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UNEP

From the desk of

KLAUS TOEPFER

United Nations
Under-Secretary-General
and Executive Director,
UNEP

The great philosopher who developed the *Principle of Responsibility*, Hans Jonas, once remarked: 'Today, mankind is a bigger threat to the sea than the sea has ever been to mankind.'

This edition of *Our Planet* marks the annual World Environment Day celebrations. The theme 'Sea and Oceans! Wanted Dead or Alive?' reflects Jonas' observations, his concerns. From overfishing and the discharge of untreated, raw, sewage to the clearing and destruction of precious habitats like coral reefs and mangrove swamps, the world's marine environment is under assault as never before.

UNEP, and the rest of the United Nations system, is not standing idly by, merely a witness and chronicler of the damage. The United Nations Millennium Development Goals and the World Summit on Sustainable Development's (WSSD) Plan of Implementation give us clear targets and timetables for addressing a wide range of pressing issues including those relating to oceans and seas.

Under the plan, we all have the responsibility to restore fish stocks to healthy levels by 2015, where possible. Significantly, it also urges establishing a global network of marine protected areas. Already we are seeing action on this – from proposals dramatically to extend Australia's protection for its Great Barrier Reef to moves by six West African countries – Cape Verde, Gambia, Guinea, Guinea Bissau, Mauritania and Senegal – to develop a network of marine protected areas aimed at reducing overfishing and possible threats from oil exploration.

Key target

One key target and timetable set at WSSD was to halve the number of people without access to basic sanitation by 2015. Not only will this reduce sickness and misery, it will also reduce the levels of toxic, algal blooms in the oceans which threaten human health and wildlife – and spread low-oxygen areas, so called 'dead zones'.

Reducing sewage pollution will also cut discharges which can choke precious marine habitats, like coral reefs. These are fish nurseries and significant generators of tourist dollars for often poor coastal communities.

Delivering the WSSD sanitation target should lead to further spin-offs for the marine world. In some situations, modern wastewater treatment works may be appropriate. But natural systems – some of which, like mangrove swamps, are coastal and marine – can provide low-cost alternatives. Many are being cleared for agriculture and other uses. By focusing attention on their sewage and pollution filtering properties, valuable habitats for spawning fish and birds can be saved.

The seas are special but there are some areas that are especially vulnerable to interference by humankind.

Pervasive threat

In small island developing states, water supplies, agriculture, terrestrial and marine wildlife and unique cultures are threatened not only by overfishing, pollution and insensitive development. They are also threatened by probably the greatest and most pervasive threat of all, namely climate change.

Solutions to their plight will be the focus of the Barbados+10 meeting to be held in Mauritius later in 2004.

These activities are not carried out in isolation.

The United Nations Convention on the Law of the Sea (UNCLOS) and its implementing agreements are now in force alongside numerous regional fisheries agreements.

We now have 13 regions covered by the UNEP Regional Seas Programme, the latest of which covers the North East Pacific. There are also three, non-UNEP, regional seas agreements including the Oslo Paris Commission (OSPAR) Convention.

UNEP, with funding from the Global Environment Facility, is also leading the four-year Global International Waters Assessment or GIWA. This is a sort of marine and freshwater equivalent of the Intergovernmental Panel on Climate Change (IPCC).

Sixty-six international waters are being assessed with the aim of giving the international community crucial information on where current problems are.

Significantly GIWA will also develop scenarios of the future conditions of these waters as a result of social, economic and environmental pressures, allowing the international community to prioritize efforts.

I am delighted to say that GIWA is well under way. Work on several significant regions, including the Amazon Basin, the Indian Ocean Islands and the Caspian Sea, has been successfully completed.

UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was also given big backing by WSSD.

By 2006, up to 40 mainly developing countries are expected to have national programmes of action in place to reduce the levels of pollution entering the sea from the land and from rivers ■

YOUR VIEWS

We would really like to receive your feedback on the issues raised in this edition of ***Our Planet****. Please either e-mail feedback@ourplanet.com or write to:*
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Into the mainstream

PAUL RAYMOND BERENGER calls on the international community to recognize the seriousness of the plight of small island developing states and take concrete action to promote their sustainable development

Achieving the objectives of sustainable development is the greatest challenge facing nations – specifically small island developing states (SIDS) – and, indeed, the human race in general, at the dawn of the 21st century. This is why the United Nations International Meeting – which will undertake a full and comprehensive review of the implementation of the Barbados Programme of Action for the Sustainable Development of SIDS – will be of such vital importance, not only to SIDS but also to the whole international community.

As preparations gather momentum for the hosting of the International Meeting in Mauritius, we cannot help looking back on the important landmarks which have paved the way to this historic event.

The 1972 Stockholm Conference on Human Environment, by relating environment to development, placed the concept of sustainable development on the world's agenda for the first time. Twenty years later, in June 1992, the United Nations World Conference on Environment and Development in Rio adopted Agenda 21 as a blueprint for sustainable development.

The inherent disadvantages and vulnerabilities of SIDS – whether at economic, social or environmental level – were recognized during the Rio Summit and this was reflected in Agenda 21. Since then, SIDS have been acknowledged by the international community at large as a 'special case both for environment and development'. The factors identified as major constraints to the socioeconomic development of SIDS are:

- their smallness
- their remoteness
- their vulnerability to natural disasters
- the fragility of their ecosystems
- isolation from markets
- vulnerability to exogenous economic and financial shocks
- a highly limited internal market
- lack of natural resources
- limited freshwater supplies
- heavy dependence on imports
- brain drain

We have no choice but to develop and reinforce partnership with the development partners

- their limited ability to reap the benefits of economies of scale.

The Global Conference on the Sustainable Development of SIDS held in Barbados in 1994 expanded further the notion of their 'special needs', and more particularly the need to build resilience against vulnerabilities: the end result was the adoption of the Barbados Programme of Action. The programme addresses 14 of the most specific island issues – including water resources, sanitation, land use, biodiversity, conservation and protection, and marine resources – which are the fundamental pillars of their economies and sustenance. The Barbados conference was also the opportunity for building new partnerships for a sustainable development plan for SIDS.

Unfortunately, no new or additional funds were made available, as committed, for implementing the Barbados Programme, nor were any monitoring and review mechanisms put in place to report on the implementation process. The five-year review held in 1999 came and went, and it was business as usual. Very little progress had been achieved on addressing island-specific issues through implementing the programme.

In the meantime, the world order had taken a turn for the worse both in economic and environmental terms. Countries with small economies and with little or no resilience were sinking lower and most SIDS were in a worse situation than when the Barbados Programme was approved.

Very few SIDS were able to mobilize extra resources for implementing the programme, and those which did had to divert already scarce resources from other important development projects.

Both the Millennium Summit of World Leaders in September 2000 and the Johannesburg World Summit on Sustainable Development in 2002 called for a firm renewed commitment to meet the objectives of sustainable development at the highest political level and provided a golden opportunity for SIDS to claim lost recognition.

The International Meeting in August-September 2004 in Mauritius provides us with another opportunity to revisit the Barbados Programme. This time, we cannot afford to make any mistakes. We have no choice but to develop and reinforce partnership with the development partners.

The Programme is still as valid today as at the time of its adoption ten years ago. However, new elements have compounded our already serious situations, such as difficult trade rules, erosion of acquired access rights to traditional trading markets, diseases such as HIV/AIDS (which are exacerbating an already critical lack of human resources), serious natural disasters (more cyclones, droughts, flooding, etc.), coastal erosion and overexploitation of marine resources, and security problems affecting air transport and the tourism industry amongst others.

Global problems need global solutions and, to that end, we believe that a holistic and integrated approach is called for. The Mauritius International Meeting is a unique forum for challenges and opportunities, for sharing experiences, and drawing lessons from the past with a view to bringing SIDS into the mainstream of sustainable development. We are looking forward to its outcome, which should not only contain recommendations, but also be target oriented with clear timetables as provided for in the Millennium Development Goals and the Johannesburg Plan of Implementation. In addition, it will be necessary to ensure monitoring through a mechanism set up for follow-up implementation.

In Mauritius, we are perfectly conscious of the heavy responsibilities incumbent upon us as the host country, but it is a privilege to assume them. Every effort is being undertaken to make the International Meeting a success in terms of organization, as well as recommendations and outcome.

We want our development partners to realize the seriousness of the stakes for SIDS and we expect they will find no difficulty in providing the necessary support.

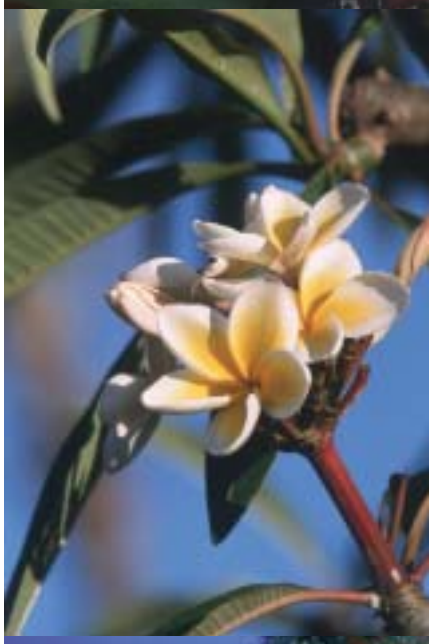
Naturally, this will require the massive and active participation and cooperation of one and all: SIDS, United Nations and the whole international community.

We welcome you to Mauritius!

The Hon. Paul Raymond Bérenger, GCSK is Prime Minister of the Republic of Mauritius.



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Jochen Tack/Still Pictures



Kevin Aitken /Still Pictures



Nikolaos Manginas

Creation's forgotten days

HIS ALL HOLINESS BARTHOLOMEW OF CONSTANTINOPLE says that water is the binding force between heaven and earth and that pollution of the sea represents paradise lost

When we consider the creation story in Genesis, we tend to recall the first moment – or perhaps the sixth day – of creation. We often overlook what occurred on the third and fifth days, when the world's waters came into being. Yet these days are an essential part of the whole story. They are a critical part of our own story.

At the foundation of the world, 'in the beginning … the spirit of God swept over the face of the waters' (Genesis 1:1-2). The Judeo-Christian scriptures speak of water as a sign of blessing and peace (Deuteronomy 8:7). The way we relate to God is reflected in the way we respect water. Water pronounces the sealed covenant between God and the world; drought and thirst announce the rupture of this binding relationship, an apostasy from the divine commandments (I Kings 17). The heavens, too, are set among the waters (Revelation 4). Marine pollution is nothing less than the violation of a hallowed promise.

Our fourth-century predecessor in the See of Constantinople, St John Chrysostom, understood the spiritual and mystical connection between the creation of water, the creation of humanity and the role of the Creator:

'We experience a sense of wonder before the boundless extent of the seas;

we are filled with awe before the unfathomable depth of the oceans;

we confess our amazement before the marvelous works of the Creator.'

In the same city of Constantinople, beneath the magnificent Church of St Sophia (the wisdom of God), there flows a channel of water. The Byzantines believed that this stream issued from the church itself, since water has traditionally been considered to be the symbol for life and wisdom (John 7:37). Moreover, rivers of green marble on the floor of the Great Church represent the streams of paradise. Water is the binding force between heaven and earth. A dying sea is more than simply the result of industrial or chemical waste, of oil spills and water mismanagement. Marine pollution is nothing less than paradise lost.

No water, no world

In Eastern Orthodox iconography, blue is interchangeable with green. These colours are predominantly used for foregrounds and backgrounds, being reserved also for the depiction of the celestial. As in the viewpoint from space, so also in the perspective of icons: both heaven and earth are blue! We tend to call earth our habitat; yet, in many ways, water might be more appropriately hailed as our home or natural environment. If there were no water, there would be no world. Marine pollution is nothing less than the devastation of our earthly premise.

An early mosaic of the crucifixion of Christ, found in San Clemente, Rome, portrays streams of water flowing from the foot of the cross, a symbol for the Sacrament of Baptism (John 19:34). Like the Sacrament of the Eucharist (or Communion), the Sacrament of Baptism derives from the loving passion of Jesus Christ. Just as blood issued from the body of Christ, water constitutes the blood of the Church and of the Earth. Marine pollution is nothing less than an assault upon a delicate cosmic balance, preserved over millions of years.

Orthodox spirituality employs water imagery to describe the struggle to redress a balance between matter and spirit, between body and soul. In Orthodox ascetic practice, tears function as a way of reversing habits that abuse creation and divide the world. The silence of tears and the stillness of water (Psalm 22) echo the need to refocus attention on sharing God's gifts fairly. The depths of the ocean resonate with the depths of silence. This is why Orthodox spiritual practice emphasizes stillness as a way into the human heart and as a window into the divine abyss. Paul Claudel once observed: 'Everything the heart desires can be reduced to a water figure'. Some 2,500 years ago, Thales of Miletus founded his school of philosophy on the same conviction: 'All things are water'.

There is, then, something sacred, almost sacramental in the very fabric of water. The meaning of water somehow conceals the very mystery of God. In this respect, Orthodox theology proposes a model of environmental action based on the spiritual significance of water. On a planet where oceans and rivers are polluted, we would do well to remember the original and radical relationship



Schinogrotzki/UNEP/Topham

between living sources of water and the life-giving spirit of God. In a world where the unjust demands of the few stifle the fundamental survival of the poor, water reminds us of the need to live simply and simply to live. At a time when wastefulness has become so rampant and pervasive, we are challenged to recall the implications of our actions as well as to assume responsibility for a society where water is justly shared and where everyone has enough.

