthening networks and promoting dialogue and co-operation among technical and scientific specialists, planners and other stakeholders. The other emphasis of HFA is to include disaster risk reduction subject matter in formal, non-formal, and informal education and training activities. However, in order to make sustainable development in general a reality, there needs to be a greater focus on higher education to produce young professionals, who can in turn, provide and develop important tools and methodologies which contribute to expert knowledge.

To address the requirements and objectives of the HFA and ESD, and to further contribute to the higher education and research process, Kyoto University, in partnership with 15 other universities and organizations from 13 Asian countries, has formed the Asian University Network for Environment and Disaster Management (AUEDM).

The objectives of AUEDM are as follows:

- To share and work together (bilaterally or multilaterally) in promoting environment and disaster management in higher education (focusing on, but not restricted to, post-graduate education).
- To seek mutual collaboration on field-based action research.
- To broaden the scope of education and learning in the environment and disaster management field through collaboration with other stakeholders like NGOs and local governments.

AUEDM has specific features:

- Multi-disciplinary approach
- Field-based action research
- Linking academic research to field practice

The specific modality of the AUEDM is to promote close co-operation with civil society organizations. Non-government organizations (NGOs) have direct field access and experience in grassroots project implementation. However, this experience is not properly reflected in the education curriculum. Thus, the network aims at bridging academic research, education and field practice.

Some of the highlights of the university-NGO co-operation are:

1. Quality of knowledge and information: All participating universities in the targeted countries are esteemed organizations in the field of disaster risk management. Therefore, it promotes high quality knowledge and information.
2. Extensive network: The 15 universities have their largest networks in the tsunami affected areas in Asia, thus ensuring that knowledge will have a wide circulation.
3. Ensuring sustainability: Through development of certificate courses and customized courses, professional development of the young will be ensured, thus linking to the sustainability of the disaster preparedness activities in the targeted countries and communities.

In order to make sustainable development in general a reality, there needs to be a greater focus on higher education to produce young professionals who can in turn, provide and develop important tools and methodologies which contribute to expert knowledge.

For more information on AUEDM, please see: www.auedm.net

[1] More information on HFA can be found at: http://www.unisdr.org/eng/hfa/hfa.htm

Developing an International Perspective on Agriculture and ESD

By Atsushi Tajima

The Agricultural and Forestry Research Center of the University of Tsukuba (AFRC-UT), Associate Centre of the UNESCO APEID programme in Japan, has launched a six year ESD programme focusing on higher agricultural education titled the International Agricultural ESD (Ag-ESD) programme.

The main focus of Ag-ESD at AFRC-UT is to provide a framework for integrating diversified educational and research activities on agriculture at the University of Tsukuba and four affiliated universities, namely Bogor Agricultural University of Indonesia, Ibaraki University of Japan, Kasetsart University of Thailand, and the University of the Philippines at Los Banõs.

The first international Ag-ESD Symposium was held at the University of Tsukuba from November 4th to 11th, 2008. During the symposium, there was discussion to develop a university network on Ag-ESD. A special lecture describing the current situation of Afghanistan was organized as a part of AFRC-UT efforts to support the reconstruction of Afghanistan.

Student participation is the most important element of the Ag-ESD programme. Five graduate students registered for a one credit course, "International Agricultural Internship", newly offered by the Graduate School of Life and Environmental Sciences, University of Tsukuba. Poster sessions for graduate students and a Young Researcher's Forum for young researchers on sustainable agriculture were organized to encourage the younger generation to interact in an international atmosphere, and also to develop a student network for future Ag-ESD activities.

Education for sustainable development requires integration of the knowledge and technology of many disciplines. A holistic approach will be one of the biggest challenges for the future Ag-ESD programme, since the academic specialty at the university is usually based on a reductionist approach. In order to be truly holistic, the future Ag-ESD programme should cover not only the university level but also various formal and non-formal education sectors. This will be an important challenge.

Dr. Atsushi Tajima is the Assistant Co-Director at the Agriculture and Forestry University at the University of Tsukuba.

Asia-Pacific UN DESD Interagency Steering Committee

The Asia-Pacific Interagency Committee for the United Nations Decade of Education for Sustainable Development is a forum consisting of fourteen UN agencies and affiliated partners to promote ESD in the region. The Interagency Steering Committee partners include the FAO, UNCRD, UNDP, UNEP, UNESCAP, UNESCO Bangkok Regional Bureau for Education, UNESCO Jakarta Regional Science Bureau, UNEVOC, UNICEF, UNISDR, UNU-IAS and affiliates, ACCU, ADB, APCEIU, and IGES.

The interagency nature of the Steering Committee underlines the importance of working jointly for the common goals of the UN Decade. The committee is a co-ordinating body which channels efforts for ESD in the Asia-Pacific region through preparation of advocacy materials, liaising with donor organizations to encourage appropriate funding of ESD initiatives in the region, and identifying projects that contribute to the implementation for the Decade. As of 2008, the Committee is beginning to move in the direction of joint planning and it has, in its 11th meeting, agreed to focus joint efforts to address climate change through education related activities.

Interdisciplinary Thinking with Mathematics in Globally Relevant Issues

By Bharath Sriraman

Interdisciplinarity has become relevant for emergent sciences of the 21st century. Yet mathematics in nearly every country in the world is still rooted in rudimentary computational processes and problems that emphasize "simplistic thinking". Curricular documents in Asia-Pacific, Europe and the United States, make a call for connecting mathematics internally and externally to relevant problems and the promotion of mathematical literacy.

The goals for educating current and future generations should have more emphasis on connections, coherence, civic consciousness and cross-curricular competencies for solving problems confronting humanity. By civic consciousness, I mean shared global problems e.g., fair trade, environmental indexes, ethical issues, information reporting (ability to fact check, source check, detect biases). Most (maths) education programmes typically do not prepare prospective teachers to incorporate interdisciplinary activities that cohere with reading, science, mathematics and societal issues.

A research project[1] was designed and implemented to connect the standard curriculum to socially relevant problems, i.e., combine uses of mathematics and critical thinking skills. In this project, scenarios were created that involved making Fermi estimates, reasoning in ratios, and problem solving. The purpose of this approach was to create a paradigm shift and humanize the purpose and relevance of mathematics in global economies and societies of today.

Several scenarios were used in the context of the culture and communities that surround the students. Examples include comparing amounts of waste produced in different countries to make linkages between consumerism and the environment; debt calculations between (ex-colonial) countries abundant in natural resources, or the debtor, and those that do not have the same magnitude of resources, the collector to study equitable distribution of global resources; and, to compare data on GNP per capita income and resource consumption to highlight the reasons for discrepancies and their consequences in OECD and non-OECD countries.

The goals for educating current and future generations should have more emphasis on connections, coherence, civic consciousness and cross-curricular competencies for solving problems confronting humanity.

There are numerous possibilities and implications for the use of such scenarios in professional development programmes. For instance, the implementation of interdisciplinary activities that take place during Earth Week involve science, maths, field trips to local water treatment and recycling plants, as well as to local landfills. This can be followed by the presentation of findings to the community by pre-service students, teachers and school children.

In conclusion, the future of our planet is intricately connected to the concepts and skills that future generations derive from their school education. We need to foster critical thinking and to develop an awareness for the value of making reasoned choices that seek to will good for humanity.

Professor Bharath Sriraman, is a Professor of Mathematical Sciences at The University of Montana. He has published over 200 journal articles, books, book chapters, reviews and commentaries in the areas of mathematics education, learning sciences, innovation, educational philosophy, sustainable development, and international policy/political issues in education. He is the founding editor of The Montana Mathematics Enthusiast and serves as the Associate Editor of a dozen journals in different areas of mathematics, philosophy, psychology and education.

[1] Further examples of such implementable projects with measures of effectiveness can be found below:
Sriraman, B. (2007). Interdisciplinarity in mathematics teacher education. Mathematische Forschungsinstitut Oberwolfach (Germany) Technical Report No. 52, pp.18-19.
Sriraman, B., Knott, L and Adrian, H. (2009). The Mathematics of Estimation: Possibilities for Interdisciplinary Pedagogy and Social Consciousness. Interchange: A Quarterly Review of Education. Vol. 40, no.1.

ESD Implementation and Promotion in Japan

By Isao Kiso

In accordance with the United Nations Decade of Education for Sustainable Development (UN DESD), the Japanese National Commission for UNESCO ("Japanese Natcom") has been promoting ESD in co-operation with related ministries and stakeholders based on Japan's Action Plan for the UN DESD.

For the implementation and promotion of UN DESD, the Japanese government established the Liaison Conference of Ministries and Agencies ("Liaison Conference"). In the 2005 fiscal year, the Liaison Conference decided upon a plan of implementation known as the "Japan's Action Plan for UN DESD".

Since Japan's proposal for the Decade, in Johannesburg, indicated that ESD would be dealt with on a global scale, the government pressed ahead and led domestic and international programmes. There are a wide range of issues to be dealt with in ESD programmes, such as incorporating ESD concepts into basic education and higher education. Research and innovation are thus of vital importance and have been encouraged for building ESD programmes.

ESD requires not only individual programmes but also a comprehensive framework which connects diverse education fields for example, environmental issues with international understanding. In this context, in 2008, the "Courses of Study" were revised in the national education curriculum of Japan and the concept of ESD was clearly specified and incorporated within each subject, including science, social studies, and moral education.

In addition, the Japanese Natcom has been promoting the UNESCO Associated Schools Project Network (ASPnet) for building networks and for strengthening the collaboration among schools which are implementing ESD activities.

Higher education institutions are expected to contribute in various ways for the promotion of ESD in Japan. Some universities of education are developing ESD curriculum for undergraduate students; others are developing the ESD teacher training course in basic education.

In addition to traditional educational roles, higher education institutions are expected to contribute to research and innovation. To address this objective, the University of Tokyo and other universities, established a research network founded with the aim of serving as a global research and educational platform for "sustainability science". The goal of sustainability science is to establish a transdisciplinary academic structure and foster specialists who can make an active contribution to the construction of a sustainable society on the global stage.

In addition, there are various ESD activities implemented by UNESCO's partners, NPOs (Non-Profit Organizations) and the private sector. The challenge is to link the Japanese initiatives within a comprehensive framework of ESD.

Isao Kiso is the Secretary-General of the Japanese National Commission for UNESCO.

