

# TUNZA



by young people • for young people • about young people

## NORTH-SOUTH PARTNERSHIPS

Developing sustainably  
together

Netting the ether  
Eco-Minds

Trading futures  
Widening horizons

LIVE 8 ... the best thing we could ever do

Rapid power  
Seeds of change

HOLMES' FIRE





## TUNZA

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Writlington School

**UNEP and Bayer, the German-based international enterprise involved in health care, crop science and materials science, are working together to strengthen young people's environmental awareness and engage children and youth in environmental issues worldwide.**

A partnership agreement lays down a basis for UNEP and Bayer, who have collaborated on projects in the Asia and Pacific region for nearly 10 years, to step

up current projects, transfer successful initiatives to other countries and develop new youth programmes. Projects include: TUNZA Magazine, the International Children's Painting Competition on the Environment, the Bayer Young Environmental Envoy in Partnership with UNEP, the UNEP TUNZA International Youth Conference, youth environmental networks in Asia Pacific, the Asia-Pacific Eco-Minds Forum, the Eco Forum in Poland and a photo competition, 'Ecology in Focus', in Eastern Europe.



**Partners for Youth  
and the Environment**





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www.facewar.com



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Jorgen Schyite/Sill Pictures



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web.media.mit.edu/neilg/neil



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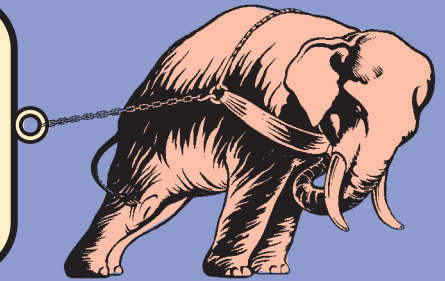
J. Griesbach



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Donna Sheppard, Calgary Zoo

# OUR MOMENT... ...OUR TIME



## Editorial

'Make Poverty History': the slogan has caught the imagination of the world – and particularly of our generation. Young people all over the globe are seized with the belief that the obscenity of dire poverty – which, for example, causes the needless death of an African child every three minutes – could be ended within our lifetimes. The rock star Bono spoke for us at the Live 8 conference this summer: 'This is our moment. This is our time. This is our chance to stand up for what is right.'

But making poverty history – while absolutely essential – is only half of the task that faces our generation. For though poverty is, indeed, the worst form of pollution, the world faces many other threats to its future – such as the rapid loss of species and ecosystems, the frighteningly widespread erosion of precious topsoil and, above all, the increasing threat of global warming.

Unless the world develops in harmony with the environment, poverty can never be ended. Poor people, even more than the rest of us, depend for their survival on the essential services – like freshwater, fertile soil and clean air – that nature provides. Climate change, though threatening us all, will hit the poorest hardest as droughts and famines increase and sea levels rise. Development has to be sustainable if it is to last.

'Make Sustainable Development the Future' does not have the same ring to it as a slogan as 'Make Poverty History'. Somebody – maybe a TUNZA reader – needs to come up with a snappy way of making it catch the public imagination. But the two goals are inseparable, and both must be reached within our lifetimes if the world is to have a worthwhile future. We pledge ourselves to do all we can to achieve both of them – and look to our leaders to do the same.

*We want to hear from you –  
your views, your news and  
your ideas. E-mail us at  
tunza@ourplanet.com.*



**N**ever before has cooperation between the global North and South, developed and developing countries, been so high on the agendas of the world's leaders. And it has been placed there by a remarkable mass movement, in which young people have played a key part.

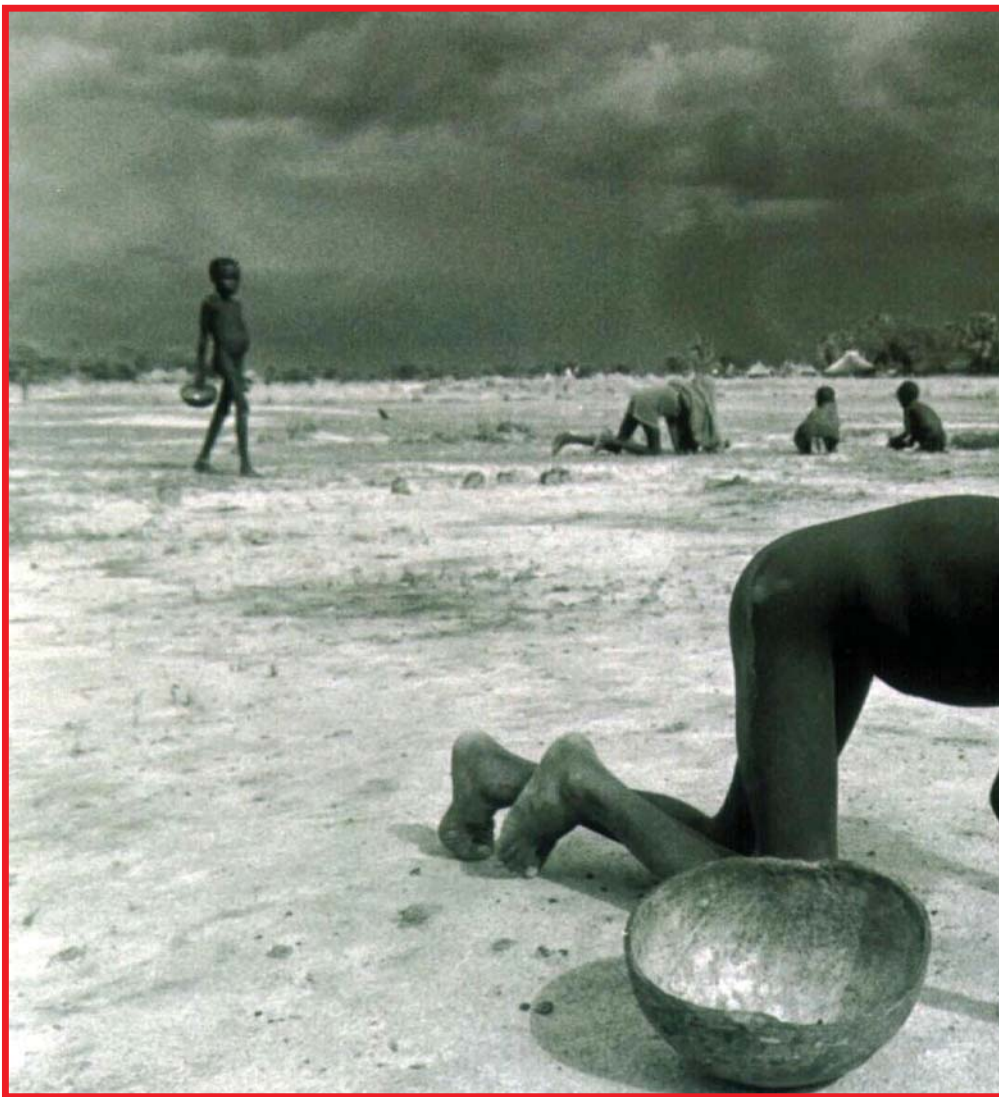
It all came to a head in Gleneagles, Scotland, at the end of the first week in July, when the leaders of the world's richest countries for the first time devoted their annual G8 summit to the linked issues of global warming and poverty in Africa. And, in another first, they invited the leaders of key developing countries to join them in their deliberations.

They met with the music of the world's greatest international rock festival still ringing in their ears. The Saturday before, ten Live 8 concerts – spanning the globe... Berlin, Johannesburg, Hyde Park in London, Moscow's Red Square, Paris, the Museum of Art in Philadelphia, the Circus Maximus in Rome and Tokyo – belted out a loud demand for change.

Organized by rock stars Bono and Bob Geldof, the concerts featured a galaxy of famous names – including such legendary artists as Paul McCartney, Sting, Stevie Wonder, Elton John, Stevie and Angelique Kidjo – and brought together such unlikely combinations as Madonna and Nelson Mandela, Bill Gates and Snoop Dogg to demand action on African poverty.

UN Secretary-General Kofi Annan told the hundreds of millions watching around the world, 'This is really the United Nations... the whole world has come together in solidarity with the poor.' And Bill Gates, one of the world's richest men, added: 'We can do this and, when we do, it will be the best thing that humanity has ever done.'

UNEP/Harmut Schwarzbach



## 'The best thing we

A few days later the organizers presented the Gleneagles summit with a petition signed by 38 million people. Under the pressure, the G8 leaders – who were focusing on the issues at the insistence of their host, UK Prime Minister Tony Blair – made unprecedented progress, even if it did not go as far as the campaigners had hoped.