In light of this commitment, the Ecumenical Patriarchate has to date organized five international, inter-religious and inter-disciplinary symposia: in the Aegean Sea (1995), on the Black Sea (1997), along the Danube River (1999), around the Adriatic Sea (2002) and in the Baltic Sea (2003). A sixth is currently being prepared for the Caspian Sea in the summer of 2005. The purpose is to call attention to the plight of our seas; to attract religious leaders, scientists, environmentalists, politicians and journalists; and to raise awareness about collective responsibility for our environment for future generations. None of us is able to resolve the environmental crisis alone; 'everyone has a part to play', as we stated in a Common Declaration with Pope John Paul II at the closing ceremony of the Adriatic symposium.

All of us know that we are surrounded by rivers, seas and oceans. What we do not immediately recognize is the way in which these are intimately and innately connected to one another as well as to our environment. We may not immediately discern the close relationship between the world's waterways, the world's people and the world's Creator. There is an interconnection and inter-dependence between the water of baptism, the sap of plants, the tears of humans, the bloodstream of animals, the rainfall of a forest and the flow of rivers to the sea.

We tend to call earth our habitat; yet, in many ways, water might be more appropriately hailed as our home or natural environment

We are called to avow water as the wonder of life if we are ever to avert the world crisis in water pollution and distribution. In order to correct the wrongful politics of water by those who regard it as their rightful property, we must first celebrate water as the irre-placeable patrimony of all humankind; we must accept the indiscriminate and inalienable right to water for all people in the world. Water can never be reduced to a marketable commodity for profit – especially for the affluent, especially for the few. It must always be protected as part of the fundamental quality of life – especially for the more vulnerable, especially for our children.

On the third day of creation, 'God gathered the waters under the sky into one place; and God saw that it was good. … So God created every living thing, with which the waters swarm. And God saw that it was good.' (Genesis 1:9-21). The Greek word for 'good' implies beauty and harmony. The very least that we owe God, this world and our children, is to preserve the beauty of our planet's water, to leave behind a world that remains good ■

† *BARTHOLOMEW Archbishop of Constantinople, New Rome, and Ecumenical Patriarch*



Restoring A PEARL

TIMOTHY E. WIRTH describes the environmental devastation that has led to political turmoil in Haiti, and suggests how it can again become 'the pearl of the Caribbean'

Much has been written about the sad and recurring spectre of political turmoil in Haiti. The tug and pull between democracy and dictatorship has been on display for the past few decades, personified by the desperate boat people risking everything to try to find hope and opportunity for the future. Far too little attention, however, has been given to the environmental underpinnings of the Haitian crisis and to the environmental destruction accelerated by the crush of poverty and rapid population growth.

Arriving at Haiti in the late 15th century, Columbus wrote in his journal of the island's wonders: 'The mountains and hills, the plains and meadow lands are both fertile and beautiful. They are most suitable for planting crops and for raising cattle of all kinds… the trees, fruits and plants are very different from those of Cuba.'



Mark Edwards/Still Pictures

Too many people scraping too few natural resources from the land...

Environmental exhaustion

Five hundred years later – and 20 years after my first visit – I went to Haiti in the mid-1990s on behalf of the US Government. Just flying into the country, the extent of the environmental exhaustion of the land was striking. The lush hillsides and meadows Columbus described have been denuded, stripped virtually clean. The stark contrast between forested and bare lands acts as an unofficial but unmistakable border between Haiti and the Dominican Republic.



Mark Edwards/Still Pictures

The daily grind of meeting basic needs for an impoverished people is a major force in eroding Haiti's essential natural resources and core economic assets. Too many people scraping too few natural resources from the land has led to one of the world's highest rates of deforestation. Topsoil is lost to erosion. Rivers are filled with the resulting sediment and the freshwater resources are diminished. These trends – and associated pollution – lead to waterborne diseases and damage to human health. And all these developments push rural residents toward the island's urban centres, where there are too few jobs. In this despair, the seeds of discontent and political chaos germinate and grow.

Comprehensive strategy

The other driving force is rapid population growth. Haiti's population of 7 million is growing at almost 1.5 per cent annually and will increase by 30 per cent in the next 20 years. The average Haitian woman has 4 or 5 children, each entering a nation whose economic, environmental and political prospects are headed in the wrong direction.

Any serious effort to stabilize Haiti and help its residents pursue sustainable development must fundamentally address both its people's need for family planning and other basic reproductive health services and the issue of rural agriculture, the primary endeavour of two thirds of the population. A comprehensive population strategy would provide services, promote human rights and education for all, and engage women in the economy. A rural agriculture programme must provide credit, promote land reform – giving farmers a stake in the land – and include an inventory of the country's biological diversity and opportunities.

Haiti's misfortune is likely to be a recurring nightmare for its people, for the cause of democracy and for world concerns unless the core factors underlying its political and economic collapse are addressed. Yet a creative, effective programme of environmental restoration might just transform Haiti once again into the 'pearl of the Caribbean', and help demonstrate the powerful relationship between the world's future economic and environmental fortunes ■

Timothy E. Wirth is President of the United Nations Foundation and Better World Fund, and was formerly a US representative and senator from Colorado. He served as undersecretary of state for global affairs in the Clinton Administration.



Mark Lynas/Still Pictures

Stop my nation *vanishing*

SAUFATU SOPOANGA describes how Tuvalu is increasingly threatened by the rising seas caused by global warming, and calls for urgent international action

Tuvalu began to voice its concern internationally over climate change in the late 1980s. Our key concern then, and now, is sea-level rise, which has the potential to submerge the islands we call home. Successive elected governments in Tuvalu have amplified warnings of this threat.

More than 30 years ago, scientists first hinted at the possibility that manmade emissions of carbon dioxide and other greenhouse gases were raising the Earth's atmospheric temperature, causing glaciers and polar ice to melt, and sea levels to rise. Since then an impressive canon of scientific research has been published.

Thirty years later, is the sea rising? We think it is, and this view is supported by a broad scientific consensus. Estimates of sea-level rise in the southwest Pacific range between 1 and 2 millimetres per year, confirming what we fear most. This is what the science tells us and anecdotal evidence here in Tuvalu – just south of the equator, and west of the international dateline – suggests the same.

What we see in Tuvalu is marginally higher (peak) sea levels when tides are highest. This means annual high tides are creeping further and further ashore. There is crop damage from previously unseen levels of saltwater intrusion. There is a higher incidence of wave washover during storms or periods of strong tidal activity.

Some commentators, journalists and scientists alike, have attributed these phenomena to construction too close to fragile lagoon foreshores or ocean fronts, or to the loss of natural coastal protection (allegedly from cutting down too many shoreline trees, shoreline mining and so forth). Whether or not this picture is accurate, this line of reasoning confuses the issue of recent material gains – principally the present level of development in Tuvalu – with sea-level rise. If the sea is rising, as local evidence suggests and scientists suspect, no amount of natural or manmade coastal protection that is not prohibitively expensive will fend it off. So-called 'adaptation' measures are a short-term fix, which, however beneficial, merely delay the inevitable. Unless, of course, the worldwide volume of greenhouse gas production is cut drastically, and cut fast.

Tuvalu's nine small atolls and reef islands are geographically flat, rising no more than 4 metres above sea level. At any time, we are naturally concerned with the state of the sea, just as a desert nomad is with the health of an oasis. We have no continental interior where we can relocate; no high interior, as found on a volcanic island. We cannot move away from our coastlines. All the land we inhabit is a coastline, right where the threat of rising sea levels is greatest.

Confronting issues

Successive elected governments in Tuvalu have adopted the concept of sustainable development, and we confront its issues almost daily. But however much we try to put this concept into action locally, we also know it will not solve the problem of rising sea levels, if in fact the sea is rising. What can we do?

As much as we try to meet the expectations of the international community, which demands that we mix sustainable development into national policy, our efforts on the ground have been mostly unsuccessful. (Other developing countries around the world share the same experience.) Why? For one, a shortage of labour and capital. Two, Tuvalu is a least developed country.

In the context of climate change, it has become obvious to us that sustainable development – which can offer solutions to many of the issues we confront as a nation still in the early stages of growth – is clearly not a defence against sea-level rise, no matter how hard the international debate tries to connect the two. As the former chairman of the Association of Small Island States, Tuiloma Neroni Slade, recently said: 'It may be that we manage to get our sustainable development polices right. Yet we will still face the risk that all will be undermined by climate change.' This reality is an undeniably ▶

Mark Edwards/Still Pictures

accurate view of the situation we face in the Pacific. Manmade climate change is not a Pacific invention, nor are rising sea levels our problem to fix. There is only this: Tuvalu and other Pacific island countries will be among the first to suffer the catastrophic consequences of sea-level rise.

The only international mechanism to combat climate change is the Kyoto Protocol. In the absence of potentially better alternatives – if and when they might ever appear – we appeal to the international community: support the provisions set out in Kyoto without reservation, and achieve its stated greenhouse gas emission targets. But that's not all. What we fear is that whether or not countries ratify Kyoto, greenhouse gas emissions will continue to grow, unless there is drastic change – for example, in how industrial countries, by far the largest emitters of greenhouse gases, use energy. Yet, fossil fuel consumption continues to grow.

Not enough

Policy measures and non-technology fixes are important tools in the battle to lower greenhouse gas emissions worldwide. Examples of these measures include energy conservation, the creation of vast new carbon sinks and emissions trading. But these efforts will not stop the sea from rising unless there is widespread replacement of existing energy technology that uses carbon-based fuel to power the steam turbine and internal combustion engine. Sadly, this prospect seems highly unlikely in the foreseeable future.

Manmade climate change is not a Pacific invention, nor are rising sea levels our problem to fix

As far back as independence in 1978, Tuvalu has consistently advocated the use of renewable energy. We have had some success with solar power, using a technology (solar photovoltaic) that is obviously compatible with sustainable development. But Tuvalu still relies predominantly on imported petroleum to meet its energy needs. To curtail this dependence in any meaningful way will require public or private investment from the international community to finance a large-scale shift to solar energy. Otherwise, Tuvalu – and most other countries in a similar situation – will fall well short of expectations in relation to sustainable development, and of the expectations of climate change-related public policy.

From where we stand, this type of large-scale renewable investment and commitment has not been forthcoming, from public or private sources. But, make no mistake, Tuvalu stands ready to enter into partnership with any industrial country or manufacturer of solar energy equipment to transform its energy sector – and to play our part, however small, in reducing greenhouse gas emissions. We cannot do it alone. The concentration of carbon dioxide and other greenhouse gases in the atmosphere is growing. Scientific research and debate have informed the majority of international public opinion. Scientists sounded the alarm on climate change and atmospheric warming years ago. The Intergovernmental Panel on Climate Change – in thousands of pages of research documentation – has explained in detail the threat posed by manmade atmospheric warming.

Paying the price

Its effects are being felt not just in Tuvalu but everywhere. Why powerful decision makers in countries who can make a difference continue to downplay the threat posed by global warming is beyond our understanding. Isn't mankind's future at risk? The biggest emitters of manmade greenhouse gases are the world's largest countries, in North and South America, Europe, Africa and Asia – which comes as no surprise. Two countries, which are also the world's two most populous, China and India, also represent the world's biggest future greenhouse gas emissions threat. By comparison, Tuvalu's greenhouse gas emissions are next to zero.

It is likely that in the next 50-100 years, if not sooner, the nine islands of Tuvalu will at best become uninhabitable, or at worst vanish. This is based not on speculation, but on mounting scientific evidence. The outlook is grim, but what can Tuvalu do? As one of my predecessors wrote, 'Tuvalu's voice in the climate change debate is small, rarely heard, and heeded not at all. Industrial countries, with all their wealth, may fret, but if atmospheric temperatures [continue to] rise, even by a few degrees, the price will be paid by the islands of Tuvalu and all low-lying land just like it' ■



Mark Lynas/Still Pictures



Mark Lynas/Still Pictures

The Hon. Saufatu Sopoanga, OBE is Prime Minister of Tuvalu.

Energy *release*

TOM ROPER describes how three West Indian nations are planning to reduce their dependence on imported fuel and exploit their own sustainable energy supplies





Mark Lynas/Still Pictures

Small island developing states (SIDS) are particularly vulnerable to the vagaries of the world's energy markets. Most depend almost entirely on oil for their needs, but few have any oil of their own. So they must rely on importing it and are enormously exposed to the volatility of its price, and to the uncertainty of supplies. As most SIDS are remote, the fuel has to be transported for long distances, greatly increasing its cost.

This dependence entails a major threat to their economies. Importing the fuel absorbs a large proportion of their foreign exchange earnings, constraining investment in economic and social development. Additionally, the high price of energy slows down development even further, and makes it hard for the poor to get energy for the lighting and services they need.

Yet, while most SIDS are poor in fossil fuels, they are usually rich in renewable sources of energy such as the sun and the wind and could do much to improve their energy efficiency. They are therefore well placed to benefit from sustainable energy policies, which would cut back their expensive fuel imports and make modern forms of energy much more widely available to their people.

There is also a moral reason for taking this approach. Many SIDS are among the countries most vulnerable to the sea-level rise and extremes of climate brought about by climate change – yet they emit only a tiny proportion of the greenhouse gases that cause global warming. Setting an example by cutting back their use of fossil fuels would strengthen their moral position even further.

So far, however, little renewable energy is exploited in SIDS, and what development has taken place has been largely restricted to international assistance programmes. Now a planned project, initially in three West Indian islands, partially funded by the United Nations Foundation, aims to speed this up. The Global Sustainable Energy Islands Initiative (GSEII) seeks to bring sustainable energy projects, models and concepts together in a sustainable energy plan for small island nations, and to showcase their efforts to cut their greenhouse gas emissions significantly.

Projects developed under the GSEII will address key barriers that constrain the use of renewable energy technologies for power generation on these islands. This approach will enable the development of real, sustainable projects that can be adopted and implemented throughout other SIDS.

The GSEII – also funded by the Rockefeller Brothers Fund and the US Department of Energy – was founded in 2000 by the Climate Institute, the Organization of American States, the Energy and Security Group, Winrock International and Counterpart International. Since its foundation, it has concentrated its efforts on the island nations of St Lucia, Grenada and Dominica.