Higher Education for Sustainable Development (HESD) Forum 2008 in Japan

By Osamu Abe

Japanese institutions for higher education convened a series of events for higher education for sustainable development (HESD) from 12 to 14 December 2008 in Tokyo. The Second HESD Forum was held on 13 December 2008 at Rikkyo University, following the First Forum in December 2007 at Iwate University in Morioka. It was organized by Rikkyo University (the ESD Research Center) with the support of Ministry of Education, Culture, Sports, Science and Technology (MEXT), Ministry of the Environment, Japanese National Commission for UNESCO and the United Nations University – Institute of Advanced Studies (UNU-IAS). Approximately 86 experts from 35 higher education institutions participated. Eighteen universities reported their ESD activities during the first session sharing their experience and lessons learned. The next session was devoted to discussions on curriculum development and its institutionalization, as well as networking and opportunities for further collaboration. The direction of the HESD Forum was discussed during Session 3. It was agreed to establish a drafting committee to formalize the HESD Forum (which is, at present, an informal gathering of Japanese higher education institutions), for the Third Session of the Forum in November 2009 at Okayama University in Okayama.

On 12 December, the ESD Seminar on the "Challenges for Higher Education for Sustainability" was held at the Big Site in relation to Eco-Products 2008, the biggest environmental exhibition in Japan. Fourteen Japanese universities exhibited their ESD activities and five universities made presentations at the panel discussion. Approximately one hundred participants from the private sector were in attendance. An International Symposium on "Sustainability in Higher Education: Learning from the Experiences in Asia and the World" was held on 14 December at Rikkyo University with the support of the same organizations for the HESD Forum.

Osamu Abe is the Director of the ESD Research Center at Rikkyo University and was also the organizer of the 2008 HESD Forum in Japan.

Youth Volunteers Up-Front on Climate Change in Hanoi

Cycling for environment by C4E © Cycling for Environment

"In my first year of university, I was a very average person; I would go to university and come back home. Somehow however, I was still looking for something else. With the involvement of the environmental club I have changed so much - I think I am a living person now and this feeling is very wonderful. I would like to better learn how to persuade other people to change too." Thi, Go Green Club

"Last summer when I went to Japan with a scholarship programme, people there were asking me - what you are doing in Viet Nam for climate change? Actually, at that time, I was not clear on what exactly climate change was and whether it would ever come to Viet Nam." Duyen, Talking Green Club

"For me, in the club, the relationship between friends is very important. We have a very good spirit in our team. After every meeting the members seem closer and this creates a good environment to work together. The friendship is important in being active." Chi, 3R (Reuse, Reduce and Recycle)

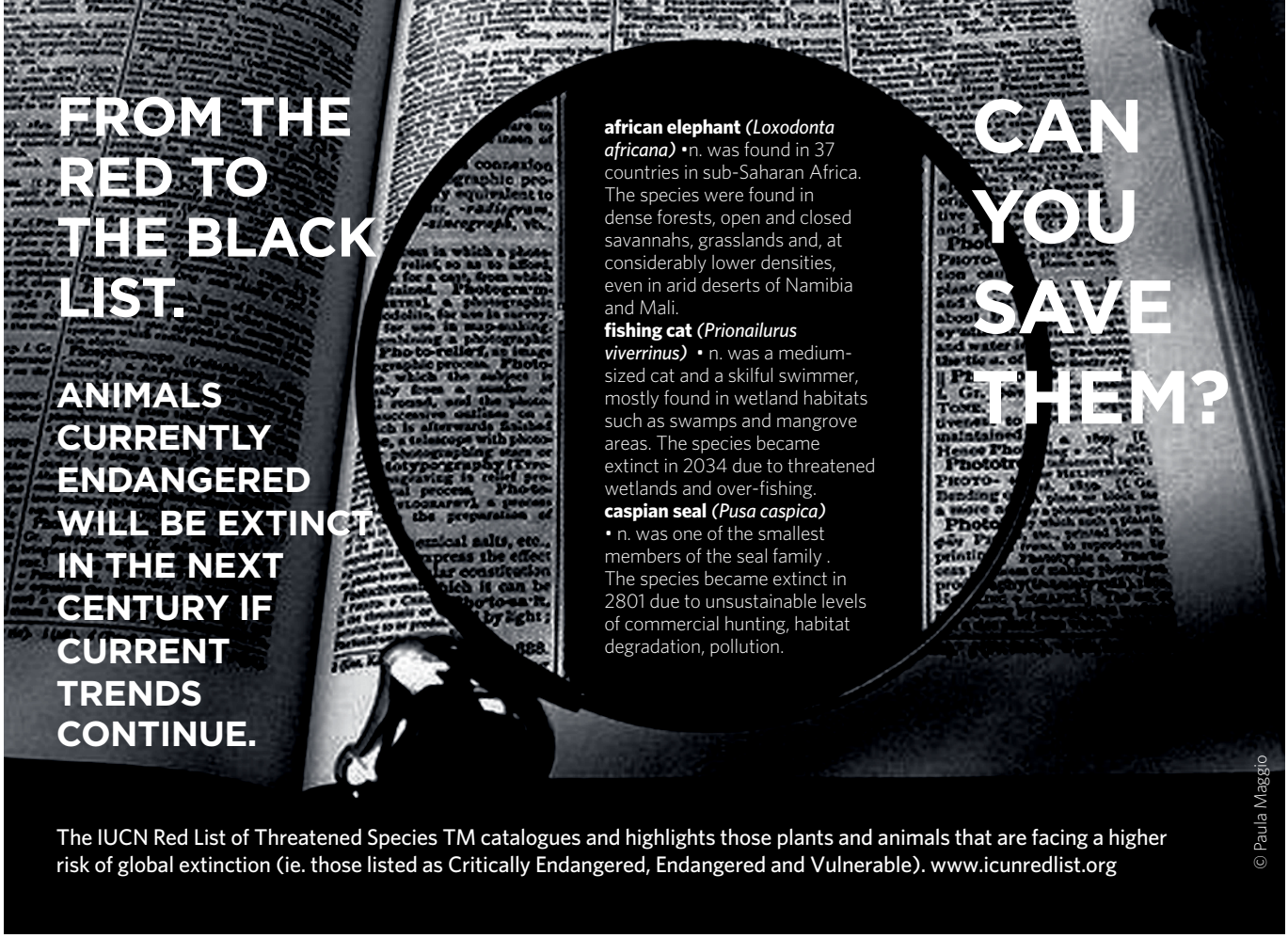
By Katja Pellini

Climate change models predict that Viet Nam will be among the most affected countries in the world because its long coastline is vulnerable to rising sea levels and the occurrence of intensified or more frequent natural disasters such as typhoons, floods and drought.

Young people are often the first to mobilize in response to the challenges we face. In addition to traditional activist organizations and social clubs, a new form of youth engagement is growing in Hanoi and also in other towns of Viet Nam. Currently, around 100 volunteers belonging to a network of at least eight independent youth groups are now involved in raising the awareness of Hanoi residents on environmental issues including climate change. Over a thousand young people and older members of various communities have participated in activities ranging from cycling, city clean-ups, environment conservation petitions, organizing recycling fairs, creating community art; or simply joining English speaking clubs that discuss and debate environmental issues and provide opportunities for information sharing.

Visionary young individuals have initiated this social movement. The founding members of these clubs are young people touched personally by the urgency of environmental protection and the degradation of their environment. Some youths have established clubs after participating in events organized by environmental NGOs, whereas others have participated in workshops or have read articles that have changed their thinking and understanding of the issue of climate change. Web pages and blogs are a common medium used to share information to bring different groups together.

Katja Pellini, UNV Specialist in Education for Sustainable Development in UNESCO Hanoi.



International Forum on ESD Dialogue 2008

The International Forum on ESD Dialogue was held in Tokyo, Japan from 2 to 5 December, 2008 and hosted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The forum was organized for a number of purposes: to use collective learning as a basis for enhanced future action; to identify results oriented strategic projects for the second half of the Decade; to explore the possibility of a global consortium on ESD involving the private sector and NGOs; and to consider the contribution of research and innovation to the Decade.

Recognizing that the 2009 World Conference on ESD will be an important opportunity to strengthen the implementation of the UN DESD, as well as the leadership role of UNESCO, participants of the forum developed a list of recommendations to the Bonn Conference and advised UNESCO Member States to:

- Incorporate the principles, values and practices of sustainable development as an important element of strategies in all educational settings;
- Assist each other in the implementation of the UN DESD, for example, through the exchange of good practices and innovations in ESD;
- Fully utilize the available networks and extended ESD community and partners, such as the Associated Schools Project (ASPnet) Network, the UNEVOC Centre and its global network, the UNESCO Chairs network, UNESCO Category 2 Centres and the UNU Regional Centres of Expertise on ESD (RCEs) as laboratories of ideas for innovative research, methods, teaching and learning in ESD, in particular, flagship projects and others which can guide stakeholders in implementing ESD;
- •Strengthen partnerships with UN agencies, and build closer connections with stakeholders, higher education institutions, NGOs, the private sector and media.

Furthermore, forum participants also recognized the need for steps to be taken by UNESCO to assist Member States. Recommendations for UNESCO include the promotion of an accelerated implementation of the UN DESD; fostering a stronger relationship between EFA and ESD; and assisting Member States to develop ESD programmes in line with their national priorities. Additionally, facilitating intersectoral activities in ESD (such as UNESCO's Man and the Biosphere Programme) as learning laboratories for ESD which will provide support to the development of national research agendas, and to stimulate the capacity of higher education institutions for ESD research and innovations.

Youth and Community Leadership in Sustainable Practices

By Iris Bergmann and Jodi-Anne Smith

Scenario Thinking for Climate Change Adaptation and Youth Leadership for Sustainable Consumption are developed and implemented by researchers at the Global Cities Research Institute of RMIT University in Melbourne, Australia, in co-operation with community organisations.

otherWISE – Youth Leadership for Sustainable Consumption is a collaboration between researchers at RMIT University and the International Young Professionals Foundation (IYPF), an Australian youth-led organisation. *otherWISE* informs, inspires and equips young people aged 15-25 to take action and demonstrate leadership towards sustainable lifestyles and communities. The programme facilitates stakeholder engagement, it provides resources, facilitator and youth training, and youth action support. It has been implemented in two capital cities - Canberra and Melbourne - and Hamilton, a rural area in Victoria.

otherWISE satisfies the need expressed by many young people in Australia for the following: to learn more about their impact on the environment; to understand how to use less resources; to learn "what needs to be fixed and how to fix it"; how to live a more sustainable life; and, very importantly, how to encourage others to do likewise. Building partnerships and collaboration among organizations, institutions and individuals is critical to the success of *otherWISE*; creating opportunities for youth to network and discuss, have access to information and learning about strategies to implement their action plans is vital. Engaging key community stakeholders not only provides youth with action support networks, but also helps the programme become more locally relevant, led and 'owned'. Participating community groups and government agencies can use it as an opportunity to enhance their own sustainability networks and programmes.

