United Nations
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UNESCO
Associated
Schools

UNESCO
Associated
Schools

Second Collection of

Good Practices

Education for Sustainable Development

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Good Practices

Education for Sustainable Development

UNESCO Associated Schools

2009

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Acronyms

ASPnet	UNESCO Associated Schools Project Network, commonly called UNESCO Associated Schools
BSP	Baltic Sea Project
DESD	Decade of Education for Sustainable Development (2005-2014)
EFA	Education For All
ESD	Education for Sustainable Development
ERLFS	Education for Rural Livelihoods and Food Sovereignty
FAO	Food and Agriculture Organization of the United Nations
HIV and AIDS	Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome
ICTs	Information and Communication Technologies
IGO	Intergovernmental organization
IIS	DESD International Implementation Scheme
MDGs	Millennium Development Goals
NGO	Non-governmental organization
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development (or *Earth Summit*, Rio de Janeiro, Brazil, 1992)
UNCHE	United Nations Conference on the Human Environment
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WSSD	World Summit on Sustainable Development (Johannesburg, South Africa, 2002)

Preface

This is an era in which some 1 billion people live in poverty while the majority of the world's wealth is in the hands of just a few people. This is a time of considerable turbulence and instability – a time of financial and economic crisis, and social upheaval as well as persistent ecological degradation, global warming and the rampant consumption of finite resources. As the current crisis is likely to affect everyone, it is time to anticipate possibilities for profound transformation, toward more inclusive societies, more equitable growth and more responsible behaviours of consumption.

Hence, it is extremely refreshing, encouraging and enlightening to see the enthusiasm and the dynamic creativity of the significant UNESCO Associated Schools Project Network (ASPnet) Good Practices recently conducted in support of the United Nations Decade of Education for Sustainable Development (DESD) 2005-2014.

As we are about to complete the first half of this crucial Decade, the collection of the ASPnet ESD Good Practices is timely and helpful. It presents, in a concise and illustrated way, a multitude of educational approaches developed in favour of sustainability.

Pages and pages have been written about the concept and definition of "sustainable development". This publication does not go into any lengthy explanations of what it is or what it should be. It is rather based on the simple definition of a woman who first coined this term. As Chairperson of the United Nations International Commission on Development and the Environment, Gro Bruntland (Norway) made an appeal for sustainable development i.e. "***development that meets present needs without compromising the ability of future generations to meet their own needs***".

This statement, so simple in its essence, yet so challenging to put into practice, has come a long way since it was first pronounced in 1987. It could have been just another countless declaration, another intention of high ideals. It could have been shelved like many other noble appeals. However, the call for sustainable development is too closely linked to our livelihoods, to our well-being and to our very survival on this planet to be ignored or neglected. It had to emerge as a top priority in all future strategies worldwide to plan, to develop and to educate.

That is what provoked the United Nations General Assembly to declare the DESD and, five years into the Decade, there is now general agreement that education for sustainable development (ESD) has to be an integral part of quality Education for All (EFA) as defined in the Dakar Framework for Action (goal number six).

Ministries of Education worldwide are currently examining how to introduce and reinforce this vital dimension throughout the curricula, in the training of teachers, in extra-curricular activities and in non-formal education. There is pressure to take urgent measures. Where to start? What is the best approach? What can we learn from the ASPnet collection of DESD Good Practices? How can the Network serve as a pathfinder to help us to find our way in the labyrinth of educating for sustainable development?

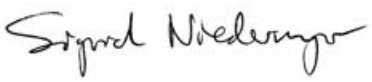
First, this Collection reminds us that ESD is not just for some schools in some countries, it is not reserved for upper secondary schools or institutions of higher education. This publication reveals that **ESD is for all schools and all learning settings** – in highly industrialized counties as well as emerging economies, in highly populated states as well as small island countries, in public schools and private institutions, and in rural and urban settings. It reminds us that ESD has to start as early as possible, and that pre-schools and primary schools have particularly prominent and effective roles to play, just as do teacher-training institutions.

Second, this publication shows **that it is relatively easy to ensure a holistic and interdisciplinary approach in educating for sustainability**. By conducting **projects**, similar to those conducted by UNESCO Associated Schools, children and young people can gain a sound knowledge base, practical skills and competencies as well as new values, attitudes and behaviour that will improve their lifestyles, their environments and future prospects.

Third, this collection **stresses the essential role of teachers**. As the economic situation in many countries is worsening, the position of teachers is also becoming increasingly vulnerable and more demanding. Yet, in spite of difficult conditions, the ASPnet Good Practices reveal that many teachers have now moved forward into the driving seat; they are becoming the real agents of change who are so badly needed if sustainable development is to become a reality rather than a mere aspiration. Principals and teachers are investing their time, energy and often their own resources to enable children and young people to understand and appreciate the value of sustainability and to become main actors and defenders of sustainable development, now and hopefully into the future. **In brief, ASPnet projects put into practice the three "Is" initiate, innovate and integrate ESD in classroom learning as well as in out-of-school and extracurricular activities.**

Last but not least, **education policy-makers are invited to take into account ASPnet's formidable contributions** made at local, national, regional and international levels in applying the three "Rs" of education for the twenty-first century – to **R**ethink, **R**eorient and **R**eassess education in the light of ensuring a sustainable future for all.

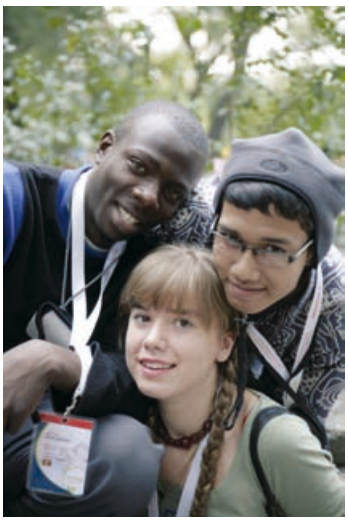
Aline Bory-Adams
Chief of the DESD Coordination Section
UNESCO



Sigrid Niedermayer
ASPnet International Coordinator
UNESCO

The UNESCO Associated Schools Project Network (ASPnet)

Shortly after the founding of UNESCO, the Organization put into place (in 1953) its Associated Schools Project Network (ASPnet). The purpose of the Network is to serve as an international laboratory for exploring, experimenting and taking to scale new educational practices that reinforce the humanistic, ethical and international dimensions of education. In brief, ASPnet strives to translate the principles and priorities of UNESCO, the United Nations and some of the other Specialized Agencies and UN bodies (e.g. FAO, WHO, UNEP, UNICEF) into concrete learning approaches and outcomes by taking into account the four pillars of learning for the twenty-first century[1]: learning to know, learning to do, learning to be and learning to live together. ASPnet was set up to have a multiplier effect through the systematic diffusion of its innovative educational resource materials such as its Tolerance Posters and its Peace Pack produced for elementary school teachers, its World Heritage Education Kit for secondary schools and its Good Practices.



Mondialogo 2008 Symposium participants in Beijing, China © Mondialogo

Over the decades, the Network has grown in size and has kept pace with the evolving issues and concerns addressed by the international community. It produced educational resource material on the plight of indigenous peoples. Associated Schools served as a test group for an educational kit on the alarming trend of desertification. ASPnet helped to produce preventive education resource material on HIV and AIDS. Associated Schools facilitated the launching of the Mondialogo School Contest for Intercultural Dialogue (sponsored by both UNESCO and Daimler) and contributed to its three successful rounds (2003-2008).

UNESCO Associated Schools are committed to contributing to the quality of education as advocated by the Education for All (EFA) Dakar Framework for Action and to reaching the United Nations Millennium Development Goals (MDGs). Around the world, ASPnet has been mobilized to assume its pilot role in helping to show the way towards new and rapid paths of Education for Sustainable Development (ESD) and to the implementation of the United Nations Decade of Education for Sustainable Development (DESD) 2005-2014.

1– J. Delors et al., *Learning: the Treasure Within, Report to UNESCO of the International Commission on Education for the Twenty-first Century*, UNESCO Publishing: 1996 (http://www.unesco.org/delors)

Education for Sustainable Development in practice in schools

Experiments in Cameroun

The second publication of the UNESCO Associated Schools Project Network (ASPnet) Good Practices[2] presents a sampling of some of ASPnet's pioneering and innovative initiatives taken in support of the United Nations Decade of Education for Sustainable Development (DESD, 2005-2014).

It is important to keep in mind that, at the time of the United Nations Conference on the Human Environment (Stockholm, Sweden, 1972), relatively few people were concerned about the state of our planet Earth. However, shortly after that Conference and the establishment of the United Nations Environment Programme (UNEP, Nairobi, Kenya), the theme "man and the environment" was added in 1975 as one of the four topics for ASPnet activities, which has now become "education for sustainable development"[3].

Terrassed agricultural fields, San Pedro de Atacama, Chile © Jair Torres

In preparation for the UN Conference on Development and the Environment (Rio de Janeiro, Brazil, 1992), twenty years after Stockholm, UNESCO's Associated Schools conducted pilot projects in support of environmental and development education, through an international contest. This Contest and the Rio Conference proved to be a turning point for mobilizing ASPnet in support of Agenda 21[4] and its emphasis on education for environmental protection and harmonious development. As we know, the Rio Conference, often referred to as the Earth Summit, advocated and endorsed the new concept of sustainable development calling for *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Our Common Future, Report of the United Nations International Commission on Development and the Environment, 1987)*.

Schoolgirls in China

Associated Schools started to work on this new dimension of sustainability. Ten years later, the World Summit on Sustainable Development (WSSD, Johannesburg, South Africa, 2002) called for an International Decade on Education for Sustainable Development. The United Nations General Assembly declared the ESD Decade for the years 2005-2014, and ASPnet schools were already prepared, ready and willing to contribute at both local and global levels!
As indicated in a presentation prepared by UNESCO-Nairobi and UNEP in 2006[5], the WSSD Johannesburg Plan of Implementation identified two key aspects of ESD:

1. Education is the foundation for sustainable development and much of the work on ESD must be closely linked to the pursuit of Education for All (EFA).

2- The First Collection of ASPnet Good Practices for Quality Education (see Useful resources on p. 67), was published in 2008.
3- The three other major themes proposed to ASPnet schools for conducting quality education projects are: World concerns and the role of the UN system; Peace and Human rights; and Intercultural Education.
4- The full text of Agenda 21 was revealed at the United Nations Conference on Environment and Development (Earth Summit), held in Rio de Janeiro on 14 June, 1992, where 172 governments voted to adopt the programme.
5- See on http://www.education.nairobi-unesco.org/

2. Education is a key instrument for bringing about changes in values and attitudes, skills, behaviours and lifestyles consistent with sustainable development within and among countries. Thus, ESD is a tool for addressing such questions as gender equality, environmental protection (including water education), climate change, biodiversity, rural development, human rights, health care (including HIV and AIDS) and responsible and sustainable consumption as these interact with the sustainable development agenda.

Teacher and her pupils in Si Saket Province, Thailand © 2006 Connelly La Mar, Courtesy of Photoshare

The concept of sustainable development continues to evolve, encompassing key areas such as society, environment and economy, with culture as an underlying dimension:

- **Society**: an understanding of social institutions and their role in change and development, as well as the democratic and participatory systems
- **Environment**: an awareness of the resources and fragility of the physical environment and the effects on it of human activity and decisions
- **Economy**: a sensitivity to the limits and potential of economic growth and their impact on society and on the environment, with a commitment to assess personal and societal levels of consumption out of concern for the environment and for social justice.

Tatio geysers, Desert of Atacama, Chile © UNESCO/Francisco Cintra

Furthermore, the values, diversity, knowledge, languages and world views associated with **Culture**, influence the way ESD issues are dealt with, in specific national contexts. In this sense, culture is not just a collection of particular manifestations (song, dance, dress, etc.), but a way of being, relating, behaving, believing and acting which people live out in their lives; it is in a constant process of change and exchange with other cultures.

ESD is fundamentally about values, with respect at the centre: respect for others, including those of present and future generations, for difference and diversity, for the environment, and for the resources of the planet we inhabit. Education enables us to understand ourselves and others, and our links with the wider natural and social environment, and this understanding serves as a durable basis for building respect. Along with a sense of justice, responsibility, exploration and dialogue, ESD aims to move us to adopting behaviours and practices that enable all to live a full life without being deprived of basics.

Baby calf born on an organic farm

ESD mirrors the concern for education of high quality, encouraging a holistic interdisciplinary approach. ESD is to be embedded in the whole curriculum, not as a separate subject. It should be locally relevant, stimulate critical thinking and encourage the use of problem solving techniques. Furthermore, in order to create ESD programmes all sectors of the education community need to work together in a cooperative manner. Formal education (i.e., primary, secondary, post-secondary and higher education) should work closely with traditional partners from the non-formal education sector.

The International Implementation Scheme of the DESD (see p. 67) reinforces the need for reorienting existing education programmes: ***"Creating a more sustainable future will not occur simply by increasing the amount of education; instead, it is an issue of content and relevance. Questioning, rethinking, and revising education from pre-school through university to include more principles, knowledge, skills,***

Children's Club ESD activities in France
© Club Mouriscot, Biarritz

perspectives and values related to sustainability in each of the three realms – environment, society, and economy – is important to our current and future societies. This should be done in a holistic and interdisciplinary context, engaging society at large, but carried out by individual nations in a locally relevant and culturally appropriate manner (…) More comprehensive educational tools focusing on the skills inherent in critical thinking and rational decision-making are necessary to build a citizenry capable of thinking through some of the more complex sustainability issues that face communities and nations (…) No universal models of ESD exist. While there is overall agreement on principles of sustainability and supporting concepts, there will be nuanced differences according to local contexts, priorities, and approaches. Each country has to define its own sustainability and education priorities and actions."

The Decade pursues the global vision of a world where everyone has the opportunity to benefit from quality education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation. An international decade such as the DESD serves as a framework within which diverse and multiple actors pursue a shared agenda based on their commitment to the central vision.

Old man in Nizwa, Oman

A wealth of literature has already been published on the ESD Decade. This publication does therefore not repeat what has already been said, stated and defined. However, it does include a bibliography of pertinent reports, papers and documents as well as relevant websites (see Useful resources on p.67).

The main purpose of this Collection of Good Practices is to show how ESD is being introduced and actually put into practice in different parts of the world through the UNESCO Associated Schools Project Network (ASPnet), in support of the DESD. When the UNESCO Secretariat invited ASPnet National Co-ordinators to submit Good Practices for eventual inclusion in this publication, hundreds of projects were received. It was of course not possible to publish all of them and therefore a selection had to be made, using criteria such as geographical representation, level of schools, innovativeness and potential to take to scale, and relevance to the DESD.

"The ultimate goal of the Decade is that education for sustainable development must be more than just a slogan. It must be a concrete reality for all of us - individuals, organization, governments - in all our daily decisions and actions, so as to promise a sustainable planet and a safer world to our children, our grandchildren and their descendants. The principles of sustainable development must find themselves in children's schooling, higher education, non-formal education and community-based learning activities. This means that education will have to change so that it addresses the social, economic, cultural and environmental problems that we face in the twenty first century"

UNESCO Director-General
Koïchiro Matsuura,
International Launch of DESD
New York, 1 March 2005

Schoolteacher in her classroom in Kenya
© 2007 Sean Hawkey, Courtesy of Photoshare

Part 1 of this publication presents ESD pedagogical approaches developed by Associated Schools at the grass-roots level, the vast majority being public, State-run institutions. Part 2 offers an insight as to how ASPnet is contributing to the DESD at the sub-regional, regional and international levels.

ASPnet has a mission to translate the ideals and programme priorities of the UN and UNESCO into concrete and effective educational approaches. The Network is playing a

leading role in contributing to achieving the Millenium Development Goals (MDGs) and the EFA goals. Another special characteristic of this Collection is that it promotes the link between ESD and quality education for the third millennium.

By examining the ASPnet Good Practices in support of the DESD, one can further observe how these initiatives help to contribute to:

- Making education more relevant and meaningful
- Building partnerships in support of sustainable development
- Developing capacity-building both inside and outside the classroom
- Improving the teaching-learning process.

These same issues are on the Agenda of the World Conference on Education for Sustainable Development (Bonn, Germany, 31 March to 2 April 2009). Let us take a closer look, learn some valuable lessons and forge ahead. So much is at stake; no more time can be lost.

Madinat al-Zahra, Cordoba, Spain

"Stand Up Campaign" for MDGs at the St Michael's School, Dominican Republic

One of the 6 million signatures for the "Planet Earth 's Contract", Spain

Indien Kogi child, Sierra Nevada de Santa Marta © Jair Torres

Executive Summary: ESD Success Stories

This second collection of ASPnet good practices for quality education takes stock of some of the contributions being made by UNESCO Associated Schools in support of the United Nations Decade of Education for Sustainable Development (DESD).

Let us travel to learn about projects conducted by schools in all parts of the world: from the heart of Africa to near the Arctic circle, from the Far East to the Middle East, and from the Caribbean to the centre of the Pacific.

