Projecting the Planet into the Future

Preventing tsunami disasters

Taking the pulse of Iraqi universities

L’Utile: lost episode of the slave trade
Among all the reports about the Indian Ocean tsunami of December 26 and its tragic consequences, two extraordinary stories went to the very heart of education for sustainable development. A little English girl on a beach in Thailand with her family remembered what she had learned at school and understood the natural phenomenon that was unfolding before her eyes. She raised the alarm in time and was able to tell people the best course of action to take. The Moken people from the Surin islands, who from the dawn of time and issue. Non-copyright photos will be "Reprinted from 7, place de Fontenoy, 75352 Paris 07 SP, France © UNESCO/Niamh Burke May 2005

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Tsunami Special

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After the disaster, the Mokens from the Surin Islands (Thailand) rebuild their village

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When the earth began to shake in Sumatra, Indonesia, on March 28, the tsunami that devastated the Indian Ocean coasts in December 2004 was fresh in everyone’s mind.

Terrified that they would see the sea rise up once again, people living on the coast rushed out of their homes and ran for higher ground. The scars inflicted by the disaster are still visible everywhere in affected countries, adding to the climate of fear (see article p. 5). This time the earthquake did not cause a giant wave, but the new alert re-emphasized the urgent need for a tsunami early warning system.

UNESCO has a long history of experience in this field. The Intergovernmental Oceanographic Commission (IOC) launched a tsunami warning system for the Pacific in 1968 (see article p. 11). Thanks to the data supplied by hundreds of seismic stations and tide gauges installed in the Pacific, the system makes it possible to detect the appearance of a huge tidal wave and to warn the countries concerned, so that they in turn can alert their citizens living on the coast. Transmitting information at maximum speed is a key factor in the prevention of disasters.

That is why, in the aftermath of the catastrophe that struck the countries bordering the Indian Ocean, UNESCO proposed putting in place, as of June 2006, an interim warning system in the Indian Ocean region, until a global system comes into operation in June 2007. Experts believe that such a device can save numerous lives (see interview p. 8). But the chances for success and for the system to work also depend on the long-term efforts of all the countries involved. Because tsunamis are rare occurrences, they may eventually be relegated to a secondary level of priority. That is why it is crucial to develop a culture of prevention that sustains a constant awareness of the risk.

Agnès Bardon

On December 26, 2004, the waters of the Indian Ocean crashed into the Sri Lankan coast, killing more than 30,000 people. The giant waves have left behind a devastated landscape of ruins and debris. Martin Hadlow, Director of UNESCO’s Antenna for Post-tsunami Operations in Colombo (Sri Lanka) tells the story.
Welcome to the tsunami affected areas. The wording on the sign by the main road south of Colombo seems incongruous. The name of the sign’s sponsor, a local commercial firm, is written below. Within minutes of leaving the outskirts of greater Colombo, the first indications of tsunami damage become apparent. Broken houses, collapsed walls, scattered debris. Even here, on the relatively sheltered west coast of Sri Lanka and away from the full impact of the tsunami, the water held enough energy to cross a major highway, scouring the earth, flattening trees and buildings, disrupting the main railway line and bringing fear and misery in its wake.

But this is just the beginning. All along the low-lying parts of this busy, two-lane beachside road are scenes of unparalleled destruction. One can only look and wonder. Wonder at the sheer terror created when a wall of water, somewhere between three and ten metres high, suddenly reared up from the calm sea, consumed the beach, roared into hotels, houses, shops, schools. Buses, trucks, even a moving railway locomotive and carriages, were thrown great distances by the raw power of the flood. “These heavy vehicles...
“floated like feathers on water” I was told. Three of the recovered railway carriages now stand on display as a reminder of the day when some two thousand passengers lost their lives. Death visited hundreds and hundreds of kilometres of this coastline. Recent burial sites are clearly evident, white cloth both indicating deep mourning and marking the resting places of the deceased.

**REBUILDING FOR THE FUTURE**

As we drive further south towards Galle and Matara, the destruction becomes even worse. Affected area. Please help us! pleads a hand-written sign with a red arrow pointing off the main road and down a small alley towards the sea shore. Large black plastic tanks containing potable water become commonplace by the side of the road. Local dwellers stand quietly by them in small queues, containers in hand. Whole encampments of tents, neatly laid out in rows, become more evident on sporting and recreation fields on the inland side. Everywhere, there are further tangible examples of the outpouring of funds from the global community: small wooden structures funded by a German NGO, blue plastic sheeting provided by the refugee agency, UNHCR, rugged structures from Japan....

Families are laying concrete blocks and bricks as they start afresh. Everyone seems busy rebuilding their lives and their futures. One can only marvel at their strength and fortitude. Less then two months after the tsunami, the railway tracks, grotesquely twisted and buckled beyond use, have been re-laid by Sri Lankan rail workers and much of the main line reopened to train traffic.

But amid the signs of hope and renewal are the elements of ongoing despair. The foundations of a house stand near the beach, concrete steps leading up to what was once the first floor. Now, there is nothing above. A man sits on the steps staring out to sea. But the tsunami was also cruelly selective, some buildings looking remarkably unscathed, while neighbouring properties were completely destroyed. Even the dead have found no peace, cemeteries being disturbed by the raging water and headstones smashed and toppled.

The ancient city of Galle also awaits the return of tourists. The huge Galle Fort, a UNESCO World Heritage listed site, seems, to my untrained eye, to be relatively unscathed. Within the walls of the Fort, the old houses are intact. I am told that the water from the sea flowed through old portals in the walls and into the town’s drainage system, but without causing damage, apart from minor flooding. Soon-to-visit UNESCO teams will expertly assess the effects of the tsunami on the Fort and another old fortified area at Matara, a town further south.

**WAITING FOR BETTER TIMES**

At the Rampart Hotel, the veranda restaurant overlooking the Galle Fort and the sea is almost empty. The hotel staff laments their current fate and look forward to better times. On the way out, the shop manager calls me into his empty store. It’s a quiet time for him too. Outside the walls, the tsunami swept through Galle’s main bus station and market, carrying many people to their deaths. Galle’s famous cricket ground also bore the brunt of the sea’s invasion, the playing turf being sodden by saltwater and needing replacement before international cricket fixtures can again be played.

Lost hopes and shattered dreams crowd each side of the road as we travel onwards to our Illuminated Hotel Al Madeena in Galle (Sri Lanka) to reopen.

© UNESCO/Nigel Swann
terminus, Matara. Houses within Matara’s old Dutch-era fort have fared less well than those in Galle. Without the protection of an all-surrounding wall and caught between the beach and a lagoon, the homes were brutally destroyed by the seawater. In the lagoon, four young men carrying long wooden prod at the sea floor. We are told that they are looking for some 15 missing vehicles which now lie somewhere in the lagoon, probably under tonnes of mud and sand. There is little chance of finding human remains here as the sea, when it retreated, took back to itself much of what it had destroyed. Across the lagoon, a large fishing vessel sits high above the level of the water, thrown there by the tsunami’s destructive force.

INCALCULABLE COST OF SHATTERED DREAMS

As we drive back towards Colombo, I realise that I have seen just a small part of the southern region affected by the tsunami. The east coast of Sri Lanka was, apparently, more harshly struck and devastation in some places is almost complete. Sri Lankan authorities estimate that, nationwide, some 31,000 people were killed by the tsunami and over one million displaced. More than 100,000 homes and some 176 schools were destroyed or damaged, and many museums and archives completely wiped out. This is human, social and cultural catastrophe writ large.

Nothing that I have watched on the television news has prepared me for the reality of seeing the damage with my own eyes. While a monetary figure can be placed on replacing bricks and mortar, fishing boats and railway lines, the human toll is incalculable. It can only be imagined how these people, who have lived with the sea as their friend, livelihood, food source and cultural focal point for countless generations, can ever view the now tranquil Indian Ocean waters in the same way again. As I drive northwards to Colombo, I watch the waves rhythmically rolling ashore on the white sandy beach. A now benign sea hides its capability to crush entire villages, kill whole families, traumatize millions of survivors and carry away trucks and trains, as if they were just “feathers on water”.

Martin Hadlow
Colombo (Sri Lanka), February 21, 2005
talking to LAURA KONG

“MANY LIVES COULD HAVE BEEN SPARED”

According to the latest estimates, the tsunami that struck countries with coasts on the Indian Ocean in December 2004 caused nearly 300,000 deaths. Had an early warning system been in place in the region, the toll would not have been as heavy. UNESCO’s Intergovernmental Oceanographic Commission set up such a tsunami alert system in the Pacific in 1965, and is now working on a world-wide one that will be operational by June 2007. Laura Kong, Director of the International Tsunami Information Centre based in Hawaii, outlines the project’s benefits.

The Pacific Tsunami Warning Centre had detected and located the earthquake, but was unable to warn people on the coasts of the Indian Ocean countries of a tsunami risk. Could we have imagined a different scenario?

LK. We could have, if there had been an early warning system. First it detects an earthquake, determines how large it is and then sends out a warning to the right people, in the right manner. It’s also necessary to confirm that a tsunami wave has been generated, because most earthquakes don’t generate tsunamis. That requires instruments. Such a system also means that those notified then have to know exactly what to do, which is to get at least 1km inland or move 10 meters uphill. If such a system had been in place, many lives could have been spared in December 2004.

But the problem is that many countries don’t have a 24-hour instant alert system. Japan and Hawaii have sirens, as well as radio and TV broadcasts. Japan can get a message out in two to five minutes. But they often get earthquakes and tsunamis, so they can justify the amount of money they put into the system, while Hawaii’s notification system was developed with other hazards in mind as well, like hurricanes, because regional scale tsunamis are rare.

But Indonesia, for example, doesn’t have the necessary communication infrastructure at the local level. It’s a pretty
tough challenge for them to set up a system. And their special case, being in a seismically active area, is that the hazard is right off their coast. So they probably don’t have much time to make a warning.

Q. There have been pledges to get an early tsunami warning system for the Indian Ocean up and running in 12-18 months. Is that feasible?
LK. An interim system can be ready soon, using the existing warning centres and data stream. The seismic network is probably already there to detect the largest earthquakes. But it is not good enough to be able to tell accurately whether the earthquake is in the water or on land. They’re going to need a lot more instruments to do that – and the data have to be collected and sent somewhere in real time. With unlimited resources in terms of money and people, it’s possible to deploy these instruments and get a system running in a year or two.

In Bangladesh, a lot of money was put in to develop a storm surge early warning system in the last decade. If it is able to deliver a message instantly at all hours of the day, you no longer have to develop that component; you’re just adding the tsunami warning. So there’s no need to wait. Work can start now in these countries. But this means education of public officials, elected officials, government heads, agency staff, fire, police, and then the public.

Q. So there are seismic detectors already in place in the Indian Ocean?
LK. They’re there. The existing global network has enough fidelity to identify when there’s a very large earthquake, and then to locate it. To have a more precise location it would take more instruments, perhaps 5 or 10 more stations – and probably that will happen. But if there were a large earthquake tomorrow, the Pacific Tsunami Warning Centre and all the other geophysical observatories that get this freely available data stream would know instantly about it. They’d be able to locate it quickly and be able to estimate its size.

Q. How do you detect a tsunami and where it’s heading?
We can detect it in the open ocean using deep ocean detection systems, but we still have to model it or propagate it to shore. These systems are very sensitive gauges that sit on the ocean floor and measure changes in pressure in the water column above. It’s a new technology that has just become operational in the last few years. Because tsunami waves go out in every direction from the epicentre, there is a very simple way to know if one has been generated, by using tide gauges at the coasts. So, if another tsunami event occurred off western Sumatra, that wave would hit at least one tide gauge before it started heading towards Thailand or Malaysia. And if a large wave generated in Indonesia is detected on a coastal gauge, that’s a pretty strong indication that as much or more energy is going the other way towards Sri Lanka. If you had a deep ocean gauge between where it occurred and the Indian continent, then that would be a direct indication that a large wave had been generated. We would still need to carry out numerical models to estimate its wave height or coastal impact.

Q. Once you have a system in place, the instruments have to be maintained. What does that involve?
One of the limitations of the deep ocean pressure gauges is that they need power. They sit on the ocean bottom and talk to the surface by modem when there’s a large signal. If it’s big enough they transmit the data to a satellite. But this requires maintenance. At present, every year after you deploy one of these instruments, you have to go back in a ship, locate the gauge, bring it to the surface from perhaps 4000 metres

At a glance

A Life in Seismology

Laura Kong has been Director of the UNESCO/IOC International Tsunami Information Centre, based in Honolulu, Hawaii (USA) since 2001.

After finishing her PhD in marine seismology at the Massachusetts Institute of Technology and the Woods Hole Oceanographic Institution (USA) in 1990, she spent a year as postdoctoral fellow at the Earthquake Research Institute in Tokyo (Japan), before taking up a post as geophysicist at the Pacific Tsunami Warning Center.