Action projects developed by youth include sustainable fashion initiatives – sewing skills development and clothes swap events; a green music and film night; the production of a documentary on uranium; a support group for young people striving to green their workplaces; information stalls about *otherWISE* youth activities at various community events; facilitation of workshops at youth conferences; participation of fair trade events, public transport and similar forums; organisation of pre-loved goods exchange events; and the establishment of native vegetation corridors. It is planned to roll out *otherWISE* nationally from 2009 with the support of a private/government sponsorship arrangement.

Scenario thinking is a method of engaging communities in discussions about climate change, the possible futures of their locales and the actions that they can take to mitigate and adapt. This approach has been used in the rural farming community of the Hamilton region in Victoria, Australia, a region already experiencing climate change. A prolonged drought has necessitated ongoing water restrictions and forced farmers to alter cropping and stocking practices. Rainfall patterns are predicted to shift further towards the dry which will affect farm viability, as will increased transport costs. The challenges the community face have led to high public interest in understanding and responding to climate change.

Engaging key community stakeholders not only provides youth with action support networks, but also helps the programme become more locally relevant, led and 'owned'.

A scenario thinking workshop was held in February 2008. Forty-one representatives of different community sectors participated. They developed four different future scenarios and undertook an analysis to identify implications and adaptation strategies. This revealed that climate change could have far more complex impacts than first imagined: higher levels of financial pressures, stress, mental illness and addictive behaviours, affecting community cohesion and quality of life; plus possible farm closures, high unemployment and associated

Scenario thinking can be powerful in helping communities understand the complexity of impacts that may occur with climate change, in their own language and about their local area, and potentially helps to reduce the sense of isolation and helplessness.

population losses affecting the viability of small towns. Strategies identified to reduce the region's vulnerability included altering farming practices, ensuring water security, building social cohesion, attracting new residents and diversification of employment opportunities.

Scenario thinking can be powerful in helping communities understand the complexity of impacts that may occur with climate change, in their own language and about their local area, and potentially helps to reduce the sense of isolation and helplessness. Once the scenarios are created, considerable work needs to be performed to engage the wider community, government agencies, businesses and other sectors to analyse the scenarios and their implications, and to develop and implement mitigation and adaptation strategies. Scenario thinking is simply one step in the journey towards sustainable development. The local municipal council, regional health service and others in Hamilton have used the workshop outcomes to rethink their strategic plans.

The *otherWISE* and the scenario thinking projects are part of the RMIT University Education for Sustainability Research Programme.

More information can be found at: www.rmit.edu.au/dsc/otherWISE and www.communitysustainability.info/events/Scenario_Project.html

Dr. Iris Bergmann is a research fellow at RMIT University and Dr. Jodi-Anne Smith is a Senior Research Fellow with the Global Cities Institute of RMIT University.

Scenario Thinking Workshop in Hamilton Victoria, Australia © Iris Bergmann

Young Minds in Action: UNESCO Youth Envisioning Contest

ESD calls for a lifestyle that contributes to a sustainable society and considers sustainability as a key part of decision-making. Youth between the ages of 15 to 24, can capture these values, ideals and goals and use them to shape our future. Youth are important partners and stakeholders in UNESCO's approach to ESD.

In celebration of the UN Decade of Education for Sustainable Development (2005-2014) and to better understand youths' perspectives on sustainable development, the ESD unit of UNESCO Bangkok in collaboration with UNESCO's Associated Schools Project Network held a contest in 2006 to harness the creative potential of young people in the Asia-Pacific region. This "Youth Envisioning Contest" invited young people to depict in a variety of different media types, their concept of sustainable development. Recognizing that creative expression may take several forms, there were three categories in which submissions were judged: art, music and writing, allowing contestants flexibility in depicting their ideas. Over 150 entries were received from 10 countries throughout the region.

To retain a platform for youth to give full reign to their imagination, in 2008 UNESCO Bangkok held an "Education for Sustainable Development Mural Contest" to capture perspectives on sustainable development, and also to engage the wider community. The mural competition had several themes under the banner of sustainable development. They included sustainable urbanization, action for climate change, and the preservation of traditional and indigenous knowledge. The murals, created on free surfaces at a school or in the local community, were intended to be part of a community-led initiative for UN DESD and to create a legacy for future discussion and awareness on sustainable development. For more information and to view the winning entries for the 2006 and 2008 competitions, please visit: http://www.unescobkk.org/education/esd/esdmuralcontest.

World Heritage in Young Hands

By the Culture Unit, UNESCO Bangkok

Heritage underpins our diverse identities, shapes our environment and provides a wellspring of resources for the development of our economies and societies. Understanding, valuing and safeguarding natural and cultural heritage is a vital component for preparing people of all walks of life to find solutions for issues that threaten the sustainability of our planet and the well-being of all.

Together, natural and cultural heritage reflect the interlinked economic, social and environmental dimensions of sustainable development. By developing a better understanding of these dimensions, people will be better able to assume responsibility for creating a sustainable future.

As such, World Heritage Education (WHE) is considered an important part of ESD. Many of the values underpinning ESD are the same values that WHE attempts to instil, notably: interdependence, stewardship, promotion of biological and cultural diversity, intercultural tolerance, sustainable change, and respecting the needs and rights of future generations. As young global citizens and the stewards of tomorrow's world, the role of youth is paramount. WHE and ESD can work in harmony to better equip young learners to absorb these values and to take a proactive stance in transforming these values into action.

The UNESCO World Heritage Centre launched the "Young People's Participation in World Heritage Preservation and Promotion" programme in co-operation with the Associated Schools Project Network (ASPnet) in 1994. The programme encourages young people to learn more about natural and cultural heritage and become active in safeguarding efforts by participating in various activities, such as youth forums, camps and training workshops.

In South-East Asia, students and teachers came together for the first time in 2000 at the Sukhothai World Heritage site in Thailand to put WHE into practice. During the workshop, they were introduced to *The KIT: World Heritage in Young Hands*[1] produced by UNESCO. The kit is designed to help teachers raise the awareness of young people about the importance of world heritage by incorporating world heritage issues into various subjects in the school curriculum. It has been distributed to over 130 UNESCO member countries and is now available in 32 languages.

To supplement the WHE kit, local teaching aids using the creative arts have been developed by teachers in the Asian context. During the third South-East Asian teacher training workshop, which was held in Penang, Malaysia in January 2006, teachers tested practical tools for learning about local cultural resources through the arts, such as cultural mapping.

Understanding, valuing and safeguarding natural and cultural heritage is a vital component for preparing people of all walks of life to find solutions for issues that threaten the sustainability of our planet and the well-being of all.

Creative arts can be used to discover and learn about the historic environment in a way that inspires both teachers and students alike. All aspects of the arts can be brought into the learning process – visual and performing arts. Experts have found that using the arts as a teaching technique allows students to build on their creativity and help strengthen their expressive styles and skills in communication, interaction and learning. These new pedagogical approaches can help mobilize young people to participate actively in world heritage protection and contribute to a sustainable future together.

[1] *The KIT: World Heritage in Young Hands* which is a World Heritage Education resource kit. For more information: http://whc.unesco.org/en/educationkit/

The Asia-Europe Young Volunteers Exchange (AEYVE)

By Francesco Volpini

The Asia-Europe Young Volunteers Exchange (AEYVE) is a project established in 2001 and organised in co-operation with the Asia-Europe Foundation (ASEF) and the Co-ordinating Committee for International Voluntary Service (CCIVS).

Its 7th programme was held in November 2008, in Singburi, Thailand, and brought together 22 participants from 17 of the 18 countries represented in the project: Bulgaria, Cambodia, China, Estonia, France, Germany, India, Indonesia, Italy, Japan, Myanmar, Netherlands, Philippines, Singapore, Slovenia, South Korea, Thailand and Viet Nam. The AEYVE 2008 fostered mutual understanding, co-operation and exchange between voluntary service organisations in Asia and Europe.

During the first phase of the project, participants gathered for an intensive four-days training focusing on two main issues: cultural diversity, in particular to the learning dynamics of an Asia-Europe intercultural project; and sustainable development, with a progressive introduction and discussion of the three pillars of ESD. The two themes are strongly interconnected with continuous reference to culture as both a potential barrier and a powerful tool to understand and address the challenges of sustainable development in the diverse social and cultural realities existing in the two regions.

In the second phase, participants travelled to their field project sites in northern Thailand, Indonesia, Viet Nam, and Cambodia, and collected data to address challenges at the grassroots level. They then prepared and ran specific actions using different tools, from the promotion of environmental education and recycling using traditional knowledge, to the staging of theatre performances to discuss with university students and local communities some of the main issues identified during the training phase and the first days of the field visits.

In the third and final phase, participants returned to Thailand and, after a brief introduction to project planning and management in the Asia-Europe context, were invited to plan future actions addressing some of the issues raised during the training. The project reinforced new and effective partnerships in the field of international voluntary service and education for sustainable development.

Francesco Volpini is the Director of the Co-ordinating Committee for International Voluntary Service.

ESD-Net: Reorienting Teacher Education to Address Education for Sustainable Development

To pursue the objective of reorienting education programmes to address sustainability, it is crucial that teachers are equipped with the knowledge, competencies and perspectives to incorporate education for sustainable development in their daily practices. To meet this challenge, UNESCO Bangkok initiated the establishment of the Asia-Pacific Regional Network of Teacher Education Institutes for ESD (ESD-Net) in 2006. Its main goal is to co-ordinate efforts by member teacher education institutes (TEIs) to incorporate ESD into their teacher education programmes. Work will continue on this programme through 2009 in APEID.

ESD and Climate Change

By the ESD Unit, UNESCO Bangkok

The poster child of the international community at the moment is arguably climate change. Although scientists collectively agree that climate change is taking place, we can at this stage only make educated guesses about just how dramatic and catastrophic the consequences of our actions will be. What is certain is that those who are already the most vulnerable and susceptible to the adverse effects of climate change, will be hit the hardest. One can add with equal certainty that the price for both mitigation and adaptation is rapidly increasing as we wait to seriously tackle the challenges before us.

The waiting game we find ourselves playing is far from a passive one. While debating possible scenarios and solutions, research indicates that we are quickly approaching a level of CO_2 in the atmosphere that is estimated to have a fifty per cent chance of bringing about devastation on a massive scale[1]. At the same time, we are giving up on more moderate levels of CO_2 equivalents as impossible or extremely difficult to achieve.

The increasing number of thematic conferences, workshops and publications in the last couple of years is part of a vital stage that can prompt future action. However, many actors, including NGOs, are stressing that the exchange of information must simply be the first step, and we must rapidly move towards action.