G8 leaders agreed to increase their aid to the developing world by \$50 billion by 2010, to cancel all the debts of 18 countries – rising to 35 if countries meet conditions laid down by the leaders – and to eliminate subsidies for exports that often undermine the economies of Southern countries. This falls short of what is needed: some 60 countries need debt relief; the UN says that the increase in aid should be twice as big and happen sooner; and no date was set for eliminating the subsidies. But it was still the biggest single move ever made by the leaders of the world's richest nations.

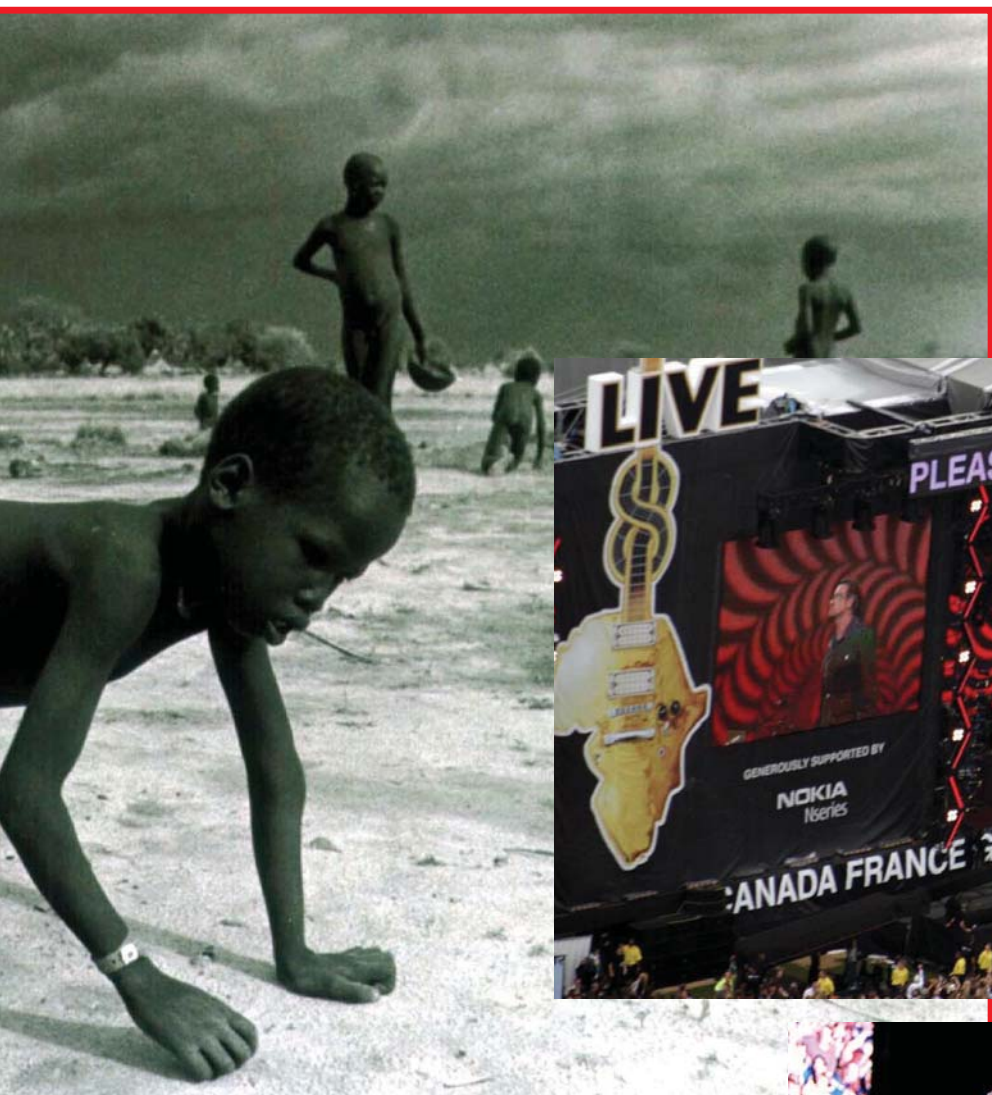
There was much less progress on climate change. But the leaders of the G8 and key developing countries like Brazil, China and India agreed to start talks on combating global warming, offering the first hope that the world might agree on action to be taken when the Kyoto Protocol expires in 2012.

Despite the disappointments, there is now a strong momentum for change for the first time in at least a quarter of a century. Everything will depend on the next few months – and on three momentous meetings.

In September, the leaders of the world's countries will



UNEP/Lynda Lee Howland



**LIVE 8**



topfoto/national

# could ever do'

meet in New York to review progress on the Millennium Development Goals – which include an aim to halve dire poverty by 2015. In November, a vital conference in Montreal will begin negotiations on the next stage in tackling global warming. And in December, key talks on world trade will take place in Hong Kong.

These meetings will be crucial tests of the new movement towards North-South cooperation, and the countless millions who supported Live 8 and the associated campaign to 'make poverty history' will be watching closely to see if they produce results.



topfoto/uppa

**Above:** Midge Ure, Bono and Bob Geldof at the Edinburgh Live 8. **Below:** (left) UN's Kofi Annan, heads of the World Bank and IMF join G8 and African leaders; (right) UK's Tony Blair, President of G8, receives thousands of messages from African people.



Empics

North-South partnerships



topfoto/fotonews

**'And what is a man without energy?  
Nothing – nothing at all.'**

**Mark Twain, the American writer, was right. We all require energy for heating, transport, nutrition, hygiene, health and other needs. But how we get it depends on where we live and how much we can pay.**

People in rich countries tap into power grids and pump petrol to run appliances, machinery and vehicles. In developing ones, more than 2 billion 'energy poor' burn charcoal, wood and cow dung for light, heat and cooking. Gathering these fuels – work overwhelmingly done by women and children – is usually time consuming and exhausting, eating into hours that could otherwise be spent at school or in productive work. And fumes from burning the fuels kill millions of people a year.

### **Clean, renewable sources**

Meeting humankind's growing energy needs ecologically, sustainably and profitably is a major challenge. Developing clean, renewable sources that meet these needs, without adding to global warming, is essential.

Experts estimate that at least 60,000 new energy enterprises are needed to supply this clean power to those now without electricity. Supporting local entrepreneurs to help provide energy services that the poor need – and are willing to pay for – can make communities the drivers of their own economic growth.

### **Sun-dried food**

Bamba Coulibally of Mali is one such entrepreneur. With a loan from the UNEP-led partnership for Rural Energy Enterprise Development (REED), he started a company that uses solar-drying technology to preserve meat, fruit and vegetables – filling a vital niche in a country where the climate spoils food quickly but most people cannot afford refrigeration. His company's dried meats, mangoes and onions can now



UNEP/Ong Hoooi Giin

## **Entrepreneurial energy**

be found in grocery shops, service stations and street-vendors' stalls throughout the nation's capital, Bamako.

### **Solar-powered irrigation**

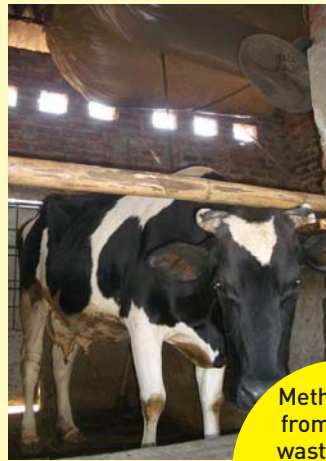
In north-eastern Brazil, a new cooperative of rural farmers grows organic crops irrigated by solar-powered water pumps and sells them in Fortaleza, capital of the Ceará state. The REED-sponsored project has created jobs, increased incomes and reduced urban migration by giving people the reason and means to stay in their community.

### **Biogas cooking**

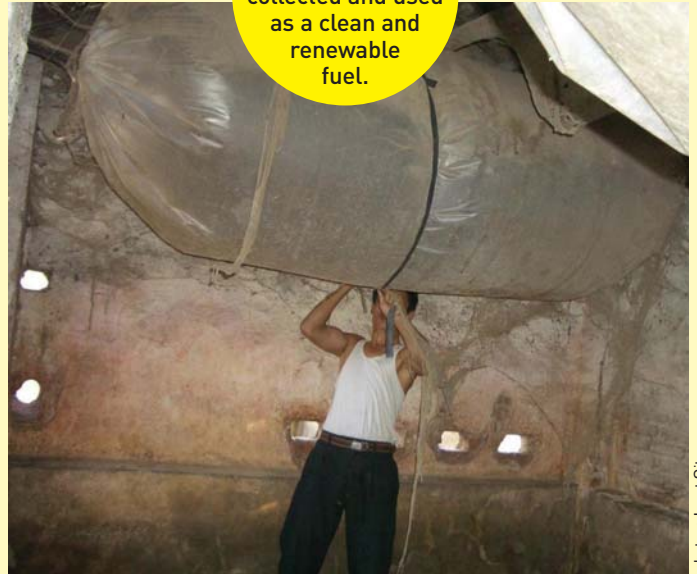
And Viet Nam's national horticultural association, Vacvina, is marketing \$40 household biodigestors that turn animal waste – typically from the one or two pigs owned by small farmers – into enough methane gas to cook family meals. Funded by E+Co – an independent company that is one of UNEP's main partners in REED – the project has sold and installed more than 3,000 biogas systems in villages throughout the country, freeing up time spent collecting fuelwood, reducing indoor air-pollution and improving health.