This voyage promises a valuable insight on the enormous capacity of these UNESCO ASPnet schools – urban or rural, big or small, well-staffed and equipped or with very little resources – to take initiatives in favour of the DESD. In the vast majority of cases, their action was not isolated. It went beyond their classrooms and beyond the walls of their schools. Students and teachers reached out to families and local communities, to other schools in their vicinity, in their country and sometimes even to schools beyond their borders and continents.

What do we have to gain from such a trip to so many places? As educational planners, policy-makers, educators, principals and teachers, what has this collection of ASPnet good practices to tell us and where do we go from here?

1. Identifying common denominators for ESD

Our journey testifies, once again, that "unity in diversity" does exist. Each school is different, each place is unique, and each culture has its own specific characteristics. Yet the educational approaches conceptualized, developed and practised have much in common. All projects had a holistic approach centred on gaining knowledge, acquiring new skills and competencies, and developing new aptitudes, attitudes and behaviour conducive to sustainable development. Projects started out small but many of them grew quickly and reached out to multitudes of others. **The "contract for planet Earth" drafted by a small school in Spain received recognition from His Majesty the King of Spain and 6 million signatures. The school project in Japan not only involved four other Asian countries but benefited from in-puts from two European nations. The Arab States Water Project brought in experts from India and South Africa.** ASPnet initiatives do not focus on the short term but lead to learning for the future and throughout life. ASPnet projects are conducted both inside and outside the classroom. They are often embedded in the community, addressing issues of common concern, leading to tangible results and leaving their imprint in both the minds and hearts of children and young people. There might not be a common recipe but the ASPnet good practices have definitely given us some common and essential ingredients.

2. Assuming responsibility for contributing to sustainability

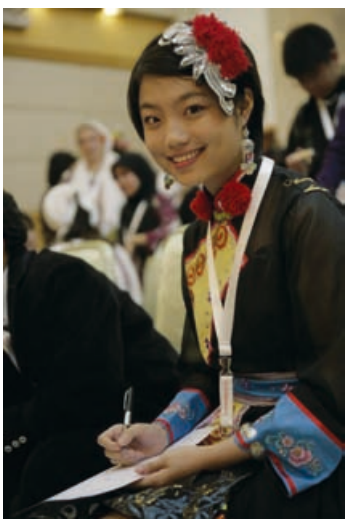
We have observed that ESD does not have to entail a complex and sophisticated approach. As in each ASPnet good practice, ESD has to stem from the reality of the locality, of the school's particular situation, and attempt to help meet the challenges

facing the immediate environment and well-being of the community. In the twenty-first century, schools can no longer afford the luxury of passivity, of being isolated islands of learning in a sea of turbulent water. Each and every school has to become a pulse-taker and a pro-active partner in achieving sustainability. Like UNESCO Associated Schools, they have to be encouraged to look both within their very walls and out into their milieu, and then decide on what type of action they need to take to assume their responsibility in contributing to a more sustainable and self-reliant life and future. In an effort to share their results with others and accelerate the process of education for sustainable development, projects have also often resulted in new educational resource materials. **For example, the Baltic Sea Project has produced seven Learners' Guides, an interactive DVD providing learning modules is under preparation as part of the Sandwatch Project and Uzbekistan designed its own DESD manual for teachers.**

Adapted teaching manual and exercise book on ESD in Uzbekistan

3. Making education more relevant and more meaningful: "Strengthen the link" between school and society

Education has to stimulate students' desire to learn and to explore, to undertake research and analyse the findings, to draw conclusions, and to take responsible action. It has to encourage children and young people to think for themselves and for the good of their communities and countries and the world at large. However, this is not always the case. Drop-out rates from school remain high in many places and the problem of motivated learners persists. Hence, education must become more relevant and more meaningful, and ESD does just that. The ASPnet projects presented indicate not only highly enthusiastic and motivated learners but, by taking part in ESD activities, their scholastic scores have also improved as confirmed **by the school in France**. Furthermore, ESD relates to the many crucial environmental, economic and social issues facing our societies and to our corresponding cultural contexts. **In China, the school developed an interactive activity on "school and society" focusing on energy saving and emission reduction.** ASPnet Good Practices indicate some useful points of entry and somewhat of a consensus of ESD priority topics including: water conservation, more rational use of energy, preserving the environment, halting climate change, self-reliance (affecting the entire school community), empowerment, and improving health and living conditions. In commenting on their participation in the ESD projects, children and young people indicated, time and again, that their education is giving them a new sense of purpose and mission, not only now but for throughout their lives.


Chinese student participating in the Mondialogo Symposium, Beijing 2008

4. Building partnerships in support of sustainable development

If the world could only become one team, striving for the same goals and for a better life for all, and excluding no one, what a difference it would make. Although we are not yet there, team work is an essential feature, not only on the playing field, but also in the classroom and within and beyond the school. **In Thailand, students went out in teams to produce their environmental map indicating areas needing attention as well as those which already have a *green* effect.** But even team work does not suffice in the twenty-first century. Schools and learning require partnerships, particularly in their communities and respective countries. The ASPnet good practices illustrate a wide range of partnerships including those with non-governmental organizations (NGOs), universities, municipal authorities, public institutions, government bodies, research centres, foundations, UNESCO Clubs, the media, and intergovernmental organizations (IGOs), such as UNESCO. **Just one school in South Africa formed three different**

Parents discussing at the School Health Map Seminar, Satri Sri Suriyothai school, Thailand

Discussion between teachers from Wales and Zanzibar

Orange trees in Tunisia

Planting banana tress in the United Republic of Tanzania

partnerships: with an orphanage, a home for the elderly and a camp for squatters. These partnerships have become a necessity for creating the synergy needed between learners and experts, between amateurism and professionalism and between mere interest and the empowerment of young people. One of the most often cited partnerships was that with parents – calling upon their expertise, helping hands and good will. **Examples are numerous including the school farm and garden in Colombia where parents offered their precious time and meagre resources.** Some of these ASPnet DESD partnerships have also actually helped to sensitize and inspire other adults, professionals and decision-makers.

5. Developing capacity-building both inside and outside the classroom

In this era of globalization, massive transformations, and prolonged life expectancy, children and young people have to be prepared to face both their present and a constantly changing future. It has already been emphasized that quality education has to lead to life-long learning. The ASPnet good practices have shown us that ESD enables learners to acquire essential skills and competencies which they can not only use immediately but which will also help them to confront the challenges facing them in the near and distant future. **By setting up a "gender desk" in the school in Uganda, students advised and helped their peers on crucial issues facing them, such as HIV and AIDS, drugs, alcohol and environmental degradation.** Most projects enabled students to conduct research and apply the findings. **Consequently, learners were able to cross the bridge between theory and practice , for instance building a reservoir to store rain water for the school garden and trees in Tunisia.** Educators can no longer neglect or underestimate the need to enhance students' capacity to use effectively information and communication technologies (ICTs). Such technology has become essential for conducting research, and seeking facts and figures as well as for communicating with other partners, experts and/or their peers elsewhere. **The Portuguese students relied heavily on ICTs in creating and developing their virtual "sustainable island".** In almost all projects students acquired valuable communication and language skills, including the practice of other languages, that are so needed in a rapidly shrinking planet, **as exemplified by the Wales/Zanzibar school clusters project to enhance rural livelihoods.** Reporting and communicating skills are also essential for striving to have a multiplier effect and raise support for projects. **Students in the Palestinian Territories took special time to write articles and report on their water project to the media.** Education for sustainable development also calls for problem-solving skills **and students gladly responded by recycling, planting palm trees to halt erosion (Cook Islands), making school gardens and selling the produce (United Republic of Tanzania), building their own windmill to save energy at their school (Finland).**

6. Improving the teaching-learning process

High on the agenda of quality education is the improvement of the teaching-learning process. There is now general agreement that teachers have to become facilitators and students have to become the real actors of the learning process. But how does one put this into practice? Simply through project work! The key to the success of the UNESCO ASPnet has been in its "projects" and this has been one of the biggest contributions of Associated Schools to quality education for the past 56 years. Similarly, this ASPnet collection of good practices demonstrates that one of the most effective ways to introduce and maintain education for sustainable development is through project work. Such an approach enables teachers to become facilitators, and puts pupils and

students in the centre of the learning process. ASPnet projects call for a holistic approach and interdisciplinarity which is also an indispensable feature of ESD in view of its many facets and dimensions. Team teaching is badly needed to make relevant linkages between the various subjects and show how they relate to daily life, concerns and solutions. **The Lebanese school reported on such an approach in launching their recycling campaign. The Trinidad and Tobago report underlined that it was just not the science teachers who take part in the Sandwatch Project but teachers across the curriculum from poetry to mathematics and from history to wood carving.** Learning also has to be both creative and enjoyable, and that is why many of the ASPnet projects emphasized the need to involve students in using and developing their talents and imagination in a variety of forms. **Following a visit to an ecological home and farm in Brazil, students were eager to create their own models of ecological homes in harmony with the local environment and sustainability. Another example was the photography contest of natural sites in Oman; it not only gave students a deeper appreciation of the beauty of their country but also enabled them to acquire new skills in both taking and developing photographs, and perhaps orienting them towards new careers.**

Measuring water quality in Fiji, Sandwatch Project © G. Cambers

Nizwa, Oman

Stock of tree trunks

We are aware of the fact that education reform is a long process, requiring considerable research, experimentation, analysis and validation. Therefore, how can we integrate and/or reinforce education for sustainable development in school curricula, in extracurricular activities and in both out-of-school education and non-formal education?

The ASPnet good practices have shown us that schools today have developed a capacity to initiate, to innovate and to succeed in bringing the concept of sustainability into the forefront of the learning process. Hence, it is hoped that education policy-makers, curriculum developers, teacher trainers, principals, classroom teachers and parent associations will recognize and provide further support to bringing education for sustainable development into the centre of the learning process.

ASPnet was designed to have a multiplier effect. It is hoped that these good practices inspire many other schools to undertake similar projects in favour of the DESD while enhancing quality education and learning throughout life.

Part 1

ASPnet schools' educational approaches developed at the **school level**

Children in Vietnam © 2007 Trinh Le Nguyen, Courtesy of Photoshare

Africa

Mille balais project/Burkina Faso © UNESCO/ASPnet

Cameroun

School:
Lycée de Zamengoé (public secondary school)

City:
Yaoundé

Project co-ordinator:
Mr Jean-Jacques Kangné Tanouo

Protecting **Biodiversity** in Humid Zones in an **Urban Context**

Background

This project was the result of an initiative taken by the French Ministry of Foreign Affairs which launched a contest entitled "Forum of Youth for Development".

Project objective

- To enhance the scientific and technical capacity of young people to contribute to the conservation of biodiversity and good health in urban areas

Project implementation

This project entailed conducting research in humid zones on both the protection of biodiversity and improving health conditions in the capital city, Yaoundé. Participation in a video conference with young people from other countries e.g. France, Morocco, Republic of Moldova and Romania at the outset of the project was both stimulating and motivating. Students understood well what was expected of them and were committed to achieving results. For their research, young people visited humid zones in their city. They collected data on water drainage and purification issues, analysed them in a laboratory, discussed results and wrote reports on their findings. A number of activities was conducted using recuperated material including using less wood for home cooking, water purification through the use of solar energy, etc. The research results of the project on biodiversity will be included in a national data bank of "Good Pedagogical Practices" and is already available as an on-line publication on the website: www.zoneshumides-cm.info, linked to the Service Culture, Editions, Ressources pour l'Education Nationale (SCEREN). Certain challenges were encountered such as managing such a large number of students in just one project, the lack of willingness on the part of community members to accept interviews, the availability of students, the duration of working sessions and the hesitation of the school administration to release students for project work. However, solutions were also found. Tasks were divided up in order to accommodate the maximum of students. Diplomacy was the main tool for encouraging people to agree to be interviewed. School vacations were used for some of the project work. The collaboration of parents was achieved and further explanations were given to school administrators as well as a commitment to produce reports and monitor the project.

Experiments at school, Cameroun

Project results

– Conferences and slide projections
– Participation in a video conference on 2 April 2008
– Training of young people in caring for humid zones
– Various publications: CD-ROM, brochures, booklets and on-line publications (www.zoneshumides-cm.info)

Impact of the project

The overall assessment of the project was done during a conference held the week of 11 February 2009 (National Youth Week). However, it is already recognized that it has had a major impact on the participating students. They have been able to grasp the issues at stake

and to assume leadership qualities for contributing to a sustainable future, and they have developed a much greater sense of responsibility for caring for their immediate environment, and for improving living and health conditions.

You can do it too!
Over the years UNESCO Associated Schools with means and resources have organized video conferencing with their peers abroad and sometimes even with UNESCO staff at UNESCO Headquarters in Paris. Such instant and visual communication has always proved to be stimulating and motivating for those concerned and this seemed to be once again the case for this project which benefited from a video conference early in its implementation. Travel abroad remains expensive and impossible for many young people. However, if your school has access to the technology required for video conferencing and can help a partner school in another part of the world to have access as well, it can be very motivating and useful in exchanging views and ideas on vital issues of sustainable development while at the same time strengthening intercultural dialogue.

"We feel really much more responsible, and responsible for a problem which up until recently we knew little about... We have discovered a part of ourselves and have become more concerned with vital issues facing the world such as the environment, sustainable development and the UN Millennium Goals (MDGs)."

Germaine Obono
(President of the school's Scientific Club)

Observing biodiversity in Cameroun

Reaching out to the **less fortunate**

South Africa

School:
Athlone High School (public secondary)

City:
Cape Town

Project co-ordinator:
Ms N. Kriel

Background
In many societies today there is still either widespread poverty and exclusion or pockets of neglected and disadvantaged people, both young and old. At the foundation of sustainable development lies solidarity, taking an interest in others and the sharing of knowledge, resources, and affection.

Project objective
– To care and share with those who are less fortunate

Project implementation
In order to sensitize students to the needs of others and encourage them to lend support, visits were made to three places in the community: an orphanage (the Christine Revell Home), a camp of squatters and a home for the elderly. In each place students demonstrated empathy and solidarity. Under the slogan "Think BIG/ACT small", they brought toiletry items for children in the orphanage, they interviewed squatters and listened to their needs and they entertained the elderly with songs and talks. The entire school collected items to be donated. Research was undertaken and comparative charts were produced showing persisting inequalities with regard to gender and social levels. Inspired by a poem *"The Earth"* by Chief Seattle, environmental issues were addressed and discussed. Emphasis was placed on health matters and corresponding behaviour, particularly the prevention of HIV and AIDS. The two main problems encountered were time and transportation; the latter was solved by walking the three kilometres to the orphanage and to the squatter camp.

Woman weaving a small carpet in a community center close to Cape Town, South Africa © 2006 Therese Lee, Courtesy of Photoshare

Project results
– Caring and sharing with others, compassion and heightened awareness of inequality
– A sense of responsibility and solidarity

Impact of the project
In an age of technological distractions the project gave students an opportunity to learn more about some of the hard conditions in their community and to address environmental issues. Young people not only met children, adults and the elderly who were less fortunate than themselves but showed interest in them and in their situations, and offered them some comfort. The experience gained was shared with the larger school body during school assemblies.

You can do it too!
Education for sustainable development is based on many of the values reinforced in this project, mainly becoming involved in helping those who are less fortunate. Well-planned and well-organized visits to such places as a children's hospital, a refugee camp, an orphanage, homes for disabled people, etc. enable young people to see for themselves the plight of others and to be prompted to do something to help to alleviate their pressing needs, improve their present conditions and give them some hope and reassurance for the future. Many such initiatives can go a long way to help reduce both poverty and exclusion and hence contribute to the MDGs and to the DESD.

Uganda

School:
Makerere College (public secondary)

City:
Kampala

Project co-ordinator:
Ms Carol Serwanga

Gender desk: Promoting environmental awareness and **preventive education** for sustainability

Background
For millions of young people and adults it is impossible to speak about a sustainable future as they will have no future. Plagued by sickness and diseases such as HIV and AIDS their lives are being taken away from them, often at an early age. The College therefore set up a programme called "gender desk" to promote behavioural changes and social responsibility by providing peer support for youth facing problems particularly related to health, environmental protection and sustainable livelihoods. All three issues relate directly to the MDGs and to the DESD.

Project objectives
– To enable youngsters to remain healthy and acquire social responsibility
– To empower students with knowledge, moral values and life skills required to meet effectively the challenges facing them
– To entice learners to focus on career development and maintain aspirations

Project implementation
In an effort to shape attitudes and behaviour conducive to a sustainable future, "gender desks" were set up whereby students and resource persons help other students at the various

levels, lower, middle and upper school, through chat forums where students can express openly issues on their mind, and seek advice and guidance. Topics included alcoholism, drug abuse, premarital sex, and the increased number of HIV and AIDS cases. Teachers supported the "gender desks" by relying on some new, innovative and creative teaching methods and skills and a wide range of creative activities were conducted including participative discussions, drama, music, poetry, essay and song writing and dance. Environmental clubs were set up and students took part in planting grass in the school compound as a measure to prevent soil erosion and in creating recreation areas to enhance the school's environment. This project involved all 1,600 students (aged between 12 and 18), as well as the teachers and support staff. Parents also took part in addressing problems affecting adolescents and in providing career guidance. Among some of the problems encountered were finding time in the curriculum for conducting the activities and identifying local resource persons and environmental specialists.