There are some signs that measures taken to mitigate climate change and adapt to its impacts are being taken across previously separate sectors. For example, mitigating climate change is a necessity, but equally important for the safety of hundreds of millions of people is adapting to its impacts. Because the most extreme climate change impacts are essentially natural disasters in one form or another, important linkages are increasingly being made between disaster risk reduction (DRR), education for natural disaster preparedness (ENDP) and adaptation to climate change.

ESD and Climate Change

In light of these challenges, educators at different levels all over the world promote a perhaps unwise expectation, sometimes in the form of an illusion that "education" will come to the rescue and save the world from itself. The expectation is compounded and encouraged especially by those depending on funding from external donors. UNESCO cannot claim to be immune to this lure and ESD, possibly the most amorphous concept among complex models in education, often appears in an especially appealing light for this purpose.

Granted, there has been some misunderstanding about what ESD can do and with what schedule. But the appeal of ESD is certainly not an optical illusion. Quality education remains a critically important precondition to sustainable development and structures in education must be changed in order to alleviate existing harmful patterns blocking the way to a healthier development.

Although scientists collectively agree that climate change is taking place, we can at this stage only make educated guesses about just how dramatic and catastrophic the consequences of our actions will be.

Sometimes we tend to overlook the obvious: that education's role in development is really twofold – it does not inherently have to lead to something that can be described as inclusive development. As much as anything else, education can be harnessed to serve the benefit of a few, and even when development in general appears to be "good", it doesn't necessarily have to be sustainable in all senses of the word, like most of the developed nations of the 20th century have shown by example. And where education has been part of the challenges we now face, it is undoubtedly part of the solution. The solution is, however, as Albert Einstein has famously said, not achievable by applying the same logic that helped create the problem.[2]

[1] Cf. Stern Review, www.hm-treasury.gov.uk/stern_review_final_report.htm

[2] The saying "we cannot solve problems by using the same kind of thinking we used when we created them" is widely attributed to Albert Einstein.

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Indeed, some of the obstacles to a more sustainable development have been created in part *by* education that has been considered good and well. In this context, ESD can provide the perspective and prioritization needed in reform efforts, but the concept remains difficult because there may not be a uniform definition and because it varies by context. That, however, is also precisely the comparative strength of ESD.

While several themes deserve general universal attention – human rights, gender equality and climate change, to mention but three – all of these must be addressed at the local level to be realized and to not remain hollow words in the text of a Declaration. Climate change, for example, must be understood in terms of a global challenge and phenomenon, but the required changes will vary according to the specifics and level of development of respective communities. By the same token, the specific shapes in which challenges to sustainable development take place in the rural areas of Lao PDR and urban China, will be dramatically different, even though they may well share their root cause.

> Mitigating climate change is a necessity, but equally important for the safety of hundreds of millions of people is adapting to its impacts.

ESD can function as an entry point to global challenges and transform education into a tool which provides solutions. There is one particularly persistent illusion involved in discussions around the concept of ESD. With all the promise of education in development, we must always acknowledge one of education's most salient if not obvious traits: because there are no shortcuts to learning, education is without exception a medium- to long-term solution. Rushing ESD, therefore, can mean a fundamental misunderstanding of the nature of changes it is dealing with. In a way, ESD is an opportunity for education to regain significance through increased and broader relevance, benefiting the whole sector.

Pushing the Limits Of Education on Climate Change

But how does one make education work to combat climate change in concrete terms? It is only too obvious that attention needs to be given to understanding and differentiating between the greenhouse effect and anthropogenic global warming, and to be able to see the causes for the latter. Much of this is achievable through quality science education.

Education must also specify the local context as it relates to the emissions from one's own community, how these can be reduced, and how the potential future risks of climate change can best be met and countered (e.g. by increasing awareness of what to do in case of a natural disaster, building more resilient structures, strengthening the capacities of citizens and authorities alike to get relevant information). Much of this can be done through exchanges

between the learning environment and the community and much of this has been done by environmental education. However, in most cases, this requires flexibility and strengthened capacities at the local level and making live linkages between different subjects, a task which, in most countries, is still experimental at best. It is all very much an ESD matter to (re)gain the relevance and update educational content to what really matters internationally, nationally and locally.

© Enzo D

Increasing the relevance of education remains a major task for educators and politicians everywhere but, at the same time, making learning more appealing and child centred is another contributing factor to attaining more sustainable development. To maintain the learner's motivation, his or her curiosity for new knowledge and new applications must be kept alive vigorously. It goes without saying that this cannot mostly be done by way of "making" the learner do things that the educator deems right. Of course, education is not meant to make everyone an Einstein who himself resented much of formal education and failed an entrance examination to the Institute of Technology in Zurich. He can nevertheless be used as an example of quite unorthodox learning and free thinking abilities. In his words, *"it is, in fact, nothing short of a miracle that the modern methods of instruction have not yet entirely strangled the holy curiosity of inquiry"* [3]. While not true of every school and certainly not of every teacher, detrimental attitudes sustaining top down teaching models still abound in the 21st century.

Social and ethical issues are especially apparent in the consequences that the neglect of these dimensions provokes. Coercing values is a particularly obvious contradiction in terms, and changing our lifestyles to be more sustainable, a sense of solidarity towards other peoples, or taking others into consideration, is unquestionably a mixture of values and skills. The age old adage is ever so true: values are more caught than taught. This means that substantial attention must be given to the learning environment and the ability and willingness of teachers to lead by example.

> Quality education remains a critically important precondition to sustainable development and structures in education must be changed in order to alleviate existing harmful patterns blocking the way to a healthier development.

As noted above, the international community's commitment is a healthy signal as no one approach can claim to be enough. Education needs other development sectors as much as vice versa, and the education sector is far too valuable to be left operating in a vacuum of its own. It needs and deserves embedding in the overall sustainable development community.

Working together or not, tackling climate change is not going to be easy. On the contrary, the steps that need to be taken make most people relatively uneasy. These measures involve changing the status quo, especially in the more affluent countries, in terms of macro-level policies like the price of energy and food production, as well as individual choices concerning mobility and consumption.

Many developing countries see their future in very uncertain terms. This can be compounded with the sentiment that concrete targets in reining in greenhouse gas emissions can be inherently unfair towards the least developed as the past growth of developed countries has, to a large extent, only been possible and achieved with the help of non-renewable and cheap energy.

Remembering Einstein, however, using the old ways of thinking and generating wealth would be folly. Despite the gloom and doom nature of climate change and its impact on human welfare, education must transform itself to be the starting point for thinking that in every crisis there is an opportunity to help transform societies.

Innovation and structures of new, more sustainable economies will increasingly need to reward producing, procuring and transporting more sustainably. But because we have not yet reached that stage and because the changes in existing structures, attitudes and values have yet to transform dramatically, there needs to be a fundamental shift in what education offers, too.

[3] Albert Einstein quoted in "Autobiographical Notes", Albert Einstein: Philosopher-Scientist, Paul Schilpp, ed. (1951), pp. 17-19.

Acting on an
anonymous phone call, the
police raid a house to arrest a
suspected murderer. They
don't know what he looks
like but they know his
name is John and that he
is inside the house. The
police bust in on a
carpenter, a
lorry driver, a
mechanic and
a fireman
playing poker.
Without
hesitation or
communica-
tion of any
kind, they
immediate-
ly arrest
the
fireman.

How do
they know
they've got
their man?

The fireman was the only man among his circle of poker-loving friends.

Gender Equality and ESD: Common Future – Present Inequality

By Stefan Bengtsson

UNESCO's Director-General Koïchiro Matsuura's address in Johannesburg in 2002 on the shared vision of education, removed all doubts concerning the importance of reorienting education systems and practices to empower everyone, including men and women, to make decisions and act in ways that are culturally appropriate and locally relevant in order to address the problems that continue to threaten our future. As the Director-General's statement indicated, increased equality in society is a prerequisite for sustainable development; as such, social inequality is a large contributing factor in unsustainable development.

A brief look at the development of ESD in the Asia-Pacific region during the first half of the UN DESD indicates that national contextualizations of the International Implementation Scheme have centred on the identification of sustainable development (SD) issues of national importance. A preliminary analysis of these ESD priorities concludes that the reformation of education practices to increase gender equality is neither a shared priority nor identified as a means to achieve national SD priorities through ESD. If this assumption is correct, that the first half of the decade has mainly been about identifying sustainability issues and ESD goals, then the second half of the decade should preferably focus on the means to address the underlying causes of these challenges through education.

Equal empowerment requires not only the acknowledgement of existing inequalities but also adequate measures to address the causes of unsustainable development through empowerment education.

Building on the shared vision presented in Johannesburg, the pedagogical means and values that are about to be implemented in education during the second half of the decade, should empower society to collectively address the challenges identified during the first decade. Equal empowerment requires not only the acknowledgement of existing inequalities but also adequate measures to address the causes of unsustainable development through empowerment education. Social learning as a central theme in ESD can be seen as a comprehensive means to achieve identified national goals.

It is therefore of utmost importance that future initiatives improve the scope of social learning in education and identify obstacles towards sustainability in gender equality in daily interaction with the local community. Social learning enables students to engage in future objectives by identifying present obstacles that they have experienced in their daily life and the means to

A secondary school pupil guides the class on the blackboard in Hanoi, Viet Nam © UNESCO/ Justin Mott

Below: A drawing on the wall depict children going to school as part of a campaign to promote school in Herat, Afghanistan © UNESCO/ Christophe Buffet

overcome them. By critically examining common practices in ESD, education can be refocused to directly address the causes of unsustainable development instead of simply teaching about future challenges of such development.

Inequality in all its forms and especially gender inequality, is a central obstacle to a more equal society, which is not sufficiently or comprehensively addressed in current ESD initiatives. If not addressed by proper educational means throughout the second half of the decade, the lack of progress toward gender equality might impede both the achievement of national SD goals and SD in general.

Stefan Bengtsson is currently a Ph.D. candidate at the Department of Curriculum Studies at Uppsala University, Sweden.

Education for Natural Disaster Preparedness at UNESCO Bangkok

By the ESD Unit, UNESCO Bangkok

In the wake of the 2004 Indian Ocean tsunami, UNESCO Bangkok in collaboration with the UNESCO New Delhi and Jakarta offices, commenced a regional project focusing on developing materials for education for natural disaster preparedness (ENDP) in the context of education for sustainable development. In-country teams from India, Indonesia, Maldives and Thailand produced educational materials relevant to local needs indentified through consultations with community members and representatives. Input was also provided from partner organizations.