From 1993 to 1995, she worked as a seismologist at the Hawaiian Volcano Observatory. From 1996 to 2001, before becoming Director of ITIC, she held a research post at the Hawaii Institute of Geophysics.
depth, change the batteries and the hard disk, service it, then throw it back in the water. This has to be done for each of the instruments. So the recurring cost is high, in addition to the initial investment. These deep ocean devices might cost up to $300,000 to deploy initially and then perhaps $50,000 a year to maintain. So you can put in ten of the coastal tide gauges, which are a lot easier to install and maintain than these ocean buoys, for the cost of one deep ocean gauge. But the ocean buoys give you a data point in the middle of the ocean, which the other one can’t. And they buy you extra time for a warning. Technology is improving very quickly these days so it’s very probable that the costs of the deep-ocean systems will go down and servicing time may be reduced as better and more reliable electronic components are developed.

Q. So what will be the next stages?
LK. The IOC can’t implement an Indian Ocean system by itself. It doesn’t have the funding base, or the human resources. It has information and guidance that we’ve used in the Pacific. Each nation has to contribute what they can in terms of instruments and infrastructure to build a regional system. The IOC doesn’t own any of it.

In order to build a truly regional system, nations need to contribute national resources in a freely available way, especially in terms of data sharing. This is critical to its success.

Q. Do all the States involved agree on this?
LK. We are aware that some countries have not freely shared their data in real time in the past. Some countries do have networks that are not yet generating real-time data, and so we hope to encourage and work with them so that they will be able to contribute for example, sea-level data, to a regional warning centre. It’s well known that data sharing is critical, and so we will want every country who participates in the system to contribute. Through the IOC coordination process, we hope to achieve this consensus opinion, as well as agree on where and how the regional centre will function.

Q. Is there a working group to see the proposed global early warning system through to its becoming operational in 2007?
The IOC will coordinate the regional effort inter-governmentally. But the regional effort has to be built on national efforts, with each country responsible for its own national system, built according to their particular seismology, organisational structures, culture, and ways of interpreting warnings. That’s a big job. The IOC, and particularly the ITIC, which I run, are of course ready and willing to assist in their efforts.

Countries are moving very quickly to identify monitoring requirements and establish plans for communicating information to their peoples. That is a good sign that we will see a minimal system implemented in the next year or two. But if that’s going to happen, it means a huge amount of work and resources. No one’s getting any sleep now.

Interview by Peter Coles
Paris (France)
It was early afternoon on May 22, 1960, in the thriving port of Corral, southern Chile, when disaster struck. The town’s inhabitants were at first startled to see the sea rising and then disappearing: the water simply withdrew, leaving boats marooned on the mud of the sea floor. Just a few minutes later, the terrified inhabitants began to witness the return of the water, but this time in the shape of a gigantic wall that was decimating everything in its path. Thousands of people died that day on the shores of southern Chile and in lands as far away as Hawaii or Japan, for the giant wave (or “tsunami,” as the Japanese call it) travelled the entire Pacific Ocean, coast to coast.

That tragedy taught Chile a tough lesson, which bore fruit six years later via the creation of the Sistema Nacional de Alarma de Maremotos, or National Tidal Wave Warning System (SNAM). At the same time, UNESCO’s
Intergovernmental Oceanographic Commission (IOC) was finalizing The International Pacific Tsunami Warning System, which now allows for direct communication with 26 separate member-states, enabling warnings to be sent and received whenever emergencies arise in any part of the ocean.

In Chile, both of these tasks now fall to the Navy’s Hydrographic and Oceanographic Service (SHOA), based in Valparaíso, which employs advanced technology alongside a warning management system and public awareness-raising to ensure that the disaster of 1960 will never be repeated.

THREE REGIONAL CENTRES
Commander Roberto Garnham, director of the SHOA, explains that this system is working very effectively in the Pacific Ocean, and that much has been learnt from previous tragedies along the coastlines of both South America and Asia. The system, which relies on antennae stationed in every one of the member countries, is based around three regional centres - one in Hawaii, one in Alaska and a third in Chile – which together monitor and supervise events across the whole Pacific Ocean. In the case of Chile, this is carried out by a network of digital devices placed along the coast of Chile and its nearby islands, which keep tabs on abnormal variations in the sea level and in seismic activity. The system is triggered whenever a seismic event leads to a tsunami warning within the national territory, or whenever the Valparaíso centre receives a memo or a warning from the Pacific Tsunami Warning Centre.

When a warning is issued, the SHOA passed on the alert to a public agency called Onemi (the National Emergency Office), which immediately
Activates the network that has been set up to organize contingency plans through direct radio contact with regional governments, which in turn relay information directly to provincial and community authorities. This network means that the whole country can be warned of a possible approaching tidal wave within five minutes or less.

Commander Garnham notes that the best way of knowing if an earthquake will produce a tsunami is the strength of the tremor: whether it is weak enough to allow someone to stay standing, or strong enough to force people on the ground to lose their balance. “If this happens, the best recommendation I can give is that people who live in the coastal zone should take a torch, batteries and a radio, and head for higher ground, which must be over 25 metres above sea level,” he says. Once the first alert is given, if the SHOA confirms that a tsunami wave has been produced, then the news is conveyed once again to Onemi, which can then determine the estimated time of arrival of the water for different parts of the country.

From that moment on, each affected community must put into practice its evacuation and civil defence plans. As part of these plans, the country’s 28 main ports have maps showing the areas that will be flooded in the event of a tsunami. Two of them, the northern cities of Arica and Antofagasta, have also set up helpful signposts, and keep their local populations regularly informed of emergency plans.

GLOBAL COOPERATION IS VITAL

While many districts have yet to put enough work into preparing their communities for a possible tsunami, the SHOA and Onemi continue to produce information and educational material. Above all else, these organizations stress that with sound evacuation plans and a well-informed and prepared population, over 90 percent of the members of any locality can be saved in the space of 10 to 15 minutes.

“The benefits of a tsunami warning system are so great that UNESCO, through its Intergovernmental Oceanographic Commission, is intent on establishing a worldwide warning system. And we are ready to contribute our experience and our knowledge if they are needed,” declares Garnham, adding that the centre he heads operates 24 hours a day, 365 days a year.

Garnham observes that knowing which areas can be flooded can affect the value of land and tourist sites, as well as the possibilities for general development, but emphasizes that a much greater good is being served. “The world must acknowledge that certain events are adverse, and that they must be prepared for as Chile has already done. This country now has buildings made to resist earthquakes and flooding maps, which enable plans to be drawn up to protect local populations,” he concludes.

Emilio Lorca, head of SHOA’s geophysics department, warns for his part that it is not enough for one country to have a warning centre if this is not connected with others. “The system works precisely because it is interconnected with other locations that exchange information. If not, this would be useless,” he states.

Organizing a system such as the one across the Pacific Ocean is, of course, far from easy. Provisional estimates suggest that a similar emergency network in the Indian Ocean would need around $30 million, well-trained staff, a tailor-made communication system and a lot of time. “A system such as this can raise awareness of the risk of a tsunami, and that is very positive, because it helps countries to organize themselves and work in cooperation,” insists Lorca.

According to this expert, the number of fatalities caused by the tsunami in South Asia would have been much lower if the region had benefited from a system like that operating across the Pacific.

Marcia Franque
journalist from the daily “El Mercurio”
Valparaiso (Chile)

www.unesco.org/tsunami
UNESCO’S CHANGING PARTNERSHIP WITH THE PRIVATE SECTOR

Once limited to sponsoring, partnerships between the private sector and UNESCO are now becoming more numerous and ambitious. Information and communications technology (ICT) are providing a special opportunity to experiment with a new form of cooperation with business.

The idea came in 1999, at the World Economic Forum in Davos. United Nations Secretary General Kofi Annan invited the private sector to work with the UN. The Global Compact was launched, and a new relationship between business and multilateral organizations was born. Since then, the concept has developed, particularly in the field of information and communications technology (ICT), integral to achieving global Millennium Development Goals.

The new cooperation is also key to meeting the Education For All goals. As Mr Abhimanyu Singh, Director of UNESCO’s Division of International Coordination and Monitoring of EFA points out: “If we are to have a better chance of achieving the EFA goals, then it cannot be done without broadening the partnership to the private sector, globally and in-country.”

Elizabeth Longworth, Director of UNESCO’s Information Society Division, agrees. “The digital divide is one of the greatest obstacles to the fulfilment of UNESCO’s key mandate to help create, share, disseminate and preserve knowledge,” she said.

UNESCO’s growing list of partnerships with ICT companies include Hewlett-Packard, Intel, Microsoft, Alcatel and Hitachi, and range from teacher syllabus programmes to community access centres, science networks and recording cultural heritage. The nature of the partnerships also varies, from more traditional sponsorship to strategic agreements where each side contributes individually and no money changes hands.

STRATEGIC OBJECTIVES

So far, results from the field are impressive. Where UNESCO might have funds to train one teacher, a partnership in the same area with an IT company can enable 1,000 teachers to be trained. However, partnerships with business need to be carefully considered, particularly when commercial interests are at stake. “We can’t enter strategic partnerships for the sake of partnering with the private sector. There has to be a very strong strategic objective for UNESCO,” said Ms Longworth. While each agreement is different, all must fit within the Guidelines on Cooperation between the United Nations and the Business Community, issued by the Secretary-General in July 2000.

In recent months, much attention has
HP and UNESCO work to reduce “brain drain”

From 1990 to 2000, Southeastern European countries affected by the Balkans conflict lost intellectual capacity on a massive scale. Research indicates that up to 70% of teaching and research jobs were lost in some university faculties.

UNESCO’s partnership with Hewlett-Packard (HP), “Piloting Solutions for Alleviating Brain Drain”, implemented in seven universities in Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, and Serbia and Montenegro, entails a three-step process of reconnecting faculties to the web, connecting scholars to international colleagues and university resources and, finally, identifying international partnerships and funding opportunities.

“Without the partnership,” says Michel Benard, HP University Relations Manager for Europe, the Middle East and Africa, “HP would not have had access to existing UNESCO’s higher education and scientific networks, both at governmental and institutional levels.”

Iulia Nechifor, Programme Specialist in Science Policy and Capacity-Building at UNESCO’s Venice office, said initial research indicated some positive signs of reversing brain drain. For example, in Croatia, some academics are returning to their previous faculties, which offered them new opportunities.

According to Stamenka Uvalic-Trumbic, Chief of UNESCO’s Section for Access, Mobility and Quality Assurance, Division of Higher Education, the partnership has not only strengthened scientific and educational capacity at national level but also re-established dialogue among young researchers and linked them to their research fellows abroad. Encouraged by these results, the Education Sector intends to replicate the project in Africa, a region heavily affected by massive brain drain.

been focused on two particularly high profile partnerships between UNESCO and the private sector: a Memorandum of Understanding with Intel and a Cooperation Agreement with Microsoft. These represent a new level of strategic engagement with the private sector, taking partnerships beyond the more traditional idea of funding and sponsorship to defining how to meet the needs of developing countries. While these new partnerships have attracted much media attention, not all reactions have been positive. In December 2004, the French newspaper Le Monde cited fears that such agreements were diluting UNESCO’s strong support for Free and Open Source Software (FOSS).

For Ms Longworth, such fears are are based on misunderstanding. In 2003, the World Summit for Information Society produced a Declaration of Principles and Action Plan stressing the need for all software, whether proprietary or non-proprietary, to be in a technology-neutral approach to development. To this end, Ms Longworth said UNESCO gives strong support to the development of free and open software. One example is the software “Moodle” in six branches of the Arab Open University.

GUIDED BY COMMON INTEREST IN SOCIAL PROGRESS

“Our mandate is about knowledge transfer,” Ms Longworth said. “We could argue that we are absolutely committed to open source and we have done a huge amount to promote this ideologically and practically. In an ideal world we would all use open source – it has low prices, it’s interoperable, there are lots of advantages. But if we are talking about immediate development we cannot always wait, and how can we tell developing countries they must only use open source where developed countries have a choice?” she asked.

Philipp Müller-Wirth, Specialist for Cooperation with the Private Sector at UNESCO, is acutely aware of the new challenges and opportunities for UNESCO in working with the private sector. When he arrived at the Organization in 1993, the idea of working with business extended to the latter contributing money through sponsorship programmes. Today, he facilitates a plethora of public-private partnerships, from L’Oréal’s high profile Women in Science programme to the Hewlett-Packard partnership to reduce brain drain in Southeast Europe. “In working with UNESCO, companies not only associate themselves with a legitimate image, but they obtain access to our networks which are often strong in countries where their structures are still weak,” he explains.

Though sometimes diverging, the interests of UNESCO and the private sector can also be common interests. UNESCO needs the private sector’s powerful influence and ability to leverage funds, while business benefits from better educated and trained populations.