Talking about gender in the classroom

"Today I am thankful to "Gender Desk". Punishment couldn't help. It was the education I was given every Wednesday at 4:40 pm. I got to learn about juvenile delinquency in a wider perspective. I learnt of the dangers of peer influence. I regained self control and this helped me to relieve my fears, overcome addictions, know myself better and have high self-esteem."

Sendi Ian Matovu Isghelt
(student)

Project results

- Positive peer influence, the ability to identify good values, the adoption of preventive behaviour and higher motivation
- Increased awareness about diseases, alcohol and drug addiction and the disastrous effects on one's health
- Greater harmony and respect between boys and girls

Impact of the project

Students have become more knowledgeable about the many serious health risks facing them and are better equipped to take the right decisions concerning their health, environment and fellow peers. The teaching staff has acquired new skills to conduct activities and transmit messages that help to encourage values that promote behavioural change and social responsibility. Relations between the community and school have improved as has family life.

Participating students in the school garden

You can do it too!

In many societies today teenagers face increasing risks and challenges. Drug trafficking remains rampant, HIV and AIDS cases continue to increase, alcohol is obtainable and peer pressure is high. Young people often have concerns and worries but no one to talk to and to consult. By setting up "gender desks" students can share their thoughts and seek advice from other young people as well as qualified resource persons. Decisions taken at a young age, either negative or positive, can often have a long-term effect and hence it is vital to build up the decision-making capacity of youngsters so that they are in a strong position to say "no", to protect their health and the health of others as well as their environment.

United Republic of Tanzania

School:
Mtwara Teacher's College

Region:
Mtwara

Gardening as a mean to **diminish poverty** and contribute to sustainable development

Background

This teacher-training college joined ASPnet in 1988 and formed an ASPnet group called "Amani" which means peace in Swahili. Due to economic hardships facing the student teachers and the community in general, the ASPnet group decided, in 2007, to start a garden project using one and-a-half acres of land. The project was designed in collaboration with the College's Administration, the ASPnet National Co-ordinator and local UNESCO Clubs.

The banana "harvest"

Project objectives

– To reinforce the philosophy of self-reliance for sustainable development
– To develop participatory educational approaches for poverty eradication activities
– To improve local social and economic conditions
– To provide a balanced diet to students and local neighbourhoods

Project implementation

The project was conducted in several stages. First, the students (future teachers) had to clear the site and dig 81 holes for the banana and pawpaw plantations. In an effort to increase soil fertility, natural fertilizer was collected from neighbouring cowsheds. Second, plants were collected, planted and cared for 27through regular watering, weeding and maintenance. Six months later, it was harvesting time. The plants yielded 53 bunches of bananas and 111 paw paws worth more than the equivalent of $350. The fruit was sold to ASPnet members and to the College and local communities. Vegetables and soy beans were also produced and sometimes used by students for their meals. Third, since water is a big problem (as evoked in several other projects presented in this publication), it was necessary to install an underground water tank (with a capacity of 7,350 litres). Shelters were also built to grow flowers, small plants and fruit trees that were subsequently distributed to neighbouring elementary and secondary schools. Furthermore, the entire project area had to be fenced off to prevent cows and goats from destroying the crops. All of the activities were recorded, documented for future practice and photographed, phase by phase, and reports and posters were displayed on a big notice board designed specifically for this Amani ASPnet action.

> "If all ASPnet schools can combine studies and manual work, schools can become productive academically and economically and help to eliminate the misconception that manual work is for uneducated rural masses."
>
> School Report

Project results

– Acquisition of new skills and techniques for environmental management, conservation and water collection
– Availability of fruit and vegetables and provision of a balanced diet for students
– Income and opportunities for self-employment and the eradication of poverty
– Sharing of knowledge and results with the community

Impact of the project

This project has enhanced the four pillars of learning for the twenty-first century i.e. learning to know (eradication of poverty); learning to do (actual gardening); learning to be (gardeners); and

learning to live together. The combination of study and manual work, very unusual and rare in the Tanzanian school system, proved to be effective. The future teachers are now well equipped to extend this food and income generating project to the schools where they will soon be appointed.
Students without learning disabilities became more aware of this phenomenon and offered help, assistance and friendship which made a positive impact on students with learning disabilities.

You can do it too!
This Project strives to contribute to attaining both the DESD objectives and the MDGs and it recalls the strategic role to be played by teacher-training institutions. If future teachers can become involved in conducting practical and relevant activities, in support of a sustainable future, they will be in a position to share their vision and introduce new and meaningful activities in and throughout their future teaching careers. Like this project, such activities should advocate care for nature, independence, self-reliance, creativity and critical thinking for sustainable development.

The MDGs
(http://www.un.org/millenniumgoals/)

Arab Region

Primary schoolboys in Oman

Recycling: **Solidarity** in Action

Lebanon

School:
Franco-Lebanese Verdun School (private elementary)

City:
Beirut

Project co-ordinator:
Ms Wafa Hamami

Background
Following a debate on the responsibility of everyone (children and adults) to protect the environment, pupils and teachers decided to take action, within the school, with regard to recycling paper and the writing of relevant messages e.g. letters, poems, slogans.

Project objective
– Sensitize students to the dangers threatening the planet and enlist their participation in helping to solve them.

Project implementation
Emphasis was placed on encouraging students to reflect and discuss issues related to the preservation of our environment and to seek and collect relevant information. One of the main activities of the project was the preparation of a survey concerning the use of natural resources and separating rubbish (e.g. glass, plastic, cans, etc.). An interdisciplinary teaching approach helped them to prepare the questionnaire, analyse the results and undertake a recycling campaign. For example, in French class, students learned how to undertake a survey, to make verbal presentations, draft a questionnaire and write texts, messages, etc. In mathematics, they learned how to calculate survey results by using percentages. In the Documentation Centre they sought information and conducted research, completed by science books. In art class, they made drawings, took and selected photos for posters and in informatics they produced posters using photoshop software. Although a number of aspects related to the DESD are already in the curriculum, this project made these dimensions much more meaningful and enabled the students to become the main actors in the learning process and conscious contributors to a sustainable future. It is not always easy to introduce an interdisciplinary approach at school but this project showed that it is possible.

"Let us protect the poppies of Monet!"

Project results
– Sensitization of all of the students to the need to sort out rubbish and to practise recycling paper at school and at home
– Introduction of a trans-disciplinary approach to introduce preservation and recycling into classroom teaching

"At school we have started to separate rubbish and we send paper to a local factory for recycling. However, at home it is more difficult because there are not the appropriate containers so I sometimes bring the paper from home to school for recycling."

Firas El Khatib
(student)

Impact of the project
Students have now acquired better daily habits in school and at home. When they leave the classrooms they turn off lights and fans and they are committed to recycling and to diminishing the use of plastic bags. The young people have also become more aware of the discrepancies between theory and practice and of the persisting general ignorance or indifference with regard to the need to protect the environment.

You can do it too!
Stop wastage has to become part and parcel of the DESD and hence recycling, both at home and at school, has to be an inherent part. Start a recycling campaign in your school as well as a movement to stop using plastic bags. Encouraging students to make a survey concerning the

behaviour and attitudes of parents is also a good way to extend the practice of recycling to families. Unfortunately, many communities are still not equipped with rubbish containers and collectors which allow recycling and maybe your school can help to find a solution!

Oman

Photographing the beauty of our environment

School:
Al-Mutanabbi School (public secondary)

City:
Ibra – Al-Yahmadi

Project co-ordinator:
Mr Abdullah Hamood Salim Al-Harthy

Background

Being aware of the United Nations role and work in promoting the protection of the environment, the school Principal, Mr Mohammed Al-Barwani, suggested a project to encourage students and society to appreciate and to preserve their environment by conducting a photo contest.

Project objectives

– Increase awareness and appreciation of the Omani environment among students and society and their commitment to protect it
– Develop students' photographic skills and an aesthetic approach to the environment.

Project implementation

The ABC's of the DESD! This project relied mainly on Aesthetics, Beauty and Creativity. In early 2008, students were invited to take part in a photography contest to capture some of the most beautiful features of their environment. Students were provided with guidance on the art of photography as well as information on the wide use of photography including scientific research. Students were invited to take pictures of the beautiful landscapes in Oman and often with the help of their families they went to the seaside, the countryside and into the desert.

Photograph taken by the students of the Al Mutanabbi school

"I learned how to photograph and I told my family and friends about the beautiful areas in Oman. I learned the spirit of fair play and my message to the community is 'protect the environment'."

Salem Khamis Al-Abrawi
(first place winner of the photography contest)

Project results

– Acquisition of new skills in photography and the discovery of new places and sites and their unique beauty in the country
– A wide range of photographs, taken by students, showing the diversity and beauty of the Omani environment
– Heightened interest and willingness to protect the Omani environment

Impact of the project

The competition was very motivating for the students and photography proved to be an effective teaching method. Students were keen to visit different places in their community and country in search of some scenic places. The families became interested in the contest, in the art of good photography and accompanied their youngsters to places conducive to the goals of the contest. In view of the high quality of the results of the contest, the media published some of the outstanding photographs in newspapers and magazines.

You can do it too!

We need more ABC's in DESD contributions. So many times we are faced with bleak images of our damaged environment e.g. erosion due to desertification, trash piling up in cities,

smog covering large urban areas. It is not only refreshing to be able to admire some of nature's wonders and its pristine beauty but it is also a powerful way to sensitize both young people and adults about the need to take action to preserve nature's gifts to us. Since photography is used in so many fields, not just for leisure and personal usages, but from space to exploring the ocean floors, from advertising to journalism, and from biology to industrial research, it can also equip students for future careers while sharpening their conscious observation and creative skills. The results of such a contest can also be used to make posters, collages and art work bearing important messages for environmental protection within the school and in the community.

How to **save water** in Palestine

Palestinian Territories

School:
King Talal Secondary School (public)

City:
Nablus

Project co-ordinator:
Mr Najeh Dabous

Schoolboys collecting water in West Bank

Background
Although the Palestinian Territories are close to the Mediterranean sea, the climate is semi-arid. Hence, access to clean and safe water is a constant concern and that is why it was decided to conduct a water-related project.

Project objectives
- To save water
- To establish standards for reusing water
- To contribute to providing a healthy and clean environment for current and future Palestinian generations
- To stimulate students' creativity and the learning process

Project implementation
A series of excursions were made to enable students to examine water resources and to learn more about this precious commodity from experts. As a result of such visits, students wrote reports and articles and sent them to the local media for diffusion in order to inform the community. New and creative teaching methods were introduced and students were invited to translate their ideas and views through drawing, singing and making plays. Water-related issues at both local and global levels were examined and discussed.

Project results
- Comprehension of the need to ensure a good balance of water demand and supply
- Consciousness of each individual's responsibility in saving water
- Capacity to make plans for a controlled development of water resources to secure a safe future

Impact of the project
Students deepened their understanding of the seriousness and extent of water shortages facing the Palestinian Territories and became more aware of possible solutions. They internalized the proverb "a healthy mind in a healthy body" and realized more fully that access to water is a basic human right, as well as an individual and collective responsibility. The project also entailed peaceful dialogue. It generated good co-operation between teachers and students and helped them to listen better and to respect more each other's

views. The local community supported the activities conducted and some of them as follow-up, in a sustained way.

You can do it too!

Particularly in industrialized countries with a good and even high standard of living, many young people, as well as adults, take water for granted. Yet not all people have equal access to this indispensable resource. If it is not available in sufficient quantities, this can have serious consequences on health; one's learning capacity, social development, the economy and even peace. By making school visits to water sources and/or water processing plants, young people understand better from where and how they get water at school, home and in the community and are prompted to use it more rationally. Both local and global approaches can also be taken whereby students learn more about crucial water issues facing societies and they should be encouraged to take action to share and to show their solidarity.

"We worked together as one team. The Project gave us a clearer picture of the importance of water to everyone."

Muhammad Qafaf
(grade 11 student)

Tunisia

School:
El Ferdaouss Primary School (public)

City:
Ariana

Project co-ordinators:
Ms Mortadha Houas and Ms Amel Khelifi

Recuperate rain water for growing **medicinal** plants

Background

The school once had a very nice garden with fruit trees and aromatic and medicinal plants. However due to the high cost of water which meant an added expense for the school, the garden deteriorated and was eventually abandoned. Fortunately, a few of the teachers (both men and women) were attached to the former green surroundings of their school and they sought to restore it to its former beauty and benefits.

Project objectives

- To instil positive attitudes in pupils towards the conservation of water resources, the embellishment of their school grounds and the value of medicinal plants
- To contribute to attaining the aims of the DESD
- To establish a Charter within the school advocating the sharing of knowledge, good practices, solidarity and shared values, with the participation of teachers, pupils, parents and civil society

Project planning at school

Project implementation

The project commenced in February 2006. A series of sessions were conducted with pupils on the topic of living conditions in arid and semi-arid regions and the need for water management. At the same time concrete plans were made and carried out to set up a system to recuperate rain water from the roofs and terraces of the school building and to preserve the water by building an underground tank preventing evaporation and pollution. The project consisted of three main dimensions: i) seeking information, acquiring theoretical knowledge and team work; ii) practical field work such as gardening; and iii) the sharing of experiences and results by presenting the project at national and international meetings. Once the new water system

was put into place, each class was given a parcel of land for the planting of aromatic and medicinal plants. In 2009/2010, emphasis will be on dealing with organic waste through composting. Parents were very much implicated in the project and they participated actively in the life of the school. Several problems were encountered and overcome, such as a lack of resources. Hence partnerships were established with non-governmental organizations (NGOs) and UNESCO Clubs. Administrative procedures took time to obtain clearance since the school is a public institution. Ensuring the continuation of the project during school vacations and ensuring maintenance of the garden and plants were another issue.

Replanting the school garden

Special recognition
As part of the launching of a Tunisian/Canadian Project on the Development of Water for Urban Agriculture, the Ambassador of Canada paid a visit to the school to learn about its initiative.

Project results
- Installation of a system to recuperate and store rain water for the school garden
- Greening of the school grounds and planting of aromatic and medicinal plants (often offered by local greenhouses)
- Value was given to traditional knowledge concerning water conservation and the importance and use of medicinal plants
- A play entitled "Water, a treasure not to loose" produced and enacted by the students

Impact of the project
The project was conceptualized, from the outset, to create synergies between quality education for all and sustainable development. Acquiring techniques to use rain water in order to beautify and enhance the school grounds forged positive attitudes in favour of water and soil conservation. Team work for both students and teachers was strengthened in the classroom and outdoors and led to closer and more cordial relations between learners and teachers.

"Once our garden will be completely finished our school will merit its name- El Ferdaouss means "paradise" in Arabic."

Nesrine Ben Ameur
(student)

You can do it too!
"A drop of water is worth more than a treasure" (Arab proverb). Water is becoming rarer and more expensive in many communities. Urgent action is required at all levels from home to school and from the community to the planet, to make a more rational use of this indispensable commodity. Take a look at the needs and consumption of water at your school and another look at your school grounds. Examine how you can use water sources more effectively and how you can embellish the area around and inside your school and produce aromatic and medicinal plants as well!

Asia and the Pacific

Photo courtesy of Ms Wang Tieying, Changshengyuan Primary School, China

"Four Respects" in support of ESD

China

School:
Changping Changshengyuan Primary School

City:
Beijing

Project co-ordinator:
China ESD National Working Committee

Background

Long before the DESD was declared, China was already making efforts to integrate ESD throughout its education system. In 2001, China introduced a new curriculum, with emphasis on decentralization, shifting the traditional learning process based on rote learning and memory to an inter-active, inquiry-based approach that enhances critical thinking and the acquisition of problem-solving skills. The values and principles of ESD are reflected in the current curricula and schools are encouraged to reinforce them.

Project objectives

– To reinforce the ESD dimension in the school curriculum
– To enhance the climate of the school
– To improve teachers' professional development
– To change students' attitude toward ESD issues

Project implementation

In keeping with the new school-based curriculum and the need to strengthen ESD, the school introduced a new notion called the "Four Respects" in support of ESD: Respect for Nature, Respect for Science, Respect for Cultural Diversity and Respect for All. In-depth discussions were held on how best to integrate these four features into the teaching/learning process and curriculum. All of the teachers were involved in this interdisciplinary project which they integrated into their daily lesson plans. A set of pedagogical textbooks based on the "Four Respects" was designed and used and ESD workshops for teachers were held. A "School and Society" activity on energy saving and emission reduction was conducted interactively and an exhibition was set up of teaching and learning outcomes related to ESD.

Photo courtesy of Ms Wang Tieying, Changshengyuan Primary School, China

Project results

– Change of attitudes and behaviour of both students and teachers in support of ESD
– Professional development of teachers to become involved in curriculum design and implementation and to better understand the value of education
– Improved school climate and curriculum
– Strengthening of linkages between school and society

Impact of the project

Students have begun to adopt new behaviour and practices in favour of a sustainable future and they have influenced their families. They have become more enthusiastic and motivated learners. Based on this successful project and others, ESD guidelines are being formulated and plans are underway to conduct a Five-Year ESD Development Plan in China.