[www.uneptie.org/energy/projects/REED](http://www.uneptie.org/energy/projects/REED)



Methane gas from animal waste can be collected and used as a clean and renewable fuel.



photos: Joost Sijeur



Leanna Rathkelly/UNEP/Still Pictures

## RAPID POWER

*The mighty Congo river rushes through the Democratic Republic of the Congo, at one point dropping 96 metres in just 14 kilometres. A dam at its Inga Rapids already supplies electricity to Rwanda, South Africa, Zambia and Zimbabwe – but the South African energy provider Eskom thinks it could provide much, much more.*

*Eskom aspires to build the world's largest hydroelectricity plant to harness the potential of Inga rapids and channel it across the continent. The \$50 billion Grand Inga project*

*would generate roughly 40,000 megawatts, twice the power of China's Three*

*Gorges dam. But rather than damming the river, Eskom would generate this huge capacity with a run-of-river plant, which would siphon off the water, channel it through turbines and then return it to the river – avoiding the environmental and social problems often caused by big dams.*

*The project's proposers hope to power the whole of Africa with the output and export excess energy across the Mediterranean to Italy, Jordan, Spain and beyond. Plans to link Africa's fragmented supply lines to create a cohesive transcontinental electricity grid are already under way.*

*Success is likely to depend on solving such problems as cross-border disputes, long-distance transmission losses, maintaining the very diverse and species-rich local environment and funding. And even if all goes well, construction work on Grand Inga is still at least a decade away.*

*But Eskom's leaders are optimistic. North and South are already cooperating on the project. A study by French utility company Electricité de France has indicated that the plan is viable, and financial backers, like the World Bank, and private investors are beginning to show interest. Thulani Gcabashe, Eskom's CEO, believes that 'some day soon, hundreds of millions of Africans will use electricity to light up their homes, cook their food, and literally have the power to develop their potential'.*

# Widening horizons

## New perspectives

Carmen LaCambra



**Carmen LaCambra** came to the UNEP World Conservation Monitoring Centre (UNEP-WCMC) in Cambridge, England, from Colombia to 'close the gap between academic science and science for development'. A biologist by training, LaCambra was awarded a Chevening Scholarship by the British Council to spend a year at UNEP-WCMC. Says Carmen, 'You gain experience that helps build your career, and make links that you can maintain back in your home country. It opens your mind to active, equitable partnership: the Centre gives us support, but we have knowledge to contribute in return. Here in the North there is political will for conservation, but much biodiversity is in the countries of the South. The two sides must work together through information exchange, capacity building and joint scientific research to achieve simultaneous holistic development.'

Another Chevening scholar, **Shan Khee Lee**, from Malaysia, added: 'Before I came to the WCMC, I was working as a field researcher in north Borneo, with communities and animals on a local level – but I wanted to see conservation on a global scale and gain technical skills to share with colleagues back home. In Cambridge, I've had the opportunity to communicate with researchers worldwide, sharing data and knowledge. It's given a context to my local efforts and will help immensely when I return to Malaysia and work at the local level once again.'



Shan Khee Lee



**With 70 per cent of its construction materials derived from parts of the coconut tree, the Coconut Palace in Manila is a fitting place for the welcome dinner of the first annual Eco-Minds Youth Forum – the latest youth environmental programme developed under the UNEP-Bayer partnership.**

**Creative and practical uses of science, sociology and technology for sustainable development will top the agenda of the conference, which will bring 27 hand-picked youth delegates from Australia, China, India, Indonesia, Republic of Korea, New Zealand, the Philippines, Singapore and Thailand together in October 2005. The forum will focus on facilitating the exchange of ideas between youth involved in a range of academic disciplines and from countries in different stages of development.**

**After three days of lectures and discussions in Manila, the programme will move to Subic, where delegates will trek into the forest for demonstrations by aboriginal guides of medicinal and water plants, firemaking, and utensils and cookers made from bamboo. Then, crucially, delegates will form teams combining expertise in the natural sciences, engineering and technology, the social sciences, and commerce and management to tackle real-life environmental problems in the area.**

**Dr Udo Oels, the member of the Bayer AG Board of Management responsible for Innovation, Technology and Environment, says, 'A global task such as sustainable development is a challenge for us all. Science and technology play a crucial role and interdisciplinary cooperation can put sustainability concepts into practice. Eco-Minds therefore is an important forum for bringing together young people representing a wide range of nationalities and academic disciplines.'**

Bayer



**Eco-Minds candidates from China, Indonesia, the Philippines and Singapore told TUNZA of their hopes for the forum and what the participation of young people in sustainable development could bring to environmental protection in their countries.**



# Widening horizons

## Peer networking

**LEAD International**  
Inspiring leadership for a sustainable world

Leadership for Environment and Development (LEAD) International coordinates educational programmes for people and institutions interested in sustainable development. Its 1,500 individual members, or Fellows, in more than 85 countries work together on projects and publications and participate in international peer-learning sessions. LEAD also runs postgraduate courses in sustainable development and organizes students and young professionals to work alongside, and be mentored by, other LEAD Fellows. Simone Beatrice Noemdoe, a LEAD Fellow working in South Africa to reintegrate people living with HIV/AIDS into society through public works employment, explains, 'The South African Government has demonstrated its commitment, but we lack people with enough skills to implement these initiatives. My LEAD training provided me with the enhanced knowledge, understanding and skills in order to take this on.'



Counterpart International



**Wang Feng, postgraduate student in environmental planning and management at Nanjing University in China**

'Eco-Minds presents a precious opportunity to communicate with people from different backgrounds and experiences. I am curious about what youth around the world are doing in their everyday lives to protect the environment, and am eager to tell them about what is happening in China and how the government, general public and enterprises are handling these issues... It is a good time for young people to join together to plan for the planet.'



**Nyoman Sutarsa, Indonesian medical student**

'Nowadays, development in our country means improving one aspect while at the same time sacrificing another. I believe that managing the environment involves balancing educational and health care concerns as well. I was selected for the Eco-Minds programme and I plan to raise awareness of these interrelated issues in Indonesia.'



**Gerard Dumancas, a recent chemistry graduate from the Philippines**

'Many people think that only the older and more experienced adults should be given an opportunity to speak, because they can better discern what's best for a country's development. This may be true, but, as youth, we believe that we also have the minds and hearts to contribute to the good of our country.'



**Oliver Goh, Singaporean diploma student in civil and environmental engineering**

'It is through this forum that I feel fruitful discussion can take place among passionate youth who want to learn, share, take lessons back home and spread the environmental message to their peers. It will be like a domino effect, where we are all individual dominoes. With each hit, our chain of influence spreads. At the end, passion for the environment will be much greater than before.'

## Advocates for the future

Counterpart International, an international human development organization, has helped Malika Yamatova continue her studies in Uzbekistan on developing emerging markets through international finance, business ethics and social responsibility. The scholarship advances Counterpart's aim of 'building a just world through service and partnership' by building and supporting local capacity in the South. Lelei LeLaulu, president and CEO of Counterpart International, urged Yamatova – who has served as CEO of the Student Government Association, run classes for the unemployed and helped to compile a 70,000-entry English-Russian-Uzbek online dictionary – to 'work hard, share your ideas with others, and not fear challenges', adding, 'You have the power to shape the future, to advocate change, to lead and to help create a truly sustainable future.'

# TUNZA ANSWERS YOUR QUESTIONS

## North-South partnerships

**Q** Since all of us share the same set of limited natural resources, North-South cooperation on environmental and development issues is essential. Why has the concept taken so long to appear on the global agenda?

**A** It has been a matter of time. Today, we live in a different world, with a mindset that can clearly see the ever-increasing inequality between the rich and the poor, the assault on our natural resources, the impact of climate change, population growth and crippling poverty. Such issues can no longer be ignored through ideological differences.

**Q** Given their differences in language, culture and resources, how can Northern and Southern youth begin working together towards common goals?

**A** Today's young people are made global citizens by an ability to speak and learn languages and by an appreciation and adoption of each other's cultural diversity. A partnership between youth of the North and South can open new prospects and access to opportunities in education, training and skill developments through exchange programmes and other forms of solidarity.