“The long-term interests of the private sector are the same as those of UNESCO. Both have a fundamental interest in sustainable development which allows people and their countries to achieve real social progress and prosperity,” stresses Wallace Baker, a senior partner in the law
Building bridges across the digital divide with Microsoft

The global Cooperation Agreement between UNESCO and Microsoft was signed in Paris last November 17 by Director-General Koichiro Matsuura and Microsoft Chairman Bill Gates. **It covers areas** including ICT’s and education (a standard syllabus for teacher training); training for disadvantaged youth and adults; and the development of on-line communities of practice among many other areas of mutual interest. Certain “UNESCO Knowledge Communities” will be founded on a new Microsoft platform which offers a rich set of functions for online collaboration and knowledge management. As Axel Plathe, a Senior Program Specialist with UNESCO’s Information Society Division, explains, the platform has many advantages, including the creation of a virtual space “where civil society can gather like a café or a marketplace to speak about issues”.

In several of the projects envisaged, work will feed into existing UNESCO programmes. Some of the work is already underway, such as teacher training and the E-learning initiative now available through UNESCO’s portals. Others, including programmes for refurbishing old computers and the Sub-Regional Resource Centre to support Youth Information and Learning Structures in the North African Arab States, are currently in the planning phase.

Dr Tarek Shawki, UNESCO’s Regional Communication and Information Advisor for the Arab States, believes that staunch defenders of Free and Open Source Software (FOSS) are missing the point when they criticize UNESCO’s work with proprietary software companies. “UNESCO has very limited programmes resources and in order to have any real impact we have to revolutionize our execution modalities,” he explains.

While very supportive of open source programs (he facilitates three of them through the Cairo office), he believes in pragmatism. “To make it a religious matter is a mistake; it’s whatever works best for our Member States,” he said.

“It is important to understand that we are not biased towards Microsoft, we are simply coordinating our efforts in areas of mutual interest. Our value is as a neutral broker agency.”

Microsoft agrees. Says Frank McCosker, Senior Director of Global Strategic Accounts, “As an international corporate citizen of conscience, Microsoft is committed to initiatives throughout the world that seek to create social change and to expand opportunities through greater access to ICTs.”

In November 2004, Intel signed a Memorandum of Understanding with UNESCO to develop a syllabus for training teachers in the use of ICT in the classroom. Intel has become one of the key players in the area of teacher training and ICT.

For Intel, which has already invested US$ 1 billion in primary and secondary education since 1989, and which has trained 2 million teachers worldwide in more than 50 countries, the agreement is an important step. As Intel Foundation President Wendy Hawkins said, “Our view is that public and private sectors share the same objective in this area – finding the best use of technology for improving the quality of teaching and learning around the world. We all win when graduating students have the best possible preparation for the knowledge-based economy.”
On July 31, 1761, the French ship L’Utile is shipwrecked on a tiny island in the Indian Ocean. Not long after, the sailors manage to reach Madagascar, but they leave behind the Malgache slaves they had embarked illegally on L’Utile. Only a handful of survivors remain when they are found 15 years later, in 1776. UNESCO has reopened this lost chapter in the history of the slave trade.
kilometer square, which now bears the name of the man who saved the last few survivors: Tromelin."

A "relation", one of the gazettes sold on the street in those days, gave details of the shipwreck: "Traversing a host of dangers, most of the crew finally succeeded in reaching the island. Almost all were injured, maimed and covered in bruises; they were specters rather than men." At the beginning of their exile, the survivors salvaged wood from the wreck as well as tools and supplies: "a few kegs of brandy and a few barrels of flour." They built a forge and dug two wells, "the thick white milky liquid" from the first proving to be toxic. In spite of the hostile environment, food was not a major problem. All they needed to do was catch one of the 500-kilo sea turtles that lived on the island.

**ABANDONED, FORGOTTEN, FINALLY RESCUED**

Just two months after the wreck, the survivors managed to build a boat. "Preparations were made for an imminent departure on the night of the 26th to the 27th of September," according to the gazette. "All hands worked feverishly... they were able to move the boat along rollers, despite several accidents and unrelenting terror...Finally it was launched, held by an anchor salvaged from the wreck." But not all the shipwreck victims were invited aboard the "Providence", name given to the vessel. "The 122 French sailors boarded the wreck." But not all the shipwreck victims were invited aboard the "Providence", name given to the vessel. "The 122 French sailors boarded the wreck." But not all the shipwreck victims were invited aboard the "Providence", name given to the vessel. "The 122 French sailors boarded the wreck."

About 60 men and women stayed on the island, with a "writ testifying to their services" and the promise that the sailors would return to rescue them. As for the French sailors, they reached Madagascar a few days later, and continued to Mauritius where they made a report on the shipwreck and the slaves. "The governor of the Ile de France was so angry at the late captain La Fargue for having disobeyed his orders by taking slaves aboard the Utile that he refused to send a ship to get them," says Max Guérout. "On the day the crew arrived, he wrote, 'Today the Utile survivors arrived. The captain has died. Good for him.'" Yet it was the slaves who paid for his transgression.

After waiting in vain for two years, the desperate survivors built a raft and 18 of them sailed for home. We do not know if they made it. We do know is that the second attempt at escape, 10 years later, failed. A French sailor was on the second raft, and had they succeeded, he would have produced a written account.

In 1773 or 1774, when the Utile shipwreck victims were long forgotten, a passing ship spotted signs of life on the Ile de Sable. The new governor dispatched the vessel the Sauterelle to the rescue, but it failed in its attempt to approach the little coral island, surrounded by waters 4000 meters deep. Two sailors headed for shore in a canoe, but smashed up against a reef. One sailor managed to swim back to the ship, the other was left on the island. According to the women who were finally rescued, the sailor and the last three male survivors then built a raft. The four men, with three of the women, sailed away from the island. They were never seen again.

Another two expeditions failed before the corvette La Dauphine finally arrived, on November 29 1776. The Chevalier de Tromelin, a royal navy officer, was its captain. What happened when he met the last survivors, and where is his report? Hard to say, because "It’s mentioned in the archives, but I can’t get my hands on it," says Max Guérout, who is trying to trace the officer’s descendants in Lorient, in southern Brittany.

So far, much of the historical research linked to these events has been fruitful, due largely to UNESCO’s financial support. More than 100 documents have been examined in several cities in France, notably Bayonne, where the ship was commissioned. Genealogical research has begun to find descendants of the Utile sailors; more is planned on Mauritius, where Tromelin took the seven women and the little boy.

**GENEALOGICAL RESEARCH**

This historical research is one of three dimensions of the “Forgotten Slaves” programme launched by the GRAN, as part of the International Year for the Commemoration of the Struggle Against Slavery and its Abolition (2004), and of UNESCO’s Slave Route Programme. (http://www.unesco.org/culture/dialogue/slave). Inspired by the story of the Utile, “Forgotten Slaves” aims to conduct historical and archaeological research to elucidate every aspect of this terrible event, representative of the slave trade. It will also serve as part of an information campaign targeting the media, the
general public and schools, to raise awareness of issues surrounding slavery. Software called “I-maj”, recently launched on GRAN’s website (http://www.archeonavale.org/) allows partners to write, edit and post texts approved by the project’s supervisors.

A group of 17 children from a primary school in Brittany (France) are the first partners in this category. The school is not far from the Tromelin family manor, and the pupils are focusing on the Chevalier’s life. Guérout looks forward to extending the network of schools to Reunion Island, Polynesia and Martinique and to forming partnerships with UNESCO’s Associated Schools Project Network and the 90 schools in SEED (Schlumberger Excellence in Educational Development Programme) in New York.

Finally, an exceptional adventure will begin in 2006 with the archeological phase of the “Forgotten Slaves” project. A dozen archeologists, divers, scientists and doctors are off to Tromelin Island for a 25-day land and underwater survey.

“It’s a complicated operation,” says Guérout. “Tromelin is not a tourist destination. There are no flights and access by sea is particularly risky because of whirlpools, currents and breakers.”

Where there’s a will, there’s a way. On the island, the GRAN will try to locate the old camps, the forge, the well and the only permanent building dating back that far, a shelter for the fire. “There’s a theory that they kept the fire going for 15 years,” says Guérout. “That does not seem very likely, given the trade winds and the frequent hurricanes.” The doctor looking after the team will also do physical anthropology research should they find burial places.

Underwater, the team will explore the wreck, and also vast sedimentary basins, which according to Guérout “are a sort of receptacle at a depth of six or seven meters, into which objects may have fallen”. Pieces of ceramic have already been found washed up on the shore. Each little fragment is significant to recreate the history of the forgotten slaves, who are now being rescued from oblivion.

Jasmina Sopova

For more information:
http://www.unesco.org/culture/dialogue/slave
http://www.archeonavale.org

1. The island is still today home to a large colony of sea turtles, and has been listed as a natural reserve. Its “green turtle” is an endangered species and protected since 1981 by the Washington Convention (1975).
Once regarded as the best universities in the region, Iraqi universities are today in a pitiful state. A round table focusing on revitalising higher education in Iraq, organized by UNESCO, was held in February in Paris. Its goals: evaluate the situation and define future needs.

In 2003 when the coalition forces moved in, Iraqi universities were already reduced to a pale shadow of their former selves. Gone was the time that they had established close ties with British universities, in the years before the Iran-Iraq war. Thousands of Iraqis studied for their doctorates at universities across the UK.

The flow stopped almost overnight. Iraqi academics quickly became isolated in a precarious university system where political allegiance was as important as intellectual competence. Many left, either because of political differences with Saddam Hussein’s regime or because the career opportunities were better overseas. Now, as democracy flickers into life and international aid for the stricken university system at last begins to be felt on the ground, the Diaspora is being encouraged to return.
At Baghdad’s Mustansiriyah University, lab equipment is rudimentary

The country needs its elite more than ever. The universities, struggling to cope with a massive infrastructure deficit, are bulging with students. The situation is all the more critical as two Gulf wars have also contributed to damaging the system. Idris Salih, Iraq’s deputy minister for higher education, told a round table meeting in Paris convened by UNESCO’s higher education division that 85% of the universities’ infrastructure was destroyed in the months of chaos as the coalition struggled to gain control.

In any case, reconstruction is clearly going to be founded as much on Iraqi as on imported know-how. After the fall of the old regime, USAid put together a $20 million strategy based on consortia of US universities with partner universities in Iraq. A few weeks later, Qatar launched a $15 million project to revitalise the universities as part of a $100 million reconstruction plan. But Mr Salih says: “We were unable to benefit from financial resources from donors because they arrived late or were not paid at all.”

PROBLEMS WITH AID DELIVERY AND SECURITY

Progress on the ground has been limited, partly because of security issues. The USAid programme was predicated on the inclusion of non-US universities in the partnerships, but only a small number joined up. Only Oxford University represented the UK, as a partner with the State University of New York Stony Brook in a consortium for rebuilding Archeology, Assyriology, and Environmental Health. But Oxford’s involvement ended with the tragic death of the one academic who was pivotal to the project.

Some countries, notably the UK through the British Council and Germany through DAAD, have given direct assistance in the form of intensive training courses for university administrators and updating opportunities for academics in economically and socially strategic fields. UNESCO has already drawn on some of the Qatari US$15 million to send medical and engineering laboratory equipment and textbooks. At the end of 2004, a shipment of US$4.6 million of equipment and materials for medical and related disciplines such as dentistry, pharmacy and nursing, as well as for engineering faculties, was delivered to universities in Iraq. It also included textbooks for students and reference books valued at a further US$1 million. Ten tons of books were delivered by the British Council to universities in Baghdad and Basra.

New pledges were announced from Qatar and the Republic of Korea during the Paris conference. The First Lady of Qatar, Sheikha Mozah Bint Nasser Al-Misand, who is a Special UNESCO Envoy for Basic and Higher Education, pledged a further US$1 million dollars; Korea pledged US$200,000; and the Doha Bank pledged US$30,000.

“These donations are warmly appreciated and will be used for the implementation of concrete projects for the benefit of students, academics and researchers,” Mr Koichiro Matsuura, UNESCO’s Director-General, said. But that depends on promised aid being delivered. In February one Iraqi university president privately estimated that barely 10% of the resources pledged had materialised on the ground. The amount is not sufficient to stem the brain drain affecting Iraq. Numerous Iraqi academics leave in search of opportunities closed to them in their own country. One initiative to be taken further is to encourage the Iraqi academic Diaspora to be encouraged to return, through temporary leave of absence from universities elsewhere in the Middle East or in the West.

Salaries are being increased – from A$150-400 a month to A$1,000-1,500. But the most severe disincentive is the security situation. Baghdad University president Mosa Al-Mosawe said that since the fall of the old regime 47 academics had been assassinated – 17 of them from his own university. Kidnapping for ransom is rife – “the threats come from lazy students to get some finance, especially near the time of final assessments”.

BRAIN DRAIN

Mr Salih said that more than 2,000 academics had left Iraq under the old regime. Since its fall a further 260 have followed them “The 19,000 [who remain] are heroes working under difficult conditions – lack of electricity, power cuts every day, terrorism and the fear of terrorism that weighs on them every day,” he says. But whether academics who have relocated to countries where
secularism is the norm would return to an Islamist university system to teach segregated classes is highly questionable.