You can do it too!

In elementary schools the approach to ESD has to be made simple and relevant to pupils' lives. The "Four Respects" in support of ESD can serve as a good platform for sensitizing children to ESD goals and how they can help to attain them. Once this new concept has been discussed and tested, the production of some corresponding educational resource material would also be most useful and facilitate the involvement of all of the teachers in the school.

Cook Islands

Beach Management and Protection Project

Four Schools

Project co-ordinator:
Ms Jane Taurarii

Atiu student looking at beach composition, Cook Islands, Sandwatch Project
© Jane Taurarii

Background

What makes the Cook Islands unique is found in their white sandy beaches, which are a key tourist attraction that need to be looked after and treasured. However, there are numerous problems and conflicts facing beach environments such as erosion, pollution and developments. Many trees have been destroyed by natural disasters and cut down to make way for new constructions. Rocks and sand have been shifted further inland or have been removed for other purposes. Waste has been deposited in the lagoons which pollutes the area. Hence there was an urgent need to develop an educational approach for mobilizing young people to take an interest in their beach environments and to help to preserve them. The Sandwatch Project (see pages 61) offers a fine opportunity.

Project objectives

- To take beach measurements and work together with the local community to evaluate the problems encountered
- To develop sustainable approaches to address these issues
- To instil a sense of caring for beaches in students and in community members

Project implementation

The project was first introduced to schools on Rarotonga in 2003 and slowly extended out to the outer islands. At date all 20 Schools in the Southern Group and 4 in the Northern Group have been introduced to the project and its implementation has been incorporated into the national science and social science curriculum. Each school selected one or two beaches on their respective islands. Students were involved with the planting of new palm trees on the beach to help reduce the rapidity of sand erosion. Every month they measured the beaches in order to identify any modifications which occurred. They looked at the physical transformations caused by waves, currents and tides as well as the impact made by people on their beach environment. Students examined the beach composition to see if there were any patterns running along the beaches. The project mainly focused on the landscape of the beach and its major threats i.e. erosion, pollution and developments. However, some schools extended their project towards the history of their beaches – and the meaning of their names. Others looked at the biodiversity around the coastal area or interviewed local communities on the impact of new developments around the beach areas. Local communities supported the project as did government bodies. The project culminated at a Students National Conference held from 26 to 29 June 2007 in Rarotonga. Thirteen schools sent some 120 student representatives to attend the Conference. During the first two days the young people reported on their research and findings through power point presentations, drama, poetry and art work. The other two days enabled students to visit various Government Ministries (e.g. Environment, Agriculture, Marine, Waste Management, etc.) to learn more about their respective roles in protecting the environment.

Project results

- Student involvement in the management of the coastal environment
- Student proposals for decision-making on the sustainable development of coastal areas of their environment
- Team work with local communities and Government officials
- Shared ideas and views on beach environments and sustainable development

Impact of the project
By taking part in a wide range of hands-on activities – from measuring sand erosion to interviewing community members and from recycling rubbish to making new forms of art work, students not only learned about the serious threats facing their coastal landscapes but also committed themselves to assuming responsibility to help protect their endangered natural and beautiful beach sites. Some of them put up signs 'not to litter the beach' thereby hopefully having an impact on many others. Students also gained a sense of empowerment as their Conference was graced by the presence of the Prime Minister of the Cook Islands, the Secretary of Education, the President of the House of Traditional Chiefs and a UNESCO representative.

"It was a very successful Conference and the students recommended having it once every two years."

(school report)

Cook Islands, Sandwatch Project
© Jane Taurarii

You can do it too!
In many parts of the world, beaches are a natural treasure, a source of income, a place for leisure, sports and relaxation, a show case for tourism, and a home for flora and fauna. Due to massive developments and mass tourism, considerable damage has often already been done in many parts of the world. However, it is never too late to help recuperate, restore, preserve and protect beaches and coastal zones from further damage or threats. Do not wait any longer. You too can join the Sandwatch Project like schools in Trinidad and Tobago (see page 51) and others (see page 61) by going to www.sandwatch.org

Voices for Sustainable Societies

Japan

School:
Ikeda Senior High School attached to Osaka Kyoiku University (public)

City:
Ikeda, Osaka

Project co-ordinator:
Mr Naohiro Li

Background
A national ASP Network was set up in 2003 and was extended to an Asian ASP Network at the initiative of this school that same year. Education for sustainable development, as proposed by UNESCO, is supported by the Ministry of Education of Japan which decided to incorporate relevant themes in the new curricula.

Project objective
– To create an international forum for young people and adults for discussing the need to create sustainable societies

Project implementation
The main idea for the project was to organize an international conference to enable students to learn from each other and to reflect on how they can contribute to sustainable societies. The scope of this project went far beyond the school and its community, reaching out to young people in four other Asian countries – China, the Republic of Korea, the Philippines and Thailand – and in two European countries – Lithuania and Sweden. The Conference organizers were keen to invite representatives from the Baltic Sea to take part in this unique encounter, held in Osaka, Japan, from 13 to 18 November 2008. It was learner-centred and consisted of several stages: first, students gave presentations on such issues as "Things preventing sustainability", "Problems facing our Environment" as well as on their current ESD Projects. Second, two in-depth discussion groups were formed and then the two groups

came together to share their views on creating a sustainable society and what concrete steps the young people, as a group, could take towards meeting ESD goals. They agreed that one of the main obstacles hindering sustainability was selfishness and disrespect for others and nature. Hence, they emphasized the need to improve relations between people mainly by becoming more open and friendly. As a first small step they advocated always greeting others with a warm smile, thanking people graciously and sharing with each other. The way the Conference was planned and conducted paved the way to a new learning process whereby the students become more autonomous learners. Some 30 high school students and 8 teachers from 6 countries took part in the Conference as well as 400 Japanese students and 50 teachers from 50 schools in the country. University professors of education also attended the Conference and were able to take note of ASPnet's capacity to mobilize schools locally and internationally.

Students attending the ASPnet Conference

Project result

– A student "Declaration" and commitment to creating sustainable societies

Impact of the project

This was the first international student and teacher ASPnet Conference held in Japan and it had a positive impact in a number of ways. Having participated very actively in the debates and presentations, students were no longer mere on-lookers but creative and fully engaged actors in striving to build a common and sustainable future for all. The quality of their participation was extremely high and in many ways equal to that of adults. Young people felt that proper greetings and showing appreciation and gratitude promote compassion, an essential element of the DESD. Sharing knowledge and respecting the views of others in support of sustainable development through discussions also proved to be effective. In some societies discussions are not always easy since they can appear to be competitive or even aggressive. The involvement of the Ministry of Education was appreciated and has helped to extending ASPnet in the country. In the light of the success of the Conference, several other Asian participants expressed hope that their respective countries would organize follow-up regional meetings to pursue the dialogue and spread a culture of peace as embodied in the DESD and practiced by ASPnet.

"The idea of warmly greeting people really worked well for me – just being positive connected me with people and made me want to communicate more. The Conference was worth it to me if only from this point of view and it also gave me a stronger will to find a way to be a positive influence in society."

Yamasaki Momoyo
(student)

You can do it too!

We (ASPnet International Coordination) tried it and it works! The next time you go into a shop, the Post Office or ask directions, give a big warm smile. You will see the reaction and notice a difference. Openness to others, compassion and empathy are essential for a sustainable future, but how many people actually put them into practice? The students' proposals quickly brought us back down to daily life on Planet Earth. ESD is a process, no doubt a long one. But one must start out simply and effectively. Sometimes it is the first step that is the hardest to find but the students found it and what a difference it would make if the whole world followed and kept their example. Let's begin!

Community Environmental **Map**

Thailand

School:
Satri Si Suriyothai Secondary School (private)

City:
Bangkok

Project co-ordinator:
Ms Wannapa Sriwilaisakuwong

Background
As in all big cities, there are areas that are not very safe, clean or healthy. Hence, a project was initiated to sensitize students to their local environment and to take action to improve it.

Project objectives
– To explore, assess and analyse local areas, with regard to health, safety and cleanliness, in the vicinity of the school
– To take action to enhance the local environment
– To develop skills and team work

Project implementation
In order to take stock of living conditions near and around the school it was decided to undertake a survey and mapping activity. Students were invited to go out into their community to identify eventual areas in need of environmental clean-ups and improvement as well as to indicate places that seemed to be well cared for. Students took part in activities such as reforestation and collecting and recycling beverage containers. Some challenges were encountered but overcome: secondary school students have full schedules and not much time for community and team work and hence students had to rearrange their schedules. There were not enough vehicles for visiting various neighbourhoods so students went on foot or took public transportation. Mapping is a long process and calls for utmost accuracy. The on-line map had to be constantly checked and revised. Sometimes disagreements appeared in the team so it was necessary to have reasonable discussions and occasionally even vote-taking. Although the project was managed by the students, it did benefit from teachers' supervision. The idea for the project came from the Girl Guide Association of Thailand. It was carried out in 2007/2008 and will be continued in order to improve the on-line map and to share it with other interested schools.

The Seminar organized by the Girl Guide Association

Project results
– A digital on-line map http://www.stporpeang.th.gs describing the situation in the vicinity of the school
– A safer and cleaner, improved environment around the school

Impact of the project
Students became much more familiar with their wider community, and with some of the problems and issues facing it and they became involved in applying solutions. They now better understand the notion of sustainable development and are keen to contribute to it. Co-operation was strengthened between teachers, students and parents. The project also had an impact on community members who became more aware of the need to practise recycling. A local television company interviewed some of the students and teachers about their project and the programme was broadcasted on 17 November 2007.

You can do it too!
Environmental mapping can have many positive effects. First, it can help to open the eyes of young people as to what is actually happening in their immediate and wider community. By identifying environmental issues, particularly in their neighbourhood, they learn to care and to

become more motivated to doing something about them. Second, such an approach fosters contact and collaboration between students and community members. Third, mapping requires the acquisition of a number of skills e.g. accuracy, measuring, team work, taking things to scale and this project calls for an interdisciplinary approach involving teachers from across the curriculum from mathematics to art, from geography to language and from science to physical education. And fourth, mapping can become a medium or long-term endeavour, for once the map has been made it has to be monitored and continuously updated since conditions often change and in the case of the DESD they should be changed for the better!

Uzbekistan

Integration of ESD into school curricula

30 Secondary Schools and the Republican Avloni Teachers Training Institute

City:
Tashkent

Project co-ordinator:
Ms Dilnoza Kurbanova, ASPnet National Co-ordinator

Background

Having received the UNESCO DESD multimedia teacher education resource material: Teaching and Learning for a Sustainable Future (http://www.unesco.org/education/tlsf/index.htm), Uzbekistan was keen to examine how best to integrate the concept of sustainable development into their school curricula. ASPnet schools all over Uzbekistan were invited to take part in this pioneering effort.

Project objectives

– To integrate the concept of sustainable development into formal and non-formal education
– To generate respect for nature and limited natural resources

Project implementation

Based on the DESD UNESCO resource material, the Uzbekistan National University elaborated an innovative DESD learning manual for teachers and educators. It provides both a theoretical framework and a practical approach advocating participative methodology such as role play, brainstorming, project work etc. A series of training seminars were then held for ASPnet teachers, teacher trainers, policy makers, university lecturers and media specialists. Students took part in events organized by the non-governmental organization "Environment and a Healthy Life Style" and organized peer-to-peer training for their friends. Any obstacles encountered were overcome through a team effort i.e. by teachers, policy-makers, community members, students and partners. The Project was conducted from April 2007 to December 2008 but it is expected to continue with more training seminars and contests on ESD.

"ESD" students with their teacher

"We are working on changing behaviour, attitudes and life styles for the preservation of our Planet Earth and the building of a knowledge-based economy and society."

Gulyamov Islam,
(student in ASPnet School #91)

Project results

– Production of an innovative DESD learning manual
– Integration of ESD in the curriculum of some schools and in the Republican Avloni Teachers Training Institute

Impact of the project

Both teachers and students gained valuable knowledge and developed new attitudes in support of sustainable development, respect for nature and limited natural resources, the

halting of climate change, and the need for peace and equality. The new manual benefits a wide range of users, not only teachers and educators but also policy-makers, researchers, and the media. This project was fully recognized and supported by the Ministry of Education of Uzbekistan.

Using the new DESD pedagogical material

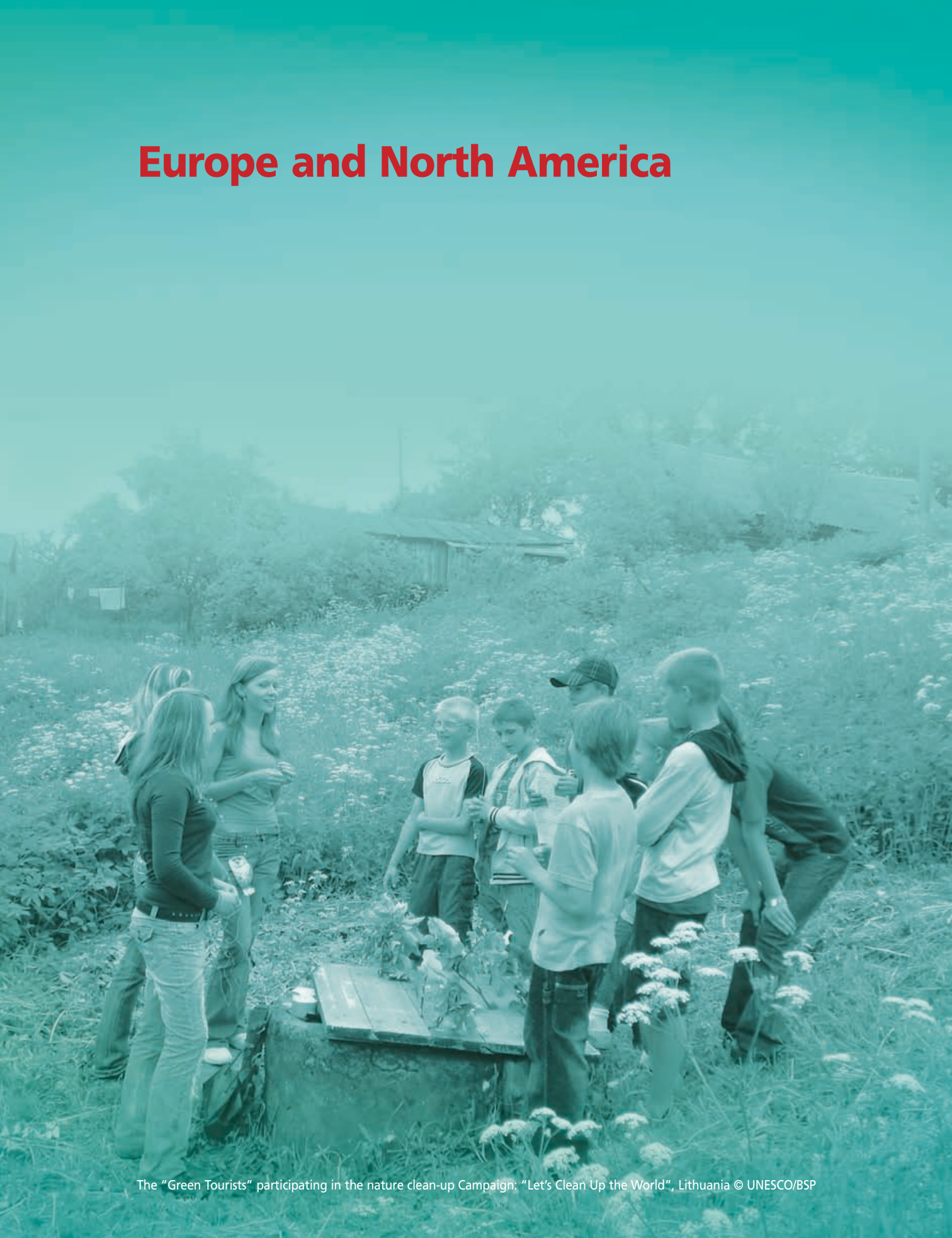
You can do it too!

Education for sustainable development is not only vital but it has also become urgent. Often teachers are interested and eager to contribute to the DESD but they do not always have sufficient training nor documentation or relevant textbooks. Hence, optimum use should be made of existing educational resource material such as the software made available by UNESCO that can be adapted to meet national needs and priorities. Once such material becomes available, for example by translating and adapting it to local circumstances and needs, it is easier to conduct training courses for teachers from many schools and thereby make a major contribution to integrating the principles of ESD in classroom teaching. Such material can also be useful in conducting seminars for a wide range of specialists from the media to university lecturers and from industry to parents and community members.

"Our new DESD Manual helped us to gain knowledge on how to introduce DESD into our curricula."

Ms Kuchkarova Mazluma
(ASPnet teacher, School No 91)

Europe and North America



The "Green Tourists" participating in the nature clean-up Campaign: "Let's Clean Up the World", Lithuania © UNESCO/BSP

Sun and **Wind** – Learning about the Environment

Finland

School:
Latokartano Comprenhensive School (public elementary/junior high school)

City:
Helsinki

Project co-ordinators:
Ms Tina Antikainen and Ms Ilona Korpela

Background
Finland is a country with very severe winters during which a high use of energy is required for heating. Hence, it was decided to initiate a project that would mobilize students to seek more economical and environmentally friendly sources of energy.