The objectives of the project were to develop ENDP materials that integrate key principles of ESD, and to communicate and disseminate information to assist in the formulation of education policy for natural disaster preparedness. Joint initiatives with UN/ISDR (United Nations International Strategy for Disaster Reduction) and UNICEF resulted in the integration of education for natural disaster preparedness into school curricula at the national level. In order to further ensure the sustainability of this project, the "Asia-Pacific Regional Workshop on School Education and Disaster Risk Reduction" was held in 2007 and provided an opportunity for dialogue on ENDP between practitioners, curriculum developers and policy makers from a large number of countries throughout the region.

The educational materials produced, namely an ENDP board game Disaster Master and a landslide hazard awareness video, were disseminated to relevant audiences in order to spread important messages about natural disaster preparedness.

Following the Asia-Pacific Regional Workshop, UNESCO Bangkok co-ordinated with six countries in the Asia-Pacific - China, Japan, Philippines, Sri Lanka, Thailand and Vanuatu - in order to integrate education for natural disaster preparedness in school curriculums.

Each of the six countries has different priorities and are at very different stages

Disaster Master, an educational board game that helps players understand what natural hazards are and what actions can be taken to reduce the impact of natural disasters © UNESCO

of ENDP integration. The highlights from each country are: China has always attached great importance to disaster prevention and mitigation work and thus has sufficient educational materials on this topic. However, a majority of schools in the country have not yet set up prevention and mitigation programmes and still lack quality disaster prevention and mitigation materials. On the other hand, Japan has the most successful education for natural disaster preparedness programmes in its schools. The Philippines is at the stage of recognizing and implementing policy to address the issues hindering ENDP. The significance of ENDP has only really come to light

Rebuilding after the tsunami, January 2005, Koh Surin, Thailand © UNESCO/ D. Elias

in Thailand after the 2004 tsunami. Therefore, Thailand is at a very early stage of ENDP implementation, starting in schools in the six coastal provinces affected by the tsunami. Sri Lanka is in the process of integrating a holistic approach to disaster management into its education system in an attempt to create synergies between its curricular and co-curricular programmes.

Vanuatu has no existing policy on a disaster risk management curriculum. However, it is one of the first countries to systematically implement the Hyogo Framework for Action and the Regional Frameworks of Action for DRR (Disaster Risk Reduction) and DM (Disaster Management) which have been mainstreamed into all sectors, as reflected in its National Disaster Plan.

The project outcomes achieved include: a mapped understanding of ongoing and projected natural disaster preparedness related activities in each country; a directory of contact information and focal points for persons/organizations relevant to ENDP; a situational analysis report documenting ENDP in schools and disaster management activities; and a curriculum recommendation document for the integration of ENDP into school curricula.

Promoting ESD Through the Framework of EIU

By Jeongmin Eom

Pursuant to its mandates, the Asia-Pacific Centre of Education for International Understanding (APCEIU) as a UNESCO Category II centre, has convened a number of training workshops and developed a series of education materials to promote education for international understanding (EIU) towards a culture of peace in the Asia-Pacific region. Education for sustainable development, or more precisely, its core vision and goals, has been articulated and delivered in the mainstream activities of APCEIU since the Centre's establishment in 2000.

An underlying theme that cuts across all of APCEIU's programmes is the goal of peace education, which inherently includes the idea of global sustainability as one of the main conditions for peace. EIU and ESD significantly overlap each other and can be seen as complementary: the former enriches the latter, both conceptually and pedagogically, by adding the value of peacefulness to the notion of sustainability. The concept of global sustainability clarifies and refines the goals and focus of education for a Culture of Peace as they are demanded and articulated by most current global concerns and discourses. At the same time, both EIU and ESD recognize and incorporate other overarching concepts such as human rights, economic viability and equity, and cultural diversity and heritage. APCEIU strives to articulate this vision in its programmes and in so doing, actively engages in promoting ESD through the development and implementation of training programmes and educational materials.

ESD is often misunderstood in the popular rhetoric as "environmental education," which poses several limitations. Those who have not had any in-depth exposure to ESD tend to perceive it as a concept that is synonymous with education for advocacy purposes, on environmental pollution and degradation issues. However, the holistic approach of ESD that encompasses a wider range of overarching concepts and goals including human rights, economic viability and justice, and cultural heritage, is relatively unfamiliar to them. In general, however, ESD is perceived as less politicized than human rights and democracy education that EIU pursues, and thus provides a relatively easier entry point for more in-depth education towards peace and sustainability.

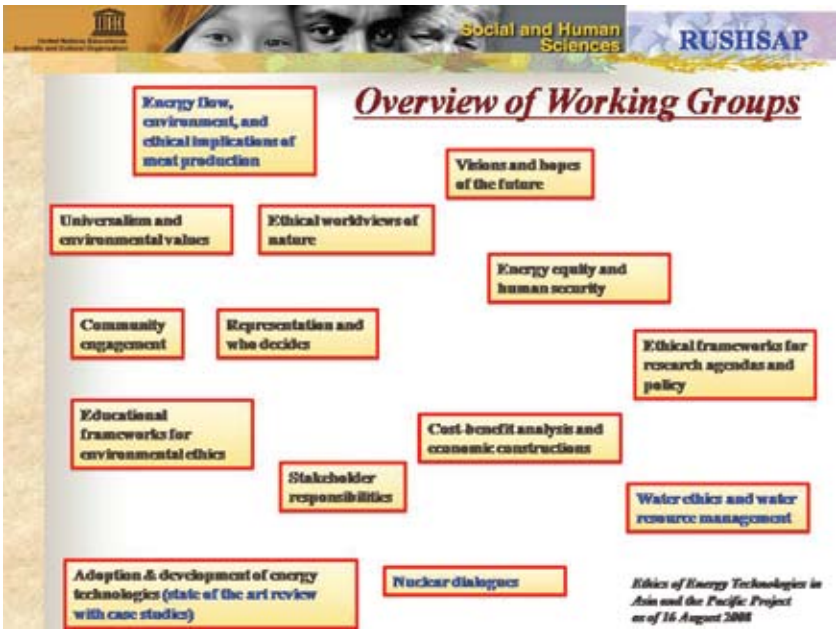
APCEIU has been conducting training workshops and policy meetings under the title "education for peace and sustainability." Worth noting is the collaboration between APCEIU and UNESCO Bangkok on Two Concepts, One Goal: Education for International Understanding and Education for Sustainable Development in 2006; the annual Asia-Pacific Training Workshops on EIU; Pacific Workshop on EIU for Sustainable Development: Towards Policy and Programme Development; the Sub-regional Consultation on Development of EIU Policy: Education towards Peace and Sustainability in South Asia held in 2008; and, the SangSaeng magazine. In the future, what needs to be pursued further is the development of modules and teaching resources to promote participatory and action-oriented pedagogies in the field of ESD.

Those who have not had any in-depth exposure to ESD tend to perceive it as a concept that is synonymous with education for advocacy purposes, on environmental pollution and degradation issues.

Jeongmin Eom is the Chief of the Research and Development Team at the Asia-Pacific Centre of Education for International Understanding under the auspices of UNESCO (APCEIU).

Ethics of Energy Technologies in Asia and the Pacific

By the Social and Human Sciences in Asia and the Pacific, UNESCO Bangkok



The Regional Unit in Social and Human Sciences in Asia and the Pacific (RUSHSAP) at UNESCO Bangkok is responsible for the co-ordinated management of UNESCO Social and Human Science sector projects in 47 member countries. The Ethics of Energy Technologies in Asia and the Pacific project (EETAP), launched in September 2007 and hosted by UNESCO Bangkok, has opened up ethical and value questions that have often been neglected.

The project was launched with a three day conference in collaboration with the Ministry of Science and Technology and the Ministry of Energy, Thailand, attended by representatives from over 20 countries, from many sectors and backgrounds, with a range of views on these issues.

The UNESCO Conference on Ethics of Energy Technologies and Human Rights, held in August 2008 called for developing dialogues throughout the region on future research needs and policy recommendations in regard to the ethical issues of energy-related technologies and related environmental, human security and human rights issues.

The Asia Pacific region is experiencing the fastest annual growth in energy demand in the world and meeting this demand over the next two decades will be a tremendous challenge. The ethics of all energy choices, including fossil fuels, biofuels, nuclear energy, fuel cells, renewables, etc., need to be considered holistically. How will energy production affect the environment and other living organisms? How will changing energy prices affect the poor? What are our ethical obligations for consultation with local people? What are our ethical obligations to future generations and what vision for the future do we hold? Do environmental values held in Asian philosophical and religious traditions affect the sustainability of our relationships with our environment?

Fourteen working groups have been formed on the following topics:

The aim of the working groups is to develop dialogue around these issues with a focus on environmental ethics and human security. Each group will produce a report with policy options that can be used by policy makers, philosophers, scientists and researchers to consider the ethical dimensions of energy policy.

Thailand Case Study on Health Promotion: Healthy Sexuality Education

By the HIV Coordination, Adolescent Reproductive and School Health Unit UNESCO Bangkok

New HIV incidence rates have increased alarmingly among young people. However, one of the biggest challenges in HIV education is the difficulty of getting meaningful and comprehensive sex education programmes integrated into regular school curricula. Therefore, an innovative approach is required to ensure that Thai youth get the information they need, and simultaneously develop the communication skills to get them safely through this critical period of their lives.

In recognition of this need, UNESCO Bangkok and the National Science Museum of Thailand, in collaboration with UNIFEM, PLAN, and the Women's Health Advocacy Foundation (WHAF), are developing a comprehensive 1,000 square meter exhibition on healthy sexuality targeting Thai adolescents.

Among the difficulties related to teenage sexuality are increasing fertility rates and unplanned pregnancies. In 2004, the age-specific fertility rate for females aged 15-19 was 47.3 per 1,000 females, up from 31.1 in 2000.[1] A study in 2000 showed adolescents accounted close to 30 percent of all abortions in Thailand.[2] The exhibition will seek to shed light on these and related topics and engage today's youth in an effort to reduce unintended problems.

Adolescence is a transitional phase in life. This exhibition will target teens through a comprehensive, interactive and provocative examination of human sexuality. More than an exhibition, this will be an exploratory "experience". It will offer a thematic intersection of many aspects of sexuality, with a special focus on gender issues, the need for good communication skills, and safe sex.

As in most other countries, gender inequities underpin many societal problems in Thailand. Violence against women and girls is perhaps the most blatant and shameful. The content of this exhibition on healthy sexuality offers a unique opportunity to initiate dialogue with and among adolescents to address this serious problem.

The exhibition is scheduled to open in June 2009.