Meanwhile some experts question whether it is sensible to rebuild the system along the lines left by the previous regime. Some universities, created to serve political rather than academic needs, demand vast injections of resources to enable them to offer quality higher education. But are they worth the investment? Jairam Reddy, who guided South African universities’ emergence from the apartheid era, has recommended a critical appraisal to determine whether unsustainable institutions should be shored up, or efforts concentrated on bringing stronger universities back to their former levels. Georges Haddad, director of UNESCO’s Higher Education Division, was upbeat about the prospects. “It is important for us to have a strong, democratic Iraq...Without higher education there is no future. I do not expect the moon but it is important that the dialogue is started and partnership is under way,” he said.

MOVE QUOTE

As the round table wrapped up its proceedings there was a clear acceleration of pledges of support – the inclusion of Iraqi academic leaders within the world university community, scholarships and exchanges.

Mr Salih concluded: “Higher education needs more help – this is the key to the future in building a new Iraq based on multi-party democracy and respect for human rights.”

Since then, a real dynamic has taken form around the projects initiated by the round table and the Higher Education Division is receiving offers of cooperation from institutions, governments and other donors.

David Jobbins
Journalist, Times Higher Education Supplement
Montreal World Book Capital City

On April 23, 2005, World Book and Copyright Day, UNESCO named Montreal the “World Book Capital City 2005-2006”. It is the fifth city to receive the honour, after Madrid (2001), Alexandria (2002), New Delhi (2003) and Antwerp last year. The selection committee is made up of representatives of the International Publishers Associations (IPA-UIE), the International Booksellers Federation (IBF), the International Federation of Library Associations and Institutions (IFLA), and UNESCO. This year the committee’s selection was made in recognition of the quality of Montreal’s programmes to promote books and reading, and of the dedication of all players in the book industry. The city’s literary scene is, moreover, extremely vibrant and situated at the crossroads of diverse cultures: English, native, Caribbean, French, Hispanic and Asian. All means of communication will be used to celebrate the special year of books, with a selection of 200 works of fiction evoking Montreal in libraries, bookshops, and on the internet. Festivals and exhibitions will take place throughout 2005. At the close of the event, which will also include cultural exchanges with cities such as Barcelona, Hiroshima, Turin and Shanghai, an International Copyright Symposium will be held, bringing together 300 publishers and specialists in April 2006.

Campaign against Racism

“All equal in diversity: mobilizing schools against racism, discrimination and exclusion”: that was the slogan of UNESCO’s campaign on March 21, to mark International Day for the Elimination of Racial Discrimination. Schools belonging to UNESCO’s Associated Schools Project Network in countries participating in the “Breaking the Silence” Transatlantic Slave Trade (TST) Education Project signed up for the initiative, launched at the International TST Youth Forum in Port of Spain (Trinidad and Tobago). It is a follow-up activity to the International Year to Commemorate the Struggle against Slavery and its Abolition, celebrated in 2004. It is also a new point of departure for a series of actions and joint activities with other ASPnet schools.

World Heritage in Images

Thanks to the high definition images and sounds of Japanese television channel NHK, it is now possible to view brief documentaries on 10 World Heritage sites on UNESCO’s website. The partnership between NHK and UNESCO builds on state-of-the-art digital visual and sound processing technologies. The images were selected, adapted and made accessible on the web by UNESCO. In the long term, these documentaries are expected to cover all World Heritage sites, as well as all cultural expressions and spaces protected by the International Convention for the Safeguarding of the Intangible Cultural Heritage. Concurrently, a data-base system will allow such images to be used for various projects, such as DVD and other audio-visual package operations, public exhibitions, new types of exhibition using virtual reality systems, and production of quality replicas for exhibition and academic purposes. An advisory committee has been formed to ensure the project’s quality, headed by Professor Ikuo Hirayama, UNESCO goodwill ambassador.

For more information: www.portal.unesco.org/culture
At the opening of the International Conference on Biodiversity: Science and Governance, held at UNESCO January 24 to 28 2005, French president Jacques Chirac called upon the international community to create an “international group on the evolution of biodiversity”. More than 7000 animal species and some 60,000 plant species are in fact threatened, according to the World Conservation Union (IUCN). Koïchiro Matsuura, Director-General of UNESCO, declared to the audience, including a number of other heads of state, that “The accumulation of knowledge must go hand in hand with the establishment of systems for observing and preventing ecological and social dynamics.”

This is the function of UNESCO programmes such as the Intergovernmental Oceanographic Commission (IOC) and MAB (Man and the Biosphere). Madagascar’s President Ravalomanana pointed out that in his country, “85 percent of our 12,000 plants are unique in the world”. He went on to present the “Madagascar, naturally” national plan, underlining that “At the present rate, we predict that more than half of the coral reef areas will be lost in the next 30 years.”
UNESCO Helps Media

The Bureau of UNESCO’s International Programme for the Development of Communication (IPDC) will give US$1,050,000 million to 51 media projects in developing countries and countries in transition. The announcement was made at its meeting at UNESCO headquarters March 7 – 9, 2005. Projects include broadcast, print and electronic media, as well as training programmes. Among them is a project to enable radio stations in the Indonesian province of Aceh, severely damaged by last December’s tsunami, to resume operations.

The sum of US$319,000 was channelled to 13 projects in Africa.

Three Palestinian projects will be funded, including a literary audio library to serve for radio broadcasts and general educational programmes and to provide access to literature to the blind.

Proposals this year concerned a total of 112 projects, submitted by media organizations in 62 developing countries and 26 regional media organizations. Since its creation in 1980 the programme has supported over 1,000 projects in 137 countries.

For more information: www.unesco.org/webworld/ipdc

Education for All Week

Millions of students and adults transmitted life-sized cardboard and paper cut-outs representing children out of school to their respective governments during Education for All Week (April 24-30). Entitled “Send My Friend to School”, the operation aimed to call the attention of politicians all over the world to the plight of 105 million out-of-school children and 860 million illiterate adults, a majority of them women and girls. The campaign also stressed the importance of gender parity in school.

For more information: www.unesco.org/education/efa/fr/index.shtml

Citizens’ Radio in India

Namma Dhwani (“Our Voice”), a community radio broadcasting in southern India, played a pivotal role in a local election last March. Supported by UNESCO’s International Programme for the Development of Communication (IPDC), the station aired a series of special programmes on the elections. And voters expressed their opinions. The majority of people questioned asked that candidates “not try to bribe people to vote for them”. Sensitive subjects such as corruption and violence during the voting were raised through radio plays and songs. In the course of previous elections, there was no media coverage of the voting process and results were announced by the authorities. This time, the coverage was live.

Using his mobile telephone, a journalist from the station updated listeners every 15 minutes on voting results. His comments were relayed over loudspeakers in nearby villages. When it was all over, the election’s biggest winners were Namma Dhwani, its audience and good governance.

PROJECTING THE PLANET

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© Michael Reynolds/EPA/Sipa, Paris
Do jeans grow on trees? The question is ludicrous, but that is the point, to fire the children’s imagination and make them think about their clothes: what they are made of, where they come from and where they end up... From there, the children are encouraged to think up stories inspired by the process that produced their sports shoes or their jacket.

The idea for this kind of role-playing is included in an educational pack distributed by the German Commission for UNESCO to almost 300 schools that belong to the Associated Schools Project Network (ASPnet), ranging from pre-school to secondary establishments. The aim is to raise awareness among young people about sustainable development, starting by taking a look at their daily lives. The approach is original because sustainable development has failed to find a place in most school curricula.

Yet since sustainable development first emerged in 1987, the idea has made headway, as demonstrated by the current popularity of fair trade, organic food and ethical investments. Even more significantly, the 2004 Nobel Prize was awarded to the militant Kenyan ecologist Wangari Maathi “for her contribution to sustainable development”.

FOCUSED ON HUMAN BEHAVIOUR

Intended to meet “the needs of the present without compromising the ability of future generations to meet their own needs”, according to the definition of the United Nations Commission chaired in 1987 by Gro Harlem Brundtland, sustainable development requires that the environment be taken into consideration when shaping development policy. It encompasses economic and social dimensions, as was stated during the Johannesburg Summit in 2002, as well as cultural aspects (see box p. 30).

Furthermore, the prevention of natural catastrophes, the fight against HIV/AIDS, water management and even reducing poverty are all linked to the concept of sustainable development.

“Unlike education about the environment, which is focused on preserving natural resources, sustainable development is centred on man,” says Claude Villeneuve, director of the eco-consultancy chair at the University of Quebec at Chicoutimi (Canada). And it is humankind, being asked to change its behaviour, that is at the heart of the Decade of Education for Sustainable Development (2005-2014). UNESCO was among...
2005-2014: A Decade for Change

The four priority axes of action for the Decade of Education for Sustainable Development aim to:

**Promote basic education**
It will not be enough to reinforce literacy and numeracy to make significant progress in sustainable development. Efforts must also have impact on the content and methods of education and its adaptation to the cultural context. Basic education must also encourage and support people’s involvement in community life and decision-making.

**Develop public understanding and awareness**
While the concept of sustainable development is now familiar in institutional, academic and specialized milieus, it still needs to be spread at the grass-roots level. All sectors of society must be targeted.

**Provide practical training**
All trained, informed people can play an active role: this is a basic precept of sustainable development. Specific training must be provided through scientific and technological education, but also with the help of partners in the world of work, particularly in business and industry.

**Reorient and revise education programs**
Programmes must be restructured from nursery school to university to include explicitly the study and comprehension of problems linked to the social, economic, environmental and cultural sustainability of our planet, emphasizing interdisciplinary approaches.

The quantity of water available per capita has decreased from 12,900 m³ in 1970 to less than 7000 today.

FROM WORDS TO ACTION

Pleas for consumers to adopt a more responsible attitude seem to fall on deaf ears. “The messages from governments exhorting people to use their cars less or to avoid buying products which cause severe damage to the environment do not work. You will only have limited success by making people feel guilty about their lifestyle and their buying habits,” Klaus Toepfer, the director of the United Nations Environment Programme (UNEP), said in 2003.

In this context, education has a key role to play. But sustainable development, because it concerns our production methods as much as our transport, food or construction, cannot be taught as if it were a subject like biology or algebra.

“It is less about a prescribed body of knowledge and more about concrete exploration of issues. Education for sustainable development needs to...”
"As much a philosophy as an academic concept"

Aline Bory-Adams is head of the Division of Education for Sustainable Development at UNESCO.

**Education for Sustainable Development (ESD) is often talked about, but making it a reality is problematic. Why is that?**

It’s true that the notion of ESD was originally promoted from outside the education sector. I would also add that after the Rio Summit the term ‘sustainable’ was not easily translated into every language and hence not understood by all. However, it is clear that education is indeed at the heart of sustainable development. Since Johannesburg, the concept seems to more easily understood, particularly if we refer to some glaring issues such as lack of clean water, the spread of HIV-AIDS, high population and the management of natural resources. ESD is about the interconnectedness of all of these issues. With time, understanding of the concept has grown, and that’s why the movement is picking up momentum.

**How can we make ESD a reality?**

ESD is not just an academic concept, but also a philosophy and way of life. As long as people have not inculcated the understanding of how they can contribute on an individual level towards ESD, it cannot be a success. Some years back, the UN Commission on Sustainable Development (UNCSD) had identified over 20 sustainability issues that, if not adequately addressed in the next two to three decades would create problems with possibly irreversible consequences. It is this awareness and sense of responsibility that ESD must inculcate through learners worldwide.

**What is UNESCO’s expertise in this domain?**

UNESCO has a long experience of examining the relationship between humanity and the environment. In addition to playing the role of lead agency for the Decade, UNESCO plans to develop its own strategy for the next ten years. The Organization will work towards increasing the attention given to sustainable development by school curricula and textbooks. We are considering launching studies to evaluate SD’s place in educational systems around the world. The Asia-Pacific region, for instance, is going to conduct studies on the topic and their results will guide future initiatives.

**How would you respond to certain developing countries who maintain that education for sustainable development is not a priority?**

ESD is applicable at every level of learning in developing countries. When farmers in rural areas learn to read and write, they can better understand how to read fertilizer and pesticide labels, for instance, to reduce the risk to personal and environmental health, and to use this know-how for sound decisions at the community level. A skills-based lower secondary level education in a rural context might be able to respond to alternative off-farm employment, or enhance marketing skills for handicrafts or organic foods. However, I must make clear that simply increasing the access and level of education in societies does not mean that ESD is happening. The increase in level of education must be coupled with the quality of education that nurtures critical thinking skills. ESD is as much about personal development as it is about the community.
Sustainable Development: Six Key Dates

1968
UNESCO organized the first intergovernmental conference aiming to reconcile environment and development. It led to the creation of UNESCO’s Man and the Biosphere (MAB) Programme.

1987
The World Commission on Environment and Development, presided by Gro Harlem Brundtland, used the expression “sustainable development” for the first time in its report, “Our Common Future”. The concept, at first emphasizing the environment, has encompassed socioeconomic domains since the Johannesburg Summit (2002). It now incorporates other areas such as culture, recognized as a full-fledged source of development by the Universal Declaration of Cultural Diversity adopted by UNESCO in 2001.

1992
The main points of the sustainable development concept are defined by Agenda 21, the Action Programme for the 21st century adopted by governments at the Rio Earth Summit in 1992.