Project objectives
– To enable students to learn about and practise sustainable ways of producing energy
– To prepare young citizens to become active in environmental issues

Project implementation
This project deals mainly with environmental protection, halting climate change and fostering responsible and sustainable consumption. In an attempt to sensitize children to the need to seek ways to use alternative sources of energy and to alter consumption patterns, several study visits were made to such places as the Museum of Hydro Energy Production, the Waste Water Cleaning Systems and to the Gas-based Power Plant. An impressive number of city agencies were involved in the project e.g. Helsinki Energy, Helsinki City Environmental Centre, Helsinki City Department for Economy and Planning, Helsinki Water, Mitox company, and Helsinki University. Co-operation with these stakeholders proved to be very rewarding. The preparation, conduct and follow-up of such visits helped to make learning more relevant and strengthened links between the school and the "real world". Problems such as insufficient information technology at school and the availability of time for teachers to conduct the study visits had to be overcome. The first phase of the project was from 2006 to 2008. The second phase will be devoted to the use of solar energy and building a solar energy plant at school.

Project
– Construction of a modern wind mill and the student monitoring of its energy production (with the help of computers)

The windmill

Impact of the project
Students' interest in environmental issues has grown remarkably and they have gained a deep understanding of the value of natural sources of energy such as wind and sun. Recycling and energy saving are practised on a daily basis at school. The project is appreciated in the community and has received media coverage both locally and nationally.

"It was very nice to receive this regional award for our project because we really worked hard. In the speech I gave during the ceremony I explained all about our Project and study visits and the adults asked very sensible questions which were easy to answer."

Matti Iohi
(student, grade 6)

Special recognition
This Project was awarded the Ministry of the Environment Uudenmaa Region Environmental Year 2008 Award.

You can do it too!
With the help of students and an interdisciplinary team of teachers a study can be conducted in your school on how much energy it requires to function. History teachers can help to explain the various types of energy used by the school (or other schools in the country), geography teachers can explain where the energy comes from, science teachers can explain the

actual type of energy used, the ICT teacher can provide information on energy consumption elsewhere – in the country and in the world – and together students and teachers can make plans on how to reduce their use of energy and find more economical and healthy sources.

France

Let's think of **tomorrow together** – Epernon takes a step forward for the planet

School:
Collège Michel Chasles (public secondary school)

City:
Epernon

Project co-ordinator:
Mr Jean-Marc Septsault

Background

The Project Co-ordinator took a special training course in 2003 for human resource specialists in ESD in the Orléans-Tour Academy. Subsequently he was keen that each student should become a main actor in promoting sustainable development. Hence, in 2004, the Collège introduced the concept of "eco-delegates" whereby students elect their representatives to orient and monitor a project in support of ESD with the help of the school's staff.

Project objectives

– To ensure a holistic approach to integrating ESD in school curricula
– To enable students to become the main actors in the learning process

Pupils digging a pond

Project implementation

The project started in January 2004. It is on-going and student-led. Due to the regular meetings of "eco-delegates" the students have provided a platform for decision-making and project implementation. In March 2007 the Collège signed a School Agenda 21 aiming to integrate the principles, values and concrete practices of sustainable development throughout the curriculum and into the learning process. Each year students propose a wide range of activities and events dealing with sustainability including the setting up of some 18 exhibitions on all sorts of topics, from saving energy to dealing with the special needs of young people and from keeping the school clean and tidy to global warming. Two major conference-debates are held each year and a number of clubs and workshops are available to students during their free time. So far the project has involved 1,000 students aged between 9 and 16 as well as teachers.

Project results

– Adoption of a School Agenda 21 with concrete indicators for observing changes in behaviour, for example the decrease in energy consumption (e.g 53 per cent less water; 37 per cent less electricity; 7 per cent less gas used), 4 tonnes of paper recycled each year; there is less litter around the school and current efforts are being made to reduce photocopies
– Educational nature zones (a pond, garden, weather station, etc.) were set up and cared for by the students
– Production of a tool kit for "eco-delegates" in collaboration with regional educational authorities (Conseil général d'Eure-et-Loire) and distribution to all 50 public and private schools in the *Department*
– Four partnerships with industries promoting sustainable development
– Some 14 student clubs and 5 thematic weeks (each year!) of special concrete activities related to key aspects of ESD (e.g. European week, October; Week in support of young people with

special needs, December; Week for risk prevention, February; Cultural Week, March; and Week for Sustainable Development, April)
– Families more implicated in the project and increased local press coverage of conducted activities

"All Europeans"

Impact of the project
Although it is difficult to measure change in students' behaviour, the above facts and figures speak for themselves. Other significant changes are occurring: improved scholastic results, less verbal and physical violence, a significant increase (83 per cent) in the last four years of use of the school's Documentation Centre, a considerable drop in equipment and material damage to the school and a high percentage (50 per cent) of students wanting to become eco-delegates!

Special Recognition
The school received national recognition for its commitment ("Grenelle Environmental Protection at School") and action has been taken to ensure a multiplier effect. Responding to the school's proposal, the Departmental Educational Officials have decided to give award a special distinction (a logo representing a modern wind mill) to all schools taking part in this endeavour.

"The projects carried out have made us more aware of the need for sustainable development. We are more involved, more responsible and more respectful of the environment and of others."

Sonia Serhouni
(student, 14 years old)

You can do it too!
If students are to become the main instigators and actors of the learning process, internalizing the values and behaviour required for a sustainable future, they have to be given the empowerment, means and recognition. The concept of "eco-delegates" can easily be introduced in schools along with an action plan.

Sustainable **Youth Exchange** – Solar Net International

Germany

School:
Schillergymnasium Münster (public secondary)

City:
Münster

Project co-ordinator:
Mr Christoph Lammen

Background
It all started in 2005. Participants of an exchange project between Namibia and Germany were eager to acquire further sponsorship for their renovation works in a Namibian school village, among them the installation of solar-thermics. They produced films and posters, and finally founded the association Solar Net International (www.solarnet.tv) in order to make their project sustainable and participatory.

Project objectives
– To encourage local projects and global discussion on issues pertaining to sustainable development, in particular the use of renewable energies
– Strengthen multimedia education to enable young people to raise awareness of significant aspects of their life and to participate in global exchange using internet technology
– To support intercultural youth exchange and sustainable networking

Students testing in Namibia the solar helicopter and the solar cooker

Project implementation

There seems to be nothing simpler than telling someone from far away about our daily life. It is by picking up this natural curiosity on topics of personal interest that the internet network of Solar Net International creates awareness of global issues brought up by students and teachers worldwide. All members of the network have access to a communication platform on the website: www.solarnet.tv. Since 2005, almost 1,000 online reports on daily life situations from 57 countries have been published on this site. These reports allow a perspective on other countries that one would barely find in the media. Students also produced a variety of language learning videos on YouTube. The daily intercultural online exchange has brought up many discussions on environmental, political and social topics. Subsequent ideas for personal meetings, seminars, film productions and development projects have been put into practice over the years. In this way, Solar Net International has become a unique mixture of global intercultural youth activities and local education, environmental and development projects.

Project results

- In partnership with the City of Münster, Solar Net supported the installation of photovoltaic systems at partner facilities in Namibia, Poland and, most recently, in the United Republic of Tanzania
- Various international youth workshops have been held in Germany, Ghana, Namibia and Poland, addressing the topics of global warming, renewable energies, solar cooking, sustainable mobility or photovoltaic techniques
- Several film projects and exhibitions on renewable energies have been carried out in Germany, Ghana and Namibia

Impact of the project

The network has created an active and highly motivated community of current and former students, teachers and parents, with some 1,900 participants in 109 countries registered so far. Participants' awareness on how important it is to work together internationally and as equal partners to achieve sustainable development was raised. Each participant – regardless of age, gender, colour or culture – is a learner and teacher at the same time. Many students keep active within the project even after graduating from school and take job-related decisions based on their experience and interest in global learning. The project has won several national awards.

"This is the chance to communicate and learn from people who are so far away! It is just amazing! Thanks Solar Net International!"

Rabea, 15
(student, Münster, Germany)

You can do it too!

By making efficient use of multimedia and internet technology, even a project initiated by a relatively small group of students and teachers can end up fascinating so many people worldwide! This project shows how important it is to hand over voice and responsibility to the youth – even lower secondary students participate in the exchange projects, and uphold and advance the network. The project also shows how students can be filled with enthusiasm to commit themselves to global projects by starting with issues of significance to their daily life.

The Sustainable Island **"SISCOALIA"**

Portugal

School:
Escola Secundaria Dr. Ginestal Machado (public secondary school)

City:
Santarém

Project co-ordinator:
Ms Maria Alexandra Neves Forte

Background

Since 2005 a new curricula has been introduced in Portugal. For grade 12 (last year of school) there is a new subject entitled "Project Area". Students plan and conduct a project by themselves and under the guidance of their teachers. Although the issue of sustainability is included in several subjects (e.g. chemistry, physics, biology and geography) of the new curricula, this school decided to conduct a special student project devoted to ESD.

Project objectives

– To learn and practise the concept of sustainability through "learning by doing"
– To promote awareness about the need for a sustainable world
– To stimulate creative thinking and problem-solving among students

Project implementation

The students decided in 2006/2007 to create an imaginary island in the Atlantic Sea (Portugal has a long Atlantic coast) that had just emerged following an earthquake. They took pleasure in creating a new and sustainable nation with new laws, new infrastructure and new economic and social systems. Such an approach prompted students to carefully reflect on a wide range of issues – from equal access to education and health care for all to alternative sources of energy and from public transportation to fair justice. With the help of computer software they made three-dimensional images of their imaginary island and presented their work to schools in several other cities as an example of a better world. Each year a new team of students provide more ideas to improve the sustainability of the island. In 2007/2008 students founded a multicultural city which they called "Orbis" with a culture of peace dimension. They presented their new city at a four-day meeting to students and teachers from Spain. By using the Ibero-American network, students further exchanged their views on such a city with their peers in both Mexico and Spain. For the school year 2008/2009 students are working on producing a solar energy automobile for the Island. Difficulties with team work and a lack of computers were overcome respectively by hard work and by promoting understanding among team members and by the provision of laptop computers and Internet from the Principal. Families also donated funds to enable students to present "Orbis" to schools in other towns.

The virtual island of SISCOALIA

Project results

– Understanding of the need for a sustainable world and for an individual and collective commitment to do something about it
– Creation of an imaginary island and of a new sustainable and multicultural virtual city "Orbis" and its presentation to other schools in different countries
– Acquisition of new knowledge and practical skills (including the use of ICTs) as well as creative thinking skills in support of sustainability
– Respect for cultural and religious diversity and the elimination of all types of prejudice
– Fruitful collaboration between students, parents and the community

Impact of the project

Many students within the school and in other schools have benefited from this innovative project which continues to develop, extend and stimulate student's creativity. It has served as an excellent example on how to sensitize young people, as well as adults, to all of the pillars of sustainability – economic, ecological, social and cultural. Students' attitudes have changed – they have become more open-minded, keen to eliminate prejudice and are recycling and saving

Portuguese students visiting Alhambra in Spain

water and energy at home and at school. Young people are also more engaged in discussing worldwide issues such as pollution, the use of natural resources and the prevention of natural disasters. The Principal has lent valuable support in helping to promote media coverage and informing the local government office of education of the project results. Entire families pledged support for the project not only financially but by adding their ideas and involving their neighbours and friends.

You can do it too!
If students are to become the main instigators and actors of the learning process and internalize the values and behaviour required for a sustainable future, they have to be empowered, and given means and recognition. The concept of "eco-delegates" can easily be introduced in schools along with an action plan.

"Till recently I didn't care about recycling or water pollution but now I realize that we all must begin to act…We have many immigrants from Eastern Europe and we must help them to integrate our community without prejudice"

Mariana Parreira
(student)

"Everyone now wants to live on our Island!"

Manuel Pedroso
(student)

Spain

School:
Colegio Publico de Hurchillo "Manuel Riquelme" (public elementary school)

City:
Hurchillo-Orihuela (Alicante)

Project co-ordinator:
Don Joaquin Marza Mercé

An **Educational Contract** in support of Planet Earth

Background
This project was actually launched at the start of the new millennium in 2000, prior to the DESD but very much in line with its aims and in accordance with the slogan "Think Globally, Act Locally". It is an incredible example of what a small elementary school can do to mobilize an extraordinary number of both children and adults to personal commitments to protecting our planet Earth.
An educational "Contract" in the form of a Commitment was drafted including several main points such as:

The EARTH is like our gigantic home and we have to commit ourselves to taking care of her.
AT HOME I must use water, electricity and natural resources sparingly.
I must sort out garbage (plastic, glass, organic debris, etc.).
IN THE CITY I must help to keep our urban areas clean as a first step to keeping our planet clean, use waste bins and do not litter, we must respect green areas, parks and gardens.
IN THE COUNTRYSIDE, SEASIDE OR IN THE MOUNTAINS: we must respect all natural sites, never enter restricted areas or make fires and convince smokers not to smoke in vulnerable areas, one should never litter, in any way, in natural sites.
And WHEREVER I AM I must fulfil my contract.

Project objectives
- To enable pupils to make a personal commitment and to take concrete actions to help protect our planet Earth
- To extend this initiative to adults and to other schools and institutions
- To obtain 1 million signatures!

Project implementation

The basic idea was a simple one: draft a pledge that all children (and adults) could identify with and be inspired by, to take action, on a daily basis and throughout life to conserve the planet for present and future generations. The project was designed to have a multiplier effect and what started out in a very small school with few resources was broadly extended far beyond its classrooms. The "Contract" was sent to thousands of schools in the country. The fact that the Colegio takes part in the UNESCO Associated Schools Network clearly enhanced its credibility and facilitated contacts with so many other schools and institutions. Local education authorities also granted their support. Initially, the initiative of three teachers, the project has been supported by the entire teaching staff (some 20 teachers) as well as by parents.

"This project has put into practice the principles of UNESCO"

School report

Official visit at the school paying tribute to the results of the project and their authors

Project results

Phase I: 2000-2007: 1,025,000 children signed personal contracts
Phase II: 2007: 5,000,000 adult signatures
Phase III: 5 June 2008 to 5 June 2010: aims to obtain 1 million signatures of youth in the Province of Valencia.
In addition to the some 6 million signatures one can also expect that children have assumed their commitments and responsibilities and continue to pursue action to help preserve our fragile planet.

Impact of the project

The number of signatures speaks for itself! Some 6 million children and adults have not only taken the time to read the "Contract" but to sign and return it to the Colegio. It can be expected that there have been significant changes in the behaviour, values and attitudes of the signers. The Colegio has received enormous positive feedback from those involved. Even the duration of the project is significant: it has been in operation for eight years and another two are foreseen.

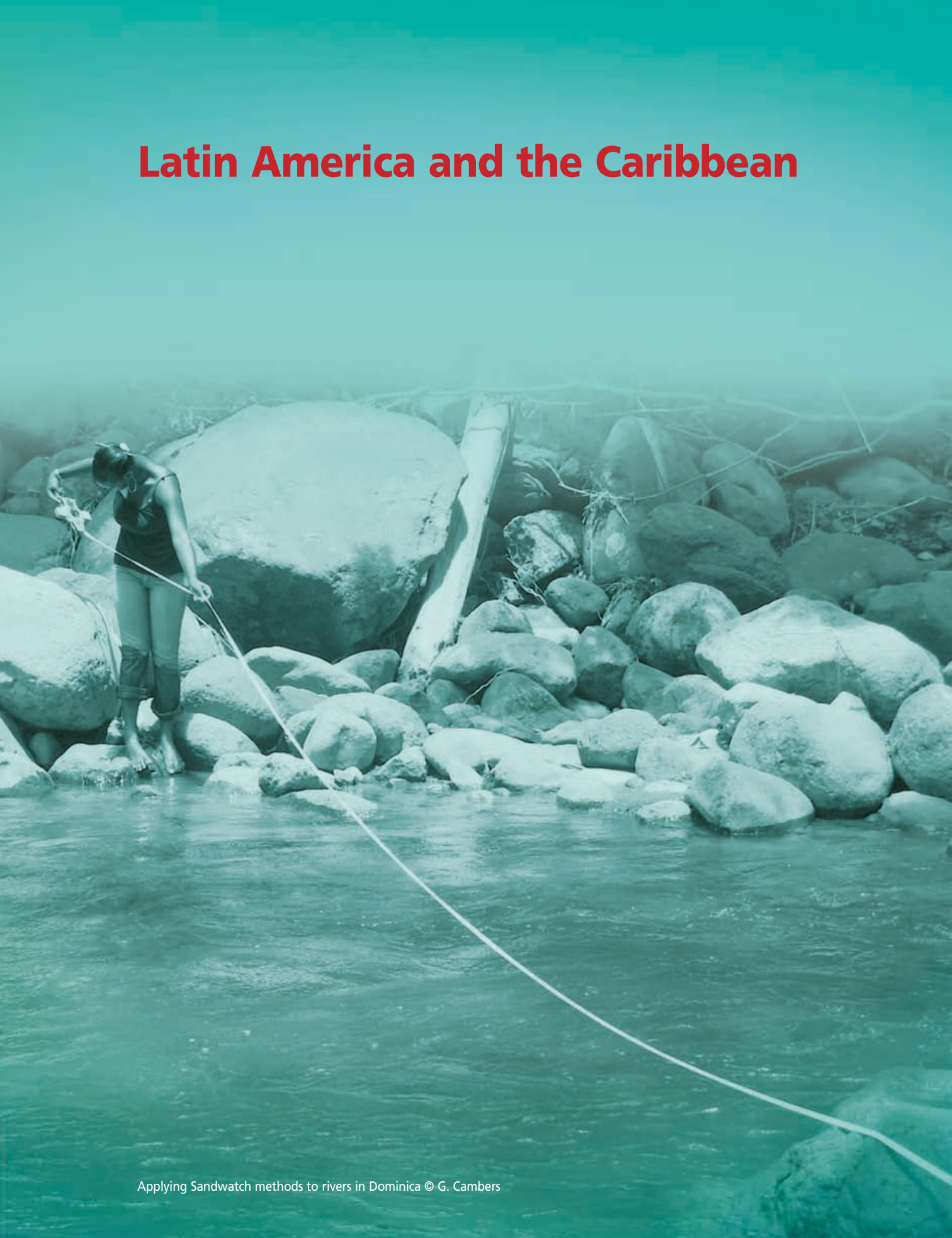
Special recognition

The King of Spain, His Majesty Juan Carlos gave special recognition to this worthy and innovative project.