**Q** Many joint North-South projects seem to become mired in personality conflicts, miscommunication and financial and logistical difficulties. What key elements are needed for forming and sustaining successful partnerships?

**A** There is no one formula, but if a partnership is built around a genuine effort to address local conditions, conflicts and misperceptions can be avoided. If the goal is to provide access to water, food, sanitation, shelter or education, the partnership should have a clear plan of action, leadership, a timeline, a source of funding and – above all – active stakeholder participation. Lasting partnerships can be built if all those involved listen to one another, understand needs and differences, and keep their engagement simple and as free from bureaucratic procedures as possible.

**Q** Aren't many North-South partnerships just new forms of imperialism?

**A** If cooperation is imposed, or presses the views and perspectives of one country upon others – or is purely based on the search for one side's interest – then there is a problem. Acceptable partnerships promote health care services, education, agriculture, transfer of new technology and information, and foster economic development and prosperity.

**Q** How are UN agencies encouraging equitable partnership between Northern and Southern member states?

**A** The United Nations is the leading world body in promoting and implementing international cooperation between the countries of the North and South. Its agencies and programmes offer platforms for them to discuss, debate, address and decide on such extremely important issues as protecting the environment; health; education; international aid, trade and debt; human rights and security; the empowerment of women; and peace building. At the 2000 Millennium Summit, world leaders came together and committed themselves to halving dire poverty by 2015 and attaining development for all through partnership between developing and developed countries.

**Q** Critics say that globalization is unfairly stacked against poorer countries. How can we ensure that its benefits are universally distributed?

**A** In principle, the growing integration and interdependency of economies and societies around the world could be a good sign of development and partnership. But if poor countries are just seen as sources of raw materials and potential markets for export goods, that is the kind of false partnership that has caused increased inequality and unprecedented environmental degradation. Rich countries should share their wealth and knowledge with poorer ones, and offer them better opportunities. This is the key to helping them break free of poverty and to putting us all on the path of sustainable growth and development.

Do you have questions on environment and development issues that you would like the experts at UNEP to answer? Please send them to [cpiinfo@unep.org](mailto:cpiinfo@unep.org), and we will try to answer them in future issues.

# Greenhouse EFFECT

We are continually bombarded with the problems that humanity has contributed to in the world: pollution, mass extinction and deforestation, to name just a few. At Writhlington School, my local secondary state school in Somerset in the United Kingdom, we have decided to take action – and work with indigenous peoples in the northeast of India to save endangered species.

Since starting at the school four years ago, I have been an avid member of its greenhouse club. It may seem normal, at first sight, for a school to grow plants, but the greenhouses at Writhlington hold a particularly special array of flora. Orchids are the single largest known family of flowering plants, with upwards of 25,000 classified species and a similar number predicted to be discovered. They grow on every continent, including Antarctica, although only a few species thrive there.

For many years the battered greenhouses at our school – a business and enterprise specialist school located outside the ancient city of Bath – contained just the usual tomatoes and cacti, until Simon Pugh-Jones, a physics teacher, took over. For the next couple of years, the greenhouses became home to a growing number of bedding plants and hanging baskets, which brought a steady income to cover the costs of repair. Eventually the orchids made their entrance in the form of a few donated hybrid cymbidiums.

Our school now grows an enormous

number of orchids – from *Aerangis* to *Zygostates*, and *Angraecum* to *Zygopetalum*. For years we struggled to fill the greenhouses, but now we battle to find space for all our plants, as we grow everything we can lay our hands on.

Writhlington School has become the United Kingdom's second biggest orchid specialist propagation lab, using a nutrient agar jelly in a sterile environment. We built the lab in an unusual place – the girls' disused lavatories.

Our work is now entering its most exciting stage, setting up links with botanically vital habitats such as Costa Rica – which has one of the only rainforests in the world that is increasing in size – and Sikkim, an Indian state in the eastern Himalayas. The work in India is centred on the Labrang Monastery and school near the village of Tumlong, and links up with Mohan Predan, secretary of the Indian subcontinent regional orchid specialist group of IUCN – the World Conservation Union.

The area around Tumlong is home to many endangered species of orchids, which are under increasing threat as people continue to remove them from the wild – and there are no local projects to breed more to increase the supply.

The plan is for Mr Predan to collect wild seed from orchids nearby and send it to our school for propagation. We will send the resulting seedlings to village

schools in Sikkim, where students will pot and grow the seedlings, eventually selling the matured orchid plants locally. We hope that this project will stop people from collecting orchids from the wild, as well as motivate communities to become involved with orchid conservation.

The orchids will also be sold through horticultural establishments and organizations like Kew Gardens in London. The profits from these sales will be sent to India to fund the construction of a lab there, so that the people can produce seedlings themselves.

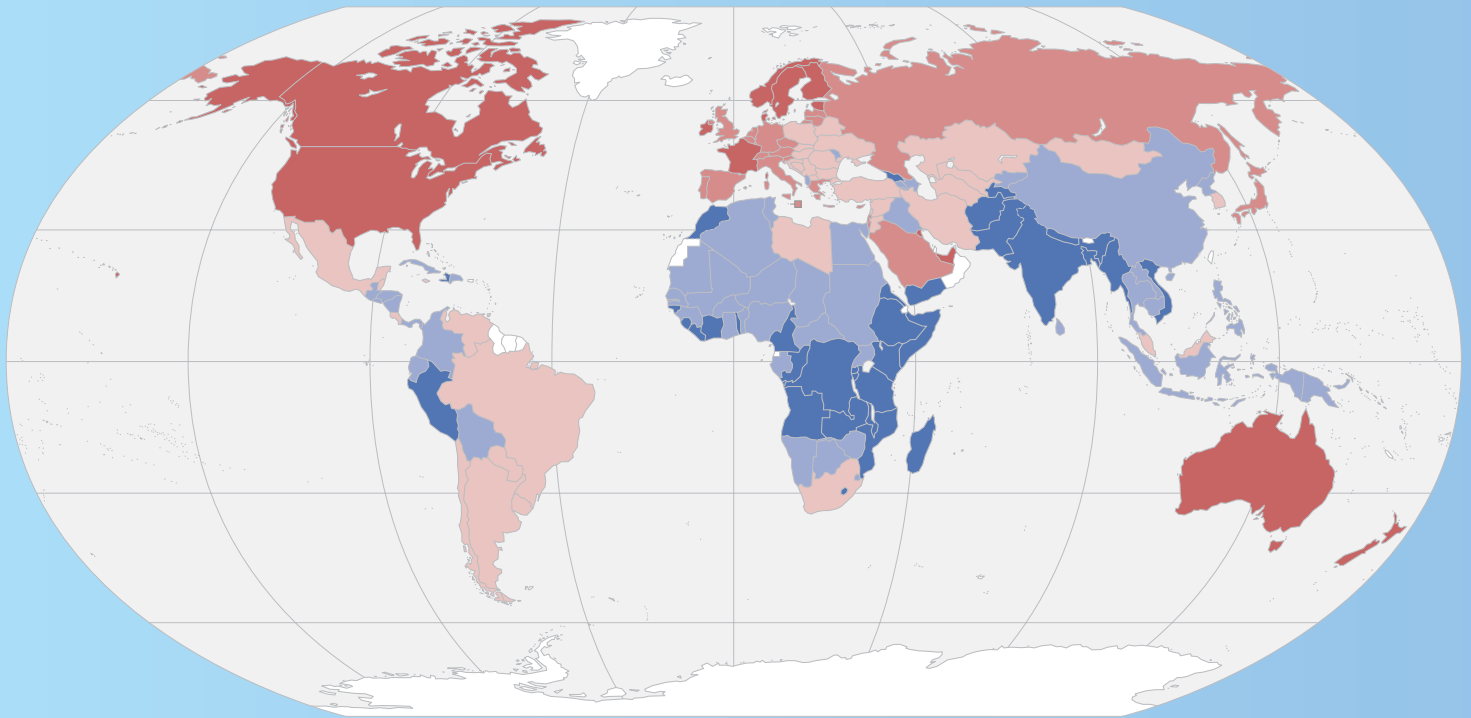
We hope to spread this model to other parts of the world, including Brazil, Guatemala and Africa. Our goal is to create dozens of these self-sufficient orchid propagation labs to meet the world's need for orchids, and conserve these precious flowers for years to come.

## Callum Swift (15)

Year 10 student at Writhlington Business and Enterprise Specialist School



# Developing sustainably...



*There is literally only one Planet Earth, and we rely on its amazing biological capacity to regenerate the goods and services we use – often without thinking: our food and drink, our clothes, our homes, how we stay warm and how we move around and stay healthy.*

The Ecological Footprint is one way of measuring our use of the world's natural resources and ecological services. The footprint is the area, expressed in global hectares, needed to keep producing the food and fibre we use, absorb our wastes, generate the amount of energy we consume and provide the space for the roads, buildings and other infrastructure we rely on. Currently the world average individual footprint is 2.2 global hectares – but Earth can sustain just 1.8 global hectares for each one of us. That means together we are using nearly the equivalent of one and a quarter planets.