2000
Heads of state and government from all over the world, assembled at United Nations headquarters in New York, adopted the Millennium Declaration that reaffirms the international community’s support of “development that is truly sustainable”. The Millennium Development Goals represent an ambitious commitment to reduce poverty and “ensure environmental sustainability”.

2002
The Johannesburg World Summit on Sustainable affirmed its collective determination to promote the pillars of sustainable development – economic development, social development, and safeguarding the environment.

2005
Launching of the Decade of Education for Sustainable Development (DESD), adopted in 2002 by the United Nations General Assembly.}

be related to the learner’s needs and to engage with ‘real world’ issues,” says Stephen Sterling, an independent British consultant on education related to environmental issues and sustainable development. “It is important to ‘start from where the people are at’ in order to establish the issue’s personal relevance. Then we can help people expand their perspective.”

The aim therefore is not to create an abstract concept but rather to cultivate a form of good citizenship applied to our everyday behaviour. Anyone can do this, for example by opting for seasonal produce. A strawberry imported by plane and purchased in France in March consumes 24 times more energy than the same fruit bought in June and grown locally. When you find out that the annual consumption of paper in offices is 75 kilograms per person, in other words the equivalent of one tree, it can also help encourage people to be less wasteful.
Planet Earth is Living Beyond its Means

The image is particularly striking: More land was converted to agriculture since 1945 than in the 18th and 19th centuries combined. Another significant statistic: approximately 60 percent of the ecosystem services that support life on Earth are being degraded. At that rate, human well-being will be seriously threatened in the near future. That is the conclusion of the “Millennium Ecosystem Assessment (MA) Synthesis Report”, launched on March 30 worldwide and notably at UNESCO’s Paris headquarters.

At the request of the United Nations, 1,300 scientists in 95 countries examined closely the state of global ecosystems (1). Result: it appears that humanity has caused ecosystems to change more rapidly and extensively in the last 50 years than in any other period of history. The study, less concerned with diagnosing the state of the environment than with evaluating services provided by ecosystems, covers such topics as climate regulation, natural hazards and fresh water. First observation: humans have modified ecosystems mainly in order to meet their rapidly growing demands for food, fresh water or fuel. In fact, certain changes have “contributed substantial net gains in human well-being and economic development,” the study notes. The increase in agricultural production, for instance, is now greater than that of the world’s population. Progress has been made in decreasing hunger and improving health, but at what price?

One result is loss of biodiversity, with some 10 to 30 percent of the world’s mammal, bird and amphibian species currently threatened with extinction. Another is threatened resources. Two services – capture fisheries and fresh water – are now well beyond levels that can sustain current, much less future, demands. According to the experts, the ongoing degradation of 15 of the 24 ecosystem services examined increases the likelihood of changes that will seriously affect human well-being. Examples include the emergence of new diseases, changes in water quality, the destruction of fisheries. The outlook is all the more ominous because global warming – that could turn the Amazonian region into savannah in a few decades – will make it difficult to reverse negative changes.

The report further notes that it is the world’s poorest people who suffer most from ecosystem changes. In Sub-Saharan Africa, for example, the number of poor people is forecast to rise from 315 million in 1999 to 404 million by 2015.

Achieving the United Nations’ Millennium Development Goals, which the world’s leaders adopted in 2000, will be all the more difficult under these circumstances. Unless human societies decide to ease the strains we are putting on the nature services of the planet. “Achieving this, however, will require radical changes in the way nature is treated at every level of decision-making,” notes the MA board of directors. “The warning signs are there for all of us to see. The future now lies in our hands.”

(1) Natural system formed by a community of interdependent organisms (plants, animals, microorganisms)

www.millenniumassessment.org

So instead of giving a theoretical lesson on recycling waste, Claude Villeneuve encouraged his students at the University of Quebec at Chicoutimi study concretely the way the university managed its own waste. The first thing to note was that the university only recycled paper and there was so much waste that a garbage truck had to come every day at an annual cost of 45,000 dollars. “So starting from that basis, we found companies who recycle old computers, plastic and metal and we called in a company that deals with organic waste and comes to collect it for free,” Villeneuve explains. Recyclable material such as wood is now processed by companies that employ staff from socially disadvantaged backgrounds. The result is that the amount of waste has been greatly reduced and the cost of processing it has been cut by 80 percent. Everyone comes out ahead.

“Sustainable development begins at home. You have to realize that everything you do counts,” stresses Villeneuve. It is then up to society’s other actors to follow through. “Changing attitudes is important and education can help,” says Clayton White, “but we must also work to create the social, economic and political institutions that will make sustainable development a reality.”

Agnès Bardon

Like the black caiman, between 20% and 30% of animal species are threatened with extinction
High school students in Kalmar, Sweden, are not learning about the environment from textbooks. By taking water samples and analyzing their make-up, they are learning about pollution in the Baltic Sea. Their high school is one of 200 institutions working together in the Associated Schools Project Network (ASPnet) to try to improve environmental conditions in the landlocked sea.

On the second floor of the Jenny Niström high school in Kalmar, a small port in southeastern Sweden, the laboratory used by the environmental awareness class is spotless. Various lab instruments arranged neatly on the shelves, often made by the students themselves, are used to analyze samples taken on school field trips. In one corner, two glass beakers on a burner contain yellowish liquids.

“It’s an experiment in progress,” says earth science professor Sven Åhlin, explaining that the students are inspecting water taken from a pond near Kalmar, which could contain suspicious substances.

On the balcony behind the lab, a small greenhouse houses several aquariums where plants of all kinds are growing. “The students planted them and they take care of them,” Åhlin insists. The results of each experiment carried out by the
students are carefully logged in a notebook so that the class can study the evolution of environmental conditions in the Kalmar area.

These experiments are more than just a classroom science lesson: they are evidence of true interest in the environment. And that interest did not just crop up yesterday. Since the high school opened its doors in 1992, Åhlin has taken his students every year to collect samples from the Baltic Sea in order to observe the evolution of the water quality.

The results have been poor. Very poor, even. “Not only have the levels of phosphorus and nitrogen continued to increase,” says the teacher, who speaks of the “eutrophication of the Baltic Sea”. But since he moved to Öland Island, just off the coast of Kalmar, more than 20 years ago, Åhlin has noticed other dramatic changes. “Several species of fish are in the process of disappearing, and bird fertility rates are consistently dropping”, he says. He is not the only one who is alarmed. At a meeting of European Union environment ministers in Brussels on March 10, Lena Sommestad warned her colleagues. Citing the worrying conclusions of a report published in early March in Stockholm, the Swedish minister said that without quick and effective action, the Baltic Sea, its marine life on the point of suffocating, soon would be beyond help.

But Åhlin, who is in his 50s, refuses to give in to pessimistic predictions. On the contrary, the teacher is convinced that “the future of the planet lies with the younger generations”. And that’s one of the reasons why he chose, starting in 1992, to participate along with his students in the Baltic Sea project. Launched three years earlier, the project stemmed from a conference of European education ministers held at UNESCO’s Paris headquarters in 1988. At that meeting, the ministers in attendance agreed on two points. One, they acknowledged the need to improve water quality in the Baltic Sea, and two, they voiced their wish to bolster relations between young people in the region.

200 SCHOOLS LOOKING FOR ENVIRONMENTAL SOLUTIONS

Inspired, Finland’s national commission for UNESCO invited representatives from all countries bordering the Baltic Sea to Helsinki in May 1989. The commission proposed to launch a project aimed at “encouraging schools in the countries along the Baltic Sea to reflect together on the environmental problems that the region and its residents must face”. The initiative, sponsored by UNESCO’s Associated Schools Project Network, earned a favorable response.

Fifteen years later, more than 200 schools are participating in the Baltic Sea project in Sweden, Finland, Denmark, Poland, Germany, Russia and the three Baltic states. And while the goal has not...
changed since 1989, the Baltic Sea project is now focused on the idea of sustainable development. As the coordinator of the Swedish project, Martin Westin, explains, “the goal is to help students understand the scientific, social and cultural aspects of the relationship between man and nature”.

**KEY INGREDIENTS, STUDENT EXCHANGE AND COOPERATION**

Even more so than environmental awareness, the project aims to encourage students in different countries to work together. For the past several years, Åhlin has worked with high schools in Kalmar’s two sister cities in Lithuania and Russia -- schools that are not yet participating in the Baltic Sea project but which are soon expected to join UNESCO’s Associated Schools Project Network. In May 2003, about 30 students from the high school in Zelenogradsk, in Russia’s Kaliningrad province, spent a week in Kalmar before welcoming their Swedish counterparts the following autumn. An “unforgettable” experience, according to Stina Andersson and Maria Carlsson, two high school graduates who made the trip.

Despite their initial apprehension, “we quickly realized that despite our cultural differences, we pretty much had the same values,” says Maria. “We all had the same goal: the fight to protect our environment,” adds Stina. This is a point of view shared by Therese Henriksson, a student in her final year of high school who participated last September in a conference in Nacka, near Stockholm, organized by the central board of the Baltic Sea project. For one week, about 100 youths from nine countries bordering the Baltic Sea and from the region around Africa’s Lake Victoria studied the problem of eutrophication and its consequences for the survival of tuna.

Before the Nacka conference, each school invited drew up proposals aimed at stamping out the scourge threatening the Baltic Sea. “Nearly 70 percent of cultivated land in Sweden produces fodder,” explains Therese. “It would therefore be good to reduce meat production in order to slow the production of fodder and cut the use of fertilizer, traces of which are still being found in rivers and the sea.” That was just one suggestion discussed during the week of seminars, at which experts listened attentively to the ideas put forth by the youths.

Therese, who is 19, admits that even just a few years ago, the environment was not exactly one of her top priorities. But after three years at Jenny Nyström high school, she says she is now aware of the important consequences her actions may have for the environment. Once she graduates, she hopes to enroll at the environmental sciences school at the University of Umeå in northern Sweden.

But Sven Åhlin wants to keep things in perspective. “My goal is not to turn all of my students into fire-breathing ecologists, but to turn them into responsible adults,” he says. Mission accomplished? Since 1992, things have really changed at Jenny Nyström high school, she says she is now aware of the important consequences her actions may have for the environment. Once she graduates, she hopes to enroll at the environmental sciences school at the University of Umeå in northern Sweden. Not only does the cafeteria sort its recyclable garbage, the school has 30 bicycles for use on field trips and its environmental council is hoping to soon receive the “green high school” seal of approval.

Anne-Françoise Hivert
Freelance journalist, Lund (Sweden)
Judging from the champion’s pose, arms outstretched with trophy in hand, you might have thought that 15-year-old Tomoya Hirata’s team had just won one of Japan’s prestigious national sporting events.

But triumph for Hirata and his 61 classmates at Shinjo Middle School, came for their tsunami preparedness project at the second annual “Disaster Prevention Education Challenge Plan” workshop, held last month [February 27, 2005]. The national program, sponsored by the cabinet and several ministries, selects the year’s top twenty local disaster prevention programs and then awards one top prize.

They take tsunami disaster mitigation seriously in Japan, especially in places like Tanabe, Wakayama prefecture, where Hirata’s school is. The town sits...
out on the Kii peninsula which, facing the Nankai and Tonankai seismogenic zones, has been struck several times by deadly tsunamis and is thought to be prime target for another major one in the near future.

With earthquake generating zones all around, the country has developed a national tsunami warning system that is generally taken to be the best in the world.

But the warnings alone mean little. “A warning alone doesn’t save lives,” says Haruo Hayashi, a professor at Kyoto University’s Research Center for Disaster Reduction Systems, who chaired the organizing committee for the workshop. “The warning is just a trigger,” he says. “People need priming.”

BEATING THE CLOCK

Japan’s warning system is an impressive one, whose development accelerated in the 1980s. In 1983, a hundred people died when a magnitude 7.7 quake gave rise to a tsunami hit on the Japan sea coast. The warning came in 17 minutes. The tsunami came in seven.

The current system is based on a network of 180 seismometers cabled to onshore monitoring stations. It takes only two minutes for a preliminary measurement of an earthquake to reach one of six regional monitoring stations.

Then the computer magic begins. The Japan Meteorological Association has pre-calculated 100,000 scenarios based on location, depth, and magnitude of a given earthquake. Within one minute, the simulations predict whether and where the earthquake might produce a tsunami. The warnings ride along television screens and set in motion local disaster mitigation measures.

Estimates may be off, and small tsunami can be either missed or their impact overestimated. But with the looming threat of a large tsunami from the nearby Nankai trough, which runs only Japan’s pacific coast, there is no choice. “Speed is more important than accuracy,” says Hayashi.

Experts think that an earthquake is overdue there. The greatest fear is that it could wreak havoc on Tokyo. But tsunamis are a great fear all along the coast. A Nankai earthquake of magnitude 8.6 would, according to simulations, throw a 7.5 meter tsunami wave at Wakayama in eight minutes.

Japan’s system would get a warning in time. But would people have the wherewithal to react?

CHILD’S PLAY

Preparedness exercises take place in most Japanese coastal towns. And the training starts young.