You can do it too!

1) Help diffuse and enlist children in signing this unique "Educational Contract" by contacting the Colegio Publico de Hurchillo "Manuel Riquelme", Carretera de Bigastro-4, Hurchillo-Orihuela (Alicante). What started out at the local level to help save our planet can easily be extended universally.
2) Draft your own School Contract in support of the DESD taking into account your local and national context.

Latin America and the Caribbean



Applying Sandwatch methods to rivers in Dominica © G. Cambers

An **Ecological** Home

Brazil

School:
Centro Educacional Menino Jesus (private pre-school/elementary school)

City:
Florianopolis

Project co-ordinator:
Ms Juliane Cordova de Rosa Reichert and Ms Fabiola Rabelo Schulter

Background
Since ESD was the ASPnet topic for 2008 in Brazil, it was decided to conduct a special project in support of it.

Project objective
– To develop educational approaches to enable children to understand the importance of the rational use of energy sources and how to make home dwellings more ecological

Project implementation
This awareness-raising project concerning the value and use of energy and improving one's habitat was intended for grade 7 students (12 years old) and was conducted from June to October 2008. Several visits were made, in small groups, to a local farm "Carakura" where there is a house that was built from a completely ecological and sustainable perspective e.g. the material used, lighting, toilets, etc. The owners explained how and why they built such a home and its innovative sustainability, an architect who works on bio-construction explained alternative uses of building materials. At the end of each visit, students took part in manual and practical activities and recorded their views and observations. All of the students were then divided into working groups in order to conduct research on themes, such as:

– Natural resources for building a home (to be made out of wood, bricks and ceramic tiles produced locally to lower transportation costs)
– Energy efficiency (the rational use of electrical energy, window openings that enhance natural lighting, solar energy for heating water and showers)
– Reutilization of rain water and water from the kitchen and bathroom (e.g. for gardening)
– Preparation of guidelines for transforming an ordinary house into an ecological, friendly home
– Recycling of rubbish

"We feel that thanks to this project, many people will change their habits and maybe even one day even build an environmentally friendly house or transform their present home from an ecological standpoint. We count on everyone to save Brazil."

Isabela Duarte
and Lauren Fabrin
((students)

For their research they sought information and examples in books, magazines and on the Internet. The main challenges encountered were time and materials for the models (see below) but they were both overcome.

Project result
– The building of models of homes showing alternative ways of constructing homes while respecting the environment

Impact of the project
Many models were made by the students showing how well they understood innovative and concrete ways to make households more ecological. Such new knowledge and awareness acquired will surely have a lifelong impact on the young students. Their work was evaluated very positively and presented to the other students in the school thereby fostering a multiplier effect. Some of the students also brought their families to visit the farm.

Examples of ecological homes

You can do it too!
This project was very much "hands-on" linking knowledge with practice and conducted in several stages. Each phase had an impact on the students i.e. the visit to the ecological farm and the writing of reports on what was learned, the conduct of further research and gathering of information; the building of models showing ecological dwelling and the presentation of these new homes to peers. The visit, in small groups, enabled students to see first hand how ecology can be an integral part of home construction and thereby help to preserve our environment as well as our future!

Colombia

Integrating new agro-ecological changes for the **school and community's benefit**

School:
Institucion Educativa el Queremal Sede Pio XII el Chilcal Dagua (public, pre-school to secondary school)

City:
Dagua Valle

Project co-ordinator:
Ms Blanca Ines Moreno Velasquez

Fruits produced locally © Jair Torres

Background
This community is located in a rural area with relatively few resources. The children come from peasant and farming families. The entire teaching staff was therefore keen to set up a programme that could provide children and young people with new skills and competencies to improve the learning process, and optimize agricultural resources and livelihoods without harming the environment nor its ecological balance. "A culture of peace requires a culture of conservation" is the basic philosophy behind this project.

Project objectives
– To develop the school's capacity to respond to local needs by developing agriculture in harmony with the ecology of the community
– To enhance employment outlook, the quality of life and food security

Project implementation
An in-depth programme of capacity-building was introduced in order to enlist children and young people in optimizing the community's agriculture sector and subsequently to improve living standards and conditions. Within the curriculum, transversal and thematic approaches were introduced in each grade, starting at kindergarten and going up to grade 11 of secondary school. For the younger children, topics included learning more about the immediate environment and planting seeds for the school's vegetable, herb and flower gardens. The older students were involved in reforestation, improving river basins and promoting agro-industry as well as eco-tourism. Many hands-on activities were conducted within the school grounds, in the community as well as at home. Such activities included: raising hens for egg production, introducing new types of fertilizer and planting trees for reforestation. The main problem encountered was finding sufficient economical resources for conducting the project. It was necessary to "knock on many doors" and assistance was obtained from both governmental and non-governmental organizations. The project started in 2006 and it is foreseen to continue until 2012. It has involved so far some 900 children and young people, 40 teachers and 600 families.

"Values needed for 'learning to live together' - Responsibility, Solidarity, Equality and Tolerance."

Mural painting at the school.

Project results
- The development of a broad-scale training and environmental awareness programme within the school which strengthens its zone of influence and active participation in the enhanced use of natural resources
- School and home gardens, and the raising of poultry
- 8 hectares of reforested land in the small basins of the San Juan and Espanola rivers
- The introduction of an agro-ecology policy in the school and in the municipality of Dagua

Impact of the project
The students showed enormous enthusiasm and participated actively in the various phases of the project. Interviews with them indicated that the majority felt that the project was indeed very helpful to them and has increased their self-esteem. They learned to care more for their environment, and developed new and useful agricultural skills and competencies. A number of them reproduced the school gardens at home. The reforestation activities also helped to integrate young people more into the community. The families, of peasant origin, were receptive and available, and they shared their agricultural knowledge for the benefit of the project.

You can do it too!
When an entire school decides to launch a new project, it has a much better chance of succeeding as illustrated in this sustained initiative. Located in a rural area, the school put emphasis on both theory and practice, i.e. the need to seek improved means and methods for agriculture, and the need for a more ecologically sound environment. Pupils and students of all grades were involved, leaving no one out. The school assumed its role as a "motor for change". Many other schools, in rural or remote areas, might want to benefit from this school's successful approach, and local and national authorities should be encouraged to support them.

Magdalena River © Jair Torres

Teacher training takes on ESD

Mexico

School:
Centre for Research and Innovation for Teaching and Learning (Centro de Investigación e Innovación para la Enseñanza y el Aprendizaje, Teacher training institution)

City:
Teapa, Tabasco

Project co-ordinator:
Ms Ana Luisa Bustos Ramon

Background
Tabasco is one of 32 federal entities of the Republic of Mexico, located in the South-Eastern part of the country on the border with Guatemala. In collaboration with the Mexican National Commission for UNESCO and within the framework of ASPnet activities, the Centre developed a strategy to promote environmental education for sustainable development as an integral part of quality education.

Project objective
- To incorporate key dimensions pertaining to the environment and to sustainability in school curricula from pre-school to adult education

Project implementation
A collegial, comprehensive and interdisciplinary approach was used to introduce and reinforce environmental education for sustainable development in pre-school, primary, secondary and adult education. Emphasis was placed on in-service training for teachers and academics, the

Mexican pupil © 2006 E. Valdez-Curiel, Courtesy of Photoshare

improvement of databases and pedagogical resource materials, and monitoring and evaluation of successes and failures, using external expertise. Topics of social responsibility included gender equality, education for health and for peace, the rational use of resources and care for the environment. One of the main principles that emerged from this initiative was the need to take into account local culture, history, knowledge and customs, while strengthening the feeling of belonging and being an integral part of one's environment. The project was conducted from 1995 to 2008 and included training workshops, seminars, congresses, forums and distance education. A reforestation campaign was launched involving the community and an environmental literacy programme was set up for parents from remote areas. New teaching units were added to textbooks, including such topics as biodiversity, pollution and deforestation, and a new subject entitled Cultural and Natural Heritage in Tabasco was offered in the secondary school curricula. This experience was also shared with other countries such as Costa Rica, Cuba, Germany, Portugal and Spain. The main problem encountered was a lack of funds. It is expected that the project will be pursued by developing new approaches for addressing the issue of global warming.

"Learn the essential but practice what is fundamental."

Project Report

Project results

- Introduction/reinforcement of environmental education for sustainability from pre-school to adult education
- Ten publications
- An anthology: *Our Pedagogy for the Environment* (financed under the UNESCO Participation Programme)

Recognition

Special Honorary Mention (in two categories) within the framework of the National Prize for Ecological Merit (2004)

Impact of the project

Many teachers, pupils and students were involved in this project and benefited from it. In the training and re-training of primary school teachers a special "Qualification in Environmental Education and Sustainability" diploma gave recognition to their newly acquired expertise and contributions. Short stories prepared for pre-school children were produced and transmitted by the local television station. The project involved and impacted on many partners from various institutions such as universities, the Ministry of Education, the Sustainable Development Network and the Mexican National Commission for UNESCO.

You can do it too!

This project shows the enormous capacity of a teacher-training institution to reach out to many other schools, at various levels of education, in its community. By providing training for teachers, new educational resource materials, monitoring and assessment, it was possible to introduce or reinforce environmental education for sustainability from pre-school level to parents and adults throughout the district of Tobasco. Such an ambitious initiative requires many partners but when a project is well-conceptualized and supported by sound coordination and backstopping it is easier to secure the expertise and resources needed.

Sandwatch Project

Trinidad and Tobago

School:
Mayaro Government School (primary) and Mayaro Environmental Wave UNESCO Club

Region of **Mayaro**

Project co-ordinator:
Mr Andy Paul

Implementation by **the Mayaro Environmental Wave UNESCO Club**

Palo Sec. High School collecting sand © Andy Paul

Background

The concept of the Sandwatch Project originated at the First ASPnet Caribbean Sea Regional Environmental Education workshop held in Tobago in 1998. Students and teachers observed first-hand the problems facing the coastal zone and particularly the beaches which are much treasured by islanders and coastal residents but seriously endangered. There was much concern about erosion and pollution and hence a major ASPnet (on-going) regional "Sandwatch Project" was launched (see page 61) for the presentation of this unique regional project.

Project objectives

- To involve pupils in the scientific observation, measurement and analysis of sand beaches
- To acquire skills to help manage and monitor the quality of beaches and contribute to their enhancement by working closely with the community
- To help reduce the level of pollution in adjoining seas and oceans

Project implementation

The Sandwatch Project is conducted in a number of schools in the country and this is one example. The Project provides an interdisciplinary framework for students, with the help of their teachers and community members, to work together to evaluate critically problems and threats facing local beach environments and to develop sustainable approaches to address such issues. Not only science teachers take part in the Project but teachers across the curriculum from mathematics to poetry and from woodwork to biology. A wide range of hands-on activities are carried out on such topics as erosion, beach composition, impact of people on beaches, global warming, rising sea levels, endangered species, hurricanes and tsunamis, pollution, water quality, beach debris, and longshore currents. By taking part in a regional project, contacts with other schools are facilitated and a study visit was made to the Afonso Pena School in Santos, Brazil in order to exchange students' views and experiences. The main problem encountered has been insufficient time for field visits to the beaches (data collection, monitoring and clean-ups) which have to be made during out-of-school hours, on the weekends and during school vacations.

> "It made me acquire a better understanding of our coastal environment and I appreciate more the role it plays in my life and the changes I have to make to conserve it for future generations, especially in the light of global warming."
>
> Sade Forgenie
> *(student)*

Project results

- Simple measurements concerning the conditions and quality of local beaches
- Analysis and interpretation of data
- Conduct of beach enhancement activities, in cooperation with the community
- Preparation of reports and diffusion to government agencies and other concerned parties

Impact of the project

The project has helped to improve students' research capacity, communication skills and leadership qualities as well as their grades and academic results. It has helped to create more awareness of coastal concerns in the community and on the beach (where people often ask students about their field work). There has been a significant change in attitudes and behaviour.

Baby crab in the Caribbean sand
© Jair Torres

Students realize the importance of their work and its contribution towards the development of their country. They have gained self-confidence and encourage the younger students to take part as well, thereby reinforcing the sustainability of the project. Business communities have become interested in supporting Sandwatch and the local cable television station covered various activities.

You can do it too!

We might not all live close to a beach but maybe near a lake or river and similar projects could be launched to analyse and enhance shorelines, riverbanks or other coastal areas. Such an approach links theory to practice, provides a forum for useful research and monitoring, enables the acquisition of new skills and builds *bridges* between the school, scientists and other specialists, and the community.

Part 2

ASPnet's contribution to the DESD at the **subregional, regional and international levels**

Children in Myanmar
© 2005 Kyaw Kyaw Winn,
Courtesy of Photoshare

Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russian Federation and Sweden

Regional Project Co-ordinator in 2009:
Ms Migle Simanaviciene (Lithuania)

Baltic Sea Project

Background

The Baltic Sea Project (BSP) was the first sustained sub-regional ASPnet endeavour to promote both the protection of a major body of water i.e. the Baltic Sea and its resources, as well as inter-cultural learning in all countries surrounding the Sea. It is significant to note that it was launched, at the invitation of Finland, in April 1989, during the final months of the Cold War era when just bringing together representatives from these countries was an accomplishment. Today, after exactly 20 years of successful implementation, this Project has paved the way for other similar ASPnet projects such as the Blue Danube River Project, the Western Mediterranean Project and the Caribbean Sea Project. As the BSP has evolved so has its emphasis on contributing to sustainability and to the DESD.

Danish students participating in the 14th International Camp School in Pori, Finland (May 2007) © UNESCO/BSP

Project objectives

- To increase students' awareness of the environmental problems in the Baltic Sea area and heighten their understanding of the scientific, social and cultural aspects of the interdependence between people and nature
- To develop the ability of students to conduct research on changes in the environment
- To encourage students to participate in developing a sustainable future

Project implementation

Since this is probably the world's longest running multi-country school project in support of both environmental education and inter-cultural learning, this can only be a bird's eye account of its conduct. The BSP is conducted at several levels: i) within the some 200 participating schools; ii) at the national level; and iii) at the sub-regional level. Schools select a wide range of topics relating to the Baltic Sea for their areas of study. These range from Campaigns to project days on "environmental history and sustainable tourism" to studies on "Tales and legends of the Baltic countries. In each country, events are organized at the national level for both BSP students and teachers (expeditions to beaches and islands etc.). Each country has its BSP National Co-ordinator and the regional co-ordination is assured on a rotation basis. At the sub-regional level, summer camps and conferences for students are held regularly in different countries. There are also nine thematic BSP programme Co-ordinators for issues ranging from Air Quality to cultural themes, from River Programmes to the Bird Ecology Programme and from Water Quality to Environmental Measures.

Project results

- Two hundred committed schools in nine countries engaged in the protection of the Baltic Sea, strengthening an intercultural dialogue and working towards a sustainable future
- Publication and broad diffusion of seven BSP Learners' Guides for teachers
- Website: http://www.bspinfo.lt/ and bi-annual illustrated (40-page) Baltic Sea Project Newsletter
- Numerous BSP national and regional seminars, camps and conferences

Impact of the project

The 20-year existence of the BSP speaks for itself. Over the years it has and continues to pioneer into new areas of environmental protection and concern as well as intercultural learning. The BSP has helped to forge an entire generation of young people who have become more aware of the many threats facing their common sea. Countless projects and

events have given them new knowledge, new skills and a determination to become more involved in protecting the Baltic Sea, its rivers and tributaries and to work together for a better common future. The project has benefited from substantial support from ministries of education and National Commissions for UNESCO as well as from intergovernmental organizations such as NORDPLUS (comprising the five Nordic countries and to be extended to the three Baltic States (Estonia, Latvia and Lithuania), HELCOM (Helsinki Commission) and UNESCO. The Project's website and the attractive and informative BSP Newsletter are not only useful to the BSP participants but also to many other educators worldwide.