The three islands are heavily dependent on fossil fuels: in 2000 importing them accounted for 23 per cent of Grenada's export earnings, 28.2 per cent of Dominica's and 53.6 per cent of St Lucia's. The islands have been found to have good potential for power from solar, wind, geothermal, hydro and biomass resources – and could improve their energy efficiency by 20 per cent.

The Prime Minister of Dominica and ministers from the other two island nations publicly stated their strong commitment to adopting measures to achieve energy self-reliance at the 2002 Johannesburg World Summit on Sustainable Development. All three nations have since developed national sustainable energy plans, establishing aggressive targets for renewables and energy efficiency – the first objective of the GSEII.

The initiative now aims to support the consolidation of these policies. In the next two years, it also plans to expand its efforts to several additional member nations of the Alliance of Small Island States across the world and to provide outreach and training to over 20 island nations ■

The Hon. Tom Roper is Project Director, Small Island States Energy Initiative at the Climate Institute, and former Minister for Planning and Environment and State Treasurer of Victoria, Australia.

Oceans *need* mountains

CONRAD C. LAUTENBACHER

explains that the health of seas and islands depends on ecosystems from ocean depths to mountain peaks, and describes an initiative starting in the Caribbean that acknowledges this

The rest of the world is finally coming around to what those who live on small islands and in coastal areas have known for some time – that the precious and pristine ecosystems upon which these communities depend for their livelihood are inextricably linked to every other ecosystem and to their influences upstream. The bad news is that the rest of the world is only just realizing this. The good news is that our actions to protect and restore these vital ecosystems are helping to improve them.

During the 2002 World Summit on Sustainable Development this basic understanding of the inter-relationships among ecosystems formed the foundation of the decision to create the White Water to Blue Water (WW2BW) partnership. As its name suggests, this explicitly acknowledges the interconnected nature of ecosystems from the tips of the highest mountains to the depths of the oceans and seeks to bring together key interests from upstream and downstream to work together for the betterment of the whole.

Widespread benefits

The vision of WW2BW is healthy, well-managed and productive marine and coastal ecosystems that support secure economies and livelihoods in coastal countries. In essence, coastal areas will not be able to achieve long-term sustainable development without a coordinated ecosystem-based management structure. However, the benefits are not just realized at the end of the line. Cleaning up the lakes, rivers, streams and watersheds that make up the white water part of the equation benefits all those who rely on them for their health and a sustainable economy.

Making such declarations is easy. The real challenge is putting processes in motion that begin working on actionable measures. A year and a half after the inception of White Water to Blue Water, the Wider Caribbean region has become the launching point for what will hopefully evolve into a worldwide initiative.

The underlying assertion is that sustainable development for the wider Caribbean – and other primarily coastal and island regions – cannot take place without healthy watersheds and marine ecosystems. The ultimate goal will be to share knowledge and experiences gained in the Wider Caribbean so as to have an impact on small island and coastal communities around the world.

This is not a problem that can be handled at the local, regional or even national level. It is truly a worldwide one and will require the collective resources of the world to address. Consider the following, for instance:

- Today, more than 50 per cent of the world's population lives in coastal areas and depends heavily on oceans and coastal resources for survival. By 2025, 75 per cent of the world's population will live in coastal areas.
- In many developing countries, fish may account for up to 60 per cent of the animal protein consumed; yet some 70 per cent of the world's fish stocks are fully fished, or overfished.
- Worldwide shipping is expected to triple over the next 20 years.
- About 25 per cent of the world's coral reefs have been lost within the past two decades.

In small islands and coastal regions, these natural systems are the basis for sustainable economic development.

Overfishing, pollution, degradation of habitats and natural disasters are increasingly undermining the ability of coastal populations to meet basic human needs. The result is missed opportunities for sustainable development and new job creation.

If we are going to achieve sustainable development, at any level:

- We need better use of existing and potential resources at both the national and regional levels.
- We need better recognition of the benefits of regional and cross-border cooperation among all groups.
- We need to improve the capacities of coastal states to manage entire coastal-marine ecosystems.
- We need to treat the primary cause of marine pollution – that which occurs upstream in the watersheds, forests, farms and cities. Upland sources deliver pollutants into wetlands, mangrove swamps and coral reefs – the nurseries for most of the commercial species on which human populations depend. Ultimately these pollutants find their way into our oceans.

These goals cannot be achieved by one party or a small group of interested people. The environment we seek to improve is complex and interconnected and our method of dealing with it will require equal complexity. WW2BW is already beginning to accomplish this by bringing together stakeholders to focus their attention and resources on these problems.

In March, WW2BW partners had their first ever meeting in Miami. This week-long conference and training session helped facilitate partnerships and allowed key players to exchange best practices and encourage innovation. The conference was the launching point for key achievements including the establishment of the International Corporate Wetlands Restoration Partnership (ICWRP) for the protection, enhancement and restoration of wetlands that have been designated as Ramsar or World Heritage Sites or both, around the world, as well as the announcement of the first project, sponsored by Gillette, in Sian Ka'an, Mexico.

New beginning

The Miami conference saw the establishment of the GPA North American Node, jointly sponsored by UNEP and the National Oceanic and Atmospheric Administration (NOAA), and headquartered

at NOAA's National Ocean Service. This represents a commitment on the part of NOAA and UNEP to work together to provide technical assistance, information and links to expertise in order to protect the valuable marine environment from pollution from land-based activities.

The establishment of the Node is both a culmination of many years of collaboration between NOAA and UNEP on this topic, and a new beginning. NOAA's engagement pre-dates the establishment of the GPA office, beginning with the negotiation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities in Washington DC in 1995. Since that time, NOAA and the GPA office have worked closely together to ensure that the 'words on paper' would not be the endpoint, but that they would guide actions, projects and progress, on the ground and with support at the regional and bilateral levels. This vision, and the dedication to its fulfilment, are due in large part to the efforts of Tom Laughlin, NOAA's Deputy Director for International Affairs, and Veerle Vanderweerd, Coordinator, GPA, heading the UNEP-GPA office in the Hague.

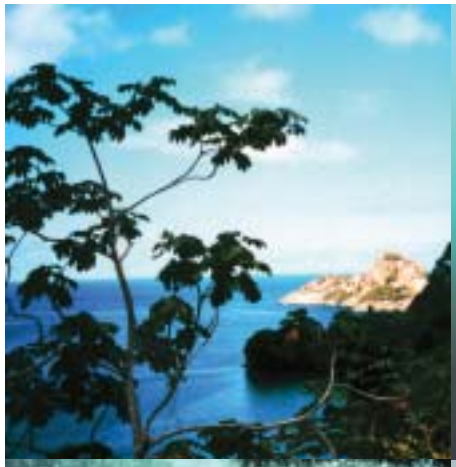
Working together

Clearly, the Caribbean is one of many regions that will benefit from integrated approaches. The lessons currently being learned will serve as a model for other countries, partners and stakeholders who wish to solve some of the key problems in the search for sustainable development.

US astronaut Neil Armstrong once noted that science has not yet mastered prophecy. We predict too much for the next year, and yet far too little for the next ten. Working in partnerships, networking, brainstorming, together we can surely exceed our goals not only in the short term, but for generations to come.

The responsibility for healthy oceans and coasts rests on all our shoulders, and cannot be carried by government alone. Sustainable development requires co-operation among the full range of stakeholders, upstream and downstream ■

Vice Admiral Conrad C. Lautenbacher Jr, US Navy (Ret.) is US Undersecretary of Commerce for Oceans and Atmosphere, and Administrator of the National Oceanic and Atmospheric Administration.



NOAA



NOAA



OAR/National Undersea Research Program (NURP)



NOAA



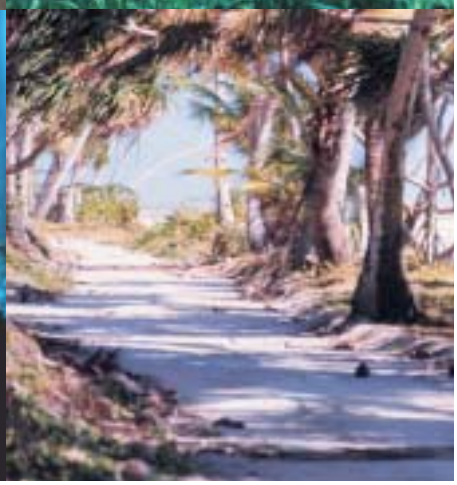
NOAA



NOAA



NOAA



NOAA

PEOPLE



Jim Iocona

Demetrio do Amaral de Carvalho

Demetrio do Amaral de Carvalho, a founding father and environmental hero of East Timor, the world's newest nation, has won one of this year's **Goldman Environmental Prizes.** A former resistance leader he founded the country's first environmental pressure group while it was still under occupation and is largely credited with getting environmental principles included in the nation's constitution, to help guide the management of the country's rainforests, coral reefs and vast oil and gas reserves.

Two victims of the Bhopal disaster, **Rashida Bee** and **Champa Devi Shukla** won another of the Prizes, which were founded by **Richard** and **Rhoda Goldman** 15 years ago for grassroots environmental activists. The two women, though poor and sick, organized a global hunger strike to draw attention to the aftermath of the disaster and are plaintiffs in a class action suit demanding a clean-up.



Prakash Hatvalne

Champa Devi Shukla



Prakash Hatvalne

Rashida Bee

The other winners are: **Margie Richard,** who got her community relocated from polluted 'Cancer Alley' in Louisiana, United States; **Libia Grueso,** who halted logging, at risk to her life, in one of the world's richest rainforests in Colombia; **Rudolf Amenga-Etego,** a Ghanaian public-interest lawyer, who secured the suspension of a water privatization project that would have made it harder for the poor to get clean water; and **Manana Kochladze,** who is fighting plans to lay an oil pipeline across her native Georgia.



David Lent

Libia Grueso

The Prize, considered the 'Nobel Prize for the Environment' consists of $125,000 given each year to activists from six regions, covering the world. A survey of past recipients reveals that their work has so far benefited an estimated 102 million people ■

Jim Iocona



Margie Richard

Goldman Environmental Prize



Manana Kochladze

Will Parrinello



Rudolf Amenga-Etego



J Eggit-AFP

Professor Wangari Maathai

Professor Wangari Maathai, *Kenya's Assistant Environment Minister, has won two more prestigious international prizes for her championship of sustainable development. The* ***Heinrich Böll Foundation,*** *awarding her the* ***Petra Kelly Prize****, honoured her 'unique position in African politics and her commitment to environmental issues'. The jury of the* ***Sophie Prize*** *– established in 1997 by the Norwegian author* ***Jostein Gaarder*** *and his wife* ***Siri Dannevig*** *– called her 'the most outspoken and respected environmental activist in Africa'. The jury added, 'She has pioneered a unique holistic community-based approach to development, combining environmental education and empowerment of civil society, especially women.'* ■

Keisha Castle-Hughes, the 13-year-old star of 'Whale Rider', rode in a hybrid Toyota Prius rather than a stretch limo to this year's Oscar ceremony – where she was nominated as best actress – to help highlight the battle against global warming.

'Even though I am not old enough to drive, I am old enough to know that the environment is in danger,' she explained.



Premiere

Keisha Castle-Hughes

Charlize Theron, Sting, Robin Williams, Jack Black, Tim Robbins and **Will Ferrell** also arrived at the Academy awards in hybrids, courtesy of the environmental group Global Green USA. Ferrell, who himself owns a Prius, says: 'In addition to being obviously economical and environmentally friendly, they drive great and are just plain sexy.' ■

British celebrities have launched a campaign to ask the public to make 'one small change' in their daily lives, to mark World Environment Day.

Monica Ali, author of *Brick Lane*, shortlisted for the last Booker Prize, pledged to plant a tree, reuse plastic bags ('which I loathe') and turn off the tap when cleaning her teeth ('I was astounded at how much water it would save'). Channel Four news anchor **Jon Snow** promised to put a water-saving device in his cistern, and TV quizmaster **Chris Tarrant** undertook to plant a tree. (*Our Planet* editor, **Geoffrey Lean,** pledged to get a shredder so that he could put the press releases that clutter his desk onto his compost heap.)



The Daily Star

Monica Ali



apexadvertiser

Chris Tarrant

Research commissioned by the National Environment Agency showed that 73 per cent of the people of England and Wales might do more for the environment if they thought it would make a difference ■

An ocean CORRIDOR

CARLOS MANUEL RODRIGUEZ describes a pioneering international bid to conserve one of the world's most important stretches of sea

Out on the eastern edge of the tropical Pacific, in the vast triangle of ocean bounded by the coasts of Central and South America, lies one of the most valuable, and vulnerable, areas on Earth. Here great movements of water – the Humboldt Current, the Equatorial Current, the Panama Current, the Costa Rica Coastal Current, the Cromwell Current and the Panama Bight Gyre – converge and mix. They cause the upwelling of the nutrients from the deep ocean, providing food for many species. And they disperse the larvae of fish, corals, crustaceans, molluscs and echinoderms, and affect migrations, resulting in a wide ecological interconnection throughout the region.

Beneath the waves vast underwater mountains and ridges rear up from the seabed, creating rich habitats, home to many endemic species. Above them jut some of the most biodiversity-blessed islands in the world, such as Cocos Island and the Galapagos. And through the waters move rare and endangered migratory species, such as blue and humpback whales, loggerhead and leatherback turtles.

The Galapagos Islands are world famous, but not that exceptional in these remarkable seas. Some 336 species of fish have been recorded around Colombia's Gorgona Island alone. My country's Cocos Island has 18 coral, 57 crustacean, 250 fish and 510 mollusc species. Our Las Baulas National Park is one of the leatherback turtle's last nesting grounds on the American Pacific, while humpback whales breed and calve around the islands of this extraordinary stretch of ocean.