Efforts start with construction of tsunami hazard maps, based on the country’s tsunami disaster prevention manual distributed by the cabinet office. The maps outline potential dangers such as narrow roads likely to be washed out and bridges likely to be wiped out in a tsunami event. They also clearly mark where refuge points are.

Part of the Tanabe team’s winning entry is a 3-D map of the coastline showing where the water would likely inundate. Another group added an inductive approach to estimating tsunami arrival times, interviewing the town’s tsunami veterans about how long previous tsunami took to reach their homes.

Preparedness measures also take into consideration that, like the Sumatra tsunami in December, tsunamis often victimize people not familiar with the area. Across the Kii peninsula from Tanabe, students at three schools in Kushimoto, created easy to grasp pictograms that indicate the height of a given location above sea level and the direction of the ocean. The signs have
been placed at easily noticeable spots around town making it easier for people, especially visitors, to know where to go for refuge. Takaharu Sugimoto, an official in the local government, says they are hoping that UNESCO will adopt the design, which won a runner-up prize at this year’s workshop, as an international standard.

Striving to impress upon the community tsunami’s potential danger, Shinjo middle-schoolers hit on a morbid historical lesson. They designed a traditional Japanese “kamishibai”—a play using drawings along to illustrate the speakers’ narrative—based on an 1944 episode, “unthinkable today”, in which the government stopped issuing weather reports and information on disasters lest they prove a disadvantage to the war effort. Unsure of what to do, the protagonist, the son of a fallen soldier, is swept away by a tsunami leaving his mother completely alone.

Materials produced by the students in Tanabe and elsewhere are incorporated into role-playing activities and drills. In Tanabe, some 80% of the citizens turn out for these yearly events. The sirens sound and the people dart off towards the refuge site. At the end, they meet to discuss how much time expired—and what the implications would have been for their safety.

But some preparedness activities might not be suitable for children. Three years ago, citizens living on a landfill coast in Kushimoto came to grips with news that a tsunami would come in less than 10 minutes after an earthquake. In their drills they knew it took 15 minutes to make the roundabout trip to the appointed refuge site.

A direct path would force them to go over one of the national railway tracks. Negotiations with Japan Railways went nowhere. In the end the citizens took matters into their own hands and built the bridge anyway. Now they can get to their refuge in six minutes.

David Cyranoski,
Asia-Pacific correspondent
for Nature
THE SAN: SUSTAINABLE DEVELOPMENT BEFORE ITS TIME

Key element of sustainable development, water management presupposes a solid knowledge of the environment and its resources. Indigenous populations often have mastered this knowledge for generations. This is true of the San, who for centuries were able to make the most of the scant water resources to be found in the desert region of the southern Kalahari (South Africa). This knowledge, however, based on respect of the local ecosystem, was lost at the time of colonisation.

When the political leadership of the ‡Khomani San Association (1) sat with three of the most fluent speakers of the ancient N/u language, they asked the elders for guidance on the land claim and restitution process. The elders identified the three most important resources of their aboriginal culture in the Southern Kalahari: !haa, !ão, //x’am. That is: water, land and truth. Water, and access to water, has been a key variable in the defense, conquest and colonisation of the Southern Kalahari.

The oldest members of the San community remember a time when there were no boreholes in the Southern Kalahari. There was no surface water available except during the rains. The people lived off those plants that absorbed water, including the all important tsamma melon (*Citrillus Lanatus*), a favored wild food with plenty of liquid. During the 19th century, settlers could not penetrate the interior of the Southern Kalahari (where the present borders of South Africa, Namibia and Botswana come together) without using the traditional technology of the San people.

WAR AND WATER

When this region became engulfed in the Nama-German war (1904-1908) that spilled over from neighboring Namibia, the humble tsamma melon became critical to all parties. The German imperial
The army had to water its men, horses and camels entirely on desert food. This all took place in the peak of summer when temperatures soar up to 50 degrees in the shade - and there is very little shade. Both sets of aggressors kidnapped San trackers to be able to help them through the endless sand dunes and find all the crucial plants to feed and water them.

The San themselves had a number of techniques for capturing and managing water. Ostrich eggshells would be cleaned out and buried deep within the red sand dunes during the rainy season. Water would percolate down through the sand dunes, weeks after the rains and the surface water were gone. The eggs would be recovered when necessary and plugged with a wax stopper. To this day the practice continues on some farms, though people now use plastic bottles.

The government of Britain and the Union of South Africa were deeply disturbed about the sovereignty issues involved in the German invasion of the Southern Kalahari, and soon Britain was at war with her previous ally. The South African government of the day decided to recruit white settlers to fill up the frontier and consolidate the border. Boreholes had to be sunk to achieve this. During the early 1920s the government sponsored white farmers to sink boreholes, particularly along the riverbeds (the Auob, N‡osob, Molopo and Kuruman) where subterranean water was easily accessible.

**CULTURAL IDENTITY VERSUS COLONISATION AND TECHNOLOGY**

The sinking of the boreholes had a drastic effect on the Southern Kalahari. Firstly, the seasonally nomadic San people lost all of their territory in a matter of a few years. Fences were put up and people were not permitted to move freely. Secondly, as elsewhere, the settlers went on killing sprees, devastating the wild animal population. By 1927 there was a famine throughout the area, as game had become so scarce. This drove San to live and work on farms where they would earn a meagre income to afford to buy food that had once been theirs for the taking and managing. Farmers banned the San from practicing their traditional religion, including the powerful trance dance that was used for healing. The San identity was ruthlessly suppressed. First there were scientific efforts to determine authenticity that involved measuring people’s heads, noses and genitalia. During this time much of the culture, language and traditional knowledge was not passed down to the younger generation for fear of stigmatising them. All of this because of borehole technology.

The Southern Kalahari is composed of a number of different soil types, but the predominant type is that of red sand dunes. When it rains, water runs down between two dunes. This is called a ‘street’. Where several streets meet and the water cannot run off anywhere a ‘pan’ is formed. Some of these pans may have been in place for up to a million

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(1) In most San languages, extra-alphabetic signs are used to represent clicks, which are predominant and distinct. The phonetic inventory of the San language is in fact so rich that all the other symbols of the roman alphabet are already used for something else. Nu has 145 different phonemes, which is three times more than in standard English. Many of the signs used come from the International Phonetic Association alphabet.

- dental click; - lateral click; - alveolar-palatal click; - palatal click
years. According to the San (and confirmed by scientists), the chemical composition of each dune and pan is distinct. Some pans are now mined for salt. The San know which streets produce the best plants, and which pans have potable surface water after rains. The water in some pans will cause immediate diarrhoea or can even be poisonous to humans. There are, however, traditional methods for purifying some of the water. The San give names to pans to remember this, such as Large Diarrhoea Pan (Xausndi ‡gas).

During the process of the land claim against the Kalahari Gemsbok National Park (now Kgalagadi Transfrontier Park), the Park officials argued that there was no potable water in the park. A mapping project has demonstrated that not only is water available through the plant life, there are also a number of sites where water can be had on the surface or just below the surface. These water sources were already pointed out seventy years ago to the settlers and the warden, and are still known to some of the older people.

On March 21, 1999, the South African government awarded the Southern Kalahari San almost 40,000 hectares of land outside the national park, and 25,000 hectares inside the park as restitution and redress for their losses. On the day that Thabo Mbeki gave the land back, the N\u speaking elders gathered and prayed to their ancestors to send rain.

As Mr. Mbeki climbed into his limousine to depart, a large rain cloud moved over the land settlement site and rained huge drops of rain in the otherwise hot and dry desert. For many of the westerners this was a marvellous and inexplicable phenomenon. After the transfer of the first farm to the San in December 1999 a great rainy season began, with the highest rainfall since the early 1970’s, when the last San were expelled from the park. The new rains have restored all of the wonderful plant life and replenished the animal life. Some of the elders are back on the land and are taking their grandchildren out into the dunes to collect tsammas, gemsbok cucumbers and desert onions. So much rain fell that the streets filled like reservoirs and both the N\osob and Auob began to flow for only the third time in a hundred years. Ironically, the massively irrigated agriculture along the Orange River, land that was taken from the indigenous peoples by the settlers, was swamped with water and the crops started rotting that year.

Nigel Crawhall

This article is excerpted from the following publication coming out soon in English:

WATER AND INDIGENOUS POPULATIONS
Coeditors: Rutgerd Boelens
Coordination, WALIR (Water Law and Indigenous Rights Programme)
Wageningen University, Netherlands
Moe Chiba and Douglas Nakashima
UNESCO-UNIKS (Local Indigenous Knowledge System)
UNESCO Publications
Under threat from urban development and demographics, the Sao Paulo City Green Belt Biosphere Reserve in Brazil is receiving an increasing number of visitors. A plan to teach sustainable tourism is designed to make the local young people aware of the fragile nature of their environment while also lifting them out of the poverty trap.

The road that leads to Paranapiacaba crosses the heart of the Mata Atlântica, the Brazilian Atlantic forest. This little town is dependent on Santo André, one of the towns in the suburbs of Sao Paulo that is part of what is known as the “Green Belt”. In summer, the road is sprinkled with manacas flowers, whose white and violet colours contrast with the green of the abundant vegetation. It is difficult to believe that such a natural paradise can exist near to a megalopolis of 17.8 million people like Sao Paulo. And that in the space of barely 40 minutes, you can go from a world of concrete and asphalt to this ocean of greenery. But this paradise is under threat from the anarchic urbanization of the surrounding towns. With already 92 percent of its original surface area lost, Mata Atlântica is a victim of the attraction it holds for the people of the Sao Paulo region. Already a popular destination for Sao Paulo residents, the forest is attracting increasing numbers of foreign tourists - with disastrous consequences for the environment.

That is why in 1994 UNESCO made the Sao Paulo City Green Belt a Biosphere Reserve, in order to preserve this natural heritage site that is home to one of the greatest examples of biodiversity.
in the world, and to ensure that protecting the environment, improving the residents’ social conditions and developing the economy go hand in hand.

Paranapiacaba thus became one of the bases for the Youth Training Programme for Eco-jobs, an educational project created in 1996 to introduce pupils to activities related to sustainable development and to promote environmental protection in the region.

NEW LIFE FOR LOCAL ECONOMY

Seven town authorities in the Greater Sao Paulo area and the State Forestry Institute participate in this programme, which trains girls and boys aged 15 to 21 from under-privileged families over a two-year period. Seven hundred of them have already taken the course; another 290 are currently studying.

“We offer them lessons in ecotourism, forestry, sustainable agriculture and waste recycling so that they leave here aware of the necessity of protecting nature,” explains Rodrigo Victor, the reserve coordinator. And so that they leave better qualified to find jobs.

Because in the long term, the project is all about energizing the local economy. “The whole Sao Paulo City Green Belt, including its forests and waterfalls, has enormous potential. Not only can sustainable tourism lead to more respect for the environment, it can also help local communities by bringing them work,” says Vanessa de Souza Silveira, one of the programme’s coordinators. According to the Tourism Secretariat of the State of Sao Paulo, activities related to ecotourism could increase 70% in five years.

In the classroom of the Paranapiacaba Youth training programme, the girls and boys look just like teenagers anywhere else in the world. André Fantineli, 20, wants to be a disc jockey; Paulo Pinheiro, 16, has ambitions to be a policeman; Salatiel Santos, 15, wants to be a lawyer... All of them aspire to a better future. From low-income families, they live in the poor suburbs that surround
the big cities and are exposed to many of society’s ills: drug dealing, domestic violence, unemployment, poverty...

Today, one year after they began the training offered by the Youth programme, some say they have changed. Salatiel views the forest in a new way. “Before, for me the forest represented a place where you could enjoy yourself, tearing down trees... Now I know that the vegetation is important for all of us,” he says. Renata Silva, 20, has discovered her vocation in life. “I really want to work in tourism. I have learned to speak in public, as a guide,” she says.

**POSITIVE RESULTS**

Some have already taken the first step. On the former motorway linking Sao Paulo and the coastal town of Santos, which has been transformed into an ecological route, young guides lead tourists on walks and explain to them the importance of Mata Atlântica, giving them information about local history or the fauna and flora of the region. “We have managed to convince our partners that it is preferable, for the development of the region, to take on young people from around here rather than bring in people from other regions, even if they are qualified. This allows us to create more jobs in the city,” Vanessa says.

The results speak for themselves, especially for the young people, a large number of whom are now free from the trap of social exclusion. Elaine Cristina Alves da Silva, 19, is one of the guides. Thanks to the lessons, she has overcome her shyness. Eventually, she would like to study biology at university, just like another guide, 18-year-old Ednalva Aparecida Oliveira, who is already taking courses at the tourism school. It represents a victory for her, given that her parents were opposed to her taking part in the Youth training programme. “They wanted me to continue working in the family bar and they thought the lessons were a waste of time,” she says.

A waste of time? In Sao Bernardo do Campo, a community to the south of Sao Paulo, 18 teenagers have followed the Youth training programme for two years. When they completed it, they all found work as guides for the Sao Bernardo Ecotouristic Office for Coastal Paths.