## Heavy footprint

The map shows how we are doing, country by country. Blue countries are those where people are using less than the global average, and red ones are where people are using more. It is not surprising that

## Living on less, living on more, 2001

The ecological footprint of an average resident in 69 out of the 150 countries illustrated is larger than 1.8 global hectares – the amount available per person worldwide. In 33 countries, the average person uses more than double, in 13 countries more than three times that.

- Countries using more than three times the worldwide average biocapacity available per person
- Countries using between twice and three times the worldwide average biocapacity available per person
- Countries using between the entire and twice the worldwide average biocapacity available per person
- Countries using between half and the entire worldwide average biocapacity available per person
- Countries using less than half the worldwide average biocapacity available per person
- Insufficient data

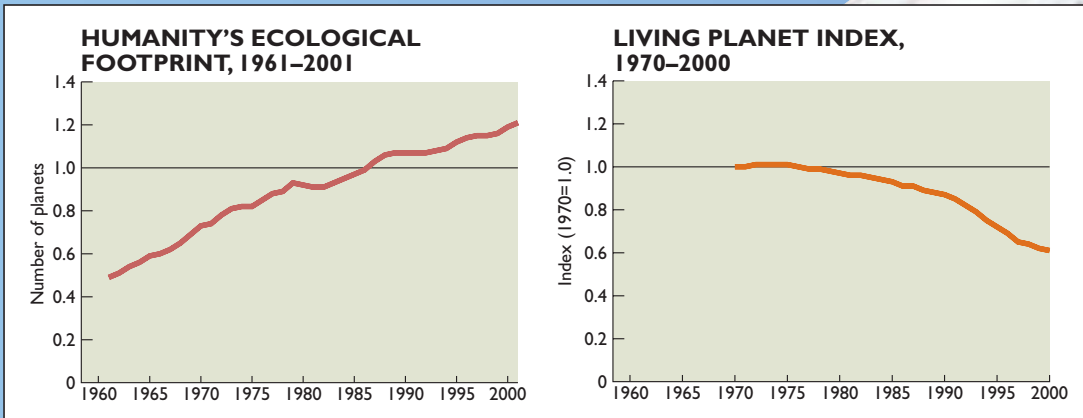
the countries of the North, with their high levels of consumption, have the heaviest footprint, while the poorer countries of the South are often, in ecological terms, living sustainably.

## Quality of life

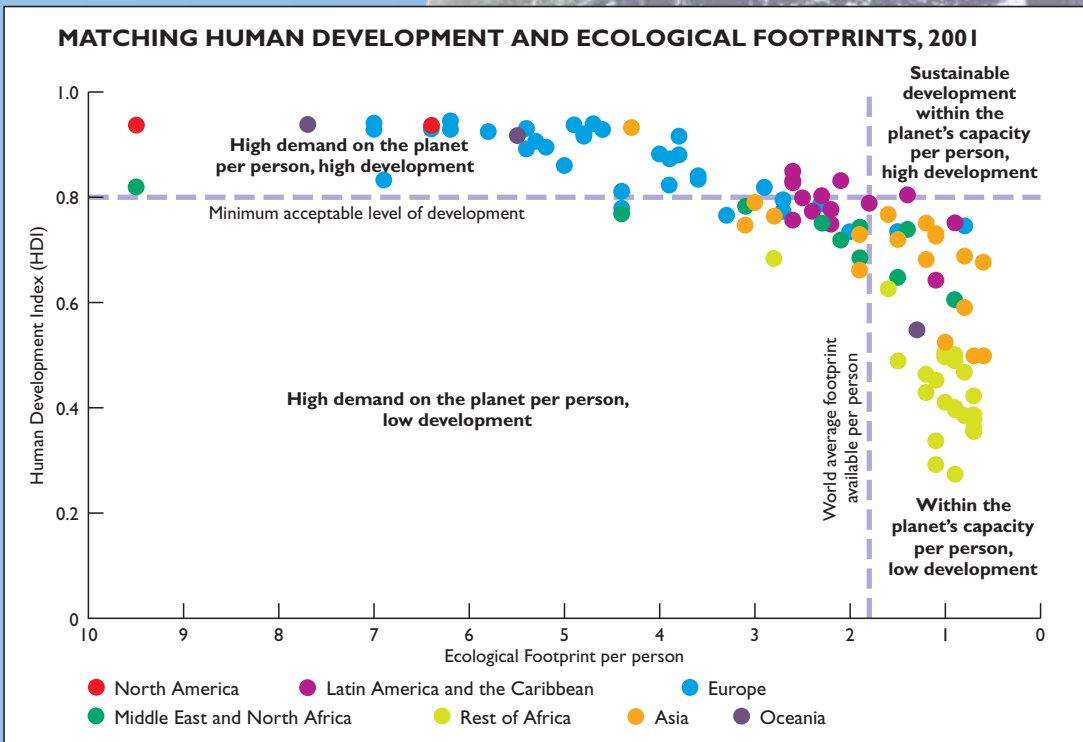
Pakistani economist Mahbub ul Haq believed 'people often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and a sense of

# together

We've only **ONE** planet



Humanity's footprint – our use of Earth's renewable biological resources – is now two and a half times what it was in 1961. Together, all of us are using the resources of the equivalent of one and a quarter planets, and our consumption levels are still rising. The Living Planet Index shows average trends in populations of land, freshwater, and marine species worldwide. It has declined by about 40 per cent since 1970. Could these factors be linked?



participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives.' His creation – the United Nations Human Development Index – quantifies these aspects of life. Produced annually, the Index shows higher quality of life in Northern countries. But are these lifestyles sustainable?

### Sustainable living

Aurélien Boutard married these two measurements, plotting the Human Development Index together with the Ecological Footprint. His diagram suggests that, as we develop a better quality of life, so we move further

North-South partnerships

### Living well on one planet:

Our challenge is for all countries to enjoy 'sustainable development' – high development and living within one planet's resources. No country is yet in this situation, but some are close.

away from living sustainably in ecological terms. No one country has yet achieved that magic mix – an ecologically sustainable, high-quality lifestyle. Now there's a challenge for us all.

Still Pictures



# Holmes' fire

## TUNZA magazine talks to Dame Kelly Holmes, Britain's golden girl

**KELLY HOLMES** sprinted to victory twice at the 2004 Olympic Games in Athens, winning the 800m and the 1,500m, only the third woman in Olympic history to achieve the double. After a career dogged by ill-timed injuries, the 35-year-old former army sergeant beamed and lifted her arms in triumph as she won her second gold medal.

A recent poll voted the picture that captured this moment Britain's favourite photograph, beating Neil Armstrong's first steps on the moon, Prince Charles and Princess Diana's wedding kiss, and the Beatles crossing Abbey Road.

Honoured by being made a Dame (Britain's female equivalent of a knighthood), Kelly Holmes has also been voted the UK celebrity most likely to inspire people to do voluntary or charity work. She's currently working with Sportability, a disabled sports charity, two children's cancer treatment specialist units at University College

London Hospital (UCLH), and a women's breast cancer charity. She also mentors 12 British junior potential athletes through a programme called 'On Camp with Kelly' and promotes sport and fitness in townships in South Africa, where she trained for two years with fellow sprinter Maria Mutola of Mozambique.

Dame Kelly attributes much inspiration to working with Mutola, who became Mozambique's first-ever gold medallist at the 2000 Olympic Games in Sydney on winning the 800m. Mutola, who overcame enormous odds as a young runner from a shanty town, has become a national role model, and has set up the Maria Mutola Foundation to provide scholarships, kit and coaching to promising young athletes.

**T:** *Much has been made of the international spirit of the Olympic Games. Do you believe that the cooperation and friendship shown between athletes from developed and developing countries can influence the way governments interact?*

**K:** *I believe that sport has no barriers and is the perfect avenue for interaction between developed and developing countries. The Olympic spirit has no boundaries – no matter what race, colour, religion or background. It brings everyone together to show solidarity, commitment, determination and passion and should be used as the*

## Paid in smiles

By Juan Ortiz



Juan Ortiz

Why would someone from Peru choose to volunteer in the United Kingdom instead of his own country? To foster mutual help and international cooperation between the global North and South, and to bring those experiences back to his country.

I have been volunteering ever since I was young, balancing my time between it, paid jobs and studies. After I returned from my first international experience – a cultural exchange programme between Peruvian and Dutch youth – an organization called Ashoka Peru asked me to help empower underprivileged

young people through educational projects involving sports, youth leadership, environmental issues and awareness and prevention of sexually transmitted infections.