[1] Ministry of Public Health: Health Information Unit, Bureau of Health Policy and Strategy (2005), Number and Age Specific Fertility Rate per 1,000 female by Age group of Mother, 2000 - 2004

[2] Boonthai Nongluk and Warakamin Suwanna (2000) Induced Abortion: Nationwide Survey in Thailand http://mwia.regional.org.au/papers/full/14_nongluk.htm accessed 07/11/2007

Untouched World™

In November 2007, Untouched World™, an ethical lifestyle fashion brand in New Zealand, became the first fashion company in the world to be given permission to carry the United Nations Decade of Education for Sustainable Development (UN DESD) logo on its labelling. The company grew out of a desire to create a positive, sustainable future with social, cultural and environmental sustainability built deep within the DNA of the business. Providing Untouched World™ with the rights to use the UN DESD logo recognizes their efforts in the area of corporate education for sustainability. The UN DESD logo can be seen in Untouched World™ store fronts in New Zealand, on garment tags and on the company website www.untouchedworld.com.

80% REDUCTION OF CO_2 BY 2050. POSSIBLE?

WE COULD ALWAYS START LOOKING FOR A NEW HOME.

Bringing Abstract Ideas to Life

By Ampai Harakunarak

Since the financial and economic crisis in 1997, Thailand has explored a developmental model of "Sufficiency Economy" that lays the foundation for and inspires the country's short- and long-term development strategies. "Sufficiency Economy" is a much admired philosophy bestowed by His Majesty King Bhumibol Adulyadej (Rama IX) to his subjects through royal remarks on many occasions over the past three decades.

The philosophy stresses a middle path as the overriding principle for balanced and reasonable conduct by the people. It concentrates on building people's capabilities to develop their full potential towards a sustainable future, with knowledge and integrity as safeguards against external challenges. Putting this philosophy in a global context, "Sufficiency Economy" is closely related to the model of sustainable development that integrates economic growth, social development, environmental protection and cultural traditions as interdependent and mutually supportive elements of long-term development.

In conjunction with various Thai public and private entities, Thailand Environment Institute (TEI), a non-government and non-profit organization, is applying the "Sufficiency Economy" concept to its research, development and education programmes from the grassroots level to the national level. Selected under the 2006-2010 ACCU-UNESCO Asia-Pacific Centre of Excellence (COE) Programme for the Promotion of Education for Sustainable Development (ESD) supported by UNESCO/Japanese Funds-in-Trust, TEI aims to advance its role as a catalyst in the development and implementation of national ESD policy. TEI also attempts to target the improvement of education research and capacity building activities in schools and communities. The institute has been taking steps to promote "Sufficiency Economy" education through school and community development activities, whilst building effective networking partnerships for sharing ESD-related knowledge at all levels.

For example, as a part of the ACCU-UNESCO Asia-Pacific COE Activity on "Innovation in Teacher and Community Leader Environmental Education in the Context of Education for Sustainable Development", TEI has recently worked with both national and local partners to implement a pilot project on "Learning to Live Sustainably with Environmental Change" in a small village situated on a major dam and reservoir area in the mountains of western Thailand. The village was relocated to its present setting in 1977 to allow dam and reservoir construction. The project aims to trace the history of community relocation and to examine the current situation and asses the well-being of the community and possible threats from climate change, in order to make linkages about the relevance of the "Sufficiency Economy" philosophy to current practices in the village. This will facilitate the learning process of the local school and community to achieve sustainability within their existing environment.

["Sufficiency Economy"] concentrates on building people's capabilities to develop their full potential towards a sustainable future, with knowledge and integrity as safeguards against external challenges.

It is anticipated that the project will contribute to further development of ESD efforts in both formal education and non-formal education, aiming to improve essential development skills and productivity of the rural populations, to be promoted elsewhere in Thailand.

Dr. Ampai Harakunarak is a Senior Director at the Thailand Environmental Institute.

The Pacific Regional ESD Strategy

"[The] Pacific region can, should and will be a region of peace, harmony, security and economic prosperity, so that all of its people can lead free and worthwhile lives. We treasure the diversity of the Pacific and seek a future in which its cultures, traditions and religious beliefs are valued, honoured and developed. We seek a Pacific region that is respected for the quality of its governance, the sustainable management of its resources, the full observance of democratic values and for its defence and promotion of human rights. We seek partnerships with our neighbours and beyond to develop our knowledge, to improve our communications and to ensure a sustainable economic existence for all." (Vision for the Pacific, Forum Leaders, 2004)[1]

By the ESD Unit, UNESCO Bangkok

A key feature of the Pacific region is the co-ordinated approach that the Pacific Islands often take to implement international priorities. Since the launch of the UN DESD, the New Zealand National Commission for UNESCO has worked with the UNESCO Office in Apia, Samoa, UNESCO Bangkok and the Pacific Centre for Environment and Sustainable Development (PACE-SD) at the University of the South Pacific (USP) to raise the profile of the UN DESD in the Pacific Islands. At the 2006 Meeting of Pacific Island Forum Education Ministers (FEdMM) held in Nadi, Fiji, the Ministers of Education formally discussed education for sustainable development in the Pacific, agreed to take a co-ordinated approach to ESD, and endorsed the Pacific ESD Framework.

The Framework states the goal for the Pacific as one which seeks to "empower Pacific people through all forms locally relevant and culturally appropriate education and learning to make decisions and take actions to meet current and future social, cultural, environmental and economic needs and aspirations."[2]

The Pacific ESD Framework takes the international vision and specific goal for the Pacific, and translates these objectives into focused priority areas for action at local, national and regional levels, appropriate to the Pacific context. This framework provides an umbrella for co-ordinated and collaborative action to achieve a common vision to integrate and mutually reinforce and make linkages between the three pillars of economic development, social development and environmental conservation. The flexible nature of the framework allows for the development of local ownership, respecting local context and culture, and is an important aspect of the implementation of ESD at all levels.

Three priority areas for action were developed based on what are considered as the key issues facing the Pacific - formal education and training; community-based education; and policy and innovation. For each priority area, objectives have been identified to further enhance the focus on that area. Example activities for each priority area were provided as best practice references for the second half of the decade. Several of these activities have already been implemented including, under the community based education priority area, Live & Learn's Rivercare programme which recognizes the role of youth in managing future environmental issues by promoting action-based and discovery learning by students, teachers and communities.

At the 2007 FEdMM, held in Auckland, New Zealand, Ministers of Education endorsed an ESD Pacific Regional Action Plan which was developed in recognition of the cross-cutting and inter-disciplinary nature of ESD. Immediately following the FEdMM, the New Zealand National Commission for UNESCO and PACE-SD convened the Pacific Regional UN DESD Implementation Workshop that developed project proposals to guide the future implementation of the UN DESD in the Pacific throughout the rest of the Decade.

The first biannual report on Pacific ESD Framework is to be completed in 2009 and in 2011, the Pacific ESD Framework will be reviewed, and target areas and objectives will be further refined.

[1] Action Plan for Implementing Education for Sustainable Development in the Pacific Islands 2008-2014, 2007
[2] Pacific Education for Sustainable Development Framework, September 2006

Saving Our Home: An Intelligent Approach to Sustainable Development

By Daniel Calderbank

Theodore Roosevelt, the first United States president to consider the long-term need for efficient conservation of national resources, once wrote: "The nation behaves well if it treats natural resources as assets that it must turn over to the next generation increased, not impaired, in value."

If he were with us today, Roosevelt would be aghast that Planet Earth is reaching a point where it can no longer sustain consumption levels.

Doom-laden data on soil erosion, retreating glaciers, deteriorating fish stocks and deforestation are raising fears over future food production techniques.

There is widespread hunger today despite the dramatic increases in global production of cereals, meat and milk.

Increased food production has been achieved through new farming practices and the development of irrigation services, but these have often had a detrimental impact on the environment through the use of chemical pesticides and, in the case of irrigation, salination of the soil.

And our hunger for the latest gadgets is leaving graveyards of hazardous waste like computers, mobile phones and television sets. We are also losing valuable raw materials to the scrap heap and squandering energy on making new products.

Mankind is also increasingly crowding into urban sprawls. Almost half the world's population now live in cities that take up less than two percent of the Earth's land surface but use 75 percent of the planet's resources.

If we want respite from hectic city life, our search for untouched destinations takes us to some of the world's most beautiful environments. However, providing facilities like flush toilets and swimming pools can put a huge strain on regions where water and power are in short supply.

Refuse disposal, managed for and by villages, breaks down because of its volume and the inability of villagers to recycle large amounts of exotic rubbish.

With a soaring global population that could pass the eight billion mark by 2025 and limited resources, how do we provide energy, food, water and consumer goods for the generations without depleting our natural assets and leaving a planet-sized rubbish dump?

Education for Sustainable Development (ESD) is taking a lead role in addressing this problem. ESD envisions a world where every person has the chance to benefit from education opportunities and to learn the lifestyles and values necessary to create a sustainable future.

ESD is a process through which societies change their ways of thinking and behaviour toward life, work and well-being. ESD aims to empower people to link personal well-being with societal well-being and the sustainability of ecosystems on which all human life is dependent.

Due to the increasing importance being attached to ESD by UN Member States in the Asia-Pacific region, UNESCO Bangkok has upgraded its ESD sector to a separate unit. This has added significance as UNESCO is the lead agency in the United Nations Decade of Education for Sustainable Development (UN DESD), an initiative launched in 2005.

UN DESD aims to improve networking among stakeholders in ESD, improve teaching in ESD and provide countries with new opportunities to incorporate ESD into education reform efforts.

ESD also strives to preserve languages and cultures and promote human

rights and gender equality. The loss of languages is a major concern. Every fortnight, another language dies, and some 40 percent of the world's languages are thought to be at risk.

In Thailand, His Majesty the King has for decades promoted the "sufficiency economy" philosophy and urged all Thais to practise it to the greatest extent possible.

He once said: "If one is moderate in one's desires, one will have less craving. If one has less craving, one will take less advantage of others. If all nations hold this concept of moderation, without being extreme or insatiable in one's desire, the world will be a happier place."

Her Royal Highness Princess Maha Chakri Sirindhorn has also been at the forefront of ESD projects to develop the well-being of disadvantaged youth in remote areas of the kingdom. Their implementation focused on "Total School Development" by addressing multiple dimensions of development - food and nutrition, health and hygiene, education, training in vocational skills and cooperatives, as well as environmental and cultural conservation.

The royally-initiated programmes have enhanced the potential of many children, reinforcing their self-sufficiency and improving their quality of life.

If we follow this sustainable path, we can help preserve our planet for future generations. As a Kenyan proverb says: "Treat Earth well. It was not given to you by your parents. It was loaned to you by your children."

Adapted from Daniel Calderbank "Saving our Home", Bangkok Post, November 18th, 2008. Full article available at: www.bangkokpost.com/181108_Learningpost/18Nov2008_lern72.php

Daniel Calderbank is a Public Information Assistant at UNESCO Bangkok.