*Gabriela Michelotti*
Freelance journalist, Sao Paulo (Brazil)
By decimating entire generations, the epidemic has emerged as a dramatic obstacle to sustainable development in Africa. By calling on Prosper Kompaoré, a specialist in interactive theatre, the UNESCO office in Dakar has chosen to tackle the issue of prevention in a different way.

In the market square of Manga, a town located 105 kilometres east of Ouagadougou, vendors close their shops one after another as the sun dips lower. In the middle of cabarets selling dolo, the local millet beer, the troupe from the Burkinabe Theatre Workshop (ATB) starts setting up its performance area in front of an impatient crowd. In next to no time, the stage is set. The evening’s show: The Cough of the Serpent, a play to heighten awareness of tuberculosis – an illness often linked to HIV/AIDS – that is being presented at the request of the National Tuberculosis Programme and the regional health authority.

At the start of the play, a malfunctioning microphone prompts vocal protests from the audience members. And they continue to make their presence felt throughout the performance. Spectators shout out their disapproval of a “patient” who refuses to follow his treatment properly, or respond to questions from the actors, who keep them involved. At the end of the rowdy show, queries fly from all sides. The actors, joined by healthcare professionals, answer them.

“How can we know if we have tuberculosis?” asks a man in the audience.
message sticks in spectators’ minds. Thus, rather than piling on warnings against early sexual relations, the theatre instead shows a girl on stage confronted with the negative consequences: an unwanted pregnancy, expulsion from school, infection with HIV…. Everybody understands. And no one wants to identify with the reviled characters who reject infected people or show irresponsible behaviour.

That is why UNESCO’s Regional Office in Dakar called on the director and founder of the ATB, Prosper Kompaoré. Devoted proponent of interactive theatre, he has already trained some 20 troupes in west Africa.

“What gives this sickness its strength,” he explains, “is the silence surrounding it. Thanks to the theatre, we can get people to leave those deathly zones of silence and lead them to take on healthier behaviour.” At the door of the workshops he teaches, a manual titled “AIDS and Theatre” is available, produced by the Dakar Office to allow theatre workers to make authoritative statements on HIV/AIDS awareness. “It’s a teaching tool to educate young troupes in the different steps in creating a...
It’s a flexible tool of communication, effective for raising certain sensitive topics,” Prosper Kompaoré explains. And AIDS is, indisputably, one of them.

Mathieu Bonkoungou
Correspondent, Reuters agency, Ouagadougou
(Burkina Faso)
CHIAPAS WOMEN INVEST IN THE FUTURE

Responsible for half the world's food production, women play a key role in sustainable food security, particularly in developing countries. Yet they have considerably less access to land and investment funds than men. That is why microcredit, celebrated by an International Year in 2005, often seems like the only solution to break poverty's vicious circle. An example: In the province of Chiapas (Mexico) women are taking advantage of both loans and literacy classes, provided by a programme UNESCO supports.

María Pérez Pérez, from the district of Zinacantán, never thought she would be able to learn to hold a pencil at 48, or pick up an exercise book and scan the lines to make sense of its content.

“I didn’t go to school when I was a girl because I had to look after the animals, and help my parents, who were very poor. But now I regret never having made the effort to learn,” says María, who like the vast majority of indigenous women, only speaks her mother tongue.

But she is one of the 345 women talking literacy classes, thanks to UNESCO’s support of the Alternativa Solidaria Chiapas (Al Sol), a non-governmental organization that provides microcredits to poor women so they can raise their...
own and their families’ living standards.

One of the 25 groups of women enrolled in the literacy programme holds its classes in Zinacantán, a municipality located around 10 kilometers from the colonial city of San Cristóbal de las Casas and a stronghold of the Tzotzils, one of the main ethnic groups to have descended from the Mayans. Every fortnight, around a dozen women, all of them adults with children, meet for an hour’s class given by their teacher, Rosalinda Bolom, who is herself Tzotzil and speaks in their language – without which her work would be impossible.

MAKESHIFT SCHOOL IN A STUDENT’S HOME

The classes themselves are held in the patio of a modest home belonging to one of the group’s members: there are neither chairs nor tables, and the students write either standing up or sitting on the ground, both of which are clearly uncomfortable. But since they are thrilled to be learning, these minor handicaps don’t worry them. Most of the students start to laugh nervously once the teacher arrives: the time has come to hand over homework. The fact that one student has not written her letters correctly sparks a chorus of laughter and whispers in their native tongue. Learning new letters or phrases also prompts excited reactions.

Using a small white piece of cardboard as a blackboard, Rosalinda Bolom writes Va-Ve-Vi-Vo-Vu, and asks her students to repeat the sounds to check they have not forgotten the previous lesson. With small children hanging from their large skirts, the indigenous women copy down the latest lesson.

“We can’t make progress as quickly as we’d like because these are not the very best conditions to work in, and because we only have classes every fortnight, but even so many of the women have learnt to read and write,” observes the teacher, who adds that María is one of the most advanced students. She and some other students have finished the first of the three levels, and are now learning how to add, multiply, divide and subtract.

“I didn’t know how to sign my name, but now I do and I’m very happy about it,” declares María with delight. She adds, “I want to keep on learning so that I can do the accounts for my business and live a bit better.” Her husband, she explains, instead of getting angry with her, has supported her in

From Bangladesh to Chiapas

Alternativa Solidaria Chiapas (Al Sol Chiapas) is a copy of the microcredit programme that has been operating in Bangladesh. Established in 1998 in San Cristóbal de las Casas, it hands out loans to poor women who would like to embark on a productive business venture. Executive Director Claudia Rovelo explains that the project began with 23 women, but has since expanded to cover 4,679, most of them indigenous rural workers.

Upon joining, a woman receives a 1,000-peso loan (worth a little under $100), but over time they can increase their credit to 15,000 pesos in order to finance projects such as setting up small grocery stores, or businesses that buy and sell fruit, vegetables and chicken, or craft and flower workshops.

Al Sol was created by Pilar García and Claudia Rovelo after they made contact with members of the Grameen Bank in Bangladesh, owned by Muhammad Yunus, who loaned them a “seed capital” of $20,000 on a 2 % interest rate. “We began the programme with those resources and then we paid back the credit, allowing us to work with other foundations,” says Rovelo. “Any woman who wishes to start or expand any productive venture, and needs money to do so, is a candidate for a microcredit from Al Sol,” declares Rovelo, who explains that the programme is oriented solely towards women because they have the least chance of securing money for such activities. “And women are very reliable. Al Sol has a bad loan rate of only 0.1 %.” At the same time, Al Sol offers other non-financial programmes, such as literacy training, improving the quality of homemade craftwork, and a novel project about nutrition that began in January this year. Demand is now so high that by 2008, Al Sol estimates it will have made microloans to 15,000 women.
taking the course and improving herself. Thanks to a small loan from Al Sol, she has also been able to plant flowers that she later sells, generating a small income for the family. During each class, Rosalinda is joined by an Al Sol representative, who is in charge of handing out credits. While Rosalinda teaches, he collects the repayments on debts every fortnight – an effective strategy, which tends to guarantee that the students turn up for class.

**LITERACY AS A CONDITION FOR CREDIT**

The Al Sol representative who accompanies Rosalinda is also a Tzotzil, Domingo Hernández Díaz, who explains that the idea of teaching the women how to read and write emerged once Al Sol decided it would not accept thumb and fingerprints on its loan contracts. “Even if they only put their initials, at least they have to learn how to write to receive the credit, and that condition is enough to persuade them to make the effort to learn,” he declares. “At the start, many of them refused to take classes, saying they were very old and stupid, but bit by bit they became more confident.”

The literacy programmes are underway in five indigenous districts in Chiapas: Zinacantán, San Juan Chamula, Teopisca and San Andrés Larráinzar. In December 2004, 345 women were taking part, while 50 more are on the waiting list. Claudio Rovelo, executive director of Al Sol, underlines the importance of the basic literacy programme, pointing to the fact that 80 percent of the 4,000 members of Al Sol do not know how to read or write. “The main problem we had was a lack of money to support the programme, but in 2002 we secured finance from the Gills Foundation in Belgium, and then we contacted UNESCO. Our application was approved in 2002, and we were given $8,000 to start off with. In November 2003 they gave us another $4,000, and we have just signed an agreement to keep the programme going,” he says.

**UNESCO’S CONTRIBUTION**

Rovelo observes that UNESCO checks the methodology used in the classes, and suggests relevant changes in accordance with its experience in providing adult education. The finance provided by UNESCO is employed to pay the teacher’s wages, acquire teaching materials and fund visits to the communities where classes are held, he says. For its part, Al Sol pays its representatives’ travel expenses. “Every month we send UNESCO a report on how the programme is going,” Rovelo says, adding they although they currently only have one teacher - albeit supported by volunteers from the Puebla Iberoamerican University - they are thinking of employing another to meet ever-rising demand.

Elio Henríquez Tobar
Correspondent of the Mexican daily “La Jordana”
EDUCATION FOR SUSTAINABLE DEVELOPMENT ON LINE

http://www.unesco.org/education/
Languages: English and French
UNESCO’s Education for Sustainable Development division site.

http://www.un.org/esa/sustdev/
Languages: English, Spanish and French.
The United Nations Commission on Sustainable Development site. It contains all the international accords and official documents.

http://www.worldbank.org/depweb/
Languages: English, Spanish and French.
World Bank site. Data tables, case studies and maps are on line. An online quiz allows visitors to test their knowledge of the issue. An educational book can also be downloaded (also in Russian).

http://europa.eu.int/
Languages: 20 European languages.
The European Union site publishes official texts, which all be downloaded.

http://www.wwf.org
Languages: 15 languages.
This very complete site features all sustainable development actions related to those safeguarding nature. You can choose your country and language; the default language is English. Every country updates its information and adapts it “regionally”.

http://iblnews.com/di/
Language: Spanish.
All information about sustainable development is archived under three major themes: economy, science and general information. The search engine is very efficient. The site is a division of a general information site.

http://www.csq.qc.net/
Languages: English and French.
This organization that represents Canadian unions promotes the relevance of sustainable development at every level of education. Firm commitment is backed up by past and future action. The site is recommended to teachers. The “DIDA” (“Des idées dans l’air”) section proposes an approach to climate change that is simultaneously artistic, ethical and scientific.

http://www.comunidadandina.org/desarrollo.asp
Language: Spanish.
The “Andean Community” site represents Bolivia, Colombia, Ecuador, Peru and Venezuela. It gives all kinds of institutional information in various areas on those countries. The section on sustainable development presents and updates texts from institutions involved in sustainable development.

http://www.iisd.org/
Language: English.
The International Institute for Sustainable Development makes recommendations at international level, and not only on natural resources or climate change. The organization’s wealth – besides its links with numerous governments – is its library. You can consult its catalogue on line, do research or subscribe to newsletters.

http://www.novethic.fr/
Language: French.
The site of the Caisse des Dépôts, a French public financial institution, gives information and makes available expert tools to professionals in business, finance, local organizations or NGOs who are interested or already involved in socially responsible activity or investment.

In Calcutta (India) cow dung is a source of fuel
Five remarkable women physicists received the L’ORÉAL–UNESCO For Women in Science Award on March 3 at UNESCO in Paris. It was the 7th edition of the award, which aims to give international recognition to women, traditionally under-represented in science. This year’s awards coincide with the World Year of Physics and are devoted to material sciences.

The laureates were: for Africa, Zohra Ben Lakhdar (Tunisia); for Latin America, Belita Koiller (Brazil); for North America, Myriam P. Sarachik (United States); for Asia, Fumiko Yonezawa (Japan); and for Europe, Dominique Langevin (France). They work in the most promising areas of physics: nanoscience or quantum physics. Their research concerns the technologies of semiconductors, measuring atmospheric pollution, the extraction of heavy petroleum trapped underground. It is also the stuff of dreams, such as building a module for the international space station on Mars or developing quantum computers that could revolutionize the way we work today.

As an extension of the L’ORÉAL-UNESCO Awards, a L’ORÉAL-UNESCO Fellowship programme was founded to encourage young women researchers in the life sciences. The 2005 list of 15 Fellows includes a strong showing from emerging countries such as Burkina Faso, the DPR of Korea, Jordan, and Cuba. This programme’s international impact is strengthened by initiatives organized in more than 15 countries – national fellowships, seminars, conferences and mentoring programs to familiarize young girls with science as a career. These actions are all intended to encourage women to pursue scientific activities.

Education for all, education for sustainable development and UNESCO’s response to natural disasters were the three themes on the agenda for the annual meeting of UNESCO Goodwill Ambassadors on March 3 and 4 at Organization headquarters. Following UNESCO Director-General Koichiro Matsuura’s opening speech, the Ambassadors presented their work over the past year and discussed their experiences.