This gave me an understanding of the problems facing my country, strengthening my determination to help solve them. It showed me how voluntary work and passionate leaders can bring about social change, and inspired me to continue volunteering. And I learned that smiles of affection and gratitude are the best payments that volunteers could ever hope to receive.

After finishing studies in international relations in Lima, I was offered a voluntary position with a British NGO, Peace Child International, to coordinate youth

stepping stone to build bridges of peace all over the world.

**T:** *What would you say to people who protest that international sporting events like the Olympics favour athletes from richer backgrounds – who have the benefits of time, coaching and facilities – over those who lack such training opportunities?*

**K:** *I don't think the Olympics favour any one nation. Yes, some athletes have more opportunity to develop, but everyone who has ability and the will to succeed is likely to make it no matter what. Less-developed countries often do not have as stringent qualifying rules to enable everyone a fair chance of reaching their goals.*

**T:** *How do you think that young athletes – and youth in general – can best encourage North-South cooperation in their own countries?*



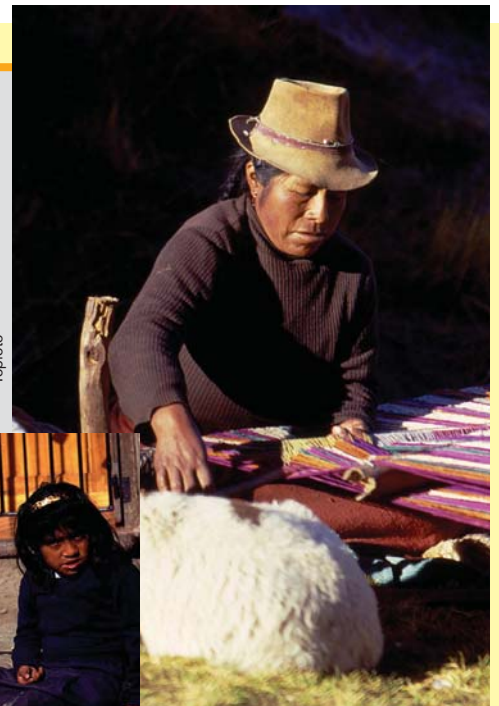
**K:** *It is important that the youth of today are fully informed of events around the world and make their own decisions and judgments on North-South relationships, rather than adhering to historic prejudices possibly held by older generations. When young sportspeople meet to compete against each other, they have an ideal opportunity to create strong and lasting friendships.*

John Giles/PA/Empics

leadership and participation projects in Latin America and Asia. I would tell British youth about my experiences with young people in my country – about their impoverished schools and how they would fight for a better life despite all their problems. Over time, many began to show an interest in volunteering as the spirit of international cooperation caught on.

Now I am back in Peru, and I know that there is still much to do. I have set short-term goals for myself to create an NGO, promote volunteering activities and keep participating in youth projects – always as a volunteer. Currently I am working for WWF – identifying potential leaders in the area of conservation and supporting them in their studies – but I make time to volunteer with

other organizations as well. It does not matter whether your actions are big or small, so long as you do them with the best of intentions. There is nothing to lose and so much to gain from volunteering – and it is the best feeling in the world to give freely without expecting anything in return.



Topfoto



Topfoto



## *A view from the North*

**N**orth-South cooperation is essential if humankind is to rise to the great challenge of fulfilling the UN Millennium Development Goals (MDGs), ensuring everyone a dignified life. But such cooperation must be different from that of past decades and treat developing countries as genuine partners, giving them responsibility and ownership of their own development.

Many donor countries have adopted this approach, adjusting aid programmes to the development strategies of recipients, rather than to their own priorities. Increasingly, well-run recipient countries can get aid as general budget support, enabling them to direct it where they see fit. But in countries that have weak democratic systems and histories of violating human rights, external support is often best channelled into civil society to push for change and minimize corruption. Whichever, optimizing North-South development cooperation requires donor coordination and partnerships to avoid conflicts of interest and minimize the administrative burdens placed on recipient countries. This has already been done across the European Union.

Trade is critical in establishing equitable North-South cooperation. Enabling developing countries to participate fully in global markets strengthens their economies and aids progress towards the Millennium Development Goals. Developed countries – which control many of the world's trade rules and regulations – must create fair trading environments, particularly by reforming the European agricultural support system.

Young people can play an important role in fostering North-South cooperation, since we are able to work together towards common goals independent of economic interests. This offers hope that we can overcome past difficulties in North-South cooperation and strive for a more balanced, sustainable world.

*Lars Rosendahl Appelquist is the Tunza Youth Advisor for Denmark.*

## **North-South cooperation...** *thoughts from Tunza Youth Advisors*

**W**e young people are ultimately responsible for the environment: it is our job to tackle the problems facing our world. The rapid industrialization recently experienced by many developing countries has led to increased economic prosperity, but has created more environmental problems than ever before. Striking a balance between economic development and environmental protection is a difficult challenge for us. It requires increased understanding and cultural exchanges between developed and developing countries.

As global citizens and future leaders, we need to foster North-South cooperation in resource sharing. The digital divide and the scarcity of information and clean technologies cause many environmental problems in developing countries. We must take into consideration

economic indicators like GDP growth (often used to measure the success and effectiveness of governments and their policies), as well as environmental concerns like threats to biodiversity, competition for natural resources and harmful emissions from 'dirty' energy sources like coal and crude oil.

There are many ways to get involved in sustainable development, from participating in projects like the Youth Exchange Programme – where socially minded young people from the North and South form networks to promote social awareness and collaborations – to building online databases to share environmental information efficiently. We can also tap into the resources of non-governmental organizations to establish educational programmes and other initiatives – addressing issues like environmental awareness, sustainable consumption and growth, and the significance of volunteering and information sharing.

We youth will bear the consequences of the present treatment of the environment. So partnerships and our efforts can make a difference and find the way forward to a sustainable future.

*Sixuan Li is the Tunza Youth Advisor for China.*



## *A view from the South*



# Trading futures



www.planethelium.com

**Chris Martin of the band Coldplay describes himself as a ‘third-rate Bono’ – a celebrity-turned activist, following in the footsteps of U2’s lead singer, who campaigns for trade justice, debt relief and increased development aid when he’s not making music. Martin’s particular cause is using his fame to promote fair trade – the selling of products that provide a decent return to poor producers in the developing world. He has visited small farmers in Ghana and Haiti and, not unnaturally, says he would sooner talk about the issue in interviews than ‘the colour of my socks’.**

The fair-trade movement provides a straightforward, practical way for customers to support ethical trading practices with their wallets. Driven primarily by consumer demand, the movement is gaining popularity – and mainstream market share – for high-quality goods produced through ethical payment and working conditions. Fair-trade teas, coffees, chocolate and other foods are now stocked by large supermarket chains as well as speciality shops around the world. Ethically traded clothing, jewellery, gifts, arts and home furnishings can be bought from fair-trade companies, non-profit

organizations and online from the producers themselves. Music lovers can even purchase CDs and concert DVDs from a fair-trade media company that guarantees at least half the revenue to the developing-country artists who recorded them.

By paying above market rates, the movement shields Southern producers from volatile market prices and allows them to cover their costs, support their households and reinvest in their communities. Many fair-trade buyers’ groups also provide vocational training for producers and their families and fund local development projects. While fair trade economically enfranchises individual farmers and artisans, the growing trade-justice movement aims to reform the rules and institutions governing world trade. Globalization has encouraged economic integration: the World Trade Organization (WTO) records that global trade volume grew by nine per cent last year and was worth over \$9 trillion.

## Trade barriers

When countries are able to compete freely for business, international trade can benefit everyone. But rich countries often protect their own industries from outside competition by subsidizing them or placing restrictions and tariffs on imports. Poor countries trying to export to Northern markets face average trade barriers four times higher than those applied when rich countries trade with each other. The barriers rise higher the more goods are processed, limiting poor countries to exporting raw commodities rather than more profitable value-added goods.

Low-income countries account for

**Driven primarily by consumer demand, the fair-trade movement is gaining popularity – as well as mainstream market share.**

just three per cent of world trade, though they have more than 40 per cent of the world’s population. By contrast, just seven nations (the United States, Canada, the United Kingdom, France, Germany, Italy and Japan), with one tenth the world’s population, account for half of all exports collectively.

According to Oxfam’s Make Trade Fair campaign, 128 million people would be lifted out of poverty if Africa, East Asia, South Asia and Latin America were able to increase their share of world exports by just one per cent each. In Africa alone, this one per cent increase would generate \$70 billion – five times what the continent receives in aid.