Unique initiative

Now an initiative as unique as the area itself is bidding to conserve it. Four governments – those of Costa Rica, Panama, Colombia and Ecuador – have joined with over 50 partners, including leading conservation and research groups, to launch the first ever attempt to pursue integrated ecosystem management across multiple international political jurisdictions. The Eastern Tropical Pacific Seascape (ETPS) initiative, which is partially funded by the United Nations Foundation, is part of a broader $15 million agreement between the Foundation, the Global Conservation Fund at Conservation International (CI) (with funds from the Gordon and Betty Moore Foundation) and the UNESCO World Heritage Centre to conserve current and proposed Natural World Heritage Sites.



Edmund P. Green

Although the oceans cover 70 per cent of the globe, less than 1 per cent of them lie in any kind of protected area

Conservation at sea lags far behind that on land. Out of the 754 sites on the UNESCO World Heritage List there are only about 20 with any significant marine components and fewer than ten of them have been inscribed purely for their marine values. Although the oceans cover 70 per cent of the globe, less than 1 per cent of them lie in any kind of protected area. ETPS aims to establish a functional marine conservation corridor by creating a network of marine protected areas across the 211 million hectare expanse of sea that falls inside our four countries' exclusive economic zones. It also sets out to improve the management and protection of the existing World Heritage Sites of Ecuador's Galapagos Islands and Costa Rica's Cocos Island, and secure the designation for Panama's Coiba National Park and Colombia's Malpelo Flora and Fauna Sanctuary.

Collaborative vision

Planning for the development of ETPS began in 2000 when Ecuador approached CI, UNEP and IUCN–The World Conservation Union to consider ways of protecting the area. It was launched two years later, at the World Summit on Sustainable Development in Johannesburg by a panel convened by the three organizations, and consisting of the Presidents of Costa Rica and Ecuador, the Vice-President of Panama and the Vice Minister of Environment of Colombia. It has the support of the presidents of all four countries and their environment ministers.

The initiative will develop a shared ecosystem approach that respects the sovereignty of each of the four governments through agreements between them. Its work represents a unique collaborative vision for sharing the management of resources. And it can provide a model for transboundary management for marine and World Heritage Sites worldwide ■

Carlos Manuel Rodríguez is Minister of Environment and Energy, Costa Rica.



Mark D. Spalding

At a glance: Seas, oceans and small islands

Small island developing states (SIDS) are perhaps the most beautiful group of countries on Earth. They are also among the most vulnerable – and becoming more so.

They are vulnerable on the environmental level. Cut off from the rest of the world, they have developed their own fragile ecosystems, rich in endemic species which are particularly at risk of extinction. Dependent on the oceans, they can be especially affected by such threats as overfishing and marine pollution. Surrounded by the seas, they are often short of freshwater: rainfall is unpredictable – what does fall often runs quickly off the land, and what remains is often prone to pollution. With little or no hinterlands, they are short of space for their wastes and particularly vulnerable to natural disasters like storms, droughts and floods, which are increasing with global warming.

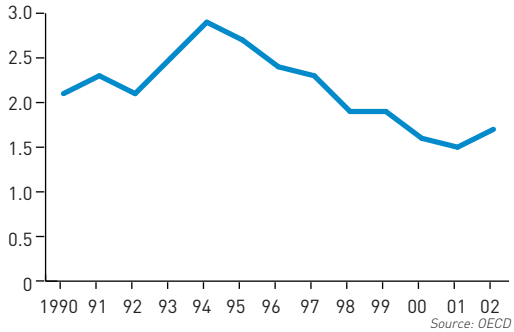
Human Development Index for SIDS, 2003



Source: UNDP Human Development Report 2003

Many SIDS score well on the Human Development Index, which measures how much their policies actually benefit their people. Most rank in the top half of all developing countries. Barbados has the highest score in the South, while the Seychelles and Mauritius head the list for Africa.

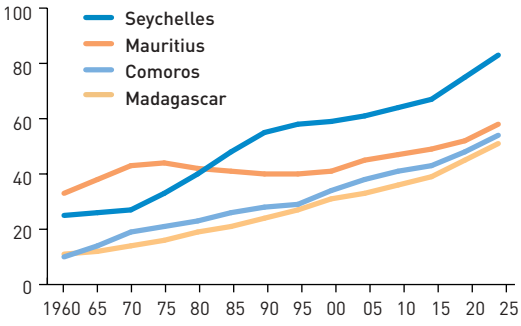
Official development assistance for SIDS (US$ billion)



Source: OECD

Aid to SIDS has declined sharply over the last decade – falling by about a half in real terms. Meanwhile foreign direct investment has dropped in most SIDS since 1998 – and what there is has been largely restricted to investment in tourism and to purchasing utilities like electricity and telecommunications.

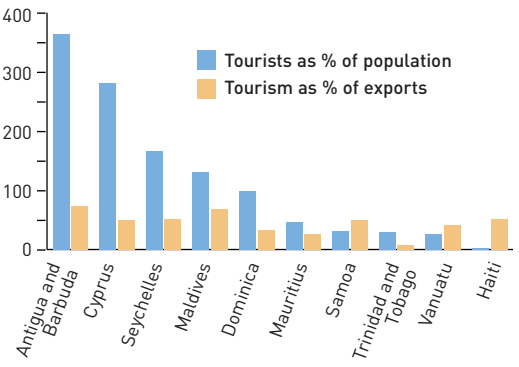
Trends in urbanization in selected SIDS (% urban)



Source: UNEP Western Indian Ocean Environmental Outlook

The rapid growth of cities in many SIDS is making heavy demands on the environment. Waste builds up, causing problems for collection and disposal. Water supplies are polluted by sewage, or contaminated by salt as heavy use causes saline intrusion from the coasts. Air pollution, noise and congestion also increase, and poverty and unemployment concentrate in the cities.

Tourism in selected small islands, late 1990s



Source: Waters J.K., World Travel Industry Yearbook

The numbers of tourists visiting many SIDS easily exceed their populations, and tourism is vital to their economies, bringing employment and foreign exchange. It accounts for over a quarter of the entire economy of the Caribbean, and employs 70 per cent of the labour force in the Bahamas. It will continue to be one of their few development options but, if not managed carefully, threatens to ruin the very environment that attracts the visitors.

And climate change is also bringing perhaps the greatest danger of all – rising seas that threaten to make some SIDS uninhabitable, and to swamp large tracts of others.

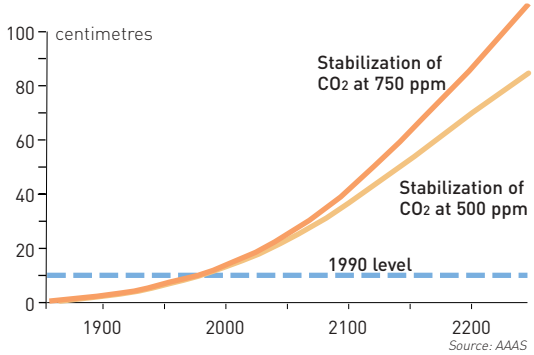
They are also vulnerable at the economic level. They usually have few resources, and depend on just a handful of crops or industries. With little industrialization, they are particularly prey to the vagaries of world commodity prices. They are exceptionally dependent on strategic imports and economically penalized by their remoteness, and resulting high transport costs. And they have little clout in the fora that decide the rules of the world economic system.

Inevitably these vulnerabilities are intertwined. Many SIDS depend on tourism, but this is threatened by environmental degradation; up to four fifths of shallow-water coral reefs in some parts of the Caribbean have been destroyed. Some are reliant on extractive industries, like forestry or mining, which too often severely damage the environment. Most are seeing their vital fish catches level off or decline as overfishing affects the world's oceans.

Twelve years ago, at the 1992 Rio Earth Summit, world leaders resolved that SIDS were 'a special case for environment and development', and this was reaffirmed at the 2002 World Summit on Sustainable Development. Ten years ago, the world community, meeting in Barbados, drew up a Programme of Action for SIDS. Yet the promised support has not materialized. Aid has declined. So have commodity prices. And environmental threats have grown. SIDS are more vulnerable than ever, while their ability to cope with environmental or economic shocks has shrunk. The Mauritius meeting to review the Programme of Action offers a chance to reverse these trends, and to begin to enable SIDS to gain a strength to match their beauty.

Geoffrey Lean

Global sea-level rise, estimated and predicted



Source: AAAS

The very existence of some low-lying SIDS – like Tuvalu and the Maldives – is at stake as a result of sea-level rise. Long before vanishing beneath the waves they would become uninhabitable, as salt contaminated their freshwater, and storms sent waves sweeping over them. Yet they contribute less to greenhouse gas emissions than any other group of nations.

Natural disasters in selected SIDS, first nine months of 2003

Country	Event	No. people killed	Total no. affected
Dominican Rep.	Floods	1	400
	Earthquake	3	2 015
Fiji	Storm	17	132 823
Haiti	Floods	36	4 070
Madagascar	Floods	16	25 585
	Cyclones	89	162 586
	Drought	0	527 000
Papua New Guinea	Landslides	13	621
Puerto Rico	Floods	2	2 405
Solomon Islands	Cyclones	0	425
TOTAL		177	857 930

Source: OFDA/CRED 2003

SIDS are particularly vulnerable to natural disasters, and these are increasing. Last December, for the first time in decades, the Caribbean was hit by a hurricane outside the normal season. This year particularly high tides have swept Pacific island states, especially Tuvalu. Storms and droughts are expected to grow both in frequency and in severity as global warming increases.

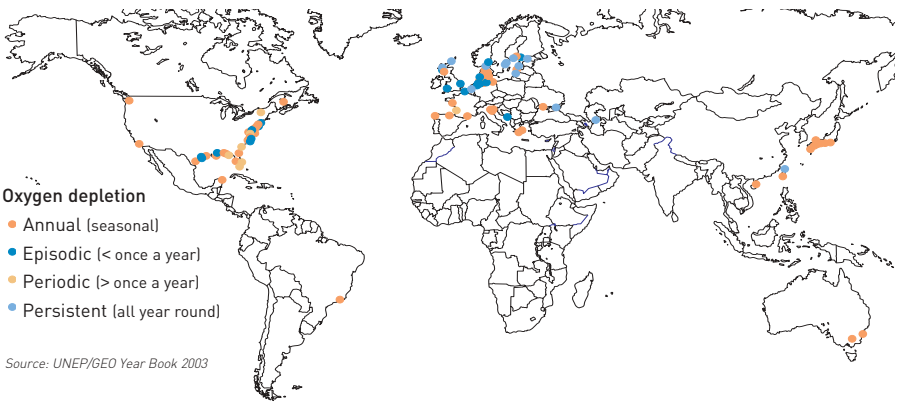
Number of endemic, threatened and extinct species, by SIDS region, 2003

	Indian Ocean	Caribbean	Pacific Ocean
Plants			
Endemic	406	2 010	222
Threatened	380	2 595	273
Extinct	47	23	0
Total no. of plant species	*1 171*	*7 328*	*3 492*
Animals			
Endemic	303	698	824
Threatened	196	571	427
Extinct	44	51	24
Total no. of animal species	*4 273*	*13 891*	*11 270*
No. of protected areas	124	823	219

Source: UNEP-WCMC 2003

Isolated in the oceans, small islands have developed a unique wildlife. In Madagascar, for example, over half the vertebrate and over four fifths of the plant species are endemic. But this wildlife is particularly endangered; virtually every one of the SIDS has species threatened with extinction. Islands were home to about three quarters of all the animal species known to have vanished forever.

POLLUTION ALERT: Coastal zones starved of oxygen



Source: UNEP/GEO Year Book 2003

Dead zones are increasing in the world's seas; the number of those known – now 146 – has doubled since 1990. Pollution – associated with agricultural runoff, fossil burning and human waste – stimulates the growth of algae, which bloom and then sink to the bottom of the sea and decompose. In the process they use up most of the oxygen, effectively stifling fish, shellfish and other living things. Fisheries and biodiversity suffer.



Joe Wurfel-Lusafrica

Cesaria Evora

'La diva aux pieds nus'

They call her 'la diva aux pieds nus' and Cesaria Evora does indeed like to perform barefoot as a symbolic salute to the poor of Cape Verde, the small island developing state where she was born and still lives, and which she evokes in her songs.

She was born, in the 1940s, into poverty herself. Her father died shortly after her seventh birthday, and she and her six siblings were raised by her mother, in straitened circumstances, on scant earnings as a cook. The young Cesaria was left in the care of a local orphanage, where she learned to sing in the choir.

From 16 she was earning a meagre living, singing for a few escuados or a couple of drinks in the bars of her home town, Mindelo, on the island of São Vicente, one of the ten islands with some 400,000 people, over 560 kilometres off the coast of West Africa, that make up the country. She took up the haunting sounds of the local *morna* (named after the verb to mourn) – the roots of which go back to the times when Cape Verde was an important station in the slave trade. Her music revolves around the themes of suffering, melancholy and exile.

Songs of poverty

'My songs are about loss and longing, love, politics, immigration – and reality,' she has explained. 'We sing about our land, about the sun, about the rain that never comes, about poverty and problems: how the people on Cape Verde live.'

After many dark years, she got her big break in her 40s, when she was invited to give a series of concerts in Lisbon and met José da Silva, a young Frenchman with Cape Verdean roots. He became her producer and persuaded her to go to Paris and record her first hit album 'The barefoot Diva'. She became an overnight success. She won a Grammy early this year, after being nominated for the sixth time, and has been honoured in France as an Official of the Order of Arts and Letters.

Fighting hunger

But her songs still go back to her roots. 'Poverty has always been unreal for you, so who are you to judge the situation in our country', she challenges in the song 'Tudo Tem Se Limite'. Or in more optimistic mood, she sings in 'Jardim Prometido': 'Cape Verde is green in our hearts. Full of love, our hands will make the land grow green.'