ESD in Tonga

The United Nations Decade of Education for Sustainable Development (UN DESD) was officially launched in Tonga on September 12, 2007, signifying the nation's commitment to fostering meaningful involvement of all parts of the community in working towards the country's long term development needs. Tonga is the first Pacific island country to take significant steps to observe the Decade and implement the ESD framework. The Honourable Minister for Education, Women's Affairs and Culture, Dr Tevita H. Palefau, also announced a government decision to establish a national task force for the Decade. The task force, to be chaired by the Ministry of National Planning, will have responsibility for co-ordinating ESD activities in the country.

Representatives from various government sectors, the diplomatic corps, donor agencies, businesses and cultural, youth and civil society groups attended the event, which was marked by cultural dances and presentations by several organisations on their role in and expectations of education for sustainable development.

The underlying theme throughout the presentations and speeches was the importance of identifying and clarifying values for sustainability and developing a Tongan identity in the context of a changing world. The Honourable Minister for Education noted the need to articulate our common values and to reach an understanding of what is important for sustainable development in Tonga.[1]

[1] Adapted from Press Release Nuku'alofa, Tonga by Lucy Moala-Mafi

Disaster Risk Preparedness in Myanmar

By the ESD Unit, UNESCO Bangkok

The ESD unit of UNESCO Bangkok acts as the Asia-Pacific Natural Disaster Focal Point and participated in the emergency Education Cluster (under the UN Humanitarian Response) for Cyclone Nargis, led by UNICEF and Save the Children. Since October 2008, UNESCO has convened the Disaster Preparedness and Response Education (DPRE) working group in Myanmar, a sub-working group of the Education Cluster. As of December 2008, the Education Cluster became dormant. However, due to the active participation of the Ministry of Education in Myanmar and upon request from the education stakeholders, UNESCO continues to convene DPRE working groups.

The objectives/goals of the DPRE WG are as follows: to recommend to all education stakeholders in Myanmar, resource materials and best practices on DPRE relevant to Myanmar; to promote DPRE as national priority and a normal practice implemented in all Myanmar schools; and to facilitate the organization of training, seminars, workshops and implementation of DPRE at the school level.

To date, UNESCO has organized nine meetings of the DPRE working group. During these meetings, the terms of reference for the working group were agreed upon, resource materials shared, and specific activities for the working group were suggested. The working group, which is comprised of representatives from UNICEF, Save the Children, World Vision, UNESCO, Plan International and officials from the Ministry of Education in Myanmar is currently working on an advocacy strategy and teaching and learning for DPRE. The translation of DPRE resource materials from English to Myanmar was undertaken. Recently, a consultative workshop with a small group of teachers from two townships severely affected by Cyclone Nargis in Yangon was conducted to adapt the translated resource materials.

UNESCO Bangkok Projects in Disaster Risk Reduction (DRR) Myanmar:
UNESCO has two projects totalling USD600,000 under the Revised Humanitarian Appeal (Flash Appeal) with the support of Plan International Inc. The titles of these projects are:

1. Capacity building for disaster response and resilience in education administration and management.
2. Capacity building in community-based education in emergencies and disaster risk reduction education for affected communities.

These projects are part of the UNESCO Myanmar Education Recovery Programme (MERP) that seeks to complement and further the educational efforts of the Government of Myanmar. Activities will concentrate on areas where UNESCO holds particular expertise and where gaps have been identified by the Government and the Education Cluster. The MERP's interventions are prepared in consultation with the Ministry of Education in Myanmar, and with technical input from the Education Sector for Post Conflict and Post Disaster Situations (PCPD), the Inter-sectoral Platform on PCPD and the Bureau of Field Coordination (BFC) based in UNESCO Headquarters in Paris.

ESD-J as the National Platform for UN DESD/ESD Promotion

By Fumiko Noguchi and Osamu Abe

The Japan Council on the UN Decade of Education for Sustainable Development, or 'ESD-J', is a nationwide network organisation founded in 2003. ESD-J recognizes that the root causes of sustainability problems are closely linked, and that a comprehensive approach to promote these issues through education is necessary. Hence, ESD-J has been acting as a platform to connect stakeholders from various fields and sectors to promote the Decade of Education for Sustainable Development (UN DESD).

Objectives

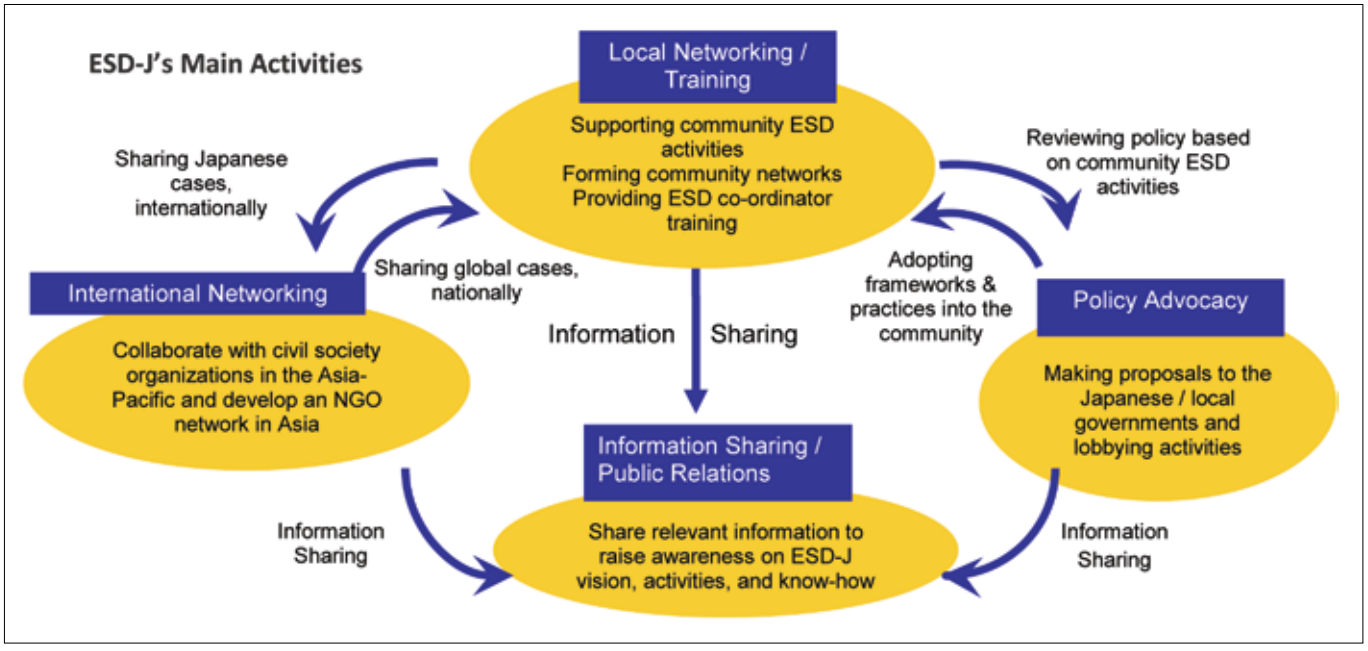
ESD-J's objectives are the following:

1. Proposing and improving the ESD implementation framework at the national level with related stakeholders in order to secure the effectiveness of the UN DESD Action Plan by the government;
2. Seeking and developing "the mechanism model to promote ESD at the local community level;"
3. Developing the human resource that is required for ESD promotion;
4. Increasing the understanding of ESD by stakeholders in the education field; and
5. Conducting ESD promotion projects through dialogue and in collaboration with various stakeholders, including NGOs, governments, business and educational organisations.

Activities

Four activity pillars - policy advocacy, local networking/training, information sharing /public relations and international networking - and a wide variety of ESD/UN DESD promotion, have been conducted at the national level and the Asian regional level.

Osamu Abe is the Chair of the Japan Council on the UN Decade of Education for Sustainable Development (ESD-J) and Fumiko Noguchi is the Coordinator at the Secretariat for International Programmes.



ESD Initiatives in Australia

By Gregory Manning

The focus of education for sustainable development in Australia is on systemic change. Through information and awareness, but more importantly, by building individual and organisational capacity, ESD is increasingly important in efforts to reorient the way Australians live and work. It plays a critical role alongside other policy tools used by governments, including legislation, market based instruments and technology, targeted at environmental and sustainability outcomes.

Progress in education for sustainable development in Australia has been achieved through the establishment of a national policy framework. Australia's first national action plan (2000) set up important institutional arrangements including a national council, national network and a research institute. These bodies have proven invaluable in raising the profile and impact of education for sustainable development as a credible policy alternative. Other important policies include: "Caring for Our Future: The Australian Government Strategy for the UN Decade of Education for Sustainable Development" and "Education for a Sustainable Future: a National Environmental Education Statement for Australian Schools".

Challenges and priorities for the future of ESD have been identified through an extensive community consultation process. These include the need for:

- Leadership and co-ordination from all levels of government.

Solar array at Lajamanu, Northern Territory © DEWHA/ Dragi Markovic

- Partnerships and networks, across and within sectors, to enhance successful delivery.
- Integration of education for sustainable development with other government policy tools.
- Access to increased and more targeted funding opportunities.
- Training and professional development in education for sustainability in a variety of contexts including industry, formal education and the community, with particular emphasis on national training packages, and undergraduate teacher training.
- Awareness, knowledge and information about learning and behaviour change models, and effective learning for sustainability methodologies.
- Co-ordinated availability of teaching and learning materials and resources, including best practice case studies.
- Publicity and advocacy to demonstrate the benefits of education for sustainability.
- Community engagement for the development of knowledge values and skills required for sustainable development; and
- An effective research programme to underpin the approaches adopted.

In order to demonstrate the potential of education for sustainable development, Australia is involved in a portfolio of projects across business and industry, formal schooling, further and higher education and community education. The need for Green Skills is emerging as an area of specific importance, particularly in relation to the proposed introduction of Australia's Carbon Pollution Reduction Scheme.

Further information is available at www.environment.gov.au/education.

Examining water quality © DEWHA/ Lyle Radford

Gregory Manning is the Assistant Director of the Knowledge Management and Education Branch in Department of the Environment and Heritage, in the Australian Government.

Preparing Children for Sustainable Living and Development: The Case of ESD Learning in China

By UNESCO Beijing (Education) with inputs from the Chinese National Commission for UNESCO

For over a decade and half, China has taken several initiatives to integrate education for sustainable development (ESD) into all aspects of the education system. Curriculum is one key component where the core skills, values and principles of ESD are being integrated. For instance, the New School Curriculum introduced by the Chinese Government in 2001, proposes a fundamental shift in the processes as well as the outcomes of learning in schools, with emphasis on cooperative and interactive learning instead of traditional rote learning. Apart from addressing core issues related to ESD, the new curriculum aims at enhancing higher-order skills such as critical thinking and problem solving on the part of learners, which are at the heart of ESD.