## People pressure

Pressure for change is now mounting as never before, as people across the world are putting pressure on governments, corporations and consumers in developed and developing countries. Rock stars and politicians, business people, grassroots campaigners and students all joined the fight against poverty. They believe they can make a difference, whether by volunteering with non-governmental organizations, addressing heads of state, hosting rallies and charity fundraisers or simply introducing the issues with their families and friends. It is a huge task, but they are convinced that now is the time to tackle world poverty head-on, through fair and just trade.



## Calling for change

**When villagers in Namunsi, Uganda, need to make or receive phone calls, they turn to their neighbour Fatima Serwoni, who owns the only mobile phone in the area. The nearest public pay phone is over four kilometres away, and Fatima's prices are reasonable.**

Fatima is one of hundreds of village phone operators in Bangladesh, Rwanda and Uganda harnessing telecommunications technologies developed in the North for thriving mini-enterprises. Mostly women, they take out micro-loans to chase their phones, connection cables and pre-paid minutes – with the help of the Grameen Technology Centre – and then rent talk time at a small profit to their customers to make business and personal calls. Literate operators sometimes add text messaging services.

Mobile phones are spreading rapidly throughout the developing world, promising to transform the way people interact and do business, much as the introduction of telegraphs and railways did in Northern countries during the Industrial Revolution. They have a striking impact on development as a 'leapfrog' technology, especially where other forms of communication – such as roads, postal systems, fixed telephone lines and so on – are lacking.

Research suggests that an increase of ten mobile phones per 100 people can boost national economic growth by 0.6 per cent. Mobile phones can reduce transaction costs and risks and save lengthy, expensive journeys. Farmers and fishermen can call different markets to find the best prices for their products, and business owners can order supplies and make secure payments by text message. People can call clinics for health and veterinary advice, and employers and job-seekers can conduct interviews over the phone.

Mobile-phone networks are often cheaper and easier to install than fixed telephone lines, and require less maintenance. Wireless signals can

circumvent geographic obstacles – like mountain ranges and vast deserts – that frustrate fixed lines, and mobile infrastructures are less vulnerable to damage by floods, storms, earthquakes and other natural disasters.

Africa is the world's fastest-growing market for mobile phones, and other Southern regions are following suit.



Jorgen Schytle/Shill Pictures



www.firstmilesolutions.com

And as many people often share one handset and subscription, access is more widespread than sales figures suggest. Using the phones does not depend on literacy, education, location or a stable income, so they enable disadvantaged or remote groups of people to participate in the economy. Those without mains electricity can use car batteries, as Fatima does, and wind-up or solar-powered chargers.

Since launching her village phone service, Fatima's weekly income has almost doubled – and her neighbours can access and contribute to the global information flow.

## On to the Information Highway

**The Ratanakiri region of northeast Cambodia is one of the world's most remote places. The nearest city – the provincial capital, Banlung – is a two-day car journey away over rough, unpaved roads. Its villages have no running water, electricity, phone lines, televisions or newspapers – but the people regularly send and receive e-mail, thanks to a new technology initiative.**

Each morning, five intrepid 'motomen' in Banlung download incoming e-mails from a central satellite hub into small boxes with wireless capabilities, then take them by motorcycle to 13 far-flung villages, mainly unreachable by most vehicles or digital signals. In each village, donated solar-powered computers with wireless cards receive the messages and upload outgoing ones, which are collected, biked back to Banlung and sent via the satellite to the Internet at the end of the day.

The project is organized by American Assistance

# ether

for Cambodia and Japan Relief for Cambodia, funded by private American and Japanese donors and the World and Asian Development Banks, with technology developed by United States firm First Mile Solutions. It keeps villagers abreast of world affairs through online news sources and helps children correspond with overseas donors who supply their school materials. Teachers can send reports to the Ministry of Education and receive them in return, citizens can voice concerns and complaints to government representatives and artisans can market their traditional handicraft products around the world. And through the project, village health workers use a telemedicine programme between Banlung's provincial hospital, Sihanouk Hospital Center of Hope in Phnom Penh, Massachusetts General Hospital and the Harvard Medical School to upload photographs of their patients and receive opinions on diagnosis and advice on treatment.

Similar North-South cooperation is bringing the power of information and communication technologies (ICTs) to the poor across the developing world.

Farmers can check going rates on world commodity markets online before negotiating crop prices with middlemen. Fishermen can check wave heights and fish movements to avoid dangerous weather and maximize their chances of a big catch. Even people who cannot use computers themselves can listen to pertinent information relayed over loudspeakers by those who can.

The MS Swaminathan Research Foundation (MSSRF) envisions locally staffed knowledge centres (KCs) with community telecommunications equipment in each of India's 600,000-plus villages by 2007. Leading a 100-member-strong alliance between government, civil society, academia, media, private industry and

international donors, including Hewlett-Packard Labs India, UNICEF, the Canadian International Development Agency, Friends of the MSSRF Tokyo, to name a few, it seeks to launch a 'learning revolution' and democratize information technology for the poor.



Jorgen Schyfte/Still Pictures

## Father of invention



web.media.mit.edu/neilg/neil

If necessity is the mother of invention, then capacity must be its father. Inventors in the developing world may have plenty of ideas, but without the right tools, these remain sketches on paper.

At the Massachusetts Institute of Technology, Dr Neil Gershenfeld and Bakhtiar Mikhak are working to place the tools of invention into the hands of ordinary people through personal fabrication laboratories. Each \$20,000 'fab lab' contains a collection of tools for cutting, connecting and computing, which can machine objects down to microns, a fraction of the size of a hair.

The first fab labs are now in place around the world giving life to such innovations as sensors to measure the fat content of milk in India; cassava grinders and agricultural tools in Ghana; and radio collars and wireless networks for tracking animal herds in Norway.

Gershenfeld aims to turn fab labs into self-sustaining operations that can fuel local economies, meet and enable further innovation. He says that fab labs could be 'matters of survival' in developing countries – developing 'locally appropriate solutions', producing them on the spot and sharing them globally.



www.web.media.mit.edu/neilg/neil



www.firstmilesolutions.com

# SEEDS OF CHANGE



T. Vandembosch

It sounds almost too good to be true – make money, reduce poverty and improve the environment all at the same time. But that is what sustainable development is all about. And there are a growing number of small entrepreneurs with excellent practical ideas on how to do it.

United States, Norway, Britain and the Netherlands, the UN Global Compact and the reinsurance company Swiss Re – SEED gives award-winning projects a customized package of support including mentoring, field trips, help getting funds, local links and international exposure.

Here are two finalists and two winners from this year.

## SEED CAPITAL ✓

Many soaps and spreads, such as margarine, on shop shelves around the world trace their origins to oil from the seeds of the pineapple-sized fruits from *Allanblackia* trees that grow wild in Africa's tropical forests. But often local people do not know the trees' value.

Now communities are to be encouraged to harvest the seeds and plant new trees through a partnership between organizations in Nigeria and the Netherlands. The project – involving Unilever

Research and Development and Oxfam, both in the Netherlands, and the local groups Friends of the Earth Nigeria, the Forestry Research Institute of Nigeria and the Nigerian Conservation Foundation – will provide sustainable incomes and combat deforestation. Village organizers will manage the harvesting of the seeds and oversee their transport to a local crushing company that will extract the oil. Unilever will then buy it, guaranteeing long-term demand and fair prices.



Dr Tony Simmons, ICRAF

Now SEED, a new awards scheme, is encouraging innovative local projects, supported by North-South partnerships that benefit social and economic development and the environment. SEED – which stands for Supporting Entrepreneurs for Environment and Development – particularly supports solutions that blend modern and traditional technologies and emphasize the sharing of human, financial and natural resources.

Pioneered by IUCN (the World Conservation Union), UNEP and the United Nations Development Programme, with support from the governments of Germany, the

## Cultivating health

African farmers are adding an ancient Chinese herb to their repertoire of cash and staple crops. Across Kenya, Tanzania and Uganda, growers are planting *Artemisia annua* – a key ingredient for new, highly effective anti-malarial drugs – where otherwise they might be growing tea, coffee, wheat or beans.

During the Viet Nam war, Chinese scientists, supported by the government, developed an anti-malarial drug from the herb and supplied it to the Vietnamese forces. Now international health officials have deemed artemisinin-based combination therapies (ACTs) as crucial in tackling malaria – which kills upwards of 800,000 people each year in Africa alone.

For East African Botanicals, the group with whom a Swiss drug company has established a close partnership to increase cultivation and processing of *Artemisia annua*, international recognition of the herb's medical value has vindicated an eight-year struggle to grow it – with little demand and few resources.