During this meeting, Aicha Bah Diallo, interim Assistant Director-General for Education, and Mary Joy Pigozzi, Director of the Division for the Promotion of Quality Education, presented the objectives of the United Nations Decade of Education for Sustainable Development (2005-2014).
On March 1, NASA and UNESCO signed a cooperation agreement at NASA Headquarters in Washington D.C. According to the agreement, UNESCO will benefit from NASA’s expertise in the earth sciences and space technology to strengthen its work in the conservation of World Heritage sites and monitoring of Biosphere Reserves via satellite observation. The cooperation should increase the efficiency and cost-effectiveness of conservation work. This expertise will also contribute to UNESCO’s work relating to prevention of natural hazards, a high priority in view of the recent tsunami disaster. Finally, concerning education, cooperation with NASA will broaden the scope of UNESCO’s Space Education Programme and other activities aiming to raise interest in science.

The agreement expands the long-standing relationship between NASA and UNESCO. It is, moreover, the first new science agreement with a U.S. organization since the country returned to full membership of UNESCO in October 2003. UNESCO has also been establishing partnerships with other space agencies within the framework of UNESCO’s Open Initiative on the use of space technologies to support the World Heritage Convention and UNESCO’s Biosphere Reserves. UNESCO has had an interest in space programmes since the early 1960s when it began working with the International Astronautical Federation.

The heads of the OPEC Fund for International Development and UNESCO signed an agreement on March 7 to launch a joint HIV/AIDS initiative in 12 Asian and Arab countries. The two-year joint project will receive a grant from the OPEC Fund of US$2,250,000. The project aims to reduce infection among young people by integrating prevention awareness into national education programs.

HIV/AIDS continues to claim lives around the globe. For developing countries, the pandemic represents a serious hindrance to socio-economic growth. In Asia, an estimated 8.2 million people were living with the virus by the end of 2004, including 1.2 million infected that year.

The targeted countries are Afghanistan, Bangladesh, Cambodia, Jordan, Lao PDR, Lebanon, Syria, Uzbekistan, Vietnam, China, Kazakhstan and Thailand. All share common obstacles in their fight against the pandemic: access to healthcare services is poor, there is limited or no reproductive health education in schools, and little exists in the way of easily understood information materials.

Activities to be carried out under the two-year project include: the development of advocacy materials for senior policy makers to help them implement effective education programs; the promotion of HIV prevention education through the media; and the scaling up of HIV prevention education in schools.

The OPEC Fund is an active partner in the global battle against HIV/AIDS. To date, over US$21 million has been committed in support of priority activities in 58 countries worldwide.
It is December 26, 2004. Several elders from the Moken tribe, a small community of sea gypsies from the Surin islands Marine National Park off the coast of Phang-Nga Province, Thailand, notice that the sea is churned up and moving in an unusual way. They raise the alarm. Most of the inhabitants rush to take refuge further inland. When they return, the village has been entirely swept away by La Boon, as the Moken call the tsunami that devastated the region. Their boats and houses mounted on piles have been reduced to a heap of wood and debris. But while Thailand mourns more than 5,000 victims, the Moken community was spared. The elders’ knowledge of the sea saved their lives. And ever since, their story has spread around the world.

In the aftermath of the catastrophe, UNESCO Bangkok took part in one of the missions launched by the United Nations Disaster Assessment and Coordination (UNDAC), based in Phuket, Thailand, to evaluate the damage done to the environment and settlements in the region. Through the Science Sector’s Coastal Regions and Small Islands (CSI) programme and the Local and Indigenous Knowledge Systems (LINKS) CCT project, UNESCO has for the last several years taken an interest in the indigenous peoples of the Andaman...
The Moken village, built right on the beach, as it was before the tsunami (above)

Photos Derek Elias
Islands and especially the Moken, who live in a protected zone that has been a national park since 1981. Acting on the conclusions of the UNDAC mission, the team working on the project for the Surin islands travelled there to assess damage and determine what aid the community required.

The Moken are now rebuilding their village, using bamboo and leaves woven together, in a non-traditional location inland, as dictated by the local government authorities. They have settled in a forest, further from the sea, and therefore a presumably safer but certainly not more advantageous site. The new village is less sanitary and has poor ventilation and a cramped design. Of most concern, the visibility of the Moken’s natural environment, the sea, is substantially reduced.

The influence of the outside world is growing all the time. Since the national park authorities forbade them from catching certain species such as the sea cucumber and some shellfish that they used to sell, the Moken have been deprived of one of their sources of income. A number of them have already abandoned fishing to work as diving guides for tourists or garbage collectors. The objective of UNESCO’s Coastal Regions and Small Islands programme is to call attention to their plight and help influence policy to allow the Moken and other sea gypsy communities in Thailand to continue to uphold their traditions and livelihoods, within the National Parks that encompass their traditional homelands and waters.
Scientists, managers, development agencies and anyone concerned with environmental issues, will find in this book, in-depth studies about the many and varied aspects of deforestation – a process whose consequences and effects are not always as negative as perceived. In trying to answer the key question of whether the irreversible destruction of forests and their biodiversity actually masks a wide range of patterns, this book provides thought-provoking answers that draw on the results of fieldwork and theoretical studies spanning the natural and social sciences.

This book also examines questions on the true nature of deforestation, how it can be measured, what changes result from it, and how human societies can manage them. It also looks at the kinds of research needed to address these complex issues. Examples from Latin America, Asia and Africa illustrate the different dimensions and perceptions of deforestation, underlining the importance of a cross-disciplinary approach on this issue.

BEYOND TROPICAL DEFORESTATION
FROM TROPICAL DEFORESTATION TO FOREST COVER DYNAMICS AND FOREST DEVELOPMENT

Edited by Didier Babin
Man and the Biosphere series
2004, 526 pp., figures, tables
24 x15.7 cm
ISBN 92-3-103941-5
€ 59.80
UNESCO Publishing/CIRAD

BIOSPHERE RESERVES: SPECIAL PLACES FOR PEOPLE AND NATURE

Compiled and edited by Malcom Hadley
Man and the Biosphere series
2002, 208 pp., colour photographs, illustrations, drawings, maps
29,7 x 21 cm
ISBN 92-3-103813-3
€ 16.00
UNESCO Publishing

The book outlines the analytical and historical foundations of the Man and the Biosphere (MAB) concept as well as major environmental conventions. It also presents concise portraits of diverse reserves to highlight accomplishments as well as difficulties encountered in promoting sustainable development in different socio-economic, cultural and geographic contexts.

This guide is primarily targeted at biosphere reserve constituencies, including MAB National Committees, biosphere reserve co-ordinators and managers, and collaborating institutions. It will also be of great use to other readers interested in approaches to biodiversity conservation and sustainable development.

EDUCATION KIT ON COMBATING DESERTIFICATION

Publication co-ordinators: Thomas Schaaf (UNESCO) and Rajeb Boulharouf (UNCCD)
The Teacher’s Library series
2003, two books (98 and 100 pp.) illustrated with photos and maps + 3 copies of an illustrated children’s book + 1 poster presented in a slipcase
30 x 21.5cm
€ 30.00
ISBN 92-3-103892-3
UNESCO Publishing

This education kit comprises a teacher’s guide, a series of case studies, an illustrated children’s book and a poster. This kit is principally targeted at teachers and pupils at the top end of primary school and the beginning of secondary school in countries affected by desertification. It has been conceived to enhance the school programme. Teachers can easily incorporate elements of the kit into existing lesson plans.
QUOTATION

This CD-ROM provides an interactive version of Water for People Water for Life: The United Nations World Water Development Report, the most comprehensive assessment of the world’s freshwater resources, based on the collective input of 23 United Nations agencies and convention secretariats. Generously illustrated with more than 25 full-colour global maps, numerous figures, tables (including country tables) and photos, the report opens with a chapter describing the water crisis. It reviews progress and trends, proposes methodologies and indicators for measuring sustainability. It then assesses progress in 11 challenge areas including: health, food, environment, shared water resources, cities, industry, energy, risk management, knowledge, valuing water and governance. Finally, it presents 7 pilot case studies of river basins representing various social, economic and environmental settings. With an easy and attractive navigation, fully searchable with many additional functions, this CD-ROM is an essential tool for professionals at all levels, teachers and students.

EDUCATING FOR A SUSTAINABLE FUTURE: COMMITMENTS AND PARTNERSHIPS
The publication collects the proceedings of a seminar organized jointly by UNESCO and the South African Ministry of Education during the 2002 World Summit on Sustainable Development in Johannesburg. It features the contributions of a wide range of education specialists, including representatives of civil society, higher education institutions, non-governmental institutions, private companies, United Nations agencies, Ministers of Education and Heads of State. It considers the many facets of education for sustainable development, ranging from the need for global action, through the sustainability of education itself, poverty eradication and the current context and new perspectives. It is a key reference work on the nature, scope and purpose of educating for sustainable development, today and for the years to come.

PLANNING EDUCATION IN AND AFTER EMERGENCIES
Margaret Sinclair
Fundamentals of Educational Planning series, no. 73
2003, 144 pp., 21 × 13.5 cm
ISBN 92-803-1225-1
€ 12.20
UNESCO-IPE

Educating populations that have been affected by crises or natural disasters is vital to the rebuilding of communities. This book argues that education should figure as priority among all the crucial issues to be addressed, as it is essential to the future of these populations. This book will be of invaluable help to organizations and educational planners who will find discussion of issues such as funding, inclusive education, safety in schools, trauma healing, curriculum activities and distance learning among many others.

EXPLAINING BIOSPHERE RESERVES
Text by Christine Sourd - Translated from French by Barbara Thompson
Discovering the World series
2004, 40 pp., colour photographs, illustrations
21 × 15 cm
ISBN 92-3-103844-3
€ 4.80
UNESCO Publishing

La série Raconte-moi, Explique-moi propose en quelques pages, tout ce qu’il faut savoir sur le patrimoine mondial, les océans, les réserves de biosphère, des sujets chers à l’UNESCO. Ces petits livres guideront la réflexion et fourniront toutes les informations nécessaires aux jeunes lecteurs (à partir de 10 ans). Ils seront des outils parfaits pour les écoliers ou les collégiens qui souhaitent présenter un dossier ou un exposé sur ces sujets. S’adresse aux enfants, aux parents, aux enseignants et aux animateurs.

Aimed at ages 10+. A colourfully and easy-to-read book that provides accessible answers to questions related to biosphere reserves, including: What is biodiversity? Why is it in peril? Why should we preserve it? What do biosphere reserves look like? How do they function? Where are they located in the world?

WATER FOR PEOPLE - WATER FOR LIFE
The United Nations World Water Development Report
2004, CD-ROM, PC/Mac
ISBN 92-3-103929-6
€ 50.00
UNESCO Publishing

This CD-ROM provides an interactive version of Water for People Water for Life: The United Nations World Water Development Report, the most comprehensive assessment of the world’s freshwater resources, based on the collective input of 23 United Nations agencies and convention secretariats. Generously illustrated with more than 25 full-colour global maps, numerous figures, tables (including country tables) and photos, the report opens with a chapter describing the water crisis. It reviews progress and trends, proposes methodologies and indicators for measuring sustainability. It then assesses progress in 11 challenge areas including: health, food, environment, shared water resources, cities, industry, energy, risk management, knowledge, valuing water and governance. Finally, it presents 7 pilot case studies of river basins representing various social, economic and environmental settings. With an easy and attractive navigation, fully searchable with many additional functions, this CD-ROM is an essential tool for professionals at all levels, teachers and students.
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Among all the reports about the Indian Ocean tsunami of December 26 and its tragic consequences, two extraordinary stories went to the very heart of education for sustainable development. A little English girl on a beach in Thailand with her family remembered what she had learned at school and understood the natural phenomenon that was unfolding before her eyes. She raised the alarm in time and was able to tell people the best course of action to take. The Moken people from the Surin islands, who from the dawn of humanity have operated in any other way. UNESCO does not believe a global tsunami warning system can operate in any other way.

While education for sustainable development is the central issue in this edition of the New Courier, current events have prompted us to return to several aspects of December’s catastrophe and put them into perspective. This regional disaster had repercussions in every region of the world, not only because the killer wave affected so many countries bordering the Indian Ocean, but also because so many people were involved and the emotion and solidarity generated from the disaster embraced the whole world. The invisible threads which join the people of the world together appeared in the blinding white light of this tragedy. The event must also be seen as an echo of the warning made by United Nations experts in their “Millennium Ecosystem Assessment Synthesis Report,” published on March 30.

To give everyone the chance to change their behaviour, a decade is hardly long enough. Representatives of every country in the world gave the United Nations a mandate to set up the Decade of Education for Sustainable Development (2005-2014). They gave UNESCO the task of leading the way. This symbolic act is undoubtedly no more than a means to attract public attention. The scant resources available for the Decade are not in themselves going to change the course of the future. However, growing awareness of the importance of our daily acts and UNESCO’s ongoing actions in education, science, culture and communication give us hope that the UN Millennium Development Goals will be reached by the target date of 2015.
Totes les Coses (All Things)
Antoni Tàpies
2.25 m x 4.45 m
The Catalan artist Antoni Tàpies is one of Spain’s greatest painters. Born in 1932, he donated this work to the Organization on its 50th birthday in 1955. The painting, displayed at UNESCO headquarters, symbolizes his respect “for all things in the universe and for diversity in unity”.