For a long time she resisted associating her name with any humanitarian agency, but last year she became an Ambassador against hunger for the World Food Programme – the first African artist to take up that role – after witnessing the impact of its School Feeding Programme in Cape Verde. 'I saw with my own eyes how food attracted children to school,' she said. 'We need to educate our children if we want our continent to prosper, but they can't learn if they go to school hungry.' ***GL***

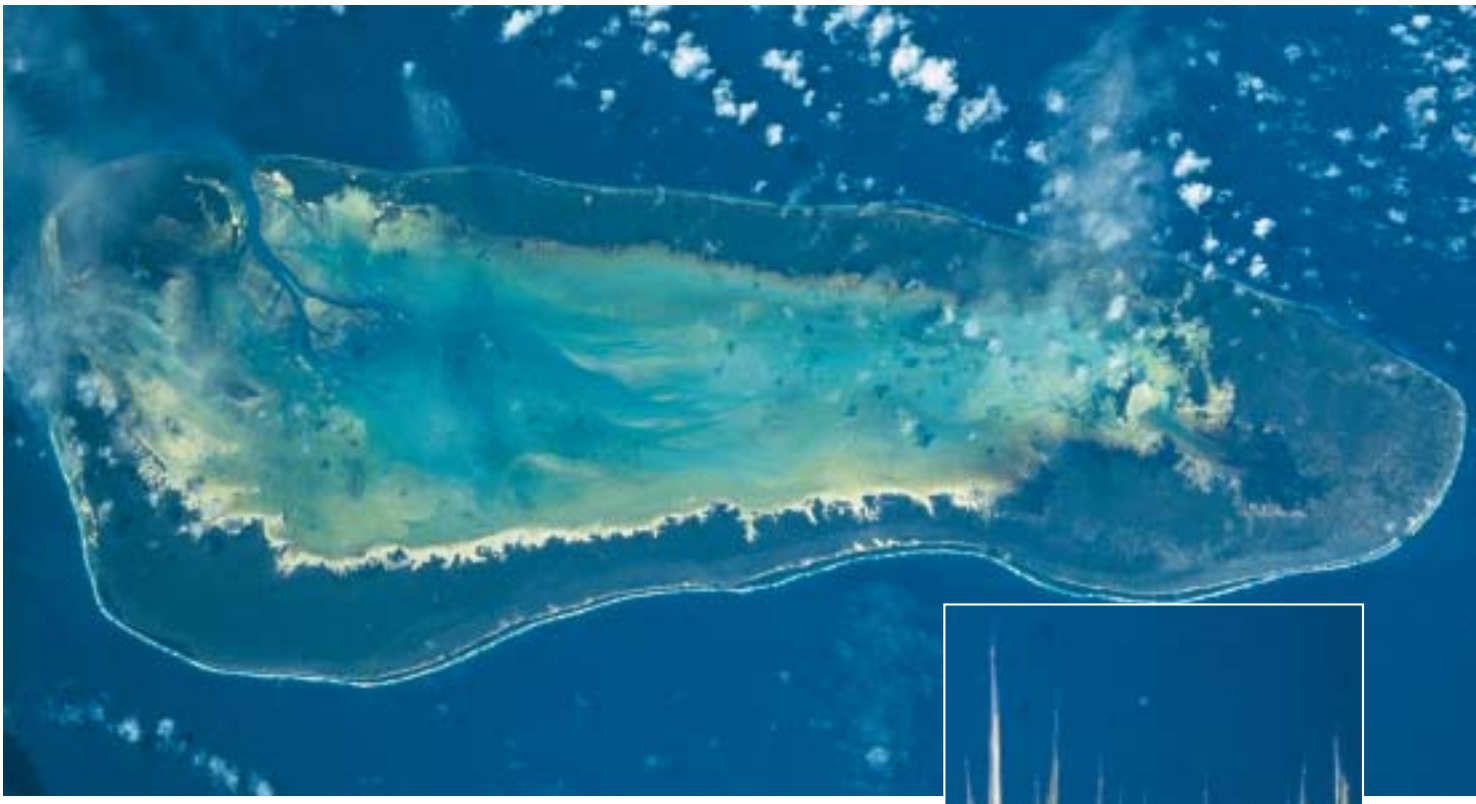
The sea is the home of nostalgia

In the late afternoon, when the sun was setting
I was walking on the beach at Nantasqued
It reminded me of the beach at Furna
I was overwhelmed with nostalgia and I cried

The sea is the home of nostalgia
It separates us from distant lands
It separates us from our mothers, our friends
Unsure if we'll see them again

I thought of my lonely life
With no one I have faith in at my side
I watched the waves gently dying
Sentiment overcame me

From Cesaria Evora, 'Cabo Verde', 1997, Nonesuch Records, a Warner Music Group Company



NASA/STS068-248-44

NO ISLAND *is an* ISLAND

RONNY JUMEAU explains how the existence of some small island developing states depends on what happens at the very ends of the Earth



Edmund P. Green

We are all linked together: what happens in the Arctic affects us all on the equator

Nothing could be further away from the tropical waters of most small island developing states (SIDS) than the sub-zero temperatures of the Russian permafrost. So why should we bother about what is happening at the frozen ends of the planet when, for example, the Pacific Ocean is reclaiming more and more of tiny low-lying Tuvalu by the year.

After all, Tuvalu, just 5 metres above sea level, is seeking to move its entire population of 12,000 to Australia or New Zealand, fearing that rising seas caused by global warming and an increase in cyclones caused by climate change will eventually swamp their homeland.

Well, it is precisely because the 'king tides' of Tuvalu are threatening to submerge the islands that we SIDS need to be even more vocal about the melting ice a whole world away at the northern and southern poles of the Earth.

As leaders of SIDS – the world's smallest and most environmentally threatened countries – meet in Mauritius we should not confine ourselves to the expected chorus of complaints that the international community has not done enough to help us overcome our special vulnerabilities and make progress in sustainable development. We also need to speak out on what other countries are doing – or not doing – in their own backyards, even as far as the icy wastes of the polar regions.

In October last year I was in London for a presentation to members of the British Parliament organized by the Advisory Committee on Protection of the Sea (ACOPS), of which I am one of the African vice-presidents. Before the presentation, I attended a joint ACOPS-UNEP news conference to announce a $30 million clean-up operation in the Russian Arctic. This will rid it of toxic wastes and other pollution caused by decades of industrial and military activities ranging from mineral mining to the dumping of nuclear submarines.

The project will also deal with the large-scale release of methane into the atmosphere as global warming steadily melts the Arctic permafrost. Such a release will in turn speed up that very climate change, ▶

which is already running at twice the global rate in the Arctic. Methane is the most important greenhouse gas in the atmosphere after carbon dioxide and contributes a very significant fraction of actual anthropogenic global warming.

I was asked at the news conference what interest an environment minister from a tropical small island state could have in the Russian project. You could not find, after all, more extreme opposites than giant cold Russia on the shores of the Arctic Ocean and tiny hot Seychelles in the middle of the equatorial Indian Ocean.

Yet the project document states that: 'the role of the Arctic in influencing global climate [is a matter] of legitimate concern to all countries of the world [adding] a global dimension to a topic that would, at first glance, appear to be a matter of concern only to the Arctic states'.

And it adds: 'The important role played by the Arctic in world ocean circulation, global biodiversity and planetary climate control is unquestionable. It is in the Arctic and Antarctic that any major change in conditions… will result in direct effects on global climate.'

A month before, we in Seychelles had taken notice when it was announced that the largest ice shelf in the Arctic had, after 3,000 years, broken up on the coast of Canada and drained a 32-kilometre-long freshwater lake into the sea. We have also never forgotten the 2002 report by the Intergovernmental Panel on Climate Change (IPCC) which concluded that global warming could cause the world's sea level to rise by as much as 1 metre within just 80 years.

Such a rise would cause nearly all of Maldives' 1,196 coral islands to disappear off the map, turning the entire population of 300,000 into refugees. Maldives is one of Seychelles' neighbours, a mere two and a half hours flight northeast of us.

Serious stake

I duly pointed out at the news conference that low-lying island states like Seychelles have a very, very serious stake indeed in any potential environmental catastrophe in the Arctic – or the Antarctic for that matter. The melting ice and snows, the heat-trapping gases being released, and the increasing temperatures all contribute substantially to the changing weather. This results in warming and rising waters which are killing our coral reefs in the Caribbean and the Indian and Pacific oceans, eroding our beaches and – as in the case of Tuvalu and Maldives – threatening to erase whole countries from the face of the Earth.

'We are all linked together: what happens in the Arctic affects us all on the equator,' I said. This is why, for example, Seychelles and other small island states are among the loudest voices calling for Russia to ratify the Kyoto Protocol.

Early warning system

I had hardly landed back home in Seychelles when scientists at the Scott Polar Research Institute at Cambridge University announced that another giant ice shelf the size of Scotland, this time in the Antarctic, was melting rapidly. It was releasing an extra 21 billion tonnes of water into the oceans each year, which could help change global ocean circulation and weather patterns. The warning came a day after a University College, London report confirmed a 40 per cent thinning of the Arctic ice-cap in the past 30 years.

Interestingly, UNEP Executive Director Klaus Toepfer said at the same news conference that the Arctic was 'the early warning system for the world'. The very same term has also been used to describe the small island states as, thanks to our smallness and special frailties, we will be the first to succumb to the major environmental problems afflicting the world today.

Our message to the international community at the Barbados +10 meeting in Mauritius should indeed be to do more to help small island developing states put things right at home. We should, however, also be more vocal in asking other countries to clean up their own backyards, all the way from the northern to the southern polar ice-caps.

We should not be so preoccupied with, or blinkered by, our own problems as to ignore what is happening in the rest of the world. When other countries mess up their parts of what is, after all, our same Mother Earth, they mess up ours too.

When the polar glaciers, ice sheets and snow covers melt, the small island developing states at the equator will be the first to be submerged. It is already happening in Tuvalu ■

Ronny Jumeau is Minister for Environment and Natural Resources, Seychelles.

Small islands, **big potential**

ANWARUL K. CHOWDHURY assesses the prospects for a new resurgence of the most vulnerable section of humanity at the Mauritius meeting

Ten years ago, the international community gathered in Barbados to agree on a broad-based plan of action for the sustainable development of the small island developing states (SIDS). The plan covers 40-plus such islands sprinkled all over our planet, ranging from Tuvalu (with the smallest population, of 10,000) to Papua New Guinea (the largest, with 5 million) – two big concentrations being in the Caribbean and the Pacific.

Vulnerability – economic, environmental and social – continues to be a major concern for countries in their development efforts. No single group of countries is as vulnerable as these small island states, and that places them at a distinct disadvantage compared to larger countries. Beyond their idyllic natural beauty lies a fragility that makes these countries so vulnerable that they needed to draw up a special global endeavour to overcome their complex challenges and make their development sustainable.

Their smallness is compounded by remoteness, isolation from the mainstream of the world economy and international trading system, ecological fragility and environmental degradation, marine pollution, and over-dependency on tourism as a major source of national earning. All these factors contribute to their slow and complex development process.

SIDS contribute the least to global

climate change and sea-level rise, but suffer most from their adverse effects and could, in some cases, become uninhabitable, as indicated in the Barbados Programme of Action. It has been rightly observed that 'As island societies strive to raise living standards for growing numbers of people and struggle to survive in a complex global economy, they often sacrifice the fragile ecosystems which are among the most valuable assets'. They continue to experience stress that they can hardly cope with by themselves.

Elusive promises

Both in its Millennium Declaration of 2000 and in the development goals identified in that historic document, the United Nations has recognized SIDS' special needs. The Barbados Programme of Action of 1994 is the first ever intergovernmental policy prescription to integrate the small islands into the world economy. But after decade-long serious efforts, this well-crafted and elaborate document has remained largely unimplemented. The well-intentioned commitments in 14 priority areas have failed to get the required political will to turn them into real actions.

The 'new and equitable partnerships for sustainable development' promised to them have remained elusive. The need for national-level action has been repeatedly emphasized, but it has been often forgotten that these countries have limited capacity to respond to the never-ending challenges they face and to recover from recurring disasters. Despite all the demanding national-level actions they have undertaken, the requisite external support has persistently evaded them.

A serious effort was made in September 1999 – at a two-day special session of the United Nations General Assembly – to conduct a five-year review of the Barbados Programme, but the outcome did not have the desired effect of galvanizing the global support the SIDS needed. Indeed the overall disbursement of international assistance to them has fallen from $2.9 billion in 1994 to $1.7 billion in 2002. Though the Millennium Declaration, the Monterrey Consensus and the Johannesburg Plan of Implementation all recognized their special needs, international support to these countries has been minimal.

Now the General Assembly has decided to undertake a ten-year review at the International Meeting in Mauritius in August 2004. The host country is also the chair of the Alliance of Small Island States, the group that has the responsibility of substantive negotiations on behalf of these countries. With nearly a decade's experience of the implementation process, the United Nations is well placed to articulate a worthwhile outcome at Mauritius.

We must keep the focus on an outcome that is practical, cost effective, benefits the neediest in society – and is, above all, implementable. Focus on key priorities through enhanced regional integration would surely be considered a pragmatic approach. As we engage ourselves in the ten-year review of the Barbados Programme, the prospects for enhanced international development assistance are not in any way significant. Hence, a greater degree of realism is called for in the exercise we are embarking upon, especially in the priorities that the SIDS intend to set for themselves. Importantly, we have to determine what worked against the effective and speedy implementation of the Barbados Programme.

The smallness and the remoteness of SIDS continue to pose serious problems in providing international aid and enhancing foreign investments. In many cases projects and programmes are not viable when targeted for specific countries. However, many of the social, economic and human development projects and programmes could prove viable and yield better results when SIDS band together to integrate their economies and meet common challenges.