The link between this East African farming group and Novartis has guaranteed a stable but much larger market for *Artemisia annua* than had previously been imagined – production is being boosted from 200 to about 1,500 hectares in 2005 alone. The

partnership also includes technical and financial support not just for growing the plants in East Africa but developing extraction and purification facilities and skills in Kenya as well.

For an increasing number of East African farmers, *Artemisia* offers a promising new source of regular income in the face of fluctuating or falling prices for traditional cash crops, while at the same time helping to fight malaria. So this small, Christmas-tree like plant from China along with North-South cooperation could yet present the best gift of all for the 210 to 300 million people worldwide, mostly children, who are newly infected each year: a chance at life.



East African Botanicals



## MANAGING MANGOES

Juicy, delicious mangoes contain more pro-vitamin A than any other tropical fruits. But, of course, they are only ripe for a short time each year. Much of the perishable fruit goes to waste before it can be eaten.

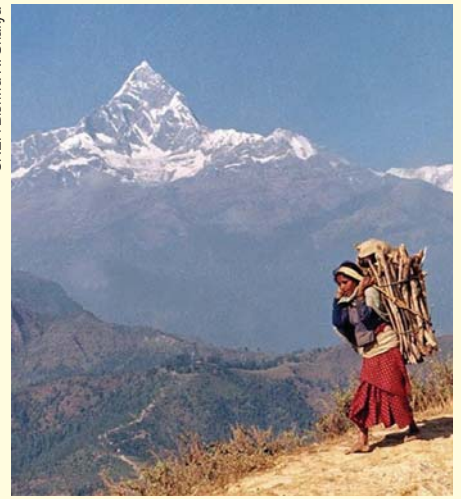
A new venture called VitAngo (for Vitamin A from Mangoes) is trying to turn this brief overabundance into a lasting source of nutrition and income in parts of Kenya, where women and young children are particularly afflicted by blindness and other disabilities related to Vitamin A deficiency. The World Agroforestry Centre, the Lake Victoria Schools Agroforestry and Environmental Education Network, the Kenya Organization for Environmental Education and the Kenya Youth and Community Development Programme have teamed up to promote earlier- and later-ripening varieties, help local people preserve mangoes by drying the fruit in the sun and train them in launching small enterprises to sell the dried mangoes.

## NICE RICE

Rice feeds half the world's people, but those who grow it often get little for their efforts, receiving low prices for their crops and having to pay increasing amounts for modern pesticides and fertilizers – which can also damage health and the environment. But a new system of intensive cultivation promises to benefit both the farmers who adopt it and the land they cultivate.

Northern and Southern organizations – The Cornell International Institute for Food, Agriculture and Development, Centre d'Etudes et de Developpement Agricole Cambodgien, National Federation of Kolo Harenas and Oxfam Community Aid Abroad – are promoting it to small farmers in Cambodia, Madagascar and Sri Lanka. Seedlings are widely spaced in a square grid pattern, then regularly moistened, drained and weeded, and nurtured with composted fertilizer. These resource-efficient practices have increased crop yields by 50 to 100 per cent and produced healthier, higher-quality rice that can be sold at a higher price – while saving water and improving the soil.

SRI Rice Global Marketing Partnership



## BERRY GOOD

Seabuckthorn, which grows throughout the Himalayas, is something of a wonder plant. Its berries yield highly nutritious juices and oils used in cosmetics and traditional medicine. Its leaves also have medicinal uses and provide fodder for livestock. And, perhaps even more importantly, their big, complex root systems bind soil to the fragile mountain slopes, cutting erosion in the monsoon rains by up to 30 per cent.

Mountain communities are being encouraged to cultivate the plants by a partnership of the international Himal Asia Foundation Tibetan cooperatives, Tribhuvan University in Nepal and the University of Applied Sciences in Germany. Three nurseries for them were opened in 2003, and others are to follow. Already Nepal's only hospital for reconstructive surgery has used the berry oils from the project, which is also looking at ways of exporting its products for use in juices, teas, other medicinal remedies and cosmetics internationally.



North-South partnerships





## 1. The elephant pump

Three young teachers – one British, two Zimbabwean – decided to tackle the problem of contaminated drinking water after three children at their remote school in Zimbabwe died. They designed the Elephant Pump – based on an ancient Chinese technology, using a rope and recycled plastic discs and costing less than a tenth of the more sophisticated pumps installed by aid efforts. It provides each child with clean water for life for less than a dollar. Almost all of those installed so far are still working, while developing countries are littered with broken conventional ones. There are now over 1,200 in Zimbabwe alone – and they are to be spread throughout Africa, with the help of the prize-winner's cheque from the prestigious St Andrews Prize for the Environment.

photos: Pump Aid



## 2. E-commerce

Log on to e-commerce websites and you can help indigenous peoples in some of the world's remotest corners earn a decent income. You can browse among such delights as silver jewellery from the Karen hill tribe in Thailand, baskets from the weavers of the Kikuthuko Women's Group in Kenya and contemporary indigenous designs from Australian Aboriginal artist Lynne Jordan, without glancing away from your screen. Usually helped by Northern groups – such as People Tree, The Virtual Souk, Global Exchange and Ten Thousand Villages – artisans and farmers from distant villages and rainforests are putting their products online and accessing a growing market for high-quality, fairly traded goods.



photos: Global Exchange



## 3. Twinning

Twin with a hippo? In a way that is what the staff of the Calgary Zoo in Canada did when they made a small grant to local chiefs in Ghana to set up the Wechiau Community Hippo Sanctuary, beginning a long-standing relationship between the two institutions. The hippo sanctuary protects the environment, gives jobs to local young people and provides income for local artisans. It began with a small grant from the zoo to local chiefs to start the sanctuary. The relationship is just one example of a host of partnerships in practical cooperation between North and South, between schools, hospitals, churches, local councils and even entire villages, cities and counties in the developed and developing world.



photos: Donna Sheppard, Calgary Zoo

## 4. Contract and converge

Former busker and concert violinist Aubrey Meyer worked out a plan for North-South cooperation that is increasingly being hailed as a way forward in tackling climate change. Contraction and Convergence, as it is called, envisages allocating every person on Earth the right to emit an equal – but diminishing – amount of carbon dioxide, the main cause of global warming. Gradually, over decades, the amounts emitted by people in rich and poor countries would converge, while the total amount of the pollution would contract to an agreed safe amount. The idea is being taken up by scientists, economists, religious leaders, political parties and even governments all over the world as a just solution.



Aubrey Meyer

## 5. UN volunteers

'They are', says Kofi Annan, the United Nations Secretary-General, 'the ultimate expression of what the UN is all about'. There are over 30,000 UN volunteers – 70 per cent from developing countries, 30 per cent from rich ones – who have worked for peace and development in more than 140 developing and Eastern European countries. Their myriad projects have ranged from running vocational training for women in Palestine to implementing a national geographic information system in Bhutan and staffing a health clinic in Timor-Leste. Many continue to work for development even after their period of service is up: Dean Mulozi spent more than two years in the Maldives developing communications systems for island micro-entrepreneurs before returning to his home country, Zambia, to begin a similar project.



photos: UN Volunteers/Andrew Smith



UNEP/Fulvio Eccardi

## 6. Debt-for-nature

Developing countries often destroy their wild areas and species to try to pay crippling international debts. But debt-for-nature swaps reverse the process. Thought up 20 years ago by Dr Tom Lovejoy, then the deputy chair of WWF-US, debt-for-nature swaps involve conservation organizations buying up part of a country's commercial debt at a large discount and redeeming it for local projects to protect forests and other important ecosystems. Since the first swap – between Conservation International and Bolivia – more than 20 countries have taken part in these deals. In all, \$3.75 billion of debt has been cancelled in this way, providing \$1.25 billion to be devoted to protecting the environment.

UNEP/Jakub Jasinski

Practical Action/Upendra Shrestha



Practical Action/Annie Bungeoth

## 7. Practical Action

It is renaming itself Practical Action, and that just about describes it. For the past 40 years – under its old name, the Intermediate Technology Development Group – it has worked with local people at the grassroots in developing countries to introduce 'appropriate technologies' that are more productive than traditional ones, but less expensive than those used in industrialized countries. Founded by E. F. Schumacher, the author of *Small is Beautiful*, Practical Action encourages people to find their own solutions, including installing gravity ropeway systems for mountain transport in Nepal; training metalworkers to forge wheels for animal carts in Sudan; introducing an online agricultural information database in Peru; and building micro-hydroelectricity generators to power villages in Sri Lanka.



Practical Action/Zul



# TOMORROW'S WORLD



Ten thousand children from 60 countries shared their visions of tomorrow's world through the 14th International Children's Painting Competition on the Environment, organized through the UNEP-Bayer Partnership for Youth and the Environment. Indonesian Mahdi Nurcahyo's entry (above) was the winner from the Asia Pacific region.