The New Curriculum provides for at least two levels of curriculum organization and implementation – national and local or school-based - with particular emphasis on its decentralized implementation. The school-based curriculum carries 10 percent of the total curriculum hours. In many Chinese schools, ESD forms an integral part of day-to-day teaching and learning as part of school-based and/or local curriculum. Many schools are actively involved in providing such an education at the school level. The purpose of these schools is not just teaching some ESD related topics. Instead, they emphasize the learning of core values of ESD, which is popularly known as the *Four Respects: Respect for All, Respect for Cultural Diversity, Respect for Nature and Respect for Science*. 'Go to Our Community' is the mode of learning to enhance hands-on experience of sustainable living. Teachers move beyond the boundaries of their disciplines and design and implement interdisciplinary projects, which are well integrated into their lesson plans, teaching, interaction and assessment. Many schools use school-based textbooks that promote the fundamentals of the 'Four Respects.' Many such schools are now known as 'ESD Schools' that have successfully transformed the school culture and environment to promote learning for sustainable living and development.

Visit to world heritage site © Changshengyuan Primary School, China / Wang Tieying

Group discussion in class © Changshengyuan Primary School, China / Wang Tieying

Environment protection team in action © Changshengyuan Primary School, China / Wang Tieying

Mongolia and the UN Decade of Education for Sustainable Development

By the Mongolian National Commission for UNESCO

The Government of Mongolia is committed to the implementation of the UN Decade of Education for Sustainable Development and has joined the global community in striving for a socially, economically and environmentally balanced developmental process. In line with these goals, Mongolia's development is targeted at ensuring ecologically oriented as well as social and economic growth inspired by the MDGs (Millennium Development Goals) and the Rio Convention.

The National Council for Sustainable Development was established in 1996 to oversee the development and implementation of Mongolia's sustainable development strategies. The responsibilities of organizations related to ESD were clearly stated.

The Ministry of Education, Culture and Science is currently in charge of formal and informal education; and the Ministry of Nature and Environment is in charge of public awareness of the environment.

With respect to policy frameworks, a Draft National Programme on ESD was jointly developed by the Ministry of Education, Culture and Science and the Ministry of Nature and Environment. Additionally, the Master Plan for Education Sector Development, based on the principles of ESD, was drafted for the years 2006-2015.

Devoting special attention to this area, UNESCO has played an important role in establishing and developing non-formal education through the implementation of the projects "Gobi Women" and "Learning for Life" in co-operation with the Government. The project "Non Formal Education Capacity Building for ESD in Mongolia" implemented by the National Center for Non Formal and Distance Education with co-operation of ACCU, specifically included ESD issues in the field of non-formal education.

The International Implementation Scheme for the Decade of ESD, developed by UNESCO, has been translated into the Mongolian language, adapting the information to the local context and making it more suitable and understandable for the public.

A national seminar was organized by the Mongolian National Commission for UNESCO and the Environmental University ECO ASIA on 7th August, 2007, in order to create a space for discussion on the strategies of the Decade of Education for Sustainable Development, which would then be further revised and adopted. The seminar was attended by about 60 representatives from the government, civil society organizations, academic and scientific organizations, universities and institutes, local educational departments and business sectors.

Mongolian Challenges

- The need to promote linkages among ministries, national and international organizations and NGOs in charge of ESD involving a wider frame of stakeholders.
- There is no clear distinction between education for sustainable development and environmental education among a wide range of the public and stakeholders.
- Knowledge management: teachers' attitudes and behaviour towards ESD are not stabilized.
- Human resource improvement is needed.
- There is a lack of publications and other materials for school children.
- Lack of financial resources and facilities.
- Increasing public awareness on education for sustainable development is essential. Education methods for ESD should be promoted simply in Mongolia; for example, to increase the capacity and skills of Mongolian people to live and work and connect sustainable development to the information society. Thus, it is necessary first and foremost to improve the training curriculum. Mongolians face the challenge of introducing the education for sustainable development concept into all educational levels; and to foster an attitude and behavioural change which should result in improved livelihoods through the integration of tradition and customs.

BIODIVERSITY OF THE SEAS: KILL ONE SPECIES IN THE FOOD WEB AND YOU SET OFF A CHAIN OF ALTERATIONS ABOVE AND BELOW!

According to some scientists: 90% of large predatory fish have gone! In estuaries and coastal waters, 85% of the large whales have disappeared!! AS LITTLE AS 5% of coral reefs can now be considered pristine, a quarter have been lost and all are vulnerable to global warming!!!

© Christian Moser/Flickr

It is clear, in any event, that man must change his ways. Humans could afford to treat the sea as an infinite resource when they were relatively few in number, capable of only rather inefficient exploitation of the vastly deep and without as yet a taste for fossil fuels. A world of 6.7 billion souls, set to become 9 billion by 2050, can no longer do so. The possibility of widespread catastrophe is simply too great. - the Economist, Dec. 30th 2008

ESD Publications

UNESCO Bangkok Publications

1. ESD on the Move: National and Sub-regional ESD Initiatives in the Asia-Pacific Region (2008)
2. Asia-Pacific Guidelines for the Development of National ESD Indicators (2007)
3. Monitoring and Assessing Progress during the UN DESD in the Asia-Pacific Region: A Quick Guide to Developing National ESD Indicators (2007)
4. Bridging the Gap between the Rights and Needs of Indigenous Communities and the Management of Protected Areas: Case Studies from Thailand (2007)
5. Education for Sustainable Development: Linking Learning and Happiness (2007)
6. Natural Disaster Preparedness and Education for Sustainable Development (2007)
7. A Situational Analysis of Education for Sustainable Development in the Asia-Pacific Region (2005)
8. Working Paper: Asia-Pacific Regional Strategy for Education for Sustainable Development (2005)

Other Featured UNESCO Publications:

1. Young Consumers' Guide to Eco-Friendly Living (2008 Paris)
2. Framework for a UN DESD Communication Strategy in Support of the UN Decade of Education for Sustainable Development (2007 Paris)
3. Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability (2005 Paris)
4. Links between the Global Initiatives in Education (2005 Paris)
5. Teaching and Learning for a Sustainable Future - A Multimedia Teacher Education Programme (2006 Paris)

All publications can be accessed online at: www.unescobkk.org/education/esd/resources/publications

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Presentations include:

- Education for Sustainable Development
- The Head, Heart and Hands of ESD EFA: Linking with the Decade of Education for Sustainable Development
- National ESD Monitoring System Development in the Asia-Pacific Region

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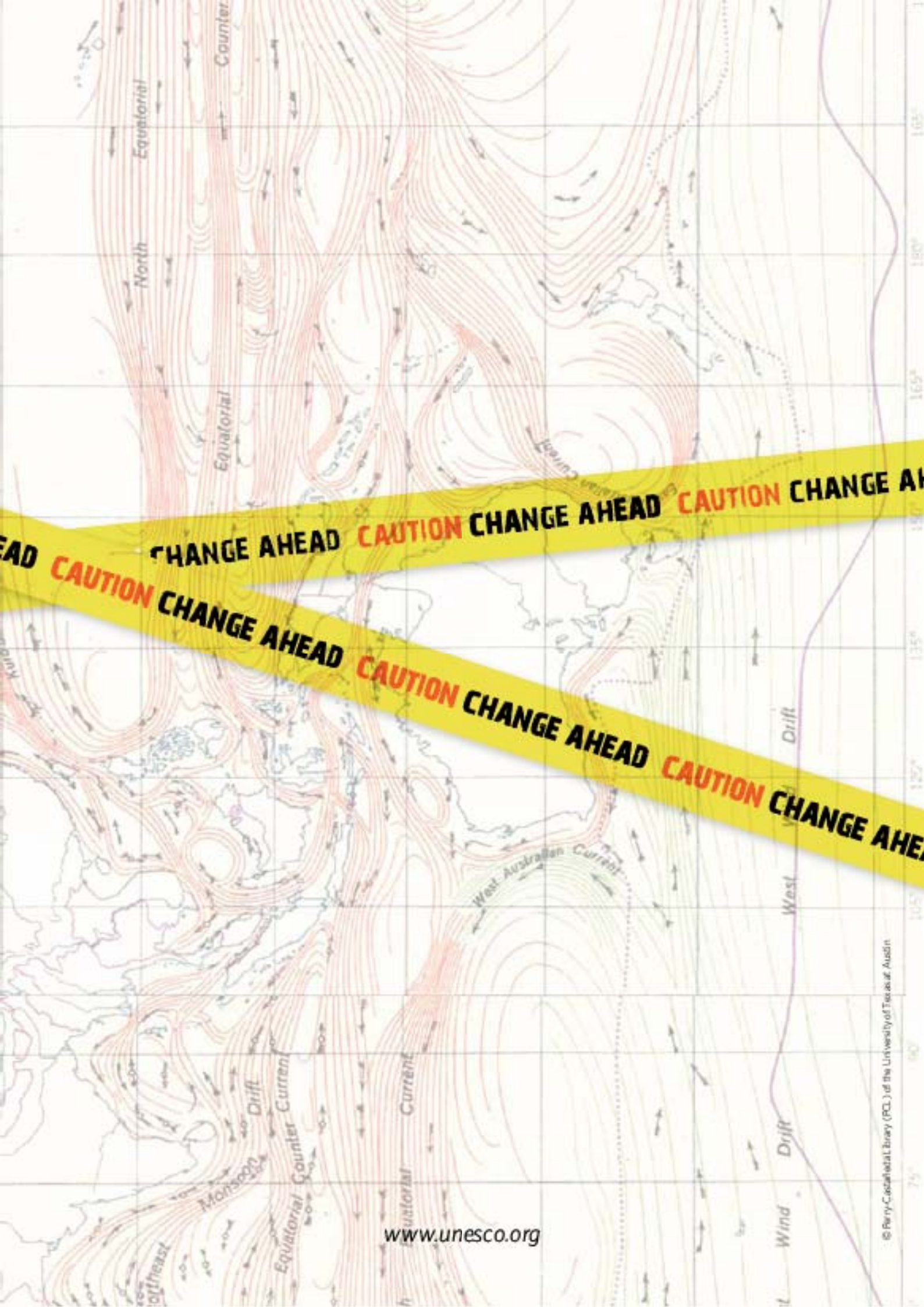
- Natural Disaster Preparedness and Education for Sustainable Development



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