"All the seminars and practical classes were extremely mobilizing and showed us the truth about the cod existence in the Baltic Sea as well as ways to deal with this crucial environmental issue."

Ms Weronika Galert and Mr Piotr Kuszewski
(Polish Students at the Nacka Conference, Sweden)

You can do it too!
The BSP can be regarded as an exemplary showcase. However, there are so many seas, rivers, major lakes around the world that share their borders with other countries. If you live near or on one of them, you could envisage a similar project with the help of your National Commission for UNESCO, education officials and the ASPnet National Co-ordinator. User-friendly and innovative Learners Guides are available and you too can benefit from them. You can obtain much more information and ideas by going to the BSP website. You can obtain valuable advice and assistance by contacting some of the BSP National and Programme Co-ordinators who are presented in the latest Newsletter which is also accessible on the web site. Start now, even small, but go far!

"The teachers together with their students are of course the most important part in this development process. They are the doers. They have to translate the visions into practical classroom work. And they have done so."

Siv Sellin
(Sweden, former General Co-ordinator of the BSP)

The "Green Tourists"

GigaPan Conversations: Diversity and Inclusion in the Community Pilot Project

South Africa, Trinidad and Tobago, United States of America (first phase)

Schools:
Naparima Girls' School and Bishop's High School (Trinidad and Tobago), Lavela School (South Africa), Falk Laboratory School (United States)

Project co-ordinators:
Carnegie-Mellon University, Pittsburgh (United States); NASA Research Center (United States); UNESCO IBE (Switzerland); UNESCO Associated Schools International Coordination

Background
The school children of the early twenty first century are a generation defined, among other things, by globalization and technology. Developing a deep understanding, consideration, respect for others and their beliefs, values and cultures is crucial for today's youth. Information and communication technologies allow us to explore and teach these concepts in entirely new ways, using GigaPan as explorable, high-resolution panoramic imagery based on the technology of NASA's Mars Rover robotic platform in the classroom. The digital divide and deficient access present challenges, but if these challenges are recognized and addressed, new media can be both a powerful teaching tool and an avenue for empowerment.

Project objectives
– To empower students to use new technologies (tools and processes, i.e. GigaPan) through participatory and productive learning experiences

– To explore local and international issues pertaining to inclusion and Learning to Live Together with a view to fostering constructive exchanges, cooperation and solidarity
– To promote empathy and understanding between cultures and create a sense of global community through an exchange of explorable, high-resolution digital imagery
– To develop and share good practices linking curriculum and new technologies
– To encourage exchange and sustainable networking

Students learning to use GigaPan, San Fernando Hill, Trinidad and Tobago, 2008 © Randy Sargent

Project implementation

ASPnet schools from South Africa, Trinidad and Tobago and the United States, were chosen for this pilot phase in 2008. School groups used GigaPan cameras to capture significant aspects of their lives and of their community. GigaPan is a simple device that novices can use to create high-resolution panoramic images with a standard digital camera. The coordinating team led technology training, development and assessment while providing the necessary equipment for each school group. They worked closely with the school community educators to jointly define how the GigaPan Camera and subsequent school exchange would be most useful in the school's curriculum and classroom environment. The schools were then given the challenge of producing a series of panoramas of their community, designed to engage their partner school in dialogue about the life and problems in each community. The panoramas were uploaded to a moderated Website (http://gigapan.org), providing a variety of tools for exploration, annotation, non-linear storytelling, and discussion. A group at one site posted an image, a group at the partner site explored it and left virtual "notes" with questions, and the first group responded. Topics of interest identified by the students included, for example, places of worship, festivals, social diversity and interactions, the economy, and issues pertaining to ESD.

After an evaluation process examining successes and challenges of the pilot, the programme will hopefully expand, building regional networks to provide training, mentorship, and interregional as well as international exchange.

"GigaPan was the greatest experience in my life it has taught me so much about the world that we live in and I am glad I joined it"

(student, Lavela High School, South Africa)

"GigaPan Conversations were such a memorable way to spend International Teachers' Day. We are grateful to you and Museum Africa that this day was such a joy. With your help GigaPan has been exposed to other South Africans. During that month three of our learners in the programme were interviewed by SABC International who wanted to find out about the Gigapan Project. Student Dumisana has just started to work with the Civic Theatre on a documentary on Alexandra (Township north of Johannesburg). They are using GigaPan."

Lulama
(teacher, South Africa)

The GigaPan camera © GigaPan

Project results

- A gallery for the outside community showcasing the pictures and lessons learned by the children
- Improved ICTs and research skills
- Increased awareness of their partner community through ESD-related perspectives

Impact of the project

Teachers and administrators reported that the project allowed them to develop a sense of one's role in the world and sharpen their awareness of cultural diversity. They were also motivated by the opportunity to become first-generation users of a new technology. GigaPan is a contextualized and authentic method of teaching about many subjects, particularly social inclusion, ESD and technology.

You can do it too!
The technological landscape that our students will encounter as they enter adulthood will be completely different from what we are able to teach them about today. One of the most valuable skills that we can pass on to young people is the ability to approach new technologies with confidence, experiencing them as tools to communicate and learn with diverse people both at local and international levels. Not all schools have technical equipment for GigaPan conversations, but there are many other ways to use the internet to have direct connections to peers around the world. Engaging in a dialogue might sometimes touch topics that may be challenging, but it is in this way that young people raise their awareness of the diversity of cultures in the world and have experience engaging in dialogue.

Intercontinental ESD project: the United Kingdom and the United Republic of Tanzania

Education for Rural Livelihoods and Food Sovereignty (ERLFS)

Wales (United Kingdom) and Zanzibar (United Republic of Tanzania)

Two School Clusters:
6 elementary and 3 secondary (public) schools in each country

Project co-ordinators:
Sazani Associates (Ms Cathryn Al Kanaan and Ms Marilyn James)

Background
In 2000 the Sir Thomas Picton Secondary School in Wales established a link with Haile Selassie Secondary School in Zanzibar through a British Council Global Curriculum Grant. Four years later the same school in Wales along with two other schools in the country, decided to take part in a FAO/UNESCO Flagship Project to promote Education for Rural People (ERP). The Project was supported by Sazani Associates and it aimed to contribute to the development of an improved curriculum in rural schools in Zanzibar. In 2006 the three Welsh schools joined the UNESCO Associated Schools Project Network and Sazani Associates worked with the schools to secure further support from the British Council, the General Teaching Council for Wales and others. This assistance led to the expansion of the project to enhance the transition between primary and secondary education in both Wales and Zanzibar and to build on the ERP project by focusing on Education for Rural Livelihoods and Food Sovereignty.

A fruit stall in Zanzibar © Mirella Saldari

Project objectives
- To develop shared learning opportunities between secondary and primary school in Wales and Zanzibar and to foster the professional development of teachers in support of poverty reduction
- To contextualize and improve school curricula to become meaningful and representative of local and global realities by comparing rural sustainable livelihood issues in the two continents
- To test the use of media technologies for improving school curricula and the learning process

Project implementation
A series of professional development training workshops for primary and secondary teachers in Wales and Zanzibar have been organized by Sazani Associates in partnership with the National Teachers Resource Centre (Zanzibar). Three study visits were made to Zanzibar in October 2007/October 2008 by Welsh secondary school teachers and in March 2008 by Welsh primary school teachers. In turn, twelve teachers and advisors from Zanzibar visited Wales in June 2008.

Local fishing vessel, Zanzibar © Mirella Saldari

Such workshops and visits have enabled teachers from both continents to work together closely in identifying resources and materials that can be used in both places as well as producing new resource materials. Key topics under study, with global dimensions, include: biodiversity through looking at food and farming in Wales and in Zanzibar, water as a basic human right, sustainable tourism, good governance and the importance of active citizenship and eliminating discrimination, inequalities and injustices. Students are becoming aware of the fact that the small changes they are making in their daily lives not only have an impact in their immediate community but also in faraway places. In understanding the ramifications of climate change and related issues such as health, water shortages and food availability, they are becoming more aware of the need to act in a responsible way, especially in the areas of consumption and waste. Emphasis is also given to improving the learning process by enabling students to develop participatory skills of empathy, enquiry, critical analysis, forming their own opinions, questioning and decision-making. Creativity is also an essential feature of the project particularly art, music and drama. Teachers have benefited from training in the use of pod casts and video for communicating and sharing information and ideas with each other. Some 27 teachers and 700 students from 9 schools are taking part in the Project in Wales and 36 teachers and 3,000 students from 9 schools in Zanzibar. Funding for the Project is secured until 2011. The main challenge encountered is communication between schools across continents, which has been partly overcome by electronic mail, reciprocal visits and hopefully the project's new website www.sazaniassociates.org.uk/ which will provide lesson plans and interactive teaching resources. The project was presented at the United Kingdom UNESCO Associated Schools Seminar in June 2008, enabling other teachers to learn about it and the value of establishing global links.

Project results

- Identification of resource materials to be used in both the United Republic of Tanzania and the United Kingdom
- Development and introduction of new educational materials related to rural livelihoods and food sovereignty
- Greater awareness among pupils and students of the value of cultural diversity and shared dreams and aspirations of youth in different continents
- Good working relationships and friendships forged between teachers in both localities

"Our partnership with Zanzibar has enhanced the global dimension in subjects across the curriculum. This is real life global citizenship."

(Teacher, Wales)

Project's website: www.sazaniassociates.org.uk/

Impact of the project

Students have been motivated by teachers who have brought the inter-continental link into the classroom through their personal experiences from the reciprocal study visits and meeting teachers from the partner schools. Receiving first hand materials from students abroad containing information about their country, homes, families and aspirations for the future has brought a sense of reality to the project and provided an opportunity to include education for sustainability and global citizenship. The community has been involved in training teachers to use pod casts and media tools including Internet and web site design. In both Wales and Zanzibar the Local Education Authorities and Local Councils showed interest and enthusiasm about the project while warmly welcoming the foreign visitors. Articles in local newspapers gave the project recognition.

"I did enjoy learning about a different country and differences in culture and the best was interviewing visitors from Zanzibar. It was awesome to be able to talk with them, ask questions and get immediate answers."

Lucy McDonald
(student, Sir Thomas Picton School, Wales)

You can do it too!
This project was initiated in order to raise awareness and appreciation for rural livelihoods, for the valuable contributions (knowledge of nature and food supply) that they make to society and to improve the quality of education in both parts of the world. What started out as a small bilateral twinning arrangement between schools in two different parts of the world has evolved into an impressive education endeavour involving several schools and education officials. Schools in the North learn from schools in the South and the benefits are enriching classroom activities, school curricula, the climate of the classroom and the learning process while contributing to the MDGs and to the DESD. UNESCO Associated Schools is a global Network, created and co-ordinated to facilitate contacts and joint projects between schools worldwide. Do not wait. Seek a partner abroad and plan and conduct together a DESD project!

Wales-Zanzibar ASPnet teachers' seminar

First ASPnet Regional Flagship Project on **Water** Education in the **Arab Region**

Egypt, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Oman, Palestinian Territories, Qatar, Syrian Arab Republic, Tunisia, United Arab Emirates

Regional Co-ordinator (before February 2009):
Mr Awad Saleh, Secretary-General, United Arab Emirates National Commission for UNESCO in co-operation with the local Environmental Education and Awareness Division of the Environment Agency (Abu Dhabi, United Arab Emirates).

Background
This is the latest ASPnet regional initiative to contribute towards the implementation of the DESD and the attainment of the MDGs. Because water is such a precious commodity in the Arab States, most of which are extremely arid, it was decided to initiate a project focusing on the importance of access to water and its preservation. The Water Education Project was launched at a Workshop held in Abu Dhabi in December 2006 with ASPnet National Co-ordinators and teachers from most of the participating countries as well as UNESCO representatives from both Headquarters in Paris and the UNESCO Amman Office.

Project objectives
– To encourage the participation of ASPnet schools in water conservation and awareness activities
– To incorporate water conservation into life-styles
– To develop educational approaches and materials on water management and preservation

Project implementation
The "Water Education Project" was designed and launched as an integral component of the DESD. It is intended for primary, intermediate and secondary schools. It has three main phases. Phase I "Gaining Knowledge" targets the curriculum through the introduction and experimentation of the Arab Water Education Pack (AWE Pack). This educational resource material presents a new learning and teaching strategy to enhance knowledge and awareness of water-related issues through a more "hands-on" approach. Phase II "Participatory Approach" calls for the conduct of special water activities by each participating school and the sharing of experience and results through school networking and coming together. All schools will be given water audit sheets to calculate the school's water use during the year and guidelines will be made available to help schools reduce water use or to recycle water. Phase III "Motivational Approach" identifies the most active young participants and invites them to attend water leadership camps to help develop attitudinal and behavioural changes and a greater sense of responsibility. The Water Project advocates: a sense of stewardship of water

Promoting a participatory approach in United Arab Emirates

resources in the region, a regional perspective emphasizing local specificity, learning should be made enjoyable and children and young people should be empowered and considered as valuable partners in water conservation and management. In September 2007 selected ASPnet schools started to test the Arab Water Education Pack. A year later some 75 teachers from the 10 participating countries attended a regional training workshop in Abu Dhabi in November 2008 along with UNESCO representatives and experts from India, North America and South Africa. The programme included presentations on "Promoting Education for Sustainable Development in the Arab Region, A Collaborative Approach" and "Empowering Young Minds on Water Quality Education". Training sessions were held on the use of the Arab Water Education Pack produced by the Environment Agency (Abu Dhabi) for experimentation in the pilot schools. Participants shared their views on the materials and tested the teaching and learning strategies outlined in the education modules. Educators from each participating country reported on experience gained by their schools and made proposals for the future.

Project results

- Ten countries taking part in the Water Project with an estimated ten ASPnet schools per country
- Experimentation underway of the Arab Water Education Pack
- An Action Plan to carry out the first three phases of the project

Impact of the project

Since the project is still in its early stage of development, it is a little soon to measure its impact. However, the large attendance at the second workshop can be an indicator of the high level of interest in this unique Water Project.

"Thanks to the commitment and good work of every participant, this Workshop made it possible to make a big step forward...My sincere gratitude goes to the hosts of the November 2008 Workshop in Abu Dhabi for their great hospitality and excellent organization."

Sigrid Niedermayer
(ASPnet International Co-ordinator)

Water canal in the United Arab Emirates

You can do it too!

It is often said that "water is life". Yet how many are really conscious of its value? How many of us take it for granted? Child mortality remains often high in many places due to lack of safe water. Climate change and drought mean that water is becoming scarcer worldwide. Even in rich countries, the price of water is increasing considerably and the time has come to urgently rethink our water consumption and management both at home and at school, at work and in the community. So you too can introduce a water project at your school and once again with the help of your National Commission for UNESCO try to extend it to other schools in your region in order to share and learn more from each other and about each other. On a practical level, read the following poem and discuss it with your students, it might be an important first step!

Ode on the General Subject of Water

By Kenneth Boulding, Feather River Anthology
Presented in the Water Project in the Arab States Basic Working Document

"Water is far from a simple commodity,
Water's a sociological oddity,
Water's a pasture for science to forage in,
Water's a mark of our dubious origin,
Water's a link with a distant futurity,
Water's a symbol of ritual purity.

Water is politics, Water's religion,
Water is just about anyone's pigeon.
Water is frightening, water's endearing,
Water's a lot more than mere engineering.
Water is tragical, water is comical,
Water is far from Pure Economical,
So studies of water, though free from aridity,
Are apt to produce a good deal of turbidity.

Measuring high water mark in Trinidad and Tobago, Sandwatch Project © Andy Paul

Sandwatch Project

Latin America and the Caribbean:
Bahamas, Barbados, Brazil, British Virgin Islands, Cuba, Dominica, Dominican Republic, Guadeloupe (France), Guyana, Jamaica, Mexico, Montserrat (UK), Netherlands Antilles, Puerto Rico (US), San Andrés (Colombia), Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, and the US Virgin Islands

Indian Ocean:
Dubai (United Arab Emirates), Indonesia, Malaysia, Maldives, Mauritius, Mayotte, Seychelles, Sri Lanka

Pacific Ocean:
Cook Islands, Fiji, New Zealand

Africa:
The Gambia, Ghana, Kenya, Zanzibar (United Republic of Tanzania)

Others:
Azores (Portugal), Wales (UK).

Project Coordinators
Sandwatch Foundation

Directors:
Dr Gillian Cambers (Barbados) and Mr Paul Diamond (Saint Kitts and Nevis)

Background

The Sandwatch Project started in the Caribbean in 1999. Supported by the UNESCO Science Sector (Environment and Development in Coastal Regions and Small Islands) and in collaboration with the UNESCO Associated Schools and the DESD Coordination at UNESCO Headquarters, the Project has evolved considerably over the past decade. From a regional initiative it is becoming a worldwide movement. Sandwatch was conceptualized as an educational and scientific process. The Sandwatch vision seeks to change the lifestyle and habits of children, youth and adults on a community-wide basis, and to develop awareness of the fragile nature of the marine and coastal environment and of the need to use it wisely. Emphasis is placed on developing skills relating to critical thinking and conflict resolution while instilling a sense of caring for beaches and the environment.