The small island developing countries need to increase their efforts to hasten the pace of regional economic integration. However, it is worth noting that, at the regional level, they have made advances in putting appropriate policy frameworks and arrangements into place to integrate their economic, social and environmental approaches to a sustainable development focus. These actions – including significant initiatives by the Pacific Islands Forum and the Caribbean Community – will undoubtedly help them to maximize the opportunities available.

Overcoming obstacles

Attracting more foreign direct investment to take advantage of SIDS' economic potential and to strengthen the hands of the domestic private sector is easier said than done. Their inherent handicaps – particularly small populations, lack of technological sophistication and narrow resource bases – pose obstacles in competing for the foreign direct investment needed if they are to avail themselves of the opportunities offered by the globalization process. Globalization is based on opportunities for cost reduction and economies of scale, which small islands cannot easily offer. Special and creative ▶



Dawee Chaikere/UNEP/Topham

Phoebe Solomon/UNEP/Topham

ways and means must be found to attract foreign investments.

The effectiveness of the monitoring mechanism is key in implementing any negotiated document among governments. It is also important to set the right tone by sequencing a congenial and practical negotiating process among all stakeholders. Regional meetings in Samoa, Cape Verde, Seychelles, and Trinidad and Tobago brought in an elaborate set of recommendations, which were blended together in a SIDS strategy paper at an interregional gathering in the Bahamas in January this year. There was then a three-day preparatory meeting in New York in mid-April involving SIDS and all their development partners.

If the Mauritius meeting is to have a meaningful outcome that has the maximum support of the international community, it is essential that the donor countries, relevant United Nations entities, multilateral financial institutions, the private sector and civil society enthusiastically participate in and contribute to this process. The spirit of partnership is the most important ingredient in making the outcome worthwhile and its realization possible. The international community, equipped with the lessons of the last ten years, now needs to come together to support – in real terms – the genuine aspirations of the small island developing states and their determined effort for a new resurgence in Mauritius to bring true benefit and progress for the women, men and children of this most vulnerable segment of humanity.

Recognizing this reality, our slogan for the Mauritius International Meeting should appropriately be 'Small Islands, Big Potential' ■

Ambassador Anwarul K. Chowdhury is United Nations Under-Secretary-General and High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States and Secretary-General of the Mauritius International Meeting for the Review of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States.

Small is vulnerable

JAGDISH KOONJUL outlines the special challenges faced by small island developing states in their pursuit of sustainable development

Small island developing states (SIDS) face vulnerabilities and challenges that other developing countries are spared. They have to contend with challenges arising from their physical size and archipelagic formations, their geographic location and other factors relating to their 'islandness'. Vulnerabilities arise from exposure to external shocks beyond their control, and from structural handicaps – exacerbated by, among other things, a high degree of openness, export concentration and dependence on strategic imports; remoteness and high transport costs; and susceptibility to natural disasters made worse by climate change and sea-level rise.

The United Nations has recognized that there is a special case among SIDS for sustainable development, and that they require special attention. The Barbados Programme of Action provided them with the basic blueprint for sustainable development, but there has been very little tangible progress in accepting their special case. Their efforts to secure a more sustainable future have not been matched by international assistance – which has fallen by half in real terms. Only a few have been able to obtain foreign direct investments and, in most cases, these have gone towards privatizing state monopolies. So while the United Nations has stated clearly that SIDS are a special case for sustainable development, the international community has yet to take concerted and practical action to implement that principle.

As assistance declines – and their commitments under international agreements increase – many SIDS have sought to integrate and optimize their resources to enable them to cope better. Many have established national sustainable development councils and coordination mechanisms. These have been successful to some degree but have not reached the level at which they could be considered implementers of national sustainable development strategies, or of mainstreaming sustainable development. This shortcoming has been recognized, and there is a genuine drive to seek effective mechanisms for developing and implementing such strategies.

The strategies were demanded by Agenda 21 at the 1992 Rio Earth Summit, reaffirmed by the Barbados Programme of Action, and reiterated in the Johannesburg Plan of Implementation at the 2002 World Summit on Sustainable Development. All SIDS regions have reaffirmed the need to have them in place. Promoting the concept will require some further work, and practical measures for integrating policies – for making a holistic approach to government – will continue to be a challenge. Practical steps need to be taken, and SIDS have called for 'best practices' in this regard.

Growing vulnerabilities

The Alliance of Small Island States (AOSIS) has assessed progress in implementing the Barbados Programme. Meeting in Nassau in January, our ministers noted that some progress has been made – but largely through our own domestic measures, despite the impediments of our structural disadvantages and vulnerabilities. They recognized that these vulnerabilities are growing and that SIDS will have to pay greater attention to sustainable development and to building resilience. They recognized the importance of international assistance in these tasks, and expressed great concern at the 'weakening economic performance of many SIDS since the adoption of the Barbados Programme of Action, due in part to their declining trade performance'. They therefore emphasized the necessity for the international financial and trading systems to grant SIDS special and differential treatment.

SIDS have traditionally produced few commodities and many have enjoyed preferential market access for their products for decades. Those preferences are now rapidly eroding. This is likely to cause tremendous economic upheaval in many

SIDS, as they find themselves at a new threshold in international trade.

Their major challenge is not just to increase their share in world trade but – even more important – to gain enough leverage to shape World Trade Organization (WTO) rules to take account of their concerns, allowing them a conducive international environment to pursue their development goals. This can only happen through their wide and effective participation in WTO negotiations, which unfortunately is not the case.

Their meaningful participation in the negotiations has been handicapped by the lack of a critical mass in WTO membership as well as capacity and financial resources. Accession processes are too cumbersome for them and many do not have permanent representation in Geneva.

Their small administrations face great difficulties integrating into the multilateral trading system. Their inability to participate actively in the multifaceted WTO processes and to implement and administer WTO agreements effectively – compounded by their very limited capacity to formulate and administer trade policy – is likely seriously to marginalize them from the global economy.

Tourism has contributed enormously to the development of SIDS and, as one of their few development options, it will continue to be very important for their future growth. But if not properly planned and soundly managed, it could significantly degrade the very environment on which it so depends. The fragility and interdependence of coastal zones – and of the unspoiled areas essential for ecotourism – call for careful management.

The UNEP GEO Reports on SIDS regions show considerable diversity within island states. The diversity and fragility of their environments are reflected in the diversity and fragility of their cultures. Protecting the former is an important condition for protecting the latter.

Disruption and conflict

Climate change has long been our preoccupation. It is indeed appropriate and timely that the Pentagon is seeking to understand its implications, concluding in a recent study that it 'would challenge the United States national security in ways that should be considered immediately'.

The study predicts 'mega-droughts', flooding and violent storms, all on an apocalyptic scale, driving 'waves of boat people' from country to country; frequent wars over basic resources such as oil, food and water; deaths from war and famine until the planet's population is reduced to a level the Earth can manage; and rich areas like the United States and Europe becoming 'virtual fortresses' to keep out millions of migrants forced from land drowned by sea-level rise or no longer able to grow crops. It concludes: 'Disruption and conflict will be endemic features of life. Once again, warfare would define human life.' SIDS have been emphasizing the importance of addressing climate change for decades – and are already experiencing its effects. This year saw unprecedented 'king' tides in the Pacific, particularly in Tuvalu. In 2001, in Majuro, Marshall Islands, shop owners with 'stores in the downtown area of the capital barricaded their front doors to prevent the one-foot deep water from washing in'.

Impacts on health

New and emerging diseases, such as HIV/AIDS and SARS, pose a special challenge, as do concerns over communicable and vector-borne diseases impacted by the changing environment and climate. Studies by UNEP and the World Health Organization have shown that climate change will have dramatic impacts on health, particularly in SIDS, whose capacity to cope with increasingly frequent epidemics causes great concern. The ranges of current diseases could be altered, with malaria returning to areas where it had been thought to be eradicated. In human terms, this would be a tragedy; in economic ones, it would ruin the SIDS tourism industry.

Security concerns are high on everyone's agenda, but SIDS are particularly worried about the costs of adjusting to new security procedures at airports and harbours. They take a larger view of the subject to include issues of food security and water resources. While self-sufficient for centuries, they are now increasingly dependent on imported food. Changes in precipitation and in the frequency of storms are creating uncertainty over harvesting rainwater, used as drinking water in many SIDS since they cannot afford desalination. AOSIS will call upon UNEP to make a renewed effort to assist SIDS in this regard.



Thomas Eells/UNEP/Topham

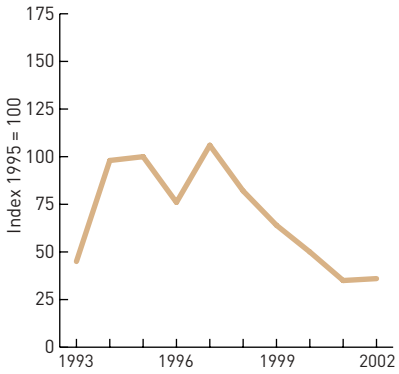
The fragility of coastal zones calls for careful management

Capacity building, access to appropriate technology and means of implementation will also feature prominently in our discussions with the international community in Mauritius. AOSIS member states will seek to ensure that the meeting produces credible and practical solutions for the sustainable development of SIDS. We need the partnership of the international community – and particularly of such organizations as UNEP. Together we can strive for a sustainable future for SIDS, for generations to come ■

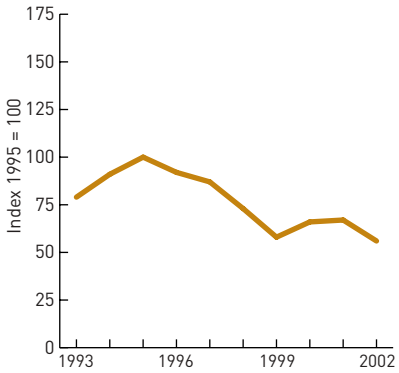
Ambassador Jagdish Koonjul is Chairman of the Alliance of Small Island States (AOSIS).

Export prices of primary commodities

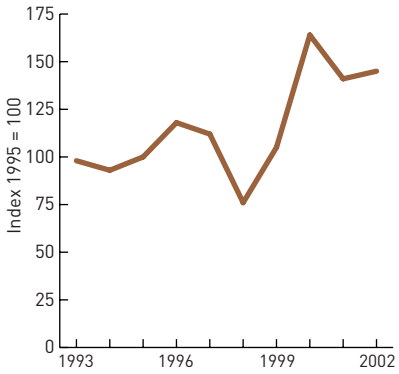
Coffee



Sugar



Crude petroleum



Foreign direct investment in selected SIDS

US$ million

	1998	2001
Samoa	3.0	1.2
Cape Verde	8.8	0.7
Barbados	15.8	17.5
Vanuatu	20.4	18.0
Grenada	48.7	34.3
St Lucia	83.4	50.9
St Vincent	89.0	35.7
Papua New Guinea	109.6	62.5

Source: World Development Indicators/ The World Fact Book

Natural resilience

ALBERT BINGER describes how the resilience of small island developing states in a difficult world depends on the proper management of their natural resources

The economies and social structure of the vast majority of small island developing states (SIDS) were developed under colonial rules. When most of them became independent nations in the later half of the 20th century they inherited economies based principally on providing commodities to their former ruling nations – and on small populations, secure markets for products, assistance with natural disasters and international political protection. Independence did not bring about any significant change in the nature of their economies or trading relationships.

At the Mauritius meeting on SIDS' progress in implementing the Barbados Programme of Action, the global community is to be told that this past economy (inherited with significant social and ecological debt) cannot work any more. All the previous conditions have changed, and new ones with potentially devastating present consequences – like the World Trade Organization (WTO) rules – and future ones – like climate changes – place us in great peril. None of these things are of SIDS' making. The international community must do a better job of helping them with resources to implement the Barbados Programme, because implementing sustainable development is the only prescription for the perilous situation facing the majority of them.

The Barbados Programme set out the necessary actions that SIDS were to follow and the basis for international assistance in helping them pursue sustainable development – and pointed out that SIDS' development was, in the vast majority of cases, linked to extracting services and products from the environment. Economic activities in the Caribbean, for example, primarily involve direct exploitation of such fragile natural resources as coastal environments, marine ecosystems, forests, agricultural land and mineral resources. The pressures being exerted on these resources from a combination of poor management practices in using them, tourism, and livelihoods for the un- and underemployed (in some countries above 30 per cent of the working population) lead to ecological and environmental degradation. The losses eat away at the limited natural resource endowment. So their carrying capacity declines, even as population expands.

Special case

Agenda 21, adopted at the 1992 Earth Summit in Rio, stipulates that SIDS constitute 'a special case for environment and development'. This was elaborated in detail at the Global Conference on the Sustainable Development of Small Island Developing States in Barbados in 1994 and reaffirmed at the 2002 World Summit on Sustainable Development in Johannesburg. The special case was based on the high levels of economic and environmental vulnerability inherent in SIDS as a result of their relatively small size, remote location, susceptibility to natural disasters, the nature of their economies and fragility of their environments. But neither the special case designation, nor the adoption of the Barbados Programme that should have brought additional and special international assistance, has had the intended outcome. Consequently, economic and environmental conditions in the vast majority of SIDS continue to deteriorate.

With special case designation, the international community was expected to provide increased support to help SIDS pursue sustainable development as set forth in the Barbados Programme. However, over the last decade, official development assistance to SIDS decreased from $2.9

billion in 1994 to $1.7 billion in 2002 (see figure on page 16). By contrast a report by the United Nations Department of Economic and Social Affairs shows that SIDS have carried out 70 per cent of the tasks and actions stipulated by the Barbados Programme, even if it has not yet been fully implemented.

The progress report for Mauritius is not encouraging: the vast majority of SIDS' economies have recorded negligible growth rates in the ten years of the Barbados Programme, with the exceptions of those islands where growth is attributed to tourism. SIDS' development, to date, has been primarily through unsustainable use of natural non-renewable and potentially renewable resources to provide raw material. As a result, many of the critical ecosystems – such as near-shore coral reefs, mangroves and other wetlands – are either under stress or showing significant signs of degradation. Yet they sustain livelihoods in SIDS and are the foundation of tourism, their largest and fastest growing economic driver. Tourism is a major economic sector in most SIDS, accounting, for example, for between 25 and 35 per cent of the total economy of the Caribbean region.

A United Nations Development Programme report – *Vulnerability of Small Island Developing States* – points out that the economic and environmental vulnerability of the majority of SIDS has increased significantly since the 1994 Barbados Conference and that their capacity to cope (resilience building) has consequently decreased. It calls for SIDS to take innovative steps to build resilience and position themselves better to address the future threat of climate change and sea-level rise. These are caused predominantly by the growing emissions of greenhouse gases from burning fossil fuels globally – but particularly in the OECD countries – a situation over which SIDS have no control. SIDS are extremely vulnerable to these threats and – according to the Intergovernmental Panel on Climate Change – Caribbean ones are among the most susceptible.

SIDS will have to build social, economic and environmental resilience as part of a process of achieving sustainable development. Building such resilience – an imperative for them – comes about through managing the environment, which provides all the raw material, so that it maintains its highest level of diversity: this requires all products and services to be obtained in a synergistic way. Maintaining high levels of diversity allows the environment to recover from external shocks. Reducing diversity, through absence of proper environmental management, will lead to significant reduction and eventual loss of raw material, with consequent damage to the population's quality of life. Sustainable development in SIDS therefore requires sustainable management of the environment, such as acquiring goods and services in a manner consistent with maintaining high diversity or high levels of resilience.

Most SIDS' ongoing difficulty in generating economic growth and building resilience results from a combination of factors that include a declining value for traditional export commodities – impacted by the coming into force of WTO rules that prohibit preferential access – and the ongoing increase in the price of petroleum compared to traditional exports as shown in the figures, left.

Between 1995, the first year of the WTO, and 2000, the unit value of seven of the Caribbean's eleven most important exports fell. The decline for five of them was greater than 25 per cent. Consequently, the trade deficit almost tripled from $1.2 billion in 1994 to $3.4 billion in 2001. Furthermore, SIDS have only seen very limited foreign direct investment (see table, left) – and this has been overwhelmingly in tourism and in the purchasing of utilities like electricity, and telecommunications – even though they provide an enabling environment under the aegis of the IMF and the World Bank. Their dependency on petroleum (with the exception of one or two countries) to meet all commercial, transportation, industrial and most household energy needs represents yet another major challenge to sustainability. The price of petroleum continues to increase relative to the value of traditional exports and is increasingly reducing SIDS' ability to compete internationally in the production of goods and services ■



UNEP/Topham



Alvaro Izurieta/UNEP/Topham



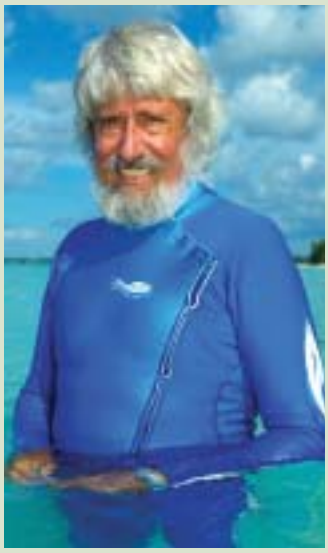
UNEP/Topham

SIDS will have to build social, economic and environmental resilience

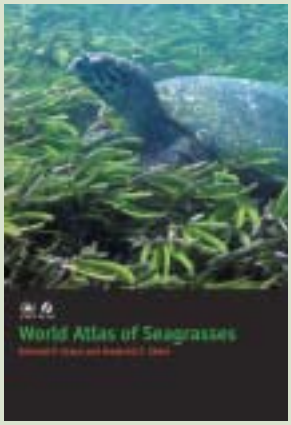
Professor Albert Binger is Director of the University of the West Indies Centre for Environment and Development, and Visiting Professor at Saga University Institute of Ocean Energy, Saga, Japan.

BOOKS & PRODUCTS

The Athens Environmental Foundation (AEF) – in partnership with the Athens 2004 Organizing Committee (ATHOC) and UNEP – is celebrating World Environment Day with a clean-up. It is tackling several beaches around the Greek capital, including Piraeus, and mounting an underwater clean-up led by Jean-Michel Cousteau (right) near the port and at several other places around the Greek coast. Hundreds of divers are involved. Three ships are to remove large debris, such as cars and refrigerators, from the sea bed, while municipal trucks take the rubbish for recycling and/or disposal. Two other ships are to demonstrate oil spill containment. The International Olympic Committee and Greek Government officials are participating along with thousands of citizens and local and international media. The Executive Director of UNEP, Klaus Toepfer, is to be connected live via satellite from the main international celebrations of the Day in Barcelona, while Athens organizes a reception – with an exhibition by the Greek synchronized swimmers team – around the Olympic Pool ■



Tom Ordway



The first-ever global survey of seagrasses has been published by UNEP-WCMC. The ***World Atlas of Seagrasses*** estimates that world–wide there are some 177,000 square kilometres of the habitats – consisting of some 60 species of underwater flowering plants, and making up one of the most important of all marine ecosystems. Yet it also reveals that 15 per cent of them have been destroyed in the last decade. 'We now have a global, scientific view of where seagrasses occur and what is happening to them,' says **Klaus Toepfer,** UNEP's Executive Director. 'Unfortunately, in many cases, these vitally important undersea meadows are being needlessly destroyed for short-term gain without a true understanding of their significance.' ■

*Two reports on the state of the seas – **Protecting the Oceans from Land-based Activities** and its popular version **A Sea of Troubles** – are available from UNEP. Produced by the **Joint Group of Experts** on the **Scientific Aspects of Marine Environmental Protection** – representing UNEP and seven other United Nations agencies – they provide a comprehensive survey of the latest knowledge on the effects of pollution and overfishing on the oceans* ■

*The **2003 UNEP Annual Report** details UNEP's activities during the year to promote the wise use and sustainable development of the global environment. Focus sections include **UNEP's work during the International Year of Freshwater; environment and security;** and **regional implementation.** The report is available from Earthprint at $10, plus packing and postage, and at www.unep.org/annualreport/2003* ■

Clean Up the World – a global campaign which promotes community action as the key to long-term environmental change – is organizing special drives to mark **World Environment Day** and support UNEP's focus on seas and oceans throughout 2004. Members of Clean Up the World are supporting the Day from Pakistan to Cuba, and from Cyprus to Kenya. In Pakistan World Environment Day is the highlight of a three-month campaign expected to attract a million participants. During 2004 the **Cyprus Marine Environment Protection Association** is conducting a campaign to clean up the Pedieos River to try to prevent waste from the city of Nicosia travelling down it to the sea, while the **Emirates Diving Association,** in the United Arab Emirates, is mobilizing more than 300 divers, conducting 500 beach clean-ups and monitoring coral as part of its activities ■



EDA

Poor island and coastal communities may be able to get drinking water from the sea by using a simple, solar-powered plastic cone. **The Watercone** – which promises to save long, backbreaking walks to rivers or ponds inland – makes saltwater drinkable without the vast expense of traditional desalination plants. It needs no electricity or high maintenance technology, and each cone will produce a litre of freshwater in 24 hours. The base, the size of a car wheel, is filled with salt water, which evaporates in the sun and condenses onto the curved edge of the cone so that freshwater can be poured out through a spout. The cone can also clean polluted water. At present its cost, $60, is still too high for many poor communities and so it would be distributed as aid: **CARE Germany** has been using it in a pilot project in the Yemen ■



Watercone.com



UNEP/Topham

Keeping oil from **troubled waters**

PAUL LOEFFELMAN describes a bid to bring renewable energy to the Galapagos archipelago and reduce the risk of oil spills devastating its unique wildlife

At ten o'clock on the night of 16 January 2001, the fuel tanker *Jessica* ran aground in the appropriately named Wreck Bay at San Cristobal, the easternmost island of the Galapagos. Over the next fortnight more than 800,000 litres of oil spilled from her hull and into the waters, raising fears of an ecological disaster in perhaps the world's most celebrated Natural World Heritage Site. In the event, the islands where Charles Darwin developed his theory of evolution were extraordinarily lucky – the slick threaded its way through them and escaped to sea without doing massive damage. Even so, some 60 per cent of the iguanas on a neighbouring island seem to have perished from the pollution.

Renewable sources

Minimizing the risk of a disastrous spill in this extraordinary archipelago, 965 kilometres off the coast of Ecuador, is one of the main motives behind a remarkable project being prepared by the United Nations Foundation (UNF) in partnership with the E7 Fund – representing some of the world's premier electricity companies – to support efforts by the Government of Ecuador, the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF). It aims to substitute renewable sources for fossil fuel in generating electricity on the islands and thus substantially reduce their emissions of carbon dioxide.

Electricity is generated by small diesel generators on the four inhabited islands of the Galapagos, as in many remote parts of the developing world: the fuel is brought by frequent deliveries in small tankers. But the sun and the wind could meet over 70 per cent of their needs, cutting the amount of diesel shipped to the islands in half. And the people will benefit from a clean, modern and reliable source of electricity.

The E7, created after the 1992 Rio Earth Summit, consists of nine leading utilities from the G7 countries – American Electric Power, Eléctricité de France, ENEL (Italy), Hydro-Québec, Kansai Electric Power Company (Japan), Ontario Power Generation, RWE (Germany), Scottish Power and Tokyo Electric Power Co. It promotes sustainable development by helping developing countries increase their capacity to generate and deliver electricity.

Internet access

Led by American Electric Power in this project, it is already introducing solar power to enable internet access on San Cristobal Island, educating the community on ways to use electricity more efficiently and – together with UNDP and UNF – is preparing to develop wind power there. It is working towards receiving an environmental licence for the development, with advice from wildlife experts and the archaeology authority, and plans to start producing electricity by the end of 2005. The E7 has created a community website (www.ecolapagos.com) to keep everyone informed, and observe data on energy production and use, and the weather. The UNF and GEF will invest in two other islands, Isabela and Santa Cruz.

Learning by doing

E7's philosophy is 'learning by doing' and it is hoped the plan will be copied by other island states and across Ecuador, where 45 per cent of the rural people have no access to electricity services – and may not be connected to the grid for the next 15-20 years because of the high investment required for grid expansion. Success in the Galapagos should give private companies and investors the confidence to set up mini grids based on renewable energy technologies to serve these people, giving them a better quality of life, enabling them to earn more, and substantially reducing emissions of carbon dioxide ■

Paul Loeffelman is Director, Environmental Public Policy at American Electric Power.

REDRESSING *the balance*

DON MCKINNON describes how the Commonwealth and SIDS strengthen each other

More than half of the members of the Commonwealth – 27 out of 53 countries – are small island developing states (SIDS). They are a key part of our identity and have an important role to play. They contribute to the internal balance of the organization and to its global reach – and they allow the Commonwealth to play its part as a bridge between small and large nations, between rich and poor, powerful and vulnerable.

The Commonwealth was the first organization to recognize the unique challenges faced by small states – and in particular small island ones – and to raise international awareness of them.

The vulnerabilities of SIDS stem from a number of factors, such as size, remoteness and isolation, susceptibility to natural disasters, limited diversification, lack of access to external capital, poverty – the list goes on. These are built-in and are there to stay. But SIDS can grow stronger and develop wealthier, healthier, better-educated communities, if we assist them.

Defining progress

The 1994 Barbados Programme of Action presents a detailed strategy to help SIDS address some of these problems. While some progress has been made, there is a great deal more to achieve. The International Meeting in Mauritius on the Barbados Programme of Action provides an opportunity to review efforts and actions taken over the past ten years and define how further progress can be achieved.

Particular progress has been made, for example, in elaborating policy frameworks and negotiating multilateral agreements. More should be done, however, to integrate policy and to raise awareness of the Barbados Programme of Action as a blueprint for sustainable development in SIDS.

A number of new issues have also emerged. Chief among them is security – from food and water security to the challenges faced by poor and archipelagic states in complying with United Nations Security Council Resolution 1373, adopted in the wake of the 11 September 2001 attacks.

The Commonwealth has been closely involved with the preparatory meetings for the Mauritius meeting and provided support to member countries in preparation for the review. Through the Commonwealth Fund for Technical Co-operation, we supported the preparation of case studies on the implementation of the Programme of Action in the Pacific Region and helped member countries complete national assessment reports in advance of regional preparatory meetings.

Commonwealth consultations on the Mauritius meeting have also been facilitated through fora such as the Meeting of the Commonwealth Ministerial Group on Small States in Abuja, Nigeria in December 2003. When Commonwealth leaders met in Abuja immediately thereafter, they gave their full support to the Barbados Programme of Action. They highlighted the burdens that terrorism and its consequences had placed on small states. They noted that 'global warming and climate change were life threatening to small island states and other low lying areas' and reaffirmed Commonwealth support through technical assistance to address these concerns.

Trade concerns

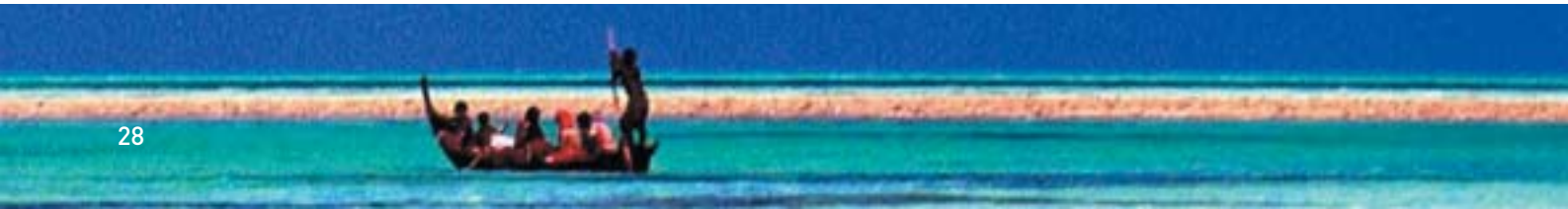
In July 2003, heads of three regional organizations (Indian Ocean Commission, CARICOM and the Pacific Forum) requested the Commonwealth Secretariat's help to elaborate a strategy to address SIDS' trade concerns in the context of the Mauritius meeting. Trade experts representing these organizations met in Geneva and produced a draft text on trade issues that was considered at the inter-regional preparatory meeting held in the Bahamas in January 2004. During this meeting, the Secretariat also highlighted the Commonwealth of Learning's project of a Virtual University for Small States, which gained the support of Commonwealth education ministers meeting in Edinburgh in October 2003. This initiative will use information and communication technologies to contribute to the sustainable development of human resource capacity in small states.

In response to issues raised at the regional preparatory meetings, the Commonwealth Secretariat, in close collaboration with the University of Malta, convened a group of experts in March 2004 to propose measures that would enable small states to strengthen their resilience in order to manage inherent economic vulnerability. The statement it produced was submitted to the Secretary-General of the United Nations to be circulated as an official document for the Mauritius meeting.

We also help strengthen the objectives of the Barbados Programme of Action in many other areas of our work. We recognize that small, and small island, states are often sidelined when decisions are made at a global level. They find it difficult to defend their interests in the face of the overwhelming influence of bigger players. Much of the Commonwealth's work is aimed at trying to help redress the balance in their favour, by giving them tools to stand their ground and help level the playing field.

When a small island state government enters into negotiations with a large multinational about the exploitation

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of its natural resources, the chances are that it will lose out. The Commonwealth's role is to provide experts who will strengthen the government's hand and ensure that the country does not get a raw deal. Similarly when there is a dispute over maritime boundaries between a country the size of Dominica and one the size of France, it is clear whom the odds favour. In this case the Commonwealth provided the knowledge and expertise to prevent Dominica from becoming sea locked.

It is the same over trade: the Commonwealth's objective is to make sure that less powerful players do not end up on the sidelines. There is clearly a serious imbalance when it costs a US farmer twice as much to produce a bag of rice than, say, a farmer in Guyana, and yet the American can still sell it more cheaply. How can SIDS be expected to trade their way out of poverty when the largest economies – the United States, the European Union and Japan – dump commodities at a fraction of what they cost to grow? And how can they hope to compete globally when they are cut out from the industrialized world's markets?

Generating consensus

We have been consistently putting pressure on developed countries to phase out agricultural subsidies. We provide trade advice to our small and developing member countries to ensure they are in a strong position to negotiate with larger players.

We have assisted our small, and small island, states to develop the World Trade Organization work programme targeted at small economies, mandated in the Doha Declaration. In addition, the Commonwealth recently received EUR17 million from the European Commission to build the trade capacity of the African, Caribbean and Pacific countries and ensure they too can reap the rewards of global trade.

The failure of last year's trade talks in Cancún concerns everyone, particularly small states. There is a real danger that the project of a rules-based multilateral trading system could flounder. At their Abuja meeting, Commonwealth leaders showed their determination to help put the trade talks back on track and decided to establish a Commonwealth Ministerial Trade Mission. Last February, the ministerial group, which included the trade ministers of Barbados and Fiji, went on a mission to key capitals and engaged with major players to help generate a consensus on the way forward.

As an organization bringing together countries of all sizes, sea locked and land locked, and at every stage of economic development, the Commonwealth is ideally placed to make a difference in the lives of its people. SIDS have a great deal to gain from the Commonwealth. What other organization enables their leaders to sit at the same table with leaders of G8 countries, talk to them as equals and exchange views about matters of common concern?

In return, the Commonwealth is made stronger by its small island states members. They enrich it and are an integral part of its diversity. They extend its range of influence and allow it to play a crucial role as a consensus builder. The partnership between small island states and the Commonwealth is at the heart of the organization and is crucial to its future ■



Laurence Fabbro/UNEP/Topham

The Commonwealth's objective is to make sure that less powerful players do not end up on the sidelines

The Rt Hon. Don McKinnon is Commonwealth Secretary-General.



Urmila Mehandra/UNEP/Topham

NEIGHBOURS *without* BORDERS

ELLIK ADLER describes how small island developing states and other countries unite to tackle common threats to the seas on which they depend

Threats to the marine environment know no bounds on our ocean planet. Biodiversity loss, the destruction of coastal habitats, uncontrolled coastal development and related land-based pollution, sea-based pollution such as oil spills and marine litter, overfishing and excessive use of marine resources: these are the destructive forces which plague the world's coastal cities, villages and communities. Their effects on people's lives and livelihoods are both direct and devastating. Their more indirect impacts reach far inland to drain the economies and development opportunities of entire countries, regions and even continents.

The best that can be said of these threats is that they unify. All over our planet, conflicts and quarrels have been pushed aside by nations who recognize their mutual interest in working together to stop the accelerating degradation of their oceans and coastal areas. From the Mediterranean to the North-West Pacific, often-contentious neighbours have found common cause in their shared marine environment.

For three decades, UNEP has fostered this unity, encouraging neighbouring countries to sit at the same table and work out practical solutions to their problems. UNEP's Regional Seas Programme, launched in 1974 in the wake of the 1972 United Nations Conference on the Human Environment in Stockholm, has created a forum where the countries of a region engage in dialogue, exchange experience and information, and express their formal commitment to agreed goals backed up by specific, practical actions.

So, at 30, has the programme's framework stood the test of time? Is its approach still relevant? Is it equipped to face the challenges of the future? My answer to all three questions is yes. Most programmes are now self-sufficient, self-financing and self-propelling, using very much the same framework as in 1974. The Regional Seas approach has provided the springboard of science and management skills for collaboration with global environmental agreements – and for local implementation of global treaties. And, as for the future, it can help improve the management of new problems threatening marine and coastal environments.

More than 140 countries now participate in 13 regional programmes established under UNEP's auspices, covering the Black Sea, the Caribbean, East Africa, East Asia, the Kuwait Convention region, the Mediterranean, North-East Pacific, North-West Pacific, Red Sea and Gulf of Aden, South Asia, South-East Pacific, South Pacific, and West and Central Africa. Five partner programmes for the Antarctic, Arctic, Baltic Sea, Caspian Sea and North-East Atlantic are also members of the Regional Seas family. The programme is coordinated by a small team of professionals from UNEP's headquarters in Nairobi.

Particular concerns

The process of establishing a Regional Seas Programme usually begins with developing an action plan outlining the strategy and substance of a regionally coordinated programme to protect a common body of water. It is based on the region's particular environmental concerns and challenges, as well as on its socioeconomic and political situation. These may, of course, differ greatly from region to region; in one it may focus on chemical wastes and coastal development; in another it might spotlight the conservation of marine species and ecosystems.

In most regions the action plan is underpinned by a strong legal framework in the form of a legally binding regional

convention – expressing the commitment and political will of governments to tackle their common environmental problems through joint coordinated activities, with associated protocols on specific problems.

At the request of its Governing Council, UNEP strengthened its commitment to the programme in the mid-1990s. It began to convene regular global meetings of the secretariats and partner programmes – today 18 in all – to discuss common interests, priorities and links with one another and with global environmental conventions and international organizations. The Governing Council has particularly encouraged ties with the Global Plan of Action for the Protection of the Marine Environment from Land-based Activities (GPA), the Multilateral Environmental Agreements, and other international partners.

It was no accident that this 'rebirth' coincided with many initiatives that focused attention on the marine environment, as the world took on board the new principles expounded by the 1992 Rio Earth Summit and its products – particularly Agenda 21 and the Convention on Biological Diversity (CBD) – and prepared for its successor, the 2002 World Summit on Sustainable Development (WSSD).

Shared priorities

The Jakarta Mandate of the CBD (1995) and its 1998 Programme of Action, represented a fresh and progressive approach to managing and using marine and coastal resources sustainably. It reinforced the priorities of the Regional Seas Programmes – soon to be echoed by WSSD and its Plan of Implementation – including the conviction that integrated marine and coastal area management is the best implementation tool. More recently, the Seventh Meeting of the Conference of Parties to the CBD adopted a series of important resolutions related to the conservation of the biodiversity of marine and coastal ecosystems, which further reflect the shared priorities of the Regional Seas and their global partners.

UNEP has singled out small island developing states (SIDS) for greater attention. Their marine and coastal environments are vital resources for socio-economic development. Marine species provide food, medicines and ingredients for industrial products. Coastal ecosystems. such as coral reefs, mangroves, seagrass beds, estuaries, coastal lagoons and wetlands, are essential as nursery grounds for commercial fish species, protectors of shorelines from storms, and buffers for the impacts of land-based activities. Clean sandy beaches, offshore coral reefs and a lack of industrial development provide a base for tourism. These resources are both limited and concentrated, and so particularly vulnerable to the adverse effects of coastal degradation. They are already disproportionately threatened by natural disasters, climate change and sea-level rise.

Efforts to safeguard their coastal environments are quickly moving up the list of international priorities. The Regional Seas Programme is being called upon to play a central role, partly because all SIDS are part of at least one Regional Seas Programme, and partly because the programme already has in place globally coordinated, region-wide mechanisms to implement environmental agreements and initiatives.

The 1994 Programme of Action for the Sustainable Development of SIDS (SIDS/POA) asks for the 'establishment and/or strengthening of programmes within the framework of the Global Programme of Action and the Regional Seas Programmes, to assess the impact of planning and development on the coastal environment, including coastal communities, wetlands, coral reefs habitats and the areas under the national jurisdiction of SIDS and to implement the POA'. The WSSD Plan of Implementation identifies the Regional Seas Programme and the United Nations Convention on the Law of the Sea as key actors for implementing SIDS activities related to the marine environment.

SIDS dominate the South Pacific and the Wider Caribbean regional programmes, and are also members of the Mediterranean Action Plan, the East Asian Seas Action Plan, the South Asia Seas Programme, and the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention). The GPA Coordination Office harmonizes UNEP's SIDS activities and addresses land-based activities at the national level through national programmes of action, within the context of the Regional Seas Programmes.

Coral reefs are one of the SIDS' most important and extensive ecosystems, so many of UNEP's activities are based on close partnerships with groups and initiatives devoted to protecting them. The activities – too numerous to mention here – are based on many international partnerships, such as those with the International Coral Reef Initiative (ICRI), the Global Coral Reef Monitoring Network (GCRMN), the International Coral Reef Information Network (ICRIN) and the International Coral Reef Action Network (ICRAN). They are aimed at promoting 'on the ground' actions and good practices for coral reef management and conservation through partnerships with the world's leading science and conservation organizations in the field.

Important role

Agenda 21, the WSSD Plan of Implementation and the new global strategy have given the Regional Seas Programme a mandate and a roadmap for the years ahead. But there are still many roadblocks to overcome, such as lack of political will, insufficient financing and competition with such overriding concerns as war or poverty.

A new era of environmental action is emerging, focusing on practical implementation of the principles of sustainable development. The Regional Seas Programme has had – and continues to have – an important role in sustainable development. Given its achievements, built upon modest resources, it has provided excellent value for money in its first three decades ■

Ellik Adler is Regional Seas Programme Coordinator, UNEP.



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Will Mother Nature *wait?*

As a West Indian, the ocean plays a critical part in my life. Every day, it is there for me, shining as I wake up. Every happy memory I have as a child, teenager – and now as an adult – has it somewhere in the background. It was my nursemaid when I was a baby, my teacher as I was growing up, my dancing partner at teenage parties, my friend when I needed someone to talk to. It speaks to me as I fall asleep; it features in most of my dreams.

I live in the parish of St James in Jamaica, known to both locals and tourists as a beach paradise where one can relax, socialize and experience a superb day of swimming. Because we live by it, the ocean is part of our family. We love it and care for it like an elder brother or sister. The thought of harming it would never occur to us. Most people in the parish depend on it for their livelihood.

However, there are other parts in Jamaica where the ocean does not have a major social or economic impact on people's lives. I now study in Kingston, the capital, and the contrast is stunning. Every day, I see and hear people who think it is fine to use the ocean as a dumping ground for industrial waste and other rubbish. I read in the papers that conserving it is low in the government's concerns, as there are more pressing political and economic matters to deal with. And, in my experience, local environmental groups who try to promote the importance of the ocean and other issues are usually mismanaged and always short of money.

Because of this, to my mind, the priority for Jamaica and other West Indian countries must be to attract major investment from first-world states, to help in the environmental care of the oceans that lap our shores. Help from respected countries and governments outside will surely raise the status of concern in my country.

How long?

But I am worried, because it is not just in Jamaica that care for the oceans is accorded low priority. Amid all the impending issues in world politics and economics, there is a paucity of environmental investment. Concern for 'sustainable development' appears to be only skin deep. And again, I worry as a citizen of Jamaica that we and other third-world states do not possess enough influence to turn the eyes of first-world governments to such issues as the increasing pollution of the ocean and its impact on our livelihoods. And this is serious: the ocean today is nothing like as clean and sparkling as I remember it as a child. In another few years, if it continues getting dirtier, tourists will stay away; the fish will die and St James will rot and become a slum.

Only, in my opinion, when first-world states assert the priority of the sustainable development of the oceans, will Jamaica and other third-world countries receive the environmental investment that they need, along with other equally important expenditures. But how long will we have to wait? And will Mother Nature wait that long?

The joys and the importance of the seas are not just indigenous to the West Indies. They are shared worldwide. But my perception as a Jamaican, and as one who has grown up in the West Indies, is that our whole lives, economy, culture, sense of well-being and spirituality are heavily dependent on the seas. As small states, we need affluent nations to work with us and Mother Nature to make the investments that will prevent the destruction of our livelihood, the ocean ■

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