Project objectives

- To enable children, youth and adults to get involved in the enhancement and management of their beach environments for a sustainable future, in cooperation with the community
- To integrate the Sandwatch approach into school curricula and contribute to the DESD
- To build ecosystem resilience and thereby contribute to climate change adaptation

Project implementation

Sandwatch is a volunteer network designed mainly for primary and secondary schools, but also including youth and community groups. The Project advocates hands-on activities for the conduct of scientific observation, measurement and analysis. Much of the scientific research takes place directly on beaches where students go to collect data, water and sand samples, examine marine life, study the flora and fauna, and identify threats and issues impacting on their coastal zones. The analysis of their field work is then done back at school where learners are able to discuss their findings from a transdisciplinary perspective, draw conclusions and seek solutions. Major regional events are also organized for both students and teachers to enable them to learn from and about each other. Jamaica held a Sandwatch Training Workshop in November 2005 and a Regional Sandwatch Youth Symposium took place in Trinidad and Tobago in December 2006 with participants from 14 countries throughout the Caribbean. Sandwatch has also expanded worldwide, and islands in the Pacific and Indian Oceans have vibrant programmes. For example the Cook Islands has introduced Sandwatch into the school curriculum and in June 2007 held a Sandwatch workshop involving schools from all its islands. The Sandwatch Foundation was set up in 2008 as a non-governmental organization to co-ordinate and promote the Sandwatch Project and to seek funding for it. In November 2008, the

Sandwatch student exchange
© Andy Paul

Sandwatch Foundation joined with two other non-governmental organizations in Barbados to host a Workshop on "Youth and Climate Change: Cool Youth Leading the Way". Through drama, Internet, video and publications they raised awareness about climate change. In 2008 an attempt was made to extend Sandwatch to the Climate Change Adaption programme sponsored by the Worldwide Wildlife Foundation (WWF) and a Climate Change Section was added to the Sandwatch website www.sandwatch.org. A Video Competition was launched on "Coping with Climate Change: Sandwatch Leading the Way" in 2008. An interactive instructional DVD is under preparation which will introduce more Sandwatch methodology. The latest community group to join Sandwatch, the "Reforestamos Mexico" AC, helps to protect the coastal regions of Mexico through replanting mangroves, protecting turtle nesting sites and other activities with schools and environmental clubs across the country.

"Having heard the commitments made by participants on how they would follow up the Workshop in their home countries, I left Barbados with reinforced belief in the power of youth as agents of change – as well as in the Sandwatch network. I look forward to working with Sandwatch in the months and years to come and to witness how the participants make a difference in their commitment using the skills they acquired in Barbados."

Hans Thulstrup
(UNESCO Headquarters Representative, Division of Science Policy and Sustainable Development and participant at the Barbados Workshop, 2008)

Beach flower in Brazil

Project results

- Scientific monitoring of beaches by students in different parts of the world and with the cooperation of the community
- Increased awareness and involvement in addressing sustainable development issues
- Integration of some elements of Sandwatch Project results into national curricula
- Seven issues of the bi-annual well illustrated and documented Sandwatcher – The Voice of the Sandwatch Project newsbulletin
- Sandwatch Manual and Website
- Creation of the Sandwatch Foundation to help ensure the sustainability and extension of the Project

"I am especially impressed with the progress that the Sandwatch Project has made in enlisting support from students and teachers around the world into actively studying and protecting their environment by watching over their seas and beaches and the constantly changing ecological balance of their coastlines."

Robin Cotterell
(Director, Black River Foundation, Canada)

Impact of the project

In view of the high interest of Caribbean countries in the Sandwatch Project, the systematic reporting on activities undertaken and the tangible results achieved together with sound co-ordination, it has been possible to introduce the Project in different parts of the world which shows both its impact and usefulness. More countries and regions are expressing interest in joining Sandwatch and hopefully the recent setting up of the Sandwatch Foundation will help to ensure its extension, development and sustainability. One example of its impact resulted from the Barbados Workshop. Students pursued their mission to "get the word out" on climate change and used various media (radio, television, Internet, newspapers) thereby reaching some 30,000 people. Started through UNESCO and in ASPnet schools, from the outset, the Project has generated many partnerships including the University of Puerto Rico, Caribbean Tourism Organization, Commonwealth Foundation, United Kingdom High Commissioner in Barbados, Black River Foundation, World Wildlife Fund and others.

Special recognition
The Nikao Maori School in Rarotonga, Cook Islands won, in 2005, the First Prize in the UNESCO Community Sandwatch Competition.

You can do it too!
By going to http://sandwatch.org you can get a broader idea as to how Sandwatch works both locally and globally. If you have a beach or coastline that you are keen to protect and preserve you can try to mobilize participation in your locality and benefit from experienced Co-ordinators, teachers and students and some of the resource materials developed by the Sandwatch Project.

Sand sculpturing by Sandwatch students © Andy Paul

The Green Turtles
By Maimoune, Mayotte (Indian Ocean)

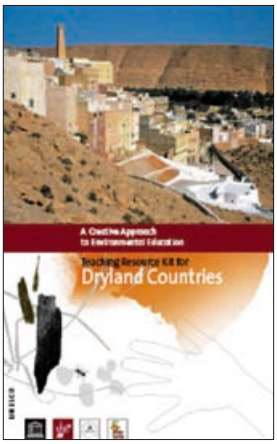
Turtles are our friends,
How can we help
End of quarrels
Green turtles
Really love the lagoon
Environment is vital
Eggs of the turtle look like pearls
Nyamba titi, don't go away
This is their "mahorese" names
Understand and
React
Travellers of the oceans
Let's not lose them
Extraordinary
Creatures
See and save the turtles.

Examples of **innovative ESD materials** pilot-tested in ASPnet schools

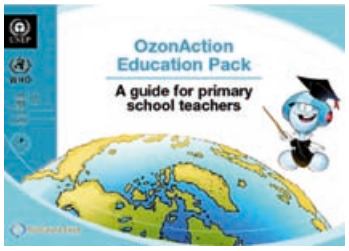
Educational Kit on Desertification
The *Education Kit on Combating Desertification* is especially aimed at teachers and their pupils, aged 10 to 12, at the end of primary school education and living in areas affected by or under threat from desertification. The guide is a general presentation to be adapted to the specific realities and preoccupations of each region or country. It begins with the different problems of desertification, which the teachers can integrate into lessons (fauna, flora, crop varieties, methods of land exploitation, socio-economic problems, etc.). Its positive approach demonstrates that desertification is not inevitable and that everyone, at his or her own level, has a role to play in Earth's future. Prepared by UNESCO's Division of Ecological Science in close collaboration with the United Nations Convention to Combat Desertification (UNCCD), this Kit has been tested in a pilot phase in selected desertification countries through the UNESCO ASP Network.

The kit exists in over ten languages and comprises:
- A teacher's guide on desertification
- Case studies on successful dryland projects
- A cartoon "The school where the magic tree grows"
- A poster of the world's drylands

Website: http://portal.unesco.org/science/en/ev.php-URL_ID=6913&URL_DO=DO_TOPIC&URL_SECTION=201.html



Teaching Resource Kit for Dryland Countries
The *Teaching Resource Kit for Dryland Countries* is intended for secondary school teachers in countries affected by desertification and is based on an innovative approach appealing to the creativity and artistic sensibilities of pupils aged 10 to 15. This kit intends to awaken environmental knowledge through creative and thought-stimulating activities that encourage rediscovery and appreciation of the natural environment and biodiversity. It also brings in the very notion of sustainable development through the application of creative activities: in real-life situations and through specific exercises such as creating illustrative inventories, role playing, scenario building, producing frescoes and gardening, pupils learn to think of people as playing an integral part of the ecosystem and develop their capacity to think critically about the impact of human activities on the environment. This kit for dryland countries was developed on the initiative of the Man and the Biosphere Programme (MAB) of UNESCO and is available in four languages.
The kit comprises:
- A teacher's manual
- A class notebook
- The world's drylands map



Website: http://portal.unesco.org/science/en/ev.php-URL_ID=6914&URL_DO=DO_TOPIC&URL_SECTION=201.html

OzonAction Education Pack for Primary and Secondary Schools
UNEP, UNESCO, the World Health Organization (WHO) and UNICEF (for the secondary school Kit only) have forged a unique partnership to provide primary and secondary school teachers with practical, hands-on and entertaining curricula material to educate their students about the protective role of the ozone layer, and the causes and consequences of its depletion. The OzonAction Education Pack contains an entire teaching and learning programme, based on basic knowledge, practical skills and participation, for students to learn about concrete and simple solutions to protect the ozone layer and safely enjoy the sun.

The primary school Pack comprises:
- A main guidance document for the teachers
- Practical teaching aids (poster, calendar images, calendar support, a UV meter, and "Who Knows?" cards)

The secondary school Pack comprises:
- A Teacher's Book and DVD
- A Student's Book

Website: www.ozzyozone.org

Conclusion

As we reach the close of this first decade of the third millennium and as we enter the second half of the United Nations Decade of Education for Sustainable Development (DESD), we find ourselves in the midst of major transformations occurring around the world, affecting economies, finance, livelihoods, stability, employment opportunities, depletion of the planet's precious resources, persistent poverty and growing disparities.

Children examining seedlings, South Africa © 2006 Hesterki Range, Courtesy of Photoshare

This ASPnet second collection of good practices has presented a sampling of just some of the DESD projects underway in all continents that relate to these current pressing issues. It has revealed the extraordinary capacity of teachers to stimulate and innovate, the power, boundless energy and enthusiasm of pupils and students to become involved and to go beyond their classrooms and schools, and the readiness of parents, community members, experts and authorities to give a helping hand, provide support and recognition, and to go forward together in quest of a sustainable life and future.

Each project presented showed the enormous potential of children and young people, not only to rise to the challenges offered to them but to also surpass our expectations. One of the goals of education is involving igniting the interest and imagination of learners, and to providing them with a platform where they can seek and gain knowledge, acquire practical skills and competencies, and equipping them to face the strong winds of rapid change, profound transformations and frequent turbulence while at the same time developing values and behaviour conducive to sustainable lifestyles and a better future for all.

Recycling since primary schools in Brazil © UNESCO/ASPnet/Ligia Brull

The ASPnet good practices show how children and young people are becoming more responsible and more self-reliant. Sometimes they are even more open and creative than adults, ahead of them in their thinking and in their actions. ASPnet DESD projects seem to have largely affected children's and young people's attitudes and behaviour. They have internalized the need to prevent wastage, to use resources rationally, not to litter, to recycle, to separate rubbish, to transform their school yards and grounds into aesthetic and productive places and gardens, and to respect human rights and gender equality. Teachers are becoming real agents of change, while pupils and students are taking on the role of the real actors in the learning process. Schools are becoming motors of change. By conducting DESD projects that go beyond school premises and by collaborating with a wide range of partners, universities, foundations, non-governmental organizations, etc., schools are helping to transform teachers and learners, parents and community members into responsible and committed citizens seriously engaged in contributing to a sustainable future for all.

ASPnet school pupils in Venezuela

This collection of ASPnet DESD good practices shows us how much we have to learn from each other. Schools in the North have much to gain from the work of schools in the South. No school can be indifferent to the need to economize water, energy and resources of all types, to help to protect, enhance and safeguard the immediate environment and to reach out to the excluded. Pupils and students can no longer be content to just go and stay at school. They have to be given the opportunity to take

Students in St. James, Jamaica © 2007 Susan Long, Courtesy of Photoshare

part in useful DESD projects that form bridges between their schools and their community, and between their school and other institutions, both at home and abroad.

Schools from the South have much to learn from other schools in the South; the wealth of their creative and innovative solutions to local challenges has proven to be enormous. ASPnet has always encouraged South-South cooperation between schools, in addition to long-established South-North school twinning.

It is obvious that schools are not the sole actors of sustainable development. While such development has to be pursued at the highest planning levels possible, it is nevertheless obvious that, if sustainable development is to succeed, now and into the future, it has to be embedded in the learning process, in the minds and hearts of teachers, students and parents.

The ASPnet good practices in this publication confirm the indispensable and dynamic role schools can play in this endeavour. It is hoped that the valuable work conducted by UNESCO Associated Schools will continue to serve as inspiring models for many other schools in all parts of the world, so that no school is left behind along the road to a sustainable and brighter future for all.

Useful resources

UNESCO Relevant Sources

UNESCO Associated Schools Project Network (ASPnet)
www.unesco.org/education/asp

UNESCO Associated Schools Strategy and Plan of Action (2004-2009)
http://unesdoc.unesco.org/images/0015/001503/150352eo.pdf

First Collection of Good Practices for Quality Education, UNESCO Associated Schools, Paris, UNESCO, 2008 (ED-2008/WS/41)
http://unesdoc.unesco.org/images/0016/001627/162766e.pdf

United Nations Decade of Education for Sustainable Development
www.unesco.org/education/desd/

DESD International Implementation Scheme in brief
http://unesdoc.unesco.org/images/0014/001473/147361E.pdf

The Decade of Education for Sustainable Development at a glance
http://unesdoc.unesco.org/images/0014/001416/141629e.pdf

Education for sustainable development toolkit
http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf

Education for All
www.unesco.org/education/efa

Climate change

Education for Sustainable Development and Climate Change, UNESCO Policy Dialogue 4: ESD and Development Policy
http://unesdoc.unesco.org/images/0017/001791/179122e.pdf

World Heritage, Case Studies on Climate Change and World Heritage, April 2007.
http://whc.unesco.org/en/activities/473/

Policy Document on the Impact of Climate Change on World Heritage Properties, 2008.
http://whc.unesco.org/en/CC-policy-document/

World Heritage and the Challenge of Climate Change, in World Heritage quarterly magazine, issue nr 42, June 2006.
http://whc.unesco.org/en/review/42/

Seventh in the Patrimonito World Heritage Adventures cartoon series
The Great Barrier Reef - World Heritage and Climate Change, 2009.

Gender mainstreaming at UNESCO
www.unesco.org/women

UNESCO's Response to HIV and AIDS
www.unesco.org/en/aids

Booklet N°5 on Good policy and practice in HIV and AIDS education
http://unesdoc.unesco.org/images/0017/001797/179711e.pdf

UNESCO and Biodiversity
www.unesco.org/mab

UNESCO - Social and Human Sciences
www.unesco.org/shs

UNESCO Water Portal
http://www.unesco.org/water

Sources from the United Nations' Specialized Agencies and Programmes

Our Common Future, report from the United Nations World Commission on Environment and Development, Oxford, Oxford University Press, 1987. ISBN 0-19-282080-X: http://www.un-documents.net/wced-ocf.htm

United Nations
www.un.org

Millennium Development Goals
www.un.org/millenniumgoals

United Nations Environment Programme
http://www.unep.org

UNEP's Tunza (programme for youth)
http://www.unep.org/Tunza/
Food and Agricultural Organization of the United Nations
http://www.fao.org

United Nations Convention to Combat Desertification
http://www.unccd.int

United Nations Children's Fund
http://www.unicef.org/

UNICEF Innocenti Research Centre "Climate Change and Children: a Human Security Challenge" (policy review paper)
http://www.unicef-irc.org/publications/pdf/climate_change.pdf

World Health Organization
http://www.who.int/en/

World Meteorological Organization
http://www.wmo.ch

World Summit for Sustainable Development (2002)
http://www.un.org/events/wssd

ESD-relevant projects and initiatives' websites

Baltic Sea Project
http://www.bspinfo.lt

Carbo-schools
http://www.carboschools.org

Education for Rural Livelihoods and Food Sovereignty
www.sazaniassociates.org.uk/globallearnerszone

Earth Science for Society - an International Year for Planer Earth
http://www.esfs.org

Eco-schools
http://www.eco-schools.org

Great Volga River Route Project
http://whc.unesco.org/en/activities/483 and www.gvrr.unesco.ru/?lang=E

Sandwatch Project
www.sandwatch.org

Teaching and Learning for a Sustainable Future
http://www.unesco.org/education/tlsf/index.htm
Earth Charter Initiative
http://www.earthcharter.org

UNEP "Ozzy School" learning tools about the ozone layer
http://www.ozzyozone.org/

UNICEF publication "Climate change and children"
http://www.unicef.org/publications/files/Climate_Change_and_Children.pdf

YouthXchange
www.youthxchange.net, a UNEP-UNESCO project on youth and responsible consumption.

Special recognitions

Our special gratitude goes to Elizabeth Khawajkie, former ASPnet International Coordinator (1976-2005), who paved the way and literally transformed the ASP Network into the largest school network in the world with the support of the UNESCO Member States. She generously edited this second collection of good practices with enthusiasm, commitment and conviction, and she remains a reference for the continuously growing Network of UNESCO Associated Schools.

The present publication is the fruit of the collaboration between colleagues from the DESD Coordination Section and the ASPnet International Coordination, as well as the ASPnet National and Project Co-ordinators, teachers and students worldwide.

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www.unesco.org/education